ARCTIC BIBLIOGRAPHY

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THE ARCTIC INSTITUTE OF NORTH AMERICA

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GOVERNMENT AGENCIES OF THE UNITED STATES AND CANADA

EDITED BY

MARIE TREMAINE

VOL. XII

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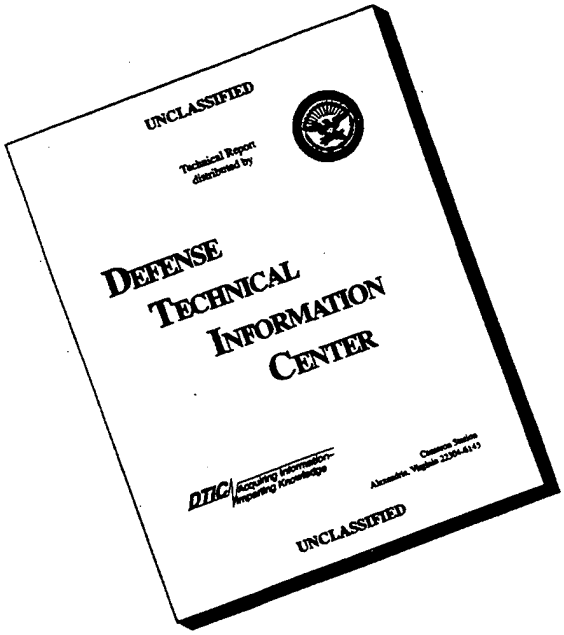

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FOREWORD

The Arctic Institute's program of abstracting and indexing the scientific literature on the Arctic and sub-arctic, under the direction and editorship of Marie Tremaine, has continued with the preparation of Volume 12 of the *Arctic Bibliography*. The volume summarizes and indexes the contents of 7,270 publications, making a total of 76,725 papers abstracted since the beginning of the project.

The Library of Congress, as in the past, has provided working space for the Bibliography staff and most of the work has been conducted there, although the collections of 100 other large libraries in the United States, Canada, England, France, and Norway have also been utilized in the preparation of the volume.

Of the 7,270 abstracts in Volume 12, 3,360 are of papers published in English, 3,165 in Russian, 493 in the Scandinavian languages, 112 in German, and 140 in French and other languages. Most of the papers are recent, 2,548 of them having been published in 1962, 3,610 in 1961, 673 in 1960, 401 between 1950 and 1959, 23 between 1940 and 1949, and 15 prior to 1940.

Funds for the preparation and publication of this volume of *Arctic Bibliography* have been provided by the National Institutes of Health, Office of Naval Research, Departments of the Army and the Air Force, Atomic Energy Commission, National Science Foundation, Defence Research Board of Canada, and the Canada Council. The Directing Committee and the Arctic Institute wish to express their gratitude to the Library of Congress for continuing to make its facilities available and to the United States and Canadian organizations whose generous financial support has made the work possible.

Henry B. Collins
Chairman, Directing Committee
Arctic Bibliography

TRANSLATIONS

English translations of Russian and other foreign language papers are listed in *Arctic Bibliography* as feasible, but these listings are by no means complete. The central source of information on the location and identification of translated materials, completed or in process, is Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151. Clearinghouse provides information on request about the availability of a translation of a specific paper, and about how to order it. Clearinghouse also issues the twice-monthly *Technical translations,* listing translations available and those in process; also the periodicals, etc. regularly translated cover-to-cover. *Technical translations* may be subscribed for at $12.00 a year, $16.00 outside the United States. The National Research Council of Canada Library also maintains an author index of completed scientific translations in Canada, other countries of the Commonwealth, and the United States, and provides information on request as to the existence and location of specific papers. Enquiries should be addressed to Translations Section, The Library, National Research Council, Sussex Drive, Ottawa, 2, Canada.

Editor, *Arctic Bibliography*

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LIBRARIES
in which works in
ARCTIC BIBLIOGRAPHY
have been used by the staff of the
ARCTIC INSTITUTE OF NORTH AMERICA

AIKøbenhavn—Arktisk Institut, København.
AMAU—Air University, Maxwell Field, Montgomery, Ala.
AkA—Z. J. Loussac Public Library, Anchorage, Alaska.
AkAbF—Fisheries Research Library, US Fish & Wildlife Service, Auke Bay, Alaska.
AkAH—Arctic Health Research Center, Anchorage, Alaska.
AkS—Public Library, Sitka, Alaska.
AkU—University of Alaska, College, Alaska.
CSt–H—Hoover Memorial Library, Stanford University, Stanford, Calif.
CU—University of California, Berkeley, Calif.
CaAU—University of Alberta, Calgary, Canada.
CaBV—Vancouver, B.C., Public Library.
CaMAI—Arctic Institute of North America, Montreal, Canada.
CaMM—McGill University, Montreal, Canada.
CaO—Library of Parliament, Ottawa.
CaOA—Dept. of Agriculture, Ottawa.
CaOAr—Public Archives of Canada, Ottawa.
CaOCU—Carleton University, Ottawa, Canada.
CaOF—Forestry Branch, Dept. of Resources and Development, Ottawa.
CaOG—Geological Survey, Ottawa.
CaOGB—Geographical Branch, Dept. of Mines and Technical Surveys, Ottawa.
CaOH—Dept. of National Health and Welfare, Ottawa.
CaOM—Dept. of Mines and Technical Surveys, Ottawa.
CaON—National Research Council of Canada, Ottawa.
CaON–B—National Research Council of Canada, Division of Building Research, Ottawa.
CaONA—Northern Affairs Library, Dept. of Northern Affairs and National Resources, Ottawa.
CaONL—National Library of Canada, Ottawa.
CaONM—National Museum of Canada, Ottawa.
CaOS—Dominion Bureau of Statistics, Ottawa.
CaOT—Dept. of Transport, Ottawa.
CaOUS—University of Ottawa, St. Joseph's Scholasticate, Ottawa.
CaT—Public Library, Toronto, Canada.

CaTU—University of Toronto, Toronto, Canada.
CaWH—Hudson's Bay Company, Winnipeg.
CoDBR—U.S. Bureau of Reclamation, Denver, Colo.
CtY—Yale University, New Haven, Conn.
DA—U.S. Dept. of Agriculture, Washington, D.C.
DAI—Arctic Institute of North America, Washington, D.C.
DAWS—Air Weather Service, Technical Information Files, Andrews Air Base, Washington, D.C.
DBRE—Bureau of Railway Economics, Washington, D.C.
DBS—National Bureau of Standards, Washington, D.C.
DCE—Carnegie Endowment for International Peace, Washington, D.C.
DCGS—U.S. Coast & Geodetic Survey, Washington, D.C.
DCT—Carnegie Institution of Washington, Dept. of Terrestrial Magnetism, Washington, D.C.
DCU—Catholic University of America, Washington, D.C.
DES—U.S. Corps of Engineers, Engineer School, Fort Belvoir, Va.
DF—U.S. Fish and Wildlife Service, Washington, D.C.
DGS—U.S. Geological Survey, Washington, D.C.
DGU—Georgetown University, Washington, D.C.
DH—National Institutes of Health, Bethesda, Md.
DI—U.S. Dept. of the Interior, Washington, D.C.
DIC—Interstate Commerce Commission, Washington, D.C.
DLC—Library of Congress, Washington, D.C.
DM—U.S. Bureau of Mines, Washington, D.C.
DN–HO—U.S. Navy, Hydrographic Office, Suitland, Md.
DN–RL—U.S. Navy, Naval Research Laboratory, Washington, D.C.
DN–Sh—U.S. Navy, Bureau of Ships, Washington, D.C.
DN–YD—U.S. Navy, Bureau of Yards and Docks, Washington, D.C.
DNG—National Geographic Society, Washington, D.C.
DNLM—National Library of Medicine, Washington, D.C.
DNO—U.S. Naval Observatory Washington, D.C.
DNR—U.S. Office of Naval Records and Library, Washington, D.C.
DP—U.S. Army Library, Pentagon, Washington, D.C.
DPHS—U.S. Public Health Service Library, Bethesda, Md.
DPR—U.S. Bureau of Public Roads Washington, D.C.
DSI—Smithsonian Institution, Washington, D.C.
DSt—U.S. Dept. of State, Washington, D.C.
DWB—U.S. Weather Bureau, Suitland, Md.
ExPF—Expéditions Polaires Françaises, Paris, France.
GB–MO—Great Britain, Meteorological Office, Harrow, England.
IEN—Northwestern University, Evanston, Ill.
IU—University of Illinois, Urbana, Ill.
InU—Indiana University, Bloomington, Ind.
MB—Public Library, Boston, Mass.
MH—Harvard University, Cambridge, Mass.
MWC—Clark University, Worcester Mass.
MiD—Public Library, Detroit, Mich.
MiU—University of Michigan, Ann Arbor, Mich.

MnU—University of Minnesota, Minneapolis, Minn.
MoU—University of Missouri, Columbia, Mo.
NBuG—Grosvenor Library, Buffalo, N.Y.
NN—Public Library, New York, N.Y.
NNA—American Geographical Society, New York, N.Y.
NNAAl—American Alpine Club, New York, N.Y.
NNBG—New York Botanical Garden, New York, N.Y.
NNC—Columbia University, New York, N.Y.
NNC–M—Columbia University, Medical Library, New York, N.Y.
NNE—Engineering Societies' Library, New York, N.Y.
NNM—American Museum of Natural History, New York, N.Y.
NNN—New York Academy of Medicine, New York, N.Y.
NhD—Dartmouth College, Hanover, N.H.
NhD–Stef—Stefansson Library, Dartmouth College, Hanover, N.H.
NPOslo—Norsk Polarinstitutt, Oslo, Norway.
OCl—Public Library, Cleveland, Ohio.
OO—Oberlin College, Oberlin, Ohio.
OU—Ohio State University, Columbus, Ohio.
PP—Free Library of Philadelphia, Philadelphia, Pa.
PU—University of Pennsylvania, Philadelphia, Pa.
SPRI—Scott Polar Research Institute, Cambridge, England.
ViU—University of Virginia, Charlottesville, Va.

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AGARD. *See under* North Atlantic Treaty Organization.

69456. AASE, ASBJØRN. Fraktietjevning på bakgrunn av Nord-Norges fraktkostnader. Bodø, Nordlands framtids trykkeri, 1958. 57 p. tables. (Studieselskapet for nord-norsk naeringsliv. Skrift nr. 21.) 10 refs. Text in Norwegian. **Title tr.:** Freight adjustment on the basis of North Norway freight costs.

Discusses the effects of government subsidizing various raw materials and consumers' goods, to equalize retail prices throughout the country. Prices tend to be higher in the North than elsewhere because of distance from domestic industrial centers and from foreign ports. Subsidy arrangements in effect are noted; more are advocated. Freight subsidies in certain classes however, would eliminate the competitive advantage of some North-Norwegian industries serving the local market. Some branches of industry could contribute to price equalization throughout the country by introducing unqualified c.i.f.-delivery. (SPRI.)

69457. AASE, ASBJØRN. Turistnaeringen i Nord-Norge. Bodø, Nordland boktrykkeri, 1959. 217 p. illus., tables, graphs, diagrs., 3 fold. maps. (Studieselskapet for nord-norsk naeringsliv. Skrift nr. 23.) 20 refs. Text in Norwegian. **Title tr.:** The tourist industry in North Norway.

Comprehensive study, the first of its kind in Norway, of regional development trends in this industry, its capacity for expansion, and how far the possibilities are being exploited. Living accommodations and transportation facilities are mainly dealt with; travel by ship, rail, bus, airplane, and car is treated in detail. Statistics on the volume of traffic and its economic return are included. Seasonal fluctuations are considered. Recommendations are given on means of stimulating the industry. A discussion of problems peculiar to certain (12) localities concludes the presentation. (SPRI.)

69458. AASEN, OLAV, *and* **A. REVHEIM.** Håbrand-, pigghå- og makrellundersøkelser i Nordsjøen med F/F "Peder Rønnestad" i april-mai 1960. (Fiskets gang, Mar. 2, 1961. årg. 47, nr. 9, p. 196-97, table, graph, sketch map.) Text in Norwegian. **Title tr.:** Porbeagle, shark and mackerel studies in the North Sea by the R/V *Peder Rønnestad* in April-May 1960.

Reports negative results for tagging purposes in waters off the Norwegian coast 59°–62° N. but echo surveys and asdic proved valuable in locating runs of mackerel. Early spring ocean trawling of mackerel may become a valuable addition to Norwegian fisheries. (DA.)

69459. AASEN, OLAV. Pigghåundersøkelsene. (Fiskets gang, Jan. 12, 1961. årg. 47, nr. 2, p. 36-44, tables, graphs, sketch map.) Text in Norwegian. Summary in English. **Title tr.:** Dogfish investigations.

Presents a biological description of *Squalus acanthias,* a small species of shark of increasing importance to Norwegian fisheries. Its world-wide distribution with emphasis on North Atlantic waters is reported, also results of Norwegian tagging in the North and Norwegian Seas 1958-1960. Its migration route seems to be between the Shetlands and Orkneys (summer) and along the Norwegian west coast about to 64° N. (winter), but the tagging results include Vestfjord on the Arctic Circle and the Barents Sea. Mortality from natural causes is about 20%/yr., from fishing: 7%. The stock on Norwegian grounds is estimated at roughly 100,000 tons; a substantial portion in Norwegian waters the year round. (DA.)

69460. AASEN, OLAV. Pigghåundersøkelser i området Kråkenes–Sandnessjøen i januar 1961. (Fiskets gang, Apr. 6, 1961. årg. 47, nr. 14, p. 296-97, table, sketch map.) Text in Norwegian. **Title tr.:** Dogfish investigations in the Kråkenes–Sandnessjøen area in January 1961.

Reports investigations off the Norwegian coast 62°–66° N., with substantial concentrations located only at the Frøya Bank about 64° N. 8°E.; these sharks were assumed to have migrated to the ocean. Stations (15), vessel, date, location, depth, temperature, shark catch, number tagged, etc. are tabulated. (DA.)

69461. ÅSLING, NILS G. Skogen och grundskolan. (Skogsägaren, Sept. 1961. årg. 37, nr. 9, p. 260-61.) Text in Swedish. **Title tr.:** Forestry and the public schools.

Notes the proposed curricula revision with four basic and rather general courses replacing nine specialized vocational courses for ninth year students. The basic mechanical, theoretical and technical knowledge requirement is recognized. In areas where forestry is the main industry, such instruction should be taught as applicable to lumbering and the wood industry. (DA.)

ÅSTOT, IBBA, *see* Näslund, M., *& others.* Samernas skolgång: betänkande . . . 1960. No. 74203

69462. ÅSTRAND, HALVDAN. Farming in Sweden.

Federation of Swedish Farmers' Associations and Federation of Agricultural Societies, 1959? 32p. illus., tables, maps.

Presents a general characteristic of Sweden and its 18 agricultural areas from the fertile Skåne in the south to barren Norrbotten in the north; the cultivated area, less than 10% of the total 174,000 sq. mi. area, consists mostly of very small farms. Social and economic conditions and the gradual decline of the agricultural population are outlined. Crops (75% forage crops), dairy and other agricultural products are described. Agricultural policy is outlined, including the system of state subsidies and loans and state-directed rationalization. Current trends, the transformation of farming from barter-type to a monetary economy, production of raw materials for industry, specialization, mechanization, etc. are discussed. (DA.)

ABAIMOVA, G.P., *see* Koksharskaîa, K.B., & G.P. Abaimova. O faune Tabulata... 1962. No. 72892

ABBOTT, J.E., *see* MacCanon, D.M., & *others*. Effect of oxygen inhalation... 1962. No. 73673

69463. ABEL, JOHN F., *Jr.* Ice tunnel closure phenomena. Hanover, N.H., Jan. 1961. v, 37 p. illus., tables, graphs, diagrs. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Technical report 74.) 21 refs.

Analyzes data on closure obtained in two tunnels near Camp Tuto during 1955-1958: maximum occurred at the center of unsupported roof, wall, or floor spans; the vertical rate decreased about 2% from the center of a room to about six ft. from the wall, and about 30% from this point to the wall. Approx. 30% of vertical closure at the center of the span is due to flexure of floor and roof, 70% to shortening of the wall height. Over 80% of closure due to flexure of floor and roof results from flexure of the floor. Empirical equations are given for predicting the maximum horizontal and vertical rates within the limiting ranges of temperature: 15–25° F.; overburden depths: 30–200 ft.; and unsupported spans: 5–38 ft. The construction of large openings in glacial ice is not feasible at depths exceeding 150 ft. because of the rapid closure rates at these depths. (CaMAI.)

69464. ABEL, JOHN F., *Jr.*, *and* R.W. JENNINGS, *Jr.* Tunneling in glacial till. (Explosives engineer, Sept.–Oct. 1961. v. 39, no. 5, p. 135–42, illus., table, graph, diagrs., map.)

Describes the excavation of a 600 ft. long tunnel in permafrost near Camp Tuto, North Greenland, during 1959–1960. The first (1959) section is 9 x 10 ft. wide and the second, 6 x 7 ft.; one small and two large rooms branch off the main tunnel. The first 80 ft., mined in the active layer, required support to prevent caving; in the others temperature was sufficiently low to preserve the frozen state of the ground. Burn-cut and V-cut rounds were used in blasting; nine different explosives were tested (cf. table), the most efficient being 50% nitroglycerine dynamite, and 100% blasting gelatin. Percussion drills proved superior to diamond equipment for fast production of blast holes. Drilling-rate records are reviewed and drill-bit wear patterns are illus. and discussed. Costs of drill and explosives are shown. (DLC.)

ABOLKALNS, ÎU. ÎA., *see* Bartosh, T.D., & ÎU. ÎA. Abolkalns. Golotsenovye... 1962. No. 70053

ABRAHAMSSON, TORE, *see* Schwartzkopf, K.A., & T. Abrahamsson. En fjälldall... Tjuolta. 1961. No. 75428

69465. ABRAMOV, V.P., *and* G.I. DEMBSKAÎA. Novye svedeniîa o mezozoĭskikh otlozheniîakh severnoĭ chasti Pechorskoĭ depressii. *(In:* Materialy po geologii... Evropeĭskoĭ chasti SSSR, sbornik stateĭ 1961, vyp. 1, p. 42-48, map, fold. cross-sections.) 4 refs. Text in Russian. **Title tr.:** New data on Mesozoic deposits in the northern part of the Pechora depression.

Describes the distribution and stratigraphy of Triassic, Jurassic and Cretaceous deposits based on 1958-1959 study of drillings around Nar'yan Mar, in the Ust'–Usa area, and the Laya River basin. Their fauna and flora are reported. Comparison is made of the Jurassic and Cretaceous deposits. Tectonic development of the region is briefly characterized. (DLC.)

69466. ABRAMOV, V.P., *and others*. Ob uchastii ledovogo faktora v obrazovanii iurskikh otlozheniĭ severa Pechorskoĭ sineklizy. (Akademiîa nauk SSSR. Doklady, Aug. 21, 1961. t. 139, no. 6, p. 1419–22, map.) 10 refs. Text in Russian. *Other authors:* V.I. Belkin *and* L.L. Khaĭtser. **Title tr.:** On participation of the glaciation factor in the formation of Jurassic deposits in the northern Pechora syncline.

Describes a drill log of Middle and Upper Jurassic deposits of the Khoseda-Khard (67°02′N. 59°24′E.) region, in the western part of the Chernysheva Ridge. Quantity and extent of the psephitic material are reported. The distribution of boulders and gravels in bedded silts and clays is outlined and the action of river and fast ice is described. The existence of a glacial basin in Middle and upper Jurassic times is recognized and its conditions briefly summarized. (DLC.)

69467. ABRAMOVA, A.L., *and others*. Opredelitel' listostebel'nykh mkhov Arktiki SSSR. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 715 p. illus. tables. Refs. Text in Russian. *Other authors:* L.I. Savich-Lîubitskaîa (editor) *and* Z.N. Smirnova. **Title tr.:** Identification manual to arctic leafy-mosses of the USSR.

Comprehensive work including over 500 species belonging to 131 genera and 43 families. A general part (p. 5–50) deals with the anatomy and physiology of mosses, their parts and organs, reproductive organs, and also with techniques of collection, conservation, identification, etc. The special part (p. 50–682) contains identification keys to all taxa and their detailed description. It includes the three subclasses of mosses: Sphagnidae, Andreacidae and Bryidae. On the species level, it deals with gross appearance and color, morphometry and anatomy (well illus.), habitat, distribution in the Arctic and elsewhere, ways of reproduction, etc. Both the tundra and taiga (subarctic) forms are included. A technical vocabulary and alphabetic lists of Russian and Latin names of mosses are appended. (DLC.)

ABRAMOVA, A.L., *see also* Savich, L.I., & *others*. Opredelitel'... mkhov. 1961. No. 75383

69468. **ABROSKIN, P.I.** Rabotu filialov na uroven' novykh zadach. (Akademiîa nauk SSSR. Vestnik, May 1962. god 32, no. 5, p. 60–64.) Text in Russian. **Title tr.**: The work of the branches must be raised to the level of new tasks.

Evaluates the achievements of seven branches of the Academy of Sciences transferred in 1961 to jurisdiction of the State Committee for Coordination of Research in RSFSR. Its chairman outlines their new functions. The Kola, Karelian, Komi and Ural branches of the Academy are among those concerned, as are the Institute of Forestry and Forest Chemistry in Arkhangel'sk and the Limnological Laboratory in Leningrad. (DLC.)

69469. **ABS, OTTO AUGUST HANS, 1891–** Das Krankheitsbild der sogenannten "Lungenerfrierungen" in hohen Breiten. (Wehrmedizinische Mitteilungen, 1960, no. 9, p. 137–41; no. 19, p. 157–59,) 33 refs. Text in German. **Title tr.**: The symptoms of the so-called "lung chill" in high latitudes.

Discusses earlier reports concerning this condition, pathogenesis, symptoms and death during cold exposure, symptoms and death after cold exposure, "lung chill" among German prisoners in Vorkuta and Noril'sk, environmental conditions favoring the development of this cold-injury, prophylaxis. (DNLM.)

69470. **ABS, OTTO AUGUST HANS, 1891–** Der Pemmikan in der Ernährung moderner Polarexpeditionen. (Polarforschung, Bd. 5, 1960 *pub.* Nov. 1961. Jahrg. 30, Heft 1–2, p. 19–21.) 7 refs. Text in German. **Title tr.**: Pemmican in the diet of modern polar expeditions.

Reviews the advantages of concentrated food on expeditions and notes the shortcomings of pemmican as exclusive diet. Combined with other foodstuffs however, it is apt to keep field personnel healthy and active for months. (CaMAI.)

69471. **ABS, OTTO AUGUST HANS, 1891–** Über akustische Wahrnehmungen in hohen Breiten. (Medizinische Welt, Mar. 11, 1961, no. 10, p. 492–96.) 27 refs. Text in German. **Title tr.**: On acoustic sensations at high latitudes.

Describes the effect of the "dead quiet" upon non-accustomed, western minds; its depressing and hallucinogenic effects; audibility of sound over great distances at low temperatures; auroral noises; noises from exhaled air; internal noises (in the thorax), etc. (DNLM.)

69472. **ABS, OTTO AUGUST HANS, 1891–** Vergiftungsmöglichkeiten in der Arktis. (Polarforschung, Bd. 4, 1959 *pub.* May 1961. Jahrg. 29, Heft 1–2, p. 143–53.) 42 refs. Text in German. **Title tr.**: Possibilities of poisoning in the Arctic.

Discusses chances of human poisoning with strychnine (used by trappers against animals), alcohol poisoning, and most common of all carbon monoxide poisoning. Its origin, past noted cases, pathology, symptoms, and first aid are discussed. Food poisoning, its causes and sources, including poisonous animals and plants, are also considered. (CaMAI.)

69473. **ABS, OTTO AUGUST HANS, 1891–** Vergiftungsmöglichkeiten in der Arktis, 1. (Medizinische Welt, Dec. 17, 1960, no. 51, p. 2715–18.) Text in German. **Title tr.**: Possibilities of poisoning in the Arctic, 1.

Discusses the limited number of poisons in the Arctic; the presence of cryolite at Ivigtut and fluorine poisoning; medicines as poisons; alcoholism; CO-poisoning, its sources, symptoms, first aid and prevention. (DNLM.)

69474. **ABS, OTTO AUGUST HANS, 1891–** Vergiftungsmöglichkeiten in der Arktis, 2. (Medizinische Welt, Dec. 24, 1960, no. 52, p. 2757–61.) About 70 refs. Text in German. **Title tr.**: Possibilities of poisoning in the Arctic, 2.

Discusses food poisoning and infections: botulism; typhus; non-specific intestinal troubles due to spoiled food; hypervitaminosis A; poisoning through consumption of certain fishes or molluscs; poisonous plants, and mushrooms. Fallout also is considered. (DNLM.)

69475. **ABSTRACTS OF NEW WORLD ARCHAEOLOGY.** Ed. by Richard B. Woodbury. Salt Lake City, University of Utah Press, 1960–1961, *in progress.* 2 v.:127, 184 p. maps.

Annual publication of the Society for American Archaeology. It includes a section on the American Arctic and the Asiatic North, with 28 publications of 1957–1959 abstracted in v. 1, and 54 of 1959–1960 in v. 2. (DSI.)

69476. **ABUSHIK, A.F.** Srednedevonskie leperditiidy Urala, Novoĭ Zemli i Sredneĭ Azii. (Leningrad. Vsesoîuznyĭ nauchno–issledovatel'skiĭ geologicheskiĭ institut. Trudy, nov. ser. 1961. t. 67, Materialy po geologii Urala, sbornik stateĭ, p. 133–51, diagr., plates.) 5 refs. Text in Russian. **Title tr.**: Middle Devonian Leperditiidae of the Ural, Novaya Zemlya, and Central Asia.

Describes Devonian ostracods of fam. Leperditiidae in collections from these regions, including the Taymyr. Nine forms, mostly new species are systematically described and illus. Gen. *Mölleritia* predominates, with seven forms; others are: *Leperditia planula* and *Herrmannina moderata.* The Eifelian was the age most favorable for Leperditiidae development. (DLC.)

ABYZOV, S.S., *see* Kriss, A.E., & *others.* Microorganisms as hydrological indicators... 1961. No. 73134

ACHAR, M.V.S., *see* Pamnani, M.B., & M.V.S. Achar. Effects of noradrenaline... 1960. No. 74631

ACKERMAN, ROBERT, *see* Krizhevskaîa, L. Î A., & *others.* Rabota sektorov Instituta arkheologii... 1962. No. 73149

ACOSTA, A.J., *see* Perry, B. Simulated waveriding dolphins... 1961. No. 74731

69477. **ACTON, A.B.** Incipient taxonomic divergence in *Chironomus*, Diptera? (Evolution, Sept. 1962. v.16, no. 3, p. 330–37, maps, diagrs., tables.) 10 refs.

Differences in the banding patterns of the giant chromosomes between European, Alaskan, and Canadian populations of *C. tentans* indicate genetic isolation of the last. Patterns in the Canadian and European flies differ, and those in a population at Anchorage, Alaska, resemble the European with some Canadian characteristics. It is postulated that the flies migrated to Canada

from Europe via Russia, Bering Strait, and Alaska: and that those who reached Canada during an interglacial period, 130,000–300,000 yrs. ago were cut off from the others by the glacial icecap. (DI.)

69478. **ADAM, N.V.,** *and* **V.P. ORLOV.** Godovye variat͡sii *H, D* i *Z* i opredelenie srednegodovykh velichin magnitnykh ėlementov po odnomesi͡achnym nabli͡udeni͡am v vysokikh shirotakh. (Geomagnetizm i aėronomi͡a, 1961. t. 1, no. 4, p. 583–87, tables, graph.) Ref. Text in Russian. **Title tr.:** Annual variations of *H, D,* and *Z,* and determination of mean annual values of magnetic elements from one-month observations in high latitudes.

Analyzes the mean monthly values of geomagnetic field elements, *H, D,* and *Z* from the data obtained during 1954–1959 at the Tikhaya Bukhta, Chelyuskin, Dikson, Tiksi, and Uelen polar stations. The form of the mean annual variations of *H* was found to be similar to that at the middle latitudes, but with double amplitude. This variation in *Z* was similar to that in *H,* but its amplitude 2–4 times greater. The mean annual variation of the *D* element was found to depend on the angle, ω, between magnetic and geomagnetic meridians, on the value of *H,* and its annual variation. (DLC.)

69479. **ADAM, N.V.,** *and* **V.P. ORLOV.** Godovye variat͡sii magnitnogo poli͡a v SSSR za period 1948–1959 gg. (Geomagnetizm i aėronomi͡a, 1961. t.1, no. 4, p. 572–82, table, graphs.) 3 refs. Text in Russian. **Title tr.:** Annual variations of the magnetic field in the USSR for the period of 1948–1959.

Investigates these variations from the data of 11 stations at or below 62°N., including Yakutsk and Srednikan. The form of annual variations, their amplitude, and its dependence on magnetic latitude are determined. (DLC.)

ADAMS, C.M., *Jr., see* Kingery, W.D., & C.M. Adams. Basic research ice snow. . . 1962. No. 72794

ADAMS, GEORGE R., *see* Pettus, T. Expedition . . . . 1962. No. 74764

69480. **ADAMS, J.I.** Laboratory compression tests on peat. (*In:* National Research Council of Canada . . . Proceedings of the Seventh Muskeg Research Conference. . . 1961. p. 36–54, graphs.) 8 refs.

Describes, methods and results of consolidation, and triaxial strength tests carried out in the Ontario Hydro Commission soils laboratory on peat samples from sites in the Cochrane-Kapuskasing area of Northern Ontario. Results indicate that the consolidation under load is mainly the expulsion of pore water under excess hydrostatic pressure which continues for a fairly long time because of greatly reduced permeability. The triaxial compression tests show a very high drained strength, but the undrained strength is shown to be closely related to pore pressure. Test results are graphically shown. (DLC.)

69481. **ADAMS, JEAN B.** Aphid survival at low temperatures. (Canadian journal of zoology, Oct. 1962. v. 40, no. 6, p. 953–56, illus., table.) 10 refs.

Reports on nine species of these insects exposed to sub-freezing temperatures. None survived –20° or 0°F. when exposed even four hours. One percent of three species survived similar exposure of 10° F. At higher temperatures survival was generally higher. (DLC.)

69482. **ADAMS, PAUL ERNEST, 1937–** . Arctic island hunter. London, G. Ronald, 1961. 136 p. plates, maps.

Recounts experiences of an Englishman during a year's (1958–1959) sojourn on Vestspitsbergen with a Norwegian hunter. They traveled by boat from Isfjord to the northern part of the island to fish for salmon in Wijde Fjord, then returned to winter at the hunter's hut about 36 mi. from Longyearbyen, where they shot ptarmigan, trapped foxes, etc. Observations and impressions are given of the countryside, bird and animal life, weather, isolation during the polar darkness, etc. The foreword is by O. Birketvedt, Governor of Svalbard. (DLC.)

69483. **ADAMS, THOMAS,** *and* **R.E. SMITH.** Effect of chronic local cold exposure on finger temperature responses. (Journal of applied physiology, Mar. 1962. v. 17, no. 2, p. 317–22, illus.) 20 refs.

Subjects immersed their right index finger four times daily for 20 min. in an ice-water bath. Fingers thus exposed for a month showed in subsequent tests a "local conditioning" indicated by earlier and quicker rewarming, higher and more labile final temperature, and pain reduced or absent. (DLC.)

69484. **ADAMS, THOMAS,** *and others.* The effect of glycine administration on human response to an acute standardized cold stress. Fort Wainwright, Alaska, 1961. 12 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60–19.) 15 refs. *Other authors:* E.J. Heberling *and* R.B. Payne.

Reports 35 grams of glycine, administered to subjects prior to cold exposure, had no effect upon rectal and extremity-surface temperatures, or upon whole-body metabolic rates. Hence the value of glycine in mitigating cold exposure is questioned. (CaMAI.)

ADAMS, THOMAS, *see also* Heberling, E.J., & T. Adams. Relation . . . acclimatization. 1961. No. 72082

69485. **ADEY, A.W.,** *and* **W.J. HEIKKILA.** Rocket electron density measurements at Fort Churchill, Canada. (Canadian journal of physics, Jan. 1961. v. 39, no. 1, p. 219–21, graph, plate.) 4 refs.

Presents electron density profile obtained by means of an Aerobee–150 rocket launched during quiet ionospheric conditions at 1237 CST. Sept. 17, 1959. (DLC.)

69486. *ADHESIVES AGE.* Seven layer bonded sandwich provides skis with permanent camber. (Adhesives age, Mar. 1962, v. 5, no. 3, p. 33, diagr.)

The Hart Ski Manufacturing Co. of St. Paul, Minn. has developed skis with permanent camber, durable edges, and dampened spring action for better control at high speeds, by bonding high carbon spring steel under high temperature and pressure to layers of aluminum, wood particle board and phenolic plaster. From top to bottom the seven layers are: plastic, steel, aluminum, particle board, aluminum, steel, and plastic. The spring action of the skis is controlled by the inner layer of compressed particle board, which dampens the resiliency of the two steel layers. Plastic is used for the exterior surfaces. The seven layers are bonded

with a phenolic resin and molded together under 250 lb./sq. in. pressure at 325°F. for about one hr. Grades of stiffness (soft, medium, hard) are governed by the thickness of the aluminum layer which varies from 0.02–0.03 in.—From CRREL. (DLC.)

ADLER, LETA MCKINNEY, *see* Lindman, E.L. Foundation for Alaska's public schools... 1961. No. 73512

69487. ADOLPH, EDWARD FREDERICK, 1895– *and others.* Ventilation of lungs in deeply hypothermic rats. (Journal of applied physiology, Sept. 1961. v. 16, no. 5, p. 819–26, illus.) 23 refs. *Other authors:* A. Naberschnig *and* D.P. Orchard.

Mathematical analysis of ventilation, O_2–consumption and heart rate and their relationships, at esophageal temperatures of 8–24°C. The proportion between the three parameters was found to change significantly with temperature. Effects of carotidectomy and of CO_2 were also studied. (DLC.)

ADOLPH, EDWARD FREDERICK, 1895– , *see also* Byon, Y.K., & E.F. Adolph. Oxygen tissues... ..deep hypothermia. 1961. No. 70494

69488. ADOLPH, ROBERT J., *and others.* Heat loss from the heart of the dog. (American journal of physiology, Jan. 1962. v. 202, no. 1, p. 41–44, illus.) 7 refs. *Other authors:* G. Pinardi *and* R.F. Rushmer.

Study of temperature difference between the left ventricular coronary inflow and outflow. The difference amounted to 0.5°C. on the average. Isoproterenol, l-epinephrine, and acetylstrophanthidin increased the temperature gradient and the coronary sinus flow and consequently the myocardial heat loss. (DNLM.)

69489. ADRIANOV, N.F., *and* **L.I. BARON.** Primenenie igdanita pri skvazhinnoĭ otboĭke krepkikh porod na rudnike Kaula. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p. 77–86, diagrs., tables.) Text in Russian. **Title tr.:** Use of igdanite for blasting hard rock at the Kaula mine.

This explosive, developed by L.I. Baron in 1957–58 for the Institute of Mining, is 96% granulated ammonium nitrate and 4% diesel fuel. Its applicability for blasting difficult rock was tested at the Kaula nickel ore pit of the Pechenganikel' Combine in Kola Peninsula. The tests are described in detail and igdanite compared with ammonite B-3 for effectiveness. The two give about the same results, but igdanite is much cheaper than ammonite (596 r. and 3,600 r. respectively); it offers savings of up to 2.4 million rubles a year. (DLC.)

69490. ADROV, M.M. O gidrologicheskom rezhime raĭona TSentral'noĭ vozvyshennosti Barentseva moriĭa. (Okeanologiĭa, 1962. t. 2, vyp. 6, p. 999–1008, maps.) 12 refs. Text in Russian. **Title tr.:** On the hydrological regime in the area of the central plateau of the Barents Sea.

Reports the regime of the area, approx. 73°–77°N. 30°–45°E., from investigations of the R/V *Issledovatel'* in summer 1940, with observations of the previous 40 and subsequent 20 years taken into account. For investigation of current flow, isopycnic analyses were used, as worked out by A.E. Parr. Prevailing currents are reported. Relative temperature of water masses on the surface and near the bottom are characterized. Distribution of phosphorus, oxygen, nitrites, and other hydrochemical elements is also reported. (DLC.)

69491. ADROV, M.M. Rezul'taty okeanograficheskikh rabot Sovetskogo Soĭuza i skandinavskikh stran v Norvezhskom i Grenlandskom moriakh v iĭune 1960 g. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten', 1961. no. 1. (15), p. 22–26, maps.) Text in Russian. **Title tr.:** Results of oceanographic work of the Soviet Union and the Scandinavian countries in the Norwegian and Greenland Seas during June 1960.

Reports on the hydrographic and plankton studies and of herring reconnaissance carried out in cooperation with Norwegian, Danish and Icelandic outfits. Horizontal and vertical extent of each vessel's investigation and the problem it studied are stated as well as the results of this composite study. (DLC.)

69492. AFANAS'EV, A.A. Velikaia arkticheskaia magistral'. (Morskoĭ flot, Dec. 1962. god 22, no. 12, p. 1–3.) Text in Russian. **Title tr.:** The great arctic route.

Sketches the 17–20th century exploration of the Northern Sea Route, noting its current importance for the industrial development of the northern regions. Problems of freighter convoy under icebreaker escort are described, especially cutting a channel through the ice of Vil'kitskogo Strait before breakup. Hydrographic and meteorological work of shore and inland polar stations, prominent personnel, etc. are noted. (DLC.)

69493. AFANAS'EV, A.P. O sostave glinistoĭ fraktsii chetvertichnykh otlozheniĭ Kol'skogo poluostrova. (*In:* Voprosy geomorfologii... Kol'skogo poluostrova, 1960. no. 1, p. 151–59, tables, fold. diagrs.) 9 refs. Text in Russian. **Title tr.:** On composition of clay fraction of Quaternary deposits of the Kola Peninsula.

Reports a study of extremely fine-grained clays (less than 0.001 mm.) collected from moraines and fluvial-glacial deposits also of lacustrine and marine clays, bottom mud of Lakes Umbozero and Imandra, and the Barents Sea. Differential thermal analyses, X-ray and chemical analyses are reported. The main minerals are found to be hydromica (illite), hydrochlorite, hydrobiotite and vermiculite. Clay fraction of moraines of the Khibiny and Luyavrurt alkaline massifs is characterized by specific minerals: allophane, gibbsite, opal and iron hydroxide. (DLC.)

69494. AFANAS'EV, B.L. Neotektonika Pechorskogo ugol'nogo basseĭna i prilegaiushchikh raĭonov Severnogo Priural'ia. (*In:* Materialy po geologii... Evropeĭskoĭ chasti SSSR, sbornik statei 1961, vyp. 1, p. 84–89.) 20 refs. Text in Russian. **Title tr.:** Recent tectonics of the Pechora coal basin and adjacent regions of the Northern Ural.

Reports a study of the tectonic processes affecting the relief of the Pechora basin since the Neogene. Oscillating movements and undulatory deformations are recognized and their extent, speed

and effects on relief and river net are briefly characterized. (DLC.)

69495. **AFANAS'EV, B.L.**, *and others*. Ob usloviiakh obrazovaniia uglenosnykh otlozhenii v krae vykh progibakh na primere Pechorskogo basseina. (*In:* Materialy po geologii ... Evropeiskoi chasti SSSR, sbornik statei 1961, vyp. 1, p. 5–22, tables, maps & cross-sections incl. fold.) 15 refs. Text in Russian. *Other authors:* G.M. IAroslavtsev *and* V.I. IAtsuk. **Title tr.**: On development conditions of coal-bearing deposits in troughs as exemplified in the Pechora basin.

Outlines the geologic and paleogeographic conditions of this coal basin, in relation to the Ural foredeep. The 60,000 km² area is described, its tectonic structure, thickness of deposits, distribution of coalbeds, seam properties and their thickness, and other features. The Lower Permian Rudnitskaya series is treated in detail, its composition, distribution, lithology, facies, distribution of coal seams, etc. The geotectonic regime of coal development is analyzed. (DLC.)

69496. **AFANAS'EV, VIKTOR FEDOROVICH.** Pervyi vypusk IAkutskogo universiteta. (Vestnik vysshei shkoly, Sept. 1961. god 19, no. 9, p. 70.) Text in Russian. **Title tr.**: First graduation at Yakutsk University.

Reports 325 graduated in July 1961, by this University founded in 1956. It has six faculties; the 2,600 students include Yakuts, Evenki-Tungus, and Yukaghirs. (DLC.)

69497. **AFANAS'EV, VIKTOR FEDOROVICH.** Uspekhi narodnogo obrazovaniia v IAkutii. (Narodnoe obrazovanie, Oct. 1962, no. 10, p. 23–24.) Text in Russian. **Title tr.**: Progress of education in Yakutia.

Statistical report on expansion of the school system and increase of students since 1917. Current data on the 15 far North districts are given separately. The 148 schools (86 elementary, 20 seven-year, 20 eight-year, and 22 secondary) have 18,200 students; before the Revolution: four schools with four teachers and 166 pupils. Yakutia as a whole has 14 special secondary and higher educational institutions with 5,200 students, including 2,708, at Yakutsk University. With the additional 1,500 Yakuts at college in other republics, students in higher education represent 4.2% of the population of Yakutia. (DLC.)

69498. **AFANAS'EVA, V.I.** Magnitnaia aktivnost' vo vremia magnitnykh bur'. (Akademiia nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniia radiovoln. Trudy 1957. vyp. 12 (22), p. 20–70, tables, graphs.) 35 refs. Text in Russian. **Title tr.**: Magnetic activity during magnetic storms.

Investigates the irregular part of the field of magnetic storms from data collected at the observatories of Yakutsk, Sverdlovsk, Kazan', Tbilisi and Tashkent for the period 1938–1948, besides partial material obtained from Bukhta Tikhaya, Dikson, Matochkin Shar, Uelen, Srednikan, Tromsø, and from some other stations in lower latitudes. Descriptions and detailed characteristics are given of very strong, strong, and moderate magnetic storms. New regularities in magnetic activity and its morphology are established. Suggestions are made for their interpretation, and for that of some earlier known peculiarities of magnetic storms, and for a differentiation of the processes originated far beyond the ionosphere from those of atmospheric origin. (DLC.)

AFFIFI, R., *see* Welch, H.F., *& others*. Hypothermia & blood ammonia ... 1961. No. 76521

69499. **AFONINA, R.G.** Obzor geomagnitnoi aktivnosti za 1952–1959 gg. i nekotorye razlichiia magnitnykh bur' s vnezapnym i postepennym nachalom. (Geomagnetizm i aéronomiia, 1961. t. 1, no. 3, p. 395–403, tables, graphs.) 13 refs. Text in Russian. **Title tr.**: A survey of geomagnetic activity in 1952–1959, and certain differences between sudden-commencement and gradual-commencement magnetic storms.

Presents data on mean annual and mean monthly magnetic characteristics and magnetic storms recorded at five polar and 11 other middle to high northern-latitude stations. The solar cycle, annual, and 27-day recurrences of geomagnetic variations are investigated. (DLC.)

69500. **AFONSO, SKODA**, *and others*. Temperature variations in the venous system of dogs. (American journal of physiology, Aug. 1962. v. 203, no. 2, p. 278–82, illus.) 8 refs. *Other authors:* J.F. Herrick, W.B. Youmans, G.G. Rowe *and* C.W. Crumpton.

Describes temperature gradients between different regions of this system and, in considerable detail, a rhythmicity in these temperatures. A variety of experiments indicate that this rhythmicity "correlates very well with the respiratory rate." The details of this correlation are elaborated. (DLC.)

69501. **AGAFONOV, K.** Zhiloi kompleks dlia arkticheskogo poberezh'ia. (Arkhitektura SSSR, 1960, no. 2, p. 36–38, illus., sketch-maps, profiles.) Text in Russian. **Title tr.**: A housing complex for the arctic coast.

Presents design for a circular dwelling built around a protected court, a compact housing unit claimed to be suited to climatic conditions of the far North and Northeast. Arkhangel'sk or Igarka is suggested as base for the lumber required, and Ukhta for oil or gas supply. (DLC.)

69502. **AGAFONOV, N.A.** Élektroènergeticheskaia sistema ledokola "Lenin." (Sudostroenie, 1961. god 27, no. 8, p. 30–33, diagr.) 2 refs. Text in Russian. **Title tr.**: The electric power system of the icebreaker *Lenin*.

Describes the electrically operated machinery and gear, power-generating and power-distributing systems (diagr.), taking into account the specially high electricity consumption of the *Lenin*, auxiliary and emergency powered generators, transformers, etc. (DLC.)

69503. **AGANIANTS, E.K.**, *and* **V.F. NOVIKOV.** Vosstanovlenie uslovnykh refleksov u sobak posle gipotermii. (Zhurnal vysshei nervnoi deiatel'nosti, 1960. t. 10, vyp. 4, p. 569–74, illus., tables.) 6 refs. Text in Russian. Summary in English. **Title tr.**: Restoration of conditioned reflexes in dogs after hypothermia.

Reports a study of secretory-alimentary and

defensive-respiratory conditioned reflexes following hypothermia of 24°C. rectal temperature. The restoration of the first mentioned reflexes began at a body temperature of 36° and ended 4–9 days after cooling; the second began at 31°–35°C. and was complete in one day. (DNLM.)

AGANĬANTS, E.K., *see also* Starkov, P.M., & E.K. Aganĭants. Vosstanovlenie ÈÉG . . . 1962. No. 75906

69504. AGEENKO, P.D. Nam nuzhny okhotovedy. (Okhota i okhotnich'e khozĭaĭstvo, Aug. 1961. god 7, no. 8, p. 12.) Text in Russian. **Title tr.:** We need hunting experts.

Notes weaknesses in the hunting industry, poaching in the Khanty-Mansi National District, and need for a hunting specialist in every *rayon;* elk-hunting without a license is done is several areas of the District. (DLC.)

69505. AGER, BENGT HANSSON. Lastbilskörning på flytande is; några undersökningsresultat och praktiska erfarenheter från Kanada. (Skogen, Oct. 27, 1961. årg. 48, nr. 21, p. 380–81, illus., table.) 3 refs. Text in Swedish. **Title tr.:** Truck driving on floating ice; research results and practical experience from Canada.

Swedish techniques are considered better than Canadian in building ice landings, but Swedish use of the facility more accident prone. Breakthrough of ice 40 cm. or more thick is caused by excessive speed, continuous traffic, loaded trucks standing one minute or more, or by ice cracks forming at very low temperatures, by ice in layers with air or water between, by ice attached to stones on shore. etc. Based on study in 1960/61 at the Snow and Ice Section of the National Research Council's Division of Building Research and a visit to the Abitibi Pulp and Paper Co. Iroquois Falls Division in northwest Ontario. (DA.)

69506. AGER, BENGT HANSSON. Snow roads and ice landings. Ottawa, Aug. 1961. 9 p. illus., graphs, tables. (National Research Council of Canada. Division of Building Research, Technical paper no. 127. NRC 6411.) 19 refs. *Preprinted from:* Pulp and paper magazine of Canada, Woodslands section, July 1961; *reprinted in:* Canadian mining journal, Jan. 1962, v. 83, no. 1, p. 55–62.

Reviews some Scandinavian studies of snow and ice problems in logging in relation to Canadian conditions. Preparation of strip roads for horses and small tractors in deep-snow regions may be adapted to Canadian conditions, but Swedish experience generally is not applicable to the truck haul snow road used in Canada. Introduction of light, portable, screw or propeller pumps however, would reduce cost in flooding of ice landings; and some snow compaction equipment used on Swedish ice landings would complement Canadian equipment. (DLC.)

69507. AGER, BENGT HANSSON. Studies on the density of naturally and artificially formed freshwater ice. (Journal of glaciology, June 1962. v. 4, no. 32, p. 207–214, tables, graphs.) 4 refs. Summary in French and German.

Notes the process of constructing ice landings for log-storage in Scandinavia and Canada, and the problem of different density in the original ice and that added by surface flooding. Observations are reported on the density of river and lake ice of natural growth in the Arvidsjaur area of northern Sweden, and the Ottawa and the Iroquois Falls areas in Ontario, etc, and on that artificially formed. The effect of initial snow density, size and shape of snow crystals, rate of water spread and rate of freezing on the density of snow-ice obtained was studied in the laboratory and is presented in graphical form. The observations indicate that snow-ice formed under natural conditions will probably have a density of 0.85-0.91 g/cm³. The classification of snow ice is discussed briefly.—From author's abstract. (DLC.)

69508. AGRANAT, GRIGORIĬ ABRAMOVICH, *and* **V.F. PUZANOVA.** Ėnergetika, sel'skoe i promyslovoe khozĭaĭstvo Amerikanskogo Severa. Moskva, Izd-vo Akademii nauk SSSR, 1962. 184 p. tables, fold. maps. (Akademiĭa nauk SSSR. Gosėkonomsovet SSSR. Sovet po izucheniĭu proizvoditel'nykh sil, Komissiĭa po problemam Severa.) 211 refs. Text in Russian. **Title tr.:** Energetics, agriculture, fishing and hunting economy of the American North.

Review based on recent, mostly American publications, the junior author covering the power resources, engineering, and fishery of northern Canada and Alaska, and Agranat dealing with agriculture, stockraising, wood industry, and natives' livelihood. The natural resources, their current (1950's) development, their potential, and their economic importance are reported. Power installations and supply, commercial fisheries, acclimatization of food plants and animals, farming including dairy cattle and poultry, lumbering including losses from forest fires and tree diseases, are treated in turn. The economic plight of Indians, Eskimos, and Aleuts traditionally engaged in fur trade, reindeer raising, caribou and sea mammal hunting, etc. is discussed in historical and ecological context, with selected statistics since 1880. Current pertinent measures are sketched in wildlife conservation and management, fur farming, handicrafts, etc. (DLC.)

69509. AGRANAT, GRIGORIĬ ABRAMOVICH. Osobennosti osvoeniĭa severa Ameriki. (Mirovaĭa ėkonomika i mezhdunarodnye otnosheniĭa, May 1962, no. 5, p. 117–21.) 23 refs. Text in Russian. **Title tr.:** Characteristic features in the development of the American North.

Reviews industrial and economic development in Alaska and Canada during the previous decade, mainly from data of Canadian publications of 1958–1961. Military expansion, population and labor problems, exploitation of Eskimo, Aleut and Indian minorities, etc. are also discussed with emphasis on the failings of "colonial" administration. (DLC.)

69510. AGRANAT, GRIGORII ABRAMOVICH. Polozhenie korennogo naseleniĭa kraĭnego Severa Ameriki. (Sovetskaĭa ėtnografiĭa, July-Aug. 1961, no. 4, p. 100–113, table.) 35 refs. Text in Russian Summary in English. **Title tr.:** The state of the aboriginal population of the American far North.

Describes the failure of Western powers to

solve the present-day economic problems of Indians, Aleuts and Eskimos, including the Greenlanders. The ill effects of colonialism and unsuitable acculturative processes are discussed: uncontrolled hunting has destroyed the basis of the aborigines' economy and forced them into ill-paid seasonal employment. The introduced money economy has disrupted the traditional social pattern. Dependence upon imported foodstuffs and clothing has affected the health of the autochthonous population and facilitated spread of disease. Segregation in state and church schools, and insufficient number of schools, leaves a large percentage of native children without schooling. (DLC.)

69511. **AGRANAT, GRIGORIĬ ABRAMOVICH,** *and others.* Promyshlennost' i transport Amerikanskogo Severa. Otv. redaktor S.V. Slavin. Moskva, Izd-vo Akademii nauk SSSR, 1962. 271 p. tables, 9 maps, incl. 6 fold. (Akademiĭa nauk SSSR. Gosėkonom-sovet SSSR. Sovet po izucheniĭu proizvoditel'nykh sil, Komissiĭa po problemam Severa.) 238 refs. Text in Russian. *Other authors:* A.B. Kupriĭanov *and* V.F. Puzanova. **Title tr.:** Industry and transportation in the American North.

Outlines exploration, mining and transportation in Alaska and in Canada north of 53°N. in the East and north of 55–57°N. in the West. The survey, based chiefly on papers pub. in English in the 1950's, is presented in three sections. The first, dealing with the organization and technique of exploration, p. 12–76, was prepared by A.B. Kupriĭanov. It sketches the main government, scientific, military, academic and private organizations active in North, and reviews the geodetic surveying and mapping work, the geological surveying and prospecting, noting geophysical, geomagnetic, aeromagnetic, radiometric, electromagnetic, gravimetric, and seismic methods; road explorations, study of water power resources, and agricultural investigations are also considered. Section 2, on the mining industry (p.77–183), was prepared by V.F. Puzanova. Mineral resources and their development during 1939–1959 are reviewed: gold placers in Alaska and gold mines at Yellowknife, etc. in Canada; uranium ores at Port Radium, Uranium City, etc. with emphasis on mining and concentration technology (p. 111–30); iron ores at Schefferville, Wabush, Gagnonville, etc.; non-ferrous metals, copper, nickel, zinc, tin, lead, tungsten at Rankin Inlet, the Mayo region, etc. platinum, mercury and coal mining in Alaska, and oil and gas prospecting and drilling in Canada. In the last section, on transportation (p. 184–258), Agranat deals with automotive, over-snow, railroad, marine, river, air and pipe-line transportation. Icebreakers are discussed (p. 223–24), also utilization of the Northwest Passage and the possibility of under-ice transportation using large submarines (p. 228–30), Statistical data, mostly tabulated, are included on surveying mapping and prospecting methods, on mineral resources and their utilization, on mining output and costs, on construction of new settlements, etc. The volume of transportation by various methods is reported and discussed. Publications for each section are listed, viz: 69, 98, 71 items. (DLC.)

69512. **AGY, VAUGHN.** The types of blackout, their time variations, and the mechanisms producing them. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings, *pub.* 1962, v. 1, p. 93–97, illus., maps.) 18 refs.

Elucidates the result of statistical studies of polar blackout with regard to the maximum frequency of occurrence of blackout at later local times at higher latitudes. The explanation is based on the difference between the mechanism of production of solar protons responsible for the polar cap absorption events, and the mechanism of production of electrons from the outer Van Allen belt rendered asymmetric by the effect of the "solar wind," responsible for the blackouts at auroral and lower latitudes. (DLC.)

69513. **AGY, VAUGHN,** *and* **K. DAVIES.** Worldwide patterns of ionospheric blackout occurrence. (*In:* NATO. Radio wave absorption...*pub.* in Journal of atmospheric and terrestrial physics, Dec. 1961, *pub.* 1962. v. 23, p. 202-205.) 17 refs.

Presents introduction to a chart and a motion picture shown at the AGARD meeting on absorption in Athens in 1960. The chart (not reproduced here) summarized blackout activity in both hemispheres on the basis of IGY data from 60 ionosonde stations. The movie showed the sequence of events in the Northern Hemisphere during five periods of blackouts. Results to date of statistical studies of polar blackouts are discussed briefly. (DLC.)

69514. **AHLBÄCK, GERHARD.** Våra matnyttiga fiskar. (Västerbotten, Feb. 1961. årg. 34, nr. 1, p. 20-21, illus.) Text in Swedish. **Title tr.:** Our edible fishes.

Deals with *Coregonus albula* which occurs in inland rivers and lakes from south to north and in eastern coastal waters; one of a series of articles on edible fishes in Norrland, their characteristics, life history, with recommendations on fishing rights. (DA.)

69515. **AHLÉN, INGEMAR.** Ett fynd av *Podiceps griseigena holboellii* Reinhardt i Sverige. (Vår fågelvärld, 1961. årg. 20, nr. 4, p. 296-302, illus., text map, 2 tables.) 12 refs. Text in Swedish. Summary in English. **Title tr.:** A find of *Podiceps griseigena holboellii* Reinhardt in Sweden.

Compares measurements of a museum specimen of *P.g. holboellii* collected in Sweden in 1835 with those of 38 others, and distinguishes this variety of red-necked grebe from *P.g.griseigena* common to northwestern Eurasia, including Fennoscandia and the White Sea, Kola Peninsula, and western Siberian regions. *P.g.holboellii* occurs commonly in northeast Asia and across northern continental America. Thus the 1835 find in Sweden is unusual, though individuals of the species have also been reported from Greenland and Spitsbergen. (DLC.)

69516. **AHLFORT, BIRGITTA.** Den renskötande befolkningen i Sverige. Stockholm, A. Börtzell, 1961. 39 p. 6 graphs, 33 tables. (Uppsala. Universitet. Geografiska Institution. Meddelanden, ser. A, nr. 156.) Text in Swedish. **Title tr.:** The reindeer-raising population of Sweden.

Reports on a 1958-1959 demographic study to

determine the prospective status of this population. Reindeer husbandry is legally open to all Swedish Lapps, but the study covered only those actively engaged in it, and the other residents of their communities. Mountain and forest Lapp settlements are identified in regional groups. The age and sex population pyramids are analyzed. Changes in age classes are projected to 1973. The total population was 3,010, of which 1,715 were mountain Lapps in Norrbotten province. The three northernmost settlements there constitute a separate group by virtue of their large percentage of children under school age and a predicted population increase of 15% by 1973. Though future emigration is not predictable, and population decrease is expected in some areas anyway, status quo generally is expected to be maintained. (DLC.)

AHLFORT, BIRGITTA, *see also* Näslund, M., & *others*. Samernas skolgång; betänkande...1960. No. 74203

69517. AHLMANN, HANS WILLHELMSSON, 1889- Degradat͡sii͡a oledenenii͡a v Severnoĭ Shvet͡sii. (Akademii͡a nauk SSSR. Izvestii͡a, ser. geograficheskai͡a, Jan.-Feb. 1961, no. 1, p. 40-47, illus., maps incl. fold., diagr.) 13 refs. Text in Russian. **Title tr.:** Degradation of glaciation in northern Sweden.

Summarizes recent studies. The time span of deglaciation, extent and thickness of the glacial cover, movement of glaciers, glacial forms of relief, etc. are reviewed. Glacial recession in the Abisko area and other regions of North Sweden is described. Extant glaciers of Sweden are shown on map and current degradation is discussed. (DLC.)

59518. AHLMANN, HANS WILHELMSSON, 1889- Fridtjof Nansen. (Erdkunde, Mar. 1962. Bd. 16, Heft 1, p. 3-10, port.) Text in German.

Lecture delivered at the University of Bonn Nov. 4, 1961, in celebration of the centenary of Nansen's birth. The course of his life is depicted from youth, his prowess as outdoor athlete, explorer of Greenland, etc. The *Fram* expedition is characterized. Nansen's scientific achievement is noted, with tribute to gifted writer, great statesman, and humanitarian. (DLC.)

69519. AHLMANN, HANS WILHELMSSON, 1889-, *and* **B. KARLGREN.** *In memoriam,* Johan Gunnar Andersson. (Ymer, 1961. årg. 81, häfte 1, p. 63-66, port.) Text in Swedish. **Title tr.:** In memoriam, Johan Gunnar Andersson.

Contains obituary of this noted Swedish geologist, 1874-1960 who participated in A.G. Nathorst's 1898 expedition to Svalbard, in 1899 led his own to Bjørnøya, and during 1906-1916 directed the Swedish Geological Survey. His work in other areas also is outlined. (DLC.)

69520. AHLMANN, HANS WILHELMSSON, 1889- Norvezhskie poseleniĭa v Zapadnoĭ Grenlandii vo vremena vikingov i v srednie veka. (Vsesoi͡uznoe geograficheskoe obshchestvo. Izvestiĭa, Mar.-Apr. 1961, t. 93, vyp. 2, p. 114-21, maps.) 7 refs. Text in Russian. **Title tr.:** Norse settlements in West Greenland during Viking and medieval times.

Describes both eastern and western colonies from the time of Eric the Red, with the main seat, Gardar. History of these settlements and causes of their disappearance are discussed. The lack of wood for building boats and dwellings and the worsening of climate are considered the most important natural factors in the decline of Norse colonization. (DLC.)

AHMAD, N., *see* International Symposium on Arctic Geology, 1960...1961. No. 72392

69521. AHO, AARO E. Mayo District. (Western miner and oil review, July, Sept., Oct. 1962. v. 35, no. 7, p. 39; no. 9, p. 54; no. 10, p. 82.)

Reviews explorations, mostly for silver during 1962 in this Yukon Territory mining district. Indications of a larger silver-bearing area stimulated field prospecting and mapping programs (noted) by several companies and individuals. Promising discoveries by Peso Silver Mines west of Haggart Creek, by Silver Titan Mines on Galena Hill, and by the two companies jointly on Keno Hill, are cited among other results. (DGS.)

69522. AHO, AARO E. Prospecting and mineral development in Yukon. (Western miner and oil review, Feb. 1962. v. 35, no. 2, p. 31-35, illus.)

Discusses mining conditions and needs, favorable prospecting areas, recent discoveries and developments, various mineral potentialities. Included are lead-zinc-silver, especially northeast of the Tintina trench; silver-lead especially in the Mayo and Ketza River districts; gold, especially lode deposits in the Windy Arm and Klondike districts; copper especially in the St. Elias Mts.; tungsten, especially in the Logan Mts. near the Northwest Territories border; asbestos; mercury; nickel in the Kluane Range; and iron in the Ogilvie and Wernecke Mts. (DGS.)

69523. AHTI, TEUVO. Poron ravinnosta ja laitumista. (Lapin tutkimusseura. Vuosikirja, 1961. v. 2, p. 18-28, illus.) 9 refs. Text in Finnish. Summary and captions in English. **Title tr.:** Reindeer food and pastures.

Discusses food plants, feeding habits, and present distribution of reindeer in Finland. Their status is becoming critical due to the increase of herds (now nearly 200,000 head) and of economic activities (farming, power development) in Lapland. A system of evaluation and inventory of reindeer pastures is outlined; lichen pastures constitute the wintering ranges and usually determine the carrying capacity of the districts. Research on year-round rotation of pastures and herding areas is proposed. (SPRI.)

69524. AINSWORTH, J.E., *and others.* Upper-atmosphere structure measurement made with the pitot-static tube. (Journal of geophysical research, Oct. 1961. v. 66, no. 10, p. 3191-3212, tables, graphs, diagrs.) 35 refs. *Other authors:* D.F. Fox *and* H.E. LaGow.

Presents profiles of atmospheric pressure, density, and temperature at 20-110 km. above Ft. Churchill, computed from data obtained during a rocket flight on Oct. 31, 1958. The temperature profile had a major maximum at 58 km., a secondary max. at 82 km., and several minor max. at 80-115 km. A horizontal-wind profile in the region

80-115 km. was obtained. Average wind speed was 125 m./sec. and max., at 115 km., 250 m./-sec. Methods are prescribed for using the pitot-static tube to measure synoptic atmospheric structure and semidiurnal pressure variations at 20-80 km. altitude (DLC.)

69525. AINSWORTH, THOMAS H. "Klondike" Boyle. (Western miner and oil review, Oct. 1962. v. 35, no. 10, p.22–24.)

Account of a gold mine operator well known in Yukon Territory during and after the Gold Rush. (DGS.)

69526. AJO, REINO. An approach to demographical system analysis. (Economic geography, Oct. 1962.v. 38, no. 4, p. 359-71, map, graphs, tables.)

Uses 1951 statistics of rates of natural population increase, inward and outward migration, and total population change in several Finnish urban centers (including Rovaniemi and Tornio in the North) to illustrate a method of investigating region-generating phenomena. Specifically investigated, with the aid of differential equations, are the extent of the surrounding area, mapped, from which each center attracts migrants and the intensity of attraction to each. The centers used were those determined to be most capable of stimulating responsive population change. (DI.)

69527. AJO, REINO. Rovaniemen allas väkiluvun keskimääräisen vuosikasvun maantieteellisen vaihtelun ilmentämänä ja altaan muuttovoittoisuuden aikavaihteluista suhdannekehityksen valossa vapaan muuttoliikkeen olosuhteissa 1866-1939. (Terra, 1962. årg. 74, no. 1, p. 8-22, map, graph.) 22 refs. Text in Finnish. Summary in English. **Title tr.:** The Rovaniemi basin as shown by the geographical variations in the average annual growth of population and the variation during 1866-1939, in the net migrational rate for the basin in the light of economic fluctuations and under conditions of unrestricted migration.

Discusses the general population growth of this basin, an important timber-producing area, showing the highest growth rate > 16/1000 in northern Finland. Correlation is shown between the migration in and out, and the political and economic events during 1878-1940. Effects of World War I and the depression of the thirties upon the timber market were reflected in the population movement. Improvements in methods, changes in processing, etc. resulted in migration into this basin. (DGS.)

AJO, REINO, *see also* Hannerberg, D., & *others*. Migration in Sweden. . . 1957. No. 71987

69528. AKADEMIIA NAUK SSSR. Dvadtsatipiatiletie geroicheskogo dreifa. *(Its:* Vestnik, Aug. 1962. god 32, no. 8, p. 136-37.) Text in Russian. **Title tr.:** 25th anniversary of the heroic drift.

Reports the Academy of Sciences meeting on May 21, 1962, commemorating the first Soviet drifting station which began operations on May 21, 1937. Its achievements and those of the later drifting stations and high latitude expeditions are appraised by officials present. (DLC.)

69529. AKADEMIIA NAUK SSSR. O nauchnykh uchrezhdeniiakh filialov Sibirskogo otdeleniia. *(Its:* Vestnik, May 1962. god 32, no. 5, p. 112.) Text in Russian. **Title tr.:** Scientific institutions of branches of the Siberian Division.

Includes report on reorganization of the Chuchur-Muran biological experiment laboratory in the Yakutsk Botanical Garden; its dendrology, landscaping, and acclimatization divisions, plant physiology, its seeds section, plant protection bureau and meteorological station. (DLC.)

69530. AKADEMIIA NAUK SSSR. O nauchnykh uchrezhdeniiakh Sibirskogo otdeleniia. *(Its:* Vestnik, June 1962. god 32, no. 6, p. 102.) Text in Russian. **Title tr.:** Scientific institutions of the Siberian Division.

Notes transfer of the ionospheric station on Cape Shmidta from the Northern Sea Route Administration to the jurisdiction of the Siberian Division of the Academy; it is now affiliated with the Northeastern General Research Institute at Magadan. (DLC.)

69531. AKADEMIIA NAUK SSSR. O nauchnykh uchrezhdeniiakh Sibirskogo otdeleniia. *(Its:* Vestnik, Nov. 1962. god 32, no. 11, p. 127-28.) Text in Russian. **Title tr.:** Scientific institutions of the Siberian Division.

Announces establishment of the Institute of Cosmophysical Investigations and Aeronomy (Institut kosmofizicheskikh issledovanii i aëronomii); it is part of the Yakut Branch of the Siberian Division of the Academy of Sciences and it supersedes the former Laboratory of Physical Problems and some divisions of the Geophysical Observatory of the Branch: the Tiksi polar laboratory of geophysical investigations, the Zhigansk laboratory of geomagnetic and ionospheric investigations, and the station for artificial earth-satellite observations. Also announced *inter alia* is the Institute of Volcanology in Petropavlovsk-in-Kamchatka. It represents a merger of the former Kamchatka geological and geophysical observatory and laboratory of volcanology; the new institute has ten laboratories, volcanological stations at Klyuchi and Avacha, the Kamchatka multipurpose (kompleksnaia) expedition, the ionospheric station in Petropavlovsk and the museum, under its jurisdiction. (DLC.)

69532. AKADEMIIA NAUK SSSR. O rabote kompleksnoi ekspeditsii 1961 g.v raione padeniia Tungusskogo meteorita. *(Its:* Vestnik, May 1962. god 32, no. 5, p. 111.) Text in Russian. **Title tr.:** The work of a multiphase expedition in 1961 in the area of the Tunguska meteorite fall.

Notes work of the summer 1961 party sent by the Committee for Meteorites and the Institute of Geochemistry and Analytical Chemistry (Academy of Sciences.). The atmospheric character of the explosion in 1908 was established, detailed maps compiled of forest devastation, soil, peat, and silt samples taken, etc. Field analysis revealed the distribution of cosmic dust, including magnetite and silicate particles, possibly remnants of the meteorite. The work is to be continued in 1962, chiefly on the cosmic dust phase. (DLC.)

69533. AKADEMIIA NAUK SSSR. Ob Institute geologii Karel'skogo filiala. *(Its:* Vestnik, Feb. 1961. god 31, no. 2, p. 100.) Text in Russian.

Title tr.: The Institute of Geology of the Karelian Branch.

Notes this Institute set up from the former divisions of petrography, mineralogy, and regional geology; its functions, its four sections, laboratory, museum, etc. (DLC.)

69534. AKADEMIÎA NAUK SSSR. Pamîati O. ÎU Shmidta. *(Its:* Vestnik, Dec. 1961. god 31, no. 12, p. 117-18.) Text in Russian. **Title tr.:** In memory of O. ÎU. Shmidt.

Reports a joint meeting of the Academy of Sciences, Moscow University, the Geographical Society and others to honor the 70th anniversary of Otto ÎUl'evich Shmidt, 1891-1956. Papers by E. K. Fedorov, P. S. Aleksandrov, M. I. Shevelev, and B. ÎU. Levin, on the life, arctic explorations and scientific work of Shmidt are summarized. (DLC.)

69535. AKADEMIÎA NAUK SSSR. Soviet geography, accomplishments and tasks. New York, 1962. xviii, 409 p. ports., maps, graphs, tables. (American Geographical Society. Occasional publication no. 1.) Refs. Translation by Lawrence Ecker, edited by Chauncy D. Harris, of No. 62908. Includes chapters: Permafrost, geocryology, by S. P. Kachurin (No. 65520); Exploration...of polar lands, by ÎA. ÎA. Gakkel' (No. 64610); and The taiga, by V. B. Sochava (No. 68383). (DGS.)

69536. AKADEMIÎA NAUK SSSR. Sozdanie limnologicheskogo instituta na Baĭkale. *(Its:* Vestnik, Apr. 1961. god 31, no. 4, p. 114.) Text in Russian. **Title tr.:** Limnological Institute on Lake Baykal.

Notes the Baykal limnological station reorganized as an institute at Listvenichnoye 58°31′ N. 108°30′ E.; its planned facilities: nine laboratories, aquarium, museum; its functions: study of natural lakes and artificial water reservoirs in Eastern Siberia and the Far East; its director: G. I. Galaziĭ. (DLC.)

69537. AKADEMIÎA NAUK SSSR. Sto let so dniâ rozhdeniiâ Frit'ofa Nansena. *(Its:* Vestnik, Dec. 1961. god 31, no. 12, p. 118-19.) Text in Russian. **Title tr.:** Centenary of Fridtjof Nansen's birth.

Reports joint meeting of the Moscow Branch of the Geographical Society and the Geography Dept. of Moscow University Oct. 13, 1961, with addresses by V. G. Bogorov and V. F. Burkhanov, on Nansen's arctic explorations, his humanitarian activities, etc. (DLC)

69538. AKADEMIÎA NAUK SSSR. Sto let so dniâ rozhdeniiâ N. M. Knipovicha. *(Its:* Vestnik, Aug. 1962. god 32, no. 8, p. 137-38.) Text in Russian. **Title tr.:** Centenary of the birth of N. M. Knipovich.

Reports a meeting sponsored by leading scientific organizations in Leningrad Apr. 29, 1962, honoring Academician Nikolaĭ Mikhaĭlovich Knipovich, 1862-1939; his oceanographic, hydrological and ichthyological work in the White, Barents and other arctic seas was appraised. A similar meeting, sponsored by the Polar Institute of Marine Fisheries and Oceanography in Murmansk is mentioned. (DLC.)

69539. AKADEMIÎA NAUK SSSR. V prezidiume Akademii nauk SSSR. *(Its:* Vestnik, Oct. 1961. god 31, no. 10, p. 122-23.) Text in Russian. **Title tr.:** At the Presidium of the Academy of Sciences of USSR.

Notes establishment of the Kamchatka Geological and Geophysical Observatory of the Siberian Division of the Academy, the Mining Institute with seven laboratories at the Ural Branch of the Academy, and the Institute of Biology with nine laboratories at the Komi Branch. (DLC.)

69540. AKADEMIÎA NAUK SSSR. *Geologicheskiĭ institut.* Voprosy geologii antropogena. Moskva, Izd-vo Akademii nauk SSSR, 1961. 224 p. illus., tables incl. fold., diagrs. Refs. Text in Russian. Summaries in English. **Title tr.:** Problems of Anthropogene geology.

Collection of 20 papers presented by Russian scientists at the sixth congress of the International Association for Quaternary Research, held in Warsaw, 1961. Problems of Quaternary geology, stratigraphy and others are dealt with; a new stratigraphic division of the Quaternary system is developed on the basis of mammal distribution. Stratigraphy and geologic age of the paleolithic are also treated. Three of the papers pertinent to the arctic regions are abstracted in this Bibliography under their authors' names, viz **(titles tr.):**

ALEKSEEV, M.N. *and others.* Quaternary deposits of Yakutia.

RAVSKII, È.I. Periglacial phenomena and the periglacial zone of the Pleistocene of Eastern Siberia.

LAVRUSHIN, ÎU. A Main features of the alluvium of plains rivers of the subarctic belt and periglacial regions of continental glaciations. (DLC.)

69541. AKADEMIÎA NAUK SSSR. ÎAKUTSKIĬ FILIAL. Almazy ÎAkutii; petrografiîa, mineralogiîa i geologiîa. Moskva, Izd-vo Akademii nauk SSSR, 1961. 227 p. illus., tables, maps, graphs, diagrs. *(Its:* Trudy, ser. geologicheskaîa, sbornik nr. 6.) Refs. Text in Russian. **Title tr.:** The diamonds of Yakutia; petrography, mineralogy and geology.

Contains 21 papers dealing with the petrology, mineralogy and geology of Yakutia diamonds and prospecting methods, distribution, origin and other problems. All the papers are abstracted in this Bibliography under their authors' names, viz **(titles tr.):**

MENÎAĬLOV, A.A. The status and tasks of diamond deposit investigations in the Yakut ASSR.

BARYGIN, V.M. Features of the tectonic structure and kimberlite pipes of the Daldyn region.

ZVEDER, L.N. On the geology of the Daldyn kimberlite field in the northern Siberian platform.

ŁOBRIEVICH, A.P., *and others.* Some data on the geology and petrography of Siberian kimberlites.

KHIL'TOV, ÎU. N Retrogressive metamorphism in the xenoliths of Precambrian crysstalline schists in kimberlite pipes of the Yakut ASSR territory.

SHCHUKIN, V.N., *and others*. On the interrelation of kimberlites and traps.

MENIAĬLOV, A.A. Relationship between a diabasic dike and the Leningradskaya kimberlite pipe.

ANODIN, T.I. Brief characterization of the composition of rocks included in some kimberlite pipes of Yakut ASSR.

KRIATOV, B.M. Contact alteration of kimberlites and included rocks of the Zarnitsa pipe.

MENIAĬLOVA, G.A., *and* V.G. IVANOVA. Contact-metamorphic rock near a diabasic dike in the Leningradskaya pipe region.

SMIRNOV, G.I. Characteristics of mineral-satellites of diamonds.

GNEVUSHEV, M.A. *and others*. On the color of Yakut diamonds.

GNEVUSHEV, M.A., *and* È.S. NIKOLAEVA. Hard inclusions in diamonds of the Yakutia deposits.

GNEVUSHEV, M.A., *and others*. Data on the distribution patterns of diamonds in the kimberlite pipes of western Yakutia.

D'IAKOV, A.G., *and* Z.V. BARTOSHINSKIĬ. Transport and character of wear of the alluvial placer diamonds of western Yakutia.

TROFIMOV, V.S. On the source of diamonds in placers of the Markha River.

TROFIMOV, V.S. Some distribution laws of diamond deposits in the Siberian platform.

ODINTSOVA, M.M., *and* G. KH. FAĬNSHTEĬN. On the geology and age of old diamond placers in the Malaya Botuobuya River basin.

SMIRNOVA, O.K., *and* M.M. ODINTSOVA, Materials on the stratigraphy of Lower Jurassic deposits in the Tyung River valley.

BARYGIN, V.M. Search for kimberlite pipes by aerial methods.

ALEKSEEV, M.N. Materials on the stratigraphy of Cenozoic deposits and geomorphology of the central part of the Vilyuy depression. (DLC.)

69542. **AKADEMIIA NAUK SSSR. IAKUTSKIĬ FILIAL.** Voprosy petrografii i mineralogii vostochnoĭ chasti Sibirskoĭ platformy i Verkhoiano-Chukotskoĭ skladchatoĭ oblasti. Moskva, Izd-vo Akademii nauk SSSR, 1962. 140 p. illus., tables, diagrs., graphs, maps. (*Its:* Trudy, ser. geologicheskaia, sbornik no. 11.) Refs. Text in Russian. **Title tr.:** Problems of petrography and mineralogy in the eastern part of the Siberian platform and the Verkhoyansk-Chukotka folded province.

Contains nine papers dealing with petrography, mineralogy and petrochemistry of various rocks of this wide area; five of them concerning the northerly parts of it are abstracted in this Bibliography under their authors' names, viz **(titles tr.):**

OZOLEVSKAIA, G.V., *and* I. IA NEKRASOV. Petrography and petrochemistry of trachyliparites, trachyandesites and monzonites of Polevaya Mt., northeastern Yakutia.

ICHETOVKIN, N.V. On the petrography of the Verkhne-Allakhskiy monzonite-porphyry subvolcano, southern Verkhoyansk region.

LUTTS, B.G. Granites of the Anabar massif.

VEDERNIKOVA, G.A. Petrography of the differentiated trap massif of the Padunskiy rapids on the Angara River.

MEN'SHIKOV, P.N. Application of geophysical methods in kimberlite and trap studies. (DLC.)

69543. **AKADEMIIA NAUK SSSR.** *Institut arkheologii.* Arkheologicheskie èkspeditsii Gosudarstvennoĭ Akademii istorii material'noĭ kul'tury i Instituta arkheologii Akademii nauk SSSR, 1919-1956 gg.; ukazatel'. Moskva, Izd-vo Akademii nauk SSSR, 1962. 264 p. Text in Russian. **Title tr.:** Archeological expeditions of the State Academy of the History of Material Culture and the Archeological Institute of the Academy of Sciences, USSR, 1919-1956; index.

Lists 552 expeditions and field trips, including 27 to northern areas of European and Asiatic Russia. For each, the name and duration, leader, sponsoring institution, geographic area and objectives are stated, as is the present depository of any collections and expeditionary reports. The main published results to 1960 are cited. (DLC.)

69544. **AKADEMIIA NAUK SSSR.** *Institut ètnografii.* Istoriko-ètnograficheskiĭ atlas Sibiri; pod redaktsieĭ M.G. Levina i L.P. Potapova. Leningrad, Izd-vo Akademii nauk SSSR, 1961. 498 p. illus. incl. plates, tables, maps. Refs. Text in Russian. **Title tr.:** Historical ethnographic atlas of Siberia; edited by M.G. Levin and L.P. Potapov.

Basic work on the material culture in nine topical parts: constituting a systematic analysis and typological classification of ethnographic materials obtained since the latter half of the 19th century. For each object or topic a general description is given, together with account of its diffusion among individual Siberian tribes, analysis of basic types, local variants, component parts, and attributes, historical data on origin, evolution, and development. Extensive illustrative material is included: black-and-white photos and drawings arranged by ethnic groups, also maps showing the territorial distribution of the types treated in text.

Introduction (p. 3-10, 2 maps) by M.G. Levin *and* L.P. Potapov describes the general make-up of the volume. The historical diffusion of tribal groups in the 17th and at the turn of the 20th century is outlined and mapped according to linguistic criteria.

Reindeer transport (p. 11-54, illus. on 23 plates, 5 maps). G.M. Vasilevich *and* M.G. Levin discuss the use of reindeer as draft animals by Samoyeds (Nenets, Sel'kups, Nganasans, Enets), northern Ostyaks and Voguls, Chukchis, Koryaks and, mainly as pack- and saddle-animals, by Tungus (Evenki, upper Negidalets, Oroki), Eveny-Lamuts, reindeer-breeding Yakuts, Yukaghirs, Tuvinets, and Tofalars. Construction and territorial distribution of various types of passenger and freight sled, harness, pack- and riding-saddles, also methods of harnessing and bridling are described. Three basic types of reindeer-sled construction and driving are distinguished: Chukchi-Koryak, Tungus-Yakut, Samoyed; and two types of pack- and saddle-transport: Siberian and

Sayan. Sled-reindeer transport grew out of dog driving and probably developed independently among Samoyeds and Chukchi-Koryaks; the pack- and saddle-reindeer transport of the Tungus grew out of Mongol horse breeding.

Dog driving (p. 55-77, illus. on 9 plates, 3 maps). V.V. Antropova *and* M.G. Levin describe the basic sled and harness types and their local variants used in the 18-20th centuries by aborigines and Russian old-timers in East Siberia, including Chukotka and Kamchatka, the Amur basin and Sakhalin Island, and in West Siberia. The development of harness dog-driving from the use of dogs to pull hand sleds and the evolution of the East Siberian dog-sled from the West Siberian (possibly Vogul) hand-drawn hunting sled are sketched.

Skis (p. 79-105, illus. on 17 plates, map). V.V. Antropova describes the shape, structure, fur-lining, bindings, etc. of the Chukotka-Kamchatka snoeshoes and six (four northern) types of skis used by Siberian aborigines in the 19-20th centuries. Origin and functional value of each type are discussed.

Boats (p. 107-129, illus. on 12 plates, map), by V.V. Antropova. Four basic types of water craft are distinguished: the dugout, plank, birch-bark, and skin boats. Their construction, local variants, use for fishing, hunting, travel, freight, their diffusion, origin, etc. are discussed by type and ethnic group.

Dwellings (p. 131-226, illus. on 63 plates, diagrs., 3 maps) by A.A. Popov. Exhaustive typological analysis of temporary, or transportable, and permanent housing for summer or winter use. The construction (frame, log) of semi-subterranean, sunken, above-ground, and pile dwellings is discussed according to type of structure and ethnic group. Building materials and skin, sod, or moss cover, roof shapes (conical, round, gabled, etc.) and supports, ground plans, construction methods, wind and snow resistance, insulation and ventilation, etc. are described. The origin of basic house types, their variants and adaptation to local climatic or economic conditions are dealt with. Treated separately (p. 154) are the summer house-boats *(ilimka)* of Ket-Yeniseians and Taz River Sel'kup-Samoyeds, and the wanigan *(nartennyĭ chum:* house on runners) used in winter by the Dolgans.

Outer garments (p. 227-328, illus. on 84 plates, table, 5 maps). N.F. Prytkova describes the basic styles and tribal variants of seven open or coat-style dress types: the Yenisey River, the east, central, west, and southern Siberian, the Lena River, east Asian; and five closed or parka-like types: the northeastern, Ural, and Taymyr worn by both sexes, and the Chukotka-Kamchatka and northeastern for women only. Material (cloth, fur, leather), cut, sewing, lining, and decoration, etc. of winter and summer coats, robes, and jackets are discussed; garment patterns are given.

Head-dress (p. 329-68, illus. on 29 plates, table, map). N.F. Prytkova describes and tabulates by ethnic group, sixteen basic kinds and several variants of hoods, bonnets, caps, and hats worn by men or women. Material, cut including patterns, sewing and blocking techniques, ornamentation, etc. are depicted.

Ornamentation (p. 369-434, illus. on 51 plates, table, 5 maps) by S.V. Ivanov. Study of ornament patterns used in appliqué and bead work, embroidery, wood and bone carving. Ten of the twelve basic types are common among north Siberian peoples. Geometric designs prevail except for stylized floral and zoomorphic motifs popular amoung southern Ostyaks and Voguls and Tungus-Manchu tribes. Color schemes and pattern structures are noted. Influence of ethnic, linguistic, territorial, or cultural affinity on the diffusion, mixing, and evolution of individual designs is analyzed.

Shaman drums (p. 435-90, illus. on 37 plates, 3 maps) by E.D. Prokof'eva. Physical description without regard to ritual and magic functions: shape and structure of the drum and drumsticks, skin stretching and mounting techniques, metal pendants and ornamentation of drumhead, etc. Drums with handles outside existed only in the far Northeast among Chukchis and Eskimos. Drums with inside handles, known throughout Siberia, are divided into four basic types: west Siberia, used by most Ostyak and Vogul and by some Nenets- and Enets-Samoyed groups; southern Siberian (three variants); central Siberian with an Evenki (Tungus)-Yakut and a Nganasan-Enets (Samoyed) variant, and a far-eastern type (two variants) common among Tungus tribes, Dolgans, Yukaghirs, Koryaks and, to the early 19th century, among Kamchadals. (DLC.)

69545. AKADEMIÎA NAUK SSSR. *Institut ėtnografii.* Sibirskiĭ ėtnograficheskiĭ sbornik iv; ocherki po istorii, khozĭaĭstvu i bytu narodov Severa. Moskva, Izd-vo Akademii nauk SSSR, 1962. 292 p. illus., diagrs., tables, maps. *(Its:* Trudy, t. 78.) Refs. Text in Russian. **Title tr.:** Collection of papers on Siberian ethnography, 4; sketches on the history, economy, and folkways of the peoples of the North. Editor-in-chief B.O. Dolgikh.

Fifteen papers dealing with ethnohistory and present economic conditions, based predominantly on field work in 1956-1960. The six-page preface indicates the main lines of future socio-economic development as formulated at the 22nd Party Congress in fall 1961. The main unresolved problems of circumpolar ethnogenetic research are outlined: aboriginal substrates in regions now occupied by Lapps, Samoyeds, Ob-Ugrians, and Yeniseians; culture formation foci of Paleosiberians and Gilyaks and possible ethnic links with Eskimos and American Indians; the origin of Yeniseians, northern Tungus and the four polar groups, i.e.. Lapps, Samoyeds, Yukaghirs, and Eskimos. The hypothesis of a circumpolar culture originally based on reindeer hunting is favored over one based on sea-mammal hunting. A general trend to preserve traditional elements in aboriginal culture seems evident in most discussions of present kolkhoz economies. The papers are abstracted in this Bibliography under their authors' names, viz **(titles tr.):**

ALEKSANDROV, V.A. Origin of the 17th century Russian population of the Yenisey region.

ALEKSEENKO, E.A. Data on the culture and folkways of the Kureyka River Kets.

TUGOLUKOV, V.A. Evenki of the Vitim-Olekma basin.

VASILEVICH, G.M. Evenki of the Katanga District.

STRAKACH, IU. B. Evenki-Russian production artel Pobeda.

VASIL'EV, V.I. Origin of Ob Ugric weir-fishery gear.

VDOVIN, I.S. Vayega River Chukchis.

SOKOLOVA, Z.P. Notes on Evenki of the Ket' basin.

PELIKH, G.I. Circular kinship ties of Sel'kups of the Narym region.

DOLGIKH, B.O. Clan exogamy of Nganasans and Enets.

FAĬNBERG, L.A. Nganasan kinship terminology as historical source.

GURVICH, I.S. Koryak occupational festivals.

CHARNOLUSSKIĬ, V.V. The dragon of the Permian animal style.

SMOLIAK, A.V. Magic rites for child-life preservation among peoples of the lower Amur region.

KOSVEN, M.O. Historical data on 18th century Koryak ethnography. (DSI.)

AKADEMIIA NAUK SSSR. *Institut etnografii, see also*

Aleksandrov, V.A. Rabota . . . 1961g. 1962. No. 69681

Dunn, E., & S.P. Dunn. Sovremennoe khoziaĭstvo . . . 1962. No. 71151

69546. AKADEMIIA NAUK SSSR. *Institut geografii.* Dal'niĭ Vostok; fiziko-geograficheskaia kharakteristika. Moskva, Izd-vo Akademii nauk SSSR, 1961. 439 p. illus., tables, maps incl. fold. Approx. 250 refs. Text in Russian. **Title tr.:** The Far East, physiographic characteristics.

Deals with a 3.5 million km² area including Magadan Province, Kamchatka, the Amur, Khabarovsk, and other regions. Following an introductory chapter, the general character of the area and its physiographic regions are treated in nine chapters:

History of physiographic investigations, by N.G. Dmitrieva, B.P. Kolesnikov, A.I. Kurentsov, *and* V.P. Chichagov, (p. 14-40). *Summarizes* the exploration, settlement, and economic, cultural, and industrial development, including Chukotka, Magadan Province and Kamchatka, from the 17th century to the 1950's. Expeditionary work is reviewed and the organization of special Far Eastern research institutions noted.

History, population, and economy, by D.V. Kravchenko, V.V. Nikol'skaia, *and* V.P. Chichagov (p. 41-56). *Reviews* the archeology of the Far East and Chukotka: culture stages, ethnic origins, contacts and affiliation with other cultural centers including West Siberia and Alaska, etc. Tribal distribution in the 17th century and subsequent population movements are outlined for, among others, the Chukchis, Eskimos, Yukaghirs, Koryaks, Evenki-Tungus, Kamchadals, Golds, Gilyaks, and Yakuts. The development of the area since the 19th century is sketched and the initial exploitation contrasted with the present cultural, economic, and industrial growth.

Relief, by V.V. Nikol'skaia (p. 59-92). *Describes* the general structure of the surface, geologic structure, paleogeography and types of relief including Magadan Province and Kamchatka. The Cherskiy, Anadyr, Kolyma, Koryak, and Kamchatka Mountain Ranges are characterized, and the geologic history summarized. Paleogeography of preglacial and postglacial times is outlined. Physical weathering, permafrost, solifluction, naleds and other relief-forming factors are described; and the geomorphic regions of the Far East indicated.

Climate, by G.N. Vitvitskiĭ (p. 93-115). *Describes* the main climatic features of the area, and distinguishes the arctic zone, subarctic zone: Chukotka and Kamchatka, coastal areas of Okhotsk Sea.

The waters, by N.G. Dmitrieva *and* V.V. Nikol'skaia (p. 116-58). *Describes* the rivers, lakes, swamps, ground water, snow cover, glaciers and seas of the area. The river net, and hydrologic regime are characterized, in particular the Kolyma, Anadyr, Aldan, and Kamchatka. Runoff, ice cover, etc. are indicated. Glaciers of Kamchatka, the Koryak Range, and Suntar-Khayata are summarized. The East Siberian, Chukchi, and Bering Seas are briefly described.

Soils, by IU.A. Liverovskiĭ *and* I.I. Karmanov (p. 159-82). *Describes* the soil distribution patterns and types; tundra, cryogenic-taiga, light-earth, taiga-mountain podsolic soils, and others are characterized, their suitability for agricultural purposes discussed.

Vegetation, by B.P. Kolesnikov (p. 183-245, 429-32). *Describes* the vegetation cover, its zonality, and main features; that of the polar desert and tundra on Vrangelya and Geral'da Islands, and of the tundra of the Kolyma, Anadyr, Anyuy, and other basins is dealt with; the forest-tundra, taiga and other zones are also described. Phytogeographic regions are outlined and mapped. Russian and Latin plant names are appended.

Animal life, by A.I. Kurentsov (p. 246-98, 433-37). *Describes* the insects, river, lake and marine fishes; the marine and land mammals including fur bearers, the birds, reptiles. Russian and Latin names are appended.

The physiographic regions, by G.N. Vivitskiĭ and eight collaborators (p. 301-354). *Describes* in some detail, three main regions of the northern Far East: the continental taiga-tundra mountains; the mountainous-volcanic and tundra-forest areas of Kamchatka and the Koryak upland; and the taiga mountains of the Aldan-Okhotsk watershed. Relief, climate, hydrology, soils, etc. are characterized, and these main regions are subdivided into smaller units. (DLC.)

69547. AKADEMIIA NAUK SSSR. *Institut geografii.* Materialy glaciologicheskikh issledovaniĭ; Novaia Zemlia; Meteorologiia, vyp. 1, osnovnye meteorologicheskie nabliudeniia. Moskva, 1961. 115 p. illus., tables. 2 refs. Text in Russian. Summary in English. By N.V. Davidovich, Z.M. Kanevskiĭ *and* O.P. Chizhov. **Title tr.:** Data on glaciological investigations; Novaya Zemlya; Meteorology, no. 1, basic meteorological observations.

Presents results of observations 1957-1959 at two IGY stations, Bar'yer Somneniy and

Ledorazdel'naya, on the Shokal'skogo Glacier. Data are tabulated on air temperature, humidity, atmospheric pressure, wind speed and direction, precipitation, temperature at the surface of snow and ice, also the state of the surface, height of the snow cover, cloudiness, visibility; 50 symbols are used to describe common and unusual atmospheric phenomena. Hourly records as well as monthly and yearly deductions are given. Station locations, heights above the surface of the recording devices, and instrumentation are described. (CaMAI.)

69548. AKADEMIÍA NAUK. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ, Novaîa Zemlîa: Meteorologiîa vyp. 2, osnovnye meteorologicheskie nablîudeniîa. Moskva, 1961. 130 p. tables. Text in Russian. Summary in English. By N.V. Davidovich, Z.M. Kanevskiĭ, *and* O.P. Chizhov. **Title tr.:** Data on glaciological investigations, Novaya Zemlya; Meteorology no. 2, basic meteorological observations.

Reports meteorological observations carried out in 1957-1959 on the Bar'yer-Somneniy station. Temperature of the air, that of surface layer, air moisture and pressure, wind direction and speed, cloudiness, visibility, precipitation and other meteorologic data are tabulated. Values are calculated for months and years. Tables of hourly data according to barograph, thermograph and hydrograph registration are also included. (DLC.)

69549. AKADEMIÍA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ; Novaîa Zemlîa; Meteorologiîa, vyp. 3, aktinometricheskie nablîudeniîa. Moskva, 1961. 150 p. tables, diagr. 2 refs. Text in Russian. Summary in English. By N.V. Davidovich *and* O.P. Chizhov. **Title tr.:** Data on glaciological investigations; Novaya Zemlya; Meteorology, no. 3, actinometric observations.

Presents results of observations 1957-1959 at two IGY stations, Bar'yer Somneniy and Ledorazdel'naya, on the Shokal'skogo Glacier. Data are tabulated on direct, diffuse, and total radiation and the radiation balance, also computed values of albedo and long-wave radiation balance together with data on air temperature, temperature at the snow/ice surface, height of the sun, cloudiness, absolute humidity, visibility, wind speed, atmospheric phenomena, and other pertinent information. Objectives and methods of observation are briefly summarized. (CaMAI.)

69550. AKADEMIÍA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ; Novaîa Zemlîa; Meteorologiîa, vyp. 4, dopolnitel'nye nablîudeniîa. Moskva, 1961. 119 p. tables, diagr. Text in Russian. Summary in English. By N.V. Davidovich *and* O.P. Chizhov. **Title tr.:** Data on glaciological investigations; Novaya Zemlya; Meteorology, no. 4, supplementary observations.

Presents results of observations 1958-1959 by an IGY party at Bar'yer Somneniy and Ledorazdel'naya on the Shokal'skogo Glacier, also during 1957-1958 on the shore near Russkaya Gavan' (76°10′N. 62°35′E.). For the glacier stations, data are tabulated on the duration of sunshine also (summer 1958) gradient observations; for the coastal station, actinometric observations. Objectives and methods of observations are summarized. (CaMAI.)

69551. AKADEMIÍA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ: Novaîa Zemlîa, snezhnyĭ pokrov. Moskva, 1962. 3 v.: 133, 107, 110 p. illus., tables, diagrs., maps. Text in Russian. Summary in English. **Title tr.:** Data on the glaciological investigations: Novaya Zemlya, snow cover.

Presents results of the Academy of Sciences' Institute of Geography work in the IGY program 1957-1959. The studies were made on the Shokal'skiy Glacier and the ice shield of North Island that feeds the glacier.

Vol. 1, Statsionarnye nablîudeniîa na stantsiîakh Ledorazdel'naîa i Bar'er Somneniĭ. (Stationary observations at the Ledorazdel'naya and Bar'yer Somneniy stations). E.M. Zinger reports data of Oct. 1957-Sept. 1959 at these stations in the Russkaya Gavan' region, on accumulation and ablation of snow, firn and ice according to runoff stakes, profiles of the snow-firn layer, volume weight of seasonal snow, etc. Measurement methods are described, the results obtained, tabulated and diagrammed.

Vol. 2, Marshrutnye nablîudeniîa. (Observations en route). E.M. Zinger, V.V. Engel'gardt, *and* O.A. Îablonskiĭ present data of 1176 measurements on the snow and ice surface and at 101 prospecting holes drilled on traverse of the glacier. Methods are described and data tabulated and diagrammed.

Vol. 3, Metelemernye i gidrologicheskie nablîudeniîa. (Blizzard measurements and hydrological observations). O.P. Chizhov reports data of 326 blizzard measurements made at Ledorazdel'naya and 356 at the Bar'yer Somneniy station: velocity and direction of winds, intensity of snow tranfer, content of snow, etc. Water runoff in Shokal'skiy Glacier and nearby rivulets and rills, also temperatures in water bodies and streams of the Russkaya Gavan' region are given. (DLC.)

69552. AKADEMIÍA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ, Novaîa Zemlîa; struktura l'da. Moskva, 1962. 174 p. illus., tables, diagrs., map. Text in Russian. Summary in English. By A.B. Bazhev *and* V.Îa. Bazheva. **Title tr.:** Data on glaciological investigations, Novaya Zemlya; ice structure.

Presents results of work during 1957-1959 in the IGY program. Observations made along the route and laboratory investigations are noted. Structure of glaciers, petrography and tectonics of ice, its physical and mechanical properties, crystals, etc. were investigated. Ice sections, structure of ice and firn, and other ice features are described. (DLC.)

69553. AKADEMIÍA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ, Polîarnyĭ Ural; ablîatsiîa, stok. Moskva, 1962. 140 p. illus., tables, maps, graphs, diagr. Text in Russian. Summary in English. By V.G. Khodakov. **Title tr.:** Data on glaciological investigations, Polar Ural; ablation, runoff.

Presents results of ablation measurements on the surface of the IGAN Glacier, made during 1958-1959 in connection with the IGY program. Methods are described: stakes were used. Data tables are appended on runoff determination at a test site on IGAN Glacier, and hydrometric work on the glacier stream and on Bol'shaya Khadata River. (DLC.)

69554. AKADEMIÏA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ, Polîarnyĭ Ural; glîatsiogeomorfologiîa. Moskva, 1962. 166 p. illus., maps, profiles, tables. Text in Russian. Summary in English. By L.S. Troitskiĭ. **Title tr.:** Data on glaciological investigations, Polar Ural; glacial geomorphology.

Presents results of work of 1957-1959 in the IGY program, prior to which 14 glaciers, with 5.5 km² area, were known in this part of the Urals. By the end of the IGY, 46 were known. They are listed with, for each, its location, measurements, area, height, exposure, and glacier type. During 1958, 1959 and 1960, 36 of these glaciers were investigated and stationary observations made on IGAN, Obrucheva and MGU (Moscow State University). Each of the 36 is described in considerable detail, its morphology and morphometry, relief forms, changes, moraine deposits, and other features. Aerial photos and maps of some glaciers are attached. (DLC.)

69555. AKADEMIÏA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ, Polîarnyĭ Ural; meteorologiîa vyp. 1, osnovnye meteorologicheskie nabliudeniîa. Moskva, 1961. 132 p. illus., tables, diagrs. Text in Russian. **Title tr.:** Data on glaciological investigations, Polar Ural; meteorology no. 1, basic meteorological observations.

Presents six-hourly, monthly and annual tabulation of observations by IGY parties on the Institute of Geography Glacier July-Aug. 1958 and May-Sept. 1959; on a plateau adjacent to the Glacier Oct. 1958-Dec. 1959; on the Obruchev Glacier July-Sept. 1959. The data include air and surface temperatures, humidity, atmospheric pressure, wind speed and direction, cloudiness, visibility, precipitation, atmospheric phenomena. Stations are illus. and diagrammed; objectives and methods of observation are summarized. (CaMAI.)

69556. AKADEMIÏA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ, Polîarnyĭ Ural; meteorologiîa vyp. 2, osnovnye meteorologicheskie nabliudeniîa. Moskva, 1961. 139 p. illus., diagr., tables. Text in Russian. **Title tr.:** Data on glaciological investigations, Polar Ural; meteorology no. 2, basic meteorological observations.

Presents data collected by an IGY party Sept. 1957-Dec. 1959 on the B. Khadata River near the lake of the same name. They include air and surface temperatures, humidity, atmospheric pressure, wind speed and direction, visibility, precipitation, cloudiness, atmospheric phenomena. Monthly and annual summaries are provided in addition to the tables of four-daily observations. Station, objectives, and methods are described. (CaMAI.)

69557. AKADEMIÏA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ, Polîarnyĭ Ural; meteorologiîa vyp. 4, aktinometricheskie nabliudeniîa. Moskva, 1961. 135 p. illus., tables, diagrs. Text in Russian. **Title tr.:** Data on glaciological investigations, Polar Ural; meteorology no. 4, actinometric observations.

Presents data collected by an IGY party on the Institute of Geography Glacier, July-Aug. 1958 and May-Sept. 1959. Two stations were used, one on the firn. The tabulated data on observations, made at irregular intervals during most days, include solar height; direct, diffuse, and total radiation; reflected short-wave radiation; albedo; radiation balance; long-wave radiation; also air and surface temperature; humidity; wind speed and direction; atmospheric phenomena; state of the "active" snow/firn/ice surface layer. Stations, objectives, and methods are described. (CaMAI.)

69558. AKADEMIÏA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ, Polîarnyĭ Ural; snezhnyĭ pokrov. Moskva, 1962. 129 p. illus., tables, maps, diagrs. Text in Russian. Summary in English. By V.G. Khodakov. **Title tr.:** Data on glaciological investigations, Polar Ural; snow cover.

Presents results of observations made in connection with the IGY program. Snow accumulation and discharge and diagenesis of the snow cover were studied on the IGAN (Institute of Geography of Academy of Sciences of USSR) Glacier and the adjacent area from Oct. 1958 till July 1960. During Apr.-May of each year, snow surveys (plan described) were made on IGAN, Avsyuk, Obrucheva and Moscow State University Glaciers and their environs. Snow drift measurements were kept at the Bol'shaya Khadata meteorological station during the 1957-58 winter. Data tables are appended. (DLC.)

69559. AKADEMIÏA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ, Zemlîa Frantsa-Iosifa, glîatsiogeomorfologiîa; rel'ef i sovremennye rel'efoobrazuîushchie protsessy v prilednikovoĭ zone. Moskva, 1962. 74 p. illus., tables, graphs. Text in Russian. Summary in English. By V.L. Sukhodrovskiĭ. **Title tr.:** Data on glaciological investigations, Franz Joseph Land, glacial geomorphology; relief and present relief-forming processes in the periglacial zone.

Reports work of July 31, 1957-Aug. 16, 1959 in the IGY program, on Gukera, Skott-Kel'ti and Kheysa Islands. Quaternary deposits, ground ice and relief-forming processes were studied. Typical points of observation, solifluction processes, temperature measurements of the surface layer, physical weathering of basaltic rocks and other features are described. Sedov and Churlyanis plateaus and other areas studied are described. The temperature data are tabulated. (DLC.)

69560. AKADEMIÏA NAUK SSSR. *Institut geografii.* Materialy glîatsiologicheskikh issledovaniĭ, Zemlîa Frantsa-Iosifa; struktura l'da. Moskva, 1962. 99 p. illus., tables, maps, diagrs.

Text in Russian. Summary in English. By M.G. Grosval'd *and* T.V. Psareva. **Title tr.**: Data on glaciological investigations, Franz Joseph Land; ice structure.

Reports on the petrographic and tectonic structures, physical-mechanical and thermophysical properties of ice and firn as studied in 1957-1959 in connection with the IGY program on the Franz Joseph Land glacier cover, mainly the Churlyanisa ice dome on Gukera Island. Data are given in tables, photographs, sections and maps, characterizing the ice petrography, tectonic features, density, porosity, features of ice crystals, etc. (DLC.)

69561. AKADEMIÎA NAUK SSSR. *Institut geografii.* Predvaritel'nye nauchnye rezul'taty glîatsiologicheskikh issledovaniĭ na Novoĭ Zemle; lednik Shokal'skogo i prilegaîushchaîa k nemu chast' lednikovogo shchita, 1957-1959 gg. Moskva, 1961. p.13-141, illus tables, maps, diagrs., graphs. (Materialy glîatsiologicheskikh issledovaniĭ; khronika obsuzhdeniîa, vyp. 3.) Refs. Text in Russian. **Title tr.**: Preliminary scientific results of glaciologic investigations on Novaya Zemlya; Shokal'skogo Glacier and adjacent part of the glacial shield, 1957-1959.

Summarizes investigations carried out in the Russkaya Gavan' region of the northern island of Novaya Zemlya during June 16, 1957-Sept. 11, 1959 as part of the IGY program. The expedition consisted of 11 scientists and six assistants; two stations were set up; a scientific seminar was held on June 1, 1960 for appraisal of the preliminary results. The following summaries are included in this report, and (except Grosval'd's) they are abstracted in this Bibliography under their authors' names, viz **(titles tr.)**:

CHIKHOV O.P. Preliminary scientific results of glaciological investigations on Novaya Zemlya.

ZINGER, E.M. *and* V.V. ÈNGEL'GARDT. Snow accumulation and degradation on Shokal'skogo Glacier and the adjacent part of the Novaya Zemlya glacial shield.

BAZHEV, A.B. Character of ice formation and structure of the firn-ice stratum in the feeding area of Shokal'skogo glacier.

DAVIDOVICH, N.V. Preliminary results of determinations of heat balance components of Novaya Zemlya glaciers in the ablation period.

KHMELEVSKOĬ, I.F. On preliminary results of temperature measurements in the firn-ice stratum of the Novaya Zemlya glacial shield.

KORÎAKIN, V.S. Features of the movement and morphology of Shokal'skogo and adjacent glaciers of Novaya Zemlya.

SVATKOV, N.M. Some remarks on feeding characteristics of the Novaya Zemlya glacial cover during 1957-1959.

KOTLÎAKOV, V.M. Annotated list of Soviet literature on glaciology, 1956–1960.

Grosval'd, M.G. Cryokinegraphic observations on the velocity fluctuations of the glacier shift zone deformation. p. 135-41, diagrs. (text in Russian). (DLC.)

69562. AKADEMIÎA NAUK SSSR. *Institut geografii.* Predvaritel'nye nauchnye rezul'taty glîatsiologicheskikh issledovaniĭ na Zemle Frantsa-Iosifa, 1957-1959. Moskva, 1961. p. 19-45, illus., maps, diagrs., graphs, tables. (Materialy glîatsiologicheskikh issledovaniĭ; khronika obsuzhdeniîa, vyp.2.) 2 refs. Text in Russian. **Title tr.**: Preliminary scientific results of glaciological investigations in Franz-Joseph Land, 1957-1959.

Reports work of July 1957-Aug. 1959 on Gukera Island in connection with the IGY program. Glaciation of the archipelago, its morphology, glacier regime, nourishment, and ablation, movement, geologic activity and other features were studied. Stations were established on the Churlyanisa ice dome and Sedova Glacier, and movement of glaciers, thickness and temperature, structure and petrography of ice and other studies were conducted. On the Kheysa Island also, the glaciers were studied, and for the other islands of Franz Joseph Land, a reconnaissance with AN-2 aircraft was made. The 14-man field party included seven scientists; materials collected are being worked up. Preliminary results were discussed at a glaciological seminar on May 18, 1960, the papers presented pub. in summary form are abstracted in this Bibliography under their authors' names, viz **(titles tr.)**:

GROSVAL'D, M.G., *and* A.N. KRENKE. Problems of glaciology in Franz Joseph Land.

VINOGRADOV, O.N. Some results of ice velocity measurements on the surface of Churlyanisa ice dome.

MARKIN, B.A. On radiation regime features of the ice dome.

RAZUMEĬKO, N.G. Temperature areas on Churlyanisa ice dome and Sedova Glacier.

SUKHODROVSKIĬ V.L. Genetic types of relief in the periglacial zone of Franz Joseph Land.

GROSVAL'D, M.G., *and* T.V. PSAREVA. Structural section of Churlyanisa ice dome.(DLC.)

69563. AKADEMIÎA NAUK SSSR. *Institut geografii.* Rol' snezhnogo pokrova v prirodnykh protsessakh; k 60-letiîu so dnîa rozhdeniîa G. D. Rikhtera. Moskva, Izd-vo Akademii nauk SSSR, 1961. 272 p. illus., tables, maps, diagrs. Refs. Text in Russian. **Title tr.**: Role of the snow cover in natural processes; for the 60th birthday of G.D. Rikhter.

Collection of 16 articles on the geography of the snow cover in the USSR, its influence on fauna and flora, soils, relief, etc. An introductory sketch is included of the life and scientific activity of Gavriil Dmitrievich Rikhter, an authority on the snow cover of the USSR and an explorer of the arctic regions, especially the Kola Peninsula. His published works are listed.

Two of the papers of special interest for arctic areas, are abstracted in this Bibliography under their authors' names, viz **(title tr.)**:

ALEKSANDROVA, V.D. Influence of the snow cover on the vegetation in the arctic tundra.

GAVRILIÛK, V.A. Influence of snow cover and exposure of slopes on the rhythm of vegetation development in eastern Chukotka. (DLC.)

69564. AKADEMIÎA NAUK SSSR. *Institut geografii.* Snezhnyĭ pokrov, ego rasprostranenie i rol' v narodnom khozîaĭstve. Moskva, Izd-vo

Akademii nauk SSSR, 1962. 272 p. illus., tables, diagrs. Refs. Text in Russian. **Title tr.:** The snow cover, its distribution and role in the national economy.

Presents 35 papers delivered at the third conference on snow problems, held in Nov. 1958 at Novosibirsk. Three main fields were dealt with: the physical and mechanical properties of snow, its formation and melt processes; geographical aspects; reclamation methods, utilization, and drift control. Several papers directly pertinent to arctic regions are abstracted in this Bibliography under their authors' names, viz **(title tr.):**

KOTLIAKOV, V.M. A comprehensive method of snow cover investigation in regions of present glaciation.

KOZLOV, M.P. Results of determination of some mechanical characteristics of snow in the Arctic.

KOTLIAKOV, V.M. *and* K.S. LOSEV. Snow cover investigations in foreign countries.

KONSTANTINOVA, G.S. The influence of snow on permafrost temperature in the Pyasina basin and on the lower course of the Yenisey.

AKKURATOV, V.N. Conduct of blizzard-measuring observations and the method of processing them. (DLC.)

69565. AKADEMIIA NAUK SSSR. *Institut geografii. Mezhduvedomstvennyĭ komitet po provedeniiu MGG.* Issledovaniia lednikov i lednikovykh raĭonov, vyp. 1-2. Moskva, 1961-1962. 2 v.: 227, 229 p. illus., tables, graphs, diagrs., maps. Text in Russian. Summaries in English. **Title tr.:** Investigations of glaciers and glacier regions. G.A. Avsiuk, editor.

Vol. 1 contains 19 papers on IGY research in the USSR and Antarctica. Twelve dealing with aretic studies are abstracted in this Bibliography under their authors' names, viz: V.L. Sukhodrovskiĭ, A.N. Krenke, V.A. Markin, N.G. Razmueĭko, O.P. Chizhov, L.D. Bazanov, A.O. Kemmerikh *and* L.S. Troitskiĭ, I.M. Lebedeva, M.M. Koreĭsha, M.K. Gavrilova two papers, and G.A. Tsykina, q.q.v.

Vol. 2 contains 15 papers, of which 13 on work in the Arctic are abstracted under their authors' names, viz: N.G. Razumeĭko *and others*, L.S. Troitskiĭ, V.G. Khodakov, A.N. Krenke *and others*, A.B. Bazhev, V.S. Korĭakin, N.M. Svatkov, Z.M. Kanevskiĭ, N.A. Grave, IU. N. Shvareva, K.S. Liubomirova, A.M. Tareeva, V.L. Sukhodrovskiĭ, q.q.v. (DLC.)

69566. AKADEMIIA NAUK SSSR. *Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii.* Fiziko-khimicheskie problemy formirovaniia gornykh porod i rud, t.1. Moskva, Izd-vo Akademii nauk SSSR, 1961. 658 p. illus., tables, maps incl. fold. diagrs., geol. sections, plates. Refs. Text in Russian. Summary in English, French and Finnish. **Title tr.:** Physico-chemical problems in formation of rocks and ores, v. 1.

Presents a collection of articles dealing with various problems of petrology, ore formation and methods in physical chemistry. It was prepared in honor of D.S. Korzhinskiĭ on his 60th birthday in 1959. Among contributors are many foreigners including some from American institutions. The papers pertinent to arctic studies are abstracted in this Bibliography under their authors' names, viz **(titles tr.):**

ESKOLA, P. Geological and geochemical features of Finland's crystalline basement.

RAVICH, M.G. Analysis of mineral paragenesis in the Proterozoic metamorphic rocks of Taymyr.

MARAKUSHEV, A.A. Paragenesis of alumina in the oversaturated Archean crystalline schists of the Aldan shield.

ROSENQVIST, I.Th. Metamorphism in epidote-amphibolite facies of the Caledonian mountain chain in Norway.

SHABYNIN, L.I. *and others.* Spinel-pyroxene rocks as metasomatic formations.

BORODIN, L.S. Nephelinization of pyroxenites and paragenesis of rock forming ijolite minerals from massifs of ultrabasic alkaline rocks. (DLC.)

69567. AKADEMIIA NAUK SSSR *Institut iazykoznaniia.* Voprosy finno-ugorskogo iazykoznaniia; k 70 – letiiu so dnia rozhdeniia D.V. Bubrikha. Moskva, Izd-vo Akademii nauk SSSR, 1961. 331p. facsim., port. Refs. Text in Russian. **Title tr.:** Problems of Finno-Ugric linguistics; in honor of the 70th anniversary of the birth of D. V. Bubrikh.

Collection of 24 papers presented at the Conference on problems of historical grammar and dialectology of Finno-Ugric languages, held in Moscow, Sept. 1959. Several of the papers are of northern interest and are abstracted under their authors' names, as listed below with titles translated, viz:

LYTKIN, V.I., *and* K.E. MAITINSKAIA Dmitriĭ Vladimirovich Bubrikh.

SEREBRENNIKOV, B.A. The declension system in Permian languages.

LYTKIN, V.I. Certain problems of vocalism in Finno-Ugric languages.

MAITINSKAIA, K.E. Function of the pronominal suffix *-n* in the personal and interrogative pronouns of Finno-Ugric languages.

TERESHCHENKO, N.M. Expression of possessive relationship in Samoyed languages.

MATVEEV, A.K. New data on borrowings from Finno-Ugric in Russian speech of the Ural and West Siberia.

KERT, G.M. Nominal and verbal stems in the Kil'din dialect of Lappish.

ROMBANDEEVA, E.I. Causative verbs in active and passive constructions in Vogul.

RUSSKAIA, IU. N. Some characteristic features of the declension system in the Ural regional speech of Ostyak.

LYTKIN, V.I. D.R. Fokos-Fuchs. (DLC.)

69568. AKADEMIIA NAUK SSSR. *Institut merzlotovedeniia.* Fiziko-khimicheskie protsessy v promerzaiushchikh i merzlykh gornykh porodakh. Moskva, Izd-vo Akademii nauk SSSR, 1961. 111 p. illus., tables, graphs, diagrs. Text in Russian. **Title tr.:** Physico-chemical processes in freezing and frozen rock.

Contains 11 papers of which ten are abstracted in this Bibliography under their authors'

names, viz (titles tr.):

TIUTIUNOV, I.A. Physico-chemical changes in rocks in the far North.

NERSESOVA, Z.A. Heat of wetting and the surface of the ground during interaction with water.

PCHELINTSEV, A.M. The temperature gradient in the freezing layer of dispersed soils.

KONNOVA, O.S. Aspects of the crystal formation of segregated ice in freezing dispersed soils, and the role of exchange cations in this process.

PCHELINTSEV, A.M. Displacement of organic-mineral particles in freezing clayey soils.

AKIMOV, A.T. Features in the spatial variation of some physical parameters of permafrost formations in the Bol'shezemel'skaya Tundra.

KORKINA, R.I. Some features of the interaction of ground water and Quaternary deposits under conditions of permafrost formation in the Khal'mer-Yu area.

POLISHCHUK, N.K. The form of taliks beneath water courses in a permafrost area.

PONOMAREV, V.M. Formation of permafrost and ground water in shallow areas of northern seas.

SMIRNOV, A.D. Instrument for laboratory and field studies of ground systems and rock by means of the impulse- and ultra-sonic method. (DLC.)

69569. AKADEMIIA NAUK SSSR. *Institut merzlotovedeniia.* Materialy k osnovam ucheniia o merzlykh zonakh zemnoi kory, vyp. 7: teplofizicheskie voprosy geokriologii. Moskva, 1961. 192 p. illus., tables, graphs incl. fold. Refs. Text in Russian. **Title tr.:** Contributions to basic studies on the frozen zones of the earth's crust, no. 7: thermophysical problems of geocryology. In sequence to No. 62922.

Contains nine papers, six pertinent to the Arctic regions are abstracted in this Bibliography under their authors' names, viz (titles tr.):

PORKHAEV, G.V. *and* V.K. SHCHELOKOV. Effect of construction on the heat and moisture regime of permafrost.

TSVETKOVA, S.G. Thermal regime of ground beneath lakes in the Igarka region.

GOLUBEV, A.V. *and* A.V. PAVLOV. Investigation of heat fluxes in soil with different surface conditions.

SHEIKIN, I.V. Determination of probable sums of air degree hours for calculation of the depths of seasonal thawing of grounds.

KHRUSTALEV, L.N. Filtration properties of seasonally thawing clayey soils in the Vorkuta region.

KAZANSKII, S.L. Determining the thickness of thermal insulation and snow insulation of ice storehouses. (DLC.)

69570. AKADEMIIA NAUK SSSR. *Institut merzlotovedeniia.* Mikhail Matveevich Krylov. *(Its:* Trudy, 1958. t. 14, p. 7-9, port.) Text in Russian.

Obituary of Krylov, 1899-1956, member of the Scientific Council, senior scientist of the Permafrost Institute and Lenin Prize winner. His life and scientific work are sketched. (DLC.)

69571. AKADEMIIA NAUK SSSR. *Institut merzlotovedeniia.* Polevye geokriologicheskie (merzlotnye) issledovaniia; metodicheskoe rukovodstvo. Moskva, Izd-vo Akademii nauk SSSR, 1961. 424 p. illus., tables, diagrs., graphs, maps incl. fold. Refs. Text in Russian. **Title tr.:** Geocryologic (frozen ground) field investigations; a handbook of methods.

Comprehensive manual prepared by many specialists, with special attention to survey and mapping, cryogenic and post-cryogenic formations, and to the aims and tasks of field observations. Scope of geocryologic survey, investigation of permafrost distribution, composition, temperature of rocks, physical properties of rocks, subsurface and surface water, seasonal freezing and thawing, compilation and type of maps and other problems are analyzed. Investigation of cryogenic formations such as hummocks and mounds, frost heavings, peat mounds, subsurface ice, ice veins, polygonal grounds, ice wedges, naleds, thermokarst, solifluction, thermal abrasion and other cryogenic features are analyzed in detail. Aims and tasks of field work such as heat regime of ground, water regime of ground, snow and ice cover, methods of investigation are described. (DLC.)

AKADEMIIA NAUK SSSR. *Institut merzlotovedeniia, see also* Materialy . . . merzlykh gruntov, sbornik 4. 1961. No. 73869

69572. AKADEMIIA NAUK SSSR. *Institut merzlotovedeniia. Igarskaia merzlotnaia stantsiia.* Voprosy regional'noi geokriologii Srednei Sibiri. Moskva, Izd-vo Akademii nauk SSSR, 1961. 152 p. illus., tables, diagrs., graphs, maps. *(Its:* Trudy vyp. 2.) Refs. Text in Russian. **Title tr.:** Problems of regional geocryology of Middle Siberia.

Presents 12 papers, prepared mostly by the Igarka Permafrost Research Station and dealing with field, experimental and laboratory studies in geocryology. All the papers are abstracted in this Bibliography under their authors' names, viz (titles tr.):

ORLOV, V.O. Frost heaving of loamy-sandy, powdery ground and methods for its calculation.

ORLOV, V.O. Solution of the problem of the freezing of dispersed ground taking into account its moisture redistribution.

ORLOV, V.O. On the force exerted on foundations by frost-heaving ground.

PCHELINTSEV, A.M. Cryogenic drainage of freezing ground as a means of controlling heaving.

ZHUKOV, V.F. Some problems in strengthening of thawing ground in Igarka and Noril'sk.

POTRASHKOV, G.D. Destruction of the frost texture in thawed clayey loam.

PROTAS'EVA, I.V. Application of air-photo survey in investigation of permafrost rocks.

TYRTIKOV, A.P. Thickness of the seasonally thawing layer of soil in the Igarka region.

PCHELINTSEV, A.M. Determination of the maximum depth of seasonal thawing of rocks according to cryogenic texture.

TYRTIKOV, A.P. Mapping seasonally thawing and seasonally frozen layers of soils on the basis

of vegetation cover.

KONSTANTINOVA, G.S. Permafrost in the Yenisey-Pyasina North.

TOLSTOV, A.N. Fissure ice wedges on the middle and lower course of the Pyasina River. (DLC.)

69573. AKADEMIÎA NAUK SSSR. *Institut merzlotovedeniîa. Severnoe otdelenie.* Voprosy obshchei i inzhenernoi geokriologii, svîazannye s promyshlennym osvoeniem Pechorskogo ugol'nogo basseĭna. Moskva, Izd-vo Akademii nauk SSSR, 1962. 108 p. illus., tables, diagrs., graphs. (*Its:* Trudy vyp. 2.) Refs. Text in Russian. **Title tr.:** Problems of general and engineering geocryology, connected with the industrial conquest of the Pechora coal basin.

Presents 14 papers on permafrost, foundation construction, physics and mechanics of frozen ground, etc., prepared in connection with the 25th anniversary of the Vorkuta permafrost station celebrated in 1961. All the papers are abstracted in the Bibliography under their authors' names, viz (title tr.):

ZHUKOV, V.F. Twenty-five years' scientific activities of the Obruchev Permafrost Institute, Academy of Sciences USSR, in Vorkuta.

IVANOVA, T.F. Geocryological zonation of the territory of the European North.

BOBOV, N.G. Cryogenic structure of covering loams and their importance in relief development in eastern Bol'shezemel'skaya Tundra.

BAKALOV, S.A. Construction methods in the Vorkuta region.

KONDRATOVA, N.S. Influence of engineering modifications of the ground surface upon the heat exchange components in the Vorkuta region.

NADEZHDIN, A.V. Investigation of the laws of rock pressure in the vertical mine shafts of the Vorkutugol' combine.

NOVIKOV, F. IÂ. Melting of frozen ground beneath slag heaps and circular buildings.

BOĬKO, I.V. The thermal-moisture condition of air in the Vorkuta deposit shafts.

FILIPPOVSKIĬ, S.M. Freezing of ground with air that has a natural negative temperature.

VODOLAZKIN, V.M. Strength characteristics of thawed clayey ground in various stages of consolidation.

KOLESOV, A.A. Settling during thawing of permafrost alluvial loams of the Vorga-Shor coal deposits.

KHRUSTALEV, L.N. Water permeability of clayey ground in the layer of seasonal freezing and thawing under natural bedding conditions.

ZAPOROZHTSEVA, I.V. *and* L.A. TOKAREVA. Results of verifying frozen rock thickness determined by interpreting VÈZ curves, with the thickness obtained by D.V. Redozubov's calculation method.

EROSHENKO, V.N. Use of carbinol glue for electrotensometric devices in permafrost conditions. (DLC.)

69574. AKADEMIÎA NAUK SSSR. *Institut merzlotovedeniîa. Severo-Vostochnoe otdelenie.* Teplo- i massoobmen v merzlykh pochvakh i gornykh porodakh. Moskva, Izd-vo Akademii nauk SSSR, 1961. 144 p. tables, graphs, diagrs. Refs. Text in Russian. **Title tr.:** Heat- and mass exchange in frozen soils and rocks.

Presents a collection of 14 papers dealing with theoretical and experimental aspects of geocryology and heat exchange processes; seven* of the papers are described under their authors' names (all titles translated):

Ivanov, N.S. On the problem of modeling heat processes in soils and rocks.

*BALOBAEV, V.T. Processes of heat exchange on the surface of exposed thinly dispersed frozen ground during laminal thawing.

*GAVRILOVA, M.K. The thermal melting regime of a glacier in the Suntar-Khayata Range in 1959.

Mostakhov, S.E. Determination of turbulent heat flow under temperature inversion of the air.

Mostakhov, S.E. On the method of turbulent heat flow calculation.

*APTIKAEV, F.F. Seismic investigations on glacier No. 31 in the Suntar-Khayata Range.

Mukhin, L.M. On one error of the gamma-method for determination of moisture content in soils and rocks.

*CHISTOTINOV, L.V. Possible use of a gamma-ray log for observations on moisture dynamics in soils and rocks.

Ivanov, N.S. Methods for measuring heat flow in rocks.

Kustasov, I.M. Determination of the time required for a cylindrical temperature pickup to acquire the ambient temperature.

Kustasov, I.M. Refining the thermistor response to temperature.

*KOZLOV, N.A. Use of the MMT-4 thermistor in geothermal measurements.

*ANTONOVA, L.V. Results of investigations of the thermal properties of Yakutia rocks.

*KORENNOV, B.I. Electrical properties of rocks and methods of their measurement in an electromagnetic field. (DLC.)

69575. AKADEMIÎA NAUK SSSR. KAREL'SKIĬ FILIAL. Problemy geologii Karelii i Kol'skogo poluostrova. Murmansk, Murmanskoe knizhnoe izd-vo, 1961. 145 p. illus., tables & maps incl. fold., cross-sections. Refs. Text in Russian. **Title tr.:** Geologic problems of Karelia and Kola Peninsula.

Presents 12 papers dealing with the eastern part of the Baltic shield. They were prepared by the Kola and Karelia Branches of the Academy of Sciences and are abstracted (except Riĭkonen, Sokolov, and Tochilin's) under their authors' names, as listed below with titles tr.

KRATTS, K. O. The Svecofennian and Karelian systems.

BOGACHEV, A.I. Alkaline rocks of the Yeletozero Lake region and basaltic magma.

KOZLOV, E.K. Main results of investigating the copper-nickel deposits of Kola Peninsula and prospects for discovery.

BISKÈ, G.S. The role of tectonics in the geomorphology of Karelia.

KRATTS, K.O. *and* IÛ. I. LAZAREV. The main features of tectonic structures of the Jatulian of Karelia.

BEL'KOV, I.V. The Keyvy metamorphic complex in the eastern part of Kola Peninsula.

IVANOV, A.M. On the geologic position and

stratigraphy of the Imandra-Varzuga series of Kola Peninsula.

Riĭkonen, O.A. Main stratigraphic problems of the Proterozoic in central Karelia.

IVANOVA, T.N. The Khibiny alkaline massif and its apatite-nephiline deposits.

CHERNOV, V.M., *and* M.M. STENAR'. The iron ore formation of Karelia and its correlation with analogous formations of the Baltic and Ukrainian crystalline shields.

Sokolov, V.A. On carbonate accumulation in the Jatulian (Middle Proterozoic) of Karelia.

Tochilin, M.S. On the problem of magnetite-hematite relations. (DLC.)

69576. AKADEMIÎA NAUK SSSR. KOL'SKIĬ FILIAL. Flotat͡siîa okislov zheleza Olenegorskogo mestorozhdeniîa. Apatity, 1961. 84 p. illus., tables, maps, graphs, diagrs. Refs. Text in Russian. **Title tr.:** Flotation of iron oxides of the Olenegorsk deposits.

Reports experiments on enrichment of Olenegorsk and Kovdorsk iron quartzites of magnetite-hematite origin and up to 31.7% iron content. The purpose was to obtain a flotation concentrate of 65% Fe and utilize the process in actual production of iron; the laboratory investigations gave positive results. The report consists of three parts, each described in this Bibliography under its authors' name, viz **(title tr.):**

ALEĬNIKOV, N.A. Flotation of iron oxides of the Olenegorsk deposits.

TOCHILIN, M.S. A geologic-mineralogic outline of the Olenegorsk iron ore deposits.

ISOTOMIN, A.V., *and* M.K. MAZUROV. Economic effectiveness of iron ore enrichment at the Olenegorsk plant according to the magnetic-flotation scheme. (DLC.)

69577. AKADEMIÎA NAUK SSSR. KOL'SKIĬ FILIAL. Magmaticheskie obrazovaniîa Kol'skogo poluostrova. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1962. 196 p. illus., maps incl. fold., diagrs. Refs. Text in Russian. **Title tr.:** Magmatic formations of the Kola Peninsula.

Presents 12 papers dealing with alkaline, basic, and acid magmatism of the Kola Peninsula, their geology, petrography and mineralogy. All the papers are abstracted in this Bibliography under the authors' names, viz **(title tr.):**

IVANOV, N.V. Sampling method by empirical curves.

BUSSEN, I.V., *and* A.S. SAKHAROV Primary layering of intrusive massifs as showing magmatic differentiation.

BUSSEN, I.V., *and* A.S. SAKHAROV. Complex-pluton of eudialyte-lujavrites in the Lovozero tundras.

BUSSEN, I.V. Gigantic eruptive breccias of the Lovozero alkaline massif.

BUSSEN, I.V., *and others*. Amphibole peridotites in the northeastern foothills of the Luyavrurt.

GALAKHOV, A.V. On contact effects of apatite-nepheline rocks on enclosed poikilitic nepheline syenites (rischorrites) in the Khibiny.

SERBA, B.I. The Sallanlatva massif of alkaline rocks and carbonates.

SHMYGALEV, V.I., *and* Ė.V. MUROVA. Kivakka intrusion.

MALAKHOVA, V.V. Ultrabasites of the Volch'i Tundras.

IŪDIN, B.A. Contact-metasomatic alteration of Tsaga massif rocks under the influence of alkaline granite magma.

IŪDIN, B.A. Alkaline granites in the Glavnyy Ridge region of the Volch'i, Monche and Chuna Tundras.

MAKIEVSKIĬ, S.I. Main laws of distribution of mica-bearing pegmatites in the Yena and Strel'na mica-bearing regions on the Kola Peninsula. (DLC.)

69578. AKADEMIÎA NAUK SSSR. KOL'SKIĬ FILIAL. Voprosy geologii, mineralogii i petrografii Khibinskikh tundr. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 114p. illus., maps, diagrs. incl. fold. Refs. Text in Russian. **Title tr.:** Problems of the geology, mineralogy and petrography of the Khibiny tundras.

Contains some of the papers delivered at the conference in Kirovsk, May 27-30, 1957 on the Khibiny alkaline massif, a 1327 km.^{2} area in central Kola Peninsula. These papers are abstracted in this Bibliography under their authors' names, viz **(title tr.):**

GALAKHOV, A.V. A geologic-petrographic outline of the Khibiny alkaline massif and the tasks of further scientific studies.

GORSTKA, V.N. On the contact interrelations of the Kuel'por apatite-nepheline body.

DUDKIN, O.B. On the mineralogy of the Yukspor apatite deposits.

DUDKIN, O.B. The development features of supergene processes in the apatite ore of the Khibiny deposits.

SHUKHMAN, L.N. Upper contact zone of the Khibiny apatite-nepheline deposits.

KRAVTSOV, A.I. Gas-bearing properties of the Khibiny apatite deposits.

PETERSIL'E, I.A. Results of investigation of gas-bearing properties of the Khibiny tundras.

BEGUNOVA, T.G., *and others*. On the problem of complete utilization of apatite-nepheline ores.

MOTOV, D.L. Utilization of sphene for obtaining titanium pigments. (DLC.)

69579. AKADEMIÎA NAUK SSSR. KOL'SKIĬ FILIAL. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova. Sbornik statei pod redaktsieĭ L.I. Barona. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 154 p. illus., diagrs., tables. Refs. Text in Russian. **Title tr.:** Problems of technology of mining of ore deposits in Kola Peninsula; a collection of papers edited by L.I. Baron.

Presents 18 papers prepared by staff of the Mining Laboratory of the Institute of Chemistry and Technology of Rare Elements and Mineral Resources (Kola Branch of the Academy of Sciences). The papers are summarized in the editor's preface, p. 3-7, and 14 of them* are abstracted in this Bibliography under their authors' names, viz **(titles tr.):**

*BUSYREV, V.M. Methods of investigating mining systems according to the labor consumption of their production processes.

*KULESHOV, A.A. *and* R.S. PERMIAKOV. Trench undercutting of blocks in the S.M. Kirov apatite mine.

*FUGZAN, M.D. *and others.* Construction of hatches with chain trap doors.

Nikanorov, V.I. Choosing of means for secondary breaking.

*FUGZAN, M.D. *and others.* On the shape of various-sized pieces of apatite ore.

*SHVANEV, K.A. Effect of the parameters of blasting on thin ore vein cutting.

*ROSINOER, B.L., *and* R.S. PERMIAKOV. Rotary-bit drilling of deep blasting holes at the S.M. Kirov apatite mine.

Turchaninov, I.A. Radiometric observation of deformation of rock strata.

*ADRIANOV, N.F., *and* L.I. BARON. Use of igdanite for blasting hard rock at the Kaula mine.

*BARON, L.I., *and* G.N. SIROTIUK. Effect of the throw index on rock breaking.

*ALEKHICHEV, S.P. *and others.* Ways of improving ventilation in the S.M. Kirov apatite mine.

ALEKHICHEV, S.P. *and* IU. A. SHASHMURIN. On the use of light pneumatic fans at the S.M. Kirov apatite mine.

*ALEKHICHEV, S.P. A case of ammonia gas given off in a cutting shaft.

Baron, L.I., *and* V.M. Kurbatov. Correlation of indicators of static and dynamic tests of rock samples.

*SIROTIUK, G.N. *and* L.I. BARON. Comparative study of rock resistance to drilling, breaking and crushing in Kola Peninsula mines.

BARON, L.I., *and others.* Investigation of the relation between rock-hardness and breaking-resistance factors and the indicators of drilling/blasting for cutting horizontal shafts.

*MARKENZON, E.I. *and others.* Resistance to crushing as indicator of rock resistance to rotary drilling.

BARON, L.I., *and* G.N. SIROTIUK. Testing the breaking of rocks by confined charge blasting. (DLC.)

69580. AKADEMIIA NAUK SSSR. KOL'SKII FILIAL. *Seismicheskaia stantsiia "Apatity.* Biulleten', Apatity, 1956? -in progess. **Title etc. tr.:** Bulletin of the Apatity Seismic Station.

The station was set up in March 1956 at 67° 33.5'N. 33°26.5'E., alt. 182m.; its bulletin pub. twice yearly: no. 5 July-Dec. 1958, 81 p. pub. 1960; no. 7 July-Dec. 1959, 92 p.; no. 8 Jan.-June 1960, 101 p.; no. 10 Jan.-June 1961, 45 p., and no. 11 July-Dec. 1961, 53 p. were pub. 1962. Each number contains data on earthquakes and microseisms recorded at the station, together with account of its instrumentation and operation. No. 8 includes analyses of macroseismic data on earthquakes in the Murman region in Feb. 1960 and a microseismic storm Feb. 8-11, 1960. No. 10 records 206 earthquakes, as well as the microseism data, and a chart of polar coordinates for the station by A.S. Kolomiets. No. 11 presents records of 530 earthquakes, and tables of microseisms. (DLC;SPRI.)

69581. AKADEMIIA NAUK SSSR. KOMI FILIAL. Komi-russkii slovar', Moskva, Gos. izd-vo inostrannykh i natsional'nykh slovarei, 1961. 923 p., tables. Text in Russian. **Title tr.:** Komi-Russian dictionary; edited by V.I. Lytkin, compiled by D.A. Timushev and N.A. Kolegova.

Contains some 25,000 words in Komi-Zyryan, the literary language of Komi ASSR, and a list of about 300 local toponymics, p.829-36. An outline of Zyryan grammar by V.I. Lytkin and D.A. Timushev, p. 837-923, traces development of the vocabulary including loan words, dialect expressions, etc., and discusses neologisms, phonetics, morphology, grammatical structure, and syntax. (DLC.)

69582. AKADEMIIA NAUK SSSR. KOMI FILIAL. Sbornik trudov po geologii i paleontologii. Syktyvkar, 1960. 404 p. illus., tables, maps incl. fold., plates. Refs. Text in Russian. **Title tr.:** A collection of works on geology and paleontology.

Presents 17 papers written by his students in tribute to A.A. Chernov on his 80th birthday and to his fifty years' activity in science, teaching, etc. Most of the papers deal with the geology and paleontology of Komi ASSR and are abstracted in this Bibliography under their authors' names, viz **(title tr.:).**

VARSANOF'EVA, V.A. Aleksandr Aleksandrovich Chernov.

FISHMAN, M.V. Stratigraphy of the metamorphic stratum in the southern part of the Subpolar Ural.

PERSHINA, A.I. Devonian stratigraphy in the Shar–Yu and Zaostrennaya River basins.

CHERNOV, G.A. Lower Carboniferous of the Pechora ridges.

VARSANOF'EVA, V.A., *and* D.M. RAUZER-CHERNOUSOVA. Characteristics of the middle Carboniferous deposits of the Ilych River.

ELISEEV, A.I. Lithology of Famennian and lower Tournaisian deposits of the Vangyr River, southern part of the Chernysheva Ridge.

SHOMYSOV, N.M. Petrographic-mineralogic investigation of upper Permian deposits in the upper Pechora basin.

GUSLITSER, B.I. Karst of the Un'ya River basin.

TRUSHCHELEV, M.G. Polymetallic deposits of the Ilych River basin.

GOLDIN, B.A. Rocks of the Malyy Patok basin, western slope of the Subpolar Ural, and sulfide mineralization.

SOSHKINA, E.D. Tournaisian rugose corals and their relationship with Devonian.

ASTROVA, G.G. Silurian Fistuliporidae from northern regions of the RSFSR.

MIKHAILOVA, Z.P. New species of foraminifers of fam. Lasiodiscidae in the Pechora region. (DLC.)

69583. AKADEMIIA NAUK SSSR. KOMI FILIAL. Sravnitel'nyi slovar' komi-zyrianskikh dialektov; okolo 25,000 slov. Syktyvkar, Komi knizhnoe izd-vo, 1961. 491 p. tables, fold. maps. 15 refs. Text in Russian. **Title tr.:** Comparative dictionary of Komi-Zyryan dialects, about 25,000 words; compiled by T.I. Zhilina, M.A. Sakharova, *and* V.A. Sorvacheva; edited by V.A. Sorvacheva.

Word forms of literary Zyryan, based on the

Syktyvkar-Vychegda vernacular, are compared with variants in ten dialects including four northern: Izhma, Vym', Pechora, and Udor. Appended is a grammatical outline of Zyryan dialects by V.A. Sorvacheva, p.456-89, and two linguistic maps of Komi ASSR. (DLC.)

69584. AKADEMIÎA NAUK SSSR. KOMI FILIAL. *Institut geologii.* Materialy po geologii i petrografii Timana i poluostrova Kanin. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 148 p. tables, plates, maps and diagrs. incl. fold. Refs. Text in Russian. **Title tr.:** Materials on the geology and petrography of Timan and the Kanin Peninsula.

Presents seven papers, all abstracted in this Bibliography under the authors' names, viz **(titles tr.):**

PLOTNIKOV, M.A. New data on the stratigraphy of Permian deposits of the Kanin Peninsula.

MOLIN, V.A. Spore-pollen complexes of Permian deposits of the Kanin Peninsula.

KALASHNIKOV, N.V. Fauna of Permian deposits in the southeastern part of the Kanin Peninsula.

IVENSEN, IŪ.P. Riphean magmatism of the Kanin Peninsula and northern Timan.

KOCHETKOV, O.S. On the mineralogy and geochemistry of titanium in the Devonian deposits of northern Timan.

CHERNOV, G.A. Basalts of the Belaya, Bol'shaya Svetlaya, and Kumushka-Volonga Rivers in northern Timan.

RAZNITSYN, V.A. Geologic structure of the southwestern Timan region; Paleozoic stratigraphy and paleogeography. (DLC.)

69585. AKADEMIÎA NAUK SSSR. *Komissiîa po problemam Severa.* Syr'evye resursy Kamchatskoĭ oblasti. Materialy vyezdnoĭ sessii komissii po problemam Severa v 1957 g. Moskva, Izd-vo Akademii nauk SSSR, 1961. 184 p. tables, graphs, maps incl. fold. Refs. Text in Russian. **Title tr.:** Raw material resources of Kamchatka Province. Materials of the excursion session of the Commission on the Problems of the North in 1957.

Contains 23 papers delivered at this conference in Petropavlovsk in July 1957, to work out development plans for the next 10-15 years, as the editor, D. I. Shcherbakov, states. The basic resources are covered: minerals, hot springs, agriculture, forestry and reindeer breeding, and in some cases a statement of needed research is included. All the papers are abstracted in this Bibliography under their authors' names, viz **(title tr.:).**

MOZESON, D. L., *and* I. S. GURVICH. The investigation of Kamchatka.

VLASOV, G. M. Main features of the geologic structure of Kamchatka and tasks of further scientific work.

ÎARMOLIŪK, V. A. Useful minerals of Kamchatka, and ways of their development prospects.

TITOV, V. A. Main features of geologic structure and useful minerals of the Koryak highland; tasks of further investigations.

TIKHOMIROV, L. I., *and* È. N. ÈRLIKH. Some features of Kamchatka metallogeny.

SUKHAREV, M. A. The Krasnaya Mountain copper-molybdenum deposits in the Sredinnyy Range of Kamchatka and the outlook in further rare metal ore prospecting.

KRYLOV, V. V. Organization and methods for conducting oil prospecting and oil exploration work in Kamchatka.

MARKIN, N. M. Prospects for oil on the west coast of Kamchatka.

PLESHAKOVA, I. B. Prospects for oil on the east coast of Kamchatka.

TOLSTIKHIN, O. N. Prospects for oil in the southern part of Kamchatka.

SAVATEEV, D. E. Mineral construction materials of Kamchatka.

NEISHTADT, M. I. Scientific and economic problems of Kamchatka peat.

OLENIN, A. S. Peat reserves of Kamchatka, their investigation and development prospects.

GORSHKOV, G. S. Study of Kamchatka volcanoes.

SADOVSKIĬ, N. D. Underground waters of Kamchatka.

SVÎATLOVSKIĬ, A. E. Geologic regionalization of the subsurface hot springs of Kamchatka and prospects for Petropavlovsk heating.

KOZLOV, B. K. Utilization of geothermal sources of energy of Kamchatka.

VLADIMIROV, A. T. Features of dynamics of the west Kamchatka coast in relation to hydrotechnical and industrial construction.

KOLESNIKOV, B. P. Knowledge of the plant life of Kamchatka Province and tasks of scientific studies.

PORTENKO, L. A. State of knowledge on the terrestrial fauna of Kamchatka Province and tasks for further studies.

GRUSHIN, M. I. Forest resources of Kamchatka.

GARIN, N. A. Fodder resources of Kamchatka and ways for their improvement.

ANDREEV, V. N. Efficient development of the reindeer pastures of Kamchatka Province.

(DLC.)

69586. AKADEMIÎA NAUK SSSR. *Laboratoriîa aèrometodov.* Primenenie aèrometodov pri poiskakh korennykh mestorozhdeniĭ almazov. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1960. 132p. illus., tables, graphs, maps, plates. Refs. Text in Russian. **Title tr.:** Application of aerial methods to the search for primary diamond deposits.

Presents a collection of papers reporting this Laboratory's expedition of 1955-1958 to work out methods and techniques for using air photography and aerial magnetic survey in diamond prospecting in western Yakutia. The papers are all abstracted in this Bibliography under their authors' names, viz **(title tr.:):**

BARYGIN, V.M. Interpretation features of kimberlite bodies on aerial photographs in the northeastern part of the Siberian platform.

KOBETS, N. V. Application of aerial methods to the search for kimberlite bodies in the Daldyn diamond-bearing region of Yakutia.

ZAGREBINA, N. L. Interpretation of vegetation on aerial photographs in the diamond-bearing regions of northwestern Yakutia.

PETRUSHKINA, Z. L. Photographic processing of black-white aerial negatives for air-photo interpretation in primary diamond deposit prospecting.

BAKHVALOV, V.M. Methods of spectrozonal aerial photographic survey on SN-2 film and its characteristics for air-photo interpretation in prospecting primary diamond deposits.

KOMAROV, V.B. An attempt at profile construction from aerial photographs without geodetic substantiation in regions of kimberlite pipes.

LOSHCHAKOV, A.I. Interpretation of aerial magnetic observations in the diamond-bearing regions of western Yakutia.

LOSHCHAKOV, A.I. Interpretation of a regional magnetic field, and the connection of magnetized bodies with tectonics in the diamond-bearing regions of western Yakutia.

BAKYGIN, V.M. Methods and techniques of prospecting for primary diamond deposits using aerial methods. (DLC.)

69587. AKADEMIÏA NAUK SSSR. *Okeanograficheskaïa komissiïa.* Pamïati A.T. Vladimirova. *(Its:* Biulleten', 1961, no.8, p.100-103, photo.) Refs. Text in Russian. **Title tr.:** In memory of A.T. Vladimirov.

Obituary of Apollon Tikhonovich Vladimirov (1921-1960), a talented geomorphologist and investigator of the dynamics and morphology of seacoasts. He was leader of the 1951-1952 expedition to the Chukchi and Bering Seas, and in 1954-1955 headed a group studying the west coast of Kamchatka. His published works are listed. (DLC.)

69588. AKADEMIÏA NAUK SSSR. *Otdelenie geologo-geograficheskikh nauk.* Petrografiïa Vostochnoi Sibiri, tom 1 Sibirskaïa platforma i ee severnoe obramlenie Moskva, Izd-vo Akademii nauk SSSR, 1962. 740p. illus., tables, maps & diagrs. incl. fold. Refs. Text in Russian. **Title tr.:** Petrography of Eastern Siberia, v.1. Siberian platform and its northern framework.

First of a planned two-volume composite work on the Siberian platform and old folded areas of Taymyr Peninsula and Severnaya Zemlya. It purposes to give a comprehensive petrographic description of magmatic and metamorphic formations, their geologic and tectonic positions, manifestations of metallogeny and mineralization. All the papers are abstracted in this Bibliography under their authors' names, viz **(titles tr.):**

LUR'E, M.L., *and others.* Intrusive traps in the western margin of the Siberian platform.

LEBEDEV, A.P. Trap formation in the lower Podkamennaya Tunguska River basin.

GON'SHAKOVA, V.I. Trap formation in the southeastern part of the Siberian platform.

MASAÏTIS, V.L. Trap formation of the Vilyuy River basin.

VAKAR, V.A. Trap formation of the Taymyr.

BOBRIEVICH, A.P., *and* V.S. SOBOLEV. Kimberlite formation in the northern part of the Siberian platform.

BUTAKOVA, E.L., *and* L.S. EGOROV. Maymecha-Kotuy formation complex of alkaline and ultrabasic rocks.

RAVICH, M.G., *and* L.A. CHAÏKA. Proterozoic metamorphic and magmatic formations of mountainous Taymyr.

EGIAZAROV, B.KH. Upper Proterozoic magmatic formations of Severnaya Zemlya. (DLC.)

69589. AKADEMIÏA NAUK SSSR. SIBIRSKOE OTDELENIE. Shestidesiatiletie professora A. B. Zhukova. *(Its:* Izvestiïa, 1961, no.8, p.136-37, port.) Text in Russian. **Title tr.:** The 60th anniversary of Professor A. B. Zhukov.

Sketches the life and scientific work of Anatolii Borisovich Zhukov, b.1901, outstanding silviculturist and since 1959 director of the Forestry and Wood Institute in Krasnoyarsk; he is chief editor of the multi-volume *Lesa SSSR* (Forests of the USSR). (DLC.)

69590. AKADEMIÏA NAUK SSSR. SIBIRSKOE OTDELENIE. Vstrecha N.S. Khrushcheva s uchenymi Sibirskogo otdeleniïa Akademii nauk SSSR. *(Its:* Izvestiïa, 1961, no.5, p.123-25.) Text in Russian. **Title tr.:** N.S. Khrushchev's encounter with the scientists of the Siberian Division of the Academy of Sciences of USSR.

Reports on Khrushchev's visit to the scientific community at Novosibirsk, where the directors of 14 institutes reported briefly on their work, including new mining methods for Noril'sk, oil discovery in Tyumen Province, etc. (DLC.)

69591. AKADEMIIA NAUK SSSR. SIBIRSKOE OTDELENIE. *IAkutskii filial.* Petrografiïa i mineralogiïa korennykh mestorozhdenii almazov. Moskva, Izd-vo Akademii nauk SSSR, 1962. 151 p. illus., tables, diagrs., maps. *(Its:* Trudy, sbornik no.8.) Refs. Text in Russian. **Title tr.:** Petrography and mineralogy of primary deposits of diamonds.

Presents eight papers by scientists of the Yakut Branch of the Academy of Sciences' Siberian Division, and they are abstracted in this Bibliography under their author's names, viz **(titles tr.):**

MENIAÏLOV, A.A. On some laws in the distribution, structure and formation of the primary diamond deposits of Yakutia.

FRANTSESSON, E.V. Composition and structure of the Mir kimberlite pipe.

KOVAL'SKIÏ, V.V. Material composition of kimberlite bodies, as exemplified by the Muna and Olenek diamond-bearing regions.

LEBEDEV, A.A. On the hydrothermal stage of serpentinization of kimberlites in connection with a find of brucite in them.

LUTTS, B.G. Xenoliths of Anabar shield rocks in kimberlite pipes.

ZOL'NIKOV, G.V. Garnet-containing rocks of the Anabar shield and their comparison with inclusions in kimberlites.

MENIAÏLOV, A.A., *and* V.B. VOSKRESENSKAIA. Pipe-like bodies with multilayered trap silts in the Botuobuya region.

PRIZHIMOVA, L.P., *and* M.G. TRUSHCHELEV. Geologic-petrographic characteristics of Paleozoic carbonaceous rocks in the Muna kimberlite-pipe region. (DLC.)

AKADEMIÏA NAUK SSSR. *Sovet po izucheniiu proizvoditel'nykh sil, see* Bibliografiïa IAkutskoi ASSR, 1931-1959, tom 2 . . . 1962. No. 70201

69592. AKADEMIÏA NAUK SSSR. *Sovet po seismologii.* Zemletriaseniïa v SSSR. Moskva, Izd-vo Akademii nauk SSSR, 1961. 412 p. illus., tables, maps incl. fold., graphs, diagrs. Approx. 600 refs. Text in Russian. **Title tr.:** Earthquakes in the USSR.

Presents a collective work, its first part

dealing with seismological instrumentation and methods, classification of earthquakes, etc. In pt. 2, the earthquake regions of the USSR are treated in turn. Three of the papers pertinent to arctic or adjacent areas are abstracted in this Bibliography under their authors' names, viz (title tr.):

LINDEN, N.A. Earthquakes of the Far East.

KONDORSKAIA, N.V., *and* R.Z. TARAKANOV. The Kuril-Kamchatka earthquakes.

LINDEN, N. A. The seismicity of the Soviet Arctic. (DLC.)

69593. AKASOFU, SYUN-ICHI, *and* **S. CHAPMAN.** The ring current and a neutral line discharge theory of the aurora polaris. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings, *pub.* 1962. v.1, p.168-73, illus., graphs.)

Calculates the electric current intensity distribution and the magnetic field produced for a model ring current belt, centered at 6 earth radii, in the outer part of the outer radiation belt. The current, partly eastward though mainly westward, produces a pronounced dip of the magnetic field near the center of the belt, agreeing with Explorer VI observation. During magnetic storms, protons (50 ~ 500 Kev) in the belt increase, perhaps by capture from solar streams carrying (tangled?) magnetic fields. The ring current increases, and at times reverses the earth's magnetic field near the center line of the belt. Neutral lines ($H = 0$) appear, of two kinds, X and O. Particles discharged through narrow strips close to one or more X lines produce arcs, single or multiple. Particles sporadically captured produce transient eastward electric fields along the X lines. Electrons are accelerated, a strong (but instable) current flows along the X lines. This narrows the "escape" strips and increases the number and energy of the auroral electrons. The result is extremely thin and bright auroral curtains, with large scale folding and fine ray structure. Westward auroral electrojets are also explained. –Authors' abstract. (DLC.)

69594. AKASOFU, SYUN-ICHI. Some examples of the aurora borealis. (Weather, Apr. 1961. p.112, illus.)

Presents four colored photos (between p.118-19) taken at the Geophysical Institute of the University of Alaska, Mar. 31 - Apr. 1, 1960. (DWB.)

69595. AKASOFU, SYUN-ICHI. Thickness of an active auroral curtain. (Journal of atmospheric and terrestrial physics, July 1961. v.21, no.4, p.287-88, illus. on plate.) 2 refs.

Shows (in black and white) two color photographs of an active corona taken five sec. apart at 0245 on Feb. 19, 1961, from College, Alaska. The thickness at two points was determined as 336 and 144 m. (DLC.)

AKASOFU, SYUN-ICHI, *see also*

Alaskan Science Conference 1960. 1961. No. 69643.

Alaskan Science Conference 1961. 1962. No. 69644.

AKEEKO, *see* Canada. Northern welfare '62. 1962. No. 70539.

69596. AKHMATOV, K. A. Vliianie listopada na perezimovku drevesnykh rastenii. (Moskva. Glavnyĭ botanicheskiĭ sad Akademii nauk SSSR. Bŭlleten' 1962. vyp.47, p.96-97, graph.) Text in Russian. **Title tr.:** The effect of leaf shedding upon the overwintering of woody plants.

Reports on studies of four kinds of trees growing in alpine localities, one of them non-deciduous. It is concluded that trees shedding their leaves early withstand the winter better than those shedding late or not at all. The problem was found to be linked with the water regimen of these plants. Knowledge of this is important in acclimatization of trees to cold climates. (DLC.)

69597. AKHMET'EVA, E. A. Osobennosti gidrokhimicheskogo rezhima Datskogo proliva. (Moskva. Vsesoŭznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozĭaĭstva i okeanografii. Trudy 1962. t.46, p.68-73, illus., table, map.) 9 refs. Text in Russian. **Title tr.:** Characteristics of the hydrochemical regime of the Denmark Strait.

Reports an investigation conducted 65° - 66° N. in June-July 1958. Oxygen saturation reached 120% indicating high biological productivity; bottom waters also showed high O_2-saturation indicative of good aeration. P-content was high, and higher in the Atlantic than in the arctic waters; in both it increased with depth. (DLC.)

69598. AKHMET'IANOV, R. G. K voprosu o prirode zvukovykh perekhodov v tiŭrkskikh iazykakh; o perekhode r ~ z. (Voprosy iazykoznaniia, Nov.-Dec. 1961. god 10, no.6, p.128-29.) Refs. Text in Russian. **Title tr.:** The nature of phonetic changes in Turkic languages; the change of r to z.

Comparative study of Turkic, Mongolian, and Tungus languages including Evenki and Eveny, also Gilyak. (DLC.)

69599. AKIMOV, ANATOLIĬ TROFIMOVICH, *and* **I.A. TIŬTIŬNOV.** Mnogoletnemerzlye porody i mikrorel'ef v Pechorskom ugol'nom basseine. Moskva, Izd-vo Akademii nauk SSSR, 1961. 80p. illus., tables, graphs, diagrs., maps. (Akademiia nauk SSSR. Institut merzlotovedeniia.) Refs. Text in Russian. **Title tr.:** Permafrost and microrelief in the Pechora coal basin.

Presents three regional studies. In *Mnogoletnemerzlye porody v doline reki Khal'mer-IU, predgor'e Poliarnogo Urala* (Permafrost in the Khal'mer-Yu River valley, Polar Ural foothills), p.4-12, the second author reviews the mode of permafrost distribution and its tempeture regime in this valley approx. 67°30′N. 64°E. The distribution is discontinuous, interrupted by deep and partly continuous taliks. Temperature measurements are given and factors affecting the regime such as hydrologic conditions, lithology of rocks and geochemical processes are noted. Mine and shaft construction is briefly discussed.

Mnogoletnemerzlye porody v doline reki Kharbeĭ, Poliarnyĭ Ural (Permafrost in the Kharbey River valley, Polar Ural), p.13-26, also by Tiŭtiŭnov, describes this region approx. 66°42′N. 67°30′E. on the eastern slope of the Ural. The lacustrine, river alluvial-deluvial deposits and bedrocks are analyzed and the sections described. Temperature of bedrocks and friable deposits are reported and tabulated. Loose frozen rocks of the valley are characterized by low temperature and temperature variation at various depths. They are compared

with the bedrocks. Cryogenic alteration of rocks is discussed.

Mnogoletnemerzlye gornye porody lesnoĭ zony, lesotundry i tundry vdol' r. Adz'va (Permafrost in forest zone, forest tundra and tundra along the Adz'va River) p.27-79, is the senior author's contribution. He reports the summer 1952 investigation 65°-68°N. by the Vorkuta station, the drilling to 15 m. depth, temperature measurements, etc. Geocrylogic division of the area is dealt with and four subzones distinguished according to temperature of rocks and thickness of permafrost. The permafrost thickness changes and temperature varies with meridional extent. Methods of permafrost mapping are discussed. Electrical survey, geobotanical and microrelief study are the best means to use in permafrost mapping. (DLC)

69600. AKIMOV, ANATOLIĬ TROFIMOVICH. Zakonomernosti prostranstvennykh izmeneniĭ nekotorykh fizicheskikh parametrov mnogoletnemerzlykh gornykh porod territorii Bol'shezemel'skoĭ tundry. *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Fiziko-khimicheskie protsessy v promerzaiushchikh i merzlykh gornykh porodakh, 1961, p. 65-85, graphs, map.) 20 refs. Text in Russian. **Title tr.:** Features in the spatial variation of some physical parameters of permafrost formations in the Bol'shezemel'skaya Tundra.

New approach to the study of permafrost using geophysical data obtained during 1947-1959. The two basic physical parameters considered are electric conductivity and temperature. Measurements were made to 15 m. depth with electrodes separated by a distance up to two km. Permafrost electric conductivity was found to be dependent on the amount of adsorbed water (boundary phase), and, at temperatures near 0°C., also on the presence of a near-boundary phase and the ion concentration in this phase. The zoning of permafrost on the basis of geophysical data is discussed.—From CRREL. (DLC.)

AKIMOV, G. A., *see* Gubler, E. V., & *others.* O posledstviiakh . . . 1960. No. 71894

69601. AKIMOV, IU. T. Zhivolovushka na kunitsu. (Ratsionalizatsiia okhotnich'ego promysla, 1961, vyp. 9, p. 89-90, illus.) Text in Russian. **Title tr.:** Door trap for marten.

Describes a home-made trap, used by the author in Karelia for catching marten without injuring the animal; this type of trap can be used for sables, ermine and other fur animals. (DLC.)

69602. AKIMUSHKIN, I. I. Chempiony dal'nikh poletov. (Sovetskiĭ shakhter. Apr. 1962. god 11, no. 4, p. 41, illus.) Text in Russian. **Title tr.:** The champions of distant flights.

Note on the arctic tern, which makes two flights a year between the Arctic and Antarctic: from its breeding grounds in Chukotka, westward to Scandinavia and thence south to Antarctica, a route considered the longest among all migratory birds. (DLC.)

69603. AKKURATOV, V. N. Prognoz nastupleniia lavinnoĭ opasnosti po velichinam metelevogo perenosa i temperaturnogo szhatiia snega. *(In:* Akademiia nauk SSSR. Institut geografii. Voprosy ispol'zovaniia snega i borba so snezhnymi zanosami i lavinami. Moskva. 1956, p.167–83, graphs.) 5 refs. Text in Russian. **Title tr.:** Forecast of avalanche danger according to the amount of snowdrift and of snow shrinkage due to temperature.

Discusses in general terms the physical bases for avalanche danger forecasting, based on observations at the Yukspor and Apatit snow-meteorological stations in Kola Peninsula. Quantitative determination of snowdrift and its mutual dependence with wind velocity are considered. Observational data are evaluated and some shortcomings indicated such as the difficulty of determining the role of relief and microrelief, the role of temperature, stratification in near-surface air, etc. Wet and dry avalanches, their types and features are outlined. The forecasting method used at the Apatit station is described, and its inadequacies are outlined: in particular, neglect of the physical properties of snow. (DLC.)

69604. AKKURATOV, V. N. Proizvodstvo metelemernykh nabliudeniĭ i metodika ikh obrabotki. *(In:* Akademiia nauk SSSR. Institut geografii. Snezhnyĭ pokrov...1962, p. 169-74, tables.) 8 refs. Text in Russian. **Title tr.:** Conduct of blizzard-measuring observations and the method of processing them.

Reports work on blizzards at the meteorological stations set up in 1936 for avalanche studies on Yukspor mountain (900 m. above sea level) and Apatit cirque (740 m.), both on Kola Peninsula. A special snow gage VO-2 for measuring wind-driven snow is described. It is installed 2 cm. above the surface. Its functioning is outlined, together with anemometric wind measuring. Procedures of calculating the obtained data are described and illus. by excerpts from the log of the Yukspor station. (DLC.)

AKSELSEN, EGIL, *see* Stockinger, C., & F. W. Gulbranson. Skipsfarten...1958. No. 75940

69605. AKSENOV, IU. Sobytiia, vskolykhnuvshie vsiu Rossiiu. (Politicheskoe samoobrazovanie, Mar. 1962. god 6, no. 3, p. 124-32.) 9 refs. Text in Russian. Title tr.: Events that rocked all Russia.

Historical sketch of the 1912 strike in the Lena gold fields; its economic and social causes, repression, political repercussions, sympathetic strikes in Russia and abroad, etc. (DLC.)

AKSENOVA, V. D., *see* Gracheva, O. S., & V. D. Aksenova. Mineral'nye assotsiatsii...1961. No.71813

69606. ALADYSHKIN, A. S., *and others.* Tret'e mezhvedomstvennoe koordinatsionnoe soveshchanie po voprosam sostavleniia litologo-paleogeograficheskikh kart Sibiri. (Geologiia i geofizika, 1962, no. 12, p. 118-20.) Text in Russian. *Other authors:* V. P. Kazarinov *and* S. P. Mikutskiĭ. **Title tr.:** Third interdepartmental coordinating conference on the compilation of lithologic-paleogeographic maps of Siberia.

Reviews the participating organizations and work of this conference held in 1962 at Krasnoyarsk. Compilation and preparation of various maps are reported including those on Tyumen and Krasnoyarsk Provinces and Yakut ASSR. Various maps done by the Institute of Geology of the Arctic also are noted. (DLC.)

69607. ALAMPIEV, P. M., *and* V. A. VITĬAZEVA. Voprosy ėkonomicheskogo raĭonirovaniĭa evropeĭskogo Severa SSSR v proshlom i nastoĭashchem. *(In:* Moskva. Gosudarstvennyĭ pedagogicheskiĭ institut im. Lenina. Geografo-biologicheskiĭ fakul'tet. Ėkonomicheskaĭa geografiĭa; toponimika, sbornik stateĭ. Moskva, Izd. MGPI, 1960, p.60–87.) 21 refs. Text in Russian. **Title tr.:** Economic zoning problems of Northern European USSR in the past and at present.

Reviews the administrative division of this 1,149,000 km² area in detail relating chiefly to the Soviet period and based on published and archival materials. It comprises now: Arkhangel'sk and Vologda Provinces and Komi ASSR. The economic, geographic, and national (Komi or Zyryan) factors are discussed. The organization in 1929 of the Northern Province (Severnyy Kray) embracing the entire area, the withdrawal of Komi when that province acquired autonomous republic status in 1936, and division of the remainder as Arkhangel'sk and Vologda Provinces in 1937 are traced. Rapid growth of the provinces' economy is based on their great forest resources; and the rise of Komi on development of coal at Vorkuta and Inta and of oil and gas in the Ukhta area, and on the construction of the Pechora railroad with its extension to the Ob River at Labytnangi. Further developments: the projected railroad from Vorkuta to the central Ural, diversion of Pechora waters southward to the Volga, incorporation of the Nenets and Komi-Permyak National Districts into Komi ASSR, etc. are discussed. (DLC.)

ALARUIKKA, YRJÖ, *see Polar record.* News notes. 1961-62. No. 74847

ALASKA, BOARD OF EDUCATION, *see* Lindman, E.L. Foundation for Alaska's public schools. 1961. No. 73512

69608. ALASKA. *Committee on Aging.* Alaska report to White House Conference on Aging. Juneau, Aug. 1, 1960. 31, xiv p. map, tables. Mimeo.

Reports to the 1961 Conference on problems of the elderly as surveyed in 19 Alaskan communities, and transmits recommendations of the State Conference on Aging June 1960. Financial security, health, welfare, housing, education, family life, recreation, community participation, and religion of older persons are considered; also research in gerontology, organizations and facilities to assist the aging. High cost of living, sparse population, climate, also language and culture differences of native peoples, present special difficulties in Alaska. (DLC.)

69609. ALASKA. DEPT. OF COMMERCE. 1961 directory of manufacturers. Juneau, June 1962. 108 p. Prepared by Research, Analysis, and Statistics Section, of the Dept. Looseleaf supplements to be issued till superseded by new edition.

Lists some five hundred firms alphabetically, also according to type of activity; addresses are included. Major activities are fish canning, curing, and freezing; shellfish processing; logging, sawmills; printing and publishing. (DLC.)

69610. ALASKA. DEPT. OF COMMERCE. *Division of Tourism and Economic Development.* Alaska passenger traffic survey 1960. Juneau, 1961. 16. p. graphs, tables. In sequence to No. 62955.

Last report in a series of seven pub. since 1954. It shows an increase of 5.9% over 1959 traffic. Airlines carried 65.6% of the total, highways, 29.1%, and steamships, 5.3%. Air traffic increased 12% over 1959; highway decreased 2.2%, steamship, 12.9%. Passenger traffic (384,401) increased 138% over 1950. Departures in 1960 exceeded arrivals by 361 persons. (CaMAI.)

69611. ALASKA. DEPT. OF EDUCATION. Practical helps for kindergarten teachers. Prepared in cooperation with Alaska On-Base Schools, Kindergarten Committee. Juneau, 1961. 80 p.

Discusses objectives, and suggests activities and materials, in some cases adapted to local conditions or interests, e.g., study units and films on Alaska and Eskimos. The manual is directed toward use in schools for youngsters at military bases. (DLC.)

69612. ALASKA. DEPT. OF FISH AND GAME. Regulations of Alaska Board of Fish and Game for commercial fishing in Alaska. Juneau, 1962. 127 p.

Annual publication covering licenses, gear, seasons, etc. for salmon, bottom fish, smelt, herring, shellfish, whitefish, sheefish, and char. Subsistence fishing, i.e. for purposes other than sale, barter, or sport, is also covered. Regulations are given for the entire state and according to the 12 fishing areas. Fishery license fees and statutes are also given. (DI.)

69613. ALASKA. DEPT. OF FISH AND GAME. *Commercial Fisheries Division.* Forecast of Bristol Bay red salmon run in 1961. Juneau, Feb. 1, 1961, 21 p. graphs, tables. *(Its:* Memorandum No. 1.) Mimeo. Compiled jointly with the U.S. Bureau of Commercial Fisheries and the Fisheries Research Institute of the University of Washington; edited by W.F. Royce.

Forecasts are based on smolt outmigration and cycle analysis data from Bristol Bay rivers, and from purse seine and gill net data obtained in 1960 from Aleutian waters. The red salmon return to Bristol Bay is estimated at 22 million ±30%. About two-thirds of the fish will have spent three years in the ocean. Returns are indicated for the river systems. (DLC.)

69614. ALASKA. DEPT. OF FISH AND GAME. *Division of Game.* Annual report of progress, Federal Aid in Wildlife Restoration Project. v.1, 1959/1960- . Juneau, 1960- , *in progress.* various paging, maps, tables, diagrs.

Contains final reports from wildlife investigations conducted by the State under the Pittman-Robertson Act since July 1, 1959. The numbers and distribution of annual populations, their biology, ecological conditions, and harvest by hunters are outlined as a basis for wildlife management. The major game species are included: deer, moose, elk, caribou, bears, etc. as are fur mammals, snowshoe hares, game birds, marine mammals, and wolves. Objectives, techniques, findings, and recommendations are reported. (DI.)

69615. ALASKA. DEPT. OF HEALTH AND WELFARE. Ground water reconnaissance and drilled wells studies in the Ketchikan area. Juneau, Alaska, 1957. 5 l. tables. *(Its:* Water, hydrological data, no.3.) Mimeographed.

Presents results of well-drilling operations

in this Southeast Alaska area in 1957, with data tabulated on eleven 31 to 127 ft. wells. Analysis of one water sample indicated considerable hardness and unusually high iron content, requiring chemical treatment for domestic use. (DLC.)

69616. ALASKA. DEPT. OF LABOR. *Employment Security Division.* Alaska employment trends. Juneau, Jan. 1961-*in progress.*

Presents monthly estimates (in approx. 6 pages including graphs, tables) of employment, and insurance-compensated unemployment according to industry; also average weekly earnings and hours of work. These employment data are derived from reports of large firms, and do not include self-employed, domestic and agricultural workers, members of Armed Forces. Unemployment data are cited from claims filed under the federal and state laws. Comparative data from the previous year are indicated. Special study of a specific type of employment, i.e. government, construction, etc. is included in each issue. (DLC.)

69617. ALASKA. DEPT. OF LABOR. *Employment Security Division.* Characteristics of the insured unemployed in Alaska. Juneau, Jan. 1961-*in progress.*

Monthly report in approx. 15 pages on number of unemployed according to age, industry, occupation, and sex, also duration of unemployment within these categories; based on data of benefit claims of participants in the state unemployment insurance program. Most wage and salary earners in private industry are covered but not agricultural, fishery, domestic and railroad workers, nor government employees. (DLC.)

69618. ALASKA. DEPT. OF LABOR. *Employment Security Division.* Labor market newsletter Anchorage. Anchorage, Jan. 1961-*in progress.*

Monthly reports in approx. 4 p. on insured employment and unemployment, also on new arrivals into the labor force. Employment is tabulated by industry, and unemployment by sex, age, occupation, industry, and duration. Comparative figures are given for the preceding month and year. These data were formerly issued as *Anchorage labor market newsletter,* and prior to Apr. 1960, were less detailed. The Anchorage labor market area coincides with the electoral district. Similar news letters are issued for the Fairbanks, Juneau and Ketchikan areas. (DLC.)

69619. ALASKA. DEPT. OF NATURAL RESOURCES. *Division of Mines and Minerals.* General Alaskan mineral information. Juneau, June 22, 1959. 7 p. (*Its:* Information circular no. 5 revised.) Mimeo.

Reports 1958 production, including amount and value by mineral; and describes the mineral resources: gold, silver, platinum, 13 base metals, eight nonmetallics, uranium, coal, oil and gas. The $21,000,000 production was two-thirds from coal and placer gold operations. Mining generally has been curtailed by World War II and subsequent inflationary costs of labor and equipment. Prospecting activity is moderately high however, and significant oil and gas production is anticipated. (DLC.)

69620. ALASKA. DEPT. OF NATURAL RESOURCES. *Division of Mines and Minerals.* Proper claim staking in Alaska. Juneau, June 19, 1959. 4 p. diagrs. (*Its:* Information circular no. 1 revised.) Mimeo.

Describes procedures and regulations for staking and holding mineral claims on public domain, oil and coal excepted. Placer and lode claims are staked differently. To hold unpatented claims, $100 worth of assessment work per year is required; after $500 work, application for patent may be filed. (DGS.)

69621. ALASKA. DEPT. OF NATURAL RESOURCES. *Division of Mines and Minerals.* Report for the year 1960. Juneau, 1961. 88p. graphs, tables. Refs.

Outlines organization and functions of the Division under the 1959 Organization Act. Mining activity resulted in a five-fold increase over 1959 value of petroleum and natural gas production. The University of Alaska Mining Extension Course, exploration projects are reviewed. U.S. gold reserves and silver consumption are discussed in relation to production: Alaska's silver output (small) is chiefly as a by-product of gold. Exploration program in the Bering River Coal Field, commercial crude oil production at the Swanson River Field (map), oil and gas activity are reported. New legislation is outlined; mining industry disapproval is noted in regard to interpretation of the Multiple Use Act (Public Law 167). Safety and employment conditions are reviewed. Mining operators active in 1960 are listed. (DGS.)

ALASKA. DIVISION OF AGRICULTURE, *see* U.S. Alaska farm production 1961. No. 76265

69622. ALASKA. DIVISION OF HEALTH. The McGrath project; report of a demonstration-study on the prevention of upper respiratory disease. Editors: David R.L. Duncan and Nell Lomprey. Juneau, 1962. 83p. illus., tables, map. 26 refs.

Presents final report on a "demonstration study" of 485 native children below 17 years of age, from six villages west of McGrath in the upper Kuskokwim area. For control of the common cold and related ailments, both clinical and educational methods were used, and improvement was achieved in the health and health knowledge and practices of the subjects. Details of the study are presented in tables, graphs, statistical data forms. Samples of questionnaires and other forms, and of some graphical exhibits are appended. (DLC.)

ALASKA. DIV. OF HIGHWAYS, *see* Rand McNally. Alaska hwy map. 1961. No. 75033

69623. ALASKA. DIVISION OF LANDS. Acquisition and development policy for Alaska State Park System. Juneau, Jan. 10, 1961. 4p. Mimeographed.

Outlines the aims, composition and first development phase of a planned park system. It is to comprise natural areas representing the 15 physiographic provinces of Alaska, as well as recreational areas, and features of aboriginal culture, historical interest, etc. (DI.)

69624. ALASKA. *Governor.* Message of Governor William A. Egan to the First Session, Second Alaska State Legislature, recommending appropriations for fiscal year 1962. Juneau, 1961 7 p Mimeo.

Proposes expenditure of $57,557,192 for state programs in transportation, education, health, welfare, etc.; and basic governmental functions. State revenues, estimated at $51,875,250, are to be supplemented by an anticipated surplus of $5,681,942 from fiscal year 1961. Transportation projects are emphasized. Income tax increase is proposed. (DLC.)

69625. ALASKA. *Laws, statutes, etc.* Alaska statutes, 1962, containing the general and permanent laws of the State of Alaska; annotated, indexed, and printed by Michie Co., Charlottesville, Va.; pub by Alaska Legislative Council, Juneau. 5v. various pagings, tables. Basic work superseding No. 159, and to be followed by annual cumulative supplements.

Contains text of the approx. 390 laws-in-force of the State of Alaska through those of the 1962 session of the Legislature. The 47 categories deal with: general provisions, aeronautics, agriculture and animals, alcohol beverages, amusements and sports, banks and financial institutions, boroughs, business and professions, civil procedure, corporations and associations, criminal law, criminal procedure, decedents' estates, education, elections fish and game, food and drugs, health and safety, highways and ferries, infants and incompetents, insurance, judiciary, labor and workmen's compensation, legislature, marital and domestic relations, military affairs and veterans, mining, motor vehicles, municipal corporations, navigation and shipping, oil and gas, partnership, probation and prisons, property, public buildings and works, public contracts, public finance, public lands, public officers and employees, public records and recorders, public resources, public utilities and carriers, revenue and taxation, state government, trade and and commerce, water, welfare and institutions. Tables of comparative sections, disposition of Acts, and state of origin sources are included in v. 5; also a concordance index. Several basic and/or pertinent documents are included in v.1, e.g. the Alaskan Constitution, No. 43539; the United States Organic, Statehood, and Omnibus Acts, q.q.v.*; the U.S. House of Representatives report no. 624 q.q.v.*, on the Statehood Act; the Presidential Proclamation of Jan. 3, 1959, admitting Alaska to the Union. Among the various treaties and conventions are: United States treaty of cession from Russia, convention for high seas fisheries of the North Pacific Ocean, halibut convention of 1953, q.q.v.*; the interim convention for the preservation of North Pacific fur seals, No. 55656; also agreements of 1916 and 1936 to protect migratory birds and game mammals, that of 1911 on fur seals, and 1937 on halibut. *in v.13 of *Arctic Bibliog.* (DI.)

69626. ALASKA. *Legislative Council.* Legislative apportionment in Alaska, 1912-1961. Juneau, 1962. Various pagings. maps.

Reviews provisions for apportionment and districting, from the Organic Act establishing a bicameral legislature through the reapportionment following the 1960 decennial census. Appended are various documents: the 1942 amendments to the Organic Act; the Dec. 1955 report to the Constitutional Convention by the Committee on Suffrage, Elections and Apportionment; pertinent articles in the Alaska Constitution (No. 43539); and the governor's proclamation of 1961 on reapportionment and redistricting. Election districts are delimited, mapped, and their representation indicated. The 16 senate districts are also noted. Current apportionment and districting, based on 1960 population, remains in effect till after the 1970 census. (DLC.)

69627. ALASKA. *Legislative Council.* Report of the annual review of administrative regulations. Juneau, Jan. 1961 – *in progress.*

Reviews regulations promulgated by state agencies to determine if the legislative intent is implemented. The agency's statutory authority to make the regulation is automatically reviewed; other aspects are considered only on formal request or complaint. The background and efficacy of legislative review is discussed at length in the first report. (DLC.)

69628. ALASKA. *Legislative Council.* Revenue and taxation in Alaska. Juneau, 1962. 2v.: 142, 109 p. tables. Refs.

Reviews and evaluates, with recommendations to the Legislature, the state's sources of income. Some twenty taxes and revenues are examined in turn: their background, base and assessment, comparisons with other states, and problems. Pt. 2 includes discussions of the state's revenue and tax structure by J.F. Sly, p. 1-35; and of its economy: population, employment, income, natural resources, etc. by G.W. Rogers, p. 36-78. As 45% of the revenue is derived from the income tax, the major fiscal problem is the development of tax bases. This depends, in turn, on the development of the economy, at present in transition from a military-federal to a natural resource base. (DLC.)

69629. ALASKA. *Legislative Council.* Summary of Alaska legislation 1961. Juneau, June 1961. 53 p., chart. Mimeo.

Annual listing, as in No. 56403, of bills introduced for legislative consideration. During this first session of the Second State Legislature, 147 bills were enacted, 270 carried over to the second session, and 36 lost. (DLC.)

69630. ALASKA. *Legislative Council.* Summary report for 1960. Juneau, Jan. 1961. 6p. Mimeo.

Reports the Council's activities: meetings, continuing and interim assignments, publications, and services. Assignments include preparation of a new state law code by late 1962, and studies of borough government, school support, legislative organization and operation, etc. (DLC.)

69631. ALASKA. OFFICE OF THE GOVERNOR. *Division of State Planning.* A capital improvement program for the State of Alaska 1962-1968. Juneau, Feb. 1962. 102p. tables.

Reports on some 360 projects proposed by state agencies: their purpose, cost, and details of financing. In all, $388,812,748 is required for this six-year fiscal 1962/63 to 1967/68, program: 73.3% for such economic development projects as roads, airports, harbors, tourist waysides, biological facilities, etc.; 18.4% for educational facilities; 7.8% for hospitals, health centers, welfare institutions, etc.; the funds to derive 29% from state, 62.1% federal, 4.8% from local governments, the remainder variously. A 1962/63 state capital-budget of ap-

prox. 25 million is recommended, some nine million of it direct appropriation. The road program is reported in details as to routes, mileage, and expenditures, etc. in appendix. (DLC.)

ALASKA. UNIVERSITY. GEOPHYSICAL INSTITUTE, *see* Symposia on Arctic Biology and Medicine. No. 76055 & No. 76056

69632. *ALASKA CONSTRUCTION NEWS.* Anchorage, Alaska Construction News Pub. Co., June ? 1959- *in progress,* pub. bi-monthly in approx. 40 pages with illus., maps.

Presents news and short articles on construction plans and projects in Alaska, methods, materials, equipment, personnel, associations, publications, etc. All fields of construction are covered, domestic and industrial buildings, airports, etc. are dealt with, as are related problems of town planning, oil and power development, winter highway maintenance, and effects of snow and ice on buildings. Extensive local advertising is included. (CaMAI, DLC.)

69633. *ALASKA EDUCATION NEWS. Juneau,* Alaska, Dept. of Education, Oct. 1960-*in progress.*

Departmental bulletin of approx. 8 pages issued monthly Oct. - May. Contains official announcements and news of teachers' conferences and meetings, new schools, legislation affecting education, staff members, studies and publications on education, etc. (DLC.)

ALASKA EXPERIMENT STATION, *Palmer, see* U.S. Alaska farm production. 1961. No. 76265

69634. *ALASKA LOCAL GOVERNMENT.* Juneau, Alaska. Local Affairs Agency, May 1961- *in progress.*

Monthly, approx. 4 mimeographed pages. Each issue is devoted to a specific aspect of local government; most deal with boroughs, their characteristics and functions, including education, sanitary, and health services; procedures and standards for incorporation; pertinent legislation; selection and responsibilities of officials; etc. (DLC.)

69635. *ALASKA MEDICINE.* The fifth annual heart clinic. (Alaska medicine, Sept. 1962. v. 4, no. 3, p. 66.)

Notes sponsors and purposes of the Clinic; numbers of patients and physicians benefitting from it; envisaged changes, etc. (CaMAI.)

69636. *ALASKA MEDICINE.* Medical coverage of Alaska. (Alaska medicine, Dec. 1961. v.3, no.4, table, map.)

Tabulation and map cover seven towns and St. Paul and St. George Islands, with respect to population (white, native) and military with dependents, number and kind of physicians, and hospitals. (DNLM.)

69637. *ALASKA SPORTSMAN.* Alaska's growing state parks system. (Alaska sportsman, June 1961. v.27, no.6, p.11–14, illus.)

Describes present facilities and plans for development; and lists 60 camping, etc. areas on the highway system with locations recreational features, etc.; historical sites also are noted. (DI.)

69638. *ALSAKA SPORTSMAN.* Chilkat dancers. (Alaska sportsman, Aug. 1962. v.28, no.8, p.24-27, illus.)

Reviews growth since 1957 of this group of Indian and white teenagers of Haines and Port Chilkoot in Southeast Alaska; directed by Carl W. Heinmiller, they perform traditional Tlingit Indian dances, make costumes and ceremonial objects. The U.S. Dept. of the Interior Indian Arts and Crafts Board sponsors the group as a craft guild: Alaska Indian Arts, Inc. Photos (16) are by W. Bacon, III. (DI.)

69639. *ALASKA SPORTSMAN.* City on top of the world. (Alaska sportsman, Jan.-Mar. 1961. v.27, no.1, p.27-35; no.2, p.25-34; no.3, p.27-38, illus., map.)

Contains 40 photographs of Anchorage past and present, and environs, landscape, airports etc., with descriptive captions. The city's growth since its founding in 1915 is sketched. (DI.)

69640. *ALASKA SPORTSMAN.* Requiem in Akutan. (Alaska sportsman, June 1961. v.27, no.6, p.30-31, +, illus.)

Notes the recording of Aleut songs and stories by Lowell Thomas, Jr. in Jan. 1961 at Akutan off the Alaska Peninsula. Four institutions are named as depositories of the tapes of this disappearing language. Photos by S. McCutcheon are included. (DGS.)

69641. *ALASKA SPORTSMAN.* Snowslide on Chilkoot Pass, on-the-spot accounts. (Alaska sportsman, Sept. 1962. v.28, no.9, p.40-43, illus.)

Describes this avalanche in Southeast Alaska 64 yrs. ago which killed several persons en route to the Klondike gold fields: accounts by A. L. Jappe and P. T. Mizony, excerpts from the *Dyer trail* of Apr. 9, 1898, etc. (DI.)

69642. *ALASKA SPORTSMAN.* Souvenir ferry edition; Alaska's fabulous new marine highway and its route through Southeast Alaska "fjordland." (Alaska sportsman, Dec. 1962. v.28, no.12, p.1-95.)

Describes the new ferry service, also highway routes and tourist attractions in Southeast Alaska, Yukon Territory and British Columbia. Three vessels are to operate between Prince Rupert, B.C., and Ketchikan, Wrangell, Petersburg, Juneau, Haines, Skagway, and Sitka, Alaska from May 1, 1963: the *Malaspina, Taku,* and *Matanuska,* cost approx. $4.5 million and carry 109 autos and 500 passengers each. Specifications, deck plans, and fares are given: also specifications for a fourth vessel proposed to serve Kodiak Island by 1964, to cost $3 million and carry 37 autos and 200 passengers. Map guides show the Alaska Highway Coastal Route mile by mile: Prince George to Prince Rupert, B.C., the Alaska Marine Highway ferry route, and the Haines Highway from Southeast Alaska to Haines Junction, Yukon Territory, also the Alaska Highway north from B.C. to Haines Junction. Large-scale route maps (10) for the Southeast Alaska and Yukon Territory are included, points of interest and communities described and illus., population, early settlement, and industries noted. Tongass National Forest is described for its tourist attractions and facilities, p.79-89. B. De Armond discusses (p.46) the naming of Point Retreat on Admiralty Island, and

(p.69-74) wood carvings for the new ferries by Amos Wallace, a Tlingit Indian. (DLC.)

69643. ALASKAN SCIENCE CONFERENCE. 11th, *Anchorage*, Aug. 29-Sept. 2, 1960. Science in Alaska 1960; proceedings, edited by G. Dahlgren, *Jr.* College, Alaska, American Association for the Advancement of Science, Alaska Division, May 1961. 212p. diagrs., graphs, tables, maps. Refs.

Lists papers presented at this conference, with author's abstract (approx. 100-500 words) or reference if the paper has been published elsewhere. A few of the papers (*) are published in full in the proceedings, and abstracted in this Bibliography under their authors' names.

Anthropology

*MOURANT, A.E. The relationship between the blood groups of Eskimos and American Indians and those of the peoples of Eastern Asia.

*LEWIS, M., *and* B. CHOWN. The blood groups of the Eskimo: an analysis and a tentative hypothesis.

Campbell, J.M. The Tuktu complex of Anaktuvuk Pass.

Irving, L. On the geographical and ethnic relations of Eskimo names for birds.

Milan, F.A. Acculturation in a northern Alaskan coastal village.

Keithahn, E.L. Tlingit heraldic screens and their relatives.

Symposium: problems of the Bering Strait Land Bridge. I. Skarland, *and others*. Title only.

Skarland, I. Archaeological survey in the Denali Highway area. Title only.

Giddings, J.L. The third season at Cape Kruzenstern. Title only.

Hadleigh-West, F. Progress of field work, 1960. Title only.

Biology

Maher, W.J. The relationship of the nesting density and breeding success of the pomarine jaeger to the population level of the brown lemming at Barrow, Alaska.

Viereck, L.A. Plant succession and soil formation of gravel outwash in the McKinley River area.

Viereck, E.G. Small mammal populations in Mount McKinley National Park, Alaska, in 1956 and 1958.

*LENT, P.C. Caribou calving study, northwestern Alaska.

Rowinski, L.J. The bird and mammal collections of the University of Alaska.

Viereck, L.A. Botanical dating of recent glacier activity in Alaska.

Dearborn, C.H. Growth and bulbing tendencies of long and short day onions as influenced by soil temperature.

Engineering

Mitchell, M. Water supply management for Alaska.

*BIELMAN, K.D. Water demands in southeastern Alaska.

Waller, R.M. Water for an expanding Anchorage.

Baumgartner, D.J. Water supply and waste disposal problems at remote Air Force sites in Alaska.

Walters, C.F., *and* J.A. Anderegg. Water conservation through reuse of the flushing liquid in an aerobic sewage treatment process.

*NEHLSEN, W.R. Use of sea water for water supply and waste disposal in arctic coastal areas.

Booth, F.O. Trends in the control of possible radiation hazards involving the use of medical and dental X-rays.

Johnson, G.W. Excavation with nuclear explosives.

Batzel, R.E. Distribution of radioactivity from a nuclear excavation.

Branton, C.I. An experimental technique for studying certain Alaskan soils.

Michaelson, N.E. Water infiltration measurements on certain Alaskan soils.

*STANLEY, K.W. Shore processes.

Gronewald, G.J. Engineering problems in connection with Rampart Canyon hydro-electric project.

*PHILLEO, E.S. Construction of a satellite tracking station on permafrost.

*STEFANO, R.R. The return air heater for ventilation in northern Alaska.

Wolak, F.A. Nuclear power plants in arctic regions.

Stevenson, A.H. The U.S. Public Health Service's sanitary facilities construction program for American Indians and Alaska natives.

Smith, R.B. Elements of engineering unique to cold weather climates; specifically, water and sewage systems.

Fisheries

Symposium, size limits, bag limits, and season limits in sport fishing:

Earnest, D. Trout management in Washington State.

Maher, F.P. Size limits, bag limits, and season limits in British Columbia.

Kirkness, W. The use of bag, size, and season limits in managing a sport fishery for king and silver salmon.

Andrews, R.E. The role of bag limits, size limits, and seasons as tools in sport fish management.

Symposium, principles in management of salmon populations:

Royce, W.F. Fishery regulation in Alaska salmon management.

Neave, F. Principles in the management of salmon populations.

Henry, K.A. Principles and management of salmon populations.

*WILIMOVSKY, N.J. An application of radioactive isotopes in fish tagging.

*MERRILL, T.R. Survival of pink salmon at Little Port Walter research station.

DiCostanzo, C.J., *and* M.L. Hayes. A method of separating river stocks of red salmon in the Bristol Bay fishery.

Larkin, P.A., *and* K.V. Ayyanger. Application of the Parker equation to growth of aquatic organisms.

Symposium, some problems in economics and international regulation of fisheries:

*CRUTCHFIELD, J.A. An economic evaluation of alternative methods of fishing regulations.

Burner, C.J. Fisheries of the eastern Bering Sea.

Hayes, M.L. Biological research and the economics of commercial fisheries in Alaska.

Forestry

Plourde, A.E. State forestry in Alaska, present and future.

Phillips, G.E. Protecting wood in Alaska against its natural enemies.

Harris, A.S. The physical effect of logging on salmon streams in southeast Alaska.

Smith, R.A. Stand characteristics of interior white spruce.

Hayes, H.E. Status of regeneration on areas logged on the south Tongass since 1954.

Waldhaus, F.H. Smokejumper and borate operations in interior Alaska.

*SCOTT, J.W. Alaska fire danger rating.

Johnson, V.J. Range and livestock of northeast Kodiak Island.

Brown, C.T. Re-creating national forest landscapes in Alaska.

*TONEY, R.D. Multiple-use management and its effect on logging practices.

Gregory, R.A. Growth and yield of paper birch in interior Alaska. Title only.

Tomlin, G.W. Multiple-use management spells more recreation, more water and more timber. Title only.

Geology

Péwé, T.L., *and* L. Burbank. Multiple glaciation in the Yukon-Tanana Upland, Alaska; a photogeologic interpretation. No. 67427.

Kelly, T.F. General geology and oil occurrence in the Cook Inlet Basin, Alaska. No. 65632.

Herreid, G. Geology of the Red Devil Quicksilver Mine. No. 65132.

Barnes, D.F., *and others*. Preliminary results of gravity surveys in interior Alaska. No. 63278.

Weber, F.R., *and* T.L. Péwé. Reconnaissance engineering geology for highway location in Alaska No. 69206.

Parkinson, L.J. *Jr.*, Cretaceous strata of the Cape Douglas area. Alaska Peninsula. No. 67317.

Lachenbruch, A.H., *and others*. Preliminary results of geothermal studies at Ogotoruk Creek AEC Project Chariot Test Site, northwestern Alaska. No. 66068.

Forbes, R.B. Preliminary investigations of the petrology and structure of the Birch Creek schist in the Fairbanks and Circle Districts, Alaska. No. 64553.

Poborski, S.J. Some remarks on unconformities.

Geophysics

Symposium, Bering-Chukchi Sea oceanography:

Beal, M.A. Some seasonal changes in the oceanographic regime off the North Alaskan coast.

Bloom, G.L. Oceanic heat transport studies, eastern Bering Strait.

Hicks, C.N., *and others*. Spring oceanographic observations along the western and northern coast of Alaska.

Fleming, R.H. Recent investigations in Bering Strait and the Chukchi Sea, 1959-1960.

Barnes, C.A., *and* L.K. Coachman. The contribution of Bering Sea water to the Arctic Ocean.

Hunsucker, R.D. Transpolar HF radio blackouts and polar cap absorption events.

Davis, T.N. The orientation of auroral arcs and bands.

Barnes, D.F. The importance of solar radiation in melting lake ice.

Murcray, W.B., *and* J.H. Pope. Radiation from protons of auroral energy in the vicinity of the earth.

Benson, R.F. Effect of line-of-sight aurora on radio star scintillations.

Matsushita, S. Seasonal and day-to-day changes of the central position of the Sq overhead current system.

Wescott, E.M. The effect of topography and geology on telluric currents.

Jalbert, R.A. Fault-plane analysis of recent Alaskan earthquakes.

Benson, C.S. Snow and firn stratigraphy in in Greenland and Alaska.

Wescott, E.M. Magnetic and telluric current disturbances in Alaska.

Akasofu, S-I., *and* S. Chapman. A neutral line discharge theory of the aurora polaris.

Medicine and public health

Human environmental physiology:

Milan, F.A. A study of the maintenance of thermal balance in the Eskimo.

Miller, L.K., *and* C.J. Eagan. The digital volume pulse during combined hyperthermia and decompression.

Irving, L. Effect of temperature in changing sensitivity of the finger to impact.

Eagan C.J. Topical adaptations to cold in the extremities.

Milan, F. A. The effect of a year in the Antarctic on human thermal and metabolic responses to an acute standardized cold stress.

Milan, F. A. Caloric requirements of man in the Antarctic.

Animal environmental physiology:

Veghte, J. H. Some aspects of thermal regulation in the Alaskan jay.

Durrer, J. L. Some observations on the metabolic responses of dogs to arctic cold.

Vaughan, D. A., *and* L. N. Vaughan. Pyridoxine requirements of cold-adjusted rats.

Johansen, K. Temperature regulation in the nine-banded armadillo, *Dasypus novemcinctus mexicanus*.

Larson, A. M., *and* J. P. Hannon. The site and mechanism of norepinephrine-calorigenesis in the cold acclimatized rat.

Schmidt, J. P., *and* R. E. Becker. Bacteriological studies of fecal material from active and hibernating arctic ground squirrels.

Klain, G. J. Metabolism of radio-argnine in the chick.

Experimental medicine:

Schmidt, J. P., *and others*. A study of upper respiratory disease of personnel stationed at 18 remote radar sites in Alaska.

Schmidt, J. P., *and* F. W. Miltenberger. Clinical and laboratory studies of an outbreak of acute respiratory illness in children at Ladd Air Force Base, Alaska.

Vaughan, L. N., *and* D. A. Vaughan. Thiamine load test response to a high fat diet.

Scott, E. M. Effects of supplementation of Eskimo diets with iron.

Eagan, C. J. Applications of the mercury strain gauge to plethysmography.

Phillips, F. J. A preliminary report of outpatient treatment of tuberculosis in remote regions.

Mills, W. J., *Jr., and* R. D. Whaley. The relation of serum G-O-transaminase to severity of freezing injury. Title only.

Social science

Bell, R. T. State land administration in Alaska.

*HITCHCOCK, K. Natives' land rights in the state of Alaska.

Buswell, A. S. The role of the cooperative extension service in Alaska as perceived by certain groups of Alaskans.

Ray, C. K. A secondary school education for Alaskan natives.

Jacobsen, E. The chemical bond approach in the teaching of elementary chemistry.

Wilson, W. S. Experiences with the summer science training program of the University of Alaska. (CaMAI.)

69644. ALASKAN SCIENCE CONFERENCE. 12th, *College,* Aug. 28- Sept. 1, 1961. Science in Alaska 1961; proceedings edited by G. Dahlgren, Jr. College, Alaska, American Association for the Advancement of Science, Alaska Division, 1962. 240 p. tables, diagrs. Refs.

Contains abstracts (200-300 words) of the papers presented as listed below, except 13* papers pub. in full and described in this Bibliography under the authors' names.

Anthropology

Oswalt, W.H. Migration theory and historical population movements in western Alaska.

Laughlin, W.S. The identification of early Eskimos in the Aleutians and Kodiak Island.

Dumond, D.E. Preliminary report on excavations in southwest Alaska.

McHugh, W.P. Archaeological evidence of the occupation of Kodiak Island.

Giddings, J.L. Archeology at Cape Krusenstern

Milanowski, P.G. Sound system of Upper Tanana Athapaskan, a preliminary view

Webster, D.H. A tagmemic analysis of the Barrow Eskimo verb complex.

Shinen, D. Notes on Saint Lawrence Island Yupik phonology.

Chance, N.A. Conceptual and methodological problems in cross-cultural health research.

Shinen, M. Notes on marriage customs of St. Lawrence Island Eskimos.

Biology

DeWolfe, B.B., *and* R.H. DeWolfe. The breeding cycle of the Gambel's white-crowned sparrow in Alaska and the mountain white-crowned sparrow in California.

Holmes, R.T., *and* F.A. Pitelka. Behavior and taxonomic position of the white-rumped sandpiper.

McKnight, D.E. Alaska's displaced waterfowl.

Shepard, P.E.K. Trumpeter swans in Alaska.

Weeden, R.B. A population study of rock ptarmigan in central Alaska.

Sommerman, K.M. Immature stages and habitat of certain Alaskan biting snipe flies, *Symphoromyia* (Diptera, Rhagionidae).

Johnson, A.W. Mudflows, frost action, and vegetation in northwest Alaska.

Laughlin, W.M. Use of potassium sprays to control foliar necrosis and to increase romaine lettuce, radish, and potato yield.

Troyer, W.A., *and others.* Live-trapping and handling brown bear.

Rausch, R.A. Present status and possible future management of wolf population in interior and arctic Alaska.

Mullen, D.A. Use of physiologic indices in the study of population dynamics of brown lemming *Lemmus trimucronatus.*

Symposium: The Arctic National Wildlife Range

*HOBBIE, J. E. Aquatic ecology in the Arctic National Wildlife Range.

* KORANDA, J.J. Plant ecology and the Arctic National Wildlife Range.

*PRUITT, W. O., *Jr.* Animal ecology and the Arctic National Wildlife Range.

*HADLEIGH-WEST, F. Anthropology in the Arctic National Wildlife Range.

*CAMPBELL, J.M. An anthropologist looks at the Arctic National Wildlife Range.

*MURIE, O.J. Wilderness philosophy, science, and the Arctic National Wildlife Range.

*NELSON, U.C., *and* D.L. SPENCER. The Bureau of Sport Fisheries and Wildlife's position on the Arctic National Wildlife Range.

Engineering

*RICE, E.F. Engineering characteristics of siphon spillways.

Mendenhall, W.W., *Jr.* A tilted line approach to photogrammetric determination of volume.

Bartsch, A.F. Exploring the unknowns in waste stabilization ponds.

Baumgartner, D.J., *and* C.F. Walters. Efficiency of removal of oxygen demand of concentrated sewage by the activated sludge process.

Long, E.L. Stabilizing permafrost and foundations with the thermo-valve system.

Mateos, M., *and* D.T. Davidson. Stabilization of Alaskan silty soils with inorganic additives.

Rice, E.F. Soviet and American education for engineers. (Listed only).

Fisheries

Pruter, A.T., *and* D.L. Alverson. Abundance, distribution, and growth of flounders in the southeastern Chukchi Sea.

Powell, G.C. Migration of large male king crabs *Paralithodes camtschatica,* off Two-Headed Island, Kodiak Island, in October 1960.

Reid, G.M. Problems affecting the Alaska herring industry.

Circle, H. Common problem: common fish names.

Farrell, R.K., *and* M.A. Lloyd. The life cycle of the salmon poisoning fluke.

Conkle, C.Y. Temporal and spatial relationships of spawning pink salmon in a Prince William Sound stream. (Listed only).

Lander, R.H. Research on the marine growth and survival of Alaska red salmon. (Listed only).

Forestry

Hurd, R.M. Research in Alaska forestry.

Buswell, A.S. A forestry education program for Alaskans.

Hoffmann, E.J. Fire protection in Alaska.

Allen, R.W. The need for recreation lands in Alaska.

Hinkson, C.E. Forestry in relation to tourism and economic development.

Hanson, P.D., *and others.* The national forests of Alaska: management objectives and activities.

Brooks, A.M. Forestry and industry in Alaska.

Stein, T.R. Potential industrial use and market for pulp wood timber species of central Alaska.

*GRIMES, G.S. World trade, and its impact on Alaska's timber industry.

Geology

Eklund, C.R. U.S. Army cold weather research.

Hansen, B.L. Temperature measuring equipment for use in a polar environment.

Lachenbruch, A.H., *and* M.C. Brewer. Geothermal evidence for recent climatic change near Barrow, Alaska.

Church, R.E., *and* M.C. Durfee. Geology of the Fossil Creek area White Mountains, Alaska.

Rivard, N.R., *and* T.L. Péwé. Origin and distribution of mirabilite McMurdo Sound region, Antarctica.

Andresen, M.J. Paleodrainage patterns: their mapping from subsurface data, and their paleogeographic value.

Stanley, K.W. Geology of the Ahtell Creek molybdenum deposit: a study of paragenesis and zonation.

Forbes, R.B. A microphotometric technique for measuring absorption in pleochroic minerals.

Walker, H.J., *and* H.M. Morgan. The morphological changes in a Colville River delta lake: a preliminary report.

Waller, R.M., *and others*. Ground-water movement in the Fort Greely area, Alaska.

Waller, R.M. Winter hydrology of a small arctic stream.

*WALKER, H.J. Winter water sources in the American Arctic.

Chapman, R.M., *and* E.F. Cooley. Semiquantitative spectrographic analyses of 166 sediment samples from streams in Alaska.

Hopkins, D.M., *and* B. Taber. Asymmetrical valleys in central Alaska.

Ragan, D.M. Valley asymmetry in the Twin Sisters Range, northern Cascades, Washington.

Stanley, K.W. Coastal geomorphology of Alaska: a review.

Everett, K.R. Quantitative analysis of slope movement in northwestern Alaska.

Hopkins, D.M., *and others*, Pleistocene stratigraphy and structure of Baldwin Peninsula, Kotzebue Sound, Alaska.

Rutter, N.W. The foliation of Gulkana Glacier, central Alaska Range, Alaska.

Geophysics

Romick, G.J., *and* A.E. Belon. The determination of the luminosity distribution within auroral forms.

Clark, K.C. A study of design parameters of the College meridian auroral spectograph.

Akasofu, S.I., *and* C.J. Echols. Auroral color photography.

Cook, A.B., *and* R.G. Madill. Earth currents and the auroral zone.

Leadabrand, R.L. Radio studies of the aurora.

Basler, R.P. The auroral absorption zone.

Benson, R.F. Instrumentation for the radio wave interaction experiment at College, Alaska.

Hook, J.L. The increase of ionospheric absorption of radio waves at the time of geomagnetic sudden commencements.

Wilson, C.R., *and* M. Sugiura. Hydromagnetic interpretation of sudden commencements of magnetic storms.

Hakura, Y. Some statistics on the solar cosmic rays produced by solar eruptions associated with type IV outbursts.

Wescott, E.M. Magnetic variations at conjugate points.

DeWitt, R. The occurrence of aurora and associated phenomena at points conjugate with respect to the geomagnetic field.

Anderson, D.L., *and* C.S. Benson. The densification of snow.

Sellmann, P.V. Preliminary report on the ablation and flow, Gulkana Glacier, central Alaska Range, Alaska.

*KUMAI, M., *and* K.E. FRANCIS. Electron microscope studies of snow and fog nuclei.

Dodd, A.V. Mesoclimatic temperature differences in the Fort Greely, Alaska area.

Brown, J.H., *and* E.E. Howick. Surface energy studies with related constants for snow, sea ice, and tundra at Wales, Alaska, 1959.

Marsden, M. A new technique for echo-sounding through ice.

Ostenso, N.A., *and others*. Geophysical studies of the Arctic Ocean Basin, a progress report.

Ashburn, E.V. The radiative heat budget at the ocean-atmosphere interface at 50° N. 145° W.

Medicine and public health.

Mick, A.H. Animal nutrition and health in Alaska.

Hilliard, D.K. The effects of humic colloids on oxidation pond biota.

Reinhard, K.R. Notes on the ecology of enteroviruses in western, northern and central Alaska.

Hopla, C.E. Observations on the natural history of tularemia in central Alaska.

Baumgartner, D.J. A method of determining the pollution of surface waters by the eggs of *Echinococcus*.

Becker, R.E., *and* C.M. Volkmann. A preliminary report on the bacteriology of permafrost in the Fairbanks area.

Maynard, J.E., *and* F.P. Pauls. Trichinosis in western Alaska: a report of outbreaks at Bethel and Goodnews Bay 1960-61.

Eagan, C.J. The role of habituation in modifying responses to cold.

Milan, F.A., *and others*. Comparative study of thermoregulation in Eskimos, Indians and U.S. soldiers.

Miller, K., *and* L. Irving. Reactions of hand and face to air cooling in an Eskimo population.

Miller, D. An investigation of cold-injured soldiers in Alaska.

Veghte, J.H. Human physiological response to extremity and body cooling.

Eagan, C.J. Practical measures for maintaining hand function in the cold.

Vaughan, L.N., *and* D.A. Vaughan. The post-cold behavior of riboflavin-deficient rats.

Klain, G.J. The effect of an excessive intake of methionine upon the metabolism of the rat.

Ramos, A.A., *and* G.J. Klain. Effect of cold exposure on the distribution of free pentoses in the rat.

Cottle, W.H., *and* J.M. Tyner. Mechanisms leading to increased thyroid function at low temperature.

Evonuk, E. A thermal dilution method for the estimation of the cardiac output in small animals.

Schmidt, J.P., *and others*. Experimental infections in hibernation hamsters.

Social sciences

Slotnick, H.E. The Ballinger-Pinchot controversy in Alaska.

Cease, R.C. Local government for Alaska: the borough.

Fox, I.K. Federal-state relations in the field of natural resources.

Bell, R.E. Problems in financing resource management activities during the formative years.

Shafer, J.E. Launching a mutual savings bank in Alaska.

General session

PENNIE, A. M. Arctic explorations and exploitations. (CaMAI.)

ALASKAN SCIENCE CONFERENCE, 12th, *College*, Aug. 30 - Sept. 1, 1961, *see also* Geological Society of Am. Abstracts 1961. 1962. No. 71635

69645. *ALASKA'S HEALTH AND WELFARE.* Accidental injuries are nearly 14,000. (Alaska's health and welfare, Feb. 1962. v.19, p.3.)

This figure represents only hospital-treated cases. Highest rate was in homes, among children under five, and in the year bracket of 20-24. Further breakdown reveals 72 cases of frostbite. (DLC.)

69646. *ALASKA'S HEALTH AND WELFARE.* Alaska Psychiatric Institute progresses. (Alaska's health and welfare, Apr. 1962. v. 19, p.1-2, illus.)

Announces the approaching completion of the state's first mental hospital of 225 beds; its functions: treatment, training and teaching, eventually research; location of institute: Anchorage. (DLC.)

69647. *ALASKA'S HEALTH AND WELFARE.* Child care institutions and day nurseries are licensed in Alaska. (Alaska's health and welfare, Oct. 1961. v. 18 p. 3, illus.)

Discusses the number of these institutions: 23 child-care and ten day nurseries; authorities and standards of licensing, number of children (15-150) per institution, etc. (DLC.)

69648. *ALASKA'S HEALTH AND WELFARE.* Child caring institutions find children's needs have changed. (Alaska's health and welfare, Oct. 1962. v. 19, p. 3, illus.)

Reports the 1962 Conference of the Alaska Association of Child Caring Institutions dealing with present problems of child care, additional services needed (receiving homes, foster homes, etc.), family counseling, employment, education, etc. (DLC.)

69649. *ALASKA'S HEALTH AND WELFARE.* Design new building for laboratory. (Alaska's health and welfare, Dec. 1961. (v. 18, p. 1, 5.)

Notes the new quarters in Anchorage of the U.S. Public Health Service, South-Central Regional laboratory division; its facilities and equipment, past activities, present services, new development. (DLC.)

69650. *ALASKA'S HEALTH AND WELFARE.* Divorce, separation, cause ADC increase. (Alaska's health and welfare, Apr. 1962. v. 19, p. 1.)

Presents data on the Aid-to-Dependent-Children program in 1961. It is given in case of divorce or separation, desertion, imprisonment, illness, or death of parents. Less than 4% of population under 18 years received aid. (DLC.)

69651. *ALASKA'S HEALTH AND WELFARE.* Extend Alaska contract for toxic clam siphons. (Alaska's health and welfare, Dec. 1962. v. 19, p.7.)

Notes on clam-collection activities for purposes of isolating and doing research on the poison found in the siphons which causes paralytic symptoms. Aim of the project is to find an antitoxin, a simple method of detecting the poison, a way of detoxication. The work is extended through June 30, 1963. (DLC.)

69652. *ALASKA'S HEALTH AND WELFARE.* Fairbanks first Alaskan city to build an extensive sewage treatment plant. (Alaska's health and welfare, June 1961. v. 18, p. 2.)

Notes cost as $1,412,500, sources of funds, beneficial and aesthetic effects on the local river, the Chena. Plans, location, and installations in the scheme are sketched, and other places located in such schemes mentioned. (DLC.)

69653. *ALASKA'S HEALTH AND WELFARE.* Field depots being established for botulism type E antitoxin. (Alaska's health and welfare, Dec. 1962. v. 19, p. 3.)

Reports on such depots at Ketchikan, Juneau and Kotzebue with the main store in Anchorage. Establishment of depots enables prompt administration of antitoxin and thus saves lives. Several such cases are presented. (DLC.)

69654. *ALASKA'S HEALTH AND WELFARE.* Fourth annual cardiac clinics held. (Alaska's health and welfare, Dec. 1961. v.18, p.6, illus.)

Notes on origin and organization of these clinics, cardiac symposia, number of patients and their disease and treatment, out-of-state medical aid. (DLC.)

69655. *ALASKA'S HEALTH AND WELFARE.* Health and Welfare Department's 4 divisions all work with Alaska's people. (Alaska's health and welfare, Feb. 1961. v. 18, p. 1-6, illus.)

Reviews creation of this Department after Alaska became a state in 1958; its administration and services; development and activities of its Divisions of Mental Health, Youth and Adult Authority, Public Welfare, and Public Health. Financing, staff, offices, hospital, etc. of the Divisions are also discussed. (DLC.)

69656. *ALASKA'S HEALTH AND WELFARE.* Homemaker Service for Children's program is continued in Ketchikan. (Alaska's health and welfare, Aug. 1961. v. 18, p. 1–2, illus.)

Reviews the work of this Service which provides a housekeeper in cases when parents are sick, or in case of death. It is part of the U.S. Children's Bureau, and its activities have proved invaluable for the morale of parents and children during emergencies. (DLC.)

69657. *ALASKA'S HEALTH AND WELFARE.* Juvenile detention facility is opened in renovated quarters in former courthouse. (Alaska's health and welfare, Apr. 1962. v. 19, p. 4-5, illus.)

Describes this new facility at Juneau, its staff and function, its services, games, recreation, etc. (DLC.)

69658. *ALASKA'S HEALTH AND WELFARE.* 'Little neck' as well as 'butter' clams are found toxic. (Alaska's health and welfare, Aug. 1962. v. 19, p. 1-2, illus.)

Reports poisons long known to occur in butter clams found in 'little neck' clams, which caused serious illness (described) in 25 fishermen. The poison exceeded 25 times the allowable maximum. Research on these poisons, which appear locally, is outlined. (DLC.)

69659. *ALASKA'S HEALTH AND WELFARE* Mental health clinic patients double. (Alaska's health and welfare, Apr. 1961. v. 18, p. 2.)

Notes increase in number of patients from 1956 to 1960 in the three regional mental health clinics; total in this period: 2677, 1557 males, 1120 females; sources of patient referrals; clinic activities, personnel; etc. (DLC.)

69660. *ALASKA'S HEALTH AND WELFARE.* Orthopedic clinics offer wide service. (Alaska's health and welfare, June 1961. v. 18, p. 3, illus.)

Notes on care of former cases of bone TB and polio in children; clinics; with 558 children treated in them during 1960; care of braces in polio victims; Salk vaccination and its effects. (CaMAI.)

69661. *ALASKA'S HEALTH AND WELFARE* Pribilof Islanders now served by state programs (Alaska's health and welfare, Dec. 1962. v. 19, p. 1-2, illus.)

Notes the "new social and economic order" effective July 1, 1962, placing the natives on a cash economy, and lifting prohibition of liquor. Possible effects of liquor on child welfare are discussed, is as native reaction to the new order. (DLC.)

69662. *ALASKA'S HEALTH AND WELFARE.* State's first 'Honor Camp' for adult offenders soon to be established. (Alaska's health and welfare, Oct. 1961. v. 18, p. 4.)

Notes the old camp, location of new, training of personnel, facilities and equipment, vocational training of offenders, etc. (DLC.)

69663. *ALASKA'S HEALTH AND WELFARE.* Statistics study shows Alaska high death rates preventable. (Alaska's health and welfare, Oct. 1962. v. 19, p. 1, 5.)

Preventable diseases among the native peoples cause a death rate which is over 3.5 times higher than that of the United States as a whole. Deaths from violent causes among whites are nearly double such throughout the U.S. and nearly fourfold that among non-whites. (DLC.)

69664. *ALASKA'S HEALTH AND WELFARE.* Third anniversary of Health and Welfare Department reveals changes and progress. (Alaska's health and welfare, June 1962. v. 19, p. 1-7, illus.)

Reviews the activities of this state agency and its four divisions of: Public Health, Public Welfare, Mental Health, and the Division of Youth and Adult Authority. Conditions before amalgamation of the various agencies into one are outlined. Management and administration of the department, its functions and services, their scope and organization, staff, are described; budget development and expansion, etc., also are covered. (DLC.)

69665. *ALASKA'S HEALTH AND WELFARE.* Youth camp boys to have privilege of building land trail to Lake George. (Alaska's health and welfare, Apr. 1961. v. 18, p. 3, illus.)

Outlines a hiking trail to be built by the Youth Conservation Camp near Wasilla; nature of the lake, route of the trail, trail blazing, the camp, its buildings, and occupants. (DLC.)

ALBE-FESSARD, D., *see* Naquet, R., *& others.* Ralentissements...1962. No. 74218

69666. **ALBERTA SOCIETY OF PETROLEUM GEOLOGISTS.** Geographical and geological distribution of oil and gas in Canada. *(In:* International Geological Congress, 20th, *Mexico City,* 1956. Symposium...petroleo y gas...t. 3, *pub.* 1956, p. 9-139, maps, graphs, tables incl. fold.) Refs.

Includes, p. 97, tables of daily average and yearly crude oil production from Northwest Territories (Norman Wells); p. 68-70, the Athabasca bituminous sands; p 100, table of oil and gas reserves from Northwest Territories, 1952-1954. (DGS.)

69667. **ALBIN, MAURICE S.,** *and others.* Hypothermia of the spinal cord by perfusion cooling of the aubarachnoid space. (Surgical forum, 1961. v. 12, p. 188-89, illus.) *Other authors:* R.J. White, D.E. Donald, C.S. MacCarthy *and* A. Faulconer,

Cooling the spinal cord with cold saline, using the subarachnoid space as a water jacket proved feasible. In addition to the spinal cord, some animals showed a drop in temperature of the brain. Changes in rectal temperature were insignificant. (DNLM.)

69668. **ALDANSKIĬ, VIKTOR FEDOROVICH, 1918–** . Kez'ba. (Druzhba narodov, Apr. 1962, no. 4, p. 12.) Text in Russian. Title tr.: Engraving.

Yakut poem in Russian translation. (DLC.)

69669. **ALDOUS, W.M.** Engineering of frost susceptible soils (Rural roads, Aug. 1961. v. 11, no. 8, p. 36-38, 40, diagrs.)

Reviews Norwegian and Swedish practices of combatting differential heaving. These techniques are directed primarily to prevent frost-boil softening, and the depth of excavation and insulating backfill are dimensioned to insure sufficient bearing capacity during critical periods. Sand or sandy gravel, placed to a depth of 20-24 in., provides an effective insulating layer, and in thinner layers prevents capillary water rise from underlying soils. To prevent entry of moisture from the paved surface, proper drainage should be provided and the surface of the shoulders sealed beyond the edge of pavement. In special cases, such materials as peat moss in 12 in. layers are used and underground drains installed to lower the ground-water table. Methods of American and Canadian agencies to combat frost action are noted also. –From CRREL. (DLC.)

69670. ALDRIDGE, W.N., *and* H.B. STONER. The behavior of liver mitochondria isolated from rats with different body temperatures after limb ischaemia or after injection of 3:5-dinitro-o-cresol. (Biochemical journal, Jan. 1960. v.74, no.1, p.148-54, tables.) 26 refs.

No correlation was found between the properties of the liver mitochondria isolated from rats in ischemic shock and their colon temperatures (range 22.0°-40.5°C.). Possible reason for the temperature changes and the behavior of the isolated mitochondria are discussed. (DNLM.)

69671. ALEĬNIKOV, N. A. Flotatsiia okislov zheleza Olenegorskogo mestorozhdeniia. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Flotatsiia... 1961, p. 5-61, tables, graphs, diagrs.) 48 refs. Text in Russian. **Title tr.:** Flotation of iron oxides of the Olenegorsk deposits.

Outlines the technology of enrichment of iron ores of the magnetite-hematite type containing 30-40% iron. The processes used at present in the Olenegorsk plant on Kola Peninsula allows concentrates with 60% Fe and 10-14% SiO_2 to be obtained from ferrous quartzites leaving a significant amount of iron in the waste. Laboratory investigations under the author's supervision in 1958-1960 are outlined in detail, describing flotation reagents, a new magnetic-flotation scheme, equipment and technological processes. Their results show, for the first time in the USSR, that under productive conditions flotation concentrates with 65% or more Fe can be obtained. (DLC.)

69672. ALEKHICHEV, S.P., *and* E.G. MAKSIMOV. Bor'ba s pyl'iu i gazami na gorizonte grokhocheniia. (Bezopasnost' truda v promyshlennosti, Nov. 1962. god 6, no.11, p.31, tables.) Text in Russian. **Title tr.:** Control of dust and gases at the screening horizon.

Reports on a new method of secondary breaking of oversize lumps of ore at the Kirov apatite mines in Kola Peninsula. The oversize pieces are graded in size with 10 cm. interval, and blastholes of 38 mm. diam. are drilled in them. A piece of detonation cord corresponding in size to the size of the ore lump is inserted, and the hole filled with water. The blast evaporates and pulverizes the exploded water, which mixes with gas and dust from the explosion, and precipitates them. This eliminates the necessity of prolonged ventilation of the shaft, improves safety and hygienic labor conditions, and reduces costs. (DLC.)

69673. ALEKHICHEV, S.P., *and* IU. A. SHASHMURIN. O primenenii legkikh pnevmaticheskikh ventiliatorov na apatitovom rudnike im. S.M. Kirova. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.109-114, illus., tables.) Text in Russian **Title tr.:** On the use of light pneumatic fans at the S.M. Kirov apatite mine.

Describes the VP-3 and VP-4 pneumatic fans and their advantages over electric fans for ventilating blind shafts. The VP-3 has a capacity of 60–100m³/min; the VP–4, 83–114m³/min. (DLC.)

69674. ALEKHICHEV, S.P., *and others*. Puti uluchsheniia provetrivaniia apatitovogo rudnika im. S.M. Kirova. (*In:* Akademiia nauk SSSR Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.96-108, illus., tables.) Ref. Text in Russian. *Other authors:* IU. A. Shashmurin *and* L.S. Voronkova. **Title tr.:** Ways of improving ventilation in the S.M. Kirov apatite mine.

This mine, one of the largest in the world, is worked by ore blasting and induced block caving. Its system of ventilating the shafts is described in detail. The inflow of air from five fans was 13,754m.³/min. in the fall and 17,763m.³/min. in the summer of 1958. The system was studied in 1958 and 1959 and means were outlined for preventing the escape of fresh air, distributing it better and utilizing natural air currents for removing gas after blasting. (DLC.)

69675. ALEKHICHEV, S. P. Sluchaĭ prokhodki vyrabotki v usloviiakh vydeleniia ammiaka. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.115-17.) Text in Russian. **Title tr.:** A case of ammonia gas given off in a cutting shaft.

Reports on ammonia gas in the Kukisvumchorr and Yukspor apatite deposits in Kola Peninsula. These deposits have two types of apatite ore (with 28 and 17.5% of P_2O_5), covered with rischorrite and bedded on urtite. Strong ammonia gas, up to 0.39 mg/liter, was given off in March 1959; it forced a work stoppage, and operations were resumed after supplementary means of circulating and purifying the air had been installed. (DLC.)

69676. ALEKSANDROV, A.V. Osnovnye cherty verkhnepaleozoĭskogo uglenakopleniia na vostochnoĭ okraine Tungusskogo basseĭna. (Geologiia i geofizika, 1961, no.7, p.55-69, diagrs. incl. fold., maps.) 9 refs. Text in Russian. Summary in English. **Title tr.:** Main features of upper Paleozoic coal sedimentation on the eastern margin of the Tungusskiy basin.

Reports field study in the Vilyuy and its tributary basins during 1957-1959. Carboniferous-Permian coal-bearing deposits are distinguished. Their lithologic-petrographic properties and facies are analyzed. Classification and ranks of coal, clarain, durain, and others are described. Sedimentation conditions are treated. (DLC.)

69677. ALEKSANDROV, A.V., *and* V.I. FLOROV. Usloviia verkhnepaleozoĭskogo osadkonakopleniia i ugleobrazovaniia na vostochnoĭ okraine Tungusskogo basseĭna. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniia 1962. vyp.7, geologiia, p.59-66, maps.) 3 refs. Text in Russian. **Title tr.:** Conditions of upper Paleozoic sedimentation and coal formation on the eastern limits of Tungusskiy basin.

Outlines depositional environments and physical-geographic conditions in which sedimentation of coal-bearing deposits took place and coals were formed. Lithofacies maps of middle-upper Carboniferous and Permian periods for the northern part of the Vilyuy basin are compiled, noting facies of river channels, open lakes, stagnant basins, peat bogs, etc. Conditions of coal formation are considered, and stagnant swamps of various water ratio found to have the best. (DLC.)

69678. ALEKSANDROV, V.A. Cherty semeĭnogo stroia u russkogo naseleniia Eniseĭskogo kraia xvii-nachala xviii v. (Akademiia nauk SSSR.

Institut ėtnografii. Trudy 1961. t.64, Sibirskiĭ ėtnograficheskiĭ sbornik 3 p.3-26, tables.) 10 refs. Text in Russian. **Title tr.:** Differences in the family structure of the Russian population of Yenisey Province in the 17th to early 18th century.

Discusses the pattern of colonization by political deportees and free settlers: peasants, merchants, adventurers, soldiery, etc. The family status of urban and rural settlers, relationship and intermarriage between old-timers and new-comers, etc. are dealt with. The large, undivided family group was typical for the peasantry, the small nuclear family for the urban population. (DLC.)

69679. ALEKSANDROV, V.A. Proiskhozhdenie russkogo naseleniia Eniseĭskogo kraia v xvii v. (*In:* Akademiia nauk SSSR. Institut ėtnografii. Trudy t.78, Sibirskiĭ... 1962, p.9-29, tables.) Approx. 25 refs. Text in Russian. **Title tr.:** Origin of the 17th century Russian population of the Yenisey region.

Discusses and tabulates the ethnic and social origin of the colonizers of Mangazeya and Yeniseysk Districts in 1630-1690. Almost 80% were central and eastern Pomors, an ethnically mixed group of Russians and Zyryans, from the Severnaya Dvina - Pechora section of the White Sea region. Originally fugitive serfs and free peasants, they formed the core of the West Siberian settled population, some joined the military garrisons, others became hunters and trappers. The other 20% were (mainly) the Russian and Cossack soldiery, the local settlers, and some political exiles of varied ethnic origins. (DSI.)

69680. ALEKSANDROV, V. A. Rabota Instituta ėtnografii AN SSSR v 1960 godu. (Sovetskaia ėtnografiia, Mar.-Apr. 1961, no. 2, p. 110-15.) Text in Russian. **Title tr.:** Activities of the Institute of Ethnography, Academy of Sciences, USSR, in 1960.

Reports on field work and cites main publications, including ten monographs on northern peoples. (DLC.)

69681. ALEKSANDROV, V. A. Rabota Instituta ėtnografii AN SSSR v 1961 g. (Sovetskaia ėtnografiia, Mar.-Apr. 1962, no. 2, p. 133-36.) Ref. Text in Russian. **Title tr.:** Activities of the Institute of Ethnography, Academy of Sciences, USSR, in 1961.

Reports on publications and field work including northern regions. The Northern Ethnographic Expedition under B.O. Dolgikh continued its study of the ethnic history, and present socio-economic conditions of northern minorities. Archeological excavations on Chukotka revealed a new Eskimo necropolis, Ekven, on Cape Verblyuzhiy, attributed tentatively to the Old Bering Sea culture. (DLC.)

69682. ALEKSANDROV, V. A. Rol' krupnogo kupechestva v organizatsii pushnykh promyslov pushnoĭ torgovli na Enisee v xvii v. (Istoricheskie zapiski, 1962, v. 71, p. 158-95, tables.) Approx. 25 refs. Text in Russian. **Title tr.:** The role of big merchants in the organization of fur hunting and fur trade on the Yenisey River in the 17th century.

Discusses the relative importance of fur trade and farming in the colonization and economic development of Yenisey Province. The organization of fur-trapping parties to the game-rich basins of the Angara, Nizhnyaya and Podkamennaya Tunguska Rivers by merchants, the role of the fur trade in accelerating Russian settlement of these regions, etc. are dealt with. The value of fur animals, especially sables, caught by Russian trappers during the peak years of the 17th century was ten times larger than revenues derived from fur-tribute paying natives. Pertinent data for 1620-1660 are tabulated for the Mangazeya and Yeniseysk Districts: number of Russian trappers and merchants engaged in fur trade, sable export, trade turnover, incomes from grain and fur sales, etc. (DLC.)

69683. ALEKSANDROV, V. A. Sessiia, posviashchennaia itogam ėkspeditsionnykh issledovaniĭ 1960 goda. (Sovetskaia ėtnografiia, July-Aug. 1961, no. 4, p. 177-80.) Text in Russian. **Title tr.:** Session devoted to the results of expeditionary investigations in 1960.

Synopsizes ethnographic and archeological field work including the North and Far East: study of ethnic processes, consolidation of ethnic groups, survival of religious beliefs, etc. as reported at an Academy of Sciences History Dept. meeting in Moscow Apr. 4-11, 1961. (DLC.)

69684. ALEKSANDROV, V. A. Sessiia, posviashchennaia itogam polevykh issledovaniĭ 1961 goda. (Sovetskaia ėtnografiia, July-Aug. 1962, no. 4, p. 179-82.) Text in Russian. **Title tr.:** Session on the results of 1961 field work.

Summarizes papers read at the session of the Dept. of Historical Sciences of the Academy of Sciences, Moscow Mar. 27 - Apr. 3, 1962. M. G. Levin reported on the excavations of the Uelen and Ekven cemeteries conducted by the Chukotka party of the Northern Expedition of the Institute of Ethnography. (DLC.)

69685. ALEKSANDROV, V. P. K voprosu o formirovanii melkovodnykh prilivnykh voln. (Moskva. Gosudarstvennyĭ okeanograficheskiĭ institut. Trudy 1961. vyp. 64, p. 103-111, tables.) 2 refs. Text in Russian. **Title tr.:** The problem of formation of shallow-water tidal waves.

Presents analysis and general traits of this phenomenon based on reports from mainland and island coasts. Areas of spreading of shallow-water waves are outlined and variability limits of their amplitudes established. Conditions in the White Sea are given particular attention. (DLC.)

69686. ALEKSANDROVA, VERA DANILOVNA. Sezonnaia dinamika rastitel'nykh soobshchestv v Arktike. (Problemy Severa, 1961. vyp. 4, p. 59-74, illus., diagrs., tables.) 57 refs. Text in Russian. **Title tr.:** Seasonal dynamics of plant associations in the Arctic.

Reports a study on Bol'shoy Lyakhovskiy Island (73°35′N. 142°E.) during May 28 - Aug. 25, 1956, of the plant associations on hummocky spotty tundra, polygonal tundra, and thermokarst bog. On spotty tundra, seven successive aspects (color periods) of vegetation were distinguished, on the polygonal tundra six, and on the bog five aspects. The composition of associations are noted and compared with those similarly observed in the Tiksi Bay area. The biomass of the plant cover was estimated at 70 cwt./hectare on the spotty, and 38 on the polygonal tundra. (DLC.)

69687. ALEKSANDROVA, VERA DANILOVNA. Vliianie snezhnogo pokrova na rastitel'nost' v arkticheskoĭ tundre. *(In:* Akademiia nauk SSSR. Institut geografii. Rol' snezhnogo pokrova... 1961, p. 210-30, illus., tables, graphs.) 16 refs. Text in Russian. **Title tr.:** Influence of the snow cover on the vegetation in the arctic tundra

Reports a 1956 study on Bol'shoy Lyakhovskiy Island, in the vicinity of Mys Shalaurova polar station. Observations were made from the beginning of thaw to the complete disappearance of snow. Plant life in hotbeds under snow, in the open field under different thicknesses of snow and without snow is described. Air temperature at 2 m. height and soil temperature are reported. Various tundra plant associations as shrubs, perennial grasses, etc. are described, noting their reaction to snow cover, vegetation period, blooming conditions,, and other features. (DLC.)

69688. ALEKSANDROVICH, V. Severnaia vakhta. (Ogonëk, Mar. 1961. god 39, no. 11, p. 1, illus. on the inner part of front cover.) Text in Russian. **Title tr.:** The northern watch.

Describes work of M. P. Orlov, leader of a team of metal workers on the new concentration plant at Mirnyy in Yakutia. (DLC.)

69689. ALEKSEENKO, E. A. Materialy po kul'ture i bytu kureĭskikh ketov. *(In:* Akademiia nauk SSSR. Institut ėtnografii. Trudy t. 68, Sibirskiĭ...1962, p. 30-66, illus., map.) Approx. 29 refs. Text in Russian; **Title tr.:** Data on the culture and folkways of the Kureyka River Kets.

Study of these northern Yeniseians based primarily on the fieldwork of the Northern Ethnographic Expedition's Turukhansk party in 1958-1959. Research centered on the Novaya Zhizn' kolkhoz comprising the entire Kureyka group of 110 people. Fishing, hunting, and transport-reindeer raising are the main economic activities, the first providing 60% of the income. Cattle breeding, fur and truck farming, recently introduced, proved unprofitable and were virtually abandoned in 1955-1957. Enforcement of a settled mode of life is hampered by the seasonal migration cycle inherent in herding and hunting. Nomadic summer and winter tents *(chum)* are described, also the permanent plank and log houses at Serkovo on the Kureyka River and Maduyka on Lake Munduyskoye. New and old forms of transportation, food and cooking, family life, crafts and clothing are dealt with, and preference for the native and Samoyed dress over Russian imports is noted. Vestiges of ancient social and religious customs, especially bear and tree cults, survive, despite rapid acculturation. Educational facilities in the Turukhansk District include ten boarding schools for aborigines. Vocational training courses are to be added to the regular secondary school curriculum in 1962. (DSI.)

69690. ALEKSEENKO, E. A. Sredstva predvizheniia ketov. (Akademiia nauk SSSR. Institut ėtnografii. Trudy 1961. t. 64, Sibirskiĭ ėtnograficheskiĭ sbornik 3, p. 64-97, illus.) 15 refs. Text in Russian. **Title tr.:** Means of transportation of the Yeniseians.

Describes winter and summer transport based on field work in 1956-1959 and on museum collections. Hand-, dog-, and reindeer-drawn sleds, and skis are dealt with, as well as dugouts, plank-, and house-boats, canoes, etc. Construction techniques and materials, harness, oar and paddle types are outlined. Typical for the Yeniseians are the hand sled drawn by a skier, the absence of harness-dog breeding and the use of hunting dogs as draft animals; the Samoyed reindeer sled and harness are commonly used as is the large plank-boat *ilimka.* (DLC.)

69691. ALEKSEEV, A.P. *and others.* Hydrographic conditions in the Norwegian Sea, November-December 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v.16, p.26-28, illus., maps.) *Other authors:* B.V. Istoshin *and* L. Ponomarenko.

Reports on investigation extending to 15°E. and about 72°N. Temperature, salinity, oxygen and phosphate are recorded. Water masses and movements are calculated and values compared with those of 1958. (DI.)

69692. ALEKSEEV A. P., *and others.* International investigations on hydrographic conditions in the Norwegian Sea, June 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959, pub. 1961. v. 16, p. 25.) *Other authors:* B. V. Istoshin, V. I. Pakhorukov, P. Myrland, H. Einarsson, F. Harmann, *and* U. Stefánsson.

Reviews activities of Denmark, Iceland, Norway, and the USSR concerning temperature, phosphate, water circulation, with comparisons to previous year(s); ice border, water masses, etc. (DI.)

69693. ALEKSEEV, A.P., *and others.* Results of hydrological and hydrochemical studies in the Norwegian Sea in 1958. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v.149, Contributions to special IGY Meeting 1959, p.53-55, illus., map.) *Other authors:* G.N. Zaĭtsev *and* S.I. Potaichuk.

Preliminary record on temperature and salinity based on material collected during a spring and a fall cruise, extending to about 15°W. and 70°N. Water masses and movements are reconstructed from these, and from oxygen data, and compared with those of previous years. Weather is also noted. (DI.)

ALEKSEEV, A. P., *see also* Istoshin, B.V., & A.P. Alekseev. Mnogoletnie izmeneniia... 1959. No. 72430.

69694. ALEKSEEV, ALEKSANDR IVANOVICH. Semen Ivanovich Dezhnev, nachalo XVII v. - 1673. *(In:* Kuznetsov, I.V., *ed.* Liūdi... 1962, p.280-89, port., map.) Refs. Text in Russian. **Title tr.:** Semen Ivanovich Dezhnev, early 17th century - 1673.

Reviews the life, travels and explorations of this outstanding Russian cossack, who discovered the strait between Asia and America, later named Bering Strait, and who traced the Yenisey, Yana, Indigirka, Kolyma, Anadyr and other Siberian rivers, Chukotka and the coasts of Asia. Almost his entire life was spent in travel. He made several significant discoveries, which are described. Papers about him are listed as well as a map of his travels. (DLC.)

69695. ALEKSEEV, ALEKSANDR IVANOVICH. Slavnyĭ put' moreplavateliā i geografa; 150 let so dnʹa rozhdeniiā A.K. TSivol'ki. (Priroda, Aug. 1962. god 51, no.8, p.105-107, illus., map.) 4 refs. Text in Russian. **Title tr.:** The glorious path of a seafarer and geographer; 150 years since the birth of A.K. TSivol'ka.

Outlines the life and explorations of this native of Warsaw, Poland. His three expeditions to Novaya Zemlya in 1834, 1837, 1839 (cf. No. 48485) are described; on the last one, which he commanded, he died on March 16, 1839 from scurvy. (DLC.)

69696. ALEKSEEV, ALEKSANDR IVANOVICH. Vitus Bering, 1681-1741. (*In:* Kuznetsov, I.V., *ed.* Līudi... 1962, p.290-97, port.) 15 refs. Text in Russian.

Describes the course of life of this Danish-Russian explorer. His First Kamchatka Expedition (1725-1730) is treated in detail. Preparations and carrying out of the so-called Great Siberian-Pacific Expedition of 1733-1743 are outlined, on which Bering Strait was sighted and Alaska discovered. The hardships, death of Bering, and breakup of the expedition are depicted. (DLC.)

ALEKSEEV, ĪURIĬ KONSTANTINOVICH, *see* Nazintsev, Ī.L., & Ī.K. Alekseev. Gal'vanicheskiĭ ledomer. 1961. No. 74241

69697. ALEKSEEV, M.N., *and others.* Chetvertichnye otlozheniā ĪAkutii. (*In:* Akademiā nauk SSSR. Geologicheskiĭ institut. Voprosy...antropogena, 1961, p. 129–39, table.) 18 refs. Text in Russian. Summary in English. *Other authors:* R.E. Giterman, N.P. Kuprina, A.I. Mediantsev, and I.M. Khoreva. **Title tr.:** Quaternary deposits of Yakutia.

Reports results from study of Quaternary deposits in the Lena, Vilyuy, Aldan, Yana and other river. basins. Structural plan, and specific features of relief and climatic fluctuation are outlined which have mostly affected sedimentation and character of the Quaternary deposits. Their flora and fauna are characterized. The deposits are divided into three series: Eopleistocene, Pleistocene, and Holocene, each is subsequently divided into stages or other smaller units, and correlation is made. (DLC.)

69698. ALEKSEEV, M. N. Materialy po stratigrafii kaĭnozoĭskikh otlozheniĭ i geomorfologii tsentral'noĭ chasti Vilīĭskoĭ vpadiny. (*In:* Akademiā nauk SSSR. ĪAkutskiĭ filial. Almazy ĪAkutii . . . 1961, p. 180-226, table, map, diagrs.) 45 refs. Text in Russian. **Title tr.:** Materials on the stratigraphy of Cenozoic deposits and geomorphology of the central part of the Vilyuy depression.

Describes the relief forms, river terraces, erosion and accumulation processes, river net, and other geomorphic features. Cenozoic deposits, consisting of eluvium, solifluction deposits, alluvium (most distributed) and eolian deposits are treated in detail. Sections of alluvial deposits are described in the Vilyuy, Markha, Tyung, Linde and other river valleys. Age determination and comparison of sections, fauna and flora are reported. Stratigraphic correlation of Quaternary deposits is made for the Vilyuy, Markha, and Lena basins and the arctic area of Eastern Siberia. (DLC.)

69699. ALEKSEEV, M. N. Stratigrafiā chetvertichnykh otlozheniĭ Vilīĭskoĭ vpadiny. (*In:* Vsesoīuznoe soveshchanie po izucheniīu chetvertichnogo perioda. Materialy . . . 1961, t.3, p. 181-85) Text in Russian. **Title tr.:** Stratigraphy of the Quaternary deposits of the Vilyuy depression.

Presents a stratigraphic description of the Eopleistocene, Pleistocene, and Holocene (Recent) deposits. Composition, distribution and fauna are characterized. Sedimentation conditions, climatic changes and changes in vegetation are reported. Correlation is made with Quaternary deposits of the Aldan, Lena and Angara basins. (DLC.)

69700. ALEKSEEV, MIKHAIL PAVLOVICH. Neizvestnoe opisanie puteshestviā v Sibir' inostrantsa v xvii veke. (Istoricheskiĭ arkhiv, 1936. t.1, p. 97-194.) Refs. Text in Russian. **Title tr.:** Description, hitherto unknown, of a foreigner's journey to Siberia in the 17th century.

Cites the text in the original German with Russian translation, of a manuscript written in 1660, and preserved in the Royal Library of Copenhagen; it is entitled: *Beschreibung der Reise auff Ziberien und weiter ins Land Orth und Stelle.* The flora, fauna, and fur trade in the Ob basin are sketched; the towns of Tyumen, Berezovo, and Mangazeya are described. Novaya Zemlya and the Lena River are mentioned by hearsay; and ethnographic notes are given on the Voguls and Ostyaks. Alekseev adds his comments throughout. (DLC.)

69701. ALEKSEEV, V. L. Perspektivy kletochnogo zverovodstva na Severe. (Sel'skoe khoziāĭstvo Sibiri, Sept. 1961. god 6, no.9, p. 77-78.) Text in Russian. **Title tr.:** The outlook in penned fur-farming in the North.

Notes the 25 million ruble income from fur farming in Yakutia in 1959, and the 15,000 silver and arctic fox and mink in runs. The quality of the skins was low however, because of poor selection, faulty processing, etc. Feed preparation should be mechanized, and a scientific study made of fur-farming problems. This industry is expected to increase to 4.5 million rubles (new currency) by 1965. (DLC.)

69702. ALEKSEEV, V. R. Rastitel'nost' i vechnaiā merzlota. (Priroda, Nov. 1961, god 50, no.11, p. 106-107, illus.) Text in Russian. **Title tr.:** Vegetation and permafrost.

Notes general characteristics of vegetation on soils with permafrost; types of vegetation as indicators of underlying ice; forests in permafrost areas; etc. (DLC.)

69703. ALEKSEEV, V. R. Treshchinovatost' lishaĭnikovogo pokrova v īuzhnoĭ ĪAkutii. (Botanicheskiĭ zhurnal, Feb. 1962. t.47, no.2, p. 239-40, illus.) Text in Russian. **Title tr.:** Cragginess of the lichen cover in southern Yakutia.

Describes fissures appearing after the snow has melted away and higher temperature causes drying-up of the substrate. The cracks are tetra- to hexagonal with fields 10-100 cm. in diameter. (DLC.)

69704. ALEKSEEVA, RAISA EVGRAFOVNA. Devonskie atripidy Kuznetskogo i Minusinskogo basseĭnov i vostochnogo sklona Severnogo Urala. Moskva, Izd-vo Akademii nauk SSSR, 1962, 196 p. illus., tables, plates. (Akademiā nauk SSSR. Sibirskoe otdelenie, Institut geologii i geofiziki.)

Approx. 150 refs. Text in Russian. **Title tr.**: Devonian Atrypidae of the Kuznetsk and Minusinsk basins and the eastern slope of Northern Ural.

Presents a monographic account of these brachiopods: outlining methods of investigation, and characterizing the morphology and ontogenic alteration of shells, sculpture and inner structure. Systematics of fam. Atrypidae are analyzed and some changes suggested. Main attention is given to the systematic description, and about forty forms are described and illus. The stratigraphic importance of the Atrypidae is indicated; several of the forms are from the Eastern Ural. (DLC.)

69705. ALEKSEEVA, T. I. Otchetnaia arkheologo-ėtnograficheskaia sessiia Otdeleniia istoricheskikh nauk AN SSSR. (Voprosy antropologii, 1962. vyp.11, p. 145-47.) Text in Russian. **Title tr.**: Archeological and ethnographic progress session of the Dept. of Historical Sciences, Academy of Sciences, USSR.

Summarizes the main reports presented, in Moscow Mar.-Apr. 1962, including: New data on the ancient history of Asiatic Eskimos, by M.G. Levin, who discusses new anthropological materials discovered at the Uelen and Ekven cemeteries (Old Bering Sea and Okvik cultures) which attest to a great similarity between the ancient and modern Eskimo types. I.M. Zolotareva reported anthropological studies on Taymyr in 1961, showing great affinity found between the Dolgan and Yakut types, but no close relationship between the physical type of the Nganasan Samoyeds and any other known Siberian ethnic group. (DLC.)

69706. ALEKSEEVSKIĬ, I. G., *and* L. E. ZUBRILOV. Sokratit' kapital'nye zatraty pri stroitel'stve kazhdogo rudnika na 5-10 millionov rubleĭ. (Gornyĭ zhurnal, Oct. 1961. no.10, p. 15-18.) Text in Russian. **Title tr.**: Construction costs of every mining establishment must be reduced by 5-10 million rubles.

Includes remarks on the Northern Ural bauxite mines, which are affected by inflow of ground water at the rate of 2-10 thousand m^3/hr.; reducing the size of the water collectors and replacing stage pumps by spiral pumps, may lower costs considerably. (DLC.)

69707. ALEKSEĬCHIK, S. N. Apono-Okhotskiĭ kainozoĭskiĭ neftegazonosnyĭ bassein i ego neftegazonosnye oblasti. (Geologiia i geofizika, 1962. no.7, p. 76-86, maps incl. fold.) 4 refs. Text in Russian. Summary in English. **Title tr.**: The Japan-Okhotsk Cenozoic oil- and gas-bearing basin and its oil- and gas-bearing regions.

Describes the extent, beginnings and geologic development history of this basin as distinguished by the author. Seven regions of oil and gas accumulation and five generating regions are established and characterized. Possible ways of oil and gas migration from the generating to the accumulation areas are considered. A more detailed zonation is given for the Sakhalin oil and gas region. (DLC.)

69708. ALESHINSKAIA, Z. V. Raspredelenie diatomovykh v razlichnykh fatsiiakh alliuviia, po dannym diatomovogo analiza otlozheniĭ poĭmy r. Eniseia. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Nov.-Dec. 1962. t.94, vyp.6, p. 501-506, diagrs.) 4 refs. Text in Russian. **Title tr.**: Diatom distribution in various facies of alluvium according to diatom analysis of the Yenisey River floodplain.

Reports studies on the present alluvial deposits of the floodplain terrace near the Surgutikha channel, 63° 38′ N, 87°10′ E. Four facies are distinguished, and the diatom complexes of each reported. (DLC.)

69709. ALEXANDER, SCOTT E. Cold weather clothing. (North, Sept.-Oct. 1962. v.9, no.5, p. 41-45, illus.)

Describes testing of materials for arctic clothing and footgear by the Royal Canadian Air Force since 1948. Nylon fabrics coated with polyurethane and interlined with a nylon fleece (Flalon) provide lightweight, waterproof, and reasonably vapor-resistant clothing. A boot with a new low-temperature cellular rubber in the sole and back zipper is under development to replace the bulky standard Canadian Army mukluk. Cold weather outer clothing and footgear for the RCAF have been reduced in weight from 17 to 7½ lbs., approximating the 6½ lb. weight of Eskimo winter clothing. (CaMAI.)

69710. ALEXANDER, SCOTT E. A report on new cold weather footgear. June, 1961. 9 l. (Canada. Royal Canadian Air Force. Institute of Aviation Medicine, *Toronto*. Report 61-RD-2.)

Describes the 3 lb. 6 oz. "Kamiluk" made of nylon duffle cloth with a sole of low-temperature cellular rubber. Footgear improvement continues, to produce a water-proof boot also an ankle-height "Kamiluk." (SPRI.)

69711, AL'FMAN, Ė. A., *and others*. Svechenie l'da. (Priroda, Mar. 1961. god 50, no.3, p. 105-106.) Text in Russian. *Other authors:* I.A. Tiutiunov *and* P.A. Shumskiĭ. **Title tr.**: Ice glow.

First author describes a glow appearing in the breaking ice, in front of a ship moving at night in the Okhotsk Sea. Other authors try to explain it as an electrical phenomenon. (DLC.)

69712. ALFORD, M. E. We too climbed McKinley. (Alaska sportsman, Dec. 1961. v.27, no.12, p. 13-17, illus.)

Describes the successful ascent of a six-man party via the Kahiltna-West Buttress route, in July 1961; also reported by Don Gordon, q.v. (DLC.)

69713. ALIAVDIN, V. F. Greĭzeny i greĭzenizirovannye porody Alĭaskitovogo mestorozhdeniia vol'framita. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy 1961. n. ser. t.60, Materialy po geologii i mineralogii rudnykh mestorozhdeniĭ SSSR, p. 159-79, illus., tables, diagrs.) 7 refs. Text in Russian. **Title tr.**: Greisen and greisenised rocks of the Alyaskitovyy wolframite deposits.

Presents results of geologic, petrographic and mineralogic investigation of metasomatic alteration of rocks included in Alyaskitovyy wolframite ore bodies on the left bank of the El'gi River, approx. 64°45′ N. 141°30′ E. in 1945-1946. Composition of the granites is outlined, and their transformation into greisen reported. Mineral-chemical features of the greisening process are described. It progressed under pneumatolytic-hydrothermal action. (DLC.)

69714. ALIAVDIN, V. F. Mineralogicheskiĭ ocherk Chagydanskogo vol'framovogo mestorozhdeniia.

(Vsesoĭuznoe mineralogicheskoe obshchestvo. Zapiski 1962. ser. 2, chast' 91, vyp.2, p. 158-74, illus., tables.) 9 refs. Text in Russian. **Title tr.:** Mineralogic outline of the Chagydan wolfram deposits.

Describes the mineralogic characteristics of these deposits in Magadan Province. Geologic features of the ore field and vein deposits are outlined. Hypogenic and supergene minerals are analyzed. Genesis of ore bodies is examined and three development stages are distinguished. The tungsten deposits are concluded to be of hydrothermal origin. Scheelite also occurs. (DLC.)

69715. ALĬAVDIN, V.F., *and* **E.S. ALĬAVDINA.** O shchelochnykh polevykh shpatakh magmaticheskikh porod i gidrotermal'nykh zhil Chagydanskogo mestorozhdeniĭa, basseĭn r. Kolyma. (Vsesoĭuznoe mineralogicheskoe obshchestvo. Zapiski 1961. ser. 2, chast' 90, vyp. 2. p.193-206, illus., tables, diagrs.) 13 refs. Text in Russian. **Title tr:** The alkaline feldspar of magmatic rocks and hydrothermal veins of the Chagydan deposits, Kolyma River basin.

Reports results of optical mineralogical study of potassium-sodium feldspars of these deposits, approx. 63°04′N. 152°34′E. on the upper Kolyma. Feldspars of wolframite-quartz veins and those of Moguchevo granitoid stock are characterized and compared as to chemical composition, optical properties, and other features. No significant differences are found, whether of hydrothermal or magmatic origin. (DLC)

69716. ALĬAVDIN, V.IA. Nekotorye voprosy paleogeografii chetvertichnogo perioda severa Zapadno-Sibirskoĭ nizmennosti; tezisy. (*In:* Vsesoĭuznoe soveshchanie po izucheniĭu chetvertichnogo perioda. Materialy...1961, t.3, p.40-41.) Text in Russian. **Title tr:** Some problem in the paleogeography of the Quaternary period in the north of the West Siberian plain; summary.

Reviews the physical-geographical environments: glaciations, marine transgressions and regressions, climatic changes, etc., during the Quaternary in the Ob and Yenisey basins. (DLC)

ALĬAVDINA, E. S., *see* Alĭavdin, V.F., & E.S Alĭavdina. O shchelochnykh polevykh shpatakh . . 1961. No. 69715

69717. ALIM, A. A. Morskie griby Belogo moria. (Botanicheskiĭ zhurnal, Nov. 1962. t. 47, no. 11. p. 1582-95, illus., tables.) 5 refs. Text in Russian. Summary in English. **Title tr.:** Marine fungi of the White Sea.

Describes 12 species of parasitic fungi and their development inside the cells of the infested algae. The material was collected during Aug. 1961 in the western part of the sea. The majority of these fungi are eurythermal and euryhaline. (DLC.)

ALISHEV, N. V., *see* Gubler, E. V., & *others.* O posledstviiakh . . . 1960. No. 71894

69718. AL'KHIMENĬUK, V. A. Vliianie tiroksina na gazoobmen krys raznogo vozrasta pri gipotermii v reparativnom periode. (Problemy ėndokrinologii i gormonoterapii, 1961. t. 7, no. 5, p. 46-50, tables.) 10 refs. Text in Russian. Summary in English. **Title tr.:** The effect of thyroxin upon gas exchange in rats of various age during the recuperative period of hypothermia.

No significant increase in gas exchange of immature rats was noted except when thyroxin was administered 24 hours earlier; this increase was more pronounced than in adult or old animals. Advance administration of thyroxin produced a lesser drop in rectal temperature of chilled rats, both immature and adult, during the recuperative period. (DNLM.)

AL'KHIMENĬUK, V. P., *see also* Isichenko, N. A., & V. P. Al'khimenĭuk. Gazoobmen...1961. No. 72423

69719. *ALL HANDS.* Ice-melting machine. (All hands, July 1961. no. 534, p. 29, illus.)

Describes successful tests in the Antarctic of a device called Aqua-Therm, which melts ice by violently churning the water under it. Two ten-hp. electric motors were submerged in 28° F. water to melt ice up to ten ft. thick; 60 hp. units are available. (DLC.)

69720. ALLDREDGE, LEROY ROMNEY.1917– *and* **G. VAN VOORHIS.** Source of the great arctic magnetic anomaly. (Journal of geophysical research, Apr. 1962. v. 67, no. 4, p. 1573-78, charts.) 9 refs.

Explains the unique pattern made by magnetic component contours and magnetic meridians in the Arctic, in terms of magnetic sources at the core-mantle interface. Eight radial dipoles were used to approximate the nondipole field. The position and amplitude of these dipoles were adjusted so that their field, together with the field of a centered dipole, reproduced all of the general features of the great arctic anomaly. The radial dipoles are good approximations to current loops at the core-mantle interface. It is concluded that the anomaly is due to electric currents in the core, which contrasts with the geological explanation suggested by Hope in No. 58738. —From authors' abstract. (DLC.)

69721. ALLEFRESDE, MAURICE. L'Arctique Fennoscandien; mise en valeur des territoires septentrionaux de la Norvège, Suède, Finlande. Paris, Feb. 5, 1962. 21 p. map. (France. Direction de la documentation. Notes et études documentaires, no. 2.857.) Text in French. **Title tr.:** Arctic Fennoscandia; development of the northern territories of Norway, Sweden, and Finland.

Discusses the physical, human, and economic problems of this 300,000 sq. km. area, whose contribution to the national economy is relatively low. Advances in forestry, agriculture, and industry are noted, state-sponsored programs described. Forests, hydro-electric power, iron ore and other resources have been nationalized. The population is young, with upward trends in immigration and urbanization. Northern Norway, the most developed, shows urban and industrial (maritime) expansion. Northern Sweden has new industry based on hydro-electric power and iron ore. Northern Finland's economy is based on small farming, fishing, and forestry. Inland surface transportation is a common problem. Cooperation in Fennoscandia would expedite progress. (CaOGB.)

69722. ALLEFRESDE, MAURICE. Données nouvelles sur les villes arctiques norvégiennes Narvik, Bodö, Mo i Rana. (Revue de géographie de Lyon, 1962. v. 37, no. 1, p. 75-103, plates, maps, graphs.) Refs. Text in French. **Title tr.:** New data on the Norwegian arctic towns of Narvik, Bodö, Mo i Rana.

Discusses the urbanization of these towns since World War II, and its regional implications. Their natural environment and historical background are reviewed. Their new urban characteristics are examined: population growth, diversification and stratification of function, extension of influence over a hinterland, new construction, and the urban aspect emerging in each community. Urbanization in northern Norway is fostered by regional planning. An embryonic urban network is discerned in a classification of the northern towns according to their functions. (DGS.)

69723. ALLEN, C. C. The platinum metals. Ottawa, Queen's Printer, 1961. viii, 68 p. illus., maps, diagr., graphs, tables. (Canada. Dept of Mines and Technical Surveys, Mineral Resources Division, Mineral report 3.) 69 refs.

Surveys the main aspects of this group of precious metals, their history since the first reference in 1557, mineralogy and occurrences either as native alloys in placer deposits or as sulfides in nickel-copper deposits. The deposits in Canada are at Sudbury, Ont., Thompson and Lynn Lake, Man., Rankin Inlet in Keewatin, the Kluane Lake district of Yukon Territory, etc. Platinum also occurs in the Goodnews Bay District, Alaska. Most of the world's production in 1959 was recovered from platinum sulfides in sulfide-type ore. Extraction and refining processes are outlined; physical and chemical properties of platinum, iridium, osmium, palladium, rhodium and ruthenium are summarized; consumption and uses in oil refining, the electrical industry, dentistry, and as jewelry, are noted. Prices of the six platinum metals on Apr. 28, 1960 are quoted; world production in 1959 was an estimated one million troy ounces, of which Canada had 319,670 ounces, roughly double the production of 25 yrs. ago. Canadian reserves are about 12 million ounces; Alaskan reserves are small. (DGS.)

69724. ALLEN, MAUDE REX. Eskimos by lamplight. (Pacific discovery, Nov.-Dec. 1962. v. 15, no. 6, p. 18-22, illus.) 4 refs.

Describes the Eskimo lamp, its appearance, uses, and antiquity. Mostly of stone, the lamps are round, elliptical, or semilunar in shape, and range in size from two to forty inches diameter. Besides providing light and heat, they had ceremonial uses, e.g., in whaling festivities. Decorated lamps, as described and illus., have been excavated from prehistoric sites in Alaska. (DGS.)

69725. ALLEN, PHILIP W., *and* R. O. WEEDFALL Microclimatology of Ogotoruk Valley, Alaska. Washington, D. C., U.S. Weather Bureau, Apr. 1962. v, 22 l., 25 maps & graphs, 10 tables. (U.S. Atomic Energy Commission. Project Chariot Environmental Study Program, final report.) 12 refs. Loose leaf.

Concludes study reported in No. 63012 and by Weedfall, q.v. Measurements of selected meteorological parameters in the valley are compared with similar measurements at nearby stations with relatively long records, arriving at approximate normals for Ogotoruk. Variations from these normals in different sites in the valley itself are observed; soil temperatures are compared within the valley and with other locations. Light precipitation totals and low temperatures are results of cold air from the northeast channelled through a break in the western Brooks Range. Frequent northerly winter gales also prevent heavy snow accumulation. Cool waters of Chukchi Sea limit summer warming of air and soil, keeping the permafrost level close to the surface, especially in the lower parts of the valley, away from the rocky hilltops. Data are summarized in maps, graphs, and tables. (DWB.)

ALLEN, REX V., *see* Kachadoorian, R., & *others*. Geologic investigations...Project Chariot...1961. No. 72604

ALLEN. ROGER W., *see* Alaskan Science Conference 1961. 1962. No. 69644

ALLEN, W. T., *see* Morrison, P. R., & W. T. Allen. Temperature response...1962. No. 74120

69726 ALOV. A. Ukrepliaem sviaz' s zhizn'iu. (Narodnoe obrazovanie, Aug. 1961, no. 8, p. 33-36, illus.) Text in Russian. **Title tr.:** We strengthen the ties with life.

The director of a secondary school in Petropavlovsk-on-Kamchatka describes its laboratory, shop, business, agricultural, etc. programs. (DLC.)

69727. AL'PEROVICH, L. V. Nekotorye rezul'taty issledovanii korotkoperiodicheskikh kolebanii elektromagnitnogo polia zemli vo vremia poliarnykh siianii. (Geomagnetizm i aëronomiia, 1961. t. 1, no. 4, p. 557-60, graphs.) 4 refs. Text in Russian. **Title tr.:** Some investigation results of short period oscillations of the earth's electro-magnetic field during auroral displays.

*Reports on a comparison of short-period electromagnetic variations (KPK) with the variations in the brightness intensity of auroras. Records of KPK of the earth currents obtained at the geophysical station Lovozero in Kola Peninsula, and the glow intensity curves obtained at Loparskaya station showed a complete coincidence between the appearance time of extremes on both curves for the prevailing period of KPK of 5-7 sec. (DLC.)

69728. ALTER, AMOS J. Alaska communities may benefit from new Water Pollution Control Acts. (Alaska's health and welfare, Dec. 1961. v. 18, p. 2.)

Discusses the original act which provides a 30% grant; additional funds available for sewage treatment works; communities benefiting and potential beneficiaries, prevention of water pollution, etc. (DLC.)

69729. ALTER, AMOS J. Community sanitary facilities and the organized borough. (Alaska local government, Oct. 1961. v. 1, no. 6, p. 1-4.)

Chief of Sanitation and Engineering, Alaska Dept. of Health and Welfare, discusses sanitation problems of Alaskan suburbs outside municipal boundaries. They lack an organized local government to provide water, sewage and refuse-collection services; such systems installed by individual property holders are often inadequate and unsafe; lack of community facilities impedes economic development. Creation of organized boroughs may alleviate the situation. (DLC.)

69730. AL'TER, S. P. K stratigrafii chetvertichnykh otlozhenii Prieniseĭskoĭ zony. (Leningrad. Vsesoiuznyi nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyi sbornik 1960, no. 40, Geologiia i poleznye iskopaemye Vostochnoĭ Sibiri, p. 65-76.) 15 refs. Text in Russian. Title tr.: On the stratigraphy of Quaternary deposits of the Yenisey zone.

Analyzes sections of these deposits as studied along the middle Yenisey: the Fat'yanikha, Ust'-Pit and Krasnoyarsk areas, in 1956-1960. Some new conclusions are offered which differ from the stratigraphic division. Fragmental loams marked as lying above the Samarovo and below the Zyryanka horizons should be considered of Sanchugovka age. During the Sanchugovka depression in the Siberian platform, single valley type glaciers existed. Other layers are interpreted. (DLC.)

ALTLAND, P. D. *see*

Highman, B., & P.D. Altland. Effects of exposure 1962. No. 72144

Highman, B., & P.D. Altland. Serum enzyme 1962. No. 72145

69731. AL'TSHULER, VIKTOR MIKHAĬLOVICH, *and* **A. A. DMITRIEVA.** Nekotorye okeanologicheskie raschety pri proektirovanii prilivnykh elektrostantsiĭ; PÉS. (Leningrad. Universitet. Uchenye zapiski 1961. no. 309, ser. geograficheskikh nauk, vyp. 16, okeanologiia, p. 3-54, tables, graphs.) 23 refs. Text in Russian. Title tr.: Some oceanologic calculations for the planning of tidal electric stations, PÉS.

Discusses the utilization of tides for obtaining electric energy. The energy of tidal waves is outlined. Fluctuation of sea-level, tidal dynamics, ice regime in seas, and various other problems are considered in relation to the construction of tidal electric stations. Such stations as projected at Lumbovskiy Bay on the Kola Peninsula, at the Mezen River mouth in Arkhangel'sk Province and on the White Sea coast are briefly described; basins, dams, layout, and voltage noted. (DLC.)

69732. AL'TSHULER, VIKTOR MIKHAILOVICH, *and* **O. A. VLADIMIROV.** Vychislenie polusutochnogo priliva *M2*, v more Baffina i Devisovom prolive metodom G. V. Polukarova. (Moskva. Gosudarstvennyĭ okeanograficheskiĭ institut. Trudy 1961. vyp. 64, p. 112-17, table, maps.) 4 refs. Text in Russian. Title tr.: Calculation of semi-diurnal tide, *M2*, in Baffin Bay and Davis Strait, by the method of G. V. Polukarov.

Based upon data on harmonic constants of tidal waves, from 39 coastal points in this area. Charts obtained by this method, for cotidal times and for harmonic constants of *M2* are of value for establishing an approximate picture of the tidal regime, little known in this region. (DLC.)

69733. ALTUKHOV, K. A., *and* **S. P. DRAMBIANTS.** Iz Tikhogo okeana v Atlanticheskiĭ; novaia rodina dal'nevostochnoĭ gorbushi. (Priroda, Apr. 1961. god 50, no. 4, p. 80-82.) Ref. Text in Russian. Title tr.: From the Pacific into the Atlantic; the new habitat of the Far-Eastern pink salmon.

Notes 1960 reports in the Scandinavian and British press concerning catches of this salmon in their coastal waters. First Soviet attempts to transplant a Pacific salmon into Kola waters (1933-1939) were unsuccessful. Efforts from 1956 including methods, transport are reviewed, biological aspects, numbers of eggs and fry involved, etc. Early appearances and further spreading of this fish in Soviet waters are noted, also needs of study in the new habitat. (DLC.)

69734. ALTUKHOV, K. A., *and* **V. M. ERASTOVA.** Rezul'taty mecheniia sel'di v karel'skikh vodakh Belogo moria. (Rybnoe khoziaĭstvo, 1962. god 38, no. 5, p. 19-22.) 2 refs. Text in Russian. Title tr.: Results of herring tagging in the Karelian waters of the White Sea.

Account of tagging conducted since 1960 with description of tags, dates and places of tagging; numbers tagged, returns; direction and rate of migration; comparison with other areas; etc. (DLC.)

69735. ALTUKHOV, K. A. Sushchestvuet-li lokal'nost' stad belomorskoĭ sel'di? (Priroda, Oct. 1962. god 51, no. 10, p. 118.) Text in Russian. Title tr.: Is there a localization of the White Sea herring tribes?

Notes that recent results of tagging indicate that areas of spawning and feeding do not coincide in this sea and that fish of one area mix with those of others. This precludes the existence of herring tribes in the White Sea. (DLC.)

ALVAREZ, S., *see* Beyda, E.J., & *others*. Effect of hypothermia. . .1961. No. 70192

ALVERSON, DAYTON L., 1924– , *see*

Alaskan Science Conference 1961. 1962. No. 69644

Pruter, A., & D.L. Alverson. U.S. fishery scientists. . .1962. No. 74983

ALYPOVA, O. M., *see* Markhinin, E.K., & *others*. Izuchenie sostoianiia vulkanov. . .1962. No. 73820

69736. AMBACH, WALTER, The energy balance during a 10 day ablation period on the Greenland Ice Cap. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no. 54, *pub.* 1961. p. 297-300, table.) 7 refs.

Describes briefly the procedure and results of heat balance measurements made by A. Bauer's team of the International Glaciological Expedition to Greenland in summer 1959. The measurements in an area of ablation, EGIG Camp 4, 69° 40′ N. 49° 37′ W., 1000 m. elevation, on the Greenland Inland Ice, were compared with calculated ablation, 3% difference. Melting requires 90% of the incoming energy; heating utilizes about 10%. Results agree with author's previous measurements of an 11-day ablation period as reported in No. 63025. (DWB.)

69737. AMBACH, WALTER, *and* **H. L. HABICHT.** Ein thermoelektrischer Strahlungsbilanzmesser zur Bestimmung der in oberflächennahen Eisschichten eines Gletschers absorbierten Strahlungsenergie. (Archiv für Meteorologie, Geophysik und Bioklimatologie; ser. B, Allgemeine und biologische Klimatologie, 1961. Bd. 11, Heft 2, p. 241-50, diagr., graphs, table.) 9 refs. Text in German. Summary in French and English. Title tr.: A thermoelectric radiation balance instrument for determining absorbed radiation energy in the surface ice layers of a glacier.

Calculates energy transformations taking place in pure Austrian alpine glacier ice, based on measurements from a special installation, shown in diagram. Average coefficient of extinction in the ice

layers from 0 to 20 cm. depth was found to be 0.14 cm^{-1}. Below that depth the extinction coefficient assumed a constant value of 0.0184 cm^{-1}. Half of the incident energy is absorbed in the first one or two cm. and 90% is absorbed at a depth of 10 cm. Hence the radiation balance decreases somewhat more sharply in this amount of ice than does the short-wave radiation measured with a spherical receiver. (DLC.)

AMBERSON, JOHNNY, *see Western miner.* Can. Tungsten Corp. 1962. No. 76533

AMDUR, B.H., *see* Gordon, M.S., *& others.* Freezing resistance. . .fishes. 1962. No. 71773

69738. AMEIGH, GEORGE C., *Jr., and* **Y. M. CHAFFIN.** Alaska's Kodiak Island; a camera report of life at Kodiak, Alaska. Anchorage, 1962. 163 p. illus. map.

Contains some two hundred photographs, with descriptive captions, and short articles, some by other authors, and all about this South Alaska island. Among the articles are: Kodiak today, by A. H. Johnson, p. 8-43; Kodiak's early history, p. 44-55; How the sea otter influenced Kodiak's history, p. 56-59; The eruption of Mt. Katmai (its effects on Kodiak), p. 60-65; Geology, p. 66-69; Beachcombing, by J. M. Hansen, p. 70-71; Wildflowers, by B. Digree, p. 72-75; Recreation, by J. M. Hansen, p. 76-87; Sportsman's paradise, by J. M. Hansen, p. 88-105; Kodiak bear, by A. Madsen *and* C. Madsen, p. 106-111; Monk's Lagoon (about Russian Orthodox missionaries), p. 112-17; Commercial fishing (salmon), p. 118-23; King crab, p. 124-33; and Cattle, p. 134-41. (DLC.)

69739. *AMERICAN ALPINE JOURNAL.* Climbs and expeditions. (American alpine journal, 1961. v. 12, no. 2, issue 35, p. 351-59, 392-95.) Refs.

Contains brief notes on five 1960 expeditions to Mt. McKinley, climbs by small parties in the Mt. McKinley, Mt. Hayes, and Mt. Spurr areas, also organization of the Alaska Rescue Group in Anchorage. Juneau Icefield Research Program activities for 1960 are outlined. Also noted: a two-man expedition to the Cumberland Peninsula of Baffin Island, the Jacobsen-McGill Expedition to Axel Heiberg Island, Sir John Hunt's expedition to Staunings Alper in East Greenland, two Italian expeditions to the Umanak and Sukkertoppen Districts in West Greenland. (DLC.)

69740. *AMERICAN ALPINE JOURNAL.* Climbs and expeditions. (American alpine journal, 1962. v. 13, no. 1, p. 248-52, illus.) Refs.

Reports on the Cambridge Arctic Canada Expedition, Cumberland Peninsula, Baffin Island, July - Sept. 1961, whose six members carried out climbing activities and research projects under R. E. Langford of the Alpine Club; Birmingham South Greenland Expedition, May - Sept. 1961, in the Tasermiut Fjord region, 75 mi. northwest of Kap Farvel, whose three men made glaciological, meteorological, geological and surveying studies of Sermitsiaq Glacier at the fjord head, reported by Roger H. Wallis, Birmingham Univ.; a two-man British party sailed to Umanak Fjord, West Greenland, and climbed several peaks on Qioqe Peninsula, July-Aug. 1961, reported by H. W. Tilman; a nine-person Belgian expedition lost four members in an accident July 16, about 40 mi. from Umanak; an Italian expedition to the west coast of Greenland, under Guido Monzino, found two of the missing Belgians, reported by Pietro Meciani, Italian Alpine Club; a British expedition of 12 members carried on geological, zoological and botanical work July-Sept. in the northern Staunings Alper, reported by G. Halliday; and a Scottish expedition of nine mountaineered in July and August in the south Staunings Alper, reported by J. Clarkson. (DGS.)

AMERICAN GEOGRAPHICAL SOCIETY, New York, *see*

Akademiiā nauk SSSR. Soviet geog. 1962. No. 69535

Crary, A. P., *& others.* U. S. glaciol. researches. . .IGY. 1962. No. 70849

Webster, W. Serial atlas marine environment. 1961. No. 76507

69741. *AMERICAN JOURNAL OF SCIENCE.* Radiocarbon supplement. New Haven, Yale University, 1959-1962, *in progress.* 4 v. each approx. 200 p.

Annual, contains a score of reports from radiocarbon dating research agencies, mostly American, but including Canadian, Danish, Finnish, Swedish, Norwegian, each dealing in part with arctic or subarctic areas. Included in v. 4, 1962 are:

Geological Survey of Canada radiocarbon dates I, by W. Dyck *and* J. G. Fyles, p. 13-26: 23 samples from Yukon and Northwest Territories.

Copenhagen radiocarbon dates V, by H. Tauber, p. 27-34: 4 archeological samples from Alaska and Greenland.

Isotopes, Inc. radiocarbon measurements II, by M. A. Trautman *and* A. Walton, p. 35-42: 16 samples from northern Canada and Alaska.

Geological Survey of Finland radiocarbon measurements I, by E. Hyyppä, V. Hoffrén, *and* A. Isola, p. 81-83: 3 samples from Finnish Lapland.

Seven geologic and 22 archeological samples from Swedish Lapland are reported by L. G. Engstrand *and* H. G. Östlund for Stockholm natural radiocarbon measurements IV, p. 115-36.

R. Nydal reports on 21 geologic and 8 archeological samples from northern Norway, also 6 mammoths from Yakut ASSR, in Trondheim natural radiocarbon measurements III, p. 160-81.

Yale natural radiocarbon measurements VII, by M. Stuiver *and* E. S. Deevey, 21 geologic samples from East Greenland, and 3 archeological samples from Alaska, p. 250-62.

All dates published in this volume are based on the Libby value, 5570 ± 30 yr. It is suggested that A.D. 1950 be accepted as the standard reference year. (DGS.)

69742. AMERICAN MEDICAL ASSOCIATION. Polar medicine. (American Medical Association. Journal, Feb. 11, 1961. v. 175, no. 6, p. 495-96.) 2 refs.

Notes on temperature extremes in both polar regions; dangerous and useful animals; clothing; shelter; caloric requirements and diet; snow blindness; cold injuries. (DLC.)

69743. AMERICAN METEOROLOGICAL SOCIETY. Automatic weather station for Canadian Arctic. (American Meteorological Society. Bulletin, Nov. 1961. v. 42, no. 11, p. 796.)

Notes installation of an isotope-powered, automatic weather station on an uninhabited island near Norwegian Bay, 77°30′ N. 90°W. This portable station measures barometric pressure, temperature,

wind speed and direction; sends observed data into a telemetry package, stores and transmits them every three hours. Description is given of the station equipment, including the power source: a safe, insoluble, chemical form of the strontium-90 isotope. The station is expected to be part of the regular North American reporting network. (DWB.)

69744. AMERICAN METEOROLOGICAL SOCIETY. Program of the 203rd national meeting 26-28 June 1962, University of Alaska, College, Alaska. *(Its:* Bulletin, Apr. 1962, v. 43, no. 4, p. 134-42.)

Includes abstracts of papers on arctic meteorology:

Leipper, D. F. Some notes on fog in the Aleutian Islands.

Benson, C. S. Variation in precipitation with altitude, Greenland.

Schwarz, F.K. Meteorological features of high flows on the Yukon River.

Riedel, J.T. A study of precipitation potential for Bradley Lake basin, Alaska.

Montgomery, W.C. A study of summer precipitation at Fairbanks, Alaska, Ladd AFB.

Weber, G.P. Possible relationship between typhoon tracks and Anchorage, Alaska, snowfall the following winter.

Benson, C.S. Accumulation of snow on the Greenland ice sheet.

Francis, K.E. A study of ice fog particles in Alaska.

Hoppe, E.R. A resume of ice fog conditions in the Alaskan interior.

Benson, C.S. Distribution of mean annual temperature on the Greenland ice sheet.

Walker, E.R. Fourier analysis of normal annual temperature and precipitation over the northern Canadian Cordillera.

Bilello, M.A. Arctic ice thickness observations and a tool for forecasting ice formation.

Benson, C.S. Reconnaissance snow studies on Mt. Wrangell, Alaska.

Ryznar, E., & F. C. Elder. Scintillation and visual resolution over snow.

Vowinckel, E., & S. Orvig. Relation between solar radiation income and cloud type in the Arctic.

Kelley, J.J., *Jr.*, & P.E. Church. Analysis of carbon dioxide in the arctic atmosphere.

Benson, C.S. Stratigraphic studies on the Greenland ice sheet and a quantitative classification of glaciers.

Merritt, R. P., & M. H. Almasi. High atmosphere meteorological data acquisition and data handling at the Gilmore Creek NASA ground station.

Murcray, W. Thermal emission spectra of the arctic atmosphere.

Cole, A. E. Density variability at altitudes up to 90 km.

Deehr, C. S., & M. H. Rees. Twilight enhancement of atmospheric sodium emission at College, Alaska.

Belon, A. E., & G. J. Romick. The influence of sunlight on the height of the aurora. (DWB.)

69745. AMERICAN SOCIETY OF MAMMALOGISTS. *Committee on Marine Mammals.* Standardized methods for measuring and recording data on the smaller cetaceans. Edited by K.E. Norris. (Journal of mammalogy, Nov. 1961. v.42, no.4, p.471-76, illus., tables.)

Presents suggested forms for general data: species, sex, locality, etc.; and body measurements, except crainial and appendicular skeleton; parasites; reproduction. General advice on photographing, weighing, locating parasites, are included. (DLC.)

69746. AMES, ROGER L. The origin of the gold-quartz deposits, Yellowknife, N.W.T. (Economic geology, Nov. 1962. v.57, no.7, p.1137-40, table.) 5 refs.

Discusses NO. 38965, by R.W. Boyle, and more recent papers on the Yellowknife deposits. Suggests a simpler and more consistent interpretation of the isotopic data. The geochemical data appear to agree with a hydrothermal origin for the mineralization in the shear zones, and the isotopic data strongly support this conclusion. (DI.)

AMITROV, OLEG VLADIMIROVICH, *see* Merklin, R.L., & *others*. Atlas-opredelitel' mollŭskov. . . 1962. No. 73947

69747. AMUNDSEN, PER BJØRN. Fra Nordmarka til Grønland. (Snø og ski, 1962, årg. 68, p. 32-36, illus.) Text in Norwegian. **Title tr.:** From Nordmarka to Greenland.

Notes preparations by two young Norwegians, Bjørn Staib and Bjørn Reese, for a 1962 crossing of the Greenland icecap along Nansen's route. (SPRI.)

69748. AMURSKIĬ, G.I., *and* IŬ. P. PARMUZIN. Sledy drevneĭ gidroseti v zapadnoĭ chasti Sredneĭ Sibiri. (Izvestiĭa vysshikh uchebnykh zavedeniĭ. Geologiĭa i razvedka, Apr. 1961, no. 4, p. 33-43, illus., map.) 7 refs. Text in Russian. **Title tr.:** Traces of old river net in the western part of Middle Siberia.

Reports study and map on the reconstruction of the old net of the Kureyka, Nizhnyaya Tunguska, Bakhta and other river basins. Old river valleys, watersheds, terraces, distribution of alluvial deposits, and other geomorphic features are described by regions. The old valley of the Yenisey is characterized. The main causative factor in river net reconstruction is considered to be differentiated tectonic movements. The Upper Quaternary river net is best expressed in the landscape. This type of study aids search for placers. (DLC.)

69749. ANANĬAN, A.A. O vzaimosviāzi mezhdu soderzhaniem nezamerzsheĭ vody v tonkodispersnykh merzlykh gornykh porodakh i vodnymi svoĭstvami ėtikh porod. (Merzlotnye issledovaniĭa. Sbornik stateĭ 1961. vyp. 1, p. 184-89, table.) 13 refs. Text in Russian. **Title tr.:** The relationship between the liquid water content of finely dispersed frozen ground and the water properties of such ground.

Applies principles stated *infra* to friable soils at Igarka, noting that the physical state of liquid water in frozen ground corresponds to that of bound water in thawed ground. Soil samples from a 10.1 m. -deep pit were used to determine the liquid water content, the maximum molecular moisture capacity and the critical rolling values of these soils. It was found that the amount of liquid water in the finely dispersed frozen ground at temperatures near 0° C. could be determined approximately from the

maximum molecular moisture capacity, in the case of sandy loams, loams, and clays, and from the moisture content at the limit of rolling, in the case of loams and clays.–From CRREL. (DLC.)

69750. ANANĬAN, A.A. O zhidkoĭ faze vody v merzlykh gornykh porodakh. (Merzlotnye issledovaniĭa. Sbornik statei 1961. vyp. 1, p. 173-77.) 15 refs. Text in Russian. **Title tr.:** The liquid phase of water in frozen rock.

Reviews the literature, chiefly Russian, of 1952-1960, and concludes that the solid surface of mineral rock particles, exerting an orienting influence on the nearest molecules of water in the rock, creates additional bonds and distorts the quasi-crystalline, tetrahedral structure of the water. As the rock(ground) temperature decreases, this force acts as a kinetic barrier to crystallization of the oriented water. As the moisture content of the soil decreases, and the water films become thinner, its molecules more oriented, and its structure more distorted, the water remains longer in a supercooled, metastable state. After the phase transition of the least oriented, thermodynamically unstable portion of the water into ice, an amount of water determined by the type of soil and by the temperature remains in the liquid state. The solid and liquid phases of water coexist in finely dispersed frozen ground.–From CRREL. (DLC.)

69751. ANANĬAN, A.A., *and* V. P. DOBROVOL'SKIĬ. Ob elektroprovodnosti merzlykh gornykh porod. (Geologiia i geofizika, 1961, no. 3, p. 96-103, table, graphs.) 9 refs. Text in Russian. Summary in English. **Title tr.:** On the electrical conductivity of frozen rocks.

Reports on laboratory experiments in Salekhard and elsewhere to obtain geologic-permafrost interpretation of electrical studies of frozen rocks. The electrical conductivity depends largely on the unfrozen water and ice content of the rock. Temperature, moisture, mineralogical and chemical composition, and genetic features of rocks should also be considered. The process of phase transformation of water is considered important: the most significant changes in electrical conductivity occur as water changes phase. The fact that electrical conductivity of frozen rock depends mostly on temperature and ice content enables electrical survey to be used for mapping and other studies of frozen rocks. Experiments indicate the possibility of determining the coefficient of anistropy depending on temperature. (DLC.)

69752. ANANĬAN, A.A. Udel'naia elektroprovodnost' merzlykh gornykh porod estestvennoĭ struktury raiona g. Igarki. (Merzlotnye issledovaniĭa. Sbornik statei 1961. vyp. 1, p. 208-215, tabels.) 11 refs. Text in Russian. **Title tr.:** Specific electric conductivity of frozen rocks of natural structure from the Igarka region.

Reports determination by an alternating current and a Kohlrausch bridge, for samples mainly of banded clays, the phase composition of the water in the samples determined in an isothermal calorimeter. It is concluded that the electric conductivity and the amount of unfrozen water in the frozen material (ground, rock) are functions of the degree of dispersion of the material and its temperature. The greater the dispersion of the material, the greater its oriented water content, the amount of liquid water remaining in it, and its electric conductivity. In a number of cases, irregular stratification in the frozen material, inclusions of interlayers and lenses of different granulometric composition, uneven interstratification, and inclusions of ice lenses and differently oriented ice layers sharply reduce the indices of specific conductivity of frozen ground and rock. A brief review of the literature introduces the report. From CRREL. (DLC.)

69753. ANANĬAN, A.A., *and* V.P. DOBROVOL'SKIĬ. Udel'naia elektroprovodnost' merzlykh gornykh porod estestvennoi struktury raiona g. Salekharda. (Merzlotnye issledovaniĭa. Sbornik statei 1961. vyp. 1, p.216-26, tables.) 3 refs. Text in Russian. **Title tr:** Specific electric conductivity of frozen rocks of natural structure from the Salekhard region.

Describes in some detail the bedding and composition of deposits in vicinity of the proposed Salekhard hydroelectric plant. Samples in an undisturbed state were taken in the form of cylinders 5-7 \cm. in diam. and 15-20 cm. long, or parallepipeds, and were tested with alternating current bridges. Many samples were tested with both direct and alternating current, the results are tabulated with respect to specific electric conductivity and the phase composition of the water in the test material. The electric conductivity and the amount of unfrozen water in the material are functions of the dispersion of the material and its temperature. The similarity of the findings to those at Igarka *(supra)* indicates that the specific electric conductivity values for one region may be used for a preliminary interpretation of an electrical survey in another region having deposits of similar composition and gensis. From CRREL. (DLC.)

ANASTASI, J. N., *see* Benjamin, F.B., *& others.* Effect of stress . . . brain. 1961. No. 70132, 70133

69754. ANATER, FRANCES. Veterans of sourdough network. (Alaska sportsman Oct. 1962. v. 28, no.10, p.12-13, illus.)

Describes the work since 1955 of radio ham volunteers on this short-wave communication system in Alaska. L. Olendorf and wife serve as control operators for the network, under the Military Amateur Radio Service at Fort Richardson. Messages, often emergency, are received from and relayed to approx. 1100 licensed amateur operators throughout the state. (DLC.)

69755. ANDA, B. Forekomsten av "hvite fingrer" blant gruvearbeidere i Sulitjelma. (Tidsskrift for kjemi, bergvesen og metallurgi, Jan. 31, 1961. bd. 21, nr. 1, p. 18-21, graph.) Text in Norwegian. Summary in English. **Title tr.:** Occurrence of "white finger" among miners in Sulitjelma.

Discusses the incidence, nature, and investigation of the syndrome, diagnosed as Raynaud's disease, in this northern Norwegian community, the pre conditions appear to be pneumatic drill operation in cold, damp environment. (DLC)

ANDEREGG, J. A., *see* Alaskan Science Conference 1960. 1961. No. 69643

ANDERSEN, F., *see* Loomer, E.I., & F. Andersen. Record of observations. . .1961. No. 73586

ANDERSEN, F. L., *see* Levine, N.D., & *others*. Survival *Trichomonas*. . .-28 and -95°C. . .1962. No. 73465

ANDERSEN, K. P., *see* Hansen, V. K., & K. P. Andersen. Recent Danish investigations...1961. No. 72009

69756. ANDERSEN, KRISTIAN LANGE. Kälteanpassung bei Tieren und Menschen. (Polarforschung, Bd. 5. 1960 *pub.* Nov. 1961. Jahrg. 30, Heft 1-2, p. 11-18, graphs.) 23 refs. Text in German. **Title tr.:** Cold adaptation in animals and man.

Discusses the constancy of core temperature in various climates, the conditions and means of maintaining it, by physical and chemical thermoregulation; critical temperature and body isolation in arctic as compared with tropical animals; cold-adaptation in mammals generally and in man, its physiology; critical temperature in man; thermal balance at rest and sleep, and at work in man; skin circulation in cold-adapted subjects. (CaMAI.)

69757. ANDERSEN, KRISTIAN LANGE, *and others*. Metabolic and thermal responses to muscular exertion in the cold. Fort Wainwright, Alaska, June 1962. 4, 26 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 61-52.) 28 refs. *Other authors:* S. Strømme *and* R.W. Elsner.

Reports on investigation indicating that in a cold environment the metabolic rate during exercise is higher than in a warm one. In the cold environment, there is a tendency towards a lower O_2-uptake in outdoor workers than in indoor workers. Differences of skin temperature and onset of rewarming between the two groups, indicate an adaptability to cold in the vasomotor control of the peripheral circulation. (CaMAI.)

69758. ANDERSEN, KRISTIAN LANGE, *and others*. Physical fitness in terms of maximal oxygen intake of nomadic Lapps. Fort Wainwright, Alaska, June 1962. 4, 32 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 61-53.) 25 refs. *Other authors:* R.W. Elsner, B. Saltin *and* L. Hermansen.

Reports a study of physical fitness as determined by maximal O_2-consumption during exercise on a bicycle-ergometer. 49 males aged 10-55 and 21 girls were tested. The young Lappish men showed greater fitness than young men in sedentary occupations in towns but were inferior to athletically trained men. No sexual differences were noted below the age of 15. Middle-aged Lappish men were superior in exercise fitness to their counterparts from towns. (CaMAI.)

69759. ANDERSEN, KRISTIAN LANGE. Tilpassing til kulde. (Nordisk medicin, Apr. 1960. v.64, no.31, p.994-1002, illus.) 21 refs. Text in Norwegian. Summary in English. **Title tr.:** Adaptation to cold.

Review of the problem of heat balance at low temperatures. Large mammals utilize increased insulation (fur, blubber); small mammals and birds maintain a high metabolic rate. Man adapts by losing stored body heat, by insulation through body-surface cooling, by increased heat production and metabolism. (DNLM.)

ANDERSEN, KRISTIAN LANGE, *see also*

Elsner, R.W., & *others*. Thermal and metab. responses . . . cold . . . 1961. No. 71256

Hammel, H.T., & *others*. Thermal & metab. measurements reindeer . . . 1962. No. 71975

Hart, J.S., & *others*. Thermal & metab. responses . . . Eskimos cold. 1962. No. 72054

69760. ANDERSEN, NORMANN. Sommerdøgn og vinternatt på Aust-Grønland. Fire år på "Revet" med Gudrun. (Polarboken, 1961-62, p.88-101, illus.) Text in Norwegian. **Title tr.:** Summer days and winter nights in East Greenland; four years at Revet with Gudrun.

Contains reminiscences on seven years at this hunting station approx. 74°20'N. 21°50'W. opposite Clavering Ø, his wife there also, during four years. (SPRI.)

69761. ANDERSON, DON L. A study of some properties of sea ice. Washington, D.C., June 1961. vii, 36 p. illus., graphs, tables. (Arctic Institute of North America. Research paper no. 11. *Also issued as:* U.S. Air Force, Cambridge Research Laboratories, Contract AF 19 (604)-3073, Scientific report no. 14, AFCRL-649.) 31 refs.

Presents material compiled to provide data for interpretation of seismic results; preliminary statistical work (cf. No. 55966) indicated that the arrangement of structural constituents was systematic enough to permit theoretical calculation of sea ice properties. Thus the phase relations in sea ice may be determined from ion concentration measurements on the unfrozen brines; also such physical properties as strength, thermal conductivity, and permeability may be calculated from the composition and structure. All physical properties change rapidly after freezing begins until the temperature of the ice is about -5°C. The anomalous behavior of strength, density, and other properties may be explained by the continuous phase changes taking place at all temperatures. Field work on the growth rate of sea ice was carried out in North Star Bay near Thule, North Greenland in 1956-57; thickness data are presented and a growth equation is developed which can be applied to observations. (DWB.)

ANDERSON, DON L., *see also*

Alaskan Science Conference 1961. 1962. No. 69644

Kingery, W.D. . . . Project Ice Way. 1962. No. 72796

ANDERSON, HUGH R., *see* Neher, H.V., & H.R. Anderson. Cosmic rays . . . & solar cycle. 1962. No. 74250

69762. ANDERSON, J.W. Fur trader's story. Toronto, Ryerson, 1961. 245 p. illus., map on end papers.

Recalls experiences at Hudson's Bay Co. posts: Charlton Island, Moose Factory, Rupert's House, Mistassini, Attawapiskat, Albany, etc., 1910-1947. Various aspects of the post manager's life are described; his duties, dealings with the Indians, life among the James Bay Cree, the Mistassini (best he dealt with), etc. Disastrous effect of unlimited trapping on the Indian economy and fur resources in general is emphasized. Trading with the Eskimos is discussed and his travels outlined after 1937 when in charge of the HB Co.

Eastern Arctic District including Baffin and Southampton Islands Ungava Bay region, etc. References are made to the supply vessel *Nascopie*, development of air transport. (DLC.)

69763. ANDERSON, KINSEY A. Relation of balloon X-rays to visible auroras in the auroral zone. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962. v.1, p.237-41, illus., graphs.) 4 refs.

Reports on high altitude balloon flights from Fairbanks during Mar.-Apr. 1961, carrying lightly shielded scintillation detectors of high efficiency for X-rays. The detectors showed large fluxes of X-rays above 25 keV energy present when bright auroral forms were absent over most of the sky. A sharp burst of X-rays was detected on a different flight during the rapid movement and disappearance of bright rayed band. In the auroras studied electron < 25 keV is concluded to have had no direct association with the particle producing the visible luminosity. These fluxes of energetic electron are presumed to reflect dynamic processes in the radiation belt.—From author's abstract. (DLC.)

69764. ANDERSON, KINSEY A. Secondary cosmic-ray photons below cascade energy. (Physical review, ser. 2, Aug. 15, 1961. v.123, no.4, p.1435-39, tables, graphs.) 4 refs.

Investigations with small unshielded scintillation crystals carried through the auroral-zone atmosphere (Ft. Churchill, Manitoba) by balloons show large fluxes of photons in the energy region 30-300 kev. in equilibrium with the primary cosmic ray beam. At 90 g. cm.$^{-2}$ depth, the flux is about 22 photons cm.$^{-2}$ sec.$^{-1}$ compared with a charged particle flux determined from a Geiger tube of 1.9 cm.$^{-2}$ sec.$^{-1}$ at the same depth. The photon flux at zero depth, taken to be the albedo of this secondary cosmic-ray component, is estimated (by extrapolation) as eight photons cm.$^{-2}$ sec.$^{-1}$ greater than 30 kev.—From author's abstract. (DLC.)

69765. ANDERSON, M. J., *Jr.* Accidental hypothermia complicated by bronchopneumonia; report of a case. (American Osteopathic Association. Journal, Jan. 1960. v.59, p.379-80.)

Case of a 32-year-old white woman, with shallow respiration every 15-20 seconds the only visible sign of life, and a rectal temperature of 19°C. two hours after hospital admission. Cold exposure and excessive barbiturate intake were the cause of hypothermia. Course of temperature, pulse, etc., therapy, and autopsy findings are outlined. (DNLM.)

69766. ANDERSON, SYDNEY. A new northern record of *Synaptomys borealis* in Ungava. (Journal of mammalogy, Aug. 1962. v.43, no.3, p.421-22.)

Record of remnants of the northern bog lemming found in owl pellets at Esker Lake (61°37'N 74°40'W.), a northward extension of some 12 miles in the known range. (DLC.)

69767. ANDERSON, WILLIAM ASHLEY. Angel of Hudson Bay, the true story of Maud Watt. Toronto, Clarke, Irwin; New York, Dutton; 1961. 217 p. plates, map.

Biography of the wife of a Hudson's Bay Company trader in northern Quebec, recounting especially her journeys and efforts to aid the Cree Indians: a trip overland in Apr.-June 1918, from Fort Chimo to Seven Islands to obtain relief for the arctic posts cut off from supply ships by World War I; a midwinter journey in the early 1930's across James Bay, etc., efforts toward establishment by the Quebec Government of a 7200 sq. mi. beaver preserve in the Rupert River area, where decline of this valuable fur-bearer had brought destitution to the area. (DLC.)

69768. ANDERSSON, BENGT, *and others.* Activation of the thyroid gland by cooling of the preoptic area in the goat. (Acta physiologica scandinavica, Feb. 1962. v.54, fasc. 2, p.191-92, illus.) 3 refs. *Other authors:* L. Ekman, C.C. Gale *and* J.W. Sundsten.

Preliminary report on experiments indicating that cooling of the pre-optic region causes a quick release of thyroid hormone. Parallel to this release, core temperature rose to 41.5° C. (DNLM.)

69769. ANDERSSON, BENGT, *and others.* Effects of chronic central cooling on alimentation and thermoregulation. (Acta physiologica scandinavica 1962. v.55, fasc. 2-3, p.177-88, illus.) 11 refs. *Other authors:* C.C. Gale *and* J.W. Sundsten.

Account on chronic local cooling in the forebrain of unanesthetized goats. Two animals with pre-optic cooling, showed marked inhibition of water consumption; a third goat with the posterior pre-optic area and the rostral hypothalamus cooled, showed in addition a slight rise in food intake; a fourth goat with the ventromedial hypothalamus cooled, showed increased hay consumption but normal water intake. Central cooling produced rapid hyperthermia. (DNLM.)

69770. ANDERSSON, BENGT, *and* B. LARSSON. Influence of local temperature changes in the preoptic area and rostral hypothalamus on the regulation of food and water intake. (Acta physiologica scandinavica, May 1961. v.52, fasc. 1, p.75-89, illus.) 23 refs.

Cooling of these areas induced eating in the fed goat; after dehydration to the stage of aphagia, it inhibited drinking but induced eating. When eating stopped, due to high (40°C+) body temperature, cooling of these areas also elicited eating. Effects of heating and proton irradiation of these areas are described. (DNLM.)

69771. ANDERSSON, BENGT, 1922– . Nybyggen och kolonisering kring Ångesån. (Norrbottens läns hembygdsförening. Årsbok 1961, p.100-122, illus., maps.) 26 refs. Text in Swedish. **Title tr.:** Settlements and colonizing around Ångesån.

Deals with a locality of Gällivare parish in north Sweden, where Finns, Lapps and (sporadic) Swedes began to settle in the late 17th-early 18th century. The migratory Lapps already in the area began to settle down after the Finns arrived, and indications of early Lapp intermingling with the Finnish settlers are cited. Fishing conditions determined primarily the settlement site but cattle farming possibilities also were a factor. Toward mid-18th century, many settlements shifted from a lakeshore to higher ground better suited to cultivation. After 1750, the settlement pattern was determined by mining developments and the ore transport routes were favored. (SPRI.)

ANDERSSON, BENGT, 1922– , *see also* Thunborg, F., & B. Andersson. Norrbotten. . .1960. No. 76133

69772. ANDERSSON, SVEN OLOF. En kalkyl över lönsamheten hos skogsbruk med få gallringar. (Norrlands skogsvårdsförbund. Tidskrift 1961, nr. 2, p.119-34, illus., tables (Meddelanden fran Statens skogsforskningsinstitut. Serien uppsatser nr. 83.) 8 refs. Text in Swedish. **Title tr.:** A calculation of profits in lumbering with few thinnings of the stand.

Reports a Forest Research Institute estimate, based on yield tables for planted pine in various Norrland localities, of capital value, volume and profit in two types of operation. In one, early thinnings are made, and the stands left untouched until final clearcutting. In the other (usual method) thinning is done every ten (later 15) years. The latter, gradual-cutting operation showed a higher capital value, logging costs equal or lower, unless greatly improved methods used with the single final cutting; yield was found about the same in the two types of operation. (DA.)

69773 ANDJUS, RADOSLAV K., *and* V. PETROVIC. Hypothermie et excretion hydro-minerale. (Journal de physiologie, 1961. t.53, no.2, p.246.) 3 refs. Text in French. **Title tr.:** Hypothermia and excretion of water and minerals.

Brief discussion of diuresis caused by simple hypothermia, and increasing concentration of sodium, which is independent of the intensity of diuresis. Conditions during rewarming, the physiology of Na retention, etc. are also noted. (DNLM.)

69774. ANDJUS, RADOSLAV K., *and* V. RAJEVSKI. Réanimation du coeur isolé de grenouille après congélation; effet du calcium. (Journal de physiologie, 1961. t.53, no.2, p.245-46.) 2 refs. Text in French. **Title tr.:** Revival of the isolated, frozen frog-heart; effect of calcium.

Authors described procedure of freezing frog hearts to -20°C. and reviving them. Of the three different Ringer solutions used prior to freezing, only that free of calcium permitted full recovery of amplitude of auricular contractions after thawing. (DNLM.)

69775. ANDJUS, RADOSLAV K., *and others.* Réanimation et transplantation du coeur foetal de rat apres congelation. (Journal de physiologie, 1962. t.54, no.2, p.272-73, illus.) 5 refs. Text in French. *Other authors:* V. Rajevski *and* M. Pavlovic-Hournac. **Title tr.:** Revival and transplantation of the fetal rat heart, following freezing.

Dimethylsulphoxide (DMSO) as well as glycerol assured protection against freezing damage, when hearts were cooled to -20°C. and maintained in Tyrode with or without calcium. In freezing to -190°C., DMSO offered superior protection to material maintained in Tyrode without calcium. (DNLM.)

69776. ANDREASSEN, KÅRALE, 1890–1934. En fangstrejse til omegnen af "Kialêq," Skraekkens Bugt, i 1880-erne, fortalt af østgrønlaenderen, overkateket Kårale Andreassen i december 1933; oversat af kaptajn J. Balle. (Grønland, 1961. nr.4, p.149-59, illus.) Text in Danish. **Title tr.:** A hunting trip to the "Kialêq" region, Skraekkens Bugt, in the 1880's, told by the East Greenlander, head catechist Kårale Andreassen in December 1933; translated by Captain J. Balle.

Recounts events of a trip by Eskimos in six umiaks from Angmagssalik to a region on the East Greenland coast approx. 67°N. 34°W.: difficulties encountered, bad weather, lack of game, efforts to overcome these with the help of magic, etc. Deaths from starvation and cannibalism on the trip are mentioned. (SPRI.)

69777. ANDREEV, ALEKSANDR IGNAT'EVICH, 1887–1959 Stepan Petrovich Krasheninnikov, 1711-1755. (*In:* Kuznetsov, I.V., *ed.* Lîudi. . . 1962, p.345-55, port., map.) 16 refs. Text in Russian.

Describes the life and activities of this outstanding explorer of Kamchatka. His travels there are mapped, and his great book on its geography, botany, and population (No. 9265) is characterized. (DLC.)

69778. ANDREEV, ÎU. F., *and* ZH. M. BELORUSOVA. Geologicheskoe stroenie Tazovskogo poluostrova. (Leningrad. Vsesoîuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedoch'nyĭ institut. Trudy 1961. vyp.186, Geologicheskiĭ sbornik 6, p.176-202, illus., fold. map.) 9 refs. Text in Russian. **Title tr.:** Geologic structure of the Taz Peninsula.

Reports results of geologic and geomorphic studies of the Salekhard expedition 1956-1960. The stratigraphy of Tertiary and Quaternary deposits is described, the Quaternary treated in detail. Lower, Middle and Upper Pleistocene deposits, their distribution, and lithologic characteristics are outlined and fauna identified. Tectonics of the Peninsula is dealt with; five of second-order and twelve third-order structures are distinguished and characterized. A 150-200 m. amplitude is reported for tectonic movements of the Tertiary and Quaternary. The Taz Peninsula is considered to have favorable conditions for oil and gas. (DLC.)

69779. ANDREEV, ÎU. F., *and* ZH. M. BELORUSOVA. Svîaz' kriogennykh form rel'efa s geologo-geomorfologicheskim stroeniem Tazovskogo poluostrova. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy 1962. t.19, p.44-54, illus., map.) 2 refs. Text in Russian. **Title tr.:** Connection between the cryogenic forms of relief and the geologic-geomorphologic structure of the Taz Peninsula.

Presents a schematic map of the Peninsula showing the distribution of cryogenic relief forms. Several kinds are identified, e.g. lineal-hilly relief, pingos, thermokarst forms, frost clefts and fissures. They are described in some detail, and their close relationship to the geomorphic structure of the region. The permafrost is 300-400 m. thick. (DLC.)

ANDREEV, N. N., *see Pacific Fisherman.* INPFC Conference. 1962. No. 74609.

ANDREEV, V., *see* Fedosov, M. V., & V. Andreev. Hydrochemical observations in the Davis Strait... 1961. No. 71366.

69780. ANDREEV, V. N. Znachenie strukturno-petrologicheskikh osobennosteĭ metamorficheskikh porod pri inzhenerno-geologicheskikh izyskaniiakh;

na primere Eniseĭskoĭ GĖS. (Soveshchanie po inzhenerno-geologicheskim issledovaniĭam skal'nykh osnovaniĭ gidrotekhnicheskikh sooruzheniĭ, *Moskva,* 1960. Problemy inzhenernoĭ geologii v stroitel'stve. Materialy *pub.* 1961, p.122-30, cross-sections, map.) 7 refs. Text in Russian. **Title tr.**: Importance of the structural-petrological properties of metamorphic rocks in engineering-geology survey, as exemplified by the Yenisey hydroelectric station.

Reports structural-petrologic investigations and mapping of metamorphic rocks in 1959 in the region of this station. The mapping was done at 1:5,000 and other scales; migmatization, structural boudinage, banding and schistosity of the rocks are described. This type of study is considered of importance for hydraulic engineering and construction purposes. (DLC.)

ANDREEV, V. S., *see* Marmorshteĭn, L.M., & V.S. Andreev. Izmerenie vyzvannoĭ poliarizatsii. . .1962. No. 73840

69781. ANDREEV, VLADIMIR NIKOLAEVICH, 1889– . Izuchenie chislennosti severnykh oleneĭ i puteĭ ikh migratsii s pomoshch'iu aėrometodov. (Zoologicheskiĭ zhurnal, Jan. 1961. t.40, vyp. 1, p.117-21.) 7 refs. Text in Russian. Summary in English. **Title tr.**: Studying the population and migration routes of reindeer by means of aerial methods.

Reports investigations of the Agricultural Research Institute in the far North, which indicate that counting of large herds should be done from photographs, that of small (up to 40 head) visually. Census from the air in Taymyr showed a reindeer population of over 100,000 in 1958. (DLC.)

69782. ANDREEV, VLADIMIR NIKOLAEVICH, 1889– . Primenenie aėrometodov pri izuchenii landshaftov tundry i dlia ikh sel'skokhoziaĭstvennogo osvoeniia, tezisy doklada. (*In:* Soveshchanie po primeneniiu aėrometodov. . .1961, p.67-69.) Text in Russian. **Title tr.**: Application of aerial methods to investigation of tundra landscapes and their agricultural utilization; theses of the paper.

Summarizes the use and importance of aerial photography for studies of microrelief forms, mapping of vegetation, inventory of reindeer and other fauna, of meadows, hunting spots, and other features of the tundra. (DLC.)

69783. ANDREEV, VLADIMIR NIKOLAEVICH, 1889– . Ratsional'noe ispol'zovanie olen'ikh pastbishch Kamchatskoĭ oblasti. (*In:* Akademiia nauk SSSR. Komissiia po problemam Severa. Syr'evye resursy. . .1961, p.176-82.) Text in Russian. **Title tr.**: Efficient development of the reindeer pastures of Kamchatka Province.

Reports a 1949-1955 study showing that 34 of the 46 million hectares of pasture in Kamchatka are suitable for reindeer range. The Sredinnyy Mountain tundra, the west coast and coastal areas of the Okhotsk Sea are the most favorable. Range territory is divided into northern and southern sections and each is characterized. The northern can support herds at the rate of 120-150 hectares/head, the southern at 190-200 ha./head. Hence the stock may be increased from 144,000 to 180,000, and a bright future is foreseen for this industry. (DLC.)

69784. ANDREEVA, N. N. Rezul'taty issledovanii chuvstvitel'nosti balansomerov i pirgeometrov. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovateľskii institut. Trudy 1961. t.229, Radiatsionnyĭ i teplovoi balans Arktiki, p.147-65, tables, graphs.) 31 refs. Text in Russian. **Title tr.**: Results of investigations of the sensitivity of balansometers and pyrgeometers.

Analyzes research data on sensitivity of balansometers (of the first issue), pyrgeometers and pyranometers (effective) from the Arctic Institute's station at Lake Ladoga during July-Aug. 1950. Wind effect, and effects of the azimuth and height of the sun are investigated in relation to the sensitivity of this balansometer, and pyrgeometers of the Savinov, and Savinov-IAnishevskiĭ systems. Small variations in the intensity values of the total and reflected radiation are found to lead to considerable error in evaluations of radiation balance. Therefore, calculations of the longwave radiation balance from the data obtained with a pyranometer and balansometer cannot be regarded as dependable. (CaMAI.)

69785. ANDREEVA, OL'GA NIKOLAEVNA, 1917– Nekotorye kembriĭskie brakhiopody Sibiri i Srednei Azii. (Paleontologicheskiĭ zhurnal 1962. no.2, p.87-96, illus., plates.) 4 refs. Text in Russian. **Title tr.**: Some Cambrian brachiopods of Siberia and Middle Asia.

Describes systematically a new family Matutellidae, n. gen. *Kotujella* and six new species of the Lower and Middle Cambrian from the Kotuy and Amga River and other areas of the Siberian platform. The new species are: *Nisusia kotujensis, N. jerganensis, Matutella grata, M. amgensis, M. aldanica,* and *Kotujella calva.* (DLC.)

ANDREEVA, OL'GA NIKOLAEVNA, 1917– , *see also* Nikiforova, O.I., & O.N. Andreeva. Stratigrafiia...1961. No. 74336

69786. ANDRÉN, F. J. B. Med eller utan karts? (Till fjälls, 1960-61. årg. 32-33, p.81-85, illus., map.) Text in Swedish. **Title tr.**: With or without map?

Describes a canoe trip from Lake Skjomen (68°15′N. 17°25′E.) in Nordland, north Norway, to Lake Sitasjaure (68°N. 17°20′E.) over the Swedish frontier. (SPRI.)

69787. ANDRÉN, THORSTEN. En norrländsk skogschef om skogsbrukets planering och arbetskraftsfrågor. (Skogen, Sept. 29, 1961. arg. 48, nr. 19, p. 343, port.) Text in Swedish. **Title tr:** A Norrland forestry chief on forestry planning and man-power questions.

Substituting one final cutting for thinning is not feasible in Norrland, because regeneration is difficult and the age groups of trees would be disturbed. Better methods to facilitate thinning are required. Improved methods, rather than improved machinery, are also needed to counteract the rising cost of logging and transportation. The favorable geological foundation and topographical conditions in Norrland compared to southern Sweden, offset disadvantages of climate and short growing season. (DA)

ANDRESEN, MARVIN J., *see* Alaskan Science Conference 1961. 1962. No. 69644

69788. **ANDREWS, J.E., *and* D.W.A. ROBERTS.** Association between ascorbic acid concentration and cold hardening in young winter wheat seedlings. (Canadian journal of botany, May 1961. v. 39, no. 3, p. 503-512, illus., tables.) 10 refs.

Ascorbic acid content of winter wheats germinated in the dark at 1.5°C. was higher than at 5°, 10°, or 20°C. No differences in content were noted between the higher temperatures. This vitamin increased during the first six weeks of growth, then decreased rapidly; this function corresponded to an increase and decrease in hardiness of the plant. Feeding seedlings with aqueous ascorbic acid solutions imparted cold hardiness. (DLC.)

69789. **ANDREWS, JOHN THOMAS, 1937–** . The development of scree slopes in the English Lake District and central Quebec-Labrador. (Cahiers de géographie de Québec, Apr.-Sept. 1961. année 5, no. 10, p. 219-30, diagrs., graphs, tables.) 24 refs.

Compares results of talus slope measurements at Wasdale in England with such near Schefferville during the summers of 1958 and 1959. The topographic, lithologic, and soil features of these slopes are examined, and the morphologic and climatic factors in their genesis considered, with conclusion that the talus slope is a possible indicator of a change of climate affecting the supply of material to that slope. Question of a post-glacial climate colder than the present however, is not answered by these results. (DGS)

69790. **ANDREWS, JOHN THOMAS, 1937–** , *and* **E. M. MATTHEW.** Geomorphological studies in northeastern Labrador-Ungava. Ottawa, Queen's Printer, 1961. 36p. illus., maps. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch Geographical paper no. 29.) 25 refs.

Reports field work in two complementary areas in 1960 by members of the McGill Sub-Arctic Research Laboratory as part of an investigation (described by J.D. Ives, p.1-3) of the deglaciation of of the peninsula. The work provides a progressive time sequence of deglaciation in the Nain-Okak section and the George River basin. Andrews (p. 5-16), working in the former area, relates a series of high lateral moraines, tentatively, to the maximum stand of the last glaciation, and a system of end moraines in the Lake Tasuiyak-Tasialua area to the final withdrawal of the ice from coastal valleys. (Matthew (p. 17-27) continues the pattern of deglaciation to the west, outlining the wastage of ice on the Nain plateau and the formation of a series of ice-dammed lakes in the George River basin (DGS.)

69791. **ANDREWS, JOHN THOMAS, 1937–** Permafrost in southern Labrador-Ungava. (Canadian geographer, Autumn 1961. v. 5, no. 3, p. 34-35.) 2 refs.

Suggests revision of the map of permafrost in Canada in No. 63643, on the basis of engineering and construction data reported on No. 62704, which disclose scattered permafrost 140 mi. south of Schefferville, the southern limit of discontinuous permafrost on the map. (DGS.)

69792. **ANDREWS, JOHN THOMAS, 1937–** . Permafrost in southern Labrador-Ungava. Montreal, 1961. 5p. Mimeo. (McGill University. Dept. of Geography. Miscellaneous papers no. 1.) 2 refs.

Reports a field study in Dec. 1960, at Twin Falls, construction site a of hydro-electric power station on Unknown River in Newfoundland Labrador, 108 miles east-southeast from mile 287 on the Quebec, North Shore, and Labrador Railway; its purpose was to observe permafrost bodies discovered in an excavation on the floor of Bonnell Canyon, a tributary of Unknown River, at 1190 ft. above sea level. Their extent was not determined. The permafrost bodies were found in frost-susceptible materials such as silts and fine sands beneath a surface layer of organic material; these and other scattered permafrost bodies reported in the Wabush Lake area suggest that the southern boundary of discontinuous permafrost in Labrador be drawn at least 140 miles south of Schefferville, possibly 300 miles south at high elevations, despite the findings of R.J.E. Brown (No. 63643). (CaOGB.)

69793. **ANDREWS, JOHN THOMAS, 1937–** "Vallons de gélivation" in central Labrador-Ungava: a reappraisal. (Canadian geographer, winter 1961. v. 5, no. 4, p. 1-9, illus., map, diagr., section.) 39 refs.

Presents a theory of the origin of the valleys incised into the west face of Dolly Ridge, three mi. east of Schefferville, as alternative to that of Twidale in No. 48502. The complexity of their forms is stressed, the role of periglacial processes in their formation deprecated Little visual similarity is seen between these valleys and several in Greenland and on the Labrador coast, also designated "vallons de gélivation." Author's interpretation derives from field work of 1959–1960 with the McGill Sub-Arctic Research Laboratory. (DLC.)

69794. **ANDREWS, JOHN THOMAS, 1937-** Variability of lake ice growth and quality in the Schefferville region, central Labrador-Ungava. (Journal of glaciology, Oct. 1962, v. 4, no. 33, p. 337-47, graphs.) 11 refs. Summary in French and German.

Examination of rates of ice growth, actual ice thickness and the quality of the lake ice profile on Knob Lake showed that all these factors were extremely variable. Three sites were established from 1957-1961, and a similar sequence on nearby Maryjo Lake from 1959-1961. Significant variations occurred within a single lake body from site to site, though it was noted that certain patterns of ice growth and quality did occur throughout most years and could be directly related to patterns of snow accumulation on the lake. Most empirical formulas proposed for lake ice growth are considered unrealistic for short-term forecasting of ice thickness and growth, and even long-term forecasting, using accumulated degree-days of frost, gives only average values.- From author's abstract. (DLC.)

ANDREWS, RUPERT E., *see* Alaskan Science Conference 1960. 1961. No. 69643

69795. **ANDRIANOV, B.P.** Obrabotka metalla i sborka sektsii korpusa i blokov nadstroiki ledokola "Lenin." (Sudostroenie, 1961. god 27, no. 8, p. 46-48, 3 illus.) Text in Russian. **Title tr.:** Processing the metal and assembling the hull sections and the superstructure units of the icebreaker *Lenin*.

Discusses the methods and requirements of steel prefabrication and assembly. Rust-proofing and rust removal, manufacture of stainless steel plates of different thicknesses and flexibility, assembly and welding superstructure: five units up to 14 x 26.8 x 14.7 m., 163 t. each; dust and dirt control measures, etc. (DLC.)

69796. ANDRIANOV, V.N. Novye dannye o stratigrafii permi tsentral'noĭ chasti zapadnogo Verkhoĭan'ia. (Materialy po geologii i poleznym iskopaemym IAkutskoĭ ASSR. IAkutskoe geologicheskoe upravlenie, 1961, vyp. 5, p. 51-57, cross section) 11 refs. Text in Russian. **Title tr.:** New data on Permian stratigraphy in the central part of the western Verkhoyansk region.

Reports on the stratigraphic division of Artinskian, Kungurian (?) and Kazanian stages of Permian deposits from study of two geologic sections: the Arkachan (65°53'N. 130°51'E.) and the Tumara (67°50'N.129°54'E.) River region. Special attention is given to the lower Permian, with the Echiy and Endybal series described in detail, lithologic properties, brachiopod, pelecypod and other fauna, noted, as well as thickness, distribution and beds. (DLC.)

69797. ANDRIIASHEV, ANATOLIĬ PETROVICH, 1910– Obzor bychkov-kriūchkorogov roda *Artediellus* Jord., Pisces, Cottidae, Beringova moria. (Voprosy ikhtiologii, 1961. t. 1, vyp. 2 (19), p. 231-42, illus., tables.) 24 refs. Text in Russian. **Title tr.:** Review of bullheads of the genus *Artediellus* Jord., Pisces, Cottidae, from the Bering Sea.

Presents a survey with key of these sculpins collected by the *Vitiaz'* in 1950-1952. Six species are dealt with, including synonyms, morphometry, ecology, geographic distribution, etc. (DLC.)

69798. ANDRONOV, S.M. Stratigrafiia devonskikh otlozheniĭ vostochnogo sklona Severnogo Urala. (Akademiia nauk SSSR. Doklady, May 1, 1962. t. 144, no. 1, p. 193-96, illus.) Text in Russian. **Title tr.:** Stratigraphy of the Devonian deposits in the eastern slope of Northern Ural.

Describes the stratigraphy of complied cross-sections in the Severoural'sk (60°09'N.59°53'E.), Sos'va, and other areas. Horizons and other stratigraphic units are distinguished, composition and faunal characteristics noted. (DLC.)

69799. ANDROSOV, M.S. Obsuzhdenie problemy bor'by s vnezapnymi vybrosami uglia i gaza na shakhtakh SSSR. (Ugol', May 1961. god 36, no. 5, p. 62-63.) Text in Russian. **Title tr.:** Discussion of the problem of controlling coal and gas blowouts in mines of USSR.

Reports the 4th All-Union conference on this problem in Dec. 1960 at Stalino; the 362 present represented 130 organizations. The papers delivered (listed) included a report by IU. I. Umnov, of the Pechora Coal Research Institute (PechorNIUI) on blowout control at Vorkuta. (DLC.)

69800. ANDROSOVA, V.P. Foraminifery donnykh otlozheniĭ zapadnoĭ chasti Poliarnogo basseina. (Moskva. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Trudy 1962. t. 46, p. 102-117, illus., tables.) 23 refs. Text in Russian. **Title tr.:** Foraminifera from bottom sediments of the western Polar Basin.

Study of material from the upper 20 cm. of sediments, collected in 1937-1938 by the North Pole-1 drifting station, with a general introduction by T. Gorshkova. Location and horizon, as well as nature of bottom, are included in the records of species found. A poverty in species is noted in all samples and horizons, with fam. Globigerinidae predominating. Most of the species were carried in by the Altantic current. (DLC.)

ANDRYSHAK, RICHARD J., *see* Evans, H.E., *and others*. Arctic Meteorol. photo probs. 1962. No. 71309

69801. ANFINNSEN, MARTIN T. Sivhøna, *Gallinula chloropus* (L.) i Norge; utbredelse og rugeforhold (Stavanger, Norway, Museet. Sterna. Dec. 1961. bd 4, hefte 9, p. 345-77, illus., graphs, 3 text maps.) 44 refs. Text in Norwegian. Summary in English **Title tr.:** The moorhen, *Gallinula chloropus* (L.) in Norway, distribution and nesting conditions.

Reports on observations of biotope, nesting habits, and activities of the common gallinule in southwestern Norway since 1953. It was first captured in Bodø in 1828, and is known as far north as Nordkapp. It is not known to migrate beyond the bounds of the country. (DLC.)

69802. ANGELAKOS, EVANGELOS T., 1929– *and* **H.I. HURWITZ.** Influence of induced hypothermia on digitalis toxicity. (Circulation research, Nov. 1961. v. 9, no. 6, 1144-47, illus., table.) 15 refs.

Reports experiments with dogs injected with toxic doses of oriabain then cooled. The results indicate that subsequently induced hypothermia does not afford protection from digitalis toxicity though it reduces arrhythmias and prolongs survival. (DLC.)

69803. ANGERE, JOHANNES. Die russisch-jukagirischen lexikalischen Berührungen. (Zeitschrift für slavische Philologie, 1960. Bd. 29, Heft 1, p. 133-46.) Approx. 20 refs. Text in German. **Title tr.:** Russian-Yukaghir linguistic contacts.

Discusses phonetic changes in 77 Russian loanwords found in Yukaghir, and six Yukaghir words encountered in the Kolyma-Russian speech. Morphological similarities between Yukaghir and Uralic are considered too weak to substantiate Collinder's claim (No. 21270) of close affinity. (DLC.)

ANGERVO, J.M., *see* Finland. Meteorol. yrbk. 2: precip. *and* snow cover 1952-56, 1961-1962, *in progress*.. No. 71401

69804. *ANGLO-SWEDISH REVIEW*. New ore treatment plant at Malmberget in Lapland. (Anglo-Swedish review, Nov.-1960, p. 228-29, illus.)

Describes this plant of the Luossavaara-Kiirunavaara Co., which began operation in Sept. 1960. It is part of a plan to increase the annual output of the Malmberget mines to six million tons of ore by 1965. (SPRI.)

69805. ANGLURE, BERNARD SALADIN d', 1936– Découverte de pétroglyphes à Qajartalik sur l'île de Qikertaaluk. (North, Nov-Dec. 1962. v. 9, no. 6, p. 34-39, illus., map.) Text in French. **Title tr.:** Discovery of petroglyphs at Qajartalik on

Qikertaaluk Island.

Describes stone engravings found on this small island near Wakeham Bay, northern Quebec in summer 1961. The 44 engravings are cut in the steatite and represent faces or masks. They are oblong or round, and up to eight in. wide and 12 in. long. Their age may be ascertained by the lichen growth-rate method. Several other archeological sites along the south coast of Hudson Strait are briefly noted. Also reported briefly in *Eskimo*, Dec. 1962, p. 19. (CaMAI.)

ANIKEEVA, L.I., *see* Leningrad. N.-i. institut geologii Arktiki. Gulinskaĭa intruziĭa . . . 1961. No. 73413

69806. ANISIMOV, ARKADIĬ FEDOROVICH. O stroe voennoĭ demokratii i nachal'nykh formakh politeizma u khantov i mansi. (Akademiia nauk SSSR. Muzeĭ istorii religii i ateizma. Ezhegodnik 1962. t. 6, p. 339-54.) 26 refs. Text in Russian. **Title tr.:** On the structure of military democracy and incipient forms of polytheism among the Ostyaks and Voguls.

Discusses the relationship between social structure and religious beliefs, using as example Siberian tribes of the 17th century. A disintegrating clan organization prevailed in the North, a feudal class society was developing among the Yakuts and, among the Ob-Ugrians, a patriarchal slave-holding community headed by military leaders or princelings *(knĭazetś)*. This new political structure was reflected in the gradual transformation of clan and tribal spirits into polytheistic deities. The original zoomorphic totem spirits of matriarchal society were replaced in patriarchal society by anthropomorphic ancestor- and master-spirits. These, in turn, lost their identity in the political rank-conscious military democracy, and became kinship-bound, primary and secondary divinities, i.e. developed characteristics typical of polytheism. These polytheistic trends, traceable in Ostyak and Vogul mythologic and heroic tales, are analyzed. (DLC.)

69807. ANISIMOV, ARKADIĬ FEDOROVICH. Protsess preodolevaniia religioznykh verovaniĭ u narodov Sovetskogo Severa. (Akademiia nauk SSSR. Muzeĭ istorii religii i ateizma. Ezhegodnik 1961. t. 5, p. 38-57.) Approx. 30 refs. Text in Russian. **Title tr.:** The process of overcoming religious beliefs among the peoples of the Soviet North.

Describes the effects of propaganda and the influence of educational, social, and economic reforms in relation to the gradual disappearance of traditional beliefs and shamanism. Vestiges of religion and superstitions persist however, and the scientific-atheistic indoctrination, relaxed since World War II, should be intensified. Examples of acculturation are cited among Samoyeds, Tungus, Chukchis, Koryaks, Yeniseians, Ostyaks, Voguls, etc. (DLC.)

69808. ANISIMOVA, L. Za Poliarnym krugom. (Mestnaia promyshlennost' i khudozhestvennye promysly, Apr. 1962, god 3, no. 4, p.35, illus.) Text in Russian. **Title tr.:** Beyond the Arctic Circle.

Notes a collection of designs assembled by a Krasnoyarsk artist who sketched them from Samoyed, Tungus, Ostyak, and Dolgan embroidery and weaving, on her numerous trips in the lower Yenisey region. (DLC.)

ANISIMOVA, L. *see also* Korzh, D., *and* L. Anisimova. ...raboty nerusskikh shkol. 1961. No. 72994

69809. ANNERSTEN, L. Permafrost investigations. *(In:* McGill University, McGill Sub-arctic Research Lab. Field research...1960-61, *pub.* 1962. p. 102-111, illus., map, graph.) 5 refs.

Describes extension of permafrost studies from 1956; ground temperature readings were made by 13 thermocouple installations on Ferriman Ridge, six mi. west of Schefferville, where earlier installations were made in 1957 and 1959. Instruments and methods are portrayed. Field studies were also made in other areas where permafrost was suspected, to determine possible soil temperature variations due to vegetation cover, exposure, and soil properties. Summer 1961 investigations showed very small temperature variations beneath various vegetation covers, and bare ground more sensitive than the vegetation-covered to changes in air temperature and insolation. Mean annual ground temperature versus depth is shown graphically for seven sites. Air temperature and wind studies are reported by J.A. Davies, q.v. (DWB.)

69810. ANODIN, T.I. Kratkaia kharakteristika sostava porod, vmeshchaiushchikh nekotorye kimberlitovye trubki IAkutskoĭ ASSR. *(In:* Akademiia nauk SSSR. IAkutskiĭ filial. Almazy IAkutii...1961, p.53-63, tables, maps.) 2 refs. Text in Russian. **Title tr.:** Brief characterization of the composition of rocks included in some kimberlite pipes of Yakut ASSR.

Presents chemical analyses of carbonate rocks included in the Mir (Malava Botuobuya River basin), Zarnitsa and Udachnaya (Daldyn basin) kimberlite pipes. Upper Cambrian and Ordovician rocks are reviewed. Dolomitization of carbonate rocks near and inside the pipes is discussed. (DLC.)

69811. ANODIN, T.I. Mineral'noe syr'e dlia proizvodstva krupnoblochnykh stenovykh materialov Sev.-Zapadnykh raĭonov IAASSR. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniia 1959. vyp. 2, p.16-23, tables.) Text in Russian. **Title tr.:** Mineral resources for production of large-block wall materials in the northwestern districts of Yakut ASSR.

Describes shingle of Jurassic and Quaternary age, sand-gravel-pebble deposits and burnt rocks in the Vilyuy, Malaya Botuobuya, Markha, Daldyn and other areas. Some clays in the Mirnyy area are considered for keramzite. Lime, cement, gypsum, etc. are discussed also, as binding materials, for making hollow porous building blocks. (DLC.)

69812. ANODIN, T.I. Novye dannye o mestorozhdeniiakh gipsa v nekotorykh almazonosnykh raĭonakh IAkutskoĭ ASSR. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniia 1960. vyp. 3, p.3-13, tables, fold. profiles, maps.) 4 refs. Text in Russian. **Title tr.:** New data on gypsum deposits in some diamond-bearing regions of Yakut ASSR.

Reports gypsum needed as construction material for the Mirnyy diamond industry. The largest and most accessible deposits for exploitation are

the Dzhelindinskoye on the lower Markha River and the Verkhne-Meikskoye deposits on the middle Vilyuy River. Both deposits are analyzed and their geologic sections, chemical composition, gypsum content, mode of mining, transportation and other features are described. Use of gypsum as fertilizer in the Suntar and Nyurba regions is also considered. (DLC.)

69813. ANOKHIN, G.I. Sotsialisticheskie preobrazovaniia v material'noĭ kul'ture saamov; po materialam kolkhoza "Tundra". (Akademiia nauk SSSR. Institut etnografii. Kratkie soobshcheniia, 1962. vyp. 36, p.46-54, illus., diagr., table.) 10 refs. Text in Russian. **Title tr.:** Socialist reforms in the material culture of the Lapps; based on data collected at the Tundra kolkhoz.

Study of the reindeer dairy-farming, etc. economy and social conditions at this collective with center at Lovozero, the largest in the Murmansk Province. Its area in 1959, when combined with the Vpered kolkhoz (center Chudz'yavr), totaled 2.5 million hectares. The resettlement of Lapps from Chudz'yavr to Lovozero was virtually completed by the winter of 1960-1961. Traditional and modern housing and furnishings, clothing, and diet are described. Benefits derived from collectivization are stressed. (DLC.)

69814. ANOKHIN, GENRIKH. Podvig dlinnoĭu v 812 dneĭ; k 25-letiiu dreĭfa "Georgiia Sedova." (Fizkul'tura i sport, Oct. 1962, no. 10, p.20-21, illus., sketch map.) Text in Russian. **Title tr.:** An 812-day exploit, the 25th anniversary of the *Georgii Sedov* drift.

Sketches the drift of the icebreaker *Sedov* icebound in Oct. 1937 in the course of a survey of the eastern Laptevykh Sea. Two sister ships, the *Sadko* and *Malygin*, were freed by *Ermak* in Aug. 1938, but the *Sedov* drifted westward in the ice, reaching warm currents in the Greenland Sea in Jan. 1940, almost duplicating the drift of Nansen's *Fram*. (DLC.)

69815. ANOKHINA, LILIIA EVGEN'EVNA, 1926– . O kol'tsakh i nerestovykh otmetkakh na cheshue belomorskoĭ sel'di, *Clupea harengus pallasi maris-albi* Berg. (Voprosy ikhtiologii, 1962. t.2, vyp. 1 (22), p.140-57, illus., tables.) 43 refs. Text in Russian. **Title tr.:** Rings and spawning marks on the scales of White Sea herring *Clupea harengus pallasi maris-albi* Berg.

Describes in detail the ring structure of fish from Onega Bay, its irregularities, and the biological processes associated with them. Scale features of the fry, spawning marks of males and females and their percentage in females are included. From these marks, sexual maturity in males and females and the number of spawnings are determined. (DLC.)

69816. ANOKHINA, LILIIA EVGEN'EVNA, 1926– . O sviazi plodovitosti, zhirnosti ryb i izmenchivosti razmerov ikrinok u sel'devykh. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ 1961. vyp. 13, p.290-95, illus., tables.) 22 refs. Text in Russian. **Title tr.:** The connection between fertility and fatness of fish and variation in size of ovaries in clupeids.

Reports on a comparative investigation of herring from the White Sea and sprat from the Baltic. The fatness of herring from the area studied, did not influence its fertility, as indicated by the condition of the ovaries. The variation in ovarial diameter (volume) thus appears to be of adaptive value. (DLC.)

ANSLEV, A., *see* Denmark. Greenland. 1961. No. 70974

69817. ANSTEY, ROBERT L. Handbook of Thule, Greenland, environment. Natick, Mass., Aug. 1956, revised Mar. 1961. iv, 42p. illus., maps, graphs, tables. (U.S. Quartermaster Corps. Environmental Protection Research Division. Technical report EP-34.) 20 refs. Partial revision of No. 43688.

Climatic data are entended by five years to an 11-year record. (CaMAI.)

ANTHONY, A., *see* Frehn, J.L. *and* A. Anthony. Respiration...chipmunks. 1962. No. 71494

69818. ANTIPIN, M.S. Nekotorye dannye o podzimnem poseve iarovoĭ pshenitsy v IAkutii. (Yakutsk. Universitet. Uchenye zapiski 1959, vyp. 6, seriia sel'skokhoziaĭstvennykh nauk, p.105-114, tables.) 15 refs. Text in Russian. **Title tr.:** Some data on early winter sowing of spring wheat.

Reports on experiments carried out in 1952-1955 at the then Yakut state selection station (now: Pokrovskoye Experimental Farm of the Yakut Agricultural Research Institute). Data are tabulated and discussed on growth, yield and seeding capacity of various strains of spring wheat sown on Sept. 5, 10, 15, 20, and 30. Early winter sowing is found to increase the yield; the crop is not affected by fungus or bacterial disease. Sept. 15-25 is the best time for sowing. (DLC.)

ANTLE, P.J., *see* Wilbraham, A.B. East coast . . . 1962. No. 76553

69819. ANTONOV, VASILIĬ SEMENOVICH. Del'ta reki Leny; kratkiĭ gidrologicheskiĭ ocherk. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy 1960. t. 6, p.25-34, tables, map.) 4 refs. Text in Russian. **Title tr.:** The delta of the Lena River, a short hydrologic outline.

Describes the drainage area; the runoff and its seasonal, year-to-year, and long-range variations. Area and nature of the delta, its distributaries, deposits, water level and its changes are outlined. Effect of tides and storms also freezing and its effects are discussed. (DLC.)

69820. ANTONOV, VASILIĬ SEMENOVICH. Izmenchivost' skorosti dreĭfa l'dov v Severnom Ledovitom okeane. (Okeanologiia, 1961. t. 1, vyp. 3, p.418-25, map, graphs.) 3 refs. Text in Russian. **Title tr.:** Variation in ice drift speed in the Arctic Ocean.

Analyzes the main factors affecting the velocity of ice drift in the central part of the Arctic Basin, viz: water volume and heat exchange between Atlantic and Arctic Oceans via the Greenland Sea, and atmospheric circulation. The ice drift regime is characterized according to data from North Pole-6 during Apr. 19, 1956-Sept. 13, 1959, and from other drifting stations. Seasonal and regional variations are discussed. Graphs are compiled for calculating of drift ice velocity and problems of forecasting it are considered. (DLC.)

69821. ANTONOV, VASILIĬ SEMENOVICH. Na poslednem etape. *(In:* Burkhanov, V.F. Na ledianom ostrove, 1962, p.98-136, illus., plate.) Text in Russian. **Title tr.:** At the last stage.

Reviews the drift, life and work of the ice island station North Pole-6; author was head of its fourth and last team, Apr.-Sept. 1959; personnel is stated. The problem of ice island stability when drifting in the open sea is discussed. North Pole-6 surface increased from 74.8 km² in 1958 to 150 km² in summer 1959, and decreased rapidly a few months later. Meltwater was combatted in summer by boring eight holes in the ice 4.8 - 12.1m. thick; main features of the 1243-day drift, longest of all the drifting stations, are stated, p.120-21; the station was evacuated on Sept. 14. The actual length of drift in a year seems constant at 2500-2600 km., as observed in drifting stations North Pole-2, North Pole-4(two years), North Pole-5 (one year). and North Pole-6 (three years). The increase in speed of drift in a general westerly direction of North Pole-6 is noted: 0.39 km. daily in 1956-57, 2.10 km. in 1957-58, 3.31 km. in 1958-59, and 6.90 km. Apr.-Sept. 1959. (DLC.)

69822. ANTONOV, VASILIĬ SEMENOVICH. Vozmozhnost' udlineniia srokov navigatsii v nizov'iakh Eniseia. (Morskoĭ flot, June 1961. god 21, no. 6, p.34-35, table, map.) Text in Russian. **Title tr.:** Possibility of extending the navigating season in the lower reaches of the Yenisey.

Suggests that the average length of the season could be extended from 91 to 115 days by planning for earlier arrival of ships to the delta and making use of the new, powerful icebreakers. (DLC.)

69823. ANTONOVA, I.F., *and* L.V. SMIRNIAGIN. O nekotorykh faktorakh razmeshcheniia gornodobyvaiushcheĭ promyshlennosti Kanady. (Moskva. Universitet. Vestnik, ser. 5, geografiia, May-June 1961, no. 3, p.14-21.) 10 refs. Text in Russian. **Title tr.:** On some factors in the distribution of the mining industry of Canada.

Summarizes the potential, the economic-geographic position, quantity and quality of mineral deposits, the transportation and manpower conditions, and other factors affecting the industry. Some developments in northern areas of Canada, such as nickel, are mentioned. (DLC.)

69824. ANTONOVA, L.A. *and* G.S. IVANOV-KHOLODNYĬ. Korpuskuliarnaia gipoteza ionizatsii nochnoĭ ionosfery. (Geomagnetizm i aèronomiia, 1961. t. 1, no. 2, p.164-73, tables, graphs.) 63 refs. Text in Russian. **Title tr.:** Corpuscular hypothesis of ionization of night ionosphere.

Establishes that mild electron streams exist in the ionosphere during auroral displays and magnetic disturbances and produce the night ionization of F2 layer. These streams of mild electrons are considered to be produced in the ionosphere by the energy of geomagnetic field during its variations. (DLC.)

69825. ANTONOVA, L.V. Rezul'taty issledovaniĭ teplovykh svoĭstv gornykh porod IAkutii. *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Severo-Vostochnoe otdelenie. Teplo- i massoobmen.. 1961, p.121-27, tables, graphs.) 2 refs. Text in Russian. **Title tr.:** Results of investigations of the thermal properties of Yakutia rocks.

Reports summer 1958-1959 studies in the lower Irelyakh and the Vilyuy valley. The heat conductivity cooefficient as determined for various types of rocks is graphed, and that determined in the laboratory for rocks of -15° C. is reported. Its dependence upon the moisture content is also determined and demonstrated; and an empirical formula for this determination is constructed. (DLC.)

ANTROPOVA, V.V., *see* Akademiia nauk SSSR. Istoriko-etnograficheskiĭ atlas...1961. No. 69544

69826. ANTRUSHIN, N. S. Dlia bor'by s navodneniem. (Priroda, Nov. 1961. god 50, no. 11, p.103-104, illus.) Text in Russian. Translated into English by E.R. Hope, Defence Research Board of Canada. T394R, July 1963. Copy at CaMAI. **Title tr.:** To combat ice-jam floods.

Reports operations during the last eight years to prevent floods caused by ice jams on the Severnaya Dvina and Onega Rivers. Blackening substances: ash, foundry loam, dark-colored sands, phosphate fertilizer, and others, were dusted from aircraft at 5-10m. height and chemicals at 10-20 m. Use of aircraft and helicopters offers new possibilities for expediting ice-melting and controlling ice-jams on rivers and canals (DLC.)

69827. ANTSYPALOVSKIĬ, IU. F., *and* A.P. ZINCHENKO. O povyshennoĭ chuvstvitel'nosti k kholodu. (Klinicheskaia meditsina, June 1961. t. 39, no. 6, p.130-37, illus.) 18 refs. Text in Russian. Summary in English. **Title tr.:** Increased sensitivity to cold.

Description of three cases with excessive sensitivity to cold (air, water or objects), manifesting itself by edema of the skin. In two, extensive cooling caused general collapse reactions. Experimental aspects of this condition are also presented. (DNLM.)

ANUCHIN, VASILIĬ IVANOVICH, 1875- , *see* Gagen-Torn, N.I. Sudovye flugera...1961. No.71541

69828. ANUKHINA, A.M. Materialy po ékologii belomorskoĭ navagi, *Eleginus navaga* Pall. (Voprosy ikhtiologii, 1962. t. 2, vyp. 1(22), p.55-68, illus., tables.) 27 refs. Text in Russian. **Title tr.:** Materials to the ecology of the White Sea navaga, *Eleginus navaga* Pall.

Reports a study of linear and weight growth, as well as age composition of these fish on the Pomorskiy coast, Onega Bay, supplemented with material from other sources. Gains in size and weight during a year, and gains of different year-classes for a number of years are stated. Age composition of catches, fertility as related to size and weight, and its fluctuation from year to year, etc. are considered. (DLC.)

APANASENKO, B.G., *see* Cherkasov, E.D., *and* B.G. Apanasenko. Techenie perelomov...1962. No. 70697

69829. APEL'TSIN, FAĬVEL' RAKHMIL'EVICH. O razmeshchenii odnovozrastnykh malykh intruziĭ i éffuzivnykh tolshch v IAno-Kolymskoĭ zone mezozoĭskoĭ skladchatosti. (Vsesoiuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.273-74.) Text in Russian. **Title tr.:** On the distribution of synchronous small intrusions and effusive strata in the Yana-Kolyma zone of Mesozoic folding.

Notes the tectonic conditions for development

of small intrusions and synchronous effusive strata in this belt. Their petrographic properties are correlated and the evolution of magmatism of this region is interpreted. (DLC.)

69830. APOLLONIO, SPENCER, 1933– . The Arctic Institute of North America Devon Island Expedition 1960-63. (Arctic circular, 1960, *pub.* May 1961. v. 13, no. 4, p.48-51.) Ref.

Describes preliminary activities and plans: in summer 1960, an eight-man reconnaissance party established a research station and made excavations at two archeological sites; in summer 1961, work by a 20-man party as planned in oceanography, geography, meteorology, glaciology, archeology, geophysics, and survey. The expedition is especially concerned with relationships between the ice field and glaciers of Devon Island, the atomsphere, and the sea (Jones Sound). (CaMAI.)

69831. APOLLONIO, SPENCER, 1933– . The chlorophyll content of arctic sea-ice. (Arctic, Sept. 1961. v. 14, no. 3, p.197-99, tables.) 6 refs.

Reports measurements of chlorophyll concentrations from algae in sea ice, made at the Devon Island station, 75°42′N., during summer 1961. The concentrations were high averaging 89.6 µg./1 chlorophyll *a* in snow-covered ice, 16.6 in cleared ice, and 12.0 in ice after snow melt. The lower values for the cleared areas are believed to result from physiological inhibition of the algae with increased light intensity. Light requirements of algae living on the underside of sea-ice are considered. (DGS.)

69832. APOLLONIO, SPENCER, 1933– , *and others*. The Devon Island Expedition. (Arctic, Dec. 1961. v. 14, no. 4, p.252-65, graphs, diagrs.)

Describes the three-year program of this expedition headed by the author, the first season's field work Apr.-Sept. 1961 by a 21-man party and plans for 1962. The investigations are to elucidate the interrelationships between glacier ice on this island 75°N. 87°W., the ocean water of adjacent Jones Sound, and the encompassing atmosphere. Establishment of the main base on the north coast, the icecap station, and that on one of the outlet glaciers to Jones Sound is noted, and summary given of the geophysical, glaciological, marine biological, oceanographic, meteorological, archeological, and geological studies, and surveying. Preliminary reports are given on geology, by J.W. Cowie; measurement of electrical resistivity of ice by K. Vogtli; glaciology, by R.M. Koerner, observations of glacial movements, by P.H. Cress *and* R. Wyness, and measurements of electrical resistivity of ice formations, by J.P. Greenhouse. Summarized in *Polar record*, Sept. 1962, no. 72, p. 279-81. (DGS.)

69833. APOLLONIO, SPENCER, 1933– . The Devon Island Expedition 1960-64. (Arctic, Dec. 1962. v. 15, no. 4, p.317-21.)

Summarizes the Sept. 1961-Sept. 1962 phase: a five-man winter party worked on the glaciology, meteorology, oceanography, and limnology of this east-central-arctic island and ambient waters, a 13-man summer party worked in geophysics, glaciology, meteorology, oceanography and marine biology. (DI.)

69834. *APPALACHIA.* Various notes-alpina. (Appalachia, Dec. 1961. v. 33, no. 4, p.527-30.) Refs.

Reports first ascent of Mt. McKinley south face in July 1961, by a six-man Italian party; first ascent in May 1961 of the northeast or "Pioneer" ridge, leading to the north peak of Mt. McKinley, by a Canadian party; as well as an unsuccessful attempt on Mt. McKinley by a four-man Seattle party, interrupted by a avalanche. (DLC.)

APTEKMAN, I.G., *see* Gonik, A.A., *and* I.G. Aptekman. Splav...lesa? 1961. No. 71753

69835. APTIKAEV, F.F. Seĭsmicheskie issledovaniĭa na lednike No. 31 v khrebte Suntar-Khaĭata. *(In:* Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Severo-Vostochnoe otdelenie. Teplo-i massoobmen...1961, p.68-80, graphs.) 7 refs. Text in Russian. **Title tr.:** Seismic investigations on glacier No. 31 in the Suntar-Khayata Range.

Reports results of 1957-1959 work in the IGY program to determine glacial thickness in these mountains of Yakutia. The structure of the glacier studied enabled the use (the first such) of exchange refractive waves. The ice in the cirque is about 100 m. thick, increasing to 145 m. near the middle of the tongue and diminishing only slightly from there to the terminus. The seismic technique also proved useful in determining the elasticity of the ice and the nature of the glacier bed. (DLC.)

69836. APUKHTIN, N.I. Chetvertichnye otlozheniĭa Murmanskoĭ oblasti. *(In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy...1961, t. 2, p.17-23.) Text in Russian. **Title tr.:** The Quaternary deposits of Murmansk province.

Describes the stratigraphy of these deposits, widely distributed in Kola Peninsula. Middle and Recent Quaternary deposits are distinguished and their lithologic properties, types, fauna and flora reported. Signs of the four glaciations discovered are characterized. (DLC.)

69837. ARAKI, TADASHI, *and* **T. NEI.** The mechanism of freezing in micro-organisms, 1; factors affecting the survival of yeast cells subjected to subzero temperatures. (Teion kagaku, 1962. ser. B. v.20, p.57-68, illus., tables.) 12 refs. Text in Japanese. Summary in English.

In *S. cerevisiae* suspended in distilled water, no cell damage occurred at -1°C to 1.5°C., and none until the medium froze. Survival decreased with decreasing temperature, reaching 20% at -40°C. Very slow cooling produced the highest rates of survival. Survival decreased with increased storage time in the frozen state, except at -40° C., when practically no decrease was noted. Freezing in liquid N after primarily freezing depended, in its results, on the temperature of the (DLC.)

ARAKI, TADASHI, *see also* Souzu, M., & T. Araki. Injury nucleic acids synthesis freezing . . . 1962. No. 75844

69838. ARCHIBALD, D.C., *and others*. Aerial ice observing and reconnaissance, eastern Canadian seaboard, 1962. Toronto, Dec. 3, 1962. 171 p. maps, tables. (Canada. Meteorological Branch, Circular CIR-3768, TEC-438.) *Other authors:* M.N. Monsinger, *and* T.B. Kilpatrick.

Presents fifth annual technical report on

waters including the Belle Isle and South Labrador coast areas and northward to near Hopedale. Data are derived from shipboard ice observers on five Canadian Coast Guard vessels, reconnaissance flights by helicopter and fixed-wing aircraft, daily reports from 34 selected shore stations, and weekly ice thickness information from Cartwright, Hopedale, and Goose Bay in Labrador, and Nicolet, Quebec. A joint U.S.-Canadian project, Operation TIREC, was completed in Feb. and Apr., to determine the usefulness of satellites (TIROS IV) for ice surveillance. Observed ice conditions at frequent intervals (Jan.-June) are graphically summarized on fig. 1-79. (DWB.)

69839. ARCHIBALD, D.C., *and others*. Aerial sea ice observing and reconnaissance, Canadian Western Arctic, 1960. Toronto, May 10, 1961. 29 p. maps, diagr., tables. (Canada. Meteorological Branch. Circular CIR-3483, TEC-358.) *Other authors:* M.N. Monsinger *and* T.B. Kilpatrick.

Reports ice conditions observed on two preliminary flights in April and May, and frequent flights during June-Oct. Ice coverage, age, topography, puddling, snow cover, ice of land origin, and water features are described and mapped. Flight data are tabulated, a dozen descriptive terms defined. The area covered is roughly west of 95°W. to the Alaska boundary, including parts of Beaufort Sea and Canadian Arctic Islands waters. (DWB.)

69840. ARCHIBALD, D.C., *and others*. Aerial sea ice observing and reconnaissance, St. Lawrence River, the Gulf of St. Lawrence and coastal waters of Newfoundland, 1959, 1960. Toronto, Nov. 14, 1960, Mar. 15, 1961. 2v.: 99, 101p. maps, tables. (Canada. Meteorological Branch. Circular. CIR-3417, TEC-339 and CIR-3465, TEC-353.) *Other authors:* M.N. Monsinger *and* T.B. Kilpatrick. 2d and 3rd annual reports.

Reports coverage, age, topography, puddling, snow cover, ice of land origin, and water features for the period Dec.-June, each year. The southern Labrador coast from the Belle Isle area to Lake Melville is included. (DWB.)

ARCHIBALD, D. C., *see also* Canada. Aerial ice observ . . . 1961. 1962. No. 70573

69841. *ARCTIC*. Charts of the Athabasca and Slave Rivers. (Arctic, Dec. 1962. v. 15, no. 4, p. 313-14.)

Describes a Canadian Hydrographic Science project since 1958, to chart the Athabasca-Mackenzie waterway from Waterways, Alberta to Tuktoyaktuk, Mackenzie District. Two charts, the Waterways-Fort Smith and the Fort Smith-Great Slave Lake sections, were issued in 1962; others are to follow. (DI.)

69842. *ARCTIC*. Geographical names in the Canadian North. (Arctic, June-Dec. 1961. v. 14, no. 2, p. 133-38; no. 3, p. 204-208; no. 4, p. 269-74.)

Lists, with approx. lat. and long., some six hundred places for which names have been adopted or changed by the Canadian Board on Geographical Names during Mar. 3, 1960 - July 5, 1961. (DI.)

69843. *ARCTIC*. The National Oceanographic Data Center, Washington. (Arctic, Dec. 1961. v. 14, no. 4, p. 249.)

Notes opening of this center in Jan. 1961, directed by W.C. Jacobs, and sponsored by U.S. government agencies. Its activities, publications, and holdings are indicated; its extensive data on marine environments stressed. (DGS.)

69844. *ARCTIC*. New polar ships. (Arctic, Dec. 1961. v. 14, no. 4, p. 249-50, illus.)

Describes three vessels delivered to J.L. Lauritzen Lines, Copenhagen during July-Oct. 1961. The *Nella Dan,* a 2150-ton d. w. expedition ship with accommodation for 42 passengers, has a 2520 ihp diesel engine, speed of 13 knots, a 28,000 -mile cruising range, ice fins and an ice knife to protect propeller and rudder, and instruments for ice navigation; a new feature is the double hull around the engine rooms and the No. 2 cargo hold. The twin cargo vessels *Ritva Dan* and *Brita Dan* are ice-strengthened, and have 3700-ton d.w. displacement, speed of 13.5 knots, and 3250 ihp engines. Delivery of the ice-strengthened *Kaisa Dan* (described) and the *Saima Dan* is reported in the same journal, Dec. 1962, v. 15, no. 4, p.313. (DGS.)

69845. *ARCTIC ANTHROPOLOGY*. Madison, Wisc., c/o Dept. of Anthropology, Univ. of Wisconsin, 1962- , in progress.

Journal (v. 1, no. 1:133 p. illus., tables) to be pub. irregularly, editor C.S. Chard, and to contain original papers, reviews, and translations of materials relating to physical or cultural anthropology including archeology in polar and contiguous regions. Particular attention is to be given to the origins and Eurasian contacts of New World peoples and cultures. Most (approx. 90%) of the papers, etc. deal with northern cultures and are treated in this Bibliography under their authors' names. (DSI.)

69846. *ARCTIC CIRCULAR*. Department of Transport icebreakers and ice-strengthened ships. (Arctic circular, Aug. 1961. v. 14, no. 1, p.19-21.)

Lists 17 vessels, with their specifications and other characteristics: year built. length, breadth, depth, draft, tonnage, engine type, horse power, speed, range, cargo, location, crew, and passengers. Ten of the ships are icebreakers, and 14 have helicopter platforms. (CaMAI.)

69847. *ARCTIC CIRCULAR*. Discovery of the table desk from H.M.S. "Resolute." (Arctic circular, 1960, *pub.* Mar. 1961. v. 13, no. 3, p. 42-44.)

Recounts the abandonment, on the Belcher, Franklin Search Expedition, 1852-1854, of four ships one of them the *Resolute,* salvaged off the east Baffin Island coast in 1855 by an American whaler. Subsequently it was refitted and returned to Britain by the United States. When the *Resolute* was broken up, a desk made from her timbers and presented to the United States in appreciation, in 1878. Use of the desk in the White House is noted. (CaMAI.)

69848. *ARCTIC CIRCULAR*. Explorers' records found in the Canadian Arctic Archipelago in 1960. (Arctic circular, 1960, *pub.* 1961. v. 13, no. 4, p. 62-65, map.)

Reports discovery of nine records, noting finder and location. The records include seven from the Franklin Search, two of them left on Russell Island by Austin's expedition in 1851, and five

on Devon Island by Belcher's group between 1852 and 1854. Of the other records, one was left by J.E. Bernier on Melville Island in 1909, and one by D.B. MacMillan on Ellesmere in 1917. (CaMAI.)

69849. *ARCTIC CIRCULAR.* New vessel for the Hudson's Bay Company. (Arctic circular, 1960, *pub.* Mar. 1961. v. 13, no. 3, p. 40-41.)

Describes the M/V *Pierre Radisson* (Capt. A.C. Lloyd), successor to the *Rupertsland* as flagship of the Hudson's Bay Co's supply fleet in northern Canada. The new ship, of 1465 tons deadweight, ice-strengthened, welded steel construction, with a 1500 BHP diesel engine, good loading and storage facilities, etc., is to begin service in summer 1961. (CaMAI.)

69850. *ARCTIC CIRCULAR.* Proposed new northern territories. (Arctic circular, 1961, *pub.* 1962. v. 14, no. 3, p. 58-59.)

Reports the recommendation from the 1962 session of the Northwest Territories Council, for the division of the NWT into two territories: one comprising the area west of 105° W. together with Banks and Victoria Islands, to be named Territory of Mackenzie, the other an eastern territory with appropriate Eskimo name (Nunassiaq.) The suggested administrative structures of the new territories are noted. (CaMAI.)

69851. *ARCTIC CIRCULAR.* Radio in the North. (Arctic circular, Aug. 1961. v. 14, no. 1, p.18–19.)

Describes Canadian Broadcasting Corp. service in northern Canada. Programs are transmitted daily by shortwave from Sackville, New Brunswick, to the Eastern Arctic for 45 min. and the Western Arctic for 6 hrs. Some, including a thrice-weekly Eskimo language program, are especially for northern listerers. CBS regional stations are operating in 13 northern communities, five of them in Yukon Territory connected directly to southern networks. (CaMAI.)

69852. *ARCTIC CIRCULAR.* Radiotelephone service to northern Quebec and Labrador. (Arctic circular, 1960, *pub.* Mar. 1961. v. 13, no. 3, p.34-35.)

Describes the communication system to be initiated in summer 1961. It provides direct connection between this area and the telephone network in southern Canada through a transmitter near Alma, Quebec. Points such as Great Whale River, Fort Chimo, and Hopedale are thus served; and radio networks operated privately by the Hudson's Bay Co., the Oblate order, etc., can tie in to it. (CaMAI.)

69853. *ARCTIC CIRCULAR.* The road programme in the Yukon and Northwest Territories. (Arctic circular, 1960, *pub.* Mar. 1961. v. 13, no. 3, p.35-38, map.)

Describes road and bridge building activities since 1959. In the Yukon, road work was in progress on Flat Creek - Eagle Plain, Johnson's Crossing - Ross River, Watson Lake - Ross River; a road was planned from Dawson to the Alaska boundary, and one to link the Watson Lake - Ross Lake - Ross River road with the Canada Tungsten mine site in western Mackenzie District; three bridges were completed on the Whitehorse - Keno Highway. In Mackenzie District, the Fort Enterprise-Yellowknife road was opened; and work done on the road from Hay River to the Alberta boundary and those from Yellowknife to Fort Reliance, Fort Fitzgerald to Bell Rock. Name changes on former sections of the Mackenzie Highway are noted. (CaMAI.)

69854. *ARCTIC CIRCULAR.* Visit of Their Excellencies the Governor-General and Madame Vanier to northern Canada. (Arctic circular 1961, *pub.* Apr. 1962. v. 14, no. 3, p.59-60.)

Describes an 18-day tour of several towns in Mackenzie District during June 1961. (CaMAI.)

ARCTIC INSTITUTE OF NORTH AMERICA. Anthropology of the North. *See*

Michael, H.N., *Editor*....Studies in Siberian ethnogenesis....1962. No. 73967

Rudenko, S.I. Ancient culture....1961. No. 75263

69855. ARCTIC INSTITUTE OF NORTH AMERICA. The Institute Library: annual reports for 1960, 1961. (Arctic, June 1961, Mar. 1962. v. 14, no. 2, p.123-25; v. 15, no. 1, p.80-82.) By Nora T. Corley.

Reviews activities, facilities and services of this library at Institute headquarters in Montreal. Approx. 5000 volumes, 13,000 reprints and pamphlets, and files of 476 current journals, government documents, etc. comprise the collection. The Institute maintains also an extensive map collection. (DI.)

69856. ARCTIC INSTITUTE OF NORTH AMERICA. McCall Glacier, Alaska; meteorological observations 1957-1958. Edited by Svenn Orvig. Montreal, May 1961. 30 p. illus., tables. *(Its:* Research paper no. 8.) 9 refs. IGY Brooks Range Project 4, 17, station A048: McCall Glacier.

Outlines the IGY program for McCall Glacier, slightly modified by the editor from the original by the late R.C. Hubley. Brief general description is given of the Brooks Range, McCall Glacier, and the observation stations maintained by the four-man field party, except during Nov. 1957 - Feb. 1958. Synoptic observations made during June 13 - Oct. 31, 1957, and Feb. 18 - Aug. 18, 1958, are summarized: temperature, precititation, relative humidity, wind, cloud cover and type. Hourly means of several micrometeorological readings (radiation, albedo, temperature) for the period Mar. 1 - Aug. 13, 1958, are tabulated in the appendix; also wind speeds at four levels in Sept. - Oct. 1957 and windspeed with simultaneous temperatures in Mar. July 1958. Results from the 1958 season are probably typical of a summer with more than average ablation. (DWB.)

ARCTIC INSTITUTE OF NORTH AMERICA, *see also* Reed, J.C. Arctic research. 1962. No. 75086

ARIMA, EUGENE, *see* Balikci, A., *and* E. Arima. Umiak for National Museum. 1961. No.69983

69857. ARISTE, P. Wotisch *lappolain (In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v. 125, Commentationes..., p.5-9.) Refs. in text. Text in German. **Title tr.:** Votish *lappolain.*

Discusses linguistic and folkloristic elements indicating cultural contacts between ancestral Lappish and Votish tribes, probably on Vespian territory, i.e. the Lake Peipus - Lake Ladoga region. The Votish name for wizard *lappolain* is connected with the Lapps' reputation as sorcerers in west Ugric folklore. (DSI.)

69858. **ARKHANGEL'SKIĬ N.K.** Tretichnye otlozheniia Palanskogo raĭona zapadnogo poberezh'ia Kamchatki. *(In:* Soveshchanie...stratigraficheskikh skhem...1961, p.163-65.) Text in Russian. **Title tr.:** Tertiary deposits of the Palana region on the west coast of Kamchatka.

Distinguishes three series and subseries briefly characterizing each, noting identified flora and fauna. (DLC.)

69859. **ARKHIPOV, STANISLAV ANATOL'EVICH,** *and others.* Stratigrafiia chetvertichnykh otlozheniĭ Prieniseĭskogo raĭona Zapadno-Sibirskoĭ nizmennosti; bassein srednego techeniia r. Eniseĭ. *(In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy...1961, t. 3, p.151-56.) 10 refs. Text in Russian. *Other authors:* E.V. Koreneva *and* IU. A. Lavrushin. **Title tr.:** Stratigraphy of Quaternary deposits in the Yenisey region of the West Siberian plain, the middle Yenisey basin.

Reports a study between the mouths of the Bakhta and the Nizhnyaya Tunguska. Eopleistocene, Pleistocene and Holocene (Recent) series of Quaternary deposits are distinguished; their distribution, composition, flora and fauna are described. (DLC.)

69860. **ARKHIPOVA, A.P.,** *and others.* Dorozhnye ėmul'sii v usloviiakh Zapolĭar'ia. (Avtomobil'nye dorogi, Nov. 1962. god 25, no. 11, p.10-12, tables.) Refs. in text. Text in Russian. *Other authors:* G.S. Igon'kina *and* V.A. Sergienko. **Title tr.:** Road emulsion under arctic conditions.

Presents results of experimental construction of rubble roads, using different binding emulsions. Three kilometers of such road built in Murmansk Province in October 1961 under air temperature to -6°C. with emulsions of direct and inverse bitumen and tar types are found to be the most suitable in construction process, and in quality for arctic conditions. The process of emulsion preparation is described. (DLC.)

69861. **ARKHIPOVA, E.G.** Osobennosti teplovogo balansa Severnoĭ Atlantiki v period MGG. (Moskva. Gosudarstvennyĭ okeanograficheskiĭ institut. Trudy 1962. v. 67, p. 74-85, illus., tables, maps.) 2 refs. Text in Russian. **Title tr.:** Characteristics of the heat balance of the North Atlantic during the IGY.

Account based on data from ten weather ships active during 1958-1959 in the North Atlantic, including its subarctic region. The distribution of heat balance parameters of the ocean surface, monthly and annual since 1950, the maximal and minimal values since 1950, periods of maximal heat loss from the ocean, and monthly and annual anomalies are considered. Data for 1958-1959 are evaluated against long-term parameters. (DLC)

69862. **ARKTISK INSTITUT,** *København.* Arktisk instituts årsberetning for 1961. Charlottenlund, 1962. 3.1. Mimeo. Text in Danish. **Title tr.:** Arktisk institut's annual report for 1961.

Reports on publications, gifts received, state of archives, photo-collection and library, personnel changes, meetings and receptions, foreign visitors. (CaMAI.)

69863. **ARKTISK INSTITUT,** *København.* Danish arctic research 1960-1961. Helge Larsen, editor. Charlottenlund, 1961-1962. 25, 28 p. *(Its:* Report 6, 7.) Refs. In sequence to No. 63136.

Surveys research activities completed, continued, and started, in: geology, geodesy, meteorology, ionosphere, hydrography, fisheries, ornithology, limmology, archeology, etc., by the respective Danish research agencies in Greenland. Included is report of the Universitets Arktiske Station at Godhavn, and a list of 60 publications of 1960, 94 for 1961. Summarized in *Polar record* Jan. 1962, no. 70, p.43-44; May 1963, no. 74, p.592-93. (DN-HO.)

69864. **ARMAND, A.D.** Novye dannye o poslednem oledenenii na Kol'skom poluostrove. (Akademiia nauk SSSR. Doklady, June 1, 1961. t. 138, no. 4, p.890-92, map.) 6 refs. Text in Russian. **Title tr.:** New data on the last glaciation in the Kola Peninsula.

Reports a 1955-1958 study of relief development of the Khibiny Mts. Two stages are recognized in the Valdai glaciation. The direction of glaciers, glacial scars, distribution of drumlins, kames, eskers are characterized. The glacial history of the Kola Peninsula is interpreted. (DLC.)

69865. **ARMAND, A.D.** Ocherk formirovaniia rel'efa i chetvertichnykh otlozheniĭ Khibinskikh tundr. *(In:* Voprosy geomorfologii...Kol'skogo poluostrova, 1960, no. 1, p.32-84, illus., tables, diagrs., maps incl. fold.) 44 refs. Text in Russian. **Title tr.:** Outline of the formation of relief and Quaternary deposits of the Khibiny tundras.

Summarizes previous studies and own work in 1955-1958. Main features of the relief are outlined, its development in pre-Quaternary, glacial, late-glacial and post-glacial periods is analyzed. Effects of endogenic and exogenic factors are evaluated. Uplift of the region, its intensity and extent are described. Glaciations, weathering of rocks, solifluction, development of the river net and other features are described. Stratigraphic core of "young" rock, not bedrocks, is presented. Origin of the Khibiny alkaline massif and its later events are reviewed. (DLC.)

69866. **ARMAND, N.N.** O poslednem oledenenii na severo-vostoke Kol'skogo poluostrova. *(In:* Voprosy geomorfologii...Kol'skogo poluostrova, 1960. no. 1, p.136-50, illus., table, maps, diagrs.) 11 refs. Text in Russian. **Title tr.:** On the last glaciation in northeastern Kola Peninsula.

Reports a geologic and geomorphic study in the Voron'ya, Kharlovka, Vostochnaya Litsa and Iokan'ga River basins, to elucidate the disputed question of whether the region was covered by the last glaciation. Glacial deposits, their mode of occurrence, and mechanical composition of glacial boulders are analyzed, with conclusion that entire region was so covered. Glacial relief forms, such as drumlins, eskers and others are described; the direction, movement and activity of the ice are characterized. (DLC.)

ARMSTRONG, J.F., *see* Durham, W.F., *and others.* Insecticide content of diet...1961. No. 71155

69867. **ARMSTRONG, JAMES F.** The problems behind arctic drilling. (Oil in Canada, Nov. 9, 1961. v. 14, no. 2, p.35-40, illus.)

Reports an interview with Peter Bawden Drilling Ltd. and Dome Petrolem representatives

on equipment, construction, winterizing, personnel, etc., involved in drilling the Dome Petroleum Ltd. well near Winter Harbour, Melville Island. Transportation of rig and supplies from Montreal to Winter Harbour on the *Thora Dan,* loading and unloading after construction of a pier at Braithwaite Point, ¾ mi. from well site, are discussed. Safety measures and living conditions at the camp are described. Each shift has three complete five-man drilling crews. Fresh water is provided by two salt water evaporators of 1000 gal-/day capacity; these also supply steam for thawing equipment and heating the buildings. Drifting snow is a serious problem, with no simple solution. The drilling operations beginning in August are described with photo-illus. also in *Oilweek* Nov. 6, 1961, p.27-30: the well spudded Sept. 10, was below 7000 ft. in Nov. (DGS.)

69868. ARMSTRONG, TERENCE EDWARD, 1920–

The population of the north of the U.S.S.R. (Polar record, May 1962. v. 11, no. 71. p.172-78, map, tables.) 9 refs.

Estimates the total and some ethnic group populations from 1959 census data, tabulated for 17 northern administrative regions. Total population of the North ranges from 4,750,000 to 1,100,000 according to definition of the area preferred (five cited). Native peoples number approx. 95,000. Total population has tripled since the 1926 census, due mostly to high Russian immigration. The indigenous peoples have remained approximately the same in numbers and are now outnumbered about four to one by the immigrants. (DGS.)

69869. ARMSTRONG, TERENCE EDWARD, 1920–

Soviet place-names: transliteration or anglicization? (Arctic, June 1962. v. 15, no. 2, p. 162-65.) 2 refs.

Disagrees with the suggestion of Sinclair and Topchy, q.v., that Soviet geographical names be anglicized in English-language publications. The policy of transliterating both generic and specific parts of Soviet names prevents international confusion and involves only minor differences in spelling. Sinclair and Topchy answer, p.164-65. (DGS.)

69870. ARMSTRONG, TERENCE EDWARD, 1920-

Soviet terms for the North of the USSR. (Polar record, Sept. 1961. v. 10, no. 69, p.609-613, map.) 6 refs.

Explains the terms Krainiĭ Sever: the extreme North, or severnye okrainy: the northern marches, and Sovetskiĭ Sever: the Soviet North. The first two used in legislation, refer not to a fixed area, but to one which varies with the different laws, e.g. an area where workers receive special privileges because of the difficult environment, or one where special building rules are in effect due mostly to permafrost. The term Sovetskiĭ Sever suggested by Slavin (No. 54955) is based on the extent of economic development in 1917, indicated mainly by population density. (DI.)

69871. ARNBORG, TORE, 1912– . Framtidens skogsfrö. (Västerbotten, Mar. 1961. årg. 34, nr. 2, p. 42-44, illus.) Text in Swedish. **Title tr.:** Forest seed in the future.

Stresses the importance of provenance and genetics in forest plant and seed selection; and outlines measures to improve the 40,000-45,000 kg. of pine and spruce seed needed annually in Sweden. Quality control has been tightened by classification of coniferous forest for cone-picking purposes, regulations for collection, designation and sale of seed are to be established. Within a few years, most seed will be supplied by seed plantations; of 750 planned half are operational. The country was divided into 15 zones for pine and ten for spruce according to altitude and latitude; in each zone, the best trees were selected as breeders. Progeny of 3,000 are being tested for second generation seed plantations. (DA.)

69872. ARNES, JOHAN. Finnmark skal i større utstrekning satse på minken. (Norden, Oct. 1, 1960. årg. 64, nr. 20, p.547.) Text in Norwegian. **Title tr.:** Finnmark planning on extensive mink farming.

Notes plans for setting up four farms, training of specialists, financing, etc.; local fishery by-products are to be used in feed. (DA.)

69873. ARNOLD, K.C. An investigation into methods of accelerating the melting of ice and snow by artificial dusting. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v. 2, p.989-1013, illus., map, diagrs., graphs, tables.) 23 refs.

Describes experiments conducted by author in summer 1959 on snow, sea ice, and lake ice surfaces near the Isachsen weather station in the Canadian Arctic Islands. Seven different types of material, ranging from coarse cinder to fly ash, were spread in five various amounts over 1 $m.^2$, in all 35 squares. Repeated measurements were taken in each, noting the departure from a system of reference stakes and from untreated areas as controls. Penetration of the dust into the ice surface was recorded by taking cores and stereoscopic photographs. Meteorological readings were taken at three-hour intervals. Results showed that, used in concentrations of up to 1000 $gm./m^2$, all materials accelerated the rate of melting. Effectiveness of the same quantities of material differed on sea and lake ice, whose difference in structure is suggested as a factor. Practical applications of this process in different latitudes are recalled and possible uses in Canada are suggested, e.g., to minimize spring flooding or extend the navigation season. This study was part of the Polar Continental Shelf Project of the Canadian Dept. of Mines and Technical Surveys. (DGS.)

ARNOLD, K.C., *see also* Weber, J.R., *and others.* Geophys. surveys Gilman Glacier...1961. No.76506

69874. ARNOL'D, O.A. Arkhitekturnoe oformlenie pomeshchenii atomnogo ledokola "Lenin," (Sudostroenie, 1961. god 27, no. 8, p.14-18, illus., diagrs.) Text in Russian. **Title tr.:** Layout of the living quarters on the atomic icebreaker *Lenin.*

Describes crew, officers, and captain's quarters, their decorative features, lighting, furnishings, etc. Illus. show lounge and messrooms, sleeping cabins, companionways, also deck plans. (DLC.)

69875. ARNOL'DI, IOSIF ALEKSANDROVICH. Akklimatizatsiia cheloveka na Severe i IUge. Moskva, Gos. izd-vo meditsinskoĭ literatury, 1962. 71 p. illus. Text in Russian. **Title tr.:** Acclimatization of man in the North and South.

Popular account, dealing with essentials of human acclimation, the climate of the Far North,

its conditions of temperature, radiation including UV, and air electricity. Hygiene of diet, incl. vitamins, is outlined, housing and water supply are discussed. Clothing, work: mining, etc. are dealt with; as are child hygiene, and air pollution. (DLC.)

69876. ARNOL'DI, V.S., *and* **R.S. LIPETS.** O peredachi fonda Etnograficheskogo otdela Obshchestva liubiteleĭ estestvoznaniia, antropologii i etnografii v arkhiv Instituta etnografii AN SSSR. (Sovetskaia etnografiia, Nov.-Dec. 1962, no. 6, p.156-57.) Ref. Text in Russian. **Title tr.:** Transfer of the collection of the Ethnographic department of the Society of Friends of Natural Sciences, Anthropology, and Ethnography to the archives of the Institute of Ethnography of the Academy of Sciences, USSR.

The collection, mainly of ethnographic, folkloristic, and linguistic interest, was assembled in the mid-19th to early 20th centuries and includes materials on northern peoples: Lapps, Zyryans, Ostyaks, Yakuts, and Chukchis. The transfer was implemented in May 1962. (DLC.)

69877. ARON, WILLIAM. The distribution of animals in the eastern North Pacific and its relationship to physical and chemical conditions. (Canada. Fisheries Research Board. Journal, Mar. 1962. v. 19, no. 2, p.271-314, illus., tables, maps.) 42 refs.

A study based on "indicator organisms" collected with the Isaacs-Kidd midwater trawl. The transition from the Subarctic to Intermediate waters was accompanied by a decline in quantity by a factor of ten, and the Tropical waters produced catches only 1/100 of those in the Subarctic. The Subarctic's fauna changed also in character upon transition into warmer water. Quantitative differerences between 1958 and 1957, diurnal migrations, standing crop fluctuations, and the causes of all these changes are also discussed. (DLC.)

ARONOW, S., *see* Mark, V.H., & *others*. Localized cooling...1961. No. 73812

69878. ARPI, GUNNAR. Svenskars semestrar 1958-60, en intervjuundersökning. (Ymer, 1961. årg. 81, hafte 4, p.241-57, tables.) Text in Swedish. **Title tr.:** Swedish vacation habits 1958-60, an investigation by interview.

Reports an inquiry by Statens Vattenfallsverk (the State power administration) among some 4,500 individuals, as to spending vacation in Lapland and Norrbotten, northernmost Sweden. About 80% had never spent a holiday in this region; of the other 20%, the majority had visited the area in winter. About 33% rejected the idea of a northern vacation. Almost half of the visitors to upper Norrland had visited some power station. As main attractions, most of those questioned cited scenic beauty, fishing, and other factors which would be affected by the hydro-electric projects. Large areas of untouched nature though remote, were preferred to more easily accessible areas where nature had been interfered with. (DLC.)

69879. ARSEN'EV, A.A. Geologicheskoe stroenie Olenek-Markhinskogo mezhdurech'ia. (Materialy po geologii i poleznym iskopaemym IAkutskoĭ ASSR: IAkutskoe geologicheskoe upravlenie, 1961. vyp. 5, p.58-85, table, maps incl. fold.) 25 refs. Text in Russian. **Title tr.:** Geologic structure of the Olenek-Markha interfluve.

Reports field studies of lower Paleozoic deposits in 1955 and 1956 along the valleys of the Daldyn (left tributary to the Markha), Siligir (right tributary to the Olenek), and Markha. Stratigraphy of Cambrian, Ordovician, Silurian and Permian deposits is presented together with schematic geologic map. Traps and kimberlites of the region are characterized. Tectonic structure is analyzed in describing the faulted zones of the area. (DLC.)

69880. ARSEN'EV, A.A. O zakonomernosti razmeshcheniia kimberlitov v vostochnoĭ chasti Sibirskoĭ platformy. (Akademiia nauk SSSR. Doklady, Apr. 11, 1961. t. 137, no. 5, p.1170-73, map.) 16 refs. Text in Russian. **Title tr.:** Distribution laws of kimberlites in the eastern part of the Siberian platform.

Reports geophysical investigations in the area roughly between the Kotuy and Lena. Eight disjunctive fault zones such as Angara-Muna, Markha-Kotuy, Molodo-Popigay, are distinguished, their connection with the distribution of kimberlite bodies is emphasized. (DLC.)

ARSEN'EV, A.A., *see also* Susov, M.V., & A.A. Arsen'ev. K geologii...1962. No. 76015

69881. ARSEN'EV, V.A. Rasprostranenie kitov v Beringovom more i vozmozhnosti razvitiia kitobolnogo promysla. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ 1961. vyp. 12, p.112-24, maps.) 16 refs. Text in Russian. **Title tr.:** Distribution of whales in the Bering Sea and prospects of developing a whaling industry.

Includes also the waters south of the Aleutians, Bering Strait and the southern part of the Chukchi Sea. The main part of the paper is a review of Soviet whaling and research, presented area by area. Number and kind of whales are noted and mapped, and ice conditions, occurrence, location and size of herds recorded. General conclusions are drawn as to migration and size of herds and prospects for whaling. (DLC.)

ARSEN'EV, V.S., *see* Dobrovol'skiĭ, A.D., & V.S. Arsen'ev. Gidrologicheskaia kharakteristika...1961. No. 71044

69882. ARSEN'EVA, N. IA. K voprosu o vliianii prilivo-otlivnykh techeniĭ na klimaticheskie i gidrologicheskie usloviia moria. (Moskva. Gosudarstvennyĭ okeanograficheskiĭ institut. Trudy 1961. vyp. 64, p.93-102, illus., table, map.) Text in Russian. **Title tr.:** On the effect of tidal currents upon the climatic and hydrological condition of the sea.

Reports study of anomalous climatic and hydrographic conditions at the White Sea Narrows. Results indicate that the strong tidal currents of this channel cause an intensive mixing of water masses. This, together with horizontal heat transfer from neighboring areas, is held responsible for the small seasonal changes in temperature of the water and air, late summer, fogs, etc. (DLC.)

69883. ARTAMONOV, L.V., *and* **L.A. RIVOSH.** Opyt kompleksnogo primeneniia aėroėlektrorazvedki i aėromagnitnoĭ s"emki v geologicheskikh usloviiakh Baltiĭskogo kristallicheskogo shchita. (Sovetskaia geologiia, Aug. 1961, no. 8, p.98-105, graphs.) 2 refs. Text in Russian. Summary in English. Title

tr.: Use of aeroelectromagnetic and aeromagnetic survey methods in the geological environment of the Baltic crystalline shield.

Reports on experiment in simultaneous use of these two methods in geologic mapping and prospecting. All the necessary aerogeophysical instruments were placed on a single Il-14. The combination of the induction method of aeroelectric prospecting and aeromagnetic survey helps solve problems of prospecting for highly conductive sulfide ores under conditions prevailing in Kola Peninsula and Karelia. Anomalies of conductivity and magnetic anomalies help isolate previously unknown tectonic disturbances and the boundaries of various geological formations. (DLC.)

69884. ARTEMOV, N. Drug igarskikh lesopil'shchikov. (Master lesa, Sept. 1961, no. 9, p.11.) Text in Russian. **Title tr.:** The lumberman's friend in Igarka.

Notes achievements of Mikhail Mikhaĭlovich Stepanov, his devices for simplifying machinery increasing efficiency and safety at the second Igarka sawmill. (DLC.)

69885. ARTEMOV, N. Za polĭarnym krugom. (Master lesa, July 1961, no. 7, p.21, illus.) Text in Russian. **Title tr.:** Beyond the Arctic Circle.

Describes activities of the Igarka lumbermen's House of Culture (Dom kul'tury) headed by IUriĭ Chizhinevskiĭ: musical concerts, plays, performances at the Polyarnyy state farm and the S.M. Kirov collective farm nearby. (DLC.)

69886. ARTEMOVA, E. Otlichnik narodnogo prosveshcheniia. (Russkiĭ ĭazyk v natsional'noĭ shkole, 1962, no. 2, p.64-66, port.) Text in Russian. **Title tr.:** Teacher of great merit.

Describes the visual instruction methods used by a Komi woman teaching Russian in Zyryan schools of the Ust'-Kuloma District, Komi ASSR. (DLC.)

69887. ARTHUR, HARRY. Trapline marauder. (Alaska sportsman, Jan. 1961. v. 27, no. 1, p.11-12, + illus.)

Relates experiences with wolverines in the Stony River area of western Alaska. Their destructive habits, ability to climb caches, follow blazed trails, etc. are described. (DI.)

ARTHUR, J.D., *see* Hyman, C., & *others*. Distensibility of digital blood vessels...1961. No. 72286

69888. ARUTIUNOV, S.A., *and* **D.A. SERGEEV.** Novye nakhodki v drevneberingomorskom mogil'nike v Uelene. (Sovetskaia ėtnografiia, Nov.-Dec. 1961, no. 6, p.120-24, illus., diagr.) 6 refs. Text in Russian. **Title tr.:** New finds in the Old Bering Sea cemetery at Uelen.

Describes the 1960 field work of the Northern Expedition's Chukotka team on a three-layer burial complex: the lowest classic Old Bering Sea, the uppermost Punuk stage. Two typologically different "winged objects" found in these two layers are noted, also (in the lower) several wooden artifacts, one of them similar to the boomerang-crook used by modern Koryaks and Yukaghirs, an unusual slate knife, etc. (DLC.)

69889. ARWIDSSON, ERIK. Vad är en kursgård? (Norden, Oct. 1, 1960. arg. 64, nr. 19, p.534-35.) Text in Swedish. **Title tr.:** What is a "course farm?"

Describes studies for adults in rural areas, such as navigation (for fishermen), home economics (for blind housewives), poultry farming, bookkeeping, etc. Short courses are given at the Norrbotten Agricultural School annex, and the studies continued subsequently in local study circles arranged by the school. (DA.)

ARZHAKOV, N.D., *see* Mikhalev, G.P., & N.D. Arzhakov. Nekotorye geologicheskie osobennosti... 1962. No. 73990

69890. ARZHANOV, D. Sozdat' snegokhod. (Okhota i okhotnich'e khoziaĭstvo, Aug. 1961. god 7, no. 8, p.11.) Text in Russian. **Title tr.:** An over-snow vehicle must be developed.

Cites need for a dependable aerosled for winter hunting in northern areas of the Soviet Union. (DLC.)

69891. ASAHINA, ÉIZO. Frost injury in living cells. (Nature, Nov. 3, 1962. v. 196, no. 4853, p. 445-46, illus., table.) 4 refs.

Reports on survival of unfertilized eggs of the sea-urchin *Hemicentrotus pulcherrimus* suspended in single salt and other solutions and frozen to -2.5 to -35 C. Direct observations and death rate as related to kind of solution and temperature indicate that at the eutectic point or "at least at a definite temperature" below it, the egg cell is damaged, apparently because of destruction of the protoplasmic structure of the cell surface. (DLC.)

69892. ASAHINA, ÉIZO. Intracellular freezing and frost resistance in egg-cells of the sea-urchin. (Nature, Sept. 23, 1961. v. 191, no. 4795, p.1263-65, illus., table.) 7 refs.

Describes intracellular quick freezing to -16° C. of *Strongylocentrotus nudus* eggs aided by seeding, very slow freezing to -10° or -20°C., and survival rate following these two main methods. Freezing in unfertilized and fertilized eggs is also reported and the great resistance of fertilized eggs even to rapid freezing, discussed. (DLC.)

69893. ASAHINA, ÉIZO. A mechanism to prevent the seeding of intracellular ice from outside in freezing living cells. (Teion kagaku, 1962. Ser. B, v. 20, p.45-46, illus., tables.) 15 refs. Text in Japanese. Summary in English.

Account of experiments with eggs of the sea-urchin *Strongylocentrotus nudus*. Fertilized eggs were found to be resistant to slow and rapid freezing, while unfertilized eggs withstood only slow freezing. Varied experiments reported, indicate that high permeability of cells to water, and great plasticity of cell form, are the two factors preventing death from cold injury. (DLC.)

ASAHINA, ÉIZO, *see also* Takehara, I., & É. Asahina. Glycerol...slug caterpillar 1...1961. No. 76071

ASHBURN, EDWARD V., *see* Alaskan Science Conference 1961. 1962. No. 69644

ASHDOWN, K.H., *see* National Research Council of Canada...muskeg research conference 1960. 1961. No. 74228

ASHIDA, K., *see* Yoshida, A., *and* K. Ashida... Low temp. and accumulation liver fat... 1962. No. 76611

69894. **ASHWOOD-SMITH, M.J.** Viability of mouse bone marrow frozen to -79°C. in the presence of dimethyl sulfoxide. (Journal of physiology, Jan. 1961. v. 155, no. 1, p.26P-27P.) 4 refs.

Mouse bone marrow treated with up to 15% dimethyl sulphoxide, slowly frozen to -79°C. and rapidly thawed at 27°C. showed actively motile cells within 30 minutes. Omission of the sulphoxide caused extensive injury especially to more mature cells. (DLC.)

69895. **ASKILDSEN, THOM.** Indianerne ved Peel River: The Peel River Indians. (Norway. Norsk Polarinstitutt. Årbok 1960 *pub.* 1962, p.75-85, illus., map.) 3 refs. Text in Norwegian. Summary in English.

Reports observations made in 1961 among Loucheux Indians, some four hundred in number, in this northwest Mackenzie District area with Fort McPherson the regional center. Fishing (herring, ling, whitefish) trapping and hunting (mink, marten, caribou) are their main livelihood. Their equipment, methods, and seasonal routines are described, as are the housing, means of transport, and social organization. The main trends in their changing way of life and culture are outlined. Wage employment tends to be preferred to subsistence hunting, fur trade, etc. as easier, more dependable and more remunerative. There are boarding schools for the children and some opportunities for further studies. The influence of the church has declined. Various problems are touched upon: alcoholism unemployment as population rises, especially more young people with little schooling but out of contact with the old way of life; the tension in personal relationships between Indians and whites is noted also. (DLC.)

69896. **ASLANOVA, N.E.** Mechenie promyslovykh ryb. (Voprosy ikhtiologii, 1961. t. 1, vyp.3 (20), p. 564-69, illus., map.) 25 refs. Text in Russian. **Title tr.:** Tagging of commercial fishes.

Discusses the aims, and beginnings of Russian tagging activities, including those in the Barents and White Seas; results of these activities; taggings in the Far East, including the Okhotsk Sea; types of tags, work of the Russian tagging center, etc. (DLC.)

69897. **ASMUND, BERIT,** *and* **D.K. HILLIARD.** Studies on Chrysophyceae from some ponds and lakes in Alaska, 1; *Mallomonas* species examined with the electron microscope. (Hydrobiologia. 1961. v.17, no.3, p.237-58, 10 illus.) 21 refs.

Presents preliminary report on these protozoan collections, and detailed descriptions with illus. of electron micrographs of the *Mallomonas* species from a variety of habitats on Kodiak Island and north to Cape Thompson (68°N.). Notes on topography, geology, vegetation and water temperature and chemistry are added. (DGS.)

69898. **ASSALI, N.S.,** *and* **B. WESTIN.** Effects of hypothermia on uterine circulation and on the fetus. (Society for Experimental Biology and Medicine. Proceedings, Mar. 1962. v. 109, no. 3, p.485-88, illus., table.) 3 refs.

Reports study of ten pregnant bitches made hypothermic, with and without shivering. Uterine circulation decreased in both groups and was associated with increased uterine vascular resistance. Fetal survival was not affected and fetal temperature fell as that of the mother. Hypothermia of the fetus probably increases its tolerance of hypoxia. (DLC.)

ASSALI, N.S., *see also* Westin, B., *and others.* Regional blood flow...1961. No. 76537

ASSOCIATION OF SCIENTIFIC HYDROLOGY. *See under* International Union of Geodesy and Geophysics.

69899. **ASSUR, ANDREW, 1918–** Bearing capacity of floating ice sheets. (American Society of Civil Engineers. Engineering Mechanics Division. Journal, June 1961. v.87, no. EM3, p.63-66, graph.) 3 refs.

Meyerhof's calculation of the collapse of ice sheets (No. 66700) is criticized on the basis of field and laboratory work conducted by the U.S. Army Cold Regions Research and Engineering Laboratory. The argument that the idealized stress distribution leading to the full plastic bending moment does not correspond to the actual stress in an ice sheet may hold for fresh ice and quick loading. But for prolonged loading and especially for sea ice, the plastic moment may well be a proper idealization. The assumption that the hydrostatic reaction is confined within the hinge circle is unfounded, since experiments indicate considerable deflection at the circumferential hinge until collapse occurs. The assumption that the hinge radius is equal to the radius of the deflection dish is also incorrect. The circumferential crack occurs well within the deflection radius and at the place where the elastic theory predicts maximum radial stress. The conditions for this location are calculated, also considered on the basis of A. Johansen's concept of yield lines. Actual tests show a considerable deflection at the circumferential crack. Many other approximations were used even though more precise approaches can be derived.—From CRREL. (DLC.)

69900. **ASSUR, ANDREW, 1918–** . Composition of sea ice and its tensile strength. Wilmette, Ill., Dec. 1960. v, 49p. diagrs., graphs, tables. (U.S. Army. Corps of Engineers. Snow Ice and Permafrost Research Establishment. Research report 44.) 29 refs.

Portions of the salts contained in sea water are trapped in sea ice upon freezing; they form liquid and solid inclusions in a systematic pattern; the amount of these inclusions depends upon temperature and salinity. This report of work performed as part of SIPRE project on bearing capacity of floating ice sheets, gives a detailed table of phase relations and derives a general theory to show how interval cavities may affect the strength of sea ice. Specific models are based on the general theory; most promising model seems to be elliptical. The principle of ring tensile strength tests is explained and a series for evaluation is given. Test data tend to substantiate theoretical principles, also to illustrate several hypotheses concerning the effect of solid salt inclusions upon strength. Observed sea ice phenomena, such as increase in sled friction and in brittleness, also changes in color and texture, are explained on the basis of internal structure.–From author's summary. (CaMAI.)

69901. ASTAKHOVA, T.V. Deĭatel'nost' Sibirskogo otdeleniĭa Vsesoĭuznogo paleontologicheskogo obshchestva. (Geologiĭa i geofizika, 1962, no. 5, p.142-43.) Text in Russian. **Title tr.:** Activities of the Siberian branch of the All-Union Paleontological Society.

Reports its fifth and sixth, October and December, sessions of 1961. Papers delivered are briefly summarized, including arctic material. (DLC.)

69902. ASTRAKHANTSEV, VENIAMIN IVANOVICH, *and* **E. V. PINNEKER.** Tret'e soveshchanie po podzemnym vodam i inzhenernoĭ geologii Sibiri i Dal'nego Vostoka. (Sovetskaĭa geologiĭa, Apr. 1962, no.4, p.143-46.) Text in Russian. **Title tr.:** Third conference on ground water and engineering geology of Siberia and the Far East. Also reported in *Geologiĭa i geofizika,* 1962, no. 2, p.126-27.

Describes the conference held in Krasnoyarsk Oct. 17-21, 1961, with 265 participants representing 85 organizations. 103 papers were delivered dealing with problems of hydrogeology and engineering geology, hydrochemistry, thermal waters, water supply, permafrost (a special section), etc. Soviet arctic regions were treated among others. (DLC.)

69903. ASTROVA, GALINA GRIGOR'EVNA, 1906–

Siluriĭskie fistuliporidy iz severnykh raĭonov RSFSR. *(In:* Akademiĭa nauk SSSR. Komi filial. Sbornik trudov po geologii...1960, p.352-77, illus., plates, tables.) 15 refs. Text in Russian. **Title tr.:** Silurian Fistuliporidae from northern regions of the RSFSR.

Describes Ludlovian bryozoans of fam. Fistuliporidae, collected on Bol'shoy Zelenets Island, Barents Sea and in the Bol'shaya Synya River basin of Komi ASSR. Nine new species of gen. *Fistuliporida* and two of gen. *Fistuliramus* are systematically described and illus. (DLC.)

69904. ATAMANOV, A.V., *and others.* Novye dannye po geologii Lovozerskogo massiva. (Sovetskaĭa geologiĭa, Feb. 1961, no.2, p.55-67, table, sections, diagrs.) 13 refs. Text in Russian. Summary in English. *Other authors:* S.F. Lugov *and* IA. M. Feĭgin. **Title tr.:** New data on the geology of the Lovozero massif.

Outlines the geologic structure of this massif in central Kola Peninsula from work done since 1955. The rock complexes distinguished: poikilitic nepheline-syenites, stratified rocks, eudialytes, and vein rocks, correspond to four phases of intrusion activity. From geophysical investigations, depths of the massif are described down to 1700 m. The laws governing vertical alteration of rocks are established. Titanium-bearing minerals are noted to increase quantitatively with depth. (DLC.)

ATHERTON, DAVID L., *see* Carter, H.A., *and* D.L. Atherton. Milton Mt. McKinley Range Exped. 1961. No. 70623

69905. ATKINS, LEONARD, Preservation of viable leucocytes in glycerol at -80°C. (Nature, Aug. 11, 1962. v.195, no.4841, p.610-11, illus., tables.) 9 refs.

Describes method of freezing, storage (at-80° C.) and thawing of leucocytes in whole blood or plasma. Successful cultures were established from surviving cells with chromosomes unchanged. (DLC.)

69906. ATKINSON, DAVID J. Tectonic control of sedimentation and the interpretation of sediment alternation in the Tertiary of Prince Charles Foreland, Spitsbergen. (Geological Society of America. Bulletin, Mar. 1962. v.73, no.3, p.343-64.)

Describes the 6000-ft. thick Tertiary sediments of dominantly low-rank graywacke on this island west of Vestspitsbergen, investigated during three field seasons, and discusses their formation and cyclic sedimentation. They were derived from low-grade metamorphics to the west, and deposited in a rapidly subsiding belt adjacent to a rising fault block. The tectonic activity was not associated with orogenic processes, hence the rocks differ in type from sediments associated with block-faulting at the end of an orogeny. Major lithologic cycles in the sediments are attributed to variation in the balance between the rate of upward movement of the source area and the rate of erosion of the resulting topographic relief. Superimposed minor cycles probably represent short-term meteorologic variations. (DGS.)

69907. ATLASOV, I.P., *and* **V.N. SOKOLOV.** Osnovnye cherty tektonicheskogo razvitiĭa tsentral'noĭ chasti Sovetskoĭ Arktiki. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t. 117, Geologiĭa...1961, p.49-58, table, maps.) Text in Russian. Pub. in English in International Symposium on Arctic Geology, q.v. **Title tr.:** Main features of the tectonic development of the central part of the Soviet Arctic.

Deals with a broad area from the Polar Ural and Novaya Zemlya on the west to the Verkhoyansk region and New Siberian Islands in the east, including Franz Joseph Land, Severnaya Zemlya and other islands of the Kara Sea. Based on analysis of geologic structures, seven stages are are distinguished; Archean, Proterozoic, Sinian, lower-middle Paleozoic, upper Paleozoic-lower Mesozoic, Mesozoic-Cenozoic and Cenozoic. Each is characterized, noting regional depression and transgression of the sea, sedimentation and uplift, finally development of various structures. A tectonic map of the area is included. (DLC.)

69908. *ATUAGAGDLIUTIT,* Flatøbogen og dens udfordring til den arkaeologiske videnskab. (Atuagagdliutit: Grønlandsposten, July 13, 1961. Ukiut 101-iat, nr. 15, p.15-16, illus.) Text in Danish and Eskimo. **Title tr.:** The Flatø book and its challenge to archeology.

Contains details on this mediaeval Icelandic manuscript in Latin; compiled by Icelandic priests Jon Tordarsson and Magnus Thorhallson, it contains the so-called Greenland saga, which tells about the Norsemen's voyages from Greenland to America. This manuscript was part of the collection transferred by Denmark to Iceland in 1961. (SPRI.)

69909. *ATUAGAGDLIUTIT.* Grønlands naeststørste (Atuagagdliutit: Grønlandsposten, Dec. 1, 1960. Ukiut 100-at, nr. 25, p.14-15, 17, illus.) Text in Danish and Eskimo. **Title tr.:** Second biggest in Greenland.

Describes the West Greenland port of Egedesminde, its economic life, etc. (DLC.)

69910. *ATUAGAGDLIUTIT*. Et maegtigt liv ved Godthåb for ca. tre tusinde år siden. (Atuagagdliutit: Grønlandsposten, Sept. 1, 1960. Ukiut 100-at, nr. 17, p.7-8.) Text in Danish and Eskimo. **Title tr.:** A busy life at Godthåb about three thousand years ago.

Reviews the summer 1960 excavations of Jørgen Meldgaard: sites found with remains of the Sarqaq people, their large houses with long sunken entrance passage, central hearth, wood fuel; tools, etc. in great number. (DLC.)

69911. *ATUAGAGDLIUTIT*. Ny stor luftfartsbygning på Sdr. Strømfjords-basen. (Atuagagdliutit: Grønlandsposten, Jan. 21, 1960. Ukiut 100-at, nr. 1, p.4-5, 15, illus.) Text in Danish and Eskimo. **Title tr.:** New large air terminal building at Søndre Strømfjord air Base.

Describes a hotel at this American base in West Greenland operated by The Royal Greenland Trading Company for the Scandinavian Airlines System. Aluminum-covered, it is 110 m. long, its foundation on permafrost; it accommodates 124 overnight guests, also airline personnel. Fuel tank installations of 80,000,000 l. capacity have been built at the airfield by ESSO. (DLC.)

69912. *ATUAGAGDLIUTIT*. 6960 mand og 15 kvinder i en iskold atomverden. (Atuagagdliutit: Grønlandsposten, Aug. 25, 1960. Ukiut 100-at, nr. 16, p. 1, 6-10, illus.) Text in Danish and Eskimo. **Title tr.:** 6,960 men and 15 women in an ice-cold atomic world.

Describes the life and installations at Thule Air Base, Camp Tuto and Camp Century, northwest Greenland. (DLC.)

69913. *ATUAGAGDLIUTIT*. Vildrenbestanden er kun på ca. 15.000 stk. til efteråret. (Atuagagdliutit: Grønlandsposten, Aug. 24, 1961. Ukiut 101-iat, nr. 18, p. 10.) Text in Danish and Eskimo. **Title tr.:** The reindeer population will number only about 15,000 in the autumn.

Cites the West Greenland air survey of Christian Vibe in 1961, which indicated about 12,000 head, estimated increase: 3,000 calves; the small numbers are attributed to the climatic conditions. (SPRI.)

69914. ATWOOD, EVANGELINE. Anchorage, all-America city. Portland, Ore., Binfords and Mort, 1957. 118 p. illus.

Outlines the development of this settlement 1915-1955, the largest in Alaska. Prior to World War II, it was a city of 3,500 with railroading the chief industry. A military air base, during the war, it became a peacetime Air Force Base and Army post, with an estimated population 470,000 in 1955. Aviation is the chief industry: in 1954 Anchorage was the fourth busiest center in air traffic operations in the United States. It is Alaskan headquarters for Federal government agencies, whose activites are a major industry. Daily life, service organizations, and prominent individuals are described. The city still needs a year-round, deep-water port terminal. (CaONA.)

69915. AULISA, B., *and* **L. VENTURA.** Considerazioni sugli effetti dell'ipotermia sul ricambio proteidico di cane. (Archivio di medicina interna, 1960. v.12, no.2, p.114-19, tables.) 7 refs. Text in Italian. **Title tr.:** Investigations on the effects of hypothermia upon the protein metabolism of the dog.

Study of five albumin and globulin fractions in the plasma of dogs cooled to about 20°C. A change in all the fractions was noted, with a major relative increase in albumin and alpha-2 globulin. (DNLM.)

AUMONIER, A.J., *see* Cave, A. J. E., & A. J. Aumonier. Morphology...reniculus. 1962. No.70628

69916. AUNE, LEIF. Nord-Norges industri og bergverk. Tromsø, 1961. 19 p. illus., tables. (Ottar, Dec. 1961. no.30; 1961: no. 3.) 5 refs. Text in Norwegian. **Title tr.:** Industry and mining in North Norway.

Surveys post-war economic development in this area, where about 21% of the labor force is in industry and mining as compared with 32% for the country as a whole, and production represents 4-5% of the national total. Industry is reviewed according to branch and region. Mining, the food industry, and metallurgy employ the greatest numbers. Traditionally, North Norway had a raw-material industry, mainly fish, ores and minerals; as late as 1954, 70% of its industry was such in small units with little capital, slight prospect of processing the raw material, seasonal, and susceptible to market conditions. The North Norway development program of 1952 is outlined: investment in power installations, communications and vocational schools, special subsidies for agriculture and forestry, special tax regulations and priorities for financing private enterprise. Gross investment of 1950-1955 amounted to 600-700 mill. kr., 12% of the national total, the investment rate 80% of the production value. (DI.)

AURELA, ASKO, *see* Hovi, V., *and* A. Aurela. On asymmetry of cosmic rays . . . 1960. No. 72245

AURICH, H. J., *see* Dietrich, G., *and others* . . . redfish . . . Irminger Sea. 1961. No. 71028

AUSTEN, W.G., *see*

Ebert, P.A., *and others*. Relationship of blood pH . . . 1962. No. 71187

Greenfield, L.J., *and others*. Cardiac denervation . . . hypothermia . . . 1962. No. 71838

69917. AUSTIN, TORALF. Skogplantinga setter ny rekord i år; stor interesse for sitkagran i kyststrøka. (Norden, Nov. 1, 1960. årg. 64, nr. 21, p.593.) Text in Norwegian. **Title tr.:** Forest planting sets new record this year; great interest in Sitka spruce in coastal areas.

Notes 11.7 million seedlings planted in Nordland in 1960 as compared to 8.5 million in 1959; native plants of good quality in good supply because of the warm summer with sufficient precipitation. Sitka spruce grows as fast as the native variety; more storm-and wind-resistant, it is favored for costal areas. (DA.)

69918. AVER'EV V.V., *and others*. Problems of using volcanic thermae of the Kurile-Kamchatka Island arc for power. (IUGG. Association of Volcanology. Bulletin volcanologique, 1960. sér. 2, t. 23, p.257-63, tables.) 3 refs. Paper read at International Association of Volcanology Symposium of Paris, 1959. *Other authors:* V.V. Ivanov *and* B.I. Piip.

Discusses main features of the four genetic types of hot springs and geysers in this volcanic zone, as summarized in table, p.258-59. Chemical composition of nitric-carbonated thermae are compared with some in New Zealand and Iceland. Source of the Pauzhetka thermal waters in southernmost Kamchatka is suggested. (DGS.)

69919. AVER'EV, V.V., *and others.* Sovremennyĭ gidrotermal'nyĭ metamorfizm v oblastiākh aktivnogo vulkanizma. (Akademiiā nauk SSSR. Doklady, Mar. 11, 1961. t.137, no.2, p.407-410, tables.) 2 refs. Text in Russian. *Other authors:* S.I. Naboko *and* B.I. Piĭp. **Title tr.:** Present hydrothermal metamorphism in the regions of active volcanism.

Reports a study of Pauzhetsk hydrotherms in the Kambal'nyy Ridge, near the Kosheleva and Kambal'naya volcanoes in Kamchatka. From deep borings, max. temperature of these therms was found to be 190° C. at 270 m. depth. Composition of the water condensate at various depths is shown (tables). Three zones of hydrothermal metamorphism are distinguished, and rock-forming processes are described. Comparison is made with New Zealand. (DLC.)

69920. AVER'EV, V.V., *and* **A.E. SVIĀTLOVSKIĬ.** Vulkano-tektonicheskie struktury IUzhnoĭ Kamchatki. (Akademiiā nauk SSSR. Izvestiiā, ser. geologicheskaiā, June 1961, no. 6, p.98-100, cross-section.) Text in Russian. **Title tr.:** Volcanic- tectonic structures of southern Kamchatka.

Describes main features of the Kambal'nyy Ridge (Kambal'naya Sopka, 51°18′N. 156°52′E.) as a volcanic-tectonic uplift, and Lake Kuril'skoye as a volcanic-tectonic depression. (DLC.)

69921. AVER'IANOV, A.G., *and others.* Deep seismic sounding carried out during the IGY in the zone of transition from the Asiatic continent to the Pacific Ocean. (International Union of Geodesy and Geophysics. Association of Seismology and Physics of the Earth's Interior. Travaux scientifiques 1961. sér. A, fasc. 22, p.59-80, maps, graphs.) 11 refs. *Other authors:* E.I. Gal'perin, I.P. Kosminskaiā, R.M. Krakshina, G.G. Mikhota, IU. V. Tulina, P.S. Veĭtsman, M.A. Zaĭonchkovskiĭ, *and* S.M. Zverev.

Describes methods and instrumentation used by the Institute for Terrestrial Physics of the Academy of Sciences USSR, in this main part of its geophysical work in the IGY. Profiles were made across the structures of the Okhotsk Sea and the Kuril-Kamchatka Trench into the North Pacific, one close to the Commander Islands. Analysis of the seismograms and time-distance curves shows the variety of the structure of the earth's crust. Three main structure types were observed: continental, mostly uniform and granitic under the Okhotsk Sea; oceanic, best observed east of the Kuril-Kamchatka Trench; and an intermediate type, observed in the deep-water part of the Okhotsk Sea and elsewhere. (DGS.)

69922. AVER'IANOV, A.G., *and others.* Glubinnoe seĭsmicheskoe zondirovanie v perekhodnoĭ zone ot aziatskogo kontinenta k Tikhomu okeanu v period MGG. (Akademiiā nauk SSSR. Izvestiiā, ser. geofizicheskaiā, Feb. 1961, no.2, p.169-84, maps, graphs.) 12 refs. Text in Russian. *Other authors:* P.S. Veĭtsman, E.I. Gal'perin, S.M. Zverev, M.A. Zaĭonchkovskiĭ, I.P. Kosminskaiā, R.M. Krakshina, G.G. Mikhota, *and* IU.V. Tulina. **Title tr.:** Deep seismic sounding in the transition zone between the Asiatic continent and the Pacific Ocean during the IGY.

Describes the methods of observations, and the apparatus used in the process of deep seismic sounding in the zone across the Bering Sea. From analysis of seismograms and travel-time curves obtained along the longitudinal profiles across the tectonic structures of the Sea of Okhotsk, the Kuril-Kamchatka island arc, and the Commanders, and of data from the Iturup Island station, the regions investigated are found to have a varied thickness of the total earth crust, and of its component layers. They are made up of continental, oceanic, and transitional types of crust, its total thickness determined as 20-30 km. (DLC.)

69923. AVER'IANOV, A.G. O vyiāvlenii refragirovannykh voln pri glubinnom seĭsmicheskom zondirovanii v severo-zapadnoĭ chasti Okhotskogo moriā. *(In:* Soveshchanie po glubinnomu seĭsmicheskomu zondirovaniiū zemnoĭ kory... v SSSR, *pub.* 1962, p.342-62, graphs, diagrs.) 11 refs. Text in Russian. **Title tr.:** Detection of refracted waves in deep seismic sounding in the northwestern part of the Okhotsk Sea.

Discusses the method of detecting seismic waves refracted at the boundaries of a nonhomogeneously layered medium. The kinematics and dynamics of waves originated in such mediums are analyzed and their travel-time and amplitude curves calculated for four cases in which the velocity gradient of such waves decreases or increases in jumps with increasing depth, or changes with depth linearly, having a jump at the discontinuity boundary. Singularities in kinematics and dynamics of the waves are presented as criteria for distinguishing refracted waves, from other types recorded. Experimental seismic records from the deep-sounding traverse 700 km. long at three stations on Sv. Iony Island and northeast and southeast of it, and on a movable blasting station are analyzed. This analysis is compared with that theoretically obtainable on the basis of the criteria proposed. In a number of cases, this comparison has helped in detecting the refracted seismic waves, and in establishing the similarity of their and head wave kinematics. (DLC.)

69924. AVER'IANOV, A.G., *and others.* Osnovnye kharakteristiki glubinnykh voln, zaregistrirovannykh pri rabotakh po glubinnomu seĭsmicheskomu zondirovaniiū v zone perekhoda ot Aziatskogo kontinenta k Tikhomu okeanu. *(In:* Soveshchanie po glubinnomu seĭsmicheskomu zondirovaniiū zemnoĭ kory...v SSSR, *pub.* 1962, p. 282-300, diagrs., graphs, maps.) 11 refs. Text in Russian. **Title tr.:** Main characteristics of deep waves, registered in the course of deep seismic sounding in the transition zone from the Asiatic continent to the Pacific Ocean.

Reports work of 1957-1959 in connection with the IGY program. The region studied includes the Okhotsk and Bering Seas, Kuril-Kamchatka depression, and other coastal areas of the Pacific. Continental transition, and oceanic types of the

earth's crust are distinguished, and the kinematics and dynamics of P°, P^{*}, P, and other waves are characterized. Interpretation of the seismic structure and geology of the crust is offered. Water areas are especially suitable for investigating the dynamics of deep seismic waves, whereas in the continental zone the wave picture is much more complex. (DLC.)

69925. AVER'IANOV, V.A. Vliianie nizkoĭ temperatury okruzhaiushcheĭ sredy na vozniknovenie dekompressionnoĭ bolezni. (Patologicheskaia fiziologiia i eksperimental'naia terapiia, 1962. t. 6, no.3, p.57-61, tables.) 7 refs. Text in Russian. Summary in English. **Title tr.:** Effect of low environmental temperature on the development of caisson disease.

Reports experiments with dogs and mice. Cooling during high air pressure considerably reduced the severity of caisson disease. Two hours' cooling preceding or following compression and decompression increased the incidence and severity of the disease. (DLC.)

69926. AVER'IANOVA, V.N. Sopostavlenie eksperimental'nykh dannykh, poluchennykh pri trekh Kamchatskikh zemletriaseniiakh, s sushchestvuiushchimi silovymi modeliami ochaga. (Akademiia nauk SSSR. Izvestiia, ser. geofizicheskaia, Oct. 1962, no. 10, p.1340-56, tables, graphs.) 16 refs. Text in Russian. **Title tr.:** Correspondence of experimental data, obtained between three Kamchatka earthquakes and existing force models of the source.

Discusses the mechanism at foci of the strong Kuril-Kamchatka earthquakes of Mar. 5, Sept. 23, and Oct. 5, 1953. The possible planes of rupture at the foci are found on the basis of the first arrival sign (+ or -), and the observed signs of displacement are compared with the signs expected from the V.I. Keilis-Barok theory of the force model of earthquake source in the form of a dipole with the moment, and from the A.V. Vvedenskaia theory of the force model base on dislocations. The distribution of signs observed empirically agrees well with that expected from the second theory. (DLC.)

69927. AVILOV, I.K. Osobennosti stroeniia rel'efa i gruntov v raione iugo-vostochnoĭ Grenlandii. (Moskva. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaistva i okeanografii. Trudy 1962. t.46, p.57-61, illus., map.) 3 refs. Text in Russian. **Title tr.:** Characteristics of bottom relief and sediments in the area off southeastern Greenland.

An outline, indicating the tectonic nature of these bottoms submitted to subsequent abrasion by Quaternary ice and by subaerial and marine forces. The sediments are mainly of Quaternary moraine origin, supplemented with orogenic or biogenic materials. (DLC.)

69928. AVRORIN, VALENTIN ALEKSANDROVICH. Grammatika nanaĭskogo iazyka; tom vtoroĭ: morfologiia glagol'nykh i narechnykh chasteĭ rechi, mezhdometiĭ, sluzhebnykh slov i chastits. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 294 p. tables. (Akademiia nauk SSSR. Institut iazykoznaniia.) Refs. Text in Russian. **Title tr.:** Grammar of the Gold language. v.2: morphology of verbal and adverbial parts of speech, interjections, auxiliary words and particles. In sequence to No. 56631.

Linguistic study of Nanayets-Gold based primarily on the Naykhin dialect. An alphabetic listing of some four hundred basic morphological units is appended and their word-forming functions explained. (DLC.)

69929. AVRORIN, VALENTIN ALEKSANDROVICH. On classification of Manchu-Tungus languages. Moskva, Izd-vo vostochnoĭ lit-ry, 1960. 7 p. (International Congress of Orientalists, 25th, Moscow 1960. Delegation from the USSR, Papers.) 7 refs.

The current classification into two groups, a northern i.e. Tungus and southern: Manchu, should be changed to three. The Tungus should be two groups: Evenki or Siberian, i.e. a northern Tungus group of the Evenki proper, Negidalets, Solon, and Eveny-Lamut; and a Nanai or lower Amur i.e. southern Tungus group composed of the Nanayets-Gold, UI'chi, Oroki, Orochi and Udegeets. Each language group is characterized and their morphological and lexical correspondences noted. The Evenki and Manchu groups are farthest apart, and the Nanai group intermediate between them. (DLC.)

AVRUTSKIĬ, M. IA., *see* Konikova, A.S., *and others*. Izmenenie obmena veshchestv...1962. No. 72925

69930. AVSIUK, GRIGORIĬ ALEKSANDROVICH, 1906- . Investigations glaciologiques executées sur le territoire d'URSS sous le programme de l'Année Geophysique Internationale, AGI, en 1957-1959. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.207-215.) 8 refs. Text in French. Summary in English. **Title tr.:** Glaciological investigations carried out in the USSR under the program of the IGY in 1957-1959.

Surveys Soviet glaciological research in ten areas, four in the Arctic. Preliminary interpretation is expected to be finished in 1960. Results include discovery of uniform ablation on glaciers of the Polar Urals, etc. (DWB.)

AVSIUK, GRIGORIĬ ALEKSANDROVICH, 1906- , *see also* Akademiia nauk SSSR. Issledovaniia lednikov . . . 1961-1962. No. 69565

69931. AXFORD, W.I., *and others*. A comprehensive model of auroral and geomagnetic disturbances. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings, *pub.* 1962. v.1, p.173-77, illus.) 3 refs. *Other authors:* J.A. Fejer *and* C.O. Hines.

Presents a theoretical model claimed able to account for many characteristics of auroral and related phenomena. It is based on a specific picture of motions of the earth's magnetosphere, which under the "solar wind" acquires an ovoid form, and incorporates a "geomagnetic tail" for the field lines that rise at high latitudes. (DLC.)

69932. AXFORD, W.I., *and* **G.C. REED.** Polar-cap absorption and the magnetic storm of February 11, 1958. (Journal of geophysical research, Apr. 1962. v.67, no.4, p.1962-96, graphs, diagrs.) 13 refs

Describes sequence of events on the basis of riometer records from Ft. Yukon, Churchill, and College. The storm is explained in terms of a gas "bubble" ejected from the sun, creating a shock wave which accelerates the solar particles ahead of it and distorts and compresses the (solar) magnetic field in its passage. (DLC.)

69933. AXFORD, W.I., *and* **C.O. HINES.** A unifying theory of high-latitude geophysical phenomena and geomagnetic storms. (Canadian journal of physics, Oct. 1961. v.39, no.10, p.1433-64, diagrs.) 53refs.

Deals with the occurrence at high latitudes of a number of geophysical phenomena including geomagnetic agitation and bay disturbances, auroras, and various irregular distributions of ionospheric electrons. These may all be related in a simple way to a convection system in the outer portion of the earth's magnetosphere. The source of the convection is taken to be a viscous-like interaction between the magnetosphere and an assumed solar wind, though other sources of an equivalent nature may also be available. The model is capable of accounting for many aspects of the phenomena, including the morphology of auroral forms and the occurrence of spiral patterns in the loci of maximum intensities of several features. It also bears directly on the steady state of the magnetosphere, and in particular on the production of trapped particles in the outer Van Allen belt. From authors' abstract. (DLC.)

AYARUAK, JEAN, *see* Singittuk, W., *and others.* Letters. 1961. No. 75671

AYYANGAR, K.V., *see* Alaskan Science Conference 1960. 1961. No. 69643

69934. AZAROV, A.L., *and* **V.I. PRISHCHENKO.** Sravnitel'nye dannye o rabote udlinennykh mel'nits. (Gornyĭ zhurnal, July 1962, no. 7, p.69-70, tables.) 3 refs. Text in Russian. **Title tr.:** Comparative data on the work of lengthened grinders.

Reports on the tests of rod and ball ore grinders lengthened by 700 mm. at the Balkhash (Kazakh SSR) concentration plant in 1957, and ball grinders at Noril'sk in 1959. The lengthened grinders increased their production by 17.8% maximum at Balkhash, and 23% average at Noril'sk. (DLC.)

69935. AZBELEV, V.V. K voprosu o prodolzhitel'nosti zhizni molodi semgi v reke. (Murmansk. Polĭarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozĭaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biŭlleten' 1959, no. 2 (10), p.38-41, tables.) Text in Russian. **Title tr.:** The problem of the life span of young salmon in rivers.

Reviews studies on the age of salmon descending to the sea in arctic Europe and Russia. No one-year fishes descended to the sea, and those of two or five years made up only a small fraction. On the average, Murman fishes spend longer in fresh-water than those descending to the Terskiy coast or Kandalaksha Bay. (DLC.)

69936. AZBELEV, V.V. O srokakh vypuska molodi gorbushi rybovodnymi zavodami Murmanskogo sovnarkhoza. (Murmansk. Polĭarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozĭaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biŭlleten' 1961, no.1 (15), p.55-57, tables.) Text in Russian. **Title tr.:** Dates of release of pink salmon fry by the hatcheries of the Murmansk Sovnarkhoz.

Discusses dates and places of release and descent to the sea of *Oncorhynchus gorbuscha* introduced into Kola Peninsula from Kamchatka; number of returns to the rivers; changes in spawning period, as compared with that in Kamchatka. These changes are attributed to low temperature. (DLC.)

AZBELEV, V.V., *see also* Lagunov, I.I., *and others.* N. salmon. 1960. No. 73278

69937. AZHAZHA, V.G. Goluboĭ zanaves razdvigaetsĭa; nauchnye reĭsy "Severĭanki." (Priroda, July 1961. god 50, no.7, p.81-87, illus., map.) Text in Russian. **Title tr.:** The blue curtain rises; scientific voyages of *Severĭanka.*

Account of adaptations made in a submarine, for biological research, and of its activities in the Barents Sea and North Atlantic. Reconnaissance on "wintering" and "awakening" herring, behavior and response to light, observations on cod, bottom studies, checking the working of trawl nets, special equipment, etc. are included. (DLC.)

69938. AZHAZHA, V.G., *and* **R.B. MAMAEVA.** Ob"edinenie podvodnykh issledovateleĭ. (Okeanologiĭa, 1961. t.1, vyp.5, p.928-30.) Text in Russian. **Title tr.:** Association of Underwater Explorers.

Reports the first meeting, Apr. 19-22, 1961, of the Underwater Investigations Section of the Oceanographic Commission (Academy of Sciences), with 200 representatives of 42 marine research organizations, including VNIRO and PINRO, and 32 papers etc. presented. (DLC.)

69939. AZMUCHENKO, N. Bogatyri sibirskikh lesov. (Master lesa, Dec. 1962. god 6, no. 12, p-1-2, illus., plan.) Text in Russian. **Title tr.:** Heroes of the Siberian forests.

Describes the competition among 40 small lumber-jack teams to produce 20,000 m^3 /yr. in the Konda combine. Each three-man team has a feller, a chokerman and a tractor driver; organization of the work is described and illus. and the best teams are cited. (DLC.)

69940. AZUMA, TOHRU. Studies of cold tolerance. (Endocrinologia japonica 1961. v.8, no.1, p.50-56, tables.) 11 refs.

Reports on the effect of various preparations upon survival time of mice acclimated to -5°±1°C. and exposed to severe cold (-30° to -35°C.) Acquisition or disappearance of acclimatization required less than one week. Of the means tried the following increased survival time: castration, thyroxine, chlorpromazine, and Prednisolone when given before exposure. Males showed longer survival time. (DNLM.)

69941. BAADSGAARD, HALFDAN, *and others.* Caledonian or Acadian granites of the northern Yukon Territory. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p. 458-65, maps, section, table.) 18 refs. *Other authors:* R.E.

Folinsbee *and* J.I. Lipson.

Deals with reconnaissance potassium-argon dates obtained from igneous intrusives in the Canadian Cordillera north of lat. 60°. Biotite from a granite on Mt. Fitton (68°30′N. 138°01′W.) in Yukon Territory returns a potassium-argon age of 353 million yrs. Evidence from eastern North American and from the Caledonian orogenic belt of Europe, suggests the occurrence of extensive orogeny and granite emplacement about 350 million years ago, probably during the Devonian. The presence of mid-Devonian granites in the Canadian Arctic indicates possible trans-Arctic correlations, and locally, oil accumulation and mineral deposits. (DLC.)

69942. BAADSGAARD, HALFDAN, *and others.* Potassium-argon dates of biotites from Cordilleran granites. (Geological Society of America. Bulletin, May 1961. v.72, no.5, p. 689-702, maps, table.) 60 refs. *Other authors:* R.E. Folinsbee and J. Lipson.

Compares dates established by this method with relative ages established by geological mapping of the North American Cordillera. Results show close agreement, confirming the geological dating of five Cordilleran orogenies. Among the samples dated, are three from Yukon Territory: a Paleozoic granite from the Fitton batholith in the north; and mid-Cretaceous plutons from the south and east. Discovery of the Paleozoic pluton in northern Yukon indicates possible oil deposits in the Peel Plateau area and, presumably in the Arctic Islands extension of this geosyncline. (DGS.)

BAADSGAARD, HALFDAN, *see also*

Burwash, R.A., & *others.* Precambrian K-Ar dates . . . 1962. No. 70473

Burwash, R.A., & H. Baadsgaard. Yellowknife-Nonacho . . . 1962. No. 70474

69943. BÅTH, MARKUS, 1916– , *and* E. TRYGGVASON. Deep seismic reflection experiments at Kiruna. (Geofisica pura e applicata, Jan.-Apr. 1962. v.51 (1962/I), p. 79-90, tables, diagrs., map.) 10 refs.

Presents results of a study of near-vertical reflections from crustal discontinuities. The experiment was carried out at the Kiruna, Sweden, iron ore mines by means of a series of quarry blasts recorded with a refraction instrument at about ten km. distance. The records show direct *P* waves with sharp onsets and a velocity of 5.65±0.13 km./sec. (in porphyry), also *S* waves of less definite onsets, and sound waves through the atmosphere. *P* waves reflected from crustal discontinuities were weak and of erratic occurrence. Approximate depths to the Conrad and Mohorovičić discontinuities are calculated as 19 km. and 33-34 km. There is general agreement with the explosion records of the Grenet seismograph at Kiruna; differences can be explained by the different frequency response of the two instruments. These are the first seismic investigations of the deeper crustal structure in Fennoscandia.—From authors' abstract. (DLC.)

69944. BABAĬAN, G. D. Novye dannye o geologicheskom stroenii i perspektivakh neftegazonosnosti Nizhne-Vilʹuĭskoĭ zony podnʹatiĭ. (Geologiĭa nefti i gaza, Feb. 1962. god 6, no.2, p. 9-13, maps.) 4 refs. Text in Russian. **Title tr.:** New data on the geologic structure and oil and gas possibilities in the lower Vilyuy uplift zone.

Reports on seismic investigations in the Lena-Vilyuy interfluve during 1956-1960. The lower Vilyuy upland about 200 km. in length and 25-95 km. wide is distinguished, its tectonic structure described. Several structures of brachyanticline folds are indicated. From deep borings, gravimetric and seismic measurements, thickness of the Cretaceous, Tertiary, and other deposits is calculated. Natural gas was found and the zone is considered prospective for gas and oil accumulation. (DLC.)

69945. BABAĬAN, G. D., *and* **A. K. BOBROV.** Struktura Vilʹuĭskoĭ sineklizy i Predverkhoĭanskogo progiba po krovle ĭurskikh otlozheniĭ. (Geologiĭa i geofizika, 1961, no.3, p. 35-41, map.) 10 refs. Text in Russian. Summary in English. **Title tr.:** The structure of the Vilyuy syncline and Verkhoyansk depression according to the roof of Jurassic deposits.

Reviews the discovery of productive gas accumulation in Ust'-Vilyuy Jurassic deposits, geologic and the subsequent geophysical studies of the Vilyuy syncline and fore-Verkhoyansk trough. Based on new materials, a new interpretation of the tectonic structure is offered with special attention to the thickness and distribution of Cretaceous and Triassic deposits. Various structures are distinguished and briefly described. Local upheavals composed of Cretaceous, Jurassic and upper Paleozoic rocks are suggested for further oil and gas prospecting. (DLC.)

69946. BABB, M. F. Performance of 58 tomato varieties under greenhouse culture in Alaska, 1949-1958. Palmer, Alaska, Nov. 1959. 15 p. tables. (Alaska. University. Agricultural Experiment Station Bulletin 28.)

Lists and evaluates tested varieties for growth in greenhouses. Eight are recommended, fertilizers suggested; and leaf-mold resistance appraised. The varieties recommended are also described in non-technical terms by H.W. Pillsbury in the University's Cooperative Extension Service Extension Circular no. 455, issued May 1960. (DA.)

BABINA, N. M., *see* Kontorovich, A.Ė., *and others.* Nekotorye cherty geokhimii . . .. 1961. No. 72946

69947. BABKIN, P. V., *and* **V. I. KOPYTIN.** Geologicheskie i mineralogicheskie osobennosti mestorozhdeniĭa rtuti na Chukotke. (Sovetskaĭa geologiĭa, Aug. 1961, no.8, p. 109-113, map.) 7 refs. Text in Russian. **Title tr.:** Geologic and mineralogic features of mercury deposits in Chukotka.

Describes the geologic structure of the ore field, morphology of the ore bodies, hydro-thermal alteration and genesis of the (poor) mercury deposits in the Okhotsk - Chauna volcanic belt, on the border of Mesozoic and Cenozoic folded zones. A geologic map of the deposits is included. Only one of the ore bodies has relatively higher mercury content, i.e. up to 1%. (DLC.)

69948. BABKIN, P. V. Materialy po kristallografii kinovari Koriakskogo nagorʹĭa. (Vsesoĭuznoe mineralogicheskoe obshchestvo. Zapiski, 1962. ser. 2, chastʹ 91, vyp.3, p. 337-42, illus., tables.) 8 refs. Text in Russian. **Title tr.:** Materials on the crystallography of cinnabar from the Koryak upland.

Reports his 1958-1960 study of the mercury deposits in this eastern area of Magadan. Cinnabar crystals were examined in detail, and their crystallographic features, chemical composition and X-ray tests are reported. Physical properties, occurrence and diagnostic features of cinnabar, the most important ore of mercury, are noted. (DLC.)

69949. BABKIN, P. V. O gipergennykh mineralakh rtuti na Chukotke. (Vsesoiūznoe mineralogicheskoe obshchestvo. Zapiski 1961. ser. 2, chast' 90, vyp.3, p. 299-301.) 6 refs. Text in Russian. **Title tr.:** On supergene minerals of mercury in the Chukotka.

Reports a geologic and mineralogic study in 1958-1959. Native mercury, calomel, eglestonite, terlinguaite, and mosesite are briefly described. Supergene minerals of mercury have been known hitherto only in dry climates and in southern latitudes; their occurrence in permafrost regions is considered significant. (DLC.)

69950. BABLIŪK, BORIS TIMOFEEVICH. Almaznaīa semiletka. (*In:* Iokhimovich, D.I. Moīa Sibir', 1960, p. 102-117.) Text in Russian. **Title tr.:** The seven-year plan in the diamond industry.

Popular account of diamond mining by the ĪAkutalmaz trust at Mirnyy and workers' effort to exceed the output planned. Transportation and power supply problems are discussed. Urban and industrial growth of Mirnyy is sketched and the first stage in building Viliūĭgėsstroĭ is described; this power station on the Vilyuy River is to be completed in 1963. (DLC.)

69951. BABSKAĪA, ĪU. E. Vliīanie gipotermii na vnutrimolekuliārnuiū perestroĭku belka. (Akademiīa nauk SSSR. Doklady 1961. t. 137, no.3, p. 710-12, illus., table.) 5 refs. Text in Russian. **Title tr.:** The effect of hypothermia upon intramolecular reorganization of protein.

Hypothermia with narcosis produced in the serum of rabbits a lowering of the SH-group. Serum titration at low temperatures failed to produce such effect. The effect produced in the animals disappeared in three days. (DLC.)

BABSKAĪA, ĪU. E., *see also* Konikova, A.S., & *others*. Izmenenie obmena veshchestv . . . 1962. No. 72925

69952. BABURIN, N. N. K metodike vychisleniīa glubin po termometram-glubomeram. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skii institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p. 126-27, graph.) Text in Russian. **Title tr.:** A method of computing depths by a thermometer-type depth gage.

Presents a simplified graph method to compute depths with the aid of thermo-depth gages, instead of the currently used time-consuming calculus method. Results of tests with the two methods in the Bering Sea and North Pacific were in agreement, except in three cases and there the discrepancy was negligible. (CaMAI.)

69953. BACHARACH, BENJAMIN, *and others*. Effect of inhaling carbon dioxide on brain cooling during hypothermia. (Surgical forum, 1961. v. 12, p. 186-87, illus.) 3 refs. *Other authors:* M. Snyder *and* J.Y. Templeton.

Report on experiments with dogs made hypothermic by extracorporeal blood cooling. Addition of 5% carbon dioxide to the ventilating oxygen produced increased blood and more efficient cooling in the brain. (DNLM.)

BACHOFEN, JOHANN JAKOB, 1815–1887, *see* Hultkrantz, Å. Mother goddess . . . 1961. No. 72258

69954. BADER, HENRI, 1907– . The Greenland ice sheet. Hanover, N.H., Sept. 1961. iv, 18 p., illus., maps, diagr., graphs, table. (U.S. Army. Cold Regions Research and Engineering Laboratory. Cold regions science and engineering, 1-B2.) 11 refs.

Summarizes basic information on this inland ice for design or construction purposes. It covers 666,400 sq. mi., four-fifths the area of the island, areal, linear, surface, and thickness data are presented. Mass budget of the inland ice is estimated to be: accumulation 630 km³ ; ablation 120-270 km³ ; loss by iceberg calvings 240 km³ , resulting in an annual gain of 120-270 km³ . The warming of the Arctic during the last few decades is clearly reflected in the stratigraphic record from the deep pit and drill hole at 77° N. 56° W. The ice sheet however, is probably abnormally cold except for a very thin bottom layer. Surface motion in its interior is estimated to be a few tens of meters per year. Four aspects or facies of surface conditions: ablation, soaked, percolation, and dry-snow, are described and mapped. Slope of the depth-density curve varies with location; at about 80 m. depth, impermeable ice is found with density of about 0.8 g./cm³ and an air bubble volume of about 10%. (CaMAI.)

69955. BADER, HENRI, 1907– , *and* **D. KUROIWA.** The physics and mechanics of snow as a material. Hanover, N.H., July 1962, vi, 79 p. illus., diagrs., graphs, tables. (U.S. Army. Cold Regions Research and Engineering Laboratory. Cold regions science and engineering, p.2, physical science, sec. B.) 60 refs.

Summarizes knowledge on the properties of snow as a material: a porous, permeable aggregate of ice grains, mainly single crystals or close groupings of several crystals, the pores filled with air and water vapor; in wet snow the grains coated with liquid water. Physical parameters change with time, texture and structure changing from the time of deposition until the snow disappears through ablation or becomes ice. Index properties (14) are considered, including density, porosity, permeability, etc. The International classification for snow issued by the International Association of Hydrology in 1954, is reprinted. Five main factors hampering snow mechanics research are cited, high temperature dependence, thermodynamic instability, etc. Collapse- , flow- , creep- , and elasticity mechanics are distinguished and examples given from Site 2 and Tuto, Greenland, as well as from Antarctica. D. Kuroiwa summarizes recent studies of the dielectric properties of ice, then describes those properties of the deposited snow as closely related to its internal structure. Finally, the dielectric behavior of snow in the high frequency (1 to 10^4 mc.) range is treated as a problem of radio and microwave engineering in snowy regions. (CaMAI.)

69956. BADER, HENRI, 1907– . Theory of den-

sification of dry snow on high polar glaciers, II. Hanover, N.H., Sept. 1962. iv, 18 p. graphs, tables. (U.S. Army. Cold Regions Research and Engineering Laboratory, Research report 108.) 5 refs.

Develops further the theory proposed in No. 63208, applicable if snow load was smaller than 1000 g./cm^{27}. The linear relation between load-stress and strain rate, not valid for high stresses, is replaced by a hyperbolic sine function, with a correction factor added for the annual temperature cycle, which produces more rapid densification than would occur at constant mean temperature. Two equations are derived for calculating depth-density curves with computers, and a simplified equation is given for use with a desk calculator. Computed depth-density curves for Site 2 on the Greenland Inland Ice and for three antarctic sites show good correlation with field data. Densification is much less than predicted for depths greater than 72 m. at Site 2; thus the hyperbolic sine function appears to be invalid at high load stresses such as 5 kg./cm^2, for instance under heavily loaded piles or when differential settlements are large. (CaMAI.)

69957. BADGLEY, FRANKLIN I. Heat balance at the surface of the Arctic Ocean. (Western Snow Conference, 29th. *Spokane* 1961. Proceedings, p. 101-105.

Reviews data on five components of the heat budget of the ocean surface: visible radiation, infra-red radiation, conduction from surface to air, latent heat transferred by evaporation or condensation, and heat conducted from the ocean towards the surface. Dominant factor is the radiative interchange with the environment; its nature is influenced by ice cover, as is the relative importance of evaporation to the heat budget. Artificial removal of the ice cover and sequelae are considered. Estimated values for the five components are tabulated for ice and snow surfaces 82°-86°N., on the basis of data from the drifting stations North Pole-2 and Alpha. Estimates for the components of the heat budget of an ice-free surface indicate that annual heat loss from an open surface far exceeds that from a frozen surface. (DGS.)

BADGLEY, FRANKLIN I., *see also* Hanson, K.J. Some aspects of the thermal energy exchange . . . ice pack. 1961. No. 72013

BACKSTEDT, CARL AXEL, *see* Liljequist, G.H. Arktisk utpost . . . 1960. No. 73499

BAEVA, O. M., *see* Mamaev, IU.L. & *others* Gel'mintofauna . . . 1959. No. 73776

BAGDASAROV, É. A., *see* Kukharenko, A.A., & É.A. Bagdasarov. Paragenezis . . . 1962. No. 73197

69958. BAGGERMAN, BERTHA. Salinity preference, thyroid activity and seaward migration of four species of Pacific salmon, *Oncorhynchus*. (Canada. Fisheries Research Board. Journal, May 1960. v.17, no.3, p. 295-322, illus., tables.) 35 refs.

Study of fry and yearlings of chum, pink, coho and sockeye salmon. At the onset of seaward migration, all four changed preference from fresh to salt water and maintained this preference throughout the migration season. At its end, the coho and sockeye changed preference to fresh water if kept in it; the two other species did not. The first two forms may survive in fresh water for several years. (DI.)

BAHN, C. H., *see* Irving, L., & *others*. Regulation of temperature in fur seals. 1962. No. 72409

69959. BAILLIE, A. H. Histochemical studies of the mouse testis following cold exposure. (Scottish medical journal, Jan. 1961. v.6, no.1, p. 6-11, illus., table.) 13 refs.

Mice kept up to 10 weeks at -3°C. showed no change in their testes following H.&H., P.A.S., or Sudan-black staining. However Schiff-stainable lipids showed changes in the Leydig and Sertolli cells, and are described. (DNLM.)

69960. BAINBRIDGE, V. Warm-water species in the plankton off Newfoundland during winter months. (Nature, Sept. 16, 1961. v.191, no.4794, p. 1216-17, map.) 8 refs.

Reports occurrence of warm-water zooplankton patches (with main forms listed) as encountered in February and March 1959-61 during monthly hauls with the continuous plankton recorder. Warm-water zooplankton was previously reported from the Labrador Sea also, and it is believed in both cases to have been carried north by branches of the Gulf Stream. (DLC.)

69961. BAINES, W. DOUGLAS. On the transfer of heat from a river to an ice sheet. (Engineering Institute of Canada. Transactions, 1961. v.5, no.1, p. 27-32, diagrs.) 5 refs.

Discusses thermal conditions in an ice-covered river channel. A conventional heat transfer formula is used to determine the rate of heat transfer from water to ice; examples are given. It is shown that very small temperature differences must exist between the water and the ice sheet. The effect of the ice sheet on the flow is considered also. (DLC.)

69962. BAINES, W. DOUGLAS. The principles of operation of bubbling systems. (*In:* National Research Council of Canada . . . Symposium on Air Bubbling, 1961. p. 12-22, diagrs., graphs.) 5 refs. *Its:* Technical memorandum no. 70.

The source of heat for the air bubbler lies in the excess temperature in the lower layers of the water, from which the bubbler induces an upward current carrying this heat against the under side of the ice. Characteristics of this flow pattern and heat transport by the air bubbler are described in detail, the flow field diagrammed; typical velocity profiles in the vertical and surface jets (currents created by bubbles) are shown. (DN-HO.)

69963. BAKALOV, S. A. Metody stroitel'stva v Vorkutskom raĭone. (*In:* Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Severnoe otdelenie. Trudy vyp. 2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p. 27-32, diagrs.) 5 refs. Text in Russian. **Title tr.:** Construction methods in the Vorkuta region.

Reviews results of investigations of construction problems and techniques in Vorkuta, under snow 8-9 months a year. Some 953 buildings were examined, of which 856 had been built without consideration of the thermal state of the ground.

Stone buildings suffered most but nearly all buildings, whatever the construction settled considerably. Various types of construction are diagrammed and recommendations made for procedures that allow for thawing during the construction period, for thawing of the ground before construction, and for building on alternating frozen and thawed ground. Piling foundations are recommended in most cases. Opinions differ greatly on the methods to be used in building on frozen ground, despite considerable experience and research; efforts to erect stable buildings on permafrost have failed to a large extent. (DLC.)

69964. BAKALOV, S. A., *and others.* Radiatsionnyĭ i teplovoĭ balans poverkhnosti sushi v Arktike. (Leningrad. Glavnaîa geofizicheskaîa observatoriîa. Trudy 1959. vyp.92, p. 102-126, tables, graphs, diagrs.) Text in Russian. *Other authors:* B.A. Derîugin *and* K.A. Sychev. **Title tr.:** Radiation and heat balance of the earth's surface in the Arctic.

Reports the climatic conditions of the Amderma region of Arkhangel'sk Province based on meteorological station data at Amderma, Yugorskiy Shar, Kara-Guba, Dikson, and Tiksi. Actinometric observations made on natural, uncovered and artificially covered tundra at Amderma during 1952-1954 are reported and analyzed. The various factors in radiation are reviewed. Total radiation, radiation balance, heat exchange in the ground and that in the air layer just above ground are reported. Heat balance for the months of May through September is also reported. (DLC.)

69965. BAKER, DONALD GRANVILLE, 1924- , *and* **E. A. SELLERS.** Electrolyte metabolism in the rat exposed to a low environmental temperature. (Canadian journal of biochemistry and physiology, Aug. 1957. v.35, no.8, p. 631-36, illus., table.) 24 refs.

Exposure to 2°C. produced a loss of chloride in the first day; and retention of sodium and to a lesser extent of potassium, after continued cold stress. After 45 days a sustained elevation of sodium with a transient increase of potassium were noted in the plasma; blood volume and total water content also increased. (DLC.)

69966. BAKER, DONALD GRANVILLE, 1924- . Electrolyte metabolism in the rat exposed to a low environmental temperature, 2. (Canadian journal of biochemistry and physiology, Mar. 1960. v.38, no.3, p. 205-211, illus., tables.) 11 refs.

Rats acclimatized to 2°C. showed lower temperatures in the subcutaneous tissue and superficial muscle, than controls. The total water content of the skin was also increased, due to increased chloride space. In the muscle, water content was lower, chloride space and intracellular sodium higher than in controls. (DNLM.)

BAKER, P. T., *see* Daniels, F., & P.T. Baker. Relationship between body fat and shivering . . . 1961. No. 70872

69967. BAKHVALOV, V. M. Metodika spektrozonal'noĭ aèrofotos"emki na plenke SN-2 i ee kharakteristika dlîa deshifrirovaniîa aèrosnimkov pri poiskakh korennykh mestorozhdeniĭ almazov. (*In:* Akademiîa nauk SSSR. Laboratoriîa aèrometodov. Primenenie aèrometodov pri poiskakh . . . almazov, 1960, p. 55-65, tables, graphs.) 3 refs. Text in Russian. **Title tr.:** Methods of spectrozonal aerial photographic survey on SN-2 film and its characteristics for air-photo interpretation in prospecting primary diamond deposits.

Notes the method recently worked out for taking simultaneously on the same film photographs in two different spectral zones. SN-2 film has two coatings: one sensitive to the infra-red spectrum, the other sensitive to the yellow-orange and red part of the spectrum. This type of film was used in 1956-1957 for taking aerial photographs in the western regions of Yakutia. Application, processing, developing prints and other properties of SN-2 are described. Its value for interpretation of features of the Yakutia region are discussed. (DLC.)

69968. BAKLANOV, A. V. Tysîacha shest'sot kubometrov drevesiny v god na odnogo rabochego. (Lesnaîa promyshlennost', Jan. 1961. god 39, no.1, p. 8-12, illus., tables.) Text in Russian. **Title tr.:** 1,600 m³ timber annually per worker.

Reports an increase in timber production from 17.3 million m³ in 1957 to 19.3 million in 1959 in Arkhangel'sk Province, due to technical improvements and mechanization. Employes declined from 48.3 thousand in 1956 to 42.8 thousand in 1959, but output increased from 286 m³/man/yr. in 1956 to 500 m³ in 1960. The Verkhovskiy lumbering concern is leading in this field; with the assistance of the Northern Industrial Research Institute (SevNIIP), it has introduced an automatic production line, which is described with technical details and which is expected to set a record 1,600 m³ timber/worker by 1961. (DLC.)

BAKLANOVA, K. A., *see* Kukharenko, A.A., & *others.* Sul'fat-monatsit . . . 1961. No. 73199

69969. BAKSHTANSKIĬ, È. L. Rol' kormleniîa i podogreva vody pri iskusstvennom vyrashchivanii lososeĭ v Zapoliîar'e. (Rybnoe khoziîaĭstvo, 1961. god 37, no.10, p. 15-18, illus., tables.) Text in Russian. **Title tr.:** The role of feeding and of warming the water in artificial rearing of salmon in the Arctic.

Outlines the acclimatization of Far-East salmon in the White Sea; first attempt at artificial feeding of fry in the Far East (1953); general mass feeding (1959); relation between water temperature, food intake, and growth; scheme of warming the water in some hatcheries. (DLC.)

69970. BALAKHONOVA, L. M., *and* **V. V. BARSUKOV.** Khod muksuna, *Coregonus muksun* Pallas, v r. Ob' i ego raspredelenie v del'te Obi. (Voprosy ikhtiologii, 1961, t.1, vyp.2 (19), p.262-74, illus., tables.) 13 refs. Text in Russian. **Title tr.:** The run of *Coregonus muksun* Pallas into the Ob River and its distribution in the Ob delta.

Account of investigations conducted in 1948, before industrial developments changed conditions in respect to this very common fish. The run from the sea into the delta and river, its relative size and fluctuations, distribution in the delta, size of catches and size of fish caught, diet, age and rate of growth, sexual development, and fishery, are described. (DLC.)

69971. BALAKHONOVA, L. M., *and* **V. V. BAR-**

SUKOV. O skate molodi Sibirskogo osetra, *Acipenser baeri* Br., iz r. Irtysha. (Voprosy ikhtiologii, 1962. t.2, vyp.2 (23), p.309-315, illus., tables.) 7 refs. Text in Russian. **Title tr.:** Downstream migration of young Siberian sturgeon, *Acipenser baeri* Br., from the Irtysh River.

Reports weight, length and age analysis of over 500, mostly sexually immature, specimens from the Konda River (a tributary of the Irtysh) on one end, and from the efflux of the Ob delta, on the other. Age at beginning of migration, its period, order, and peak are determined. (DLC.)

BALAKINA, L. M., *see* Pacific Science Congress. 1961. No. 74619

BALAKSHIN, L. L., *see* Gudkovich, Z.M., & L.L. Balakshin. Sud'ba dreĭfuĭushcheĭ stantsii. 1962. No. 71898

69972. BALANDIN, ALEKSEĬ NIKOLAEVICH. ĬAzyk man'siĭskoĭ skazki. Leningrad, Izd-vo Glavsevmorputi, 1939. 80 p. 47 refs. Text in Russian. **Title tr.:** Language of Vogul folk tales.

Discusses the vocabulary, morphology, syntax, poetic style, and phraseology of oral tales, legends, myths, and poetry current among the Voguls. (DSI.)

69973. BALASHOV, IŪ. A. Évoliūtsiīa sostava i soderzhaniĭ redkozemel'nykh élementov v intruzivnykh fazakh Lovozerskogo shchelochnogo massiva, Kol'skiĭ poluostrov. (Geokhimiīa, 1962, no.3, p.207-219, tables, diagrs.) 26 refs. Text in Russian. Summary in English. **Title tr.:** The evolution of the composition and content of rare earth elements in intrusive phases of the Lovozero alkaline massif, Kola Peninsula.

Reports results of 116 X-ray analyses made during 1959-1961. A close connection is established between change in the composition and content of rare earth elements and evolution of the chemical composition of rocks in each of the four phases of this massif. (DLC.)

69974. BALASHOV, IŪ. A., *and* **N. V. TURANSKAIA.** Redkozemel'nye élementy v évdialitovom komplekse Lovozerskogo shchelochnogo massiva. (Geokhimiīa, 1961, no.12, p.1087-98, tables, diagrs.) 22 refs. Text in Russian. Summary in English. **Title tr.:** Rare earth elements in the eudialyte complex of the Lovozero alkaline massif.

This complex, built by the third phase of the Lovozero alkaline massif, consists of eudialytic and porphyraceous lujavrites (90 to 95%). Composition of rare earth elements as determined from 53 samples of rocks and minerals by X-ray-spectrum analyses is shown in tables. The rare earth element content varies considerably in the rocks and prevailing patterns of this variation are described. The dominant elements are: Ce, Y, Nd, La. Content of rare earth elements in subphases of the eudialyte complex also is evaluated. (DLC.)

69975. BALASHOV, IŪ. A., *and* **N. V. TURANSKAIA.** Redkozemel'nye élementy v peridotite Poliārnogo Urala. (Geokhimiīa, 1962, no.4, p. 377-78, table.) 9 refs. Text in Russian. **Title tr.:** Rare earth elements in peridotite of the Polar Ural.

Reports study of ultrabasic peridotite from the Marun-Key Ridge, consisting of olivine, bronzite, augite, and other minerals. The average rare earth content is $2.0 \cdot 10^{-3}$% Content of rare earth elements such as Y, La, Ce and others is also noted. (DLC.)

69976. BALASHOVA, EVROSINIIA ANTONOVNA. Trilobity srednego i verkhnego ordovika i nizhnego silura Vostochnogo Taĭmyra. Leningrad, Izd-vo Leningradskogo universiteta, 1960. 112 p. tables, plates. 65 refs. Text in Russian. **Title tr.:** Trilobites of the Middle and Upper Ordovician and lower Silurian of eastern Taymyr.

Describes 60 forms from collections made in 1951-1954; 29 of them from the Middle Ordovician, 24 Upper Ordovician, and seven from lower Silurian deposits. More than half (39 forms) are identified for the first time. Stratigraphy of the deposits and stratigraphic distribution of trilobite complexes also are outlined. (DLC.)

69977. BALBYSHEV, I. N. Vyrashchivat' lesopolosy bystro i deshevo. (Put' i putevoe khoziaĭstvo, Oct. 1961. god 5, no.10, p. 33-35, illus.) Text in Russian. **Title tr.:** Cheap and fast-growing forest shelter belts.

Stresses the economic importance of windbreaks of living trees to protect railroads from snow, and discusses the planning, planting and maintenance problems from experience in various parts of the Soviet Union, including the Pechora railroad across the tundra. Local tree species are recommended for the plantings. (DLC.)

69978. BALDUZZI, F. Experimentelle Untersuchungen über den Bodenfrost. (Berlin. Preussische Versuchsanstalt für Wasserbau und Erdbau. Mitteilungen no.44, 1959.) Text in German. Translation pub. as: Canada. National Research Council. Technical translation 912, 1960. 43 p. diagr., 18 refs. **Title tr.:** Experimental investigation of soil freezing.

Presents an original approach to the problems of frost heaving in soils, and describes test procedure on samples of TiO_2, marine chalk, silt, and clayey silt; including saturation of sample, study of the saturation effect on the shearing strength, and of the freezing of the saturated sample. Conclusions are that it is possible to measure forces acting on the soil and the pore water at saturation during the penetration of frost; forces acting in the saturation zones are independent of the size of the zones bounded by the soil components and macropores. The methods based on these tests make possible the general investigation of the frost properties of the soil; a relationship exists between the volumetric properties of the soils when subjected to shearing stress, as described by the vector curve, and its behavior on penetration of the frost; as frost penetrates, the forces acting on the soil and pore water are together determined by the characteristic properties of the soil. (CaOG translation only.)

69979. BALDWIN, WILLIAM KIRWAN WILLCOCKS, 1910– , *and others*. Botanical excursion to the Boreal forest region in northern Quebec and Ontario. Ottawa, Queen's Printer, 1959. 119 p. illus., maps. 66 refs. (Canada. Dept. of Northern Affairs and National Resources. National Museum of Canada.)

Guide book primarily for an excursion by the Ninth International Botanical Congress in Aug. 1959. The itinerary includes the James Bay region

and Moosonee in northern Ontario. The regional geology and its effect on vegetation are outlined by J. Terasmae; and the tree species, by D. W. MacLean and W.K.W. Baldwin. Vascular plants are listed, by E. Lepage and W.K.W. Baldwin, for three areas, one of them the James Bay basin with 932 species. (DI.)

69980. BALDWIN, WILLIAM KIRWAN WILLCOCKS, 1910– , *and others*. Report on botanical excursion to the Boreal forest region in northern Quebec and Ontario. Ottawa, Dept. of Northern Affairs and National Resources, National Museum, 1962. 107 p. illus. maps. Refs.

Presents narrative of this field trip of the Ninth International Botanical Congress, and the participants' observations. The party spent three days in the James Bay lowland of northern Ontario. Notes on the geology are given by J. Terasmae, and on landform-vegetation relationships by G. A. Hills. The open bogs (aapasuo) of the Moosonee area are compared with bogs in central Finland, by A. Kalela. Some additions and revisions are made by E. Lepage, W.K.W. Baldwin, and I. J. Bassett to the vascular plants listed in the guide book *(supra)*. (DI.)

69981. BAL'DYSH, G. Na grani zhizni i smerti. (Neva, 1962, no.12, p. 148-50.) Text in Russian. **Title tr.:** Between life and death.

Discusses the reported resuscitation of micro-organisms and newts enclosed in permafrost for several millennia, including the revival of several 5,000-year-old tritons found during geological surveys in Yakutia. According to the biologist L.K. Lozina-Lozinskiĭ, certain cold-adapted animal organisms can survive in suspended animation if maintained at temperatures not exceeding -10 to -15°C. (DLC.)

69982. BALIKCI, ASEN. Anthropological field work among the Arviligjuarmiut of Pelly Bay, N.W. T. (Arctic circular, Dec. 1961. v.14, no.2, p.40-42)

Outlines study in summer 1959 and winter 1959-1960 of the traditional and contemporary cultures of these subsistence hunters in Keewatin District. Traditional ecological adaptation based on cooperative hunting and food sharing, social integration (very low), shaman's role and behavior, etc. are briefly stated. Acculturation following introduction of the rifle about 1919, and present trends, the Roman Catholic mission, iron tools, new hunting techniques, etc. as factors, are noted. Some hundred artifacts, mostly models of traditional implements, were collected; folk songs, drum dances, also some shamanistic performances, were recorded. (CaMAI.)

69983. BALIKCI, ASEN, *and* E. ARIMA. A new umiak or Eskimo women's boat for the National Museum of Canada. (Arctic circular, 1960, *pub.* 1961. v. 13, no. 4, p. 58-62.)

First author discusses the search for an Eskimo still possessing the skill to build this type of skin boat, the so-called woman's boat formerly used for transport, but long since abandoned, in the Canadian Arctic. The second author describes the process of building the umiak. The work was done by an old Eskimo, Ainalik, of Ivugivik in the Hudson Strait area of northern Quebec, and two assistants in summer 1960. (CaMAI.)

69984. BALIKCI, ASEN. Relations inter-ethniques à la Grande Rivière de la Baleine, Baie d'Hudson, 1957. (Canada. National Museum. Bulletin 1961. no.173, Anthropological series no. 50, Contributions to anthropology 1959, p.64-107.) 30 refs. Text in French. **Title tr.:** Inter-ethnic relations at Great Whale River, Hudson Bay, 1957.

Study of Eskimo - Euro-Canadian and intra-Eskimo relations based on summer 1957 field work. A hostile attitude toward Euro-Canadians is common among the Eskimos and is attributed to the former's down-grading treatment of the aborigines. Their traditional occupational activities have become disorganized. The influx of whites in large numbers has reversed the previous population ratio and forced the Eskimos, now the minority, into poorly paid and socially inferior occupations as unskilled laborers, domestics, prostitutes, etc. The Eskimos distinguish their welfare officers, etc. as "our" whites; the "others" are differentiated as "good" and "bad" according to conduct toward natives. French-Canadians usually are not involved in these distinctions, generally applied to Euro-Canadians of British extraction, and to recent immigrants. As result of tensions, a closer ethnic identification between unrelated Eskimo bands has developed; the traditional in-group orientation observed by J.J. Honigmann in 1950, however, is still strong. (DLC.)

69985. BALIKCI, ASEN. Some acculturative trends among the Eastern Canadian Eskimos. (International Congress of Americanists, 34th, *Vienna*, 1960. Proceedings, *pub.* 1962, p. 504-513.) 8 refs

Deals with the socio-economic changes evolving from external cultural and technological influences. In three Eskimo groups studied, similar acculturative factors are present with diverse trends resulting. Among the Arviligjuarmiut hunters of Pelly Bay, a greater isolation and emergence of a preferred cousin marriage pattern is observed. At Povungnituk, a trapping community on northeast Hudson Bay, there is a strengthening of the nuclear family and increased group collaboration. The Great Whale River Eskimos on southeast Hudson Bay show increasing integration into the Euro-Canadian economic system, as their hunting and trapping decline. (DSI.)

69986. BALIKCI, ASEN. Suicidal behaviour among the Netsilik Eskimos. (North, July-Aug. 1961. v. 8, no. 4, p. 12-19.)

Analyzes data collected in 1959-1960 at Pelly Bay, Keewatin District: 50 successful and attempted suicides during the past 50 years. Most suicides are by married men under 60 years of age. The rate is 30 times that of the United States. Influences of interpersonal and intergroup relations such as shaman-patient, parent-descendant, sharing practices, circulation of women, etc. were studied. The suicidal behavior is attributed mostly to incapacity for establishing relationship with other people, resulting from the group's low level of social integration. (DLC.)

69987. BALKOV, V. A. Osnovnye geograficheskie zakonomernosti raspredeleniia vesennego stoka rek Urala. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, July-Aug. 1962. t. 94, vyp. 4, p. 321-25, graphs, fold. map.) 11 refs. Text in

Russian. **Title tr.:** Main geographic laws in distribution of spring runoff of the Ural rivers.

Characterizes the physical-geographic factors affecting runoff, including the Northern Ural. Special attention is given to relief as the determining factor, its effects on climate, hydrologic conditions, snow accumulation and thaw, humidity, rate of precipitation, etc. Map shows the rate (in mm.) and distribution of spring runoff throughout the Urals. (DLC.)

BALL, GEORGE E., *see* Pacific Science Congress . . . 1961. No. 74619

69988. BALLANTYNE, J. B. Canada-Alaska Microwave System. (Royal Canadian Mounted Police. Quarterly, Oct. 1961. v. 27, no. 2, p. 81, illus.)

Describes this 1200-mi. communications system under construction Sept. 1959-1961. It consists of 42 UHF stations at 30 mi. intervals from Grande Prairie, Alta. through Watson Lake and Whitehorse, to Mount Dave, at the Yukon-Alaska boundary. (DLC.)

69989. BALLE, JOHANNES. Da angakokken Avgo som dreng stjal halsstykket af en sael. (Grønland, Sept. 1961. nr. 9, p. 358-60, illus.) Text in Danish. **Title tr.:** When the angakok Avgo as a boy stole the neck piece of a seal.

An East Greenlandic tale as told by head catechist Kârale Andreassen. (SPRI.)

69990. BALLE, JOHANNES. Storfangeren Kivioq, der drog på langfart til Akilineq; et gammelt sagn fortalt af Hans Kreutzmann, Kangamiut, til kaptajn Johannes Balle. (Grønland, Nov. 1962, nr. 11, p. 420-24.) Text in Danish. **Title tr.:** The great hunter Kivioq who made a long journey to Akilineq; an old legend told by Hans Kreutzmann of Kangamiut, to Capt. Johannes Balle.

Greenlandic tale from Kangâmiut, 65°49′N. 53°13′W. (SPRI.)

BALLE, JOHANNES, *see also* Andreassen, K. Fangstrejse . . . 1961. No. 69776

69991. BALLINGER, WALTER F., II, *and others.* The accumulation and removal of excess lactate in arterial blood during hypothermia and biventricular bypass. (Surgery, June 1962. v. 51, no. 6, p. 738-45, illus.) 11 refs. *Other authors:* H. Vollenweider, L. Pierucci, Jr., *and* J. Y. Templeton, III.

Lactate content of blood rose during cooling of six patients, reflecting a hypoxic acidosis. The latter lasted until temperatures of peripheral muscles and viscera became equal. During warming, a second increase of acidosis appeared, distinguished by a drop in excess lactate and rise in CO_2-tension. (DLC.)

69992. BALOBAEV, V. T. Protsessy teploobmena na poverkhnosti obnazhennykh merzlykh melkodispersnykh gruntov pri posloĭnom ottaivanii. *(In:* Akademiîa nauk SSSR. Institut merzlotovedeniîa. Severo-Vostochnoe otdelenie. Teplo- i massoobmen . . . 1961, p.25-43, tables, graphs.) 9 refs. Text in Russian. **Title tr.:** Processes of heat exchange on the surface of exposed thinly dispersed frozen ground during laminal thawing.

Reports the removal of thawed layers of alluvial deposits for access to placers, as carried out by bulldozers, scrapers and hydraulic excavators on the lower course of the Irelyakh River in Yakutia. Heat exchange of the thawed layers was measured and a formula derived for calculating the depth and speed of thawing. The study was made from the standpoint of heat balance, and data were obtained on solar radiation, evaporation, turbulent heat exchange, albedo and other elements of solar radiation. The formula was found valid but only for the area studied. Literature on thawing of permafrost is reviewed. (DLC.)

BALTRUSAITIS, E. J., *see* Hale, J. D. . . Ancient Arctica. 1961. No. 71953

BANDI, HANS GEORG, 1920- , *see* Giddings, J. L., & H. G. Bandi. Archäologische Strandwalluntersuchungen . . . 1962. No. 71678

BANDMAN, M. K., *see* Chermenskiĭ, M. P., & *others.* Osnovnye napravleniîa . . . transportno-ėkonomicheskikh svîazeĭ . . . 1960. No. 70698

BANDURKIN, G. A., *see* Zhirov, K.K., & *others.* K geokhimii redkozemel'nykh ėlementov . . . 1961. No. 76672

69993. BANFIELD, ALEXANDER WILLIAM FRANCIS, 1918- . Migrating caribou. (Natural history, May 1961. v. 70, no. 5, p. 56-63, illus. map.)

Outlines the caribou culture of the Chipewyan Indians and Caribou Eskimos; effects of the white man's advance; earlier (exaggerated) estimates of the Barren Ground caribou population. The 1948-49 census indicated 670,000 head between Hudson Bay and the Mackenzie River. the 1955-56 resurvey: 275,000 head. Protective measures taken are described: prevention of mass slaughter and waste, wolf control, etc. Prospects are discussed. (DLC.)

69994. BANFIELD, ALEXANDER WILLIAM FRANCIS, 1918- . Notes on Canadian mammal specimens and types in the British Museum (Natural History), London. (Canada. National Museum. Bulletin no. 172, Biological ser. no. 65, Contributions to zoology, 1959, *pub.* 1961, p. 112-27.) 20 refs.

List of specimens obtained from the registers of the mammal collection and annotated list of 31 type specimens. Twenty-five of the latter were color-photographed, transparencies available at the National Museum of Canada. Arctic forms are included. (DI.)

69995. BANFIELD, ALEXANDER WILLIAM FRANCIS, 1918- . Notes on the mammals of the Kluane Game Sanctuary, Yukon Territory. (Canada. National Museum. Bulletin no. 172, Biological ser. no. 65, Contributions to zoology, 1959, *pub.* 1961, p. 128-35, map, table.) 4 refs.

Deals mainly with the status of the larger forms: the grizzly bear, timber wolf, moose, caribou, mountain goat, and in greater detail with the white sheep, *Ovis dalli.* Small mammals at ebb during time of study are only briefly noted. This sanctuary in the St. Elias Mts. covers a 10,000 sq. mi. area. (DLC.)

69996. BANFIELD, ALEXANDER WILLIAM FRANCIS, 1918- . A revision of the reindeer and caribou genus *Rangifer.* Ottawa, Dept. of Northern Affairs and National Resources, 1961.

137 p. illus., maps, diagrs., tables. (Canada. National Museum. Bulletin no. 177. Biological series no. 66). 235 refs. Summary in Russian.

Comprehensive study of living and extinct forms, based on examination of hundreds of skulls and skeletons and 60 hides. An introductory section (p. 10-25) outlines methods and deals with growth, sexual differences, abnormalities, and individual and geographical variation. The taxonomic section, the remainder of this monograph, deals first with the Quaternary reindeer in Eurasia, North America, and its taxonomy, then with the extant forms. Of the latter, nine subspecies and the domestic form are distinguished and described. Description is preceded by synonyms and supplemented with information on geographic distribution, status, taxonomic history, etc. (DLC.)

BANFIELD, ALEXANDER WILLIAM FRANCIS, 1918- , *see also* Harington, C. R., *& others*. Barren Ground grizzly . . . 1962. No. 72025

69997. BANKO, WINSTON, E. Economic uses of swans in Russia. (Atlantic naturalist, Apr.-June 1962. v. 17, no. 2, p. 109, +.)

Reports a literature search on the utilization of swans in Alaska while under Russian rule. The four records found, indicate swans not important in the Alaskan trade. An established trade, in contrast, is indicated by references to the expolitation of Bewick's swans and whoopers in northern Russia. (DI.)

BANNIKOV, ANDREĬ GRIGOR'EVICH, *see* Geptner, V. G. Mlekopitaŭshchie . . . 1961. No. 71640

69998. BAPTIST, OREN C. Oil recovery and formation damage in permafrost, Umiat Field, Alaska. Washington, D. C., 1960. 22 p. graphs, maps, tables, diagrs. (U. S. Dept. of the Interior. Bureau of Mines. Report of investigations, 5642.) 12 refs.

Reports laboratory studies of reservoir sands from this field in Naval Petroleum Reserve No. 4, Northern Alaska. The studies were made to determine the cause of plugging in the wells, and to estimate oil recovery from frozen sand by depletion drive when the oil is gas-saturated at low pressures. Results showed that severe formation damage in some wells was not caused by swelling clays, also that the sands have only low-to-moderate sensitivity to water. Failure to produce was, apparently, the result of increased water saturation in the permafrost when warm mud was used in drilling. The depletion-drive method can be used for recovering the oil, despite unusually low reservoir pressures. (DGS.)

69999. BARABASH-NIKIFOROV, IL'IA IL'ICH, 1894- . . K probleme akklimatizatsii kalana na Murmane. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ, 1961. vyp. 12, p. 218-21.) Text in Russian. **Title tr.:** The problem of acclimatization of sea-otters on the Murman.

Discusses the (single) experiment of transplanting the animal to the eastern Murman, doubts, successes in the Far East, promising ecological conditions on the Murman, transfer procedure to be adopted, etc. (DLC.)

70000. BARAGAR, WILLIAM ROBERT ARTHUR. Mineral industry of District of Mackenzie and part of District of Keewatin 1961. Ottawa, Queen's Printer, 1962. 41 p. (Canada. Geological Survey. Paper 62-1.) 10 refs.

Reports observations on a score of active mining properties readily accessible from Yellowknife, including the Con gold mine at Yellowknife (500 t.ore/day); the Consolidated Discovery gold mine (140 t.ore/day); the Giant Mine (979 t. ore milled/day); and others. Remarks on transportation facilities and costs, on prospecting activities, etc. introduce the report. (DGS.)

70001. BARAGAR, WILLIAM ROBERT ARTHUR. The mineral industry of the District of Mackenzie, Northwest Territories. Ottawa, Queen's Printer, 1961. 29 p. tables. (Canada. Geological Survey. Paper 61-3.) 8 refs.

Preliminary account of developments during the year ending with the 1960 field season. Thirteen groups of prospective or developing properties are described, mainly from author's observations, including the Giant Yellowknife, largest mine in the Northwest Territories. (DGS.)

70002. BARAGAR, WILLIAM ROBERT ARTHUR. A study of basaltic rocks in part of the Labrador Trough. New York, N.Y., 1959. 161 p. illus., maps incl. 1 fold., tables. 104 refs. Ph. D. thesis to Columbia University.

Presents a study, mainly of the Ahr Lake, Quebec, area, based on field mapping done for the Geological Survey of Canada in the summers of 1954 and 1955, and on laboratory investigations. In this area on the northeast side of the Labrador trough basalts and sedimentary rocks are intruded by gabbro sills. Gabbros are divided into normal and metagabbros, and leopard rocks, with details of appearance, occurrence and formation stated. Petrographic, mineralogical, spectrographic, and chemical data of gabbros and basalts are given. It is concluded that basalts of the area are equivalent to the parent magma of the normal gabbros and differentiation was entirely *in situ*. (CaOG.)

70003. BARAL, A. A. Metody poiska sel'di v Severnoĭ Atlantike (Rybnoe khoziaĭstvo, 1961. god 37, no. 2, p. 37-45, illus., maps.) Text in Russian. **Title tr.:** Methods of herring reconnaissance in the North Atlantic.

Outlines the hydrographic conditions indicative of herring accumulations in a subarctic-arctic zone, approx. 62° - 65°N. 0° - 10°E. Early advances in this field and Russian contributions are described. Lunar and polar-front effects, influence of water movements, and of the seasons, are analyzed and discussed. (DLC.)

70004. BARANENKOVA, A. S., *and* **N. S. KHOKHLINA.** The distribution and size composition of larvae and young redfish in the Norwegian and Barents Sea. (International Council for the Exploration of the Sea. Rapports et procès verbaux des réunions 1961. v. 150, ICES/ICNAF Redfish Symposium, p. 177-87, illus., tables, maps.) 19 refs

Study based on material collected by PINRO during 1934-55 and 1959. First appearance of larvae (second half of April, northwest Norway coast); successive expansion of occurrence north and east; most intensive reproduction (May), and its end (August) are established. Size and age composition and some ecological factors also are determined. The species of the larvae are not stated,

as they are not yet identifiable. (DI.)

70005. BARANENKOVA, A. S. Rezul'taty ucheta molodi treski i pikshi v Barentsevom more zimoĭ 1958-1959 gg. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten', 1960. no. 1 (11), p. 17-20, tables.) Text in Russian. **Title tr.:** Results of stock-taking of young cod and haddock in the Barents Sea, winter of 1958-1959.

Estimates this population on the basis of standard hauls of a small-meshed trawl on six cruises over the southern and northwestern parts of the sea. Data are compared with those of several preceding years. (DLC.)

70006. BARANENKOVA, A. S. Rezul'taty ucheta molodi treski i pikshi v Barentsevom more zimoĭ 1959-1960 godov. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten', 1960. no. 3 (13), p. 15-20, tables, maps.) Text in Russian. **Title tr.:** Results of stock-taking of young cod and haddock in the Barents Sea, winter 1959-1960.

Reports on fall and winter investigations over the greater part of this sea with standardized methods. An outline of temperatures and currents, determinants of the population conditions, precede the estimates. Comparisons with data from previous years are also presented. (DLC.)

70007. BARANENKOVA, A. S., and others. Shipokhvostyĭ skat, *Raja spinicauda* Jensen, v Barentsevom more. (Voprosy ikhtiologii, 1962. t. 2, vyp. 1 (22), p. 18-24, illus., table.) 9 refs. Text in Russian. *Other authors:* V. P. Ponomarenko *and* V. P. Serebriakov. **Title tr.:** The spinytailed skate, *Raja spinicauda* Jensen, in the Barents Sea.

Presents records of an increasing number of this species, caught in the western part of the sea. Data are given on location, depth, temperature, size and sex. Egg capsule and embryo, development, etc. are also described. (DLC.)

70008. BARANENKOVA, A. S. Small cod of age-groups 0, I, II, and III in the Barents Sea. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v. 16, p. 115-16, tables.)

Analysis of catches made with a covered cod end, in the winter 1958-59. Distribution of age-groups over the area, role of hydrological factors in it, mean numbers, etc. are evaluated, and compared the preceding year(s). (DI.)

BARANOFSKY, I. D, *see* Krasna, I. H., *& others.* . . . left atrial pressures . . . hypothermia. 1961. No. 73083

70009 BARANOV, IVAN VASIL'EVICH. Limnologicheskie tipy ozer SSSR. Leningrad, Gidrometeorologicheskoe izd-vo, 1962. 276 p. illus., tables, maps incl. fold. 178 refs. Text in Russian. **Title tr.:** Limnological types of lakes in the USSR.

Up-to-date study containing much of author's unpublished work and individual accounts of some eighty major lakes. An introductory section (p. 8-85) presents a division of the country into hydrochemical zones, including a roughly arctic zone with subzones of tundra, moors, podsol, etc.; hydrological characteristics of these areas, classification of lakes; the carbonate system as indicator of lake productivity. The main European lakes are dealt with in turn (p. 86-221), including those of the Kola Peninsula and Karelia; and the lakes of Asia similarly (p. 221-63), including those of peat-bog and podsol soils of the Arctic and sub-Arctic. Most of the lakes are dealt with as to horizontal and vertical configuration (maps), physical and thermal properties, chemistry, water balance, sediments, etc. A brief summary and an alphabetical list of lakes studied conclude the monograph. (DLC.)

70010. BARANOV, K. A. Karbonatnaia "elka" solianokupol'nogo mestorozhdeniia. (Yakutsk. Universitet. Uchenye zapiski, 1961. vyp. 9, ser. geologo-mineralogicheskikh i tekhnicheskikh nauk, p. 71-75, illus., table.) Text in Russian. **Title tr.:** Carbonate "spruce" in salt dome deposits.

Describes salt stock east of Khatanga Bay injected in a complex of Cretaceous rocks. In describing the latter, special attention is given to calcareous sandstones, their structure and mode of deposition. These sandstones, spruce-like in form, encircle the salt stock. The epigenetic cementation of this carbonate "spruce" is interpreted. (DLC.)

70011. BARANOV, V., *and* **L. POPOV.** Calculation of minimum run-off of unexplored rivers in the U.S.S.R. (International Association of Scientific Hydrology. Bulletin, June 1961. année 6, no. 2, p. 47-62, graphs.)

Main factors determining minimum runoff are elements of climate, hydrogeological conditions, and morphology of the river valleys. Effects on small and medium-size rivers are described; minimum runoff of unexplored rivers may be determined by the empirical functions suggested, making the unknown value dependent on the yearly discharge, the humidity deficit and the winter atmospheric temperature. These functions also make possible the minimum runoff determinations for medium rivers. Main factors in such determinations for rivers with lakes are given as the relative regulating capacity of lakes and the standard discharge. Summer minimum is always higher than the winter for rivers in the Barents and White Sea basins and for rivers in Asiatic USSR. (DGS.)

70012. BARANOV, VLADIMIR ISAKOVICH, 1889- , *and* **G. K. KNORRE.** Novoe v opredelenii absoliutnogo geologicheskogo vozrasta. (Akademiia nauk SSSR. Vestnik, Oct. 1961. god 31, no. 10, p. 131-32.) Text in Russian. **Title tr.:** New data on absolute geologic age determination.

Reports the tenth session in Kiev, June 5-10, 1961, of the Academy Commission for determination of the Absolute Age of Geological Formations; E. K. Gerling, on the plutonic rocks at Monchegorsk as over 6 billion years old is noted. (DLC.)

70013. BARANOV, VLADIMIR ISAKOVICH, 1889- , *and* **N. A. TITAEVA.** Soderzhanie urana, toriia, radiia i ioniia v chetvertichnykn otlozheniiakh doliny r. Leny. (Geokhimiia, 1961, no. 2, p. 110-14, table, graph.) 14 refs. Text in Russian. Summary in English. **Title tr.:** The uranium, thorium, radium and ionium content in the Quaternary deposits of the Lena River valley.

Reports on these radioactive elements in alluvial and lacustrine-alluvial deposits between Bulgunyakhtakh and Pokrovsk, from analyses of

25 samples, some from the permafrost stratum. Results are tabulated and evaluated. In the deposits with humus less than 10%, the content of radioactive elements is close to the average for sedimentary rocks and soils. In deposits with more than 10% humus, an enrichment in uranium and a decrease in the thorium, radium, and ionium content are noted. (DLC.)

70014. BARANOVA, IU. P., *and* S. F. BISKE. Monografiia N. A. Shilo o geologicheskom stroenii, korennykh istochnikakh i chetvertichnykh otlozheniiakh IAno-Kolymskogo poiasa rossypnoĭ zolotonosnosti. (Geologiia i geofizika, 1962, no. 7, p. 111-14.) Text in Russian. **Title tr.:** The monographs of N.A. Shilo on the geologic structure, original sources and Quaternary deposits of the Yana-Kolyma gold-placer belt.

Reviews two of Shilo's works, published by the All-Union gold and rare metals institute in in Magadan, one of 108 pages in 1960, the other of 136 p. in 1961*. They deal with the Quaternary geology of the gold-placer belt extending from the Buyunda River in the Kolyma basin to the Adycha in the Yana basin, a belt over a thousand km. in length and about 200 km. wide. Geologic structure of the region and sources of gold-placers, Shilo deals with in detail. Relief, stratigraphy of Quaternary deposits, glaciation of the area and other problems are treated. Two glaciations are recognized. Extensive illustrative material in the maps, diagrams, etc., and literature references, augment the text. (DLC.)

70015. BARANOVA, IU. P. Novye dannye o vozraste otlozhenii Verkhne-Nerskikh vpadin v basseĭne r. Indigirki. (Akademiia nauk SSSR. Doklady, Sept. 1, 1962. t. 146, no. 1, p. 161-63.) 2 refs. Text in Russian. **Title tr.:** New data on the age of deposits of the upper Nera depressions in the Indigirka River basin.

Reports a geobotanical study of coarse gravel deposits alternating with sands and clays, in several depressions in the upper Nera region. These deposits range 120-615 m. in thickness. Palynological investigations are reported which indicate that these deposits are not Quaternary, but Miocene-Pliocene in age. (DLC.)

70016. BARANOVA, IU. P., *and* P. I. DOROFEEV. O vozraste nagaevskoĭ tolshchi. (Akademiia nauk SSSR. Doklady, Aug. 21, 1962. t. 145, no. 6, p. 1335-37.) 4 refs. Text in Russian. **Title tr.:** On the age of the Nagayeva stratum.

Reports study of the continental alluvial-lacustrine deposits on the east side of Nagayeva Bay, near the town of Magadan. Their deposition, thickness and other features are described, with special attention to results of the fossil flora and spore-pollen analyses. The upper part of this stratum is considered to be middle Pliocene in age; further studies are needed however, for any conclusive opinion. (DLC.)

70017. BARASHKOV, G. K. K sravnitel'noĭ biokhimii vodoroslei.(Akademiia nauk SSSR.Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp. 4(8), p. 47-58, tables.) 46 refs. Text in Russian. **Title tr.:** Comparative biochemistry of seaweeds.

Presents a comprehensive review of the chemistry of these plants, from both nutritional and physiological viewpoints. The results are summarized in tabular form, with certain differences noted even between genera. Caloric value is also determined. (DLC.)

70018. BARASHKOV, G. K. Khimiia nekotorykh morskikh planktonnykh diatomeĭ. (Akademiia nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp. 4(8), p. 27-46, illus., tables.) 43 refs. Text in Russian. **Title tr.:** The chemistry of some marine plankton diatoms.

Reports an analysis of material from the east coast of Kamchatka, Anadyr Bay and Kuril Straits, that of the first two consisting mainly of *Thalassiosira* species. Carbohydrate, protein and lipid contents were determined. The hydrolysable polysaccharids consist of glucose and xylose, with traces of galactose and rhamnose. About half of the N is non-protein; free glycin, alanin and tyrosine were also detected in 0.3% of dry weight. Common amino-acids were traced in the protein. (DLC.)

70019. BARASHKOV, I. Izdaniia IAkutskogo nauchno-issledovatel'skogo instituta sel'skogo khoziaĭstva. (Sel'skoe khoziaĭstvo Sibiri, Aug. 1961, god 6, no. 8, p. 88-89.) Text in Russian. **Title tr.:** Publications of the Yakutia Agricultural Research Institute.

Notes 55 books and pamphlets (not listed) in Russian and Yakut since 1957, on various aspects of agriculture, stock raising, reindeer etc., including three issues of the Institute's transactions *Trudy* and six of its scientific and technical information bulletin. The second issue of *Trudy* was devoted to reindeer raising. (DLC.)

70020. BARASHKOVA, È. A. Nekotorye osobennosti rosta kormovogo lishaĭnika *Cladonia rangiferina* L., Web. v usloviiakh Murmanskoĭ oblasti. (Botanicheskiĭ zhurnal, Mar. 1961. t. 46, no. 3, p. 310-14, illus., tables.) 5 refs. Text in Russian. **Title tr.:** Some peculiarities in growth of the lichen *Cladonia rangiferina* L., Web. in the Murmansk Province.

Reports an investigation on seasonal growth rate. effect on it of some fertilizers and chemicals, growth as dependent on height of the podetia, and the effect of temperature and humidity upon the growth of these stalks. (DLC.)

70021. BARBEAU, CHARLES MARIUS, 1883- . Tsimsyan myths, illustrated. Ottawa, Dept. of Northern Affairs and National Resources, 1961. 97 p. illus., maps on end papers. (Canada. National Museum. Bulletin no. 174, Anthropological series no. 51.)

Presents texts of 15 Tsimshian myths recorded in the 1950's and 21 Haida sculptures depicting episodes from these tales. The argillite carvings are described and illus., including some side and back views; they were made during approx. 1860-1900, by outstanding sculptors of Skidegate and Massett: Skaoskay (David Shakespeare), William Dixon, Thomas Collison, Thomas Moody, and Charlie Edensaw. (DLC.)

70022. BARBIER, DANIEL, 1907- . Introduction à l'étude de la luminescence atmosphérique et de l'aurore polaire. (Grenoble. Université. École d'été de physique théorique, *Les Houches*. Géophysique extérieure, Lectures . . . 1962, *pub.* 1963. p. 303-368, illus., map, graphs, diagrs.)

* Neither seen as yet.—*Editor.*

Text in French. **Title tr.:** An introduction to the study of airglow and aurora.

Reviews the theories of airglow and aurora, describing their spectral characteristics, distribution in the sky, and observational instrumentation. The method of analysis of observational data and reduction for interference and contaminated data is given. The standards used in airglow and aurora observations, corrections for diffusion and absorption, altitude determination of auroras, their structure, forms, temperature, and origin are discussed. (DLC.)

70023. BARBIER, DANIEL, 1907- , *and others.* Mission aérienne pour l'étude de l'aurore et du ciel nocturne dans les régions de latitudes élevées. (Annales de géophysique, 1962, t. 18, no. 2, p. 221-24, graphs.) Ref. Text in French. *Other authors:* M. Fafiotte *and* G. Weill. **Title tr:** Aerial mission for the study of the aurora and of the night sky in high latitude regions.

Describes results of observations made on a half-dozen flights in a B17, Dec. 4-11, 1961, north of 55° N. over Europe and the Greenland Sea. The auroral arc appeared at somewhat greater altitude for the 6300 Å line than for 5577 Å. The geographic position of the arc is related to the magnetic activity. The intensity of night glow for the two lines remained low; observation was hindered by the aurora and at lower latitudes by clouds. (DGS.)

70024. BÁRCZI, GÉZA. Zur Geschichte der finnisch-ugrischen Verschlusslaute in urungarischer Zeit. *(In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v. 125, Commentationes . . . p. 11-26.) Refs. in text. Text in German. **Title tr.:** Contributions to the history of Finno-Ugric explosives in proto-Hungarian times.

Phonetic analysis of the consonant system in ancestral Finno-Ugric and subsequent phone shifts in, among others, Zyryan, Ostyak, and Vogul. (DSI.)

70025. BARFOD, PIE. Uddannelsesproblemer i Vestgrønland, en rapport fra Udvalget for samfundsforskning i Grønland. (Grønland, Apr. 1962, nr. 4, p. 121-29, diagrs., table.) Text in Danish. **Title tr.:** Education and training problems in West Greenland, a report from the Committee for Community Research in Greenland.

Discusses problems due to the rapid development and lack of trained personnel in Greenland. In 1920 over 90% of the foremen and ship masters were Greenlanders; in 1958 less than 50%. The education offered should enable young Greenlanders to compete with Danes in Denmark proper, as well as in Greenland. For the present adult population, short-term measures are advocated to prepare them to take over jobs in Greenland. Long-term planning also is recommended and in Jan. 1962 an education council was formed to coordinate activities on the education and training of Greenland population. (SPRI.)

BARGETON, D., *see* Chassain, A., & D. Bargeton. Ventilation . . . rat. 1961. No. 70677

BARKER, A. M., *see* Kelly, G. F., & *others.* Racial comparison redfish . . . 1961. No. 72721

70026. BARKHATOVA, V. P. O nekotorykh granitsakh v karbone i permi Timana. *(In:* Soveshchanie po utochneniiu unifitsirovannykh stratigraficheskikh skhem paleozoia . . . Karbon, 1962, t. 3, p. 301-311, table, diagr.) 15 refs. Text in Russian. **Title tr.:** On some boundaries in the Carboniferous and Permian of Timan.

Notes general rules to be used in standard stratigraphic division. Such division adopted in 1951 is criticized. The sections of Carboniferous and Permian deposits in the western slope of northern Timan are analyzed mainly on the basis of the foraminifer and brachiopod fauna, and boundaries between the Carboniferous and Permian systems, series and stages are evaluated. The *Schwagerina* horizon is considered most suitable to delimit Carboniferous and Permian. (DLC.)

70027. BARKHATOVA, V.P. Razvitie *Choristites,* v srednium i pozdnium kamennougol'nye epokhi na Severnom Timane. (Moskovskoe obshchestvo ispytatelei prirody Biulleten', 1961. ser., t. 66, otdel geologicheskii, t. 36, vyp. 6, p. 113.) Text in Russian. **Title tr.:** Development of *Choristites* of the middle and late Carboniferous times in northern Timan.

Reports on the distribution and stratigraphic importance of this brachiopod used for separation of Carboniferous deposits. *Choristites pvaevolongaensis* Barchat. and *Ch. volongaensis* Barchat. constitute a large endemic group. Variations in them are noted. (DLC.)

70028. BARKHATOVA, V. P. Razvitie *Horridonia* i *Spiriferella* v pozdnem paleozoe Severnogo Timana. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy 1962. vyp. 196, Paleontologicheskii sbornik 3, p. 37-47, illus., table.) 33 refs. Text in Russian. **Title tr.:** Development of *Horridonia* and *Spiriferella* in the late Paleozoic of northern Timan.

Reviews studies of brachiopods in this part of Komi ASSR, with special attention to the phylogeny of gen. *Horridonia, Spiriferella,* and species. These genera appeared in the beginning of the late Carboniferous and developed in early Permian. They have a strictly defined time span and therefore are of great importance in stratigraphy. (DLC.)

BARNARD, C. N., *see* Terblanche, J., & *others.* Renal function . . . hypothermia. 1961. *E.* No. 76103

BARNARD, J. LAURENS, *see* Mohr, J. L., & *others.* Marine nature of Nuwuk Lake . . . 1961. No. 74076

BARNES, CLIFFORD ADRIAN, 1905- , *see* Alaskan Science Conference 1960. 1961. No. 69643

Coachman, L. K., & C. A. Barnes. Contribution of Bering Sea water . . . 1961. No. 70772

Coachman, L. K., & C. A. Barnes. Surface water Eurasian Basin . . . 1962. No. 70773

70029. BARNES, FARRELL FRANCIS, 1905- Geologic map of lower Matanuska valley, Alaska. Washington, D. C., 1962. Map sheet 45 x 29 in. (U. S. Geological Survey. Miscellaneous geological investigations. Map I-359.) 10 refs.

Map at scale 1:63,360, contour interval 100 ft., and text notes cover an irregularly shaped area

roughly 61°37′-61°52′N. 148°18′-149°15′W.; and depict the character, distribution, structure, and relations of the coal-bearing Chickaloon formation and associated rocks of the Matanuska coal field. Principal resources are the estimated reserves of about 100 million tons of bituminous coal in the Wishbone Hill district, 61°44° N. 149° W. Mineral reserves of several million tons probably exist in adjacent Knob Creek areas, but Chickaloon district coal is probably mostly unminable. The Little Granite Creek area may contain coal beds of minable thickness and quality. No evidence of minable coal was found in the other areas mapped or re-examined in 1960. (DGS.)

70030. BARNES, FARRELL FRANCIS, 1905- . Topographic and geologic map of the Knob Creek area of the Wishbone Hill district, Matanuska coal field, Alaska. Washington, D.C., 1962. Map sheet 36 x 29 in. (U.S. Geological Survey. Coal investigations. Map C-51.) 4 refs. Supplements No. 43882.

Field work of 1956-1958 revealed two bed-rock formations: the Matanuska sandstone and shales, the Chickaloon coal-bearing sandstone, siltstone, etc. Unconsolidated material of various thickness covers the entire area around 61°45′N. 148°52′W., except where removed by stream erosion or strip mining. Map at 1:6,000 scale, contour interval 20 ft., shows geological features; stratigraphic sections of coal beds are related to map locations. Knob Creek coal is high-volatile B-bituminous, 11,390 B.t.u. Original reserves are estimated at 27 million tons, mostly recoverable only by underground methods. (DGS.)

BARNES, FARRELL FRANCIS, 1905- , *see also* U.S. Geol. Survey research. 1962. No. 76268

BARNES, DAVID F., 1921- , *see*

Alaskan Science Conference 1960. 1961. No. 69643

Kachadoorian, R., *& others*. Geologic investigations . . . Project Chariot . . . 1961. No. 72604

70031. BARNES, JAMES W. Nuclear power plant for Camp Century. (Military engineer, Sept.-Oct. 1961. v. 53, no. 355, p. 363-64, illus.) 3 refs.

Describes the PM-2A "package" plant installed in cut-and-cover tunnels below the snow surface of the Greenland icecap. The 1,980 kw. plant was erected and tested during a period of ten weeks; it went critical on Oct. 2, 1960, and began operating on Nov. 12. (DLC.)

BARNETT, HENRY FRANK, 1921- , *see* Drewes, H., *& others*. Geology of Unalaska . . . shelf. 1961. No. 71108

70032. BARNETT, PAUL W. Consideration of aircraft as emergency shelters. Fort Wainwright, Alaska, June 1962. 10 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 62-29.) 2 refs.

Reports comparative tests, using both instruments and subjects, of a snow hut, a parateepee, and an aircraft fuselage without insulation or windows, as emergency shelters. The aircraft was found to be the worst of the three, and should be used as last resort. Instructions for improvising a stove, using airplane parts and tools, are also given. (CaMAI.)

70033. BARNETT, PAUL W. Field tests of two anti-exposure assemblies. Fort Wainwright, Alaska, May 1962. 16 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 61-56.) 8 refs.

Reports a study of the insulative value of the Navy MK-5 anti-exposure suit, and the Air Force CSU4/P partial pressure suit, in cold air or water. Both were found suitable, when used with additional clothing, in still, dry air of −30°F. The MK-5 and liner was found suitable for 8+ hours survival in water; the CSU4/P for 2+ hours. (CaMAI.)

70034. BARNETT, PAUL W. Some effects of body heating prior to extreme cold. Fort Wainwright, Alaska, Oct. 1961. 16 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-27.) 16 refs.

Subjects heated in a 42° C. bath to a fixed degree, were subsequently exposed to air of 0°C. for 30 min. or 15°C. for 60 min. No significant change in tolerance times was observed. Hence it is concluded that body heating prior to cold exposure is ineffective in extending human tolerance of cold. (CaMAI.)

70035. BARNETT, PAUL W. T-33 aircraft survival container. Fort Wainwright, Alaska, Oct. 1961. 6 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical note 61-8.)

Discusses feasibility of placing an MC-1 sleeping bag (for survival situations) in the T-33 aircraft. Of several poor models, one is chosen and described. It is a container for over 20 survival items, and is placed in the seat. (CaMAI.)

70036. BARNETT, S. A., *and others*. Mortality, growth and liver glycogen in young mice exposed to cold. (Quarterly journal of experimental physiology, Jan. 1960. v. 45, no. 1, p. 40-49, illus., tables.) 15 refs. *Other authors:* E. M. Coleman *and* B. M. Manly.

In four strains of mice exposed to −3°C., death usually occurred during the first three days; all lost weight especially in the first two days. Survivors made up lost weight but grew more slowly than at room temperature. Liver glycogen was quickly lost at −3°C. in mice reared at room or at low (−3°) temperature. (DNLM.)

70037. BARON, LAZAR' IZRAILEVICH, *and* **G. N. SIROTIUK.** Ispytanie gornykh porod na drobimost' vzryvaniem vnutrennego zaryada. *(In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p. 148-52, diagrs., table.) 3 refs. Text in Russian. **Title tr.:** Testing the breaking of rocks by confined charge blasting.

Reports on 12 rock samples, approx. 500 cm.^{3} from six mines of Kola Peninsula, tested by blasting detonating caps, set in holes 9 mm. wide and 5-6 cm. deep. Data on size of blasted ore pieces are tabulated, diagrammed and compared with pieces of mechanically crushed samples. The tested ores and rocks include: gabbro-diabase, grey (nickel?) ore, peridotite, olivine-pyroxenite, phyllite, foyaite, lujavrite, urtite (from Yukspor and Karnasurt mines), biotite-gneiss and

apatite ores of poor and rich zones. (DLC.)

70038. BARON, LAZAR' IZRAILEVICH, *and others.* Issledovanie sviazi mezhdu kharakteristikami kreposti i drobimosti gornykh porod i pokazateliami burovzryvnykh rabot pri prokhodke gorizontal'nykh vyrabotok. *(In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p. 131-42, diagr., tables.) 4 refs. *Other authors:* M. D. Fugzan and É. I. Markenzon. **Title tr.:** Investigation of the relation between the rock-hardness and breaking resistance factors and the indicators of drilling/blasting for cutting horizontal shafts.

Presents mineralogical and petrological data on eleven types of ore and rock in pits of the S.M. Kirov apatite mine, together with experimental results and data of drilling and blasting. (DLC.)

70039. BARON, LAZAR' IZRAILEVICH, *and* **G.N. SIROTIUK.** Vliianie pokazatelia vybrosa na droblenie skal'noĭ porody. *(In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.87-95, illus., diagrs., tables.) Text in Russian. **Title tr.:** Effect of the throw index on rock breaking.

Reports experimental results of blasting rock (urtite), in Jan. 1959 at the Yukspor pit of the Apatit Combine in Kola Peninsula. The mineralogical composition of urtite is given, and the blasting technique described; data are reported and discussed on the shape of explosion funnel, size of blasted ore pieces and their relation to the amount of explosive used. (DLC.)

BARON, LAZAR' IZRAILEVICH, *see also*

Adrianov, N.F., & L.I. Baron. Primenenie igdanita. . .1961. No. 69489

Akademiia nauk SSSR. Voprosy tekhnologii razrabotki. . .1961. No. 69579

Markenzon, É.I. & *others.* Vremennoe soprotivlenie. . .1961. No. 73813

Sirotiuk, G.N., & L.I. Baron. Sravnitel'noe issledovanie burimosti . . . 1961. No. 75677

BARQUIST, RICHARD F., *see* Di Giovanni, C., & *others.* Microbiol. & sanitation military op. 1962. No. 71032

BARR, J. A., *see* Ehrlich, W.A., & *others.* Soil. . . . Nelson R. . .1959. No. 71213

70040. BARRY, G. S. Geology of the Gods Narrows area, Gods Lake Mining Division 53 L/9, west half. Winnipeg, 1961. 33p. maps incl. one fold. (Manitoba. Dept. of Mines and Natural Resources. Mines Branch. Publication 60–1.) 15 refs.

Reports and maps (1 in.: 1mi.) the stratigraphic and structural geology of this area (54°30′-54°45′N. 94°15′-94°30′W.) in northern Manitoba, investigated in 1960. Rock formations, described in detail, include the predominantly volcanic Hayes River group; conglomerates and other metasediments of the Oxford group; pre-Oxford intrusives of quartz-eye "granite", quartz and feldspar porphyry, etc.; and post-Oxford granitic rocks. A major angular unconformity between the Hayes River and Oxford groups is indicated. Mineral occurrences in eleven localities (mapped) are described. Geophysical explorations for gold and base metals are justified. (DGS.)

70041. BARRY, G. S. Geology of the Munro Lake area 53L/11 (east half) Oxford Lake Mining Division. Winnipeg, 1962. 27p. tables, diagr., fold. map. (Manitoba. Dept. of Mines and Natural Resources. Publication 61–1.) 9 refs.

Reports and maps at scale 1:63,360, the rock types, structure, and mineral occurrences of this 175 sq. mi. area: 54°30′-45′N. 95°00′-15′W., in northern Manitoba, investigated in summer 1961. A greenstone belt of metavolcanic and metasedimentary rocks of the Hayes River group is surrounded by a granitic gneiss complex; metasediments of either the Hayes River or Oxford group outcrop in the northeast. Intrusions of gabbro, quartz gabbro, diorite, and amphibolite are abundant in the volcanic rocks, and tuffs are interbedded with the lavas throughout. The structure of the area is obscure; a possible interpretation is given for folding of the greenstone belt. Pyrite, arsenopyrite, pyrrhotite, chalcopyrite, and gold occurrences are found, also iron formation. Prospecting was carried out for gold from 1935 to 1945 and base metals in 1959–1960. A deposit of lithium, discovered in the adjoining Oxford House-Knee Lake area to the north in 1958 (cf. No. 63284), and re-examined in 1961, is described. (DGS.)

70042. BARRY, G. S. Geology of the western Oxford Lake – Carghill Island area, Oxford Lake Mining Division 53 L/13. Winnipeg, 1960. 37p. maps incl. two fold. (Manitoba. Dept. of Mines and Natural Resources. Mines Branch Publication 59–2.) 29 refs.

Reports and maps (1 in.: 1mi.) the stratigraphic and structural geology of this area (54°45′-55°N. 95°30′-96°W.) in northern Manitoba, investigated in 1956 and 1959. Basic to intermediate volcanic rocks of the lower Hayes River unit are overlain by pyroclastic and sedimentary rocks of the upper Hayes River unit, which are overlain unconformably by conglomerate and finer clastic rocks of the Oxford group. These volcanic and sedimentary rocks form part of the east-northeast trending Oxford Lake - Knee Lake greenstone belt which is isoclinally folded and extensively faulted. They are adjoined and intruded by younger granitic rocks, including a granitic gneiss complex ranging from granodiorite to tonalite which underlies half of the map area. Several mineral occurrences are described and mapped. (DGS.)

70043. BARRY, G. S. Mineral prospects around God's, Island, and Oxford Lakes, Manitoba. (Canadian mining journal, Apr. 1961. v.82, no.4, p.61-65, map.) 17 refs.

Describes prospecting and mining activities, geology, structure, and mineral occurrences of this early Precambrian region extending into northern Manitoba. Well-defined east-trending volcanic and sedimentary belts are set in predominantly granitic terrain consisting of gneissic and massive intrusions. Among mineral occurrences described are gold-bearing quartz veins at God's Lake (54°45′N. 94°W.) and sulfides along the Fox River (approx. 56°N. 95°W.). Although important ore deposits are

scarce, many mineralized occurrences and structures in the region seem favorable. (DGS.)

70044. BARRY, THOMAS W. Effect of late seasons on Atlantic brant reproduction. (Journal of wildlife management, Jan. 1962. v.26, no.1, p.19–26, illus., table.) 15 refs.

Reports a study on Southampton Island over three seasons with different weather. Low reproduction was found associated with the weather at the very start of the season: the later the thaw, the smaller the clutch. If the brant cannot nest, gonads regress and no later attempt at nesting can be made. The implications of these conditions are discussed. (DLC.)

70045. BARRY, THOMAS W. Sea-bird colonies of Prince Leopold Island and vicinity. (Canadian field-naturalist, Apr.–June 1961, v.75, no.2, p.72–73.)

Reports concentrations of seven types of birds seen in July-Aug. 1958 on this island (74°03′ N. 89°54′ W.) in Lancaster Sound. Characteristics and habitat of each colony are described, and the population estimated. Most of the birds were nesting on the north and east shores of the island. Author was with the J. Brian Bird expedition. (CaOGB.)

70046. BARRY, THOMAS W. Waterfowl reconnaissance in the Western Arctic. (Arctic circular, 1960, *pub.* May 1961. v.13, no.4, p.51–58, map.)

Describes population surveys of migratory species by the Canadian Wildlife Service in 1958 and 1960. Approx. 20 species were identified and counted from aircraft; the results are given for 10 areas of major concentration in Yukon Territory (Old Crow Flats), Mackenzie District, the Canadian Arctic Islands, and western Keewatin District. Promising areas for future surveys are noted. Participation and paid employment of Eskimos and Indians in such projects are discussed. (CaMAI.)

70047. BARS, E. A., *and* L. N. NOSOVA. Organicheskoe veshchestvo v vodakh razvedochnykh ploshchadeĭ Vostochnogo Priural'ia. (Akademiia nauk SSSR. Institut geologii i razrabotki goriuchikh iskopaemykh. Geokhimiia kaustobiolitov i ikh mestorozhdeniĭ, 1962, p.155–83, tables, maps, graphs.) 30 refs. Text in Russian. **Title tr.:** Organic matter in the waters in the search areas east of the Ural.

Reports study of stratal waters of Tyumen' Province including the Berezovo, Khanty-Mansiysk and other regions: 85 samples from water-bearing horizons of Paleozoic, Jurassic and Cretaceous were analyzed. Data obtained are reported; four water-bearing complexes are determined; and distribution of organic matter demonstrated. Paleozoic complex is the richest in organic matter. (DLC.)

70048. BARSKAIA, V. F. Nekotorye novye vidy siluriĭskikh favozitid TSentral'nogo Taĭmyra. (Moskovskoe obshchestvo ispytateleĭ prirody. Biulleten', nov. ser. t.67, otdel geologicheskiĭ, May-June 1962. t.37, no.3, p.41–51.) 11 refs. Text in Russian, Summary in English. **Title tr.:** some new species of Silurian favositids of central Taymyr.

Presents systematic description of seven Silurian tabulate corals of fam. Favositidae. Six species are new and characteristic for the Silurian fauna complex of central Taymyr. (DLC.)

70049. BARSOUM, A. H. Some observations on blood in relation to cold acclimatization in the Antarctic. (Military medicine, Sept. 1962. v.127, no.9, p.719–22, illus.) 6 refs.

Reports study of ten men following chronic and acute exposure. Erythrocyte count rose moderately in 50% of men after chronic, and sharply in 70%, after acute exposure. Maximal change was in the number of lymphocytes after chronic, but none after acute stress; a similar 50–100%, elevation was noted in the eosinophils. (DLC.)

70050. BARSUKOV, VLADIMIR VIKTOROVICH, 1922- . Nekotorye nabliudeniia nad sineĭ zubatkoĭ, *Anarhichas latifrons* Steenstrup et Hallgrimsson. (Voprosy ikhtiologii, 1961. t.1, vyp. 1(18), p.19–28, tables, map.) 8 refs. Text in Russian. **Title tr.:** Some observations on the blue wolffish *Anarhichas latifrons* Steenstrup et Hallgrimsson.

Description of this little studied fish from the Kopytov bank and Barents Sea, including coloration, dentition, skeleton and fins, sexual maturation, fertility, spawning grounds, vertebral numbers, etc. (DLC.)

BARSUKOV, VLADIMIR VIKTOROVICH, 1922– , *see also*

Balakhonova, L.M., & V.V. Barsukov. Khod muksuna . . . 1961. No. 69970

Balakhonova, L.M., & V.V. Barsukov. O skate . . . 1962. No. 69971

BARTLETT, M., *see* Gott, V.L., & *others*. Myocardial energy substances . . . P & hypothermic arrest. 1962. No. 71806

70051. BARTON, ROBERT H., *and* A. J. BROSCOE. Potential stream recapture in the Tieda and upper Iroquois drainage systems, Northwest Territories, Canada. (Alberta Society of Petroleum Geologists, Journal, Aug. 1961. v.9, no. 8, p. 245-47, map.)

Describes briefly the capture of the headwaters of the ancestral Tieda River, tributary to the Mackenzie, by an upper Iroquois River tributary in the Anderson River system. The original piracy took place at approx. 67°20′N. 129°40′W. and is marked by a canyon; the modern divide between the two streams is about 18 mi. to the south. Examination of maps and aerial photographs, also a brief field survey, indicate a northward migration of the divide with subsequent reversal of a considerable portion of the Iroquois River drainage, a type of geomorphic phenomenon not hitherto described. (DGS.)

70052. BARTON, WILLIAM R. Columbium and tantalum, a materials survey. Washington, D.C., U.S. Govt. Print. Off., 1962. 110 p. illus., map, tables. (U.S. Bureau of Mines. Information circular 8120.) 89 refs.

Describes the properties, uses, and technology of these metals, and surveys world resources, production, and demand. Northern deposits, described or noted, occur in the Yellowknife-Beaulieu area of Mackenzie District; Ivigtut and Kap Farvel in Greenland; Seward Peninsula and Central Alaska;

northern Finland; the northwestern Siberian platform and Kola Peninsula of USSR. In the last area, a columbium deposit in the Lovozero massif might be the world's largest. (DGS.)

70053. BARTOSH, T. D., *and* **IU. IA. ABOLKALNS.** Golotsenovye karbonatnye otlozheniia mestorozhdeniia Ammonal'nogo na Kol'skom poluostrove. (Akademiia nauk Latviiskoĭ SSR. Institut geologii. Voprosy chetvertichnoĭ geologii, 1. Trudy, t.8, 1962, p. 197-204, illus., table, diagrs.) 11 refs. Text in Russian. Summary in English. **Title tr.:** Holocene carbonate deposits in the Ammonal'naya on Kola Peninsula.

Describes recent fresh-water calcareous deposits at approx. 67°34′N. in Kola Peninsula near Titan station. Similar deposits are found in Arkhangel'sk Province and Komi ASSR. The Ammonal'naya deposits are represented by calcareous silts and were probably caused by underlying carbonate bed rocks coming to the surface. From spore-pollen analysis, carbonate accumulation in the area seems to have occurred during the Boreal period. (DLC.)

70054. BARTOSHINSKIĬ, Z. V. Sravnitel'naia kharakteristika almazov iz razlichnykh almazonosnykh raĭonov Zapadnoĭ IAkutii. (Geologiia i geofizika, 1961, no.6, p. 40-50, tables.) 3 refs. Text in Russian. Summary in English. **Title tr.:** Comparative characteristics of diamonds from various diamond-bearing regions of western Yakutia.

Reports study of the morphology and fluorescence properties under ultraviolet light of diamond crystals from the Malaya Botuobiya, Vilyuy, Daldyn, Muna and other localities. Within the diamond-bearing province, rhombic dodecahedron crystals increase quantitatively from south to north, relative to octahedra and to crystals of transitory type. Rounded diamond crystals increase quantitatively in the same direction. In the southern part, the diamonds are widely distributed, and under ultraviolet light show indifferent color or no fluorescence whatever. In the northern diamonds, dark blue and light blue are the prevailing colors. (DLC.)

BARTOSHINSKIĬ. Z. V., *see also*

D'iakov, A.G., & Z.V. Bartoshinskiĭ, Transportirovka . . . 1961. No. 71004

Gnevushev, M.A., & *others.* Dannye o zakonomernostiakh raspredeleniia almazov . . . 1961. No. 71712

BARTSCH, A. F., *see* Alaskan Science Conference 1961. 1962. No. 69644

70055. BARYGIN, V. M. Metodika i tekhnika poiskov korennykh mestorozhdeniĭ almazov s primeneniem aèrometodov. (*In:* Akademiia nauk SSSR. Laboratoriia aèrometodov. Primenenie aèrometodov pri poiskakh . . . almazov, 1960, p. 115-31, illus., map.) 6 refs. Text in Russian. **Title tr.:** Methods and techniques of prospecting for primary diamond deposits using aerial methods.

Describes organization, equipment, methods and techniques, used in prospecting diamond-bearing kimberlite bodies in various regions of Yakutia. Aerial reconnaissance, aerial photography, aerial geophysical survey, office interpretation of aerial photographs and aerial physical data, repeated aerial control survey and ground control are described. For best results, aerial photography should be associated with aerial magnetic survey, and vice versa: geologists and geophysicists should work together. (DLC.)

70056. BARYGIN, V. M. Osobennosti tektonicheskoĭ struktury i kimberlitovye trubki Daldynskogo raĭona. (*In:* Akademiia nauk SSSR. IAkutskiĭ filial. Almazy IAkutii . . . 1961, p. 15-17.) 4 refs. Text in Russian. **Title tr.:** Features of the tectonic structure and kimberlite pipes of the Daldyn region.

Diagonal and orthogonal dislocations with break in continuity are distinguished; distribution of kimberlite pipes is outlined; results of an aerial survey and field study in 1955-57. (DLC.)

70057. BARYGIN, V. M. Poiski kimberlitovykh trubok aèrometodami. (*In:* Akademiia nauk SSSR. IAkutskiĭ filial. Almazy IAkutii . . . 1961, p. 172-79, table, sketch map.) Ref. Text in Russian. **Title tr.:** Search for kimberlite pipes by aerial methods.

Reports on aerial magnetic and air-photo survey made with an AN-2 type plane in the Daldyn region and elsewhere in Yakutia. Maps at 1:10,000 to 1:15,000 scale are the best for detecting kimberlite pipes. Transfer of air-photo data to planimetric maps is described. Control and correction of air photographs are discussed. Their interpretation and that of aerial magnetic survey are evaluated. These methods are found highly advantageous for spotting kimberlite pipes. (DLC.)

70058. BARYGIN, V. M. Priznaki deshifrirovaniia kimberlitovykh tel na aèrosnimkakh v severo-vostochnoĭ chasti Sibirskoĭ platformy. (*In:* Akademiia nauk SSSR. Laboratoriia aèrometodov. Primenenie aèrometodov pri poiskakh . . . almazov, 1960, p. 5-18, plates.) 4 refs. Text in Russian. **Title tr.:** Interpretation features of kimberlite bodies on aerial photographs in the northeastern part of the Siberian platform.

Reports use, failures and successes of aerial photography in searching for kimberlite bodies in the Merchinden, Daldyn, Alakit, Muna and other regions of Yakutia. Of the various scales (1:3000, 1:3500, 1:5000, 1:7500, 1:8500, 1:10,000, and 1:15,000) tried, the last two were found best to detect kimberlite pipes. The prevailing features of kimberlites which can be traced on air photos are: the isometric form of kimberlite bodies on an old surface; the vegetation, the microrelief forms, and tectonics. These features are treated in greater detail by describing and illustrating individual kimberlite pipes. In conclusion, aerial photography at 1:10,000 to 1:15,000 is recommended for kimberlite search. (DLC.)

70059. BARYMOV, E. Voinstvennaia morzhikha. (Ogoněk, Mar. 1961. god 39, no.11, p. 30, illus.) Text in Russian. **Title tr.:** A bellicose walrus.

Describes an encounter with a herd of walrus at Idlidlya Island, (67°45′N. 172°45′W.), 8 km. off Nekshan in Chukotka. All gave way, except one with cub, who attacked the boat though without damage. (DLC.)

BASHARIN, A. K., *see* Kosygin, IU. A., & *others.* Osnovnye strukturnye èlementy . . . 1962. No. 73023

BASHARINA, L. A., *see* Markhinin, E.K., & *others.* Izuchenie sostoianiia vulkanov . . . 1961. No. 73819

70060. BASLER, ROY P., *and* **R. N. DeWITT.** The heights of ionospheric irregularities in the auroral zone. (Journal of geophysical research, Feb. 1962.

v.67, no.2, p. 587-93, tables, graphs, diagrs.) 11 refs.

Discusses recordings made at College, Alaska, of the 20 Mc./s. signal strength of satellite 1958 δ 2. A spaced-receiver technique for measuring the heights of the irregularities responsible for the violent scintillations observed in the signals gives evidence that their altitudes ranged as high as 1,000 km. A method for determining the height distribution, based on the amount of scintillation recorded when the satellite was at different altitudes, shows that they occurred mostly below 650 km. and only sporadically at greater heights.—From authors' abstract. (DLC.)

BASLER, ROY P., *see also* Alaskan Science Conference 1961. 1962. No. 69644

70061. BASOV, V. A., *and others*. Novye dannye po stratigrafii verkhnetūrskikh i nizhnemelovykh otlozhenii zapadnoĭ chasti Khatangskoĭ vpadiny. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyi sbornik, 1962. vyp.28, p. 37-43.) Text in Russian. *Other authors:* M.S. Mesezhnikov, Z.Z. Ronkina, V.N. Saks, *and* N.I. Shul'gina. **Title tr.**: New data on the stratigraphy of Upper Jurassic and Lower Cretaceous deposits in the western part of the Khatanga depression.

Reports 1961 work in the Taymyr National District to define the boundary between Jurassic and Cretaceous systems and detail sections of Volga and Valanginian stages. These studies were carried out at three sites in the Byrranga Mts., the upper Kheta and Boyarka basins. Sections examined are described, the fauna identified noted. The Jurassic and Cretaceous are delineated between the *Chetaites chetae* Schulg., and *Ch. sibiricus* Schulg. horizons. As to the paleogeographic aspect: lower and upper Volga stage ammonites are found which reveal a connection between Arctic Basin and Pacific. (DLC.)

70062. BASOVA, L. G., *and* **N. V. SHIPOSH.** Raspredelenie plotnosti vozdukha v troposfere i v nizhnikh sloĭakh stratosfery Tsentral'noĭ Arktiki. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.10, p. 63-69, tables, graphs.) 5 refs. Text in Russian. **Title tr.**: Air density distribution in the troposphere and the lower layers of the stratosphere of the central Arctic.

Analyzes data of average monthly air density and vertical gradients from the 1955-1956 materials of drifting stations North Pole-4 and -5. For comparison, average monthly air density was calculated for the Chetyrekhstolbovoy Island station. The density calculation used data of average monthly temperature, pressure, and specific humidity upon a derived formula up to 16 km. height. Obtained data are tabulated and graphed. The yearly motion of vertical gradients of air density in the Central Arctic are found analogous to yearly motion in the middle latitudes. Seasonal and monthly changes of gradients are characterized. (DLC.)

70063. BASRUR, PARVATHI K. The salivary gland chromosomes of seven species of *Prosimulium*, Diptera: Simuliidae, from Alaska and British Columbia. (Canadian journal of zoology, Oct. 1962. v.40, no.6, p. 1019-1033, illus., tables.) 12 refs.

Analysis preceded by notes on the taxonomy, ecology, cytology, etc. of the black-fly forms studied. The seven species are claimed to form a natural unit by virtue of a specified common arrangement of chromosome III. Detailed band comparison indicates two lines of descent within this unit. (DLC.)

BASS, DAVID ELI, 1912- , *see*
Iampietro, P.F., & D.E. Bass. Heat exchanges of men, caloric restriction in cold. 1962. No. 72302
Iampietro, P.F., & *others* . . . weight loss . . . cold. 1961. No. 72301

70064. BASSETT, H. G. Devonian stratigraphy, central Mackenzie River region, Northwest Territories, Canada. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p. 481-98, maps, graphs incl. fold. in v.3.) 11 refs.

Reviews pertinent literature, also arguments for revised correlations of some Devonian units of the Norman Wells - Fort Good Hope area. The terms "Ramparts" and "Beavertail" are recommended for discard, and adoption proposed of the formation names Bear Rock, Hume, Hare Indian, Kee Scarp, Canol, and Imperial, for an ascending sequence of Devonian stratigraphic units. The many facies changes, prolific fauna, economic prospects, and good outcrop make the Devonian system an interesting unit for study. (DLC.)

BASSETT, I. JOHN, *see* Baldwin, W.K.W., & *others*. Report on botanical excursion . . . 1962. No. 69980.

70065. BATALIN, A. M. Opyt rascheta teplovogo balansa Beringova moria. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy 1960, t.7, Morskie gidrometeorologicheskie prognozy i raschety, p. 23-36, tables, charts.) 18 refs. Text in Russian. **Title tr.**: Attempt at calculating the heat budget of the Bering Sea.

Reports an equation for calculating heat balance of this sea. Heat sources and losses are estimated. Solar radiation, evaporation, convection-turbulent heat exchange, formation and thawing of sea ice and other factors affecting the heat budget are analyzed. Heat losses are greater than sources at the surface of the Bering Sea, and the yearly heat budget totals -23.7 kcal./cm^2. Monthly variations also are calculated. (DLC.)

70066. BATALIN, A. M., *and* **N. G. VASIUKOVA.** Opyt rascheta teplovogo balansa Okhotskogo moria. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy 1960. t.7, Morskie gidrometeorologicheskie prognozy i raschety, p. 37-51, tables, charts.) 11 refs. Text in Russian. **Title tr.**: Attempt at calculating the Okhotsk Sea heat budget.

Divides the sea surface into sixty-one 2° squares, and analyzes heat sources (solar radiation, heat exchange between sea and atmosphere, ice forming, and condensation), and heat losses (effective heat emission, evaporation, ice thawing, and others). The losses are greater than the sources and the yearly heat budget equals -25 kcal./cm.^{2}; the heat loss $40 \cdot 10^{16}$ kcal./yr. Monthly, seasonal and regional variation of the heat budget is outlined; other features are characterized. (DLC.)

70067. BATES, HOWARD F. An HF sweep frequency study of the arctic ionosphere. College, Alaska, Apr. 1961. v, 59 p. diagr., graphs, table. (Alaska. University, Geophysical Institute. Scientific report no.1) 45 refs.

Discusses observations made during 1958 and 1959 using a sweep frequency, HF, oblique sounder; selected groups of echoes are illus. Most of the scatter echoes from soundings toward geomagnetic north were direct F-region scatter of two main types: 1F and constant range echoes. These are discussed, particularly their usefulness in ionospheric research. Further work with greatly increased system sensitivity is indicated. (DGS.)

70068. BATES, HOWARD F. The slant *Es* echo, a high frequency auroral echo. (Journal of geophysical research, Feb. 1961. v.66, no.2, p. 447-54, table, diagrs.) 13 refs.

Discusses sweep-frequency and auroral radar observations at College, Alaska. Whenever the slant *Es* echo is strong on the oblique-incidence, sweep-frequency (1-25 Mc./s.) sounder, the 41-Mc./s. radar records an echo at the same range as that at 25 Mc./s.) on the sweep-frequency record. This range is close to that at which the line of sight most nearly approaches normal incidence upon the geomagnetic field lines. The echo appears to be the result of energy that is scattered by randomly distributed, field-aligned irregularities, and is strongly enhanced by one of two focusing agents that depend upon frequency. The slanting portion of the echo is produced by least-time focusing, the constant-range VHF portion by aspect focusing. The echo is associated with magnetic disturbances; the *K* index was 3-7 in the cases examined. Its extension at 41 Mc./s. is occasionally observed as a discrete type of auroral echo. The scatterers are diffusely distributed.—From author's abstract. (DLC.)

BATES, JAMES G., *see* Hillary, *Sir* E., & J.G. Bates. Ferguson tractors . . . 1958. No. 72153

BATRAKOV, V.G., *see* Medvedev, V.M., & V.G. Batrakov. Morozostoĭkost' betona . . . 1962. No. 73908

70069. BATTEN, E. STANLEY. The summertime reversal of winds in the lower stratosphere. Santa Monica, Cal., June 17, 1959. 18 l. maps, graphs. (RAND Corp. Paper P-1727.) 16 refs. Presented at the National Conference on Stratospheric Meteorology, Minneapolis, Minn., Aug. 31-Sept. 3, 1959.

Attempts a time and space description of the spring-time change to easterly winds and the autumnal return to westerly above 20 km. (approx. 50 mb.). May-Aug. 1957 data from 36 stations north of 45°N. were used. Daily variation of winds at 50, 60, 70, 80, 90, and 100 thousand feet is graphically depicted for Seattle, Wash.; also for Naknek in Alaska, and at the four lower levels for Thule. Periods (in months and number of days) of east winds over North America 45°-78°N. are summarized graphically for the various levels. No reversal was noted below 60,000 ft.; maximum duration of 120 days was provisionally found at 90,000 ft. Explanation of this reversal is rather complicated, though thermal wind considerations are an important factor. (DWB.)

70070. BATTEN, E. STANLEY. Wind systems in the mesosphere and lower ionosphere. (Journal of meteorology, June 1961. v.18, no.3, p. 283-91, graphs.) 24 refs.

Constructs cross sections of zonal wind, using wind data since 1957 from the 30-100 km. region, and compares these cross sections with the existing model of the mesosphere and lower ionosphere. Temperatures at 60°N. computed from the zonal winds, and compared with 1957-58 observations at Fort Churchill, show good agreement during the summer months, and large, approx. 10°K., deviations during the winter.—From author's abstract. (DLC.)

70071. BATYREV, V. U 80-i paralleli. (Sovetskiĭ shakhter, Dec. 1962. god 11, no.12, p. 40-41, illus.) Text in Russian. **Title tr.:** At the 80th parallel.

Sketches the work of Russian miners in Barensburg and Pyramiden coal mines on Vestspitsbergen, outstanding individuals, living conditions, educational and recreational facilities. Importance of this coal source to Soviet shipping and industry in the North is stressed. (DLC.)

BATZEL, ROGER E., *see* Alaskan Science Conference 1960. 1961. No. 69643

70072. BAUER, ALBERT, 1916- . Influence de la dynamique des fleuves de glace sur celle de l'Inlandsis du Groenland.. (*In:* IUGG.. Association of Scientific Hydrology. Helsinki, 1960, Pub. no. 54, *pub.* 1961. p. 578-84, maps, diagr., graph.) 16 refs. Text in French. Summary in English. **Title tr.:** Influence of the dynamics of the ice streams upon that of the Greenland Inland Ice.

Suggests that the thirty-odd ice streams by their discharge of icebergs and their block movement help to determine the dynamics of the Greenland Inland Ice. This conclusion results from a detailed study of Jakobshavns Isbrae, 69°15′N. 50°W.; does not bear with the theory of J.F. Nye, q.v. on glacier mechanics. (DWB.)

70073. BAUER, ALBERT, 1916- . Interprétation des résultats obtenus sur les vitesses des glaciers du Groenland; commentaires de stéréogrammes des glaciers du Groenland. (Société française de Photogrammétrie, Bulletin, Nov. 1961. no. 3, p. 15-24, illus., map, profile.) *Reprinted in:* Expéditions polaires françaises, Expédition glaciologique internationale au Groenland 1957-1960, Réalisation technique, 1961. Publication no. 226. Text in French. **Title tr.:** Interpretation of the results obtained on the velocities of the Greenland glaciers; comments on the stereograms of the Greenland glaciers.

Notes the central zone of the Greenland Inland Ice as the most active, with 20 large glaciers discharging into Disko and Umanak Bays. Measurement of the velocity of these glaciers (as described by M. Carbonnell, q. v.) was required for determining their discharge and the mass balance of the entire central zone. Their rapid movement is exemplified in Store Isbrae, near the southeast corner of Umanak Bay, with a mean velocity of 11.4 m. per day much greater than that of the Mer de Glace (Mt. Blanc), about 0.5 m./day. The 11 stereo pairs show various aspects of glacier fronts, icebergs, and the ablation zone of the Inland Ice. Comments are made on Jakobshavn Glacier among others; and on several photos of the Inland Ice indicating changes with altitude. (CaMAI.)

70074. BAUER, ALBERT, 1916- . Mesures au tellurom̀etre, Groenland 1959, Expéditions Polaires Françaises. 7 p. illus., map, graph. offprint from *Géomètre,* Dec. 1961, no. 12. Text in French.

Title tr.: Tellurometer measurements, Greenland 1959.

Describes briefly the organization, equipment, staff and program of the International Glaciological Expedition to Greenland (EGIG) directed by P.É. Victor. Use of the tellurometer on the Inland Ice in 1959 is noted: measuring a 925 km. west-east profile and a shorter north-south profile with a 12 cm. mean error. Efficiency of the tellurometer method is stressed. (CaMAI.)

70075. BAUER, ALBERT, 1916- Précision des mesures d'ablation. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no. 54, *pub.* 1961. p. 136-43, maps, graph, tables.) 4 refs. Text in French. Summary in English. **Title tr.**: Accuracy of ablation measurements.

Describes successful testing in summer 1959 of a new type of ablation stake near the International Glaciological Expedition Camp 4, 69° 40′ N. 49° 37′ W., 1000 m. elevation, in the western part of the Greenland Inland Ice. Measurements of net ablation may be as much as 26% in error: greater accuracy may be obtained by using more stakes, each being controlled by five - ten supplementary ones. (DWB.)

70076. BAULIN, V. V. Osnovnye ėtapy istorii razvitiia mnogoletnemerzlykh porod na territorii Zapadno-Sibirskoĭ nizmennosti. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy 1962. t. 19, p. 5-18, diagrs., map.) 35 refs. Text in Russian. **Title tr.**: The main stages of the development history of permafrost in the territory of the West Siberian plain.

Reviews the transgressions, the cooling-off and warming-up periods, and the procedure of glaciations. According to these phenomena, three zones of permafrost are distinguished: a monolithic zone, of which the southern limit lies roughly along the Arctic Circle and in general coincides with the northern limit of forests; a zone of two-layer structure of which the southern boundary runs a little north of 64° N.; the third zone extends approximately from 64° N. to 61° N. and bears only relict forms of permafrost. Four stages or time-spans in Quaternary permafrost development are recognized and each is characterized. (DLC.)

BAUMANN, ROBERT C., *see* Evans, H.E. & *others*. Arctic Meteorol. photo probe. 1962. No. 71309

70077. BAUMGARDT, ERNEST. Comment s'orientent anguilles et saumons dans leurs migrations de milliers de kilomètres. (Nature science-progrès, Oct. 1961. no. 3318, p. 428-37, illus., map, diagrs.) Text in French. **Title tr.**: How eels and salmon orient themselves in their migrations of thousands of kilometers.

Describes the life cycle of the Pacific salmon, and discusses the processes by which it is guided in the North Pacific migrations and the return to natal streams for spawning. Hypotheses are considered that the salmon recognizes its spawning stream from memory of a characteristic odor, and that it orients at sea partly by sun and stars. (DLC.)

BAUMGARTNER, D. J., *see*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

BAUMKIRCHNER, KURT, *see Western miner*. Can. Tungsten Corp. 1962. No. 76533

70078. BAUSSART, M. Les procédés de mesure de la vitesse des glaciers par photogrammétrie. (Société française de Photogrammétrie. Bulletin, 1961. no. 3, p. 3-9, diagrs.) 2 refs. Text in French. **Title tr.**: Methods of measuring the velocity of glaciers by means of photogrammetry.

Explains the various methods, in particular those using stereophotography: successive photographs from one station or simultaneous photographs from two stations. The former method was used by the Germans in West Greenland; the French employ aero-meandering between fixed points on the glacier margin to determine successive positions of the points. Merits of the two systems are compared. (ExPF.)

BAWDEN, PETER C., *see* Hale, J.D. Winter drilling . . . 1962. No. 71955

70079. BAYNES-COPE, A. D. Analyses of samples of ambergris. (Nature, Mar. 10, 1962. v. 193, no. 4819, p. 978-79, illus., tables.) 5 refs.

Reports on physical and chemical examinations of six samples taken from a boulder of sperm-whale ambergris weighing 926 lb. Comparison with an earlier analysis and suggestions for sampling, are included. (DLC.)

70080. BAZANOV, L. D. Opyt kolonkovogo bureniia na lednikakh Zemli Frantsa-Iosifa. (Issledovaniia lednikov i lednikovykh raĭonov, 1961. vyp. 1, p. 109-114, illus.) 2 refs. Text in Russian. Summary in English. **Title tr.**: On the core drilling in Franz Joseph Land glaciers.

Describes drilling experiences in the Churlyanisa ice dome during the Institute of Geography expedition to Hooker Island, 1957-1959. Holes were drilled to 82 m. depth for temperature measurements and to study the structure and physical and mechanical properties of the ice. The unprotected, compressor-driven, truck-mounted rig proved cumbersome to operate as well as to transport, and could not be used during winter. An enclosed, heated, sledge-mounted rig is proposed instead. Sizable compressor power is required to blow the drill hole clean. Toothed core bits of steel with increased separation between the teeth are suitable. Sodium chloride is recommended to avoid damage to the drill (CaMAI.)

70081. BAZHEV, A. B. Kharakter l'doobrazovaniia i stroenie firnovo-ledianoĭ tolshchi v oblasti pitaniia lednika Shokal'skogo. *(In:* Akademiia nauk SSSR. Institut geografii . . . Materialy glīatsiologicheskikh . . . 1961. vyp 3, p. 26-32, illus., graphs.) Text in Russian. **Title tr.**: Character of ice formation and structure of the firn-ice stratum in the feeding area of Shokal'skogo Glacier.

Reports the firn stratum to 15 m. depth in a bore hole 31 m. deep near the Ledorazdel'naya station. This stratum has various horizons 0.5 to 2 m. thick; and below it is layered ice. Annual layers of firn and ice strata are analyzed for the 1933-1958 period, noting the climatic changes which occurred. The yearly snow accumulation is 350-400 mm. converted to water. In the last 25 years, a 10-11 m. stratum of ice and firn has accumulated. (DLC.)

70082. **BAZHEV, A. B.** Osobennosti l'doobrazovaniia i stroeniia firnovo-ledianoĭ tolshchi v oblasti pitaniia Novozemel'skogo lednikovogo pokrova. (Issledovaniia lednikov i lednikovykh rainov, 1962. vyp. 2, p. 66-75, graphs, diagrs.) 9 refs. Text in Russian. Summary in English. **Title tr.:** Features of ice formation and structure of the firn-ice stratum in the feeding area of the Novaya Zemlya ice cover.

Reports 1957-1959 glaciological investigations on the Shokal'skogo Glacier, on the northern island in the IGY program. Laboratory and route studies were made, bore pits and drillings used to determine firn-ice stratum thickness, temperature, formation processes, effects of climatic conditions and other features. The role of meltwater in the formation of ice is outlined. Cyclic (9 to 11 yr. periods) changes of climatic conditions are established and characterized. (DLC.)

BAZHEV, A. B., *see also* Akademiia nauk. . . . Novaia Zemlia; struktura l'da. 1962. No. 69552

BAZHEVA, V. IA., *see* Akademiia nauk. . . . Novaia Zemlia; struktura l'da. 1962. No. 69552

70083. **BEACH, FLOYD K.** Muskeg, signal and noise. (Canadian oil and gas industries, Sept. 1961. v. 14, no. 9, p. 49-50.)

Reports discussion, by S.N. Domenico of Pan American Petroleum Corp., of a method of improving the quality of seismic reflections in areas where changes in thickness of the frozen muskeg layer may alter reflection character severely. A mathematical analysis of signal to noise ratio as related to appearance or quality of seismic records was given by A. Junger of Shell Oil Co. (DGS.)

BEAL, M. ALLAN, *see* Alaskan Science Conference 1960. 1961. No. 69643

70084. **BEALL, G. H.** Preliminary report on Laflamme Lake area New Quebec. Quebec, 1960. 10 p. fold. map. (Quebec. Dept. of Mines. Geological Surveys Branch. P. R. no. 435) 6 refs.

Maps at scale 1 in: 1 mi. and describes the stratigraphic and structural geology of the area 61° 15′ - 30′ N. 73° 35′ - 74° 20′ W., investigated in 1959. Archaean basement rocks, mostly granite and granite gneiss, are overlain unconformably by the Povungnituk group of metamorphosed sedimentary and volcanic rocks intruded by gabbro sills. These, in turn, are overlain unconformably by the Chukotat group of basalt, gabbros, slates, and peridotites, exposed mostly in a long, east-northeast striking synclinorium. The complex folds, described, were not found in the Povungnituk group. The New Quebec (Ungava) center of supposed meteoritic origin, is in the southeast corner of the map area. Nickel-copper sulfides are present, asbestos occurrences possible. (DGS.)

70085. **BEATON, JOHN ROGERSON, 1925-** . Further observations on metabolic alterations in the hypothermic rat. (Canadian journal of biochemistry and physiology, Jan. 1961. v.39, no.1, p. 1-8, tables.) 22 refs. In sequence to No. 63313.

Report on fasted rats cooled to a rectal temperature of some 15°C. Changes in the blood, plasma, serum, red cells and liver, were determined for: inorganic P, for K, Na, Ca, H_2O, for chloride, glutathione, and glycogen. The effect of urea administration was also followed. (DLC.)

70086. **BEATON, JOHN ROGERSON, 1925-** Haematologic and serum protein alterations in the hypothermic rat. (Society for Experimental Biology and Medicine. Proceedings, June 1961. v.107, no.2, p.426-28, tables.) 11 refs.

Hypothermia of 15°C. produced increases in hematocrit, in mean corpuscular volume, total serum protein, albumin concentration, and in the serum albumin: globulin ratio. A leukopenia with relative fall in neutrophils and rise in lymphocytes, was also noted. (DLC.)

70087. **BECK, C. M.** Production of iron ore in Canada. (Canadian mining and metallurgical bulletin, Nov. 1961. v.54, no.595, p. 807-808.) Paper presented at the Canadian Institute of Mining and Metallurgy meeting, Quebec, Mar. 1961.

Reviews development from no production in 1938 to 1960 with Canada a major exporter. Prospecting and working of Canadian mines were implemented by expansion of the U.S. steel industry, improved research and equipment, etc. Effect of government policies on future growth is indicated. (DGS.)

70088. **BECKER, BERNARD, 1920-** . The effect of hypothermia on aqueous humor dynamics, 3; turnover of ascorbate and sodium. (American journal of ophthalmology, May 1961. v.51, no.5, pt. 2, p. 1032-39, illus., tables.) 6 refs. In sequence to No. 72216.

Turnover of radioactive sodium and of ascorbate corroborated findings on aqueous flow suppression during hypothermia. Sodium data indicate a drop to 0.25 in the flow coefficient from normal at 19°C. Comparable values resulted from ascorbic turnover. (DNLM.)

BECKER, BERNARD, 1920- , *see also*

Holmberg, Å., & B. Becker. Effect of hypothermia . . . 2 . . . 1960. No. 72216

Pollack, I.P., & *others.* Effect of hypothermia . . . 1 . . . 1960. No. 74860

Pollack, I.P., & B. Becker. The effect of hypothermia . . . 4. 1961. No. 74861

BECKER, ROBERT E., *see*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

70089. **BEEBE, FRANK L.** The marine peregrines of the Northwest Pacific Coast. (Condor, 1960. v.62, no.3, p. 145-89, illus., tables.) 25 refs.

Reports study of the *pealei* form of *Falco peregrinus,* a race common to this region including the Aleutian Islands. Field work was centered on the northern part of the State of Washington and British Columbia, but much information is presented on the more northerly areas. Validity of the form, geographic distribution and numbers, breeding range, biology, migrations, wintering, etc. are described. (DLC.)

70090. **BEGUNOVA, T. G.,** *and others.* K voprosu kompleksnogo ispol'zovaniia apatito-nefelinovykh rud. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy geologii . . . 1961, p. 103-108.) Text in Russian. *Other authors:* M.K. Mazurov *and* E. A. Pistsova. **Title tr.:** On the problem of complete utilization of apatite-nepheline ores.

Reports the current processing of these ores in the plants at Kirovsk, Kola Peninsula, as mostly

for obtaining superphosphate. New methods and processes are outlined for full utilization of the apatite, nepheline, sphene, titanomagnetite and other minerals. Some improvements are considered urgent. (DLC.)

70091. BEKLEMISHEV, KONSTANTIN VLADIMIROVICH, 1928- . Zooplankton severo-vostochnoĭ chasti Tikhogo okeana zimoĭ 1958-59 g. (Akademiîa nauk SSSR. Institut okeanologii. Trudy 1961. t.45, p. 142-71, illus., tables, maps.) 53 refs. Text in Russian. Summary in English. **Title tr.**: Zooplankton of the northeast Pacific in the 1958-59 winter.

Comprehensive study based on material collected during the 29th run of the *Vitîaz'*, Oct. 1958-Mar. 1959. Species distribution along certain profiles, one across the Gulf of Alaska (54°N.), is treated *in extenso;* the distribution of individual species is noted, and some data are given on the little deep-sea material collected. Bio-geographical distribution of the pelagial in the eastern and northeastern areas is discussed in some detail, and the changes of plankton composition associated with changing water masses are reported. (DLC.)

70092. BEKLEMISHEV, VLADIMIR NIKOLAEVICH, 1890- . Pokonchit' s gnusom. (Master lesa, July 1961, no.7, p. 27.) Text in Russian. **Title tr.**: Put an end to mosquito plague.

Notes mosquito repellent nets developed by E.N. Pavlov, Pervomaĭskiĭ and Nizovkin, also ointments and substances active for 4-11 hrs., aerosol spray, and other devices developed by Soviet scientists. The activities of various organizations working in this field should be coordinated. (DLC.)

70093. BELETSKIĬ, I. B. Osobennosti plodonoshenîa sosny i eli na Kol'skom poluostrove. (Lesnoe khozîaĭstvo, July 1961. god 14, no.7, p. 33-35.) Text in Russian. **Title tr.**: Fruit-bearing peculiarities of pine and spruce in Kola Peninsula.

Discusses the effects of unfavorable climatic conditions on seed production of pine and spruce from data collected by Russian and Scandinavian scientists. The normal 3-5 yr. interval between high crops, is extended on the Kola Peninsula to six years for pine (10-20 years according to Finnish scientists) and to eight years for spruce. Kola spruce seed weighs 1.8-2.7 g./1000 instead of 5 g. as in Leningrad Province; and pine is 3.5-4 g./1000 instead of 5.5-6 g. as in central USSR. The germinative capacity of pine seeds from southern Kola is 39% and only 9% in northern parts of the Peninsula; whereas with seeds of pine growing under normal climatic conditions, this ratio is 90-60%. (DLC.)

70094. BELÎAEV, GEORGIĬ MIKHAĬLOVICH, 1913- , and **B. G. IVANOV.** K voprosu o bipolîarnosti ofiur roda *Toporkovia* Djakonov. (Zoologicheskiĭ zhurnal, Aug. 1961. t.40, vyp.8, p. 1258-60, map.) 5 refs. Text in Russian. Summary in English. **Title tr.**: The problem of bipolarity of ophiuroids of the genus *Toporkovia* Djakonov.

Reports 23 specimens of *Toporkovia fragilis* found in the northwestern Bering Sea. This brittlestar, hitherto known from the Arctic by a single species is known from the Antarctic as *T. antarctica.* The differences between the two forms do not exceed the rank of subspecies. (DLC.)

70095. BELÎAEVSKIĬ, N. A. Geologicheskaîa sluzhba Kanady. (Sovetskaîa geologiîa, July 1961, no.7, p. 162-64.) 2 refs. Text in Russian. **Title tr.**: The Geological Survey of Canada.

Reviews the history, divisional organization and functions; the geologic mapping, geophysical investigations and special scientific work are indicated. (DLC.)

70096. BELÎAEVSKIĬ, N. A. Itogi Pervoĭ Vsesoîuznoĭ konferentsii po geologii i metallogenii Tikhookeanskogo rudnogo poîasa. (Sovetskaîa geologiîa, Jan. 1961, no.1, p. 146-53.) 2 refs. Text in Russian. **Title tr.**: The results of the first All-Union Conference on the geology and metallogeny of the Pacific ore belt.

Describes scope, program, and papers delivered at this conference in Vladivostok Sept. 26 - Oct. 2, 1960; it was attended by 209 delegates representing 63 scientific organizations. Magadan Province, Kamchatka and Yakut ASSR were included in the discussions. (DLC.)

70097. BELÎAKOV, L. N., *and* **L. T. BELÎAKOVA.** Nekotorye cherty geologicheskogo stroeniîa raîona sochleneniîa Urala i Paĭ-Khoîa. (*In:* Materialy po geologii . . . Evropeĭskoĭ chasti SSSR, sbornik stateĭ 1961, vyp.1, p. 55-60, text maps.) 5 refs. Text in Russian. **Title tr.**: Some features of geologic structure in the region of the Ural-Pay-Khoy joint.

Reviews the 1956-1959 geologic mapping in the Silovayakha and Kara River basins, and analyzes the joint of the Ural with the Pay-Khoy, evaluating the geologic map of the region. The study revealed that the Pay-Khoy is an immediate extension of the structural-facies zone of the western slope of the Ural. (DLC.)

70098. BELÎAKOV, L. N. Vliîanie volneniîa na pokazaniîa vertushek raznykh konstruktsiĭ. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik stateĭ, vyp.1, p. 91-93, tables.) Text in Russian. **Title tr.**: Effects of swell on readings of current meters of different designs.

Compares results obtained with a sea current meter and a BPV-2r at 5, 10 and 20 m. depth in the Kara Sea. The two devices were in agreement in but nine of their 1550 current-velocity and -direction readings. Inaccuracies of both are discussed: the marine current meter had up to 20-30% error in velocity during swells. The BPV device used from aboard ship is usually unreliable for current direction and should not be used when swell exceeds 3 points. (CaMAI.)

BELÎAKOVA, L. T., *see* Belîakov, L.N., & L.T. Belîakova. Nekotorye cherty . . . Urala i Paĭ-Khoîa. 1961. No. 70097

70099. BELINSKIĬ, A. A. Kakie lesozavody stroit' v Sibiri? (Lesnaîa promyshlennost', Aug. 1961. god 39, no.8, p. 21-22.) Ref. Text in Russian. **Title tr.**: What type of sawmill should be built in Siberia?

Distinguishes two types of sawmill: one, in lumbering combines, produces only high grade boards for export; the other is the independent sawmill-woodworking plant which produces both lumber and furniture, etc. for the local market. The first

type is to prevail in Western Siberia, particularly Krasnoyarsk Province with its port of Igarka, and in the Far East; the second type is suited to Yakutia and other non-exporting areas. (DLC.)

BELKIN, V. I., *see* Abramov, V.P., & *others*. Ob uchastii ledovogo faktora . . . 1961. No. 69466

BELKNAP, R. W., *see* Cook, S.F., & R.W. Belknap. Cold injury cellular level. 1961. No. 70815

70100. BEL'KOV, I. V. Metamorficheskiĭ kompleks Keĭv v vostochnoĭ chasti Kol'skogo poluostrova. (*In:* Akademiĭa nauk SSSR. Karel'skiĭ filial. Problemy geologii . . . 1961, p. 58-73, table, cross-sections.) 12 refs. Text in Russian. **Title tr.:** The Keyvy metamorphic complex in the eastern part of the Kola Peninsula.

Outlines the rock composition and the stratigraphic position of the Lower Proterozoic Keyvy series of the Kola Peninsula. The metamorphic complex mainly consists of gneisses and crystalline schists, which are described as to petrographic composition, typical minerals and other features. Metabasites of this series are also described. Stratigraphic division of the Keyvy series is reported. Evolution of the metamorphic complex is discussed. (DLC.)

70101. BEL'KOV, I. V. Zakonomernosti razmeshcheniĭa i formirovaniĭa metamorfogennykh vysokoglinozemistykh mestorozhdeniĭ; na primere kianitovykh mestorozhdeniĭ Keĭv na Kol'skom poluostrove. (Vsesoĭuznaĭa ob"edinennaĭa sessiĭa po zakonomernostiam razmeshcheniĭa poleznykh iskopaemykh i prognoznym kartam. 2d, *Kiyev,* 1960. Doklady sessii, chast' 1, p. 178-86.) Text in Russian. **Title tr.:** Distribution laws and formation of meta-morphogenetic high-alumina deposits; as exemplified by cyanite deposits of Keyvy, Kola Peninsula.

Describes these deposits, 40-45% cyanite, 15-80 m. thick, and extending about 400 km. Their geologic structure and history are outlined and structural analysis given. Processes of tectogenesis and regional metamorphism, the mechanism of intrusions and other problems are reviewed. Formation of the Keyvy cyanite deposits may serve to elucidate other high-alumina meta-morphogenic deposits. (DLC.)

70102. BEL'KOVICH, VSEVOLOD MIKHAILOVICH, 1935– . K voprosu o fizicheskoĭ termoregulíatsii u belukhi *Delphinapterus leucas* Pall. (Akademiĭa nauk SSSR. Ikhtiologicheskaĭa komissiĭa. Trudy soveshchaniĭ, 1961. vyp.12, p. 50-59, illus.) 40 refs. Text in Russian. **Title tr.:** The problem of physical thermoregulation in the beluga *Delphinapterus leucas* Pall.

Histological study of the skin of this whale, with emphasis on tissues and structures instrumental in heat exchange (insulation) and thermoregulation. The peculiarities of the successive skin layers and those of the complex blood vessels are described, and their role in the thermal regimen is suggested. (DLC.)

70103. BEL'KOVICH, VSEVOLOD MIKHAĬLOVICH, 1935– , *and* **A. V. ĬABLOKOV.** Sredi morzheĭ. (Priroda, Mar. 1961. god 50, no.3, p. 50-56, illus.) Text in Russian. **Title tr.:** Among walruses.

Reports several months' observations of the Pacific form in the Chukchi and Bering Seas including the Rudder harem (Anadyr Bay) and herds on the ice of the Chukchi Sea. Movements, tusks and their forms, voice, care of the young, senses, behavior and herd instinct, etc. are described and illus. with rarely seen close-ups. (DLC.)

70104. BELL, C. K. Cross Lake map-area, Manitoba 63I. Ottawa, Queen's Printer, 1961. 22 p. map 32-1961 fold. in pocket. (Canada. Geological Survey. Paper 61-22.) 17 refs.

Presents the revised and completed geological map at scale 1 in: 4 mi., of this 5600 sq. mi. area, 54°-55°N. 96°-98°W. History, previous work, and that of 1960 are outlined. Physical features include low, rocky hills, and large, flat, wet drift areas. More than 90% of the map-area is underlain by a granodiorite-tonalite-gneiss complex of Precambrian age; older Precambrian rocks include the mainly volcanic Hayes River group, and the mainly sedimentary Cross Lake group. Major structural feature is the folding of the Hayes River group; in many places tight folding or overturning prevent the working out of the stratigraphic succession. No minerals of economic importance have been found to date. (DI.)

70105. BELL, ROSCOE E. How to acquire government land in Alaska. (Alaska sportsman, Feb. 1961. v.27, no.2, p. 11-15, +, illus., map.)

Reviews work since 1959 of the Alaska Division of Lands, and outlines procedures by which individuals acquire state and federal lands. Agricultural land (up to 640 acres) for homesteading can be purchased from the state at public auctions with 10% of the price as down payment, credit toward the balance can be earned by improving the property. Federal homesteads of 160 acres can be acquired by residence and cultivation of the land. Living conditions of settlers on homesteads are described. (DI.)

BELL, ROSCOE E., *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

70106. BELLAIR, PIERRE. Bilan thermique et conditions de genèse des inlandsis. (Académie des Sciences, *Paris.* Comptes rendus, Nov. 7, 1960. t.251, no.19, p. 2061-63.) 2 refs. Text in French. **Title tr.:** Thermal balance and genetic conditions of inland ice.

The shape of the antarctic continental shoreline suggests that the coalescing of the edge of the glaciers is due entirely to oceanic forces. The sea removes 35-40 million tons of ice per km. of coast each year and the sea water absorbs the greatest part of the heat deficit of the ice. Assuming that the heat reserve of the sea could not have counterbalanced the cold reserve of the icecap at the maximum period of glacier activity, unless the heat reserve of the sea was superior, a theory is deduced for the Quaternary glaciation and the formation of both the arctic and antarctic icecaps, which does not exclude variations due primarily to climatic variations. A synchronism of glacial developments of the Arctic with that of the antarctic is demonstrated.—From CRREL. (DLC.)

BELLESTRI, J., *see* Holland, M.G., & *others*. Ocular distensibility . . . 1961. No. 72209

BELLET, S., *see* Beyda, E.J., & *others*. Effect of hypothermia . . . 1961. No. 70192, 70193

70107. BELMONT, ARTHUR DAVID, 1920– The reversal of stratospheric winds over North America. Minneapolis, Minn., Feb. 27, 1961. vi, 33 l., maps, graphs. (General Mills, Inc. Mechanical Div., GMI report no. 2173.) 19 refs. *Also issued as:* U.S. Air Force. Cambridge Research Center, Final report, Contract AF 19 (604)-6618; AFCRL TN 61-265.

Summarizes and compares the individual stratospheric wind reversals of 1957, 1958 and 1959, with the arbitrary normals, established elsewhere. The erratic spring reversal occurs as the winter vortex is displaced from time to time by a warm high pressure cell moving from middle to polar latitudes. Occasionally such intrusions prove temporary and the vortex returns to its polar location; at other times a complicated cellular pattern eventually develops into a stable polar anticyclone. Over the western hemisphere, the easterlies seem to appear first at highest levels near 55°-60°N. in early spring, then advance downward and northward. As the reversal process is not circumpolarly symmetric, southward progression is to be expected in the opposite hemisphere. The fall reversal appears to be more regular and very rapid, starting in August and propagating upward, until by mid-Sept. all the stratosphere north of 55°N. has usually changed to westerly flow.—From author's abstract. (DWB.)

BELOGORSKIĬ, V. IA., *see* Gershkovich, S.M., & *others*. Kliniko-rentgenologicheskie nabliudeniia . . . 1961. No. 71665

70108. BELOGUROVA, V. P. Épidemiologicheskoe znachenie vozbuditelia tuberkuleza bych'ego tipa v IAASSR. (Akademiia nauk SSSR. IAkutskiĭ filial. Doklady 1957. v.8, 298-309, tables.) 30 refs. Text in Russian. **Title tr.**: Epidemiological significance of the tuberculosis pathogen of bovine type, in the Yakut ASSR.

Discusses types (3) of TB and their pathogenicity to man and animals; the role of milk and its products in TB epidemiology, and of raw or insufficiently cooked meat in that in Yakutia; TB types in man in Yakutia; clinical types; incidence in domestic animals. (DLC.)

70109. BELOKUR, V. M. K faune krovososushchikh dvukrylykh nasekomykh Nenetskogo natsional'nogo okruga i severnoĭ chasti Komi ASSR. (Entomologicheskoe obozrenie, 1960. t.39, vyp.2, p. 404-409, tables.) 9 refs. Text in Russian. Summary in English. **Title tr.**: On the fauna of blood-sucking Diptera of the Nenets National District, and the northern part of Komi ASSR.

Reports on a collection of these insects made in midsummer 1955, comprising over seven thousand specimens belonging to five families. Frequency of attacks, and temperatures preferred for them, and effects of wind, humidity and pressure are described. Phenology also is noted. (DLC.)

BELON, ALBERT E., *see* Alaskan Science Conference 1961. 1962. No. 69644

70110. BELOPUKHOVA, E. B. Mnogoletnie bugry pucheniia v basseĭne r. IArudeĭ. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy 1962. t.19, p. 91-95, illus., diagr.) 12 refs. Text in Russian. **Title tr.**: Old frost mounds in the Yarudey River basin.

Reports a study on the watershed plateau and the second terrace of the Yarudey, tributary to the Nadym at approx. 66°09′N. 72°E. These mounds are usually 5-10 m. high, and mostly oval in shape, 100-150 m. long, 50-80 m. wide. Their composition and other features are described. Two types are distinguished: gigantic on the watershed plateau and normal on the terrace. Both types originated in frost heaving. (DLC.)

70111. BELOPUKHOVA, E. B. Osobennosti l'dovydeleniia v sezonnomerzlom sloe doliny r. Irelíakh. (Merzlotnye issledovaniia. Sbornik stateĭ, 1961. vyp.1, p. 60-76, illus., tables, diagrs.) 13 refs. Text in Russian. **Title tr.**: Characteristics of ice formation in the active layer of the Irelyakh River valley.

Reports a 1957-1958 investigation of the lower and upper flood plains of the Irelyakh, made in connection with the working of diamond deposits in this area of Yakutia. Natural conditions of the valley are described in some detail; the mean annual temperature is -5°C., snow cover relatively light, vegetation typically tundra. The active layer which reaches depths of slightly more than 1 m., has three distinct horizons: the uppermost has a relatively high humus and moisture content, and negligible ice content; in the middle, or exsiccated horizon, moisture migrates downward and upward into the other two. The lowest horizon contains most ice inclusions, and their nature and distribution permit determination of the lower limit of the active layer. The texture of these horizons and the nature of the inclusions formed by freezing from below and from above are described. The degree of ice formation increased with increasing amounts of precipitation in summer and fall, but the amount of ice formed in the active layer was generally negligible.—From CRREL. (DLC.)

70112. BELOPUKHOVA, E. B. Ostatochnyĭ poligonal'nyĭ rel'ef v doline r. IArudeĭ. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy 1962. t. 19, p. 85-90, illus., cross-sections.) 6 refs. Text in Russian. **Title tr.**: Residual polygonal relief in the Yarudey River valley.

Describes the second terrace of the Yarudey, which joins the Nadym just south of Ob Bay: its 18-20 m. elevation, composition, vegetation cover and polygonal relief. Development of frost mounds is noted, and pseudomorphs of ice veins to a depth of 4-5 m. and ranging 0.5 to 1.5 m. wide in the upper part. They are composed mainly of sands, lenses of loam and clay. These pseudomorphs are considered to be some five thousand years old. (DLC.)

BELORUSOVA, ZH. M., *see*

Andreev, IU. F., & Zh. M. Belorusova. Geologicheskoe stroenie . . . 1961. No. 69778

Andreev, IU.F., & Zh. M. Belorusova. Sviaz' kriogennykh form rel'efa . . . 1962. No. 69779

70113. BELORUSSOVA, A. D. Vliianie gerbitsidov na botanicheskiĭ sostav i urozhaĭnost' poĭmennykh lugov nizhnego techeniia Eniseia. (Botanicheskiĭ zhurnal, June 1961. t. 46, no. 6, p. 876-80, tables.) 12 refs. Text in Russian. **Title tr.**: Effect of herbicides upon the botanical composition and the fertility of flood-plain meadows on the lower course of the Yenisey.

Discusses productivity and common plants of these meadows and, in greater detail, the killing

effect upon them of the main groups of herbicides. Proper dosage and spraying methods, addition of substances covering the toxicity of herbicides, etc. are recommended. (DLC.)

70114. BELOUSOV, VLADIMIR VLADIMIROVICH, *and* **E. M. RUDICH.** Island arcs in the development of the earth's structure, especially in the region of Japan and the Sea of Okhotsk. (Journal of geology, Nov. 1961. v. 69, no. 6, p. 647-58, maps incl. one fold.) 30 refs.

Discusses, in the light of hypotheses on the structural development of the earth and oceans, the formation of two types of island arcs in the Pacific Ocean. The younger type to which the Aleutian Islands belong, results directly from crustal tension. This tension leads to the formation of deep faults, whose arcuate form is caused by the curving path of the tensional stresses in the process of the fault growth. The presence of island arcs in the western Pacific and their absence in the east is explained in accordance with the theory of breakdown and transformation ("basification") of continental crust into oceanic. The youthfulness of the Okhotsk Sea basin also accords with the theory. (DGS.)

70115. BELOUSOVA, M. A. K metodu privedeniia dannykh polevykh nabliudenii k seredine goda. (Akademiia nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniia radiovoln. Trudy 1961. vyp. 18 (28), p. 42-49, graphs., tables.) Text in Russian. **Title tr.:** On the method of reduction of field observation data to the middle of the year.

Develops a technique in grouping the data of Srednikan, Yakutsk, and 11 magnetic observatories of lower latitudes for detecting errors in observation in the variable component of the geomagnetic field in 1958, up to 10_g for *H* and Z, and 1 min for *D*. Two methods of investigation are analyzed for effectiveness and accuracy. (DLC.)

70116. BELOUSOVA, M. A. Spokoinye solnechno-sutochnye variatsii otdel'nykh dnei. (Akademiia nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniia radiovoln. Trudy 1957. vyp. 12 (22), p. 248-95, tables, graphs.) Text in Russian. **Title tr.:** Quiet-solar daily variations of separate days.

Investigates the metamorphism of Sq-variations during the quietest days at Yakutsk, Srednikan, Sverdlovsk, Kazan', Irkutsk, Tbilisi, and Tashkent as a function of geographical latitude, and due to variations of magnetic activity of the stations. Data of 1944 from 590 observation days (at all stations) are analyzed and the results are presented in a set of tables. (DLC.)

70117. BELOV, MIKHAIL IVANOVICH. Leninskii dekret o kompleksnom izuchenii Arktiki. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Sept.-Oct. 1961. t. 93, vyp. 5, p. 377-83.) 6 refs. Text in Russian. **Title tr.:** The Lenin decree on the comprehensive study of the Arctic.

Outlines history and importance of the decree of Mar. 10, 1921. Under it the Marine Scientific Institute was founded with biology, hydrology, meteorology and geology-mineralogy sections. Other documents of Lenin concerning study of the Arctic and early studies in the Soviet period are also reviewed. (DLC.)

70118. BELOV, NIKOLAĬ A., *and* **N. N. LAPINA.** Geologicheskie issledovaniia dna Severnogo Ledovitogo okeana za 25 let. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp. 11, p. 97-104, charts.) 6 refs. Text in Russian. **Title tr.:** Geologic investigations of the Arctic Ocean bottom during 25 years.

Summarizes various studies since 1937, when the first North Pole drifting station began its work. By 1960 more than five hundred bottom cores had been collected and studied, and maps of bottom sediments, mineralogic provinces, and chemical elements made. Characteristic features of the Arctic Ocean such as its youthfulness, separation, geologic structure, and presence of ice are noted. Bottom relief, distribution of bottom sediments, their properties and microfauna are characterized. Sedimentation conditions, climate, development of the coast line are discussed. Further studies required are noted. (DLC.)

70119. BELOV, NIKOLAĬ A. Na l'dine vdol' beregov Kanadskoĭ Arktiki. *(In:* Burkhanov, V.F. Na ledianom ostrove, 1962, p. 153-81, illus., plate, tables, map.) Text in Russian. **Title tr.:** On the ice along the shores of the Canadian Arctic.

Outlines the drift, life and work of the drifting station North Pole-7 in Apr. 1958 - Apr. 1959. Author was head of its second team, which landed at the station on April 7; its 18 members, reconstruction of the camp, struggle against meltwater by boring over 60 holes, etc. are described. Visit of a group of foreign journalists Nov. 25-28 is noted. Winter ice pressure developed and the camp was split by a crack Dec. 20-21. The station in 1959, drifted toward Ellesmere Island (300 km. away) and Peary Land, North Greenland (210 km.). It was evacuated on Apr. 11, 1959 at 85° 14.1′ N. 326° 55.9′ E., i.e. 33° 4.1′W. Bottom relief of the Arctic Basin is discussed with characteristics of the Nansen, Makarov, and Beaufort submarine depressions and of the Lomonosov, Mendeleyev, and Marvin submarine ridges; a schematic bathymetric map is included, p. 172. Data on rate of growth of the Basin are tabulated and discussed (p. 173-76), and the Paleogeography is outlined (p. 176-80.) The camp of the evacuated North Pole-7 was later sighted off the east coast of Baffin Island (editor's note). (DLC.)

70120. BELOV, NIKOLAĬ A., *and* **V. A. VEDERNIKOV.** Novoe o dreife stantsii "Severnyĭ polius-7." (Morskoĭ flot, Apr. 1962. god 22, no. 4, p. 34-35, table, map.) Text in Russian. **Title tr.:** New information on the drift of station North Pole-7.

Discusses the drift of the abandoned station from Apr. 11, 1959, till its rediscovery in Baffin Bay near 67° N. on Apr. 9, 1961. The most likely route is through Robeson Channel - Smith Sound to the east coast of Baffin Island. Discussed also by Moira Dunbar, q.v. (DLC.)

70121. BELOVA, ANNA VASIL'EVNA, 1927-
Pitanie navagi Pechorskogo zaliva. (Akademiia nauk SSSR. Murmanskiĭ morskoĭ biologicheskii institut. Trudy 1962. vyp. 4 (8), p. 146-52, tables.) 19 refs. Text in Russian. **Title tr.:** The diet of saffron cod in Pechora Bay.

Discusses earlier work of others, and own results from examination of 279 stomachs of *Eleginus navaga.* Quantitative and qualitative aspects

are considered, the latter including both general and specific enumeration of the prey. (DLC.)

BELOVA, ANNA VASIL'EVNA, 1927- , *see*

Mironova, N.V., *& others.* Raspredelenie . . . ryb . . . 1957 g. 1962. No. 74052

Mironova, N.V., *& others.* Raspredelenie . . . ryb . . . 1958 g. 1962. No. 74053

BELOVA, E. N., *see* Dorfman, M.D., *& others.* Del'khaĭelit . . . 1961. No. 71079

70122. BELOZOROV, S. T. Gavriil Ivanovich Tanfil'ev, 1857-1928. *(In:* Kuznetsov, I.V., *ed.* Liŭdi . . . 1962, p. 534-41, port.) Refs. Text in Russian.

Describes the life and scientific activities of Tanfil'ev, an outstanding botanist, geographer and soil scientist, who worked on the arctic seas, tundras and forests, among other places. (DLC.)

70123. BELROSE, J. S., *and* D. B. ROSS. Observations of unusual low frequency propagation made during polar cap disturbance (PCD) events. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v. 1, p. 126-30, graph, map.) 11 refs.

Reports studies of PCD events by means of propagation of long radio waves in the lower ionosphere at high altitudes. Phase and amplitude recordings made at Thule, Churchill, Goose Bay, Comfort Cove (Newfoundland), and Ottawa during intense polar eruptions of Nov. 10, 12, 15, 20, and Dec. 5, 1960 were used. It was found that when the PCD event is weak, the diurnal variation of the field strength is opposite to that normally observed, and the diurnal variation of phase is less than normal. When the effect is intense, the diurnal variation of both phase and amplitude disappear almost entirely. Suggestion is made that these patterns in the field strength must be determined mainly by the characteristics of the bombarding solar particles, and nocturnal ionization processes. (DLC.)

70124. BELROSE, J. S., *and* D. B. ROSS. Observations of unusual low-frequency propagation made on 12 November, 1960. (Canadian journal of physics, Apr. 1961. v. 39, no. 4, p. 609-614, diagrs., map.) 3 refs.

Reports measurements on circuits between Thule, North Greenland, and Churchill, Canada, also Goose Bay - Churchill, Ottawa - Churchill, and Comfort Cove - Ottawa, following intense solar eruptions on Nov. 10 and 12, 1960. Variations in phase lag and signal amplitude are shown, together with recordings of 30 Mc./s. cosmic radio noise made at Mont Joli on a polar-directed antenna. Lack of any diurnal variations in recorded field strength during the polar cap disturbance suggests production of electron densities near 60 km. altitude. The beginning of observable effects in propagation coincide with pronounced enhancements of ground neutron monitor count rates. (DLC.)

70125. BELYEA, HELEN REYNOLDS, *and* A. W. NORRIS. Middle Devonian and older Paleozoic formations of southern District of Mackenzie and adjacent areas. Ottawa, Queen's Printer, 1962. 82 p. diagrs. incl. 2 fold. (Canada. Geological Survey. Paper 62-15.) 34 refs.

Deals with the stratigraphy of these formations from the outcrop belt bordering on the Canadian Shield. Subsurface successions are described; the outcrop successions being dealt with separately by A.W. Norris. Ordovician and older rocks in the outcrop belt are mapped as the Old Fort Island and Mirage Point Formations. These are unconformably overlain by the Middle Devonian rocks, represented by three main intertonguing facies types; one largely carbonates, another carbonates and evaporites, and the third shales and some carbonates. The Middle - Upper Devonian boundary within the unfossiliferous shales of the Horn River and Fort Simpson Formations is indefinite. Columnar sections and correlation diagrams accompanying the report are based on some 18 well logs, 13 in the Mackenzie District. (DI.)

70126. BELYEA, HELEN REYNOLDS, *and* D. J. McLAREN. Upper Devonian formations, southern part of Northwest Territories, northeastern British Columbia, and northwestern Alberta. Ottawa, Queen's Printer, 1962. 74 p., map, sections fold. in pocket, table. (Canada. Geological Survey. Paper 61-29.) 13 refs.

Discusses surface and subsurface information on this narrow belt of rocks south of Great Slave Lake and the upper Mackenzie River. Lithologic and faunal data are considered, and a multiple formational scheme is devised. A proposed terminology is shown; several new stratigraphic names are suggested. Outcrop sections and selected oil wells are described in the appendix (p. 14-74); the same outcrops and wells are tentatively correlated. Most of the wells have been abandoned. (DGS.)

70127. BELYĬ, M., *and* I. ORLOV. Nauchnyĭ gorodok pod Novosibirskom. (Arkhitektura SSSR, 1960, no. 6, p. 4-7, illus., diagrs., table.) Text in Russian. **Title tr.:** Town for scientists near Novosibirsk.

Describes plans for the construction of Akademgorodok on a 1,300-hectare townsite by the Ob reservoir. The layout of streets, with apartment and one-family houses, hotels and dormitories, schools and university buildings, scientific institutions and library, the recreational and shopping facilities, public utilities, etc. are dealt with in turn. Architectural sketches, street maps, and floor plans are included. (DLC.)

70128. BELYĬ, V. F. Melovoĭ i nizhnepaleogenovyĭ(?) vulkanizm TSentral'noĭ Chukotki. (Vsesoĭuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p. 283-86.) Text in Russian. **Title tr.:** Cretaceous and lower Paleogene(?) volcanism of central Chukotka.

Analyzes the distribution, petrographic characteristics and stratigraphy of the volcanic rocks of the Peninsula. Seven series of volcanic formations are distinguished; four belong to the Lower Cretaceous, the fifth to the Albian-Cenomanian, and the two upper series to the upper Senonian-lower Paleogene(?). Their thickness and composition are briefly discussed. (DLC.)

BELYSHEVA, E. V., *see* Musina, A.A., *& E.V.* Belysheva. Osobennosti gidrokhimii . . . 1960. No. 74179

70129. BEMRICK, WILLIAM J. Effect of low temperatures on trophozoites of *Giardia muris.* (Journal of parasitology, Aug. 1961. v. 47, no. 4, sect. 1, p. 573-76, illus.) 13 refs.

Trophozoites of this flagellate were found to survive low temperatures and thawing, in the presence of glycerol. Slow freezing, or addition of Tween 80 to the medium facilitated survival. Quick freezing to -70°C. was survived. The parasites can survive in the frozen state for 40 days, and tolerate thawing and refreezing. (DLC.)

70130. BENDER, JAMES A. Obituary Ukichiro Nakaya. (Arctic, Sept. 1962. v. 15, no. 3, p. 242-43.)

Biographical sketch of this Japanese scientist, noting his studies of snow and ice crystals at the University of Hokkaido since 1930 and at the U.S. Army's Snow, Ice and Permafrost Research Establishment in the 1950's. (DGS.)

BENDER, JAMES A., *see also* Yen, Y.C., & J.A. Bender. Cooling undersnow camp. 1962. No. 76606

70131. BENGTSON, KERMIT BERNARD, 1922- . Recent history of the Brady Glacier, Glacier Bay National Monument, Alaska, U.S.A. *(In:* International Association of Scientific Hydrology. Pub. 58, Symposium of Obergurgl 1962, p. 78-87, illus., map, table.) 13 refs. Summary in French.

Describes the variation of this 300-sq. km. piedmont glacier at 58°38′N. 136°50′W., during a period of intensive glacierization ending about 3700 years ago by C-14 dating, and followed by a period of diminished activity ending with the Little Ice Age which crested in 1876. Brady Glacier currently is nearly in equilibrium, slightly smaller than its maximum of 1876; a condition due in part to outwash deposits in Taylor Bay having eliminated tidal action as a cause of ice wastage. During the intensive activity, ice thickness near the present terminus was about 300 m. greater than at present; the period of diminished activity was marked by salt water in Brady valley, and along the shore by a mature forest which was destroyed with onset of the Little Ice Age, and some of its trees and stumps carried up into valleys on the east. Since the Little Ice Age peak of 1750 A.D. in Glacier Bay, a 100-km. retreat has taken place, catastrophic in Muir Inlet and other areas, but practically in equilibrium on the northwestern part of the Bay. (DGS.)

70132. BENJAMIN, F. B., *and others.* Effect of stress on potassium content of rat brain. (Society for Experimental Biology and Medicine. Proceedings, Aug.-Sept. 1961. v. 107, no. 4, p. 972-73, table.) 9 refs. *Other authors:* J.N. Anastasi *and* W.H. Helvey.

Stresses of anoxia, heat and cold (120 minutes at 4°C.) resulted in a significant drop of potassium concentration in the brain. (DLC.)

70133. BENJAMIN, F. B., *and others.* Effect of stress on potassium release from surviving rat brain. (Society for Experimental Biology and Medicine. Proceedings, Aug.-Sept. 1961. v. 107, no. 4, p. 973-74, tables.) Ref. *Other authors:* J.N. Anastasi *and* W.M. Helvey.

Reports observations on isolated brains of guinea pigs and rats submitted to stress including cold 4°C.). Temperature had but little direct effect on K release. The effect of several substances was also treated. (DLC.)

70134. BEN'KOVA, N. P., *and* **L. A. ĬŪDOVICH.** Daily variations of blackout appearances. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings, *pub.* 1962, v. 1, p. 143-46, graphs.) 8 refs.

Reports on analysis of data from 42 ionospheric stations in the Northern Hemisphere, Anchorage, Dikson, and Godhavn included. During the 18 months of the IGY, the blackouts tended to a distribution along spirals similar to those of the distribution of magnetic activity Q-indexes, both unwinding in the counterclockwise direction. (DLC.)

70135. BEN'KOVA, N. P., *and others.* Ionosfernye vozmushcheniĭa 10-18 iĭulĭa 1959 g. po nablīudeniĭam ionosfernykh stant͡siĭ SSSR. (Geomagnetizm i aėronomiĭa, 1961. t. 1, no. 3, p. 369-73, tables, graphs.) 3 refs. Text in Russian. *Other authors:* ĬŪ. S. Bonchkovskaĭa *and* V.M. Shashun'kina. **Title tr.:** The ionospheric disturbances of July 10-18, 1959 from observations of Soviet ionospheric stations.

Analyzes the data of seven polar stations and 12 of middle latitude on chromospheric flares of July 11, 14, and 16, 1959. They caused ionospheric absorption in high latitude, produced by high energy corpuscular radiation, and on July 14 and 16 increased ionospheric absorption, in the middle latitudes, by the action of ordinary corpuscular radiation. A quantitative evaluation is given of increased ionization in the lower ionosphere during the pronounced absorption bursts on July 10 and 14. (DLC.)

70136. BEN'KOVA, N. P., *and* **L. A. ĬŪDOVICH.** Sutochnye variat͡sii poĭāvleniĭa blėkautov po dannym MGG. (Geomagnetizm i aėronomiĭa, 1961. t. 1, no. 5, p. 725-29, table, diagrs.) 9 refs. Text in Russian. **Title tr.:** Diurnal variations in the occurrence of blackouts according to IGY data.

Analyzes the data on blackout (ionospheric absorption) occurrence during the winter and summer seasons, and the solstices, and their relation to geomagnetic activity. Observations of 41 ionospheric stations in 47°-80° N. lat. indicated a spiral distribution of blackouts in the Northern Hemisphere. (DLC.)

BENNET, L. R., *see* Gambino, J.J., & *others.* Post-irridiation cold stress. 1961. No. 71578

70137. BENNETT, WILLIAM DONALD, 1906– . The reduction of the forest fire hazard created by logging slash; a literature review. Montreal, 1960. 56 p. (Pulp and Paper Research Institute of Canada. Technical reports series, 175.) 169 refs.

Analyzes the problem presented by logging slash, and its importance: eight factors (species, cutting method, logging system, etc.) which affect it are discussed; and nine methods (utilization and reduction of waste, slash burning, piling, lopping and scattering, etc.) of decreasing it are described. Regulations on treatment of slash in Canada and part of the United States are presented. Some of its silvicultural effects are discussed and different methods of its disposal outlined with information on costs. Research efforts enabling a better understanding of slash, and how to deal with it, are described; problem and its solution warrant more attention. (CaOF.)

BENNINGHOF, WILLIAM SHIFFER, 1918– , *see* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

70138. BENSON, CARL SIDNEY, 1927– . Stratigraphic studies in the snow and firn of the Greenland ice sheet. Hanover, N. H., July 1962. x, 93 p. illus., maps and graphs incl. fold., diagr., tables. (U. S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Research report 70.) 76 refs.

Comprehensive report on author's work on SIPRE Project on the structure of icecap névé in Greenland, 1952-1955. The Inland Ice is considered a monomineralic rock formation, mainly metamorphic, but with a sedimentary veneer of snow and firn: This veneer is perennial above the firn line and may be studied by the classical methods of stratigraphy and sedimentation. During a four-yr. period, 146 pit studies and 288 supplementary Rammsonde profiles were made along 1100 mi. of over-snow traverse, extending from Thule to French Camp VI, along the middle of the Inland Ice. Temperature, density, ram hardness, and grain size were measured on the strata exposed in each pit. The upper 10-20 m. contains a succession of annual sequences of summer and winter layers which can be recognized for several decades. Correlation of these layers, together with information from earlier expeditions, has been used to map distribution of gross annual accumulation, essentially the equivalent of annual precipitation, for the entire Inland Ice, as well as average precipitation values for eight coastal stations. Accumulation contours generally follow the north-south trend of the coast lines, ranging from less than 10 cm. of water in the northeast to more than 90 cm. in the south; average for the Inland Ice is 34 cm./yr. (map, p. 40). Four diagenetic facies are also recognized: *ablation facies*, extends from the outer edge of the glacier to the firn line; *soaked facies* from firn to saturation line, the uppermost limit of complete wetting; *percolation facies* extends from the saturation line to the dry-snow line, the upper limit of surface melting; *dry-snow facies* includes all of the glacier lying above the dry-snow line, where little melting occurs (map, p. 75.) Changes in the location of facies boundaries may be used as indicators of secular climatic change. Bauer's estimate (No. 38720) for the balance of the Inland Ice is revised; because of a greater average accumulation value and more accurate delineation of relative areas of ablation and accumulation north of 76°N., a slightly positive balance is obtained, indicating a condition of approximate equilibrium undercurrent climatic conditions. Appended are a glossary of terms used, temperature data, and 10 data sheets. (DI.)

BENSON, CARL SIDNEY, 1927– , *see also*
Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

70139. BENSON, ROBERT F. Cross modulation of cosmic noise. (Journal of geophysical research, June 1962. v. 67, no. 6, p. 2569-72, diagrs.) 7 refs.

Reports cross modulation of cosmic noise at 17.5 Mc./s. with a 4.865-Mc./s. disturbing wave in the *D* region of the ionosphere above College, Alaska. (DLC.)

BENSON, ROBERT F., *see also*
Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

70140. BENTLEY, CHARLES R. Edward Thiel, 1928-1962. (Journal of glaciology, June 1962. v. 4, no. 32, p. 243-44, port.)

Obituary of this young and able geophysicist, who died in an aircraft accident in Antarctica. His work in Alaska in 1954, 1956 and four seasons in the Antarctic are reviewed, and personal qualities assessed. (DLC.)

70141. BENTLEY, WILSON ALWYN, 1865–1931, *and* W. J. HUMPHREYS. Snow crystals. New York, Dover Publications, 1962. 226 p. illus. 10 refs. Repub. of the work pub. in 1931.

Contains nearly 2500 reproductions of senior author's photomicrographs of snowflakes, taken over a period of several years at Jericho, Vermont. Photographic methods, snow crystal types, occurrence markings, crystallography, are briefly treated in text, and related forms of moisture described. (DWB.)

70142. BENTZON, AGNETE WEIS. Opløsning af aegteskab i Grønland. (Grønland, Jan. 1962, nr. 1, p. 11-19, illus.) Text in Danish. **Title tr.**: Dissolution of marriage in Greenland.

Reports study of effects of the 1955 marriage law, which legalized separation and divorce in Greenland. Cases increased gradually 1955-1959; most involve serious estrangement. Specific problems are discussed, such as housing for the partner who leaves the home, assistance to the women wage-earners left alone with a family. (SPRI.)

70143. BENUM, HELENE. Forbrukerdagene er over men forbruket fortsetter. (Norden, Nov. 1, 1960. årg. 64, nr. 21, p. 587-88.) Text in Norwegian. **Title tr.**: The "consumer days" are over but consumption continues.

Notes the Consumers Advisory Council's program of demonstrations, etc. in North Norway communities in Sept.-Oct. 1960: lectures on merchandise identification, meat control, fruit and vegetable storage, state research and consultation services in home economics. (DA.)

BÉRARD, JEAN, *see* Bergeron, R., & *others*. . . . Ungava stable area. 1962. No. 70154

BERDICHEVSKIĬ, R. I., *see* Golovanov, G. A., & *others*. Rekonstruktsiia . . . fabriki. 1962. No. 71743

BEREGOVAIA, NINA ALEKSANDROVNA, *see* Chard, C. S. Eskimo remains, Shalaurova. 1961. No. 70662

70144. BEREZA, LEO. The changing pattern. (North, Jan.-Feb. 1962. v. 9, no. 1, p. 12-14, illus.)

Describes the Dept. of Northern Affairs' economic development program, begun in 1959, for depressed Eskimo settlements in the eastern Ungava Bay area. On the basis of a resources survey in 1958, cooperatives were established for a trading store, char and cod fishery, and production of sealskin handicrafts at Port Burwell, Labrador, and for char fishery, logging and sawmill operations at George River, Quebec. Achievements and expansion of these projects through 1961, are noted. (CaMAI.)

70145. BEREZIN, P. P. Novoe v sistemakh na atomnom ledokole "Lenin." (Sudostroenie, 1961.

god 27, no. 8, p. 34-38, graphs.) Text in Russian. **Title tr.:** Innovations aboard the atomic icebreaker *Lenin.*

Describes several new or improved facilities introduced on the *Lenin:* fresh-water supply (for drinking and bathing), water purification, sewage, heating and ventilating systems, special stabilizers to free the vessel if caught in ice, pumping systems, hot-water and anti-freeze conduits for deicing, liquid fuel supply for aircraft isolated to minimize fire hazard, radiation control and atomic waste collection and disposal systems, etc. Engineering problems encountered in the installation of water pipes, air conduits, etc. due to layout of accommodations, etc. are noted. (DLC.)

BEREZIN, P. P., *see also* Nosov, N. S., & P. P. Berezin. Protivopozharnaia zashchita . . . 1961. No. 74428

70146. BEREZIUKOVA, L. P. Opyt pedagogicheskoĭ propagandy v Zapoliar'e. (Doshkol'noe vospitanie, July 1961. god 34, no. 7, p. 68-70.) Text in Russian. **Title tr.:** On proselytizing education in the Arctic.

Head of a kindergarten in Monchegorsk discusses the advantages of pre-school training. Parents participation should be stimulated by lectures, radio, parent-teacher discussions, etc. Advice is offered on organizing nurseries, planning educational activities, solving behavior problems, etc. (DLC.)

70147. BEREZOVSKIĬ, B. I. Nekotorye osobennosti stroitel'stva v usloviiakh Kraĭnego Severa. Moskva, Gosstroĭizdat, 1960. 127 p. illus., tables, graphs, diagrs., map. 13 refs. Text in Russian. **Title tr.:** Some features of construction in the far North.

Reviews climatic features of the Soviet Arctic, geologic characteristics, snow drifting and its control. The construction of industrial and residential buildings is discussed, in particular as practiced in Vorkuta and Noril'sk: site selection and preparation, ground work, foundation construction, concreting. Construction details are provided and cost estimates included. Examples are given of construction practices unsuitable for permafrost regions, as evidenced by the irregular settling of foundations. (DLC.)

70148. BEREZOWSKI, WADIM, *and* **S. ZIEMLAŃSKI.** Zmiany temperatury błony śluzowej żołądka pod wpływem działania niektórych neurohormonów, 2; działanie histaminy na temperaturę błony śluzowej żołądka. (Acta physiologica polonica, 1961. v. 12, fasc. 2, p. 245-54, illus.) 27 refs. Text in Polish. Summary in English. **Title tr.:** Temperature changes in the gastric mucosa under the influence of certain neurohormones, 2; effect of histamine upon the temperature of the gastric mucosa.

Histamine given intramuscularly to dogs produced a brief drop in the mucosal temperature followed by a continued rise and slow return to normal. Changes in gastric juice secretion are also noted. (DNLM.)

BEREZOWSKI, WADIM, *see also* Ziemlański, S., & W. Berezowski. Zmiany temperatury . . . 1961. No. 76693

70149. BERGE, GRIM. Measurements of the primary production and recordings of the water transparency in the Norwegian Sea during May-June 1958; preliminary report. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v. 149, Contributions to special IGY meeting 1959, p. 148-57, illus., maps.) 10 refs.

Account of primary production measurements, from 142 stations, in an area extending to 75°N. and beyond 17°W. Apparatus, equipment and method of measuring "production capacity" are described, advantages of the method discussed. A transparency meter for continuous recording, independently of natural light conditions, is also described and compared with the Secchi method. Correlation between transparency and production capacity is studied and illustrated. (DI.)

70150. BERGEN. UNIVERSITET. *Jordskjelvstatsjonen.* Seismological bulletin, Isfjord, Spitsbergen. Bergen, Norway, 1959. 2 no.: 7, 22 l. tables. Mimeo. no. 1, Aug. 1 - Nov. 15, 1958, by A. Kvale *and* M. A. Sellevoll; no. 2, Nov. 17, 1958 - July 1, 1959, by M. A. Sellevoll *and* K. Storetvedt.

The first report from this station at 78°03′33″N. 13°38′25″E. gives data on 39 earthquakes, ten of them local, i.e. 80-220 km. away, in addition to two nuclear explosions. Date, time and phase, also location and other information of the disturbances are tabulated. A brief description of the station is included. The second report provides similar data on eight disturbances in late 1958 and 184 in the first half of 1959. (SPRI.)

70151. BERGER, T. S., *and others.* Novye dannye o severnoĭ granitse rasprostraneniia molodi treski, pikshi, okuniā i sel'di v Barentsevom more. (Akademiia nauk SSSR. Doklady 1962. t. 143, no. 4, p. 965-67, maps, tables.) 5 refs. Text in Russian. *Other authors:* B. A. Popov *and* R.A. Cheremisina. **Title tr.:** New data on the northern limits of distribution of young cod, haddock, redfish and herring in the Barents Sea.

Presents exact geographic records on northern limits of occurrence, and tables on size and number for each size caught in the different areas of this sea. (DLC.)

70152. BERGER, T. S. Promyslovaia kharakteristika raĭona Zapadnogo Shpitsbergena. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten', 1961. no.1 (15), p.45-49.) Text in Russian. **Title tr.:** Character of fisheries in the area of Vestspitsbergen.

Describes migration routes and seasons of cod in this area, and its food. Size of fish caught, and monthly catches since 1956 are discussed, also the trawling according to depths, techniques of trawling, grounds, weather. (DLC.)

70153. BERGER, T. S. Promyslovaia kharakteristika raĭona Ziĭdkapskogo zheloba. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten', 1959. no. 2 (10), p. 29-33, tables, maps.) Text in Russian. **Title tr.:** Character of fisheries in the Sørkapp trough area.

Outlines fisheries investigations since 1946 in the area 74°-77°N. 15°-25°E. Schooling and movements of cod, catches, hydrographic variations, and their influence on catches, year-to-year

and seasonal variations, trawling conditions in the area, are treated in turn. (DLC.)

70154. BERGERON, ROBERT, *and others.* Tectonics of regions bordering the Ungava stable area. *(In:* Royal Society of Canada, The tectonics . . . 1962, p. 144-48.) 16 refs. *Other authors:* J. Bérard, *and* L. Gélinas.

Sketches the tectonic framework of the Cape Smith - Wakeham Bay basin to the north of this area or nucleus, the Labrador geosyncline to the east, the Mistassini-Ottish basin south, and the Belcher basin to the west. Structural details within these regions are described, e.g., the 150-mile-long thrust fault across the Cape Smith - Wakeham Bay basin, the "Grenville front" truncating the Labrador geosyncline just north of Wabush Lake, the 50-mile-long reverse fault extending northeast from Lake Mistassini, and the eastern-most of the three faults along the eastern arc of the Belcher basin confirmed by author's 1960 observation. (DGS.)

70155. BERGÈS, YVES GUY. L'Alaska, 49e Amérique. (Géographia-histoire, Nov. 1962. no. 134, p. 10-20, illus., map.) Text in French. **Title tr.:** Alaska, 49th America.

Describes the unusual and spectacular aspects of the 49th state, outlining its history, building of the Alaska Highway, post-war immigration, the oil industry, statehood in 1958. Defense spending as the main economic support, growth of airlines, and factors indicating economic expansion are noted. (DGS.)

70156. BERGÈS, YVES GUY. Avec les esquimaux de Point Barrow. (Géographia-histoire, Nov. 1962. no. 134, p. 21-28, illus.) Text in French. **Title tr.:** With the Point Barrow Eskimos.

Presents colored photos of Eskimo life in North Alaska, whaling, dog teams, outboard-motor umiak, etc. (DGS.)

70157. BERGGREN, ANNIKA. Lannavaara, ung by med tradition. (Norrbotten, 1962, p. 209-212, illus.) Text in Swedish. **Title tr.:** Lannavaara, young village with a tradition.

Reviews history of this 90-year old village in Sweden approx. 68°N. 22°E.; it has 232 inhabitants of Swedish, Lapp and Finnish descent. Main occupations are cattle farming, trade and lumbering. Lannavaara is a center of Laestadianism. (SPRI.)

BERGLUND, B., *see* Erdtman, G., & *others.* . . . Scandinavian pollen flora. 1961. No. 71282

70158. BERGMAN, FRITZ. Aktuellt från norra distriktet. (Skogen, Mar. 3, 1961. årg. 48, nr. 5, p. 92-93, illus.) Föreningen skogsträdsförädling. FS information, Mar. 1961, nr. 13. Text in Swedish. **Title tr.:** News from the Northern District.

Reports activities of the Society for Forest-Tree Breeding; its Northern District: Norrbotten, Västerbotten, Västernorrland and Jämtland, with headquarters at the Sundmo Experiment Station, is concerned with cold climate problems, chiefly providing quality cuttings of pine, spruce, larch to nurseries. The various research programs are briefly outlined. (DA.)

70159. BERGQUIST, HARLAN RICHARD, 1908- . Foraminiferal zonation in Matanuska formation, Squaw Creek - Nelchina River area, south-central Alaska. (American Association of Petroleum Geologists. Bulletin, Dec. 1961. v. 45, no. 12, p. 1994-2011, graph, table, maps.) 24 refs.

Preliminary studies of microfossils from this formation, approx. 61°55′N. 147°30′W., enable correlation with other areas and age determinations. Five zones are identified; correlation with California formations is indicated; the sequence is believed to range from late Turonian or early Senonian to late Campanian and Maestrichtian. Microfossils present in the five faunal zones are listed, with relative abundance indicated; composite outcrop section shows approx. position of samples above base. (DLC.)

BERGS, A., *see* Bonisteel, W.D., & A. Bergs. . . . air bubbler system . . . 1961. No. 70327

70160. BERGSLAND, KNUT, 1914- . The Lapp dialects south of Lappland. *(In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v. 125, Commentationes. . . p. 27-39.) Refs. in text.

Comparative linguistic analysis of six Åsele and two Jämt Lappish dialects spoken south of the Ume River, mainly in the Jämtland-Tröndelag districts. Historical background of some Lapp groups' migration south after the delimitation of the Swedish-Norwegian border in the mid-18th century, formation of local idioms, metaphonic and morphological changes, relation to Ume and Pite Lappish, etc. are discussed. (DSI.)

70161. BERGSLAND, KNUT, 1914- . Minnetale over Rektor Just Knud Qvigstad. (Norske videnskaps-akademi, *Oslo.* Årbok 1957 *pub.* 1958. p. 53-57, port.) Text in Norwegian. **Title tr.:** Memorial lecture on Rector Just Knud Qvigstad.

Tribute to Qvigstad, 1853-1957 as missionary and student of the Lapps; his collection of ethnologic and archeologic materials and his numerous publications. (DLC.)

70162. BERGSLAND, KNUT, 1914- , *and* **H. VOGT.** On the validity of glottochronology. (Current anthropology, Apr. 1962. v. 3, no. 2, p. 115-53, tables.) Approx. 90 refs.

Discussion by the authors and 19 commentators of the thesis advanced by M. Swadesh (No. 55280) that "fundamental vocabularies change at a constant rate." The *Eskimo case* is considered among others, p. 126-29, 149-51, with comments by D. Hymes p. 136-37, and by Swadesh p. 144-45. Bergsland and Vogt oppose Swadesh's generally accepted thesis of vocabulary change and illustrate the unreliability of the lexico-statistical method: e.g. there is a dialectal split between the closely related East and West Greenlandic, as deep as that between the most divergent Eastern (Inupik) and Western (Yupik) Eskimo. Isolation of a tribe and word taboos strongly affect linguistic changes. Substitutes for tabooed words, not time of linguistic separation, are the prime differences between East and West Greenlandic. The case for the accelerative influence of the taboo factor on the basic rate of change is considered inconclusive by Swadesh. (DSI.)

70163. BERGSTEDT, BO. Smågnagarstudier vid Sätisjaure och Vietasjokk i Lule lappmark. (Fauna och flora, 1962, hft. 6, p. 225-41, illus.,

map, table, diagrs.) 6 refs. Text in Swedish. Summary in English. **Title tr.**: Studies of small rodents in the Satisjaure and Vietasjokk areas in Lule Lappmark.

Reports summer 1961 observations at 67°30′N. 18°30′E., north Sweden. The small rodent population was abundant. Data are given on habitats, size of adults and numbers of embryos of *Lemmus lemmus, Clethrionomys rutilus, C. rufocanus, Microtus agrestis* and *M. ratticeps*. (DA.)

70164. BERGSTRÖM, LARS, *and* **H. HVARFNER.** Nya tag i gamla berg. (Norrbotten, 1962, p. 177-83, illus.) Text in Swedish. **Title tr.**: New work in old mountains.

Photographs and brief text of Svappavaara (approx. 67°40′N. 21°E.) and Kiruna, mining towns in north Sweden. (SPRI.)

70165. BERING, EDGAR A., *Jr.* Effect of body temperature change on cerebral oxygen consumption of the intact monkey. (American journal of physiology, Mar. 1961. v. 200, no. 3, p. 417-19, illus.) 7 refs.

In rhesus monkeys with rectal temperatures of 19° to 37°C. a "linear relationship was found between the logarithm of the cerebral oxygen consumption and the reciprocal of the absolute temperature (°K) of the body." (DLC.)

BERING, VITUS JONASSEN, 1681–1741, *see* Kushnarev, V. Reĭs cherez Sibir' . . . 1962. No. 73233

70166. BERLAND, BJØRN. Copepod *Ommatokoita elongata,* Grant, in the eyes of the Greenland shark, a possible cause of mutual dependence. (Nature, Aug. 19, 1961. v. 191, no. 4790, p. 829-30, table.) 2 refs.

Discusses the widespread belief among fishermen that this species is luminous and thus lures the prey to the shark. Rate of eye "infection" was almost 100% in 1505 sharks taken from southeast Greenland waters. Appearance, color, size of this copepod are reported; its influence on the shark's cornea, its taxonomy, etc. are considered. (DLC.)

70167. BERNARDELLI, E., *and* **M. USARDI.** L'azione delle basse temperature e dell'ipossia sull'attività proliferativa delle cellule emopoietiche del sangue embrionario coltivate in terreno liquido. (Società italiana di Biologia sperimentale. Bollettino, June 30, 1961. v. 37, no. 12, p. 563-66.) Text in Italian. **Title tr.**: Effect of low temperatures and of hypoxia upon the proliferative activity in hemopoietic cells of embryonic blood, cultivated in a liquid medium.

Study of megaloblasts cultivated at 39°, 25°, and 4°C. and at different atmospheric pressures. Low temperatures caused reversible slowing and arrest of proliferation. Reduced barometric pressure (380 mm.Hg) produced an irreversible slowdown in proliferative activity. (DNLM.)

70168. BERNHARD, WILLIAM F., *and others.* Alterations in myocardial metabolism subsequent to hypoxic and hypothermic cardiac arrest. (Surgical forum, 1961. v. 12, p. 171-73.) Ref. *Other authors:* H.F. Schwarz, G. Hug, E. Carroll *and* H. Jokins.

Reports on experiments with dogs submitted to circulatory arrest and a myocardial hypothermia of 10°C. Myocardial O_2, glucose, lactate, fatty acid, glycogen, etc. were determined, and their evaluation indicates significant protection of the myocardium from hypoxia by hypothermia. (DNLM.)

70169. BERNHARD, WILLIAM F., *and others.* Elective hypothermic cardiac arrest in normothermic animals. (Annals of surgery, Jan. 1961. v. 153, no. 1, p. 43-51, illus., tables.) 12 refs. *Other authors:* H.F. Schwarz *and* N.P. Mallick.

Outlines a method for production of hypothermic cardiac arrest in dogs using intermittent coronary perfusion with cold, oxygenated blood. An evaluation in the normothermic heart and during cold-induced cardiac arrest, is also presented. (DLC.)

70170. BERNHARD, WILLIAM F., *and others* Studies in balanced hypothermic perfusion. (Surgery, Dec. 1961. v. 30, no. 6, p. 911-18, illus., table.) 10 refs. *Other authors:* H.F. Schwarz, P.M. Leand *and* J.G. Carr.

Describes a method of balanced hypothermic perfusion and of experiments performed with it on dogs. Total O_2-consumption was determined during cooling to 10°C., after a 40-minute total circulatory arrest, and during rewarming. An oxygen debt was detected during rewarming in all experiments, which remained unaffected by succinylcholine chloride. (DLC.)

70171. BERNSHTEĬN, L. B. Na beregakh Murmana i La-Mansha. (Nauka i zhizn', Nov. 1962. god 29, no. 11, p. 59-64, illus., col. plate, diagrs.) Text in Russian. **Title tr.**: On the shores of Murman and La Manche.

Describes and compares the new French 240,000 kw. tidal electrical station near St. Malo, and the Russian station to be built on Kislaya Bay (66°32′N. 33°06′E.) of the White Sea in 1963. Construction plans for four other such stations in the White Sea area are noted. (DLC.)

70172. BERNSHTEĬN, L. B. Ob ispol'zovanii energii prilivov. (Vsesoīūznoe geograficheskoe obshchestvo. Izvestiīa, Sept.-Oct. 1962. t. 94, vyp. 5, p. 405-413, illus., maps.) 5 refs. Text in Russian. **Title tr.**: Utilization of tidal energy.

Outlines the use of the rise and fall of tides for hydroelectric power. The installation to be built on Kislaya Bay is described, as are (briefly) another tidal hydroelectric station project on Kola Peninsula at Lumbovskiy Bay, and one on Mezenskaya Bay at the mouth of Mezen' River in the White Sea area. Heights of tides, construction of dams, hydraulic turbines and potential energy available are reported. Similar projects under consideration in other countries are reviewed and compared. (DLC.)

70173. BERNSHTEĬN, V. A. On magnetometric investigations in vicinity of volcanoes. (IUGG. Association of Volcanology. Bulletin volcanologique, 1960. sér. 2, t. 23, p. 129-33.) 11 refs. Paper read at: International Association of Volcanology, Symposium of Paris, 1959.

Summarizes results of field observations with a vertical magnetic variometer on Klyuchevskaya Sopka in 1953 and near Zavaritskiy volcano in the Kuril Islands in 1957-58. Methods are outlined. A zone of negative Z-anomaly was found on the slopes of Klyuchevskaya with two elongations, the greatest anomalies and strong eruptions oc-

curring within these elongations. Increase in the Z-component of the geomagnetic field near Zavaritskiy during 8.3 months, may also be of value in predicting eruptions. (DGS.)

BERRY, L. J., *see*

De Turk, J.E., & L.J. Berry. Body temp. & carbohydrate mice low temp. 1962. No. 70990.

Previte, J.J., & L.J. Berry. Cold & survival mice . . . *S. typhimurium.* 1962. No. 74953.

BERRYHILL, ROBERT V., *see* Thomas, B.I., & R.V. Berryhill. Reconnaissance studies . . . Alaska. 1962. No. 76115

70174. BERSHADSKIĬ, V. L., *and others.* Ėlektroprivod grebnoĭ ustanovki atomnogo ledokola "Lenin." (Ėlektrichestvo, 1959, no. 10, p. 50-56, diagrs., graphs, illus.) 2 refs. Text in Russian. *Other authors:* V.K. Kalashnikov, V.V. Kriāzhevskiĭ, *and* G.A. Popov. **Title tr.:** The electric propulsion drive unit of the atomic icebreaker *Lenin.*

Describes the unit, and discusses the electric circuits of two side and one central propelling motors; the percent of load of the motors under different operation conditions; static characteristics of the motors; the operational control, remote selsyn included, and the seven-panel electric switchboard control. A specification is given of the icebreaker's shipyard parameters. (DLC.)

70175. BERSON, G. L., *and* **S. K. LOPATINA.** Kollektorskie svoĭstva porod bogachevskoĭ svity v Kronotskom raĭone vostochnogo poberezh'ia Kamchatki. (Leningrad. Vsesoīuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp. 186, Geologicheskiĭ sbornik 6, p. 327-41, tables, map, diagrs.) 3 refs. Text in Russian. **Title tr.:** Reservoir properties of rocks of the Bogachevka series in the Kronotskiy region of the eastern coast of Kamchatka.

Reports on analyses of sandstones, aleurites, argillites and other rocks of the series, and presents tabulated data on their porosity, permeability, density, etc. The reservoir properties are evaluated. (DLC.)

70176. BERSON, G. L., *and* **L. V. DEMIDOVICH.** Nekotorye dannye o treshchinovatosti porod tretichnogo vozrasta poluostrova Kamchatka v sviāzi s ikh kollektorskimi svoĭstvami. (Leningrad. Vsesoīuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp. 165, Issledovaniia treshchinovatykh gornykh porod . . . p. 208-236, tables, maps, profiles, diagrs.) 5 refs. Text in Russian. **Title tr.:** Some data on jointing of rocks of Tertiary age in Kamchatka Peninsula and their reservoir properties.

Reports on macro- and micro-jointing of sandstone-silt and argillite clay rocks as studied in 1958 in the Kronotskiy and Tigil' regions of eastern and western Kamchatka. Various types of fracture are reported. The intensity of jointing depends on the lithologic composition of the rocks and thickness of the layers. The specific density of fractures is 1.5 - 2 times lower in sandstones than in argillites. Variation of jointing in structures is analyzed. Fracturing is discussed in respect to rock permeability, porosity and compaction. (DLC.)

70177. BERTELSEN, HARALD. En sten på paedagogens vej. (Grønland, Jan. 1961, nr. 1, p. 35-38.) Text in Danish. **Title tr.:** A stone in the teacher's path.

Discusses the educational problems arising from Greenlanders' traditional reserve and bashfulness. (SPRI.)

70178. BERTHELSEN, ASGER. On the chronology of the Precambrian of Western Greenland. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v. 1, p. 329-38, map, fold. section in v. 3.) 16 refs.

Discusses chronological data obtained by the Geological Survey of Greenland in 1946-1954 in central west coast, and from 1954 in the southwest. The long, complex Ketilidian cycle; the post-Ketilidian evolution with transformation of dikes; and the Gardar cycle, with alternate intrusion and faulting stages, took place south of Frederikshåbs Isblink. To the north, the three-phase Nagssugtôqidian fold belt and the pre-Nagssugtôqidian complex the latter possibly correlated with the Ketilidian fold belt of southwestern Greenland, are described. (DLC.)

70179. BERTHELSEN, ASGER. Structural studies in the Pre-Cambrian of western Greenland; III, southern Sukkertoppen District. København, C.A. Reitzel, 1962. 46 p., illus., maps, diagr., profiles, tables. (Meddelelser om Grønland, bd. 123, nr. 2.) 18 refs. *Also issued as:* Greenland. Geologiske Undersøgelse, Bulletin 31.

Summarizes 1949-1957 summers field work in this area, north of Godthåb, specifically the coastal region between Søndre Isortoq and the northern extremity of Nordlandet (65°N. 52°W.). Results are preliminary, based on reconnaissance mapping. The structure comprises three tectonic units or complexes: the Nordland, Finnefjeld, and the Alángua complexes which are characterized. Tentative correlation of certain phases of the Nordland and Alángua complexes and the converting of part of the Nordland into the present Finnefjeld gneisses are suggested. General structure of the three is shown on a sketch map, scale 1 in.: 12.5 km. (DGS.)

BERTRAND, KENNETH J., *see* Pacific Science Congress. 1961. No. 74619

70180. BERZIN, A. A. Materialy po razvitiiu zubov i opredeleniiu vozrasta kashalota. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ, 1961. vyp. 12, p. 94-103, illus.) 25 refs. Text in Russian. **Title tr.:** Materials on dental development and age determination in the sperm whale.

Describes earlier work on these problems and own study based on material from 367 animals, mostly males. Dental layers as seen on longitudinal and cross sections are described in detail and their number referred to the length and age of the animal. The age composition of Russian catches which supplied the material is estimated on the basis of this study. (DLC.)

70181. BERZIN, A. A. O metodikakh opredeleniia vozrasta samok kashalotov, *Physeter catodon* L. (Akademiia nauk SSSR. Doklady 1961. t. 139, no. 2, p. 491-94, illus., table.) 31 refs. Text in Russian. **Title tr.:** Methods of age determination of female sperm whales.

Discusses earlier and present methods of age determination and own work on 61 females from Far East waters. About half of this material was determined with two methods, examination of

ovaries and of teeth, and checked against size, length of ovary, pregnancy, lactation. etc. (DLC.)

BERZIN, A.A., *see also* Zemskiĭ, V.A., & A.A. Berzin. . . . *Physeter catodon.* 1961. No. 76652

BERZIN, N. A. *see* Kosvein, IŪ.A., & *others.* Osnovnye strukturnye ėlementy . . . 1962. No. 73023

70182. BESCHEL, ROLAND ERNEST. Dating rock surfaces by lichen growth and its application to glaciology and physiography: lichenometry. *(In:* International Symposium on Arctic Geology. Proceedings 1961, v. 2, p. 1044-1062, graphs.) 40 refs.

Compares climatic, geologic, and glaciological conditions in the Alps with those of the Sukkertoppen and Holsteinsborg districts of West Greenland as observed in 1958, in a study of lichen growth. Growth analysis depends mainly on direct measurement of the same plants at long intervals of time; in many lichens, e.g., *Rhizocarpon* and *Lecidea,* intervals longer than an individual's lifespan; indirect or comparative measurement is useful, but subject to difficulties and uncertainties. Applications of lichen study in alpine and polar regions, under various conditions of rock exposure, are discussed; comparison of lichen diameters with dated alpine moraines indicates that climatic fluctuations within the dated period are not reflected in the measured lichen growth. However, through dating of correlated moraine deposits by lichenometric and other methods, climatic fluctuations may be deduced indirectly. The eleven glaciers studied, eight in West Greenland, have all passed through a period of advance about 1500-1900 A.D., featuring several smaller peaks, the latest a minor advance, 1920-1925. (DGS.)

70183. BESPROZVANNAĬA, A. S. Abnormal polar-cap absorption associated with strong chromospheric flares on the sun for the period 1938-1959. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962. v. 1, p. 146-50, table, graphs.)

Reports on the IGY data of abnormal polar cap radio wave absorption, supplemented by an analysis of the vertical incidence ionospheric sounding data of Jan. 1938-July 1957 at Tikhaya Bay. From the combined data, statistically derived conclusions are drawn on the distribution of this third type absorption during the cycle of solar activity and during the year. Relationship is clarified between the position of the active areas on the sun, polar cap absorption, and geomagnetic storms. (DLC.)

70184. BESPROZVANNAĬA, A. S. Anomal'noe pogloshchenie korotkikh radiovoln v polĭarnoĭ oblasti. (Akademiĭa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiū Mezhdunarodnogo geofizicheskogo goda. V razdel programmy MGG: ionosfera. Sbornik statei, 1961. no. 6, p. 58-74, tables, diagr., graphs incl. fold.) 18 refs. Text in Russian. Summary in English. **Title tr.:** Anomalous absorption of short radio waves in the Arctic.

Presents data on type-III anomalous absorption of radio signals, as obtained at the Bukhta Tikhaya 1938-1959 and Bukhta Tiksi 1944-1959 ionospheric stations. From thorough analysis of these data, presented in tables and graphs, a clearly expressed relationship was found to exist between radio-wave absorption in the Arctic, and phase of solar activity. A relationship was noted between the position of the eruption region on the sun's surface, with respect to the central meridian; and the minimum absorption type-III during October-December. (DLC.)

70185. BESPROZVANNAĬA, A. S. K voprosu o prirode anomal'noĭ nochnoĭ ionizatsii sloia *F2* v vysokikh shirotakh. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1962. t.241, Geofizicheskie issledovaniia . . . vyp.4, p.20-27, illus., graphs, table.) 16 refs. Text in Russian. **Title tr.:** On the nature of anomalous night ionization of the F2 layer in high latitudes.

Reviews R.W. Knecht's 1959 analysis of the ionosphere in the south polar region, and compares it with the data from the Bukhta Tiksi, Ostrov Dikson, and Bukhta Tikhaya, and the North Pole drifting stations. Studies of the character of night ionization of the F2 layer indicate that the solar corpuscular radiation reaches the earth continuously, that it has characteristic "streamers," and that the corpuscular radiation intensity should be correlated with the variation of the number of sun spots during the 11-year cycle of solar activity. The "solar wind" proposed by E. Parker* with a velocity of 500 km./sec. and density of 100 corpuscles per $cm.^3$ seems to possess the needed characteristics. (DLC.)

70186. BESSMAN, SAMUEL P., *and others.* The relation of blood pH to the movement of ammonia into cerebral and peripheral tissues during hypothermia. (Surgery, Sept. 1961. v. 50, no. 3, p. 478-87, illus., tables.) 26 refs. *Other authors:* F. Rudo *and* R.A. Cowley.

Account of observations on 11 patients undergoing cardiac operation under hypothermia over a prolonged period. The arteriovenous differences in ammonia fluctuations did not correspond to the fluctuations in pH, but corresponded very closely to the changes in the arterial level of ammonia. Hence, the movements of ammonia into or out of tissues is considered to be primarily a function of the arterial ammonia-level. (DLC.)

70187. BETEKHTIN, ANATOLIĬ GEORGIEVICH, 1897-1962. Sergeĭ Sergeevich Smirnov, 1895-1947. *(In:* Kuznetsov, I.V., *ed.* Liūdi . . . 1962, p. 243-52, port.) Refs. Text in Russian.

Describes the life and scientific activities of this outstanding mineralogist and investigator of ore deposits in eastern Transbaykal, northern and northeastern Siberia. His studies of ore deposits in the Verkhoyansk Range, Kolyma basin and Chukotka are summarized, and his discovery of the Imtandzha (66°03′N. 129°25′E.) tin deposits is noted. His work in metallogeny and other fields also is reviewed. A list of his main published works and articles about him is attached. (DLC.)

70188. BETESHEVA, E. I. Pitanie promyslovykh kitov Kuril'skogo raiona. (Akademiĭa nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ, 1961. vyp. 12, p. 104-111, tables.) 24 refs. Text in Russian. **Title tr.:** The diet of common whales

**Journal of geophysical research,* no.11, 1959.

in the Kuril area.

Reviews earlier work of foreign and Russian scientists and reports the results of stomach examinations from 1141 sperm, 234 fin, 68 sei, 18 blue whales, and several other species. Degree of stomach fullness and species making up the food are described. Data are compared with those of other authors working in these or neighboring areas. (DLC.)

70189. BEUGEN, L. van, *and* **J. J. van der WERFF ten BOSCH.** Rat thyroid activity and cold response after removal of frontal parts of the brain. (Acta endocrinologica, July 1961. v. 37, no. 3, p. 470-78, illus., table.) 27 refs.

Tracer studies with ^{131}I show that removal of brain tissue in front of the anterior commisure, including the olfactory bulbs, did not alter thyroid activity at room or low (4°C.) temperatures, for 15 days. Vaginal smear cycles were also normal. (DNLM.)

70190. BEVAN, DONALD EDWARD. Estimation by tagging of the size of migrating salmon population in coastal waters. (*In:* Koo, T.S.Y., Studies of Alaska red salmon. . . 1962, p. 373-469, illus., tables, maps.) Approx. 75 refs.

Study based on taggings of over 11,000 fish during a two-year period, aimed at estimating population size and migration pattern. With a recovery of 45%, it is concluded that the majority of fish are bound for spawning in Karluk Lake, and that there is little interchange of fish between the northwest coast of Kodiak Island and nearby areas. Double tagging, etc. indicate a 10% loss of tags and a wandering rather than a direct movement to spawning streams. Point estimates ranged between 123,000 in the second fishing period, and 34,000 in the fourth. Methods of making successful estimates of population size, of mortality rates, exploitation rates, etc. are also analyzed. (DI.)

70191. BEVAN, DONALD EDWARD. Razlichie v kharaktere cheshui kety *Oncorhynchus keta* Walb. Dal'nego Vostoka i Alīaski. (Voprosy ikhtiologii, 1961. t. 1, vyp. 1 (18), p. 29-38, illus., tables, map.) 11 refs. Text in Russian. **Title tr.:** Differences in the scales of chum salmon *Oncorhynchus keta* Walb. from the Far East and Alaska.

Discusses method of scale reading applied; differences in scales of the first year of life between the Sakhalin – Amur and the South – West Alaska areas, also within each area. From the scale structure, differences in rate of growth, and the age of fish are deduced. Sexual maturity in both areas is reached in the fourth year, in the Far East sometimes in the fifth. (DLC.)

BEVERTON, R. J. H., *see* Int. Comm. NW. Atlantic Fisheries. Report. . . fishery assessment, regulation problems. 1962. No. 72378

70192. BEYDA, EZRA J., *and others.* Effect of hypothermia on experimentally produced arrhythmias. (Circulation research, Jan. 1961. v. 9, no. 1, p. 120-28, illus., tables.) 27 refs. *Other authors:* S. Alvarez, O.F. Muller, *and* S. Bellet.

Hypothermia produced slowing of ventricular rate in all arrhythmic dogs. In about half of the cases, sinus rhythm was restored, and persisted in most instances during rewarming. Cooling, further increased the low blood pressure in about half the cases, in the remainder no change or slight rise was noted. (DLC.)

70193. BEYDA, EZRA J., *and others.* Effect of hypothermia on the tolerance of dogs to digitalis. (Circulation research, Jan. 1961. v. 9, no. 1, p. 129-35, illus., tables.) 29 refs. *Other authors:* M. Jung *and* S. Bellet.

"The average lethal dose of Digoxin for the dog under hypothermia was found to be approximately double that of the normothermic dog. Thus hypothermia significantly increases the tolerance of the drug." A possible explanation is discussed. (DLC.)

70194. BEZRUKOV, PANTELEĬMON LEONIDOVICH, *and* **A. P. LISITSYN.** Osnovnye cherty osadkoobrazovaniīa v dal'nevostochnykh moriākh v chetvertichnoe vremīa. (*In:* Vsesoīūznoe soveshchanie po izucheniīū chetvertichnogo perioda. Materialy . . . 1961, t.1, p.132-42, maps.) 37 refs. Text in Russian. **Title tr.:** Main features of sedimentation in the Far-Eastern seas in Quaternary time.

Reviews Quaternary sedimentation in the Bering, Okhotsk and Japan Seas and other areas, based on the *Vitīaz'* investigations in 1949-1955. Terrigenous, volcanic and biogenic processes are summarized. Sources and composition of bottom sediments are reported. Special attention is given to distribution of amorphous silica and calcium carbonate, of which percentage distributions are mapped and described in some detail. Amorphous silica in depths of the Bering Sea reaches 30-40% and in the Okhotsk Sea more than 50%. Bottom sediments studies may solve important problems of Quaternary geology. (DLC.)

70195. BHARADWAJ, DINESH CHANDRA, *and* **B.S. VENKATACHALA.** Spore assemblage out of a Lower Carboniferous shale from Spitzbergen. (Palaeobotanist, 1961, issued 1962. v. 10, no.1-2, p. 18-47, illus., diagrs., sections.) 40 refs.

Contains systematic description of 28 genera and 67 species of *sporae dispersae* recovered from a carbonaceous shale of Lower Carboniferous age on Pyramiden, during study of *Porostrobus zeilleri* Nathorst. Photomicrographs of 152 specimens, preserved at the Birbal Sahni Institute of Palaeobotany, Lucknow, India, are appended. Six genera and 30 species are new. This spore flora is closely related to the assemblage from the South Nahanni River area of Mackenzie District and other areas. Authors conclude that the index-spore-association indicating lower Carboniferous age is comprised of one or more of such genera as *Convolutispora, Cincturasporites, Labiadensites, Tripartites,* and *Rotaspora,* in addition to eight other, less widely distributed, genera. (DGS.)

70196. BIALOBŽHESKII, GRIGORIĬ VALERIANOVICH, *and others.* Osobennosti zimnego soderzhaniīa dorog na Kraĭnem Severe. (Avtomobil'nye dorogi, Jan. 1962. god 25, no.1, p.20-22, diagrs., cross-sections.) Text in Russian. *Other authors:* A.K. Dīūnin, A.A. Komarov, *and* V.C. Chindin. **Title tr.:** Features of the winter maintenance of roads in the far North.

Reviews snow control measures on the basis of road-building and maintenance experience in Noril'sk and Vorkuta as well as studies by the

Power-Transport Institute. Wind-deflectors, snow fences and screens, etc. are described and diagrammed. Topographic and other factors pertinent to control measures are noted. Roads should be built 0.5-0.8 m. higher than the anticipated snow depth; if in a valley, 50-60 m. from the nearest elevation; if on a hill, along the upper third of the windward side. Economic factors are stressed: on open tundra over 1,000 m^3 of snow/m. road may accumulate during a winter season, and its removal may cost 7,500 rubles/km. road as compared with 500-600 rubles in central European USSR. (DLC.)

70197. BIÂLOBZHESKIĬ, GRIGORIĬ VALERIANOVICH, *and* **G. MATIÂKIN.** Razmeshchenie i konstruktsiia snegozashchitnykh nasazhdeniĭ vdol' dorog. (Avtomobil'nye dorogi, Nov. 1962. god 25. no. 11, p. 22-23.) Text in Russian. **Title tr.:** Disposition and construction of plantings to protect roads against snow.

Reports on six years' study and research on snow-break fencing by means of trees and shrubs planted in belts along roads. Numerous design variants are described and their snow-retaining effectiveness indicated. Preferred height and density of such snow breaks and their arrangement are recommended in relation to the amount of drift expected. (DLC.)

70198. BIAYS, PIERRE. Le dépeuplement du Labrador septentrional et les migrations récentes des populations esquimaudes. (Norois, Apr.-June 1961. année 8, no.30, p.226-29, map.) Text in French. **Title tr.:** The depopulation of northern Labrador and the recent migrations of the Eskimo population.

Notes and maps the progressive southward retreat of the Labrador Eskimos, culminating in the evacuation of Hebron in 1959. Nain at 56° 33′N., south of the tree line, is now the northernmost settlement. Better living conditions where wood is available, modern conveniences and amenities of the central Labrador settlements are main factors in the migration. It is facilitated by government aid and the availability of work at the Goose Bay military base. (DGS.)

70199. BIAYS, PIERRE. Topographie glaciaire, anciennes glaciations et formes périglaciaires dans le Canada arctique. (Annales de géographie, July-Aug. 1961. an. 70, no. 380, p. 398-402.) Refs. Text in French. **Title tr.:** Glacial topography, past glaciations, and periglacial forms in arctic Canada.

Outlines results of recent Canadian work in various parts of the Northwest Territories. The complex distribution of glacial and periglacial forms does not permit reconstruction of glacier movement or the location of glacier centers, the latter no longer thought to be in central Labrador. West of Hudson Bay, the ice retreat took place about 7000-10,000 yrs. ago. A little-known periglacial form is the square- or rectangular-shaped network of fissures, noted on Cornwallis and other arctic islands. (DLC.)

70200. BIAYS, PIERRE. Topographie glaciaire, anciennes glaciations et formes périglaciaires dans l'Ungava-Labrador. (Annales de géographie, Nov.-Dec. 1962. an. 71, no. 388, p. 634-37.) 21 refs. Text in French. **Title tr.:** Glacial topography; past glaciations and periglacial forms in Labrador-Ungava.

Reviews glacial and periglacial phenomena as studied especially in the vicinity of Schefferville because of access by railway and the McGill Sub-Arctic Research Laboratory, and in the coastal mountains of Labrador, notably the Torngats. The inventory of glacial forms is nearly complete, eskers having received most attention from such investigators as E.P. Henderson (No. 58621), J.D. Ives (No. 58923); Ives has also developed a new account of the glaciation and deglaciation of the area, especially in the Torngats based largely on glacial drainage channels. String bogs have been discussed by L.E. Hamelin (No. 51524); periglacial phenomena are being studied in greater detail. The newly organized Centre d'Études Nordiques at Université Laval in Quebec is expected to advance such research. (DGS.)

70201. BIBLIOGRAFIIA IAKUTSKOĬ ASSR, 1931-1959, tom 2; prirodnye usloviia, resursy i narodnoe khoziaĭstvo. Moskva, Izd-vo Akademii nauk SSSR, 1962. 255 p. (Akademiia nauk SSSR. Sovet po izucheniiu proizvoditel'nykh sil. Sektor seti spetsial'nykh bibliotek. IAkutskaia respublikanskaia biblioteka im. A.S. Pushkina.) Text in Russian. **Title tr.:** Bibliography of Yakut ASSR, 1931-1959, v. 2; natural sciences, resources and economy. In sequence to No. 56897.

Lists approx. 4,500 publications in 56 subject categories; occasional notes are given on content, and an author index is appended. (DLC.)

70202. BIDGOOD, D.E.T., *and* **W.B. HARLAND.** Palaeomagnetic studies of some Greenland rocks. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v. 1, p. 285-92, map, diagr., tables.) 12 refs.

Summarizes results of studies of the sedimentary rocks collected by the authors on Lauge Koch's East Greenland Expedition, 1957; comparison is made with results obtained from Europe and North America; procedures are described. Data for late Precambrian, Devonian, Lower Carboniferous, Permo-Carboniferous, Eotriassic, and Upper and Middle Triassic are given; from these, pole positions are inferred similar to those derived from North America, but suggesting a systematic displacement. (DLC.)

70203. BIDGOOD, D.E.T., *and* **W.B. HARLAND.** Palaeo-magnetism in some East Greenland sedimentary rocks. (Nature, Feb. 25, 1961. v. 189, no. 4765, p. 633-34, table, chart.) 5 refs.

Reports on Precambrian, Permian, Middle and Upper Triassic rock collected in Central East Greenland in 1957. Magnetometric measurements were made, the group mean position and positions of the magnetic pole were established, and data evaluated. Variations of the magnetic pole for each age of rocks are described and plotted on a polar stereographic projection. The positions lie about 18° east of the general European trend and 30° east of the North American trend, which would be consistent with a post-Trias movement of Greenland away from North America. (DLC.)

70204. BIDZHIEV, R.A., *and* **IU. I. MINAEVA.** K voprosu ob istochnikakh snosa v period formirovaniia nizhnefurskikh kontinental'nykh otlozhenii v TSentral'noĭ IAkutii; bassein Amgi. (Akademiia nauk SSSR. Doklady, Jan. 11, 1961. t. 136, no. 2, p. 412-15.) 10 refs. Text in Russian. **Title tr.:** The dispersion source during the formation of the

Lower Jurassic continental deposits in central Yakutia; the Amga basin.

Reports a study of cross bedding, lithology, mineral composition and other properties of these deposits to establish their source area; all indications are to the north, northwest, i.e. the Vilyuy syncline, and recent studies have confirmed this. (DLC.)

70205. BIDZHIEV, R. A., *and* IŪ. I. MINAEVA. Stratigrafiīa iurskikh otlozhenii severnoĭ chasti Priverkhoīanskogo kraevogo progiba. (Geologiīa i geofizika, 1961, no. 11, p. 47-62, map.) 11 refs. Text in Russian. Summary in English. Title tr.: Stratigraphy of Jurassic deposits of the northern part of the Verkhoyansk foredeep.

Reports results of a 1958-1960 study by the All-Union Aerogeologic Trust between the Muna and Molodo, left tributaries of the lower Lena. New faunal material is presented for the stages of Lower and Middle Jurassic deposits. In the lower Volga stage of Upper Jurassic deposits, a rich fauna of ammonites, belemnites and pelecypods is found. Rhythmicity in sedimentation of Jurassic deposits is noted. (DLC.)

70206. BIELMAN, KENNETH D. Water demands in southeastern Alaska. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p. 39-50, table, graphs.)

Data on municipal water use and requirements are tabulated and discussed from viewpoint of potential water-system expansion and the potable water resources. Average demand ranges from 102 gallons/capita/day (gcd) in Douglas to 754 gcd in Ketchikan, compared to approx. 100 gcd on the State of Washington – Oregon coast, despite abundant precipitation the supply of water is limited due to topography, geology, and lack of lakes in the area. Substantial quantities are wasted keeping pipe lines from freezing in winter. Conservation is needed to prevent a water shortage; also control measures in water-main and plumbing construction to provide for frost protection of pipes. (CaMAI.)

70207. BIENNIAL REVIEW OF ANTHROPOLOGY, 1961.. v. 2, edited by B.J. Siegel. Stanford, Cal., Stanford Univ. Press, 1962. 322 p. Refs.

Contains eight review articles, all with extensive literature lists, on field research and publications of 1955-1960 in physical and cultural anthropology and archeology. Most of the articles include work on northern peoples in the survey, as indicated:

Clifford, G. Studies in peasant life: community and society.

Wallace, A.F.C., *and* R.D. Fogelson. Culture and personality. *Mentions* the Great Whale River and Alaskan Eskimos, also Lapps.

Woodbury, R.B. New World archeology. *Includes* studies of old Eskimo and Eskimoid cultures, chronology and routes of migration from Siberia to Greenland, culture sequences in Canada and Alaska, etc.

Rubin, V. The anthropology of development. *Notes* successful adjustment of subsistence and wage economics by Point Hope Eskimos.

Sofue, T. Anthropology in Japan, historical review and modern trends. *Includes* current research on the prehistoric relations of the Ainu with the arctic cultures of Siberia and Alaska.

Romney, A.K. Social organization. *Refers to* 1958-1959 studies on the social structure and kinship terminology of Eskimos and Athapaskan Indians.

Spuhler, J.N., *and* R. Hegler. Advances in physical anthropology. *Notes* occurrence of abnormal hemoglobins among Alaskan Eskimos.

Lounsbury, F. Language. (DSI.)

70208. BIGELOW, WILLIAM G., *and* S. SIDLOFSKY. Hormones in hypothermia. (British medical bulletin, Jan. 1961. v. 17, p. 56-60.) 39 refs.

Discusses kinds of hypothermia as general, local, deep, etc., and the role of endocrines in moderate, general hypothermia. The anterior pituitary, thyroid, pancreas, adrenal medulla and cortex, and their functions are reviewed and discussed. The scanty knowledge on the role of hormones during cooling is explained. (DNLM.)

BIJAOUI, G., *see* Malméjac, J., & *others*. . . . centres respiratoires . . . 1962. No. 73770

70209. BIKE, PETER B. Teamwork speeds Alaska oil hunt. (Oil and gas journal, May 1, 1961. v. 59, no.18, p.170, +, illus.)

Photo story of exploration activities of a new firm, PRECON, in the Susitna valley, the Kenai Peninsula, the Port Heiden area on the Alaska Peninsula, and on the Nushagak Peninsula. Equipment used in gravity and seismic work is noted. (DGS.)

70210. BILELLO, MICHAEL ANTHONY, 1924– . Formation, growth, and decay of sea-ice. (Arctic, Mar. 1961. v. 14, no. 1, p. 3-24, maps, graphs, tables.) 17 refs.

Deals with effect of air temperatures and snow depths on these aspects of ice conditions, based on four to nine years' data from Alert, Eureka, Isachsen, Mould Bay, and Resolute, in the Canadian Arctic Islands. Freeze-up and freeze-over are defined and described; methods of forecasting them are outlined, and predicted results compared with those observed. Decrease in sea-ice thickness is similarly treated. Growth of sea-ice is related to air temperature and to snow depth, but data on other factors are lacking. A method for predicting sea-ice growth by increments using these two factors is described and tested; results are graphed. Appendices describe areas and water bodies at the five stations, also outline methods used to measure sea-ice thickness. This report is a somewhat condensed version of No. 63429. (DGS.)

70211. BILELLO, MICHAEL ANTHONY, 1924– Surface temperatures and growth of sea-ice. Wilmette, Ill., Jan. 1961. iv, 10 p. graphs, tables. (U.S. Army. Snow Ice and Permafrost Research Establishment, Research report 75.) 8 refs.

Computes a composite numerical value for three physical properties of sea ice, using concurrent measurements of ice growth and ice-surface temperatures made in Slidre Fjord near Eureka, Ellesmere Island, approx. 79°59′N. 85°57′W., during the 1949-50 and 1950-51 seasons. These properties, thermal conductivity k, latent heat of fusion L, and density ρ, are combined as $k/L\rho$; values for this expression were found to increase from about 4.7×10^{-5} to 7×10^{-5} during the Nov. 6 – Dec. 22 growth of ice from 0.6 to 1.0 m. in thickness. During the increase from 1.1 to 1.3 m. in Jan. 20 – Feb. 10, the value of $k/L\rho$ ranged from

7×10^{-5} to 8×10^{-5}, then decreased slightly during the rest of the growth period. A correlation coefficient of $\rho = 0.73$ was derived between sea ice accretion and temperature gradient in the ice. (DWB.)

BILLINGS, M.S., *see* Gambino, J.J., & *others*. Post-irridiation cold stress. 1961. No. 71578

70212. BINGHAM, A.L. Problems associated with transpolar airline operations. (Canadian aeronautics and space journal, Feb. 1962. v. 8, no. 2, p. 27-30, map.)

Notes weather conditions on the Canadian Pacific Air Lines Edmonton–Amsterdam route over Greenland, the high cost of ground support, lack of satisfactory communications. Optimum flight levels are difficult to obtain on eastbound flights in the Icelandic control area, which leads to a 20% increase in fuel consumption on 25% of the flight. Revenue/passenger–mile compares favorably with that of a non-polar flight Edmonton–Amsterdam. (DLC.)

70213. BIRD, JOHN BRIAN, 1923- , *and* **M.B. BIRD.** Bathurst Inlet, Northwest Territories, Ottawa, Queen's Printer, 1961. 66 p. plates, tables, maps incl. four fold. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Memoir 7.) 12 refs.

Reports the physical and human geography of this submerged valley area, 66° - 68°N. 105°-110°W., in nortneastern Mackenzie District, investigated in 1954 and 1956. Its geology, geomorphology, drainage pattern, glaciation, postglacial emergence (about 725 ft.), climate, ice conditions, vegetation, and wildlife are described. Glacial features (striae, drumlins, till) and surface deposits are mapped; the effect of the latter on overland transportation and building construction is considered. The area, lying within the Canadian Shield and including parts of the Mackenzie uplands and the Coronation Gulf lowlands, is divided into eleven physiographic regions which are mapped and described. North-south variations in summer temperatures, 45°-53°F., are reflected in the vegetation. Changes in the economy and distribution of the Copper Eskimo population, totalling 165 in 1954, are reviewed, also European settlement since 1920. (DGS.)

BIRD, M. BERYL., *see* Bird, J.B., & M.B. Bird. Bathurst Inlet. 1961. No. 70213

BIRD, P.M., *see* Canada. Annual report . . . Radioactive Fallout . . . 1960-61. No. 70535

70214. BIRKENMAJER, KRZYSZTOF. Course of the geological investigations of the Hornsund area, Vestspitsbergen, in 1957-1958. (*In:* Polska wyprawa na Spitsbergen, 1957-1958. Geological results . . . 1960, pt. 1, p. 7-35, plates, *pub. as:* Studia geologica polonica, v.4, fold. maps, tables.) 50 refs. Summary in Polish.

Reports procedures and results of stratigraphic, tectonic, geomorphic, glaciological and other investigations and geologic mapping at 1: 50,000 scale. Reconnaissance work in 1956 and field work in 1957, 1958 are described in detail. Summary of the geological investigations of the Hornsund area is given in describing a stratigraphic profile of the Hecla Hoek succession, post-Caledonian mantle and Quaternary deposits; 55 new geographic names are proposed and their coordinates and main features given. Further investigation is noted, of the geologic material collected. (DLC.)

70215. BIRKENMAJER, KRZYSZTOF, *and* **T. MORAWSKI.** Dolerite intrusions of Wedel-Jarlsberg Land, Vestspitsbergen. (*In:* Polska wyprawa na Spitsbergen, 1957-1958. Geological results . . . 1960, pt. 1, *pub. as:* Studia geologica polonica, v. 4, p. 103-123, plates, fold. map, tables.) 35 refs. Summary in Polish.

Describes the geology and petrography of 11 dolerite dikes occurring in the Hecla Hoek succession and a dolerite sill of Devonian age. Occurrence, tectonic conditions and age of dolerite intrusions are discussed. The primary mineral association of dolerites studied consists of plagioclase, pyroxene, ores, and residual glass. These minerals were altered due to action of post-magmatic waters and new minerals were formed. The alteration processes are described by the second author in the petrographic part of the paper. The dolerites of the Hornsund area are found to be similar to those of other regions of Spitsbergen, cf. No. 18136. (DLC.)

70216. BIRKENMAJER, KRZYSZTOF. Polish activities in Vestspitsbergen, 1956-1960. (Polar record, Jan. 1962. v. 11, no. 70, p. 35-39.)

Describes Polish expeditions to the Hornsund area led by S. Siedlecki, in connection with the IGY and its continuation, and with the International Geographical and Geological Congresses of 1960. Members of the 1956 reconnaissance, the four summer parties, and the 1957-58 wintering party are listed. Investigations (summarized) were made in meteorology, auroras, actinometry, ionosphere, astronomy, radioactive fallout, geomagnetism, hydrology, glaciology, periglaciology, Quaternary geology and geomorphology, Pre-Quaternary geology, and biology. (DGS.)

70217. BIRKENMAJER, KRZYSZTOF, *and* **W. NARĘBSKI.** Precambrian amphibolite complex and granitization phenomena in Wedel-Jarlsberg Land, Vestspitsbergen. (*In:* Polska wyprawa na Spitsbergen, 1957-1958. Geological results, 1960, pt. 1, *pub. as* Studia geologica polonica, v. 4, p. 37-82, plates, fold. maps, cross-sections, tables.) 45 refs. Summary in Polish.

Reports petrographic description and microscopic and chemical examination of the amphibolite complex belonging to the Skålfjellet series. This series was subdivided into lower and upper members, which are described. Formation conditions of various rocks are discussed. The amphibolites were probably metamorphosed under moderate temperature and pressure. The most wide-spread change was the epidotization of those of the granitization zone. Comparison is made with other amphibolite-bearing series on Spitsbergen. (DLC.)

70218. BIRKENMAJER, KRZYSZTOF. Raised marine features of the Hornsund area, Vestspitsbergen. (*In:* Polska wyprawa na Spitsbergen 1957-1958. Geological results . . . 1960, pt. 2, *pub. as:* Studia geologica polonica v. 5, 92, 2 p. diagrs., tables, 11 plates, 2 fold. maps.) 65 refs. Summary in Polish.

Presents analysis of the raised marine features in this fiord. particularly the region between

Rotjesfjellet and Hansbreen which was mapped. Classification and origin of the raised terraces, stormridges, cliffs and terrace pools are discussed. The raised marine features in the area are compared with those of central Vestspitsbergen. Distribution of whale bones and driftwood on the coasts is described, as is the "whale method" proposed for calculating rate of the land uplift. Post-Pleistocene movements of the shore line are analyzed. Attached is the map at 1:10,000 scale showing in color the raised marine features and glacial deposits with explanatory notes in English and Polish. (DLC.)

70219. BIRKET-SMITH, KAJ, 1893– . "The Eskimos": some comments. (Anthropologica, 1961, n. ser. v. 3, no. 1, p. 82-84.) 7 refs.

Refutes objections to his interpretation of the origin and development of Eskimo culture in No. 56919, in answer to W. E. Taylor's critical review pub. in *Anthropologica,* 1960, v. 2, no. 1. Appended (p. 85-89, with 15 refs.) is Taylor's reply, explaining misunderstanding and defending own position on some problems of terminology and classification. (DSI.)

BIRKHEAD, N. C., *see*

Issekutz, B., & *others.* Effect of severe cold stress . . . 1962. No. 72425

Rodahl, K., & *others.* Effects of dietary protein . . . work capacity . . . cold. 1962. No. 75156

70220. BISKĖ, G. S. Karel'skiĭ filial Akademii nauk SSSR. (Akademiīa nauk SSSR. Izvestiīa, ser. geograficheskaīa, Nov.-Dec. 1961, no.6, p.130-31.) Text in Russian. **Title tr.:** Karelian Branch, Academy of Sciences, USSR.

Reports recent activities of this Branch: search for rare elements, studies on the hydrologic and climatologic role of forests, microclimate of meadows, thermal regime of soils and some others. (DLC.)

70221. BISKĖ, G. S. Rol' tektoniki v geomorfologii Karelii. (*In:* Akademiīa nauk SSSR. Karel'skiĭ filial. Problemy geologii . . . 1961, p. 32-42, profiles, map.) 24 refs. Text in Russian. **Title tr.:** The role of tectonics in the geomorphology of Karelia.

Outlines the orography, relief forms and development of Karelia including its northern part. The Kukas and Chelozero synclines, the Panayarvi area relief, and the tectonic structure of the eastern part of the Baltic Shield are discussed, and tectonic features affecting the geomorphology are noted. (DLC.)

70222. BISKĖ, G. S. Stratigrafiīa chetvertichnykh otlozheniĭ Karelii. (*In:* Vsesoīuznoe soveshchanie po izucheniīu chetvertichnogo perioda. Materialy . . . 1961, t. 2, p. 47-52.) Text in Russian. **Title tr.:** Stratigraphy of the Quaternary deposits of Karelia.

Describes the stratigraphy of glacial, interglacial, marine, locustrine, eolian and other Quaternary deposits of Karelia, including the northern parts. Holocene deposits are divided into two stages and both are described noting fauna, diatoms and other features. (DLC.)

70223. BISKĖ, S. F. O nekotorykh voprosakh stratigrafii i paleogeografii kaĭnozoīa nizov'ev r. Kolymy. (Geologiīa i geofizika, 1962, no. 12, p. 96-100, text map.) 15 refs. Text in Russian. **Title tr.:** Some problems of the stratigraphy and paleogeography of the Cenozoic on the lower Kolyma River.

Criticizes a paper* by A.P. Vas'kovskiĭ and L. Z. Zasukhina on Materials for solving two paleogeographic problems of the lower Kolyma River, published in *Kolyma* 1960, no. 6 and no. 7. These two problems are: the age of continental deposits in which a fossil cone of pine was found in the Sededema River basin; and the life conditions and causes of death of a mammoth found in 1901 on the Berezovka River. Biskė outlines his and other scientists' views, and shows wherein Vas'kovskiĭ and Zasukhina are misleading. (DLC.)

BISKĖ, S. F., *see also* Baranova, IU. P., & S. F. Biskė. Monografiīa N. A. Shilo . . . 1962. No. 70014

70224. BITERMAN, I. M., *and others.* Nizhnekamennougol'nye otlozheniīa Kiuiutingdinskogo progiba no severo-vostoke Sibirskoi platformy. (Moskovskoe obshchestvo ispytateleĭ prirody. Biulleten' 1961. n. ser., t. 66, otdel geologicheskiĭ, t. 36, vyp. 6, p. 96.) Text in Russian. *Other authors:* E. S. Kuteĭnikov, B. N. Leonov, *and* L. M. Natapov. **Title tr.:** Lower Carboniferous deposits of the Kyuyutingdinskiy downwarp in the northeastern part of the Siberian platform.

Reports a stratigraphic study of Carboniferous deposits in the lower Olenek basin in 1958-1960. Four strata of these deposits are distinguished and their composition, thickness and floral and faunal remains are briefly reported. (DLC.)

70225. BITERMAN, I. M., *and others.* Novye dannye o nizhnekamennougol'nykh otlozheniiakh severo-vostoka Sibirskoĭ platformy. (Akedemiīa nauk SSSR. Doklady, May 21, 1962. t. 144, no. 3, p. 613-16, map.) 3 refs. Text in Russian. *Other authors:* E. S. Kuteĭnikov, B. N. Leonov, *and* L. M. Natapov. **Title tr.:** Recent data on Lower Carboniferous deposits in the northeast of the Siberian platform.

Reports geologic mapping and investigation of these deposits in the Olenek and tributaries basin. Four strata: terrigenous, lower carbonate, gypsiferous and upper carbonate are identified, and each described noting distribution, thickness, brachiopod, ostracod, etc. fauna, and other features. (DLC.)

BITO, M., *see* Souzu, H., & *others.* Water of microorganisms . . . 1961. No. 75845

70226. BJERGE, POUL. Skovplanterne i Grønland. (Grønland, Apr. 1962, nr. 4, p. 144-50, illus.) Text in Danish. **Title tr.:** Forest seedlings in Greenland.

Reports on an afforestation project started in 1953 in southwest Greenland. In 1961, the seedlings were found to be developing well, with Siberian larch the most successful, white spruce from Alaska, pine and fir from Scandinavia also making good progress. The seedlings were supplied by the nursery at Upernaviarssuk near Julianehåb, where they had developed from seed planted four to five years earlier. (CaMAI.)

70227. BJERKNES, JAKOB, 1897– . Synoptic survey of the interaction of sea and atmosphere in the North Atlantic. (Norske Videnskaps-Akademi

*not seen.

i Oslo. Geofysiske publikasjoner, Geophysica norvegica, 1962. v. 24, no. 3, p. 115-45, maps, diagr., graphs, tables.) 22 refs. In memory of Vilhelm Bjerknes on the 100th anniversary of his birth, 1862–1951.

Examines sea surface temperature recorded by the U. S. Weather Bureau, Danish Meteorological Office, and the International Council for the Exploration of the Sea (1850–1960), to discover meteorological causes for short- or long-term fluctuations, including those in Labrador Sea, Baffin Bay - Davis Strait, Denmark Strait, and Greenland Sea. A long trend of oceanic cooling north of 50°N. from the 1890's to the early 1920's corresponded to a strengthening of the Icelandic Low, and the subsequent warming until the early 1940's was associated with a weakening of that Low. Cooling of northern waters and warming of the Gulf Stream intensified the baroclinicity along the 50° parallel, while corresponding increase of atmospheric baroclinicity tended to intensify cyclogenesis along the atmospheric Polar Front. This so-called "oceanic feedback" serves to prolong the process of intensification. Much of the study deals with non-arctic waters, but reference is made to the Labrador, Irminger, East Greenland and West Greenland Currents and their influence on sea temperatures in the North Atlantic. (DGS.)

BJÖRKHEM, KARL EINAR, *see* Hofsten, E., & *others*. . . . statsbidragen. 1961. No. 72193

BJÖRKMAN, ERIK, 1912– , *see* Buchwald, N. F., & *others*. . . . Parasitical fungi & hosts . . . 1961. No. 70425

BJORNSON, D.R., *see* Miller, D., & D.R. Bjornson. Cold injured soldiers Alaska. 1962. . . . No. 74022

70228. BLACHUT, T.J. The use of aerial photogrammetry in the study of mountain glaciers. (*In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960. Pub. no. 54, *pub.* 1961. p. 484-91, diagr., graph.) Summary in French.

Discusses in some detail the application of aerial photogrammetric techniques to glacial studies, from experience on the Salmon Glacier B.C. expedition 1957 and the Jacobsen-McGill Arctic Research Expedition 1959. Emphasis is placed on the proper planning and execution of photographic flights and the plotting of glaciological maps, which are specialized in purpose and governed by different rules from those followed in usual topographic map production. Scales of 1:25,000 or larger are recommended for overall glacial maps; detailed maps at 1:10,000 or 1:5,000 scale are recommended for the terminus and characteristic zones. General photographic coverage at scale of 1:40,000 is satisfactory; for more detail, photography at 1:25,000 scale will provide accuracy of ± 37 cm. (DWB.)

70229. BLACK, D. JAN., *and* N.A. OSTENSO. Gravity observations from ice island Arlis–II, 6 October 1961 to 8 April 1962. Madison, Wisc., Nov. 1962. 26 p. maps, graphs, tables. (Wisconsin University. Geophysical and Polar Research Center. Contribution no. 91.) 3 refs.

General drift of Arlis –II during the 181-day period Nov. 1, 1961 – Apr. 30, 1962 was 435 km. (270 mi.) toward the northwest, an average velocity of 2.4 km. (1.5 mi.) per day. A twice-interrupted-profile of ocean-bottom topography was obtained; data are tabulated in the appendix and charted. Depths increased gradually from 800 to 2700 m. A World Wide gravimeter #5 was used throughout the drift; four-or five-per-day readings were reduced to one a day on Feb. 12, 1962. A North American #AG-1-113 gravimeter was also used Dec. 31, 1961 – Apr. 10, 1962. Free air and Bouguer anomalies for both gravimeters and water depths are plotted. Unexplained variations in gravity profiles are generally within the accuracy range of the observations, ±10 mgl.; many anomalies may indicate sub-bottom topography more accurately than the surface of the unconsolidated sediments. Near zero free air anomaly indicates good isostatic adjustment for the portion of the Arctic Basin (76°N. 176°W. – 80°N. 170°E.) traversed. (CaMAI.)

BLACK, H.P., *see Polar record.* News notes. 1961-62. No. 74847.

70230. BLACK, WILLIAM A. Competitive and marketing aspects of the Labrador floater codfishery. (Geographical bulletin, May 1962. no. 17, p. 78–84.) 7 refs.

Surveys the two main factors in the decline of this industry: one, the economic measures and controls taken by European countries to hasten national economic self-sufficiency; the other is powerful and sustained foreign competition. Decline of Newfoundland's heavy-salted cod fishery to extinction in 1954 is compared with the growth of the Icelandic fishery: the former an individualistic industry, the latter planned and coordinated under government supervision. (DGS.)

70231. BLACK, WILLIAM A. Fur trapping in the Mackenzie River delta. (Geographical bulletin, Nov. 1961. no. 16, p. 62–85, illus., maps, graphs tables.) Refs.

Discusses the decline of this major industry since 1952, a decline associated with falling fur prices, reduced use of local resources of fish and wood, and lower living standards. Local trapping methods tend to bring in low-quality pelts of little marked value; the native trapper accepts reduced returns, rather than change methods, as he has little incentive to offer high-quality furs. Mink and muskrat represent about 95% by value of the area's production. (DGS.)

70232. BLACK, WILLIAM A. Geographical Branch program of ice surveys of the Gulf of St. Lawrence, 1956 to 1962. (Cahiers de geógraphie de Québec, Oct. 1961 – Mar. 1962. an. 6, no. 11, p. 65–74, illus., maps.)

Describes methods and summarizes published results of these surveys, which extend northward into Labrador waters. Development of techniques for observing special conditions encountered, increased use of air photos, extension of the survey periods (mid-Dec. to mid-Apr.) are noted. An ice terminology of 28 items is given; ice distribution in the St. Lawrence River and Gulf on Feb. 3–4, 1960, is mapped. (DGS.)

70233. BLACK, WILLIAM A. Gulf of St. Lawrence ice survey, winter 1961. Ottawa, Queen's Printer, 1962. 52 p. illus., tables, maps incl. 7 fold. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Geographical paper no. 32.) 27 refs.

Describes and maps the coverage and distribution of the various types of ice in the Gulf and River St. Lawrence upstream to Montreal, based on an eleven-flight aerial survey, Jan.–Apr. 1961. Weather conditions were observed and their effect on ice formation, movement, expansion, preservation, breakup, etc. noted. Continued low temperatures over the Gulf and strong westerly and northerly winds produced the severest ice conditions in recent years. Labrador ice advanced erratically through the Strait of Belle Isle from March 8, reached its maximum penetration about the end of April, and retreated steadily; except for small bergs and growlers, the strait was clear about May 22. Icebreaker assistance was given to 223 ships in the Gulf region during Dec. 15, 1960 – Apr. 15, 1961, and the routing and convoy of traffic was considered successful. Aerial photos illus. the nature and distribution of the ice, and supplement the periodic maps. (DGS.)

70234. BLACK, WILLIAM A. A report on sea ice conditions in the Eastern Arctic, summer 1960. Ottawa, Queen's Printer, 1961. 29 p. illus., 16 text maps, 4 tables. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Geographical paper no. 27.) 16 refs. In sequence to No. 56939.

Contains results of the fourth ice reconnaissance survey during Aug. 1960, in the Baffin Bay – Davis Strait, Lancaster Sound – Barrow Strait, and Jones Sound – Eureka Sound areas, by the CMS *D'Iberville* on the annual resupply mission to Resolute and to Eureka. Above-normal weather conditions prevailed, air and water temperatures were notably higher than in the previous, 1958 survey; the Baffin Bay ice cover was considerably less. Ice distribution in Norwegian Bay was similar to that in 1958. Conditions observed from ship and helicopter, also regional conditions reported by the Meteorological Branch are described, mapped, and illus. (DGS.)

70235. BLACK-SCHAFFER, B. Protection by deep hypothermia and immersion against 2300 G acceleration of a non-hibernator, rat, and a hibernator, hamster. (Aerospace medicine, Mar. 1962. v. 33, no. 3, p. 286–96, illus., tables.) 10 refs.

Deep hypothermia and immersion in a fluid of specific gravity equal to their own, protected hamsters against a spin of 2300 G lasting 30 min. Rats under similar conditions did not permanently survive a 5-min. spin. Congestive gastroenteropathy was found to be the immediate anatomic cause of death. (DLC.)

70236. BLACK-SCHAFFER, B., *and others.* Protection of the adult mouse against 1800 G acceleration by hypothermic immersion. (Aerospace medicine, Dec. 1961. v. 32, no. 12, p. 1119–26, illus., tables.) 6 refs. *Other authors:* G.T. Hensley *and* L.R. Simson.

Mice in deep hypothermia (6–4°C.) immersed in saline could withstand 15 min. of 1800 G. One animal survived 15 months after 10 min. of 1800 G spin. (DLC.)

70237. BLACKADAR, ROBERT G. Field activities of the Geological Survey of Canada in the Arctic, 1961. (Arctic circular 1961, pub. 1962. v. 14, no. 4, p. 62–68.)

Reviews some dozen projects: reconnaissance by R. Thorsteinsson's four-man party of the bedrock geology of Axel Heiberg and Ellesmere Islands; J.G. Fyles' work on the surficial deposits of western Ellesmere and eastern Axel Heiberg Islands; R.L. Christie and N.E. Haimila on the geology of eastern Ellesmere; R.G. Blackadar and A.J. Jenik on the mapping of southern Baffin Island; and B.R. Pelletier on the submarine geology of the western Queen Elizabeth Islands, in connection with the Polar Continental Shelf Project. Another marine geology study in connection with this Project is noted, also three, with the Division of Oceanographic Research, in the Hudson Bay area. In Mackenzie District, pegmatites, Precambrian rocks, and the ultrabasic Muskox Complex near Coppermine River were investigated. (CaMAI.)

70238. BLACKADAR, ROBERT G. Field activities of the Geological Survey of Canada in the North in 1960. (Arctic circular, Dec. 1961. v. 14, no. 2, p. 35–40.)

Describes three projects: Operation Back River, mapping 55,000 sq. mi. of Keewatin District north of 66° N. from 90° to 100° W., thence north of 67° N. to 102° W.; R.L. Christie's investigation of the geology of southeastern Ellesmere Island, to be continued along the east coast in 1961; and R.G. Blackadar's continued mapping and study of magnetite deposits of southwestern Baffin Island. (CaMAI.)

70239. BLACKADAR, ROBERT G. Geology, Andrew Gordon Bay - Cory Bay, Baffin Island, District of Franklin. Ottawa, 1962. Map sheet 25.5 x 32 in., with descriptive notes by R.G. Blackadar. (Canada. Geological Survey, Map 5–1962, preliminary series, base map sheet 36B and 36G, south half.)

Describes briefly, and maps at 1 in.: 4 mi. the geologic features in this area 64° – 65°30′N. 74° — 76°W., immediately west of the Mingo Lake area *infra.* Predominant rocks are some form of quartz-feldspar gneiss complex; main structural trend is northwest, although circular dome and basin structures may be included. Deposits of magnetite are present west of Chorkbak Inlet, 64°30′N. 74°30′W. and elsewhere. (DGS.)

70240. BLACKADAR, ROBERT G. Geology Mingo Lake, Baffin Island, District of Franklin, Northwest Territories. Ottawa, 1961. Map sheet 26 x 22.5 in. (Canada. Geological Survey. Map 43–1960, preliminary series, base map sheet 36A.)

Map at scale 4 mi.:1 in., with descriptive notes, shows distribution of ten types of Precambrian rocks and of Quaternary drift, also other geologic features, in the area 64°–65°N. 72°–74°W. (DGS.)

70241. BLACKADAR, ROBERT G. Hobart Island, Baffin Island, District of Franklin, Northwest Territories. Ottawa, 1960. Fold. map sheet 26 x 27 in. (Canada. Geological Survey. Surveys and Mapping Branch. Preliminary series, map 55–1959, sheets 35P and 36A (parts of).)

Shows a general distribution of six Precambrian rock types, also some structural and glacial features in this unsettled area facing Hudson Strait, 63°15′–64°30′N. 72°–74°W. An extensive magnetite band winds northwestward from Amadjuak Bay to beyond Keltie Inlet (64°28′N. 73°28′

W.). (DGS.)

70242. BLACKADAR, ROBERT G., *and* J.A. FRASER. Precambrian geology of arctic Canada: a summary account. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v. 1, p.361–79, diagr., tables.) 32 refs.

Outlines information on the Precambrian north of 60°, including results of Operation Franklin 1959. Baffin, Devon, and Ellesmere Islands, also Southampton Island, the Melville and Boothia Peninsulas, Somerset and Prince of Wales Islands contain Precambrian rocks. Stratigraphic sections of Proterozoic formations in eastern Ellesmere, northwestern Baffin, and northwestern Somerset are diagrammed. Mineral production from Precambrian areas of the arctic islands has been very limited. The oldest Archean rocks exposed on the mainland Northwest Territories are probably the Yellowknife group, a term applied to all Archean volcanic and sedimentary rocks north of Great Slave Lake. Granitic rocks of great diversity also underlie large areas of the arctic mainland. Proterozoic groups are described and tentatively correlated according to their distribution into six regions. Faulting is widespread; the West Bay fault north of Yellowknife shows three-mile horizontal and a quarter-mile vertical displacement. Mineral production includes three gold mines, one uranium, one nickel, and numerous unworked deposits. (DLC.)

BLACKADAR, ROBERT G., *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

BLACKE, E.A., *see* Needleman, S.M., *& others.* . . . Centrum Sø . . . 1962. No. 74244

70243. BLACKIE, W.V. Legal surveys for oil and gas rights in the Yukon and Northwest Territories. (Canadian surveyor, Nov. 1961. v.15, no. 10, p. 560–66, diagrs.)

Describes the grid area system used as the basis for allocating oil and gas rights. Land is divided into geographically defined parcels, the largest the "grid area", which is subdivided into sections, and the sections into units. A 600-ft. square centered in each unit is the area in which a development well may be drilled. Legal surveys are postponed until actual production takes place, or is assured. Once a legal survey has been made under the Canada Oil and Gas Land Regulations of 1961, the established position of the well or boundaries determines the position of all other sections, units, or target areas within that grid. The coordinate system, control, and monumentation used in the legal survey are described. (DLC.)

BLACKMON, C.L., *see* Needleman, S.M., *& others.* . . . Centrum Sø . . . 1962. No. 74244

BLACKSHAW, ALAN, *see* Jackson, J.A., *& others.* 1960 exped. . . . Staunings. . . . 1961. No. 72504

BLADEN, VINCENT WHEELER, 1900– , *see* Royal Society of Canada. Population & colonization. 1962. No. 75234.

70244. BLAEDEL, NIELS. Moskusoksens flytning til vestkysten kan måske redde den mod katastrofer. (Atuagagdliutit: Grønlandsposten, Aug. 24, 1961. Ukiut 101-iat, nr. 18, p. 22, +, illus.) Text in Danish and Eskimo. **Title tr.:** The transfer of musk ox to the west coast may save it from catastrophe.

Outlines the history of the musk ox in Greenland, where it was first observed about 1770. At the beginning of this century it seemed threatened with extinction; with ameliorating climate of the 1920's, numbers rose to an estimated 15,000 in 1940, but declined subsequently, with catastrophic feed shortages, to about 6,000 head at present. Plans to transfer calves to the west coast are outlined. (SPRI.)

70245. BLAGUL'KINA, V.A., *and others.* K mineralogii svĭazuĭushchei massy kimberlita. (Vsesoĭuznoe mineralogicheskoe obshchestvo. Zapiski 1962. ser. 2, chast' 91, vyp. 2, p. 236–41, illus., table.) 13 refs. Text in Russian. *Other authors:* V.S. Rovsha *and* N.N. Sarsadskikh. **Title tr.:** On the mineralogy of the bonding mass of kimberlites.

Reports four forms of olivine occurrence in kimberlites. Special attention is given to olivine phenocrysts occurring in the bonding mass. Microscopic studies of Alakit-Daldyn region kimberlites are reported and in four pipes, phenocrysts of olivine are identified in the bonding mass. Optical properties of this olivine are determined and data tabulated. (DLC.)

70246. BLAIR, EMIL, *and others.* Serum glutamic oxalacetic transaminase content in hypothermia. (Science, Jan. 13, 1961. v. 133,, no. 3446. p. 105–106, illus.) 10 refs. *Other authors:* R. Hook, H. Tolley, *and* G.E. Bunce.

Dogs made hypothermic to 27°–25°C. showed elevation in serum glutamic oxalacetic transaminase, only after prolonged cooling (12 hrs.). Histologic study of organs rich in this enzyme revealed no necrosis. Upon rewarming conditions returned to normal. (DLC.)

BLAIR, M.R., *see* Rennie, D.W., *& others.* Physical regulation . . . 1962. No. 75108

BLAIS, ROGER A., *see* Stubbins, J.B., *& others.* Origin . . . iron ores Knob L. 1961. No. 75969

70247. BLAKE, WESTON B., 1930– Radiocarbon dating of raised beaches in Nordaustlandet, Spitsbergen. (*In:* International Symposium on Arctic Geology. Proceedings 1961, v. 1, p. 133–45, illus., maps, graph, tables.) 18 refs. *Also issued as:* Ohio State University, Institute of Polar Studies, Contribution no. 2.

Notes raised beaches to more than 100 m. above sea-level, well developed in the narrow, ice-free, coastal zone of Nordaustlandet. Radiocarbon determinations on imbedded driftwood, shells, and whale bones, as well as the tentative correlation of pumice fragments with dated pumice in Denmark and Norway, provide a means of dating beach levels in Lady Franklinfjorden, Murchisonfjorden, etc. Pumice occurs at three levels: the uppermost, often on a broad beach, usually marks the upper limit of driftwood, radiocarbon dated at 4000–7000 yrs. B.P.; hence such beaches formed during the Hypsithermal Interval (Tapes Sea). Wood at 36 m. and shells at 8–44 m. are dated at 9000–10,000 yrs. B.P.; shells at 44–47 m. at 35,000–40,000 yrs. B.P. The absence of 10,000–35,000 yr. (or more) material is attributed to a more extensive ice cover. Based on field work 1957–58, with the Swedish Glaciological Expedition to Nordaustlandet. (DLC.)

70248. **BLAKE, WESTON B., 1930–** . Russian settlement and land rise in Nordaustlandet, Spitsbergen. (Arctic, June 1961. v. 14, no. 2, p. 101-111, illus., map.) 35 refs. Contribution no. 1 from the Institute of Polar Studies of Ohio University.

Presents evidence of stable shoreline in the Murchisonfjorden region from 1957-1958 studies of a Russian hunting hut on Nordre Russøya. Age of the hut is determined as at least 100 years from settlement records and radiocarbon dating. It is located only 1.2 m. above high-tide level and 0.8 m. above the highest tides; hence the land has risen less than one meter in the past century. Any uplift that is occurring is probably balanced by the rise in sea level from glacier shrinkage. (DGS.)

BLAKE, WESTON B., 1930– , *see also* Christiansson, H. . . . Russekeila & land rise in Vestspitsbergen. 1961 No. 70745

Polar record. News notes. 1961-62. No. 74847

BLESCH, ROBERT R., *see* Pressman, A. E., & *others*. Terrain analysis . . . Canada. 1961. No. 74950

BLINKS, D. C., *see* Lyman, C. P., & D. C. Blinks. Effect of temperature . . . 1959. No. 73649

70249. **BLINOV, N. I.** Dreĭf vtoroĭ smeny stantsii "Severnyĭ Polius- 8". (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp. 10, p. 96-98, table, map.) Text in Russian. **Title tr.**: Drift of the second team of the station North Pole-8.

Reviews work of the drifting station from Apr. 2, 1960 at 79°07′N. 179°29′E., till this team was relieved on Apr. 15, 1961, at 82°55′N. 210°52′E. (=149°08′W.). Monthly data are tabulated on length and speed of actual drift and point-to-point drift. The station was evacuated on Mar. 19, 1962 at 83°15′3 N. 227°30′E. (=132°30′W.) because the floe was breaking up, but continuation of the work would confirm the anticyclonic circulation of surface water and ice in this area of the Arctic Basin. (DLC.)

70250. **BLINOV, N. I.** Komsomol'skaĭa dreĭfuiushchaĭa prodolzhaet put'. *(In:* Burkhanov, V.F. Na ledianom ostrove, 1962, p. 191-97, illus.) Text in Russian. **Title tr.**: The Communist Youth drifting station continues its voyage.

Drift, life and work of drifting station North Pole-8 in 1960 is described by the head of its second team, a 14-man group mostly members of the Communist Youth organization. It relieved the first team on Apr. 3, at 79°07′N. 179°29′E., when the ice field, originally 12 km², was reduced to one-tenth its size. The station operations in summer, fall, and winter are outlined, noting damage caused by a seal breaking the lamp which warmed the water in the ice hole for hydrological observations. The ice field had drifted 1,000 km., crossed 80°N. seven times during nine months, and was still in progress when the report was written. (DLC.)

70251. **BLINOVA, E. I.** *Zostera* v Barentsovom more. (Priroda, Dec. 1962. god 51, no. 12, p. 105.) Text in Russian. **Title tr.**: *Zostera* in the Barents Sea.

Reports finding of quantities of eelgrass *(Zostera marina* f. *angustifolium)* in the deep Ivanovka Bay with low-salinity and high-temperature water; it is new for this sea. (DLC.)

70252. **BLISKOVSKIĬ, V. Z.**, *and* **A. IU. LEIN.** Mineralogicheskie korreliativy nekotorykh mezozoĭskikh tolshch basseĭna reki Tuostakh. (Akademiia nauk SSSR. Doklady, June 21, 1962. t. 144, no. 6, p. 1331-33, map, diagr.) 3 refs. Text in Russian. **Title tr.**: Mineralogic correlatives of some Mesozoic strata in the Tuostakh River basin.

Reports distribution of Karnian, Norian and Rhaetic-Lias strata in the Tuostakh basin, right tributary of the Yana. Accessory minerals of the 0.01 - 0.25 mm. fraction were studied and results are diagrammed. Distribution of zircon, apatite, tourmaline, garnet, ortite and other minerals is reported. Mineral associations of these deposits are compared. (DLC.)

70253. **BLISS, L. C.** Adaptations of arctic and alpine plants to environmental conditions. (Arctic, June 1962. v. 15, no. 2, p. 117-44, illus., tables.) 130 refs. Paper, with some modifications, presented to the AAAS Symposium, Life under extreme conditions, at New York, Dec. 1960.

Discusses tundra environments, i.e. beyond the climatic timberline, mostly in Alaska, Canada, Greenland, and USSR, and various mechanisms used by plants in adapting to them. Despite a very short growing season with low air and soil temperatures, adverse wind effects, and a low nitrogen-utilization level, tundra plants are well adapted to their environment, They are apparently efficient converters of energy, due partly to their utilization of much of the growing season for growth and development, their use of considerable carbohydrate reserves of the previous year, and the higher caloric values of the species. (DI.)

70254. **BLIZNIUK, N. N.** Radiolokatsionnye nabliudeniia poliarnykh siianiĭ v b. Tiksi za 1959 g. (Kiyev. Universitet. Sbornik rabot po mezhdunarodnomu geofizicheskomu godu, 1961. vyp. 1, p. 76-81, table, diagrs.) 2 refs. Text in Russian. **Title tr.**: Radar observations of auroras at Tiksi Bay during 1959.

Reports on observations carried out from Feb. 1, 1959 to Dec. 4, 1960. Diurnal variation of diffuse and discrete radio-echoes from auroras are presented. It is established that they are produced by auroras of ray structure only, by reflection of radio waves almost entirely from the northern quadrant of the sky (DLC.)

BLOCH, J., *see* Gros, C. M., & *others*. Strahlenschutzwirkung der Kälte bei Fischen. 1959. No. 71874

70255. **BLOCK, B. P.** The effect of fasting, cold stress and ACTH administration on the blood sugar and liver glycogen levels of normal and adrenalectomized rats and mice. (Journal of pharmacy and pharmacology, Aug. 1961, v. 13, no. 8, p. 479-84, illus.) 18 refs.

Fasting or exposure to cold lowered the blood sugar and liver glycogen levels. Adrenalectomy did not affect these decreases but pretreatment with ACTH retarded them. (DNLM.)

70256. **BLOKH, IA. L.**, *and others.* Individual'nye sluchai vliianiia magnitnykh bur' na kosmicheskie luchi i ikh interpretatsiia. (Akademiia nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, VII razdel programmy MGG: kosmicheskie luchi. Sbornik statei, 1960. no. 2, p. 5-57, graphs, incl. fold.)

17 refs. Text in Russian. Summary in English. *Other authors:* L. I. Dorman *and* N. S. Kaminer. **Title tr.:** Individual cases of magnetic storm effects on cosmic rays, and their interpretation.

Discusses and explains the interrelation between heliophysical and geomagnetic phenomena, and their effect on the global and local variation in cosmic-ray intensity. On the basis of these explanations, the intensities of the hard and the neutron components of cosmic rays recorded by the world network of stations during various (about 40) magnetic storms in 1954-1959 are analyzed and interpreted. The profiles of the cosmic-ray effects during these magnetic storms are classified, and the general scheme of the investigation of individual cases is given. Most of the cases discussed are based on the arctic, subarctic, and medium latitude data. (DLC.)

BLOKH, ÎA. L., *see also* Kaminer, N. S., *& others.* Magnitnaîa burîa . . . 1961. No. 72637

BLOOM, GENE L., *see* Alaskan Science Conference 1960. 1961 No. 69643

70257. BLOOM, H. J. G., *and* **K. B. DAWSON.** Enhanced effect of total-body X-irradiation in mice under mild hypothermia. (Nature, Oct. 21, 1961. v. 192, no. 4799, p. 232-33, table.) 20 refs.

Reports on experiments with mice made hypothermic and exposed to 550 R. Increased mortality as compared with none in controls, was noted under mild body cooling (35°-31°C.). At 29°C. a protective effect was noted. (DLC.)

BLOOR, B., *see* Neville, W. E., *& others.* Profound hypothermia . . . 1961. No. 74310

BLURTON-JONES, NICHOLAS G., *see* Burton, P. J. K., *& others.* Bird notes . . . 1960. No. 70471

BOAK, R. A., *see* Linscott, W.D., *& R.A. Boak.* Protective action of glycerol . . . 1960. No. 73518

70258. BOATMAN, JOSEPH B., *and others.* Mitochondrial swelling during cold exposure of the rat and hamster. (American journal of physiology, June 1962. v.202, no.6, p.1037-40, illus.) 12 refs. *Other authors:* M.M. Boucek *and* M.J. Rabinovitz.

Study of effects of exposure to 5°C. lasting 0-20 days. Swelling of rat liver mitochondria, increased with time of exposure, while hamster mitochondria showed no change. Added thyroxin increased swelling equally in both cases. Thyroid uptake of I^{131} at room and low temperatures in both animals indicated that mitochondrial response to swelling media parallels the functional levels of the thyroid during cold exposure. (DLC.)

70259. BOBLIKOVA, N. V. Sluchaĭ parazitirovaniîa vzroslykh pîatiustok u severnogo oleniîa. (Zoologicheskiĭ zhurnal, Jan. 1961. t.40, vyp.1, p.129-30, illus.) 3 refs. Text in Russian. Summary in English. **Title tr.:** A case of adult pentastomid parasitization in reindeer.

Reports an incidence of over 30% *Linguatula rhinaria* Pilger in 88 reindeer heads examined, with 1-11 of these worm-like parasites in a single sinus. The infection was found in the Yamal-Nenets and Taymyr national districts during the winter and in calves only. (DLC.)

70260. BOBORYKIN, N. I. Otsenka tochnosti rezul'tatov obrabotki zapisi mareografa Graafena. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p.57-72, diagrs., tables, graphs.) Ref. Text in Russian. **Title tr.:** Evaluation of the accuracy of results in processing the Graafen automatic tide gage records.

Describes the Graafen mareograph and its performance in recording variations in the level of arctic seas. The accuracy of the data recorded by this instrument is evaluated rather exhaustively. Tables and graphs are given with relative errors in the record data of the mareograph after their reduction. (CaMAI.)

70261. BOBOV, N. G. Kriogennoe stroenie pokrovnykh suglinkov i ikh znachenie v razvitii rel'efa na vostoke Bol'shezemel'skoĭ tundry. (*In:* Akademiîa nauk SSSR. Institut merzlotovedeniîa. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.18-26, illus.) 29 refs. Text in Russian. **Title tr.:** Cryogenic structure of covering loams and their importance in relief development in eastern Bol'shezemel'skaya Tundra.

Reports a field study in 1959-1960 in the Kara, Vorkuta, Seyda River regions: loams 3-5 m. thick overlie all rocks of the watersheds, valleys, slopes, terraces and other relief forms and consist mostly of silt fraction. The texture, lamination, fracturing and other features are examined. Geocryologic processes, especially seasonal thawing-and-freezing, and active weathering are considered the main factors in developing of the covering loams and relief forms. (DLC.)

BOBOVA, L. P., *see* Spasskiĭ, A.A., *& L. P.* Bobova. TSestody . . . 1962. No. 75861

70262. BOBRIEVICH, A. P., *and* **B. S. SOBOLEV.** Kimberlitovaîa formatsiîa severnoĭ chasti Sibirskoĭ platformy. (*In:* Akademiîa nauk SSSR. Otdelenie geologo-geograficheskikh nauk. Petrografiîa Vostochnoĭ Sibiri, t.1, 1962, p.341-416, illus., tables, diagrs.) 28 refs. Text in Russian. **Title tr.:** Kimberlite formation in the northern part of the Siberian platform.

Reviews the geologic features of the region in which kimberlites are distributed, and deals with their geology. Primary diamond deposits in the Malaya Botuobuya, Daldyn, Alakit, Muna, Olenek, are noted. More than a hundred kimberlite pipes have been discovered; their types are distinguished and petrography is analyzed. Kimberlite dikes are described, porphyry and breccia noted. Petrochemical characteristics, and mineralogy are summarized. Petrography of xenoliths in kimberlites, is outlined noting those of ultrabasic, basic and sedimentary rocks and other types. Similarities in the geology, petrography and mineralogy of the Siberian and South African kimberlites are evaluated. (DLC.)

70263. BOBRIEVICH, A. P., *and others.* Nekotorye dannye po geologii i petrografii Sibirskikh kimberlitov. (*In:* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Almazy ÎAkutii . . . 1961, p.24-36, illus., tables, diagr.) 7 refs. Text in Russian. *Other authors:* B.M. Kriîatov *and* V.N. Shchukin. **Title tr.:** Some

data on the geology and petrography of Siberian kimberlites.

Outlines investigations in the Daldyn region. Two groups of kimberlite bodies are distinguished; size, form, fracturing and other features are characterized. Four kimberlite types are recognized, their petrographic characteristics, chemical composition, and varieties described. Rock-forming minerals are noted. Siberian kimberlite pipes are compared with those of South Africa. (DLC.)

70264. BOBRIEVICH, A. P., *and* **G. I. SMIRNOV.** Rogovaia obmanka iz granatovogo amfibolita. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskii filial. Nauchnye soobshcheniia, 1959. vyp.2, p.40-41, table.) 2 refs. Text in Russian. **Title tr.:** Hornblende from garnet amphibolite.

Reports the chemical composition, mineralogic and crystallographic properties of hornblende from a xenolith of garnet amphibolite, found in a kimberlite pipe. (DLC.)

BOBROV, A. K., *see* Babaian, G.D., & A.K. Bobrov. Struktura Viliuiskoi sineklizy i Predverkhoianskogo progiba . . . 1961. No. 69945

70265. BOBROV, N. I. K voprosu o dezadaptatsii k kholodu matrosov na Severe. (Voenno-meditsinskii zhurnal, Feb. 1961. no.2, p.48-51, tables.) Text in Russian. **Title tr.:** The problem of de-adaptation of sailors to cold in the North.

Reports on the effects of hardening of subjects with cold (5°C.) water and the effects of a longer sojourn in warmer environment. In the latter case, sailors returning from leave for example, showed lower efficiency, and required a second period of hardening, which was shorter, however, than the first one. (DNLM.)

70266. BOBROV, N. I. O sdvigakh v teploproduktsii pri povtornom okhlazhdenii organizma. (Gigiena i sanitariia, May 1961, god 26, no.5, p.23-28, illus., tables.) 8 refs. Text in Russian. Summary in English. **Title tr.:** Shifts in heat production following repeated cooling of the organism.

Study of subjects taking regular cold showers over the whole body or the legs only. Results indicate intensified oxidation not only during cooling but also in the period preceding it. The successive stages of this hardening process are described. (DLC.)

70267. BOBROV, N. I. Vliianie zakalivaniia na funktsiiu kozhnogo analizatora. (Gigiena i sanitariia, Apr. 1962, god 27, no.4, p.18-24, illus., tables.) 12 refs. Text in Russian. Summary in English. **Title tr.:** Effect of cold acclimatization upon the function of the skin analyzer.

Initially, local cooling lowered the excitability of skin receptors and raised the threshold of tactile sensitivity in the cooled area of men. Repeated cooling restored these functions in some areas. Cooling also raised the threshold value of sensitivity to pain. (DLC.)

70268. BOBROV, S. N. Preobrazovanie Kaspiia. (Geografiia v shkole, Mar.-Apr. 1961. god 24, no.2, p.5-15, illus., map.) Text in Russian. **Title tr.:** Reconstruction of the Caspian Sea.

Notes the water level of the Caspian Sea now 2.5 m. lower than in 1930 because of recent unfavorable climatic conditions and great engineering projects on the Volga. Ways to halt this disastrous process are discussed, including a plan for damming the upper reaches of the Pechora and Severnaya Dvina (Vychegda) and redirecting the flow of a part of the water to the Kama River, tributary to the Volga. This would not only increase the discharge, but would link the northern and southern seas of the Soviet Union. (DLC.)

70269. BOCHKO, N. Vashe slovo, truzhenniki lesa. (Master lesa, Feb. 1961, no.2, p.3-4.) Text in Russian. **Title tr.:** Your turn to speak, forest workers.

The 1960 timber production in RSFSR was 2.5 million m³ more than in 1959. Output rose in Arkhangel'sk Province from 406 m³ to 475 m³ /man; and the most highly mechanized Verkhovskiy lumbering concern expects to reach 1600 m³/man in 1961; the Konda lumbering concern in Tyumen' Province is aiming at 1000 m³ in 1961. Small, 2-3 man teams (brigada) are considered the most efficient, and more of them are recommended. (DLC.)

70270. BOCHKOVSKIĬ, F. A., *and* **G. M. LUSHCHIKHIN.** Perspektivy nakhozhdeniia koksuiushchikhsia uglei v iuzhnoĭ polovine Tungusskogo basseĭna. (*In:* Krasnoiarskaia . . . ėkspeditsiia. Poleznye iskopaemye . . . 1962, p.77-86, table, maps.) 5 refs. Text in Russian. **Title tr.:** Prospects for obtaining coking coal in the southern half of the Tungusskiy basin.

Reports search for metallurgical coke in order to develop the iron industry. Special attention is given to the coals of the Nizhnyaya Tunguska basin. Degree of metamorphism, petrographic composition, coking characteristics, heat value and other properties are reported. These coals are found suitable for obtaining metallurgical coke. (DLC.)

BOCK, TH., *see* Scheumann, K.H., & *others*. Versuch einer genetischen Deutung . . . 1961. No. 75410

70271. BODVARSSON, G., *and* **J. JONSSON.** Fluctuations in marine populations in Icelandic waters. (Nature, Nov. 25, 1961. v.192, no. 4804, p.768-69, illus.) 4 refs.

Statistics on cod catches per unit effort conducted since 1900 show regular variation with a period of about 10 years, the same as in the rock ptarmigan. Strong year-classes appear at 11-year intervals. Similar rhythmicity in other fishes is noted and a nexus between solar rhythms, weather, and growth suggested. (DLC.)

70272. BÖCHER, TYGE WITTROCK, 1909– Botanisk ekskursion til Evighedsfjord. (Grønland, Apr. 1961, nr. 4, p.121-28, illus.) Text in Danish. **Title tr.:** Botanical excursion to Evighedsfjord.

Describes his 1958 expedition to this West Greenland fjord area, about 66°N. between Sukkertoppen and Søndre Strømfjord. The fjord stretches about 75 km. inland and displays a striking contrast between the vegetation at the coast with large amounts of snow and low summer temperatures and the growth inland where there is less snow

and high summer temperatures. Evighedsfjord constitutes the northern limit for alder in Greenland. (CaMAI.)

70273. BÖCHER, TYGE WITTROCK, 1909– Grønlands sne-anemone, *Anemone richardsoni* Hook. (Grønland, Apr. 1962, nr. 4, p.130-36, illus., map.) Text in Danish. **Title tr.:** Greenland's snow anemone, *Anemone richardsoni* Hook.

Describes this species which occurs in an area roughly between Holsteinsborg and Sukkertoppen, West Greenland. It may be a survival of the latest glaciation in Greenland. (CaMAI.)

70274. BOENKOVA, N. M. Sutochnyĭ khod ionizatsii sloia *F2*. (Geomagnetizm i aeronomiia, 1961. t.1, no.2, p.223-27, table, graphs.) 3 refs. Text in Russian. **Title tr.:** Diurnal variation in ionization of the *F2* layer.

Confirms the correlation between the change of the rate of an increase of critical frequencies (Δf_0F2) in the F2 layer, and the sine of the zenith distance, Z, of the sun, suggested by A.I. Likhachev and others. A direct relationship between (Δf_0F2) and sine Z is observed for the high and middle latitudes (Thule, Ellsworth, Murmansk, Mirnyy, Moskva, Hobart); a relationship of (Δf_0F2) on cos Z exists for low latitudes. (DLC.)

70275. BØRTH, LIV. Oversikt over norske skogplanteskoler 1961. (Norway. Skogdirektoratet. Årsskrift for norske skogplanteskoler, 1961 *pub.* 1962, p.11-14, tables.) Text in Norwegian. **Title tr.:** Survey of Norwegian forest nurseries 1961.

Contains number of nurseries and contract growers, productive nursery acreage. plant supply, plants sold, etc. The forest nurseries are listed by province, with location, owner, manager, altitude, acreage, and 1961 production. Seven are in Nordland, two in Troms, one in Finnmark. (DA.)

BOESEN, M., *see* Oschinsky, L., & R. Smithurst. Odontology . . . E. Can. Eskimos. 1962. No. 74549

70276. BØYE, NIELS. "Søfart" ser på M/S "Agdleq" af Egedesminde. (Søfart, Mar. 1961. årg. 12, no.2, p.15-17, illus., diagr.) Text in Danish. **Title tr.:** *Søfart* looks at the M/S *Agdleq* of Egedesminde.

Describes one of three 157-t. ice-strengthened ships for the West Greenland coastal trade. The cargo vessel can carry also a number of deck passengers; maximum speed is nine kts. Crew is to be partly Greenlandic. (DLC.)

70277. BØYE, NIELS. "Søfart" ser på M/S "Nanok S" og M/S "Gitte Danielsen." (Søfart, May 1962. årg. 13, no.3, p.17-19, illus.) Text in Danish. **Title tr.:** *Søfart* looks at the M/S *Nanok S* and M/S *Gitte Danielsen.*

The *Nanok S* is a 2,050/3,110 t.d.w. ice-strengthened cargo vessel for the Greenland trade. The general arrangement is described. (DLC.)

70278. BØYE, NIELS. "Søfart" ser på M/S "Nella Dan." (Søfart, Jan. 1962. årg. 13, no.1, p.18-19, illus.) Text in Danish. **Title tr.:** *Søfart* looks at the M/S *Nella Dan.*

Describes this 2,200-t.d.w., 12-passenger (or 1,970-t., 42-passenger), ice-strengthened vessel of the J. Lauritzen Lines. Its 2,240 hp. B&W diesel engines give a maximum speed of 13 kts. on full cargo. Among the many special features are protective deep-tanks along the hull. (DLC.)

70279. BOGACHEV, A. I. Shchelochnye porody Elet'ozera i bazal'tovaia magma. (*In:* Akademiia nauk SSSR. Karel'skiĭ filial. Problemy geologii . . . 1961, p.10-19, illus., tables, diagrs.) 12 refs. Text in Russian. **Title tr.:** Alkaline rocks of the Yeletozero Lake region and basaltic magma.

Gabbroid rocks of the Yeletozerskiy massif in northern Karelia are divided according to morphologic and petrographic signs and magmatic differentiation. Each of the four complexes is analyzed, and the chemical composition of the rocks tabulated and evaluated. Processes of crystallization differentiation are analyzed. The Yeletozerskiy massif data are considered to support W. Kennedy's opinion on the connection between alkaline rocks and magma of olivine basalts. (DLC.)

70280. BOGACHEVA, N. A. Ionosfera nad Salekhardom v period MGG. (Akademiia nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, V razdel programmy MGG: ionosfera. Sbornik statei, 1961, no.6, p.75-81, graphs.) Ref. Text in Russian. Summary in English. **Title tr.:** The ionosphere over Salekhard during the IGY.

Discusses the behavior of regular layers during a quiet condition of the ionosphere, irregular phenomena in it, the sporadic layer *E*, diffusivity and ionospheric disturbances over Salekhard. Median values of the observations are compared with those at Murmansk and Sverdlovsk. Diurnal and seasonal variations of critical frequencies for regular ionospheric layers are presented graphically. (DLC.)

70281. BOGATSKIĬ, V. V., *and others.* Osnovnye problemy tektoniki Krasnoiarskogo kraia; v sviazi s Krasnoiarskim tektonicheskim soveshchaniem. (Moskva. Universitet. Vestnik, ser. 5, geologiia, Nov.–Dec. 1962, no.6, p.3–18.) 40 refs. Text in Russian. *Other authors:* D.I. Musatov *and* V.E. Khain. **Title tr.:** Main problems of the tectonics of Krasnoyarskiy Kray, in connection with the Krasnoyarsk tectonic conference.

Reports the conference held in April 1961 at Krasnoyarsk: tectonic regionalization of the Province was discussed and these discussions are summarized. The Siberian platform and its frames, the Taymyr Peninsula, and other areas, and structures of the Province are interpreted (DLC.)

70282. BOGATYREV, K. P., *and* **N. A. NOGINA.** Pochvy gornogo Urala. (Akademiia nauk SSSR. Pochvennyĭ institut im. V.V. Dokuchaeva. O pochvakh Urala, Zapadnoĭ i Tsentral'noĭ Sibiri, 1962, p.5–48, tables, col. fold. map.) 13 refs. Text in Russian. **Title tr.:** Soils of mountainous Ural.

Describes and maps the soils of this extensive mountain region, including the Northern, Pripolar and Polar Urals. Their soils are distinguished as soddy, mountain-forest, and mountain-meadow soils, mountain-forest tundra, and tundra, and sections are described. Physical-chemical characteristics are given for each type of soil. (DLC.)

70283. BOGDAN, KAROL. Nuclear plants for northern power? (North, Mar.-Apr. 1961. v.8, no.2, p.38

–41, illus.)

Discusses prospects for utilization of nuclear fuel in northern Canada. Costs of transportation and stockpiling would be less than for conventional fuels because of supply requirements; but nuclear plant construction and installation is more expensive. Nuclear power was found not competitive in a Canadian study at Frobisher Bay. Small plants for use in Alaska and Greenland however, are under development in a U.S. Army Nuclear Power program; examples, including some mobile plants, are given. Appended (p.41) is comment by E.W. Humphrys of the Northern Canada Power Commission indicating Bogdan as too optimistic about nuclear development and too pessimistic about economical power in northern Canada. (DLC.)

BOGDANOV, A. A., *see* Shatskiĭ, N.S., & A.A. Bogdanov. La carte tectonique. . .1957. No. 75543.

70284. BOGDANOV, A. I. Rol' i znachenie geofiziki pri poiskakh nefti i gaza v Sibiri. (Geologiia nefti i gaza, Sept. 1962. god 6, no.9, p.17–21.) Text in Russian. **Title tr.:** Role and improtance of geophysics in the search for oil and gas in Siberia.

Summarizes aerial-magnetic, gravimetric and seismic and other geophysical investigations carried out during 1958–1961. Such studies were made in Tyumen Province, the lower Yenisey region, Lena-Vilyuy depression and other areas for data useful in oil and gas prospecting. The extent and value of these explorations are stated and future tasks summarized. (DLC.)

70285. BOGDANOV, E. I. Novaia mashina dlia obogashcheniia krupnykh klassov rossypnogo materiala i ulavlivaniia samorodkov. (Gornyĭ zhurnal, Sept. 1961. no.9, p.68–71, illus.) Text in Russian. **Title tr.:** New machine for concentrating course grade placer ores and catching the nuggets.

Describes the OMT–III–600 mechanism developed by the author to use for placer gold in Magadan Province and tin in Yakutia. It processes 700–800 m^3. sand daily; in tests at the Bol'shevik mining installation, it separated 20.5% gold, 86.7% of which were nuggets. (DLC.)

70286. BOGDANOV, E. I. Ratsional'nyĭ tip promyvochnogo pribora pri razrabotke rossypeĭ bul'dozerami i skreperami. (Gornyĭ zhurnal, Nov. 1962, no. 11, p.70–74, illus.) Text in Russian. **Title tr.:** An effecient type of washer for working placers where bulldozers and scrapers are used.

Describes in detail the transportable installation MPD–5 for washing sand at the gold and tin placers of Magadan Province and Yakutia, also the improved type PPM–1, worked out by the author in the Magadan Central Construction Bureau and built by the Magadan Mechanical Plant. Activities of the Magadan All-Union Research Institute of Gold and Rare Metals (VNII–1) in testing machinery and installations for mining and placer washing are noted. (DLC.)

70287. BOGDANOV, GERMAN ANATOL'EVICH, 1933– Izmeneniia faktora zhirnosti belomorskoĭ sel'di v sviazi s sostoianiem polovykh produktov. (Akademiia nauk SSSR. Doklady 1962. t.144, no.3, p.652–55, illus., tables.) 11 refs. Text in Russian. **Title tr.:** Changes in the fatness factor of White Sea herring in connection with the state of its sexual products.

Reports on investigation ot seasonal changes in the small Kandalaksha herring. Maximal fatness was found in the fall, at the end of the feeding period; minimal in spring after spawning. (DLC.)

70288. BOGDANOV, K. T. Novye karty kotidal'nykh linii polusutochnykh prilivnykh voln, M_2 i S_2, dlia Tikhogo okeana. (Adademiia nauk SSSR. Doklady 1961. t.138, no.2, p.441–44, table, maps.) 7 refs. Text in Russian. **Title tr.:** New charts of cotidal lines of semidiurnal tidal waves, M_2 and S_2, for the Pacific Ocean.

Reviews earlier wave and methods, and presents an outline of conditions in the Pacific including the Gulf of Alaska. The charts were prepared by the isohypsic method and based on 563 observation points located on the coasts and on numerous islands. (DLC.)

70289. BOGDANOV, K. T. Novye karty kotidal'nykh linii sutochnykh prilivnykh voln, K_1 i O_1, dlia Tikhogo okeana. (Akademiia nauk SSSR. Doklady 1961. t.139, no.3, p.713–16, table, maps.) 4 refs. Text in Russian. **Title tr.:** New maps of cotidal lines of diurnal tidal waves, K_1 and O_1, for the Pacific Ocean.

Account based on records from 563 coastal or island points applying the isohypsic methods. Of the arctic-subarctic waters, only the Gulf of Alaska is represented. (DLC.)

70290. BOGDANOV, K. T. O vodoobmene mezhdu Beringovym morem i Tikhim okeanom cherez proliv Blizhnii. (Akademiia nauk SSSR. Institut okeanologii, Trudy 1961. t.38, p.61–63, map.) 2 refs. Text in Russian. **Title tr.:** Water exchange between the Bering Sea and the Pacific through the Blizhniy Strait.

Discusses the physical properties of the waters between Mednyy Island in the Commanders and Attu in the Aleutians. Two currents are said to be present, one on the eastern side from the Pacific to the Bering Sea, the other western flowing in the opposite direction. (DLC.)

70291. BOGDANOV, K. T. TSirkuliatsiia vod v zalive Aliaska i ee sezonnaia izmenchivost'. (Okeanologiia, 1961. t.1, vyp.5, p.815-24, table,charts, graphs.) 4 refs. Text in Russian. **Title tr.:** Water circulation in the Gulf of Alaska and its seasonal variation.

Reports on currents in the Gulf based on analyses of data for July, 1957 - Sept. 1959, from American and Canadian expeditions and the weather ship *Rara:* 645 stations in all. Dynamic topography, variations in water temperature and salinity are dealt with. Current velocity, depth, and direction are characterized. The seasonal variation in water circulation is not great. Some increase is noted in current velocity during the winter season. (DLC.)

70292. BOGDANOV, M. Pechora obnovliaetsia. (Sovetskiĭ shakhter, Nov. 1962. god 11, no.11, p.24–25, illus.) Text in Russian. **Title tr.:** Rejuvenation of the Pechora.

Outlines achievements in the Vorkuta coal

mines since the beginning of the seven-year plan: a 20.6% increase per worker in production, replacement of obsolescent cutting machinery by combines, pit reconstruction, better living conditions for the miners, etc. Features of mining in permafrost ground are noted; the best mining teams are cited. (DLC.)

70293. BOGDANOV, N. A. Ocherk stratigrafii i tektoniki khrebta Tas-Khaĭakhtakh. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geologicheskaĭa, Sept. 1961. no.9 p.61–76, map, sections.) 14 refs. Text in Russian. **Title tr.:** Sketch of the stratigraphy and tectonics of the Tas-Khayakhtakh Range.

Outlines the Paleozoic stratigraphy of these mountains (68°N. 139°E.) between the Yana and Indigirka river basins, a range some 300 km. in length and 50–80 km. wide, based on own field study and on fossil fauna, graptolites, Tabulata, gastropods, nautiloids, brachiopods, etc. identified by others. Ordovician, Silurian, Devonian and Carboniferous deposits are described and columnar sections correlated. The Tas-Khayakhtakh uplift and Chibagalakh anticlinorium are the main Paleozoic tectonic structures; others also are characterized; a structural-geologic map is presented. (DLC.)

70294. BOGDANOVICH, V. A. Novye dannye o stroenii Sovetskogo zolotorudnogo mestorozhdeniĭa. (Geologiĭa i geofizika, 1962, no.7, p.87–96, table, map, diagrs.) 2 refs. Text in Russian. Summary in English. **Title tr.:** New data on the structure of Soviet gold ore deposits.

Notes the Yenisey gold-bearing province as extending from the Podkamennaya Tunguska south to the Angara, with the gold ore deposits in the northern part of this province, the Yenisey Ridge. From a 1959 structural-geologic survey, new data are presented concerning the stratigraphy, tectonics and mineralization conditions of these deposits. The Precambrian phyllite-schist complex is divided into three series and nine horizons. Study of their structure discloses some patterns of ore-controlling joints. Metallization probably tends to a considerable depth. (DLC.)

BOGOĬAVLENSKAĬA, GENRIETTA EVGEN'EVNA, *see* Gorshkov, G.S., & G.E. Bogoĭavlenskaĭa, Sopka Bezymiannaĭa. . .1961. No. 71789

BOGOĬAVLENSKIĬ, IŪ. K., *see* Spasskiĭ, A.A., & *others*. Rabota. . .SGE v 1960g. 1962. No. 75860.

70295. BOGOLEPOV, K. V. Kazachinskiĭ graben i stratigrafiia vypolniaiushchikh ego paleozoĭskikh otlozheniĭ. (Geologiĭa i geofizika, 1961, no.8, p.3-17, maps, diagrs.) 9 refs. Text in Russian. Summary in English. **Title tr.:** The Kazachinskoye graben and the stratigraphy of the Paleozoic deposits which fill it.

Outlines the structural position and morphology of the Kazachinskoye graben in the western part of the Yenisey Ridge south of the Angara River mouth. Stratigraphic sections of the Upper Devonian and Carboniferous deposits are described and correlated. The graben is considered an important structure as the juncture of the Yenisey Ridge with west Siberian plateau. (DLC.)

70296. BOGOLEPOV, K. V., *and* **E. I. PEL'TEK.** O nekotorykh oshibkakh v kharakteristike boksitonosnykh otlozheniĭ prieniseĭskoĭ chasti Sibiri. (Geologiĭa i geofizika, 1961, no.5, p.94-98.) 6 refs. Text in Russian. **Title tr.:** On some errors in the characterization of bauxite-bearing deposits in the Yenisey region of Siberia.

Takes exception to some conclusions drawn by O.G. Shuliatin and V.L. Ivanov (No. 61631), e.g. on the age of bauxite-bearing deposits in the Bakhta and Malaya Bakhtinka basins, on the interpretation of their lithology and facies, etc. Different explanations are offered together with suggestions for further studies. (DLC.)

70297. BOGOLEPOV, K. V. O tektonicheskoĭ prirode fundamenta severnoĭ chasti Zapadno-Sibirskoĭ nizmennosti. (Geologiĭa i geofizika, 1962, no.12, p.22-39, map.) 35 refs. Text in Russian. Summary in English. **Title tr.:** On the tectonic nature of the basement in the northern part of the West Siberian lowland.

Analyzes the paleogeographic, structural and geophysical data on the area. A large continental massif of Precambrian (Baykalian and partly Archean-Proterozoic) stablization is thought to have existed there during Paleozoic time and to have been connected with the Siberian platform. Its western edge extended to Berezovo-Salekhard, and the eastern to the Turukhansk uplift. A new tectonic interpretation of West Siberian lowland is given. (DLC.)

70298. BOGOLIŪBOV, B. P., *and others*. Opredelenie moshchnosti potolochin pri otkrytoĭ razrabotke zon, narushennykh podzemnymi vyrabotkami. (Gornyĭ zhurnal, Nov. 1962, no.11, p.21-23, illus., diagr.) 7 refs. Text in Russian. *Other authors:* B.P. IŪmatov, A.S. Khodinov, et al. **Title tr.:** Determination of the strength of roofs for open mining in zones disturbed by underground workings.

Outlines the methods of estimating roof strength in shafts, as used for induced cave-in at the former Taymyrskiy mine at Noril'sk, now worked as Severnyy open pit. Various combinations of shaft size, pillar distribution and roof thickness are discussed: formulas for determination of roof strength are given and the approximate blasting set-up for induced cave-in is recommended. (DLC.)

70299. BOGOLIŪBOV, B. P., *and others*. Opyt raboty kar'era "Ugol'nyĭ ruchеĭ" v zone obrusheniĭa Zapoliarnogo rudnika. (Gornyĭ zhurnal, June 1962, no.6, p.15-18, illus., plan.) Text in Russian. *Other authors:* B.P. IŪmatov *and* A.V. Isaev. **Title tr.:** Work in the Ugol'nyy Ruchey open pit in the area of the Zapolyarnyy mine cave-in.

Outlines the methods of combining open and underground mining in the northwest part of the Noril'sk-I deposits. The work starts underground, and when the shaft is worked out, its supporting pillars are blasted, the roof caves in gradually to the surface and the debris are worked out in open mining. The process of collapsing the roof, which takes 8-10 months, is described. Safety measures are discussed. Advantages of this double mining method are stressed. (DLC.)

70300. BOGOROV, VENIAMIN GRIGOR'EVICH, 1904– . Zhizn' i deiatel'nost' Frit'ofa Nansena, 10 oktiabria 1861 goda-13 maia 1930 goda. (Aka-

demiĭa nauk SSSR. Izvestiĭa, ser. geograficheskaĭa, Nov.-Dec. 1961, no.6, p.101-110.) Text in Russian. **Title tr.:** Life and activity of Fridtjof Nansen, October 10, 1861-May 13, 1930.

Describes his work as scientist, statesman and humanitarian. His expeditions and studies in Greenland, Spitsbergen and the arctic seas are summarized, and contributions to zoology and physical oceanography are noted. His main publications including those concerning Russia are reviewed. His role in organizing relief for famine-stricken Russia in 1921 is discussed. (DLC.)

70301. BOHAN, WALTER A. A numeric-pictorial display for meteorological observational data. (Journal of applied meteorology, Sept. 1962, v.1, no.3, p.333-42, graphs.) 13 refs.

Describes a new technique of presentation of these data based on automatic data-processing methods, combining pictorial characteristics of a graph with convenient reading of a decimal digital tabulation of data. Examples are given of radiosonde observations of temperature vs. height as a space cross section from about 80°N. to the Equator along the 80°W. meridian and as time series displays of observations of temperature vs. pressure at a single station, Point Barrow, Alaska. Four arctic stations appear on the cross section: Arctic Bay on Baffin, and Coral Harbour on Southampton Island, Port Harrison in Northern Quebec, and Moosonee in Northern Ontario. Coding scheme used is shown graphically. (DWB.)

70302. BOHL, H. Rotbarsch-Selektionsexperimente mit Grundschleppnetzen unter Ostgrönland; einige Ergebnisse der 53. Reise des FFS "Anton Dohrn." (Informationen für die Fischwirtschaft, 1962. Jahrg. 9, Nr. 1/2, p.25-27.) 7 refs. Text in German. **Title tr.:** Redfish selection experiments with bottom trawls off East Greenland; some results of the 53rd cruise of the R/V *Anton Dohrn*.

Brief summary of experiments with perlon and manila nets of different mesh, off Angmagssalik in July-Aug. 1961. (SPRI.)

70303. BOĬARSKIĬ, O. G., *and* K. L. MITT. K voprosu o nalichii form rel'efa lednikovoĭ akkumuliatsii v tundre Anabaro-Olenekskogo mezhdurech'ia. (Merzlotnye issledovaniia. Sbornik statei, 1961. vyp.1, p.145-53, illus., maps.) Ref. Text in Russian. **Title tr.:** On the presence of glacial accumulation relief forms in the tundra of the Anabar-Olenek interfluve.

Reports a field study in northwest Yakutia, approx. 114°-123°E. and north of 71°N., a region of hilly moraines, kames relief, eskers, and other glacial accumulation forms, according to the map of Quaternary deposits at 1:2,500,000 scale, by the Geological Institute of the Arctic. Authors' study of the geologic structure and morphology indicates that the relief originated not in glacial accumulation but erosion-thermokarst processes. The existence of glaciation in the Anabar-Olenek interfluve north of 71°N. remains an open question. (DLC.)

70304. BOĬARSKIĬ, O. G., *and* K. L. MITT. Novye dannye ob iskopaemykh l'dakh v tundre Anabaro-Olenekskogo mezhdurech'ia. (Merzlotnye issledovaniia. Sbornik statei, 1961. vyp.1, p.154-61, illus.) 5 refs. Text in Russian. **Title tr.:** New data on fossil ice in the tundra of the Anabar-Olenek interfluve.

Reports, from 1959 field observations, the soil as fine-grained sands, loam, and sandy loam, with interlayers of peaty material and ground ice. Polygonal ground, result of ice-vein melting, and pinnacle rocks are common on the slopes. The ground ice is in interlayers, veins, lenses, and most commonly, vertical veins. In a 16.5 m. deep section, ice veins occupy about 40% of the exposed area, ranging up to 1.5-2.0 m. thick and 20 m. long. Form, composition, and structure indicate that they are syngenetic perennial vein ice, i.e., ice formed simultaneously with the enclosing deposits. (DLC.)

70305. BOĬCHENKO, I. G. Rel'ef dna Karaginskogo zaliva. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.50, Morskie geologicheskie issledovaniia, p.3-20, maps, diagrs.) 3 refs. Text in Russian. **Title tr.:** Bottom relief of the Karaginskiy Bay.

Reports on oceanographic and geologic studies of this 202-mile bay of the Bering Sea, by the *Akademik Shuleĭkin* in Aug.-Sept. 1956 and the *Vitiaz'* in 1950-1953. From these studies, bathymetry, bottom sediments, and bottom relief were mapped as illustrated. Karaginskiy Bay 50-65 mi. wide and 28,666 km², in area, is situated on a shelf, which barely exceeds the 100 m. isobath, and only east and southeast of Karaginskiy Island, does it reach 500 m. or more depth. Bottom features are treated in detail. Sediment samples taken at 55 stations and at 4-175 m. depth, are analyzed for composition, types, and distribution; sands are predominant, occupying a significant part of the bay. Its formation and tectonic conditions also are characterized. (DLC.)

70306. BOĬKO, I. V. Termovlazhnostnyĭ rezhim vozdukha v shakhtakh Vorkutskogo mestorozhdeniia (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.51-58, table, diagrs., graphs.) 4 refs. Text in Russian. **Title tr.:** The thermal-moisture condition of air in the Vorkuta deposit shafts.

Reports the atmospheric conditions in the Vorkuta coal-mines substandard in regard to health requirements for mining operations. The peculiarities of the moisture-temperature conditions due to climatic and permafrost conditions are pointed out: the temperature at different parts of the same shaft may change from 6.4° to 17.8°C., and humidity from 99 to 72%, while the exterior temperature is 19.4°C., and the exterior humidity 57% (Aug. 27, 1959). A design for an air-heating installation in the shafts was proposed in 1960: it would condition the air by passing it from outside into the shaft through heating radiators and distribute it through the shaft without using a blast, but by the action of the shaft air depression of 12-13 water gage drop in pressure on both sides of the radiators. (DLC.)

70307. BOĬTSOV, M. N. O formirovanii rel'efa v

usloviiākh podzemnogo oledeneniiā. (*In:* Leningrad. Vsesoiūznyi n.-i. geologicheskiĭ institut. Trudy 1961, t.64, Problemy chetvertichnogo . . . p.27-36, diagrs.) Text in Russian. **Title tr.:** On the formation of relief under conditions of underground glaciation.

Considers, with some other scientists, that areas of permafrost and ground ice development should be called areas of underground glaciation. The similarity of relief-forming processes in the areas of surface and underground glaciation is stressed and certain such processes discussed for areas of underground glaciation, such as the freezing of thawed ground, temperature fluctuation in frozen ground, and degradation of permafrost; processes of erosion, accumulation and abrasion also are treated. Some types of frost relief are described and illustrated from the Ob, Khanty-Mansiysk and other regions of West Siberia. (DLC.)

70308. BOĬTSOV, M. N. O nekotorykh formakh merzlotnogo rel'ʹefa Zapadno-Sibirskoĭ nizmennosti. (Leningrad. Vsesoiūznyi nauchno-issledovatel'skii geologicheskiĭ institut. Informat͡sionnyĭ sbornik 52, Materialy po chetvertichnoĭ geologii i geomorfologii, 1962, p.93-102, illus.) 10 refs. Text in Russian. **Title tr.:** On some forms of cryogenic relief in the West Siberian plain.

Describes some relief forms on the left bank of the Ob in the Khanty-Mansiysk region: round, flat-top elevations 2-3 m. above the surface, mostly occupied by "curly forest;" circular and crescent-like ranges of hills, also other positive and some negative relief forms. Their possible origin is discussed in relation to permafrost and thermokarst phenomena. (DLC.)

70309. BOĬTSOVA, ANTONINA FEDOROVNA. Usvoenie kategorii grammaticheskogo roda russkogo iāzyka uchashchimisiā ėvenkiĭskikh shkol. (Akademiiā pedagogicheskikh nauk RSFSR. Izvestiiā 1960. vyp.111, Voprosy metodiki prepodavaniiā rodnogo i russkogo iāzykov v nat͡sional'noĭ shkole, p.63-82, tables.) 3 refs. Text in Russian. **Title tr.:** Familiarizing pupils in Evenki schools with the Russian grammatical concept of gender.

Discusses teaching methods for the preparatory (kindergarten) through fourth grades in Evenki-Tungus schools. Lack of gender differentiation in the children's native language fosters difficulties which are noted. (DLC.)

70310. BOJER, HALVARD. Luftfartens stilling i norsk samferdsel. (Teknisk ukeblad, Dec. 8, 1960. årg. 107, nr. 45, p.1005-1011, table, graphs.) Text in Norwegian. Summary in English. **Title tr.:** The place of aviation in Norwegian communications.

Advocates expansion of domestic air traffic as in Finland, Iceland, and Alaska, rather than sea, rail and road transportation. The main flight routes should be completed first, then local routes established in sparsely populated regions, i.e. North Norway. Airports should be located within easy reach of urban centers. (DLC.)

BOKOVA, E. N., *see* Karpevich, A.F., & E.N. Bokova. Peresadki ryb . . . 1961. No. 72669

BOLAND, C., *see* Sayen, A., & C. Boland. Changes in blood flow . . . 1961. No. 75398

70311. BOLD, W. A. van den. The genus *Eucytheridae* Bronstein (Crustacea: Ostracoda) with a redescription of the type species. (Annals & magazine of natural history, May 1961. 13th ser. v.4, no.41, p.283-303, plates, diagrs.) 105 refs.

Describes systematically *Cythere bradii,* partly from specimens of *Eucytheridae bradii, E. punctillata,* and *E. macrolaminata* collected at Russkaya Gavan', Novaya Zemlya, by H.V. Howe in 1937, and partly from collections from Scandinavia. (DGS.)

70312. BOLOTINSKAIĀ, M. SH. Kharakteristika izmenchivosti srednei mesiāchnoĭ temperatury vozdukha v Sovetskoĭ Arktike. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.240, Voprosy dolgosrochnykh prognozov pogody . . . p.209-218, fold. map, tables.) 6 refs. Text in Russian. **Title tr.:** Variation characteristics of the mean monthly air temperature in the Soviet Arctic.

Studies the probability of deviation of the mean monthly air temperature from the mean of many years. Meteorological tables of 20 stations along the Northern Sea Route were used to determine the feasibility of basing the calculation of temperature anomalies of the mean of 55 years, or on the mean temperatures reduced to a shorter period. It is concluded that many-years temperature mean, reduced to a 55-year period, are the same for all regions of the Northern Hemisphere, and should therefore be used in calculation of temperature anomalies at the stations on the Northern Sea Route. (CaMAI.)

70313. BOLOTINSKAIĀ, M. SH. O diagnoze form atmosfernoĭ t͡sirkuliāt͡sii. (Leningrad. Arkticheskii i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.240, Voprosy dolgosrochnykh prognozov pogody. . .p.88–94, maps, tables.) 2 refs. Text in Russian. **Title tr.:** On the diagnosis of atmospheric circulation forms.

Presents the methods of evaluation of numerical indexes of basic forms, W,C, and E, of atmospheric circulation determined from the data on aerosynoptic analysis and the comparison of actual features of synoptic processes with their typical characteristics. The work of the Arctic and Antarctic Institute of the USSR, aimed at an improvement and better objectivity of the regime analysis and form diagnosis of atmospheric circulation, is discussed. Numerical data for the macrocirculation method of long-range weather forecast in the Arctic are obtained, and presented in tabular form. A study of distribution of the temperature field is suggested as additional criterion in the diagnosis of circulation forms. (CaMAI.)

BOLOTINSKAIĀ, M. SH., *see also* Leningrad. Arkticheskiĭ . . . institut. Rukovodstvo. . .1961. No. 73408

BOLSENGA, S. J., *see* Hicks, J. R., & S. J. Bolsenga . . . fences control snow drifting. 1962. No. 72143

BOL'SHAKOV, I. F., *see* Rīazanov, A.A., & I.F. Bol'shakov. Temperaturnyĭ rezhim promyvki skvazhin. . .1961. No. 75124

70314. BOL'SHAKOV, S. M. Ob iskusstvennykh

sooruzheniĭakh na vodotokakh s razvitiem naledeĭ i mnogoletneĭ merzloty. (Transportnoe stroitel'stvo, Mar. 1960 god 10, no.3 p.44–46, illus.) Ref. Text in Russian. **Title tr.:** Installations on streams with naled formation and permafrost.

Discusses experience with naleds, permafrost and solifluction in building the Tayshet-Lena railroad. Naleds were encountered at 99 sites of culverts, etc.; some of them were 250,000 m^2. in area, 300,000 m^3. volume and up to 5m. thick. Of the 848 bridges built, 99 are in permafrost areas, and 38 of the temporary bridges are affected by heaving. The most spectacular cases of damage and countermeasures against naleds are described. Experience with this railroad will aid the planning of others in northern taiga areas. (DLC.)

BOLTON, THOMAS ELWOOD, 1924- , *see* Fritz, M. A. New bryozoan . . . Ellesmere. 1962. No. 71511.

BONCH-OSMOLOVSKAIA, K. S., *see* Spiro, N.S., & K.S. Bonch-Osmolovskaia. Izuchenie. . .triasa. 1961. No. 75873.

BONCHKOVSKAIA, IU. S., *see* Ben'kova, N.P., & *others*. Ionosfernye vozmushcheniia. . .1961. No. 70135.

70315. BONDAM, JAN, *and* J. FERGUSON. An occurrence of villiaumite in the Ilímaussaq intrusion, south Greenland. Copenhagen, 1962. 12p. plate, tables. (Meddelelser om Grønland, bd. 172, nr. 2. *Also pub. as:* Greenland. Geologiske Undersøgelse, Miscellaneous papers no.36.) 12 refs.

This sodium fluoride was found in drill cores from the Kvanefjeld (northern) area of the intrusion near Narssaq, West Greenland, and was discussed generally in No. 61766. Villiaumite has been found in parageneses which have undergone alteration, as well as in late-stage pegmatite veins or pegmatitically developed recrystallization centers of the Kvanefjeld occurrence. It is the last-formed mineral in the per-alkaline rocks, lujavrite and naujite, crystallizing in a comparatively water-rich environment; it has not been observed in the field, though numerous small vugs have been noted in the surface rocks. Chemical analysis (F=44.81%, Na =54.23%, insoluble 0.80%), spectrographic and structural data, also tentative refractive index (1.325) are given. Two photo micrographs show villiaumite penetrating fractures in ussingite, and the cubic cleavage of several large anhedra. (DGS.)

70316. BONDARENKO, L. P., *and* V. B. DAGELAĬSKIĬ. Ob éulizitakh raĭona ozera Chudz'iavr, Kol'skiĭ poluostrov. (Vsesoiuznoe mineralogicheskoe obshchestvo. Zapiski 1961. ser. 2, chast' 90, vyp.4, p.408–424, illus., tables, diagrs.) 26 refs. Text in Russian. **Title tr.:** On eulysites on the Lake Chudz'yavr region, Kola Peninsula.

Describes the geologic position, minerals, petrochemical features, and genesis of fayalite-containing rocks, called eulysitic association of granulites. Eulysites contain quartz, fayalite, garnet, hedenbergite, apatite, and other minerals, which are described. Chemical composition of eulysite rocks and iron ores are analyzed. These rocks are concluded to be of sedimentary-metamorphic origin. (DLC.)

BONDARENKO, L. P., *see also* Maslenikov, V.A., & *others*. Drevneĭshie gornye porody. . .1961. No. 73856.

70317. BONDARENKO, V. M., *and others*. Pervye rezul'taty kompleksnogo primeneniia geofizicheskikh metodov dlia priamykh poiskov mestorozhdeniĭ almazov v IAkutskoĭ ASSR. (Izvestiia vysshikh uchebnykh zavedeniĭ. Geologiia i razvedka, Feb. 1961. no.2, p.118–32, tables, profiles, diagrs.) 11 refs. Text in Russian. *Other authors:* O.A. Demidovich *and* A.G. Tarkhov. **Title tr.:** First results of comprehensive use of geophysical methods in the direct exploration of diamond deposits in the Yakut ASSR.

Reports results of magnetic, gravity and electric surveys of the Zarnitsa and Udachnaya kimberlite pipes in 1959, also of trap rocks in the Udachnaya area, all in the Daldyn-Alakit region. The surveys are described in turn and correlated. Together they clarify a series of geologic and petrographic features, the structure of the kimberlite bodies, and the distribution of diamonds in each pipe. The electric survey shows electric resistance of various rocks. A micro-magnetic survey is recommended for exploration of placers. (DLC.)

BONDARENKO, V. N., *see* Lebedev, M.M., & V.N. Bondarenko. K voprosu o vozraste . . . . Kamchatki. 1962. No. 73372.

70318. BONDAREV, G. I., *and others*. Énergeticheskie zatraty ryboobrabotchikov promyslovykh sudov, provodiashchikh lov ryby v vodakh Barentsova moria i Severnoĭ Atlantiki. (Voprosy pitaniia, 1962. t.21, no.6, p.40–43, tables.) Text in Russian. Summary in English. *Other authors:* E. Sh. Zinov'ev, IU. A. Nepoklonov, *and* I.S. Endovitskaia. **Title tr.:** Energy losses of fish processing personnel aboard vessels fishing in the Barents Sea and North Atlantic.

Maximal energy spent during work was 7058.4 cal. in men handling and passing the fish, 3775.2 cal. in cutters, and 4813.8 cal. in dressers. Changes in kind of work are recommended to avoid excessive energy losses. (DLC.)

70319. BONDARKO, L. V., *and* L. R. ZINDER. Foneticheskaia kharakteristika razlichnykh tipov sintaksicheskikh sochetaniĭ v nivkhskom iazyke. (Voprosy iazykoznaniia, July-Aug. 1962. god 11, no.4, p.84–89, illus.) 3 refs. Text in Russian. **Title tr.:** Phonetic analysis of different types of syntactic concords in the Gilyak language.

Reports oscillographic tests at the Leningrad University laboratory of experimental phonetics which tend to support E.A. Kreĭnovich's theory on word incorporation, No. 52486. (DLC.)

70320. BONE, ROBERT M. A note on permafrost in western Siberia, U.S.S.R. (Geographical bulletin, May 1962, no.17, p.95–98, map, profile, table.) 2 refs.

Summarizes A.A. Zemtsov's report, No. 69384: three permafrost zones and an upper and a lower layer of permafrost are recognized. Data were obtained from eight geological borings between 61°N. 74°E. near the Ob River and Tazovskoye, 67°28′N. 78°42′E. (DGS.)

70321. BONE, ROBERT M., *and* V. W. SIM. Ter-

rain and site analysis of Chesterfield Inlet, N.W.T. Ottawa, 1962. 19p. illus., tables, maps incl. 2 fold. (Canada. Dept. Mines and Technical Surveys. Geographical Branch.) 20 refs. Typescript.

Evaluates this settlement site on the south side of the entrance to Chesterfield Inlet, 57 mi. northeast of Rankin Inlet in Keewatin, observed by the second author in Aug. 1960. It is an administrative, social, and economic center for 146 people, 75% Eskimo. Geology, detailed landforms, surface materials, drainage, permafrost, vegetation, harbor and shore conditions, climate, water supply, sewage and garbage disposal, sanitation, aircraft landing facilities, location of buildings, and fire safety are discussed. (CaONA.)

70322. BONE, ROBERT M., *and* **V. W. SIM.** Terrain and site analysis of Eskimo Point, N.W.T. Ottawa, 1962. 17 p. illus., tables, graphs, diagr., maps incl. 1 fold. (Canada. Dept. Mines and Technical Surveys. Geographical Branch.) 3 refs. Typescript.

Analyzes this settlement site on the Hudson Bay coast of southern Keewatin District. Geology, landforms, surface materials, drainage, permafrost, vegetation, harbor and shore conditions, climate and aircraft landing facilities are discussed. The nearby population was 136 in 1960. (CaONA.)

70323. BONE, ROBERT M., *and* **V. M. SIM.** Terrain and site analysis of Rankin Inlet. Canada. Dept. Mines and Technical Surveys. Geographical Branch, 1962. 11 p. map, table, graph. 16 refs. Typescript.

Evaluates from air-photos and a 1960 field visit by the second author, this settlement on the west coast of Hudson Bay 290 mi. north of Churchill; it has about five hundred inhabitants, 70% of them Eskimos. The North Rankin Nickel Mines Ltd. began operations there in 1953, employing Eskimo labor. There are Eskimo and white mining villages, and a residential Eskimo village called Itivia. Physical conditions of the area are discussed: the Precambrian volcanic and sedimentary rocks, tundra vegetation, climate, etc. The site has a boat dock and ore-loading facilities, as well as landing facilities for large aircraft and sea planes. Water supply, sewage and garbage disposal, and sanitation are commented on. (CaONA.)

70324. BONE, ROBERT M., *and* **V. W. SIM.** Terrain and site analysis of Repulse Bay, N.W.T. Ottawa, 1962. 13 p. illus., maps incl. 2 fold. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch.) 2 refs. Typescript.

Analyzes this settlement site on the northeast shore of the inner harbor of Talun Bay, Keewatin District, on the basis of a field visit by the second author, and aerial photographs. It has a trading and mission center, and in 1960, 135 Eskimos living in the vicinity. Geology, landforms, surface materials, drainage, permafrost, vegetation, harbor and shore conditions, climate, water supply, sewage and garbage disposal, sanitation, aircraft landing facilities, location of buildings, fire safety, and labor availability are discussed. (CaONA.)

70325. BONE, ROBERT M., *and* **V. W. SIM.** Terrain and site analysis of Whale Cove, N.W.T. Ottawa, 1962. 12p. illus., graphs, tables, maps incl. 1 fold (Canada. Dept. of Mines and Technical Surveys. Geographical Branch.) 2 refs. Typescript carbon.

Evaluates this site 60 mi. southwest of Rankin Inlet, in Keewatin District. It was established in 1959 as an Eskimo rehabilitation center for economically depressed families from the interior. Geology, landforms, surface materials, drainage, permafrost, vegetation, harbor and shore conditions, climate, water supply, sewage and garbage disposal, sanitation, and aircraft landing facilities are discussed. (CaONA.)

70326. BONE, ROBERT M., *and* **V. W. SIM.** Terrain and site analysis Padlei, N.W.T. Canada. Dept. Mines and Technical Surveys. Geographical Branch, 1962. 11 p. maps, graphs. 5 refs. Typescript.

Analyzes this abandoned-settlement site, 61°55′N. 96°36′W., on a small lake in south-central Keewatin District. Geology, landforms, surface materials, drainage, permafrost, vegetation, harbor and shore conditions, weather, water supply, sewage and garbage disposal, and sanitation are discussed. The Eskimos who formerly lived there moved to the Hudson Bay coast when the Hudson's Bay Co. post and the Northern Evangelical Mission closed in 1960. (CaONA.)

70327. BONISTEEL, W. D., *and* **A. BERGS,** Investigation of a compressed air bubbler system used for ice melting. *(In:* National Research Council of Canada . . . Symposium on Air Bubbling, 1961. p. 78-96, illus., diagrs., graphs.) 4 refs. *Its:* Technical memorandum no. 70.

Describes a system installed to protect piers of a bridge across Rainy Lake in western Ontario, also tests conducted during the 1960-61 winter. Ice openings of 70 ft. diam. resulted from preliminary testing Dec. 12-Jan. 10, and main tests began Jan. 24 after a 13-in. ice cover had formed over areas opened previously. Ice thickness was reduced to 8 in. in 24 hrs., but air pockets prevented further melting. This type of system does not remove ice more than 6 in. thick, but it prevents further growth of the ice cover. Data are given on the water temperature gradient, amount of air supplied by outlets of various size and at various air pressure levels, and the flow pattern induced by the rising bubbles. (DN-HO.)

BONNET, D., *see* Malméjac, J., & *others*. . . . centres respiratoires . . . 1962. No. 73770

BONVALLET, M., *see* Dell, P., & M. Bonvallet. Physiologie . . . 1955. No. 70946

BOOTH, A. H., *see* Canada. Annual report . . . Radioactive Fallout . . . 1960-61. No. 70535

BOOTH, FRANK O., *see* Alaskan Science Conference 1960. 1961. No. 69643

70328. BORDOVSKIĬ, O. K., *and* **B. A. SMIRNOV.** Strukturno-gruppovoĭ sostav maslīanykh frakt͡siĭ bitumov donnykh otlozheniĭ Beringova mori͡a. (Geokhimiī͡a 1962, no.11, p.1009-1013, graphs.) 5 refs. Text in Russian. Summary in English. **Title tr** Structural-group composition of oil fractions of bitumens of the Bering Sea bottom sediments.

Reports a study of the present sediments of the Bering Sea. Despite their variety in composition: sands, aleurites, clayey mud, etc., the group composition of bitumens is similar, averaging about 65% asphaltenes, 25% resins and 10% oils. Early diagenesis of bitumen is noted. (DLC.)

70329. BORISENKO, L. F., *and others.* O korreliativnoĭ sviazi srednego soderzhaniia skandiia i nekotorykh porodoobrazuiushchikh ėlementov v intruzivnykh porodakh. (Akademiia nauk SSSR. Doklady, May 1, 1961, t. 138, no. 1, p. 203-206, tables.) 5 refs, Text in Russian. *Other authors:* L. G. Zhuravlev *and* L. I. Sosnovskaia. **Title tr.:** On the correlation between the average scandium content and certain rock-forming elements in intrusive rocks.

Reports determination of scandium in dunite, pyroxenite, peridotite, gabbro, diorite and other intrusive rocks of the Kola Peninsula, the Northern Ural, and Yakutia. A correlative connection between its average content and FeO and CaO is shown and evaluated. (DLC.)

70330. BORISENKOV, E. P. Opyt ispol'zovaniia ėmpiricheskikh funktsiĭ vliianiia dlia prognoza davleniia u zemli s zablagovremennost'iu ot 1-2 do 3-5 sutok. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t. 240, Voprosy dolgosrochnykh prognozov pogody . . . p. 33-48, maps, tables.) 8 refs. Text in Russian. **Title tr.:** Experimental application of empirical functions of pressure influence at the ground for 1-2 to 3-5 day prognosis.

Applies empirical methods to parametric determinations of physical processes which determine the variations in atmospheric pressure, taking into account the baroclinity of the atmosphere in barotropic schemes, and an advection of warm air in baroclinic schemes. The prehistory of synoptic processes is utilized in construction prognostic schemes with the aid of empirical functions of influence, and a multiple regression equation is developed by which the variation Δp of the prognosticated atmospheric pressure can be determined. (CaMAI.)

70331. BORISEVICH, D. V. Paleogeografiia i chetvertichnye otlozheniia Srednego i Severnogo Urala. *(In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961. t. 3, p. 24-28.) Text in Russian. **Title tr.:** Paleogeography and Quaternary deposits of the Middle and Northern Ural.

Analyzes Quaternary terraces in the western slope of Middle and part of the Northern Ural. Four terraces in the Kama, Chusovaya and Sylva valleys are described and their age determined according to flora and fauna. All the Middle and a considerable part of the Northern Ural were not covered by any glaciation. (DLC.)

BORISOV, O. G., *see*

Borisova, V. N., & O. G. Borisov. Nabliudeniia v kratere vulkana . . . 1962. No. 70332

Markhinin, E. K., & *others.* Izuchenie sostoianiia vulkanov . . . 1961. No. 73819

BORISOV, P. M., *see*

Problemy Severa. V Komissii po porblemam Severa . . . 1961. No. 74960

Toporkov, L. G. Mozhno li unichtozhit' . . . 1961. No. 76181

70332. BORISOVA, V. N., *and* **O. G. BORISOV.** Nabliudeniia v kratere vulkana Bezymiannogo letom 1960 g. (Akademiia nauk SSSR. Vulkanologicheskaia stantsiia. Biulleten' 1962, no. 32, p. 14-19, illus.) 5 refs. **Title tr.:** Observations of the Bezymyannyy Volcano crater in summer 1960.

Reports a trip to the crater in September 1960; its cone was 2773 m. above sea level and 470 m. above the bottom of the crater. Data on the growth of the cone are discussed and effects of April 1960 eruption noted: 1,150,000 m^3 of pyroclastic material was ejected and a new agglomeratic stream formed. (DLC.)

BORISOVA, V. N., *see also*

Markhinin, E. K., & *others.* Izuchenie sostoianiia vulkanov . . . 1961. No. 73819

Tokarev, P. I., & V. N. Borisova. Izverzhenie . . . 1961. No. 76172

70333. BORLAND, WHITNEY McNAIR. Sediment transport of glacier-fed streams in Alaska. (Journal of geophysical research, Oct. 1961. v. 66, no. 10, p. 3347-50, map, graphs, table.) 2 refs.

Develops an empirical parameter λ in terms of the glacier area, total drainage area and length of watercourse; then presents graphically the relationship between the parameter, expressed as a fraction, and the sediment yield rate, based on hydrologic data from the Susitna, Matanuska, Gakona, and Nanana Rivers. Comparative sediment transport data are tabulated for Denali and Gold Creek stations on the Susitna, the latter station measuring nearly the total load. Sediment samples in several Alaskan streams have been collected by the U.S. Geological Survey since 1950, and hydrologic data for short periods. (DGS.)

70334. BORNEMANN, CLAUS. Bliver den grønlandske arbejder forbigået? dt svar til Chefingeniør Gunnar P. Rosendahl. (Grønland, June 1961, nr. 6, p. 216-22, illus.) Text in Danish. **Title tr.:** Is the Greenland worker bypassed? a reply to chief engineer Gunnar P. Rosendahl.

Challenges the purport of Rosendahl's article (q.v.), pointing out that only a minority of foremen are Greenlanders. Increased opportunities for further training are essential. More than 600 finish grade schools in 1961, but only 70 of them will get places in the continuation schools. (DLC.)

BORODIANSKIĬ, A. I., *see* Nekrasov, I. IA., & *others.* Zolotonosnost'. . . 1961. No. 74275

70335. BORODIN, L. S., *and* **IU. L. KAPUSTIN.** Berbankit, pervaia nakhodka v SSSR. (Akademiia nauk SSSR. Doklady, Nov. 11, 1962. t. 147, no. 2, p. 462-65, tables, graphs.) 5 refs. Text in Russian. **Title tr.:** Burbankite, first find in the USSR.

Presents mineralogic study of the rare mineral first described by W. T. Pecora and J. H. Kerr from the Bearpaw Mts. of Montana. This rare-earth carbonate with the general formula $R_6(CO_3)_5$ was found in the Vuoriyarvi massif in Kola Peninsula

in 1958 in calcite and ankerite-dolomitic veins. Its physical properties, X-ray crystallographic data, chemical analysis, heat tests and other features are described and comparisons made with the burbankite found in the United States. (DLC.)

70336. BORODIN, L. S. Nefelinizat͡siia piroksenitov i paragenezisy porodoobrazuiushchikh mineralov ijolitov iz massivov ul'traosnovnykh-shchelochnykh porod. *(In:* Akademiia nauk SSSR. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii. Fiziko-khimicheskie problemy . . . 1961, t. 1, p. 501-523, illus., diagrs.) 20 refs. Text in Russian. Summary in English. **Title tr.:** Nephelinization of pyroxenites and paragenesis of rock-forming ijolite minerals from massifs of ultrabasic alkaline rocks.

Reports petrographic study of ijolite-pyroxenites massifs in northern Karelia, Kola Peninsula and arctic areas of Siberia. Metasomatic genesis of ijolites is suggested, resulting from nephelinization of pyroxenites. Physico-chemical conditions are interpreted which effect the metasomatic alteration of pyroxenites. (DLC.)

70337. BORODIN, L. S., *and* **A. V. BYKOVA.** O t͡sirkonievom shorlomite. (Akademiia nauk SSSR. Doklady, Dec. 21, 1961. t. 141, no. 6, p. 1454-56, table.) 10 refs. Text in Russian. **Title tr.:** On zirconium schorlomite.

Notes the schorlomite found in the Gulinskiy massif in Yakutia as 11% ZrO_2; that of the Vuoriyarvi massif in Kola Peninsula is 13% and therefore called zirconium schorlomite. Specific weight, optic properties, and chemical composition are described. Comparison is made with kimzeyite, recently described in the United States. (DLC.)

BORODIN, L. S., *see also* Volotovskaia, N. A., & G. A. Il'inskii. O stat'e . . . 1961. No. 76428

70338. BORODIN, M. M. O normakh spet͡sodezhdy dlia rabotnikov lesnogo khozi͡aĭstva i lesnoĭ promyshlennosti. (Lesnoe khozi͡aĭstvo, July 1962, god 15, no. 7, p. 86-89.) Text in Russian. **Title tr.:** Special-clothing standards for workers in forestry and lumbering.

Reports in detail the regulations on clothing issue (free) to wood industry personnel: categories of qualified workers, clothing adapted to five climatic zones, the fourth and fifth being the far North and above the Arctic Circle, longevity of garments, etc. Hand- and food-gear are included. (DLC.)

70339. BORUCHINKINA, A. A., *and others.* Stratigrafiia devonskikh otlozheniĭ mezhdurech'ia Podkamennoĭ i Nizhneĭ Tungusok. *(In:* Vsesoi͡uznyĭ aėrogeologicheskiĭ trest. Materialy po regional'noĭ geologii . . . 1961, p. 133-39, map.) 10 refs. Text in Russian. *Other authors:* N. V. Drenov, V.V. Menner, and N. Ė. Shul't͡s. **Title tr.:** Stratigraphy of the Devonian deposits in the Podkamennaya and Nizhnyaya Tunguska interfluve.

Reports a study in this area, from the Yenisey east to the Uchami and Kondromo Rivers. Lower, Middle, and Upper Devonian deposits are distinguished and their stratigraphy is described. (DLC.)

BORUM, VILLY, 1903- , *see* Denmark. Greenland. 1961. No. 70974

BOSHARIN, A. A., *see* Kosygin, I͡U.A., & *others.* Osnovnye strukturnye ėlementy . . . 1962. No. 73023

BOSSDORF, R., *see* Scheumann, K. H., & *others.* Versuch einer genetischen Deutung . . . 1961. No. 75410

70340. BOSTOCK, HUGH SAMUEL, 1901- . Physiography and resources of the northern Yukon. (Canadian geographical journal, Oct. 1961. v. 63, no. 4, p. 112-19, illus., map.)

Deals with the approx. 50,000 sq. mi. region north of 64° 30′N., consisting of a rim of mountains and a basin of broad plains and low hills. The main topographical features, mapped and described, include the Mackenzie, Wernecke, Ogilvie, British, and Richardson Mts., Keele and Old Crow Ranges, the Arctic Plateau and Coastal Plain, and the Peel and Porcupine Plateaus, the last divided into the Old Crow and Eagle Plains. The region is mostly unglaciated, and its geological structure indicates petroleum and coal to be the main resources. Other known or indicated resources are low grade iron, placer gold, tungsten, ivory from Pleistocene mammals, muskrat fur, and hydro-electric power. (DGS.)

BOUCEK, M. M., *see* Boatman, J.B., & *others.* Mitochondrial swelling . . . cold. 1962. No. 70258

70341. BOUDA, KARL ERNST, 1901- . Tungusisch und Ketschua. (Deutsche Morgenländische Gesellschaft, 1960. Bd. 110, n.F. Bd. 35, Heft 1, p. 99-113.) Refs. Text in German. **Title tr.:** Tungus and Quechuan.

Comparative linguistic analysis of Tungus (mainly Evenki and Gold) and Quechuan, the language of the Peruvian Incas. Phonologic, morphologic, and lexical similarities suggest an Asiatic (Altaic) origin of the Incas. (DLC.)

70342. BOULWARE, ROBERT A. How to analyze reflection data in permafrost areas. (World oil, Apr. 1961. v. 152, no. 5, p. 80-84, port., map, graphs.) 12 refs.

Describes the three main types of permafrost as continuous, discontinuous, and sporadic, showing limits of each in North America and representative cross-sections. Seismic methods used in oil exploration in permafrost areas, their advantages and problems, are outlined. Records from seismic work in continuous permafrost areas are clearer than those from discontinuous. (DGS.)

70343. BOVILLE, BYRON W., *and others.* An atlas of stratospheric circulation, October 1958-March 1959. Montreal, Feb. 1961. 36 col. maps, 36 sections, 36 tables, & approx. 10 p. of text. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 37.) 2 refs. *Also issued as:* Canada. Defence Research Board. D Phys. R(G) Misc. G 4. *Other authors:* M. A. MacFarlane *and* H.A. Steiner.

Presents some results of the Group's Stratospheric Analysis Project, begun June 1, 1958. Its work included daily analysis of charts and cross-sections for 0000 GCT, at 200 mb., 100 mb., 25 or 30 mb., and cross-sections along the 80°W. meridian from Balboa, Canal Zone, to Alert and

from sea level to 120,000 ft. The 25-mb. charts provide a comprehensive survey of the circumpolar circulation of the middle stratosphere. Changes in temperature, the polar vortex, and the warm Aleutian anticyclone are shown. Cross-sections depict the zonal component of the wind; the temperature; temperature minima, tropopauses and the cold side of frontal zones; temperature maxima and the warm sides of frontal zones. A few of the more persistent features of atmospheric structure are pointed out. Fourier analysis was applied to the circumpolar 25-mb. charts; the coefficients of the first nine harmonics are tabulated, to permit ready comparison of the amplitudes and phases by latitude and zonal wave number. (DWB.)

70344. BOVILLE, BYRON W., *and others.* Baroclinic waves of the polar-night vortex. (Journal of meterology, Oct. 1961. v. 18, no. 5, p. 567-80, maps, graphs, table.) 23 refs. *Other authors:* C.V. Wilson *and* F.K. Hare.

Discusses the behavior of the polar-night westerlies, and examines their probable vertical extent above 60 km. as indicated by rocket soundings from Churchill, Man. It is shown that traveling wave-pertubations affect the vortex and have phase-velocities similar to those of the tropospheric westerlies. The amplification and movement of one of these systems are shown by means of a detailed case-study of vorticity and mass perturbations, Jan. 8-18, 1959. Authors conclude that the behavior of these systems indicates that they are baroclinic waves converting available potential energy to kinetic energy at stratospheric levels.—From authors' abstract. (DA.)

70345. BOVILLE, BYRON W. A dynamical study of the 1958-59 stratospheric polar vortex. Montreal, Feb. 1961. xv, 134 p. maps incl. col., diagrs., graphs, tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 36.) 53 refs.

Discusses relation of stratospheric circulation to that of the troposphere for Oct. 1958-Mar. 1959, a period marked by strong development of the polar-night westerly vortex of the arctic stratosphere. Study was based mainly on circumpolar analyses at five-day intervals at the 500-mb., 100-mb., and 25-mb. levels, supported by numerous space and time sections. Fourier analysis of the circumpolar charts was used to compute energies and energy exchanges after the manner of Lorenz, and unstable wave characteristics following the linear theory of Fleagle. The polar-night middle stratosphere is found to be baroclinically unstable in mid-winter, otherwise the energy exchanges appear to be ascribable to forced perturbations. (DWB.)

70346. BOVILLE, BYRON W., *and* **F.K. HARE.** Total ozone and peturbations in the middle stratosphere. (Royal Meteorological Society. Quarterly journal, Oct. 1961. v. 87, no. 374, p. 490-501, maps, graphs.) 13 refs.

Presents a test of the theory that very large anomalies shown by winter ozone time-series in mid-latitudes may be due to the southward movement of polar-night troughs and their cutting off as cold vortices. Two cases are cited. One, over the North Atlantic and Europe during Feb. 1959, showed sharp minima in total ozone and in 30 mb. temperature associated with passage of a stratosphere perturbation. The other, over North America in Jan. 1960, was marked by a fall of total ozone from 4980 to 3000 microns and of 30 mb. temperature from about-50°C. to about-75° C. at Moosonee in connection with the passage of a cold low. Relationship of ozone anomalies to overall dynamical activity in the polar-night vortex and the stratospheric warm belt is also noted. (DLC.)

BOVILLE, BYRON W., *see also* Hare, F.K., & B.W. Boville, Studies . . . meteorology. 1961. No. 72024

70347. BOWDLER, MICHAEL C., 1926- .An architecture for the North. (North, Nov.-Dec. 1961. v. 8, no. 6, p. 1-8, illus.)

Discusses problems of designing attractive buildings for the Arctic. Prefabricated dismountable structures, fire-retardant painted plywood, and aluminum surfaces are used, and glazed areas kept at minimum because of environmental and economic conditions. Efforts to alleviate the situation in northern Canada are described. (DLC.)

70348. BOWEN, R. Paleotemperature analyses of Jurassic Belemnoidea from East Greenland. (Experientia, Oct. 1962. v. 18, fasc. 10, p. 438-39, table.) 7 refs.

Measurement of isotopic oxygen components, in the $CaCO_3$ of these belemnoids, indicates a temperature rise from Bajocian times until a maximum of 25°.2 C. was reached at the end of the Kimeridgian, followed promptly by a decline. Findings are compared with other records from Greenland and Europe. (DLC.)

BOWER, MARGARET E., *see*

Gregory, A.F., & *others*. Airborne geophys. recon. Can. Arctic Archipelago. 1961. No. 71840

Gregory, A.F., & *others*. Geological interpretation . . . 1961. No. 71842

Gregory, A.F., & *others*. Geological interpretation . . . 1961. No. 71841

70349. BOWN, MICHAEL G., *and* **P. GAY.** An X-ray study of exsolution phenomena in the Skaergaard pyroxenes. (Mineralogical magazine, Mar. 1960. v. 32, no. 248, p. 379-88, illus., diagr.) 7 refs.

Applies single-crystal X-ray methods for exsolution phenomena study to the pyroxenes of this East Greenland intrusion. Results for about 50 selected pyroxene crystals, are correlated with previous optical descriptions; general agreement is found, but authors suggest that the combination of X-ray and optical studies is more valuable than either alone. A related study was reported by Gay and Muir, q.v. (DGS.)

BOYCE, F.M., *see* Dodimead, A.J., & *others*. Oceanographic data record . . . 1961. No. 71054

BOYD, JOSEPHINE W., *see*

Boyd, W.L., & J.W. Boyd. Food spoilage & preservation. 1961. No. 70350

Boyd, W.L., & J.W. Boyd. Presence *Azotobachter* sp . . . 1962. No. 70351

Boyd, W.L., & J.W. Boyd. Viability of thermophiles . . . 1962. No. 70352

70350. BOYD, WILLIAM L., *and* J.W. BOYD. Food spoilage and preservation in the Arctic. (Food technology 1961. v. 16, no. 2, p. 91-93, illus., table.) 14 refs.

Reports investigations, showing the presence of bacteria or fungi in the air at sea level at Point Barrow, with a maximum in the summer. Exposure experiments showed that spoilage of certain foods takes place during the colder part of the year. For such items, cold storage and refrigeration are required. (DLC.)

70351. BOYD, WILLIAM L., *and* J. W. BOYD. Presence of *Azotobacter* species in polar regions. (Journal of bacteriology, Feb. 1962. v.83, no.2, p.429-30, table.)

Reviews the results, mostly negative, of attempts to isolate these bacteria from various arctic soils. Three species are reported isolated in the area near Barrow and two from antarctic beaches. (DLC.)

70352. BOYD, WILLIAM L., *and* J.W. BOYD. Viability of thermophiles and coliform bacteria in arctic soils and water. (Canadian journal of microbiology, Apr. 1962. v. 8, p. 189-92, illus., table.) 6 refs.

Reports investigations carried out in 1955-57 which revealed the presence of both types of bacteria in the intestinal tract of some Alaskan mammals, and occasionally in soil and water. Some of the bacteria found in the latter may originate from animal or human feces. (DLC.)

70353. BOYER, LUC. A geological investigation of potential dam sites, Yukon Territory. St. Louis, June 1960. 62 p. illus., fold. maps. 8 refs. M. Sc. thesis to Washington University, Sever Institute of Technology, Dept. of Geological Engineering.

Reports summer 1959 field work with a Canadian Geological Survey party, in an area on the southern Yukon Plateau along the Stewart, Teslin, Pelly, and upper Yukon Rivers. The geology is described. Of seven sites investigated, four are discussed: the Swift River site on the Teslin, the Hootalinqua at the junction of the Teslin and the Yukon, the Wolverine and Fort Selkirk sites at the junction of the Pelly and Yukon Rivers. Each is described in terms of topography and geology, the engineering geological aspects are considered, and an evaluation offered. The Hootalinqua site is favored: it has the best potential as the flow of the Yukon is doubled by the confluence of the Teslin at that point, which is only 58 mi. from Whitehorse. Author's sketches and sketch maps enhance the text. (CaOG.)

70354. BOYLE, ROBERT WILLIAM, 1920- . Geochemical prospecting in permafrost regions of Yukon, Canada. *(In:* International Geological Congress, 20th, *Mexico City,* 1956, Symposium de exploracion geoquimica, t. 1. *pub.* 1958, p. 175-88, maps.) 8 refs.

Summarizes results of recent field and laboratory investigations carried out by the Geological Survey of Canada in the Keno Hill-Galena Hill, Quill Creek (61° 32′N. 139° 19′W.), and Whitehorse areas; also results of biogeochemical surveys by United Keno Hill Mines, Ltd. in the Keno Hill area, and soil and water surveys by Prospectors Airways Co. Ltd. in the Vangorda Creek area (62°13′N. 133° 25′W.). Applicability of geochemical prospecting methods in permafrost regions was tested in these four areas of varied geology and different types of deposits. A detailed hydrogeochemical survey in the Keno Hill-Galena Hill area outlined the mineralized belt, using zinc as an indicator. Lode-bearing faults were traced and the lodes outlined by analyses of residual soils and fair results were obtained from analyses of subsurface glacial material. Both hydrochemical methods and soil analyses were found effective in the Vangorda Creek area for locating zinc-lead deposits. A nickel-copper deposit was located in the Quill Creek area by a hydrogeochemical survey, though this method was unsuccessful in locating copper deposits near Whitehorse. (DGS.)

70355. BOYLE, ROBERT WILLIAM, 1920- . The geology, geochemistry, and origin of the gold deposits of the Yellowknife district. Ottawa, Queen's Printer, 1961. xvi, 193 p. illus., diagrs., graphs, tables, maps incl. 9 col. fold. in pocket. (Canada. Geological Survey, Memoir 310.) 196 refs.

Describes the general and structural geology, also the mineralogy of these gold-quartz deposits north of Great Slave Lake, p. 1-65. Geochemistry of the surrounding rocks as well as the geochemistry and origin of the ore and gangue minerals, and underground waters are treated in detail p. 66-178. The deposits occur as quartz lenses, in extensive shear zones cutting Precambrian greenstones; they also developed along structures in highly folded and contorted Precambrian sedimentary rocks. Several minerals including gold and silver are concentrated in them. The complex mineralization processes took place over a long period of Precambrian time; and calcite and pyrite are precipitating from underground waters in late fractures at present. General geology of the area 62°15 - 62°45′N. 114°-114°30′W. is mapped on a scale of 1 in.: 2 mi.; structural features are shown on maps of scale 1 in.: 1 mi.; several systems and mines are shown in plans and sections; chemical and spectrographic analyses are tabulated. Photographs show appearance of zones, samples, etc. (DGS.)

70356. BOYLE, ROBERT WILLIAM, 1920- . Native zinc at Keno Hill. (Canadian mineralogist, 1961. v. 6, pt. 5, p. 692-94.) 11 refs.

Notes recent identification of small amounts of native zinc in samples from the lead-zinc-silver deposits of the Keno Hill-Galena Hill area, Yukon Territory. Earlier reports of such occurrences mostly suggest the native zinc formed in the zone of oxidation, but at Keno Hill, the chemistry of zinc formation is not entirely clear. (DLC.)

70357. BOYLE, ROBERT WILLIAM, 1920- . Occurrence and geochemistry of native silver in the lead-zinc-silver lodes of the Keno-Hill-Galena -Hill area, Yukon, Canada. (Neues Jahrbuch für

Mineralogie, Abhandlungen 1960. Bd. 94, p. 280-97, illus., tables, fold. map,) 24 refs.

This occurrence of native silver of secondary origin derived by oxidation of freibergite and argentiferous galena, in deeply oxidized lodes and ice lenses is unique. The area is 220 mi. north of Whitehorse in central Yukon. (CaOG.)

BOYLE, ROBERT WILLIAM, 1920- , *see also* Ames, R.L. Origin gold-quartz Yellowknife. 1962. No. 69746

Jambor, J.L., & R.W. Boyle. Gunningite . . . 1962. No. 72516

70358. BOZHKO, I.L. K chemu privodiat narusheniia osnovnykh polozhenii markshеiderskogo kontrolia. (Bezopasnost' truda v promyshlennosti, Apr. 1962. god 6, no. 4, p. 3-4, diagrs.) Text in Russian. **Title tr.:** What the violations of basic requirements of surveyor's control lead to.

Reports on the accidental flooding of the southern longwall in a mine of the fourth coal bed of the Vorkutugol' Combine. It is attributed to poor surveyor's control, and to negligence in correcting a safety-regulations infringement, both known a month and a half prior to the accident which occurred toward the end of 1961. Two similar happenings in other mines of Vorkutugol' in 1961 are mentioned, and preventive measures are recommended. (DLC.)

70359. BRABB, EARL EDWARD, 1929- , *and* **D.J. MILLER.** Reconnaissance traverse across the eastern Chugach Mountains, Alaska. Washington, D.C., June 1960. 29 l. map-section. (U.S. Geological Survey. Reports, open file series no. 586.) 21 refs.

Preliminary report on a 1958 aerial and a 1959 ground survey of this 5 x 48 in. strip along the 142°30'W. meridian; field plotting and geologic map compilation were made on a planimetric map and profile prepared by the U.S. Geological Survey in 1959, and on the aerial photography. Geologically unexplored heretofore, the eastern Chugach contains two successions of bedded rocks, separated by the Bagley Ice Field. Marble, limestone, sandstone, etc. in the northernmost part of the traverse are provisionally referred to the Mississippian Strelna formation; this is overlain unconformably to the South by the Mesozoic Valdez group, and by other Mesozoic metamorphic units. South of the Bagley Ice field are Mesozoic volcanic rocks, and the Late Cretaceous Yakutat group, which near the southern boundary of the area is thrust over early Tertiary sedimentary rocks. The tight folding pattern was clearly seen in the Yakutat group; the Chugach-St. Elias fault is a major structural feature of southern Alaska. Mineral deposits of possible economic interest are limited in amount and variety. Evidence of two major Wisconsin glacial advances and two or three minor Recent advances is recognized in the northern part. Map at scale 1:96,000 and profile are appended. (DGS.)

BRACE, L.H., *see* Spencer, N.W., & *others*. Electron temperature evidence . . . 1962. No. 75866

70360. BRACK, D.M. Southampton Island area economic survey, with notes on Repulse Bay and Wager Bay. Ottawa, Dept. of Northern Affairs and National Resources, Industrial Division, Sept. 1962. 96 p. illus., maps, tables, diagrs. Refs.

Reports a summer 1961 field study in the northern Hudson Bay area. The physical setting of Southampton Island, its Eskimo population of 209 (45 families in four settlements), and social framework are described; the availability and utilization of food resources, mostly marine mammals, are examined, as are sources of cash income: fox trapping, wage employment, services, social security, and forms of capital such as dogs, boats, gear. The effects of possible migration from depressed mainland areas are considered upon the Islanders' economy, and in relation to the social organization of the Roman Catholic Aivilik and the Anglican Okomiut groups. Improvements are suggested in resource harvesting and food utilization, the latter but 30% - 40% of that harvested, also in handling of cash incomes. Such efforts could raise the living standard and/or enable the Island to support about fifty immigrants. Potential means of expanding and diversifying the economy are discussed, including introduction of caribou, development of fishery, horticulture, handicrafts, tourism, etc. Resource utilization and possible improvements in the Repulse and Wager Bay areas of the adjacent Keewatin mainland might be linked with those on Southampton. A community development program like those applied by the Industrial Division in other parts of the Arctic, and described by R.A. Jenness on p. 82-66, could benefit the area. Detailed data are appended on the Southampton housing conditions, their inadequacy stressed. (CaMAI.)

BRACKNEY, E.L., *see*

Ellison, R.G., & *others*. Further studies . . . hypothermia. 1960. No. 71247

Ellison, R.G., & *others*. Metabolic alterations . . . 1961. No. 71248

70361. BRADY, TERRY. Alaskan wildfires. (Alaska sportsman, June 1962. v. 28, no. 6, p. 12-14+, illus.)

Describes forest-fire control methods and problems of the U.S. Bureau of Land Management in interior Alaska. So-called smokejumpers and fire-retardent chemicals are dropped from aircraft to combat the fires, caused mostly by lightning. Approx. one (of the area's 225) million acres are burned a year, spruce, birch, and wildlife destroyed (DI.)

70362. BRANNSTROM, OLAUS. 1860-talets nödår, bilder från den övre Tornedalsbygden. (Norrbotten, 1962, p. 141-59.) Text in Swedish. **Title tr.:** Famine years of the 1860's, pictures from the upper Tornedalen region.

Describes life in this area of north Sweden along the Finnish frontier, approx. 65°45'-69°N., during a period when repeated crop failures caused widespread hardship. Isak Poromaa, a farmer from Junosuando (approx. 67°30'N. 22°30'E.), took an active part in the relief work and some letters by him in Finnish are quoted. Directions for utilizing lichen and moss also are quoted, from a book by a Swedish apothecary Jacob Widgren, *Anvisning att bereda födoämnen af Granlaf, Islandsmossa m.m.*, 1867. (SPRI.)

BRAMMING, FR., *see* Denmark, Billet til Grønland . . . 1960. No. 70967

BRAND, R., *see* Caldwell, D. F., *& others*. . . .Environ. temp. & conditioning newborn rat . . . 1962. No. 70495

70363. BRANDAUS, A.I., *and* **B.S. IUDOVIN.** Énergeticheskaîa ustanovka atomnogo ledokola "Lenin." (Sudostroenie, 1961. god 27, no. 8, p. 21-29, 7 illus. & diagrs., table.) Text in Russian. **Title tr.:** The power plant of the atomic icebreaker *Lenin*.

Presents detail of the fore, midship, and after installations with the power generating gear; the main (nuclear) and auxiliary (electric) power installations and steam-cycle scheme are depicted. (DLC.)

70364. BRANDT, MAX. Several problems of arctic medical research in the Soviet Union. (Current problems of Soviet medicine, 1961. no. 3, p. 73-81.)

Reviews conclusions from experience of central arctic expeditions concerning shelter, diet, including vitamins, UV radiation, appetite, acclimation, work distribution, etc. Research on vitamin deficiencies, common diseases, hygiene, sanitation, hospitals, training of doctors, etc. are discussed. (DNLM.)

70365. BRANDTZAEG, ANTON. Rausmoloer; norsk praksis og erfaring sammenholdt med teori og forsøk. (Teknisk ukeblad, July 7, 1960. årg. 107, nr. 27, p. 578-91, illus., diagrs., maps.) 2 refs. Text in Norwegian. Summary in English. **Title tr.:** Rubble-mound breakwaters; Norwegian practices and experience related to theory and experiments.

Most of the some 350 breakwaters on the Norwegian coast are of the rubble-mound type. The weight of the armor units (stones) usually averages 15-25 t. on a frontal slope of 1:1.25 - 1:1.5 with estimated wave heights of 5-7 m. Several examples of such structures on the arctic coast are described and illus. Conventional formulas (Iribarren's, Hudson's) for calculating the required weight of the armor units as a function of wave height are reviewed and found to agree poorly with Norwegian experience. The case of a storm destroying 90 m. of the Berlevåg (approx. 70°20′30″N. 29°07′30″E.) breakwater in Jan. 1959 is analyzed; weather data and model-scale experiments indicate a characteristic wave height of about eight m. The duration of a storm appears to be a significant factor. The Iribarren-Hudson formula is discussed by R. Svee in a paper following (p. 592-94) Brandtzaeg's presentation, and a new formula is developed for determining the weight of the armor units. (DLC.)

BRANTON, CLARENCE IVAN, *see* Alaskan Science Conference 1960. 1961. No. 69643

70366. BRATBERG, ERLING H., 1922- . Norwegian investigations in Greenland waters in 1958. (International Council for the Exploration of the Sea. Annales biologiques 1958, *pub.* 1960. v. 15, p. 95-98, illus., tables.)

Reports on Norwegian fishing (largely cod-fishing) in West Greenland waters in 1958; water temperatures and cod catches; length composition and age frequencies; dominant year classes; comparisons with 1957; etc. (DI.)

70367. BRATBERG, ERLING H., 1922- . Norwegian investigations in Greenland waters in 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v. 16, p. 14-16, illus.)

Reports on temperature conditions in both western and eastern waters, to a depth of 1500 m. with a series of sections. Changes, and movements of water masses are reconstructed. (DI.)

70368. BRATBERG, ERLING H., 1922- . Rapport fra tokt med *"G.O. Sars"* till Øst- og Vestgrønland i Juni-September 1959. (Fisken og havet, Feb. 1960. nr. 2, 12 p. tables, diagrs., maps.) Text in Norwegian. **Title tr.:** Report on cruise of the *G.O. Sars* to East and West Greenland, June-Sept. 1959.

Summarizes results of studies in hydrography and ice conditions; reviews extent of tagging operations; presents data on volume of catch, on size distribution, also bottom temperature during fishing by means of various equipment, mainly for cod. (SPRI.)

70369. BRATBERG, ERLING H., 1922- . Rapport om de norske fiskeriundersøkelser ved Vest-Grønland i 1960. (Fiskets gang, Aug. 24, 1961. årg. 47, nr. 34, p. 593-97, tables, graphs, sketch map.) Text in Norwegian. **Title tr.:** Report on Norwegian fishery investigations in West Greenland waters in 1960.

Reviews work of Mar. 28 - May 6, 60° - 66°N. on cod distribution, hydrological conditions, and experimental trawl and long-line fishing. The cod was mostly in waters of 2° - 4° C., none on deeper bank slopes with 4° C., or more; spawning was over, and earlier than 1959. The long-line catch was small cod of 73.3 cm., the trawl cod was too small: 58.5 cm. average, with the 1956 year class only 49 cm. The 1953 and possibly the 1956 classes are expected to predominate. Mature halibut seem to migrate to deeper and warmer waters during the course of the year, while the young stay on the banks. Tagging: 56 halibut, 107 cod, was impeded by weather conditions. (DA.)

70370. BRATTSEV, ADOL'F PETROVICH, *and others*. Glubokovodnoe ozero Bol'shaîa Gudyr'îa v doline r. Pechory; limnologicheskiĭ ocherk. (Vsesoîuznoe gidrobiologicheskoe obshchestvo. Trudy 1962. t. 12, p. 200-213, tables, map.) 13 refs. Text in Russian. *Other authors:* T.A. Vlasova, È.I. Popova, *and* L.N. Solovkina. **Title tr.:** The deep lake Bol'shaya Gudyr'ya in the Pechora River valley; a limnological outline.

Describes the location and physiography of this small (0.85 km.²) but deep (37 m.) lake; the water and temperature conditions; plants and plant associations; water chemistry. The phyto- and zooplankton, their main qualitative and quantitative aspects are reported, also fauna associated with the vegetation; benthos, its main forms and biomass. The principal fishes are listed, their size, weight, and age given. (DLC.)

70371. BRAWN, VIVIEN M. Temperature tolerance of unacclimated herring, *Clupea harengus* L. (Canada. Fisheries Research Board. Journal,

Sept. 1960. v. 17, no. 5, p. 721-23, table.) 4 refs.

Reports over 200 herring briefly exposed to temperatures of -1.1° to -1.4° C. and only 13% died immediately. The survivors transferred to 7° C. showed after one week a survival of "at least 63% of the original number." (DI.)

70372. BRAYTON, GEORGE E. Station Arlis-I oceanography; part I, results; part 2, tables, 1960 and 1961. Seattle, Wash., Feb. 1962. 2 v.: 20 l. maps and graphs incl. fold.; approx. 100 l. of tables. (Washington, University. Dept. of Meteorology and Climatology. Scientific report, U.S. Office of Naval Research contract Nonr 477:24) 6 refs. Mimeographed.

Contains an analysis of the physical and chemical oceanographic data collected during the winter 1960-1961 on the Arctic Research Laboratory's drifting station Arlis-1, by a seven-man party, including a combined navigational and station location chart, also graphs of temperature, salinity and sigma- t. All 139 bathythermograph slides are reproduced. Arlis-1, fourth U.S. floating ice station in the Arctic Ocean, was established by the *Burton Island* and maintained by airlift from Point Barrow. Oceanographic observations were carried on Sept. 25, 1960 - Mar. 17, 1961, when the station was abandoned. Methods of field sampling and data analysis are outlined. Physical properties are described; the general oceanography of the area is discussed in a preliminary way from the 500 mi. drift in 74° - 75° N. lat. 141° - 167° W. long.

Part 2 contains tables of the observed, and the interpolated and computed physical oceanographic data, navigational positions, positions of bathythermograph observations, and current measurements. (DWB.)

70373. BRECKENRIDGE, JOHN R. Effective area of clothed man for solar radiation. Natick, Mass., July 1961. iv, 11 p. illus., graphs, tables. (U.S. Quartermaster Corps. Environmental Protection Research Division. Technical report EP-157.) 6 refs.

Reports a study to obtain data on arctic, wet-cold, and hot-weather uniforms, to estimate the heating effect of solar radiation on the clothed man, sitting, standing, walking, and prone. The effective area was found to vary regularly with the solar angle, though only minor changes resulted often from large changes in direction of sunlight. For the arctic uniform, the lowest such value of effective area was 0.46 m^2 sitting, the greatest 0.79 m^2 walking. (DWB.)

70374. BREGADZE, T.V. Pochemu proizoshel vzryv metana na shakhte No. 40 kombinata Vorkutugol'. (Bezopasnost' truda v promyshlennosti, Mar. 1962. god 6, no. 3, p. 6-8.) Text in Russian. **Title tr.:** Why did a methane explosion occur in the No. 40 mine of the Vorkutugol' Combine?

Finds violation of the safety code and inadequate ventilation responsible for the explosion in the northern section of this mine on April 1, 1961. Despite aeration at a rate of 575 m^3/min., the relative gas content of the mine was 20.2 m^3/t. The ignition of methane was caused by sparking of a poorly clamped electric cable core in the open inlet of the feeder of AFV-1523 automat. (DLC.)

BRENNAN, J.K., *see* Murdaugh, H.V. Function of the inferior vena cava valve . . . 1962. No. 74167

BRESSLER, CALVER TUPPER, 1919- , *see* Warner, L.A., & *others*. Iron and copper deposits . . . 1961. No. 76489

BREWER, MAX CLIFTON, 1924– , *see*

Alaskan Science Conference 1961. 1962. No. 69644

Collins, F.R., & M.C. Brewer. Core tests, test wells Barrow . . . 1961. No. 70784

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

BRIDCUT, W.C., *see* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

BRIGGS, BENJAMIN R., *see* Spreiter, J.R., & B.R. Briggs. Theory of electrostatic fields . . . 1961. No. 75882

70375. BRIGHENTI, GIAN MARIA. Considerazioni sugli effetti della ipotermia sul livello glicemico del mammifero. (Rivista di patologia e clinica, July 1960. v. 15, no. 7, p. 219-24, illus., tables.) 12 refs. Text in Italian. **Title tr.:** Studies on the effect of hypothermia upon the glycemic level of the mammal.

Study of glycemia and potassemia in rabbits and dogs cooled to 30, 25 and 20-19° C. The level of blood glucose fell proportionately to the drop in body temperature. The level of blood-N varied and was not dependent on body temperature. (DNLM.)

70376. BRILL, RUDOLF, *and* **P.R. CAMP.** Properties of ice. Hanover, New Hampshire, May 1961. vii, 75 p. illus., diagrs., graphs, tables. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Research report 68.) 34 refs.

Summarizes results of nine laboratory studies carried out at the Brooklyn Polytechnic Institute 1955-59, four of them directly concerned with Alaska, viz:

Degree of perfection of glacial ice crystals, p. 13-24, deals with Alaskan glacier ice crystal structure by means of X-ray diffraction. Thermal motion in ice and heavy ice, p. 25-40, deals with molecular motion in ice crystals mainly from Alaskan glaciers. Visco-elastic properties of ice, p. 41-55, deals with ice cylinders, also from Alaskan glaciers, subjected to extension; resulting curves of deformation and of strain vs. time, are shown. Investigation of the polarity of ice crystals, p. 70-74, deals with attempts to demonstrate pyroelectric or piezoelectric properties in Alaskan glacier and other ice crystals. (CaMAI.)

70377. BRINKMANN, AUGUST, *Jr.* Fridtjof Nansen som zoolog. (Naturen, 1961. v. 85, nr. 7-8, p. 387-421, illus., 2 diagrs.) 54 refs. Text in Norwegian. **Title tr.:** Fridtjof Nansen as a zoologist.

Reviews Nansen's experience and contributions in zoology, his chosen profession: his 1882 trip on the *Viking* to Vestisen and study of marine fauna collected, his research on invertebrates at

the Bergen Museum, his professorship of zoology at the University of Kristiania (Oslo) 1897-1908, etc. Nansen's reports on the histology and anatomy of invertebrates, especially *Myzostoma,* are discussed in depth. His contribution is significant but his stature as a zoologist became overshadowed by his eminence in polar exploration and humanitarianism. (DGS.)

70378. BRINSMEAD, RALPH E. New reserves for Flin Flon operation. (Precambrian - Mining in Canada, Sept. 1960. v. 33, no. 9, p. 16-20, illus.)

Reports opening of the Hudson Bay Mining and Smelting Co. new Chisel Lake mine in Manitoba to produce lead, gold, and zinc for the Flin Flon smelter. Development of the project is described; other Flin Flon satellite mines, four mined out, two in operation, and four planned for future opening, are listed. (DGS.)

BRISBIN, WILLIAM CORBETT, *see*

Wilson, H. D. B., & W. C. Brisbin. Regional structure . . . nickel belt. 1961. No. 76579

Wilson, H. D. B., & W. C. Brisbin. Tectonics Can. Shield N. Man. 1962. No. 76580

70379. *BRITISH MEDICAL JOURNAL.* Cold injury of the newborn. (British medical journal, Mar. 10, 1962. no. 5279, p. 698-99.) 8 refs.

Notes on incidence, physiological and environmental causes, most affected age of the infant, prevention (instruction of midwives), diagnosis, and treatment. (DNLM.)

70380. *BRITISH MEDICAL JOURNAL.* Periodic hypothermia. (British medical journal, Apr. 7, 1962. no. 5283, p. 998-99.) 7 refs.

Notes cases of hypothermia with "no apparent physical or psychological cause;" hypothermia in sub-epileptic fits; hypothalamus likely center of periodic hypothermia; etiology (obscure), and therapy. (DNLM.)

70381. BRITISH NEWFOUNDLAND CORPORATION LIMITED. Ninth annual report for the year ended 31st March 1962. Montreal, 1962. 11 p. map.

Contains the directors' report to shareholders, the consolidated balance sheet, and details of the activities of this company, its associate, the Twin Falls Power Corp. Ltd., and its subsidiary companies, the British Newfoundland Exploration Ltd., Hamilton Falls Power Corp. Ltd., and Southern Newfoundland Power and Development Ltd. By June 1, 1962, the Twin Falls Power Corp. (only) had reached a revenue-earning basis, through hydroelectric power development for iron-mining companies in the Wabush Lake area, Labrador. Plans for future development are outlined. (CaONA.)

70382. BRITISH SCHOOLS EXPLORING SOCIETY. British Schools Exploring Society Arctic Sweden Expedition, 1959. *(Its:* Annual report 1959-1960, p. 17-69, illus.)

Reports by the various project leaders (chief: F. G. Hannell) on this expedition to the Sarek Mts., nearly 70 boys participating. A 160 sq. km. topographic map of the Autsotj valley at scale 1:25,000 was made by the boys; other studies dealt with the natural history of the area, botany, zoology, entomology, geology, ornithology and meteorology. A medical report is added; composition of the "marching rations" is tabulated. (SPRI.)

70383. BRITOV, V. A. O roli ryb i rakoobraznykh v peredache trikhinelleza morskim mlekopitaiushchim. (Zoologicheskiĭ zhurnal, May 1962. t. 41, vyp. 5, p. 776-77.) 6 refs. Text in Russian. Summary in English. **Title tr.:** The role of fishes and crustaceans in transmission of trichinosis to sea mammals.

Notes on this disease among men and animals of the North, and on author's experiments: successful infections of laboratory animals with parasitized crustaceans and fish indicate similar possibilities for marine mammals. (DLC.)

70384. BRIUKHANOV, I. M. O khimicheskom sostave vody burovoĭ skvazhiny ozera Abalakh. (Akademiia nauk SSSR. Sibirskoe otdelenie. Iakutskiĭ filial. Nauchnye soobshcheniia, 1960. vyp. 3, p. 91-93, table.) Text in Russian. **Title tr.:** On the chemical composition of water from a borehole by Lake Abalakh.

Reports on the water flowing into this lake at a rate of 192,000 liter/day, or 8 $m.^3$/hour from a 290 m. borehole made in 1957 on its sloping north shore. Chemical analyses are reported, noting cation and anion determinations, specific weight, temperature, and hydrogen sulfide content. The water is found analogous with that of the Goryachiy spring in the Krasnodar region and considered suitable for therapeutic use. (DLC.)

70385. BRIUKHANOV, V. A. Nash opyt ukladki drevesiny na led. (Lesnaia promyshlennost', Jan. 1961. god 39, no. 1, p. 21, illus.) Text in Russian. **Title tr.:** Our experience with piling timber on ice.

Reports on experiments at piling logs for floating upon the ice itself rather than on the river bank during the winter. The cost is lower; floating begins early and is successful. These ice-landings were tried on the Kan (56°31′N. 93°47′E.) and Kungus Rivers in Krasnoyarsk Province. (DLC.)

70386. BRIUNELLI, B. E. O variatsiiakh magnitnogo polia v sopriazhennykh tochkakh. (Geomagnetizm i aéronomiia, 1962. v. 2, no. 5, p. 933-42, graphs, map.) 15 refs. Text in Russian. **Title tr.:** Variations of the magnetic field at conjugate points.

Compares the variation characteristics of the geomagnetic field observed simultaneously at Mirnyy station in the Antarctic and the drifting station North Pole-6 in the summer of 1959. The records of magnetic variations during May-August revealed simultaneous commencements in the two places. The values of the variation vectors at the stations were found to differ according to the seasonal rate of geomagnetic activity. The degree of the correspondence observed was found to remain substantially the same during night and day hours. (DLC.)

70387. BRIUNELLI, B. E. Políarnye magnitnye vozmushcheniia, obzor. (Geomagnetizm i aéronomiia, 1962. v. 2, no. 5, p. 801-821, graphs, maps, tables.) 78 refs. Text in Russian. **Title**

tr.: Polar magnetic disturbances, a review.

Reviews various theories in explanation of polar magnetic disturbances and their auroral manifestations as presented in publications prior to 1962. Variations in the disturbances and their connection with auroras, their frequency, form, and intensity are discussed. Physical causes of auroras are interpreted as result of charged particles invading the upper atmosphere, as proposed by S.J. Akasofu and S. Chapman in their neutral line theory. The process of formation of polar magnetic disturbances is analyzed and interpreted on the basis of the dynamo-theory of the earth's magnetic field. (DLC.)

BROBECK, JOHN R., *see*

Han, P.W., & J.R. Brobeck. Deficit temp. reg. . . . hypothalamic lesions. 1961. No. 71979

Han, P.W., & J.R. Brobeck. Temp reg. . . . hypothalamic hyperphagia. 1961. No. 71980

70388. BROCHU, MICHEL. Le défi du Nouveau-Québec. Montréal, Les Éditions du Jour, 1962. 156 p. map, tables. Text in French **Title tr.**: The challenge of New Quebec.

Criticizes the present provincial boundary, and federal administration of the Eskimos in the area north of Eastmain River, from field work on Hudson Strait in 1960, and around Fort Chimo 1962. A case is made for the islands in James and Hudson Bays, Hudson Strait, and Ungava (now part of Northwest Territories) being made part of Quebec Province on grounds of proximity and economic ties. Change in the Quebec-Labrador boundary also is suggested: to a line parallel with the Atlantic coast at 10-20 km. inland. Land, sea, and air transport are reviewed: all inadequate. Eskimo administration, education, medical services, and economy are considered (critically) and some suggestions are given: to develop more cooperatives, employ Eskimos in mining developments, etc. (CaOGB.)

70389. BROCHU, MICHEL. Étude statistique sur les stries glaciaires de la region de Fort-Churchill. (Geographical bulletin, Nov. 1962. no. 18, p. 108-111, tables.) Text in French. Summary in English. **Title tr.**: Statistical study of glacial striae in the Fort Churchill region.

Describes some principal characteristics of glacial striae observed on quartzite outcrops about 2 km. east of Fort Churchill, Man. Procedures are outlined; number of striae, length, width, and depth measurements are tabulated. The nearly perfect preservation of these striae indicates the unusual resistance of this type of rock to the work of ice and to chemical weathering. (DGS.)

BROCHU, MICHEL, *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

70390. BROCKAMP, BERNHARD, 1902- . Zur Erfassung des Aggregatzustandes von Moränen und Gletschern. (Polarforschung, Bd. 4, 1959 *pub.* May 1961. Jahrg. 29, Heft 1-2, p. 119-25, graphs.) 16 refs. Text in German. **Title tr.**: On understanding the aggregate conditions of moraines and glaciers.

Glaciers carry surface, subsurface, and ground moraines along with them. The latter consist either of rock material from the edge of the glacier or of material detached from the glacier bed. In its downward creep, the rubble stream warms, so that at a specific heat of 0.25 cal./g., a 0.94°C. temperature differential is developed over 100 m. If the ice is at melting temperature, the heat is used to convert 0.5 cm^3 ice into water. Several methods have been developed for determining moraine conditions: the seismic method is based upon the dependence of longitudinal waves of water, ice and frozen moraines on the prevailing temperature; the electrical method measures the temperature dependence of such materials as ice, rock, gravel, clay, or sand. Since the specific resistance values of these materials are known over a sufficiently large temperature range, conclusions can be drawn on the composition and consistency of a glacier and its moraines. By combining seismic and electric methods it is possible also to determine whether a glacier is underlain by frozen or unfrozen moraines.—From CRREL. (CaMAI.)

70391. BRODOVA, N. S. O vozmozhnosti primeneniia aérometodov dlia poiskov lokal'nykh struktur na iuzhnom sklone Anabarskogo massiva. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy 1961, vyp. 186, Geologicheskii sbornik no. 6, p. 14-22, illus., map.) 7 refs. Text in Russian. **Title tr.**: On the possibility of using aerial methods in exploration of local structures in the southern slope of the Anabar massif.

Explains air photographic procedures, techniques and interpretation in forested areas and those difficult of access. Transfer of data from air photographs to maps is described. Structural map for the Olenek-Markha watershed is sketched showing disjunctive dislocations, trap dikes, flexures, outcrops of traps, outcrops of rocks with oil occurrences, and others. Certain areas are recommended for ground survey. Structural interpretation of areas by means of photogeologic survey is considered valuable and inexpensive. (DLC.)

BRODSKAIA, A. G., *see* Grechishchev, S.E., & A.G. Brodskaia. K . . . szhimaemosti merzlykh gruntov. 1961. No. 71835

BRODY, T. M., *see* Moore, K.E., & *others*. Tissue catecholamine content . . . 1961. No. 74104

70392. BROLIN, TORSTEN. Björkens återupprättade anseende. (Skogsägaren, Oct. 1961. årg. 37, nr. 10, p. 306-307, illus.) Text in Swedish. **Title tr.**: The restored prestige of birch.

Notes demand for Swedish birch and other deciduous woods as both saw timber and pulp; and instructs individual forest owners on sorting into quality groups to improve prices. Plants equipped to process deciduous timber are located chiefly in Norrland coastal areas. Birch should be delivered unbarked and aspen barked. Each birch float should include 15% aspen for buoyancy. (DA.)

BROOKS, ARTHUR M., 1897- , *see* Alaskan

Science Conference. 1961. 1962. No. 69644

BROOKS, CHANDLER McCUSKEY, 1905- , *see* Ushiyama, J., & C. McC. Brooks. Hypothermia . . . 1961. No. 76290

BROOKS, JACK, d. 1961, *see* Crawford, S. Yukon cattle drive. 1962. No. 70851

BROOKS, JAMES WELTON, 1915- , *see* Kenyon, K.W., & J.W. Brooks. Birds Little Diomede . . . 1960. No. 72735

70393. BROOM, BRYAN. Effects of 20 percent carbon dioxide in oxygen, and 25 percent air in oxygen, on the body temperature of the rat during surface cooling. (Nature, Mar. 31, 1962. v. 193, no. 4822, p. 1262-63, table.) 12 refs.

Contains brief review of earlier work with gas mixtures, and of responses to present mixtures at room and low (0° to -4° C.) temperatures, in clipped and not-clipped animals and in cadavers. Rate of cooling and survival under these conditions and at different rates of gas flow is specially emphasized. The effects of pentobarbitone are also considered. (DLC.)

BROSCOE, ANDY J., *see* Barton, R.H., & A.J. Broscoe. Potential stream recapture . . . 1961. No. 70051

70394. BROSGÉ, WILLIAM PETERS, 1921- , *and others.* Paleozoic sequence in eastern Brooks Range, Alaska. (American Association of Petroleum Geologists. Bulletin, Dec. 1962. v. 46, no. 12, p. 2174-98, maps, sections, tables.) 17 refs. *Other authors:* J.T. Dutro, Jr., M.D. Mangus *and* H.N. Reiser.

Summarizes results of geologic field and photo-mapping in a 19,000 sq. mi. area between the Canadian border and the 149°45′W. meridian, comprising most of the eastern Brooks Range north of 67°55′N. Work was carried out in connection with 1945-1952 exploration of U.S. Naval Petroleum Reserve No. 4, also in 1958-1960. Isolated field mapping was combined with aerial reconnaissance to compile a photogeologic map of the entire area, scale 1 in.:50 mi., showing the distribution of the predominantly upper Paleozoic rocks. Correlation chart shows the different sequences in the northern and southern belts. The pre-Mississippian Neruokpuk formation is the oldest in the northern belt, the Devonian Skajit Limestone the oldest recognized in the southern. Mississippian formations occur in both belts; particular attention was paid to the Lisburne Group, including the new Wahoo Limestone. The Permian Siksikpuk shale rests unconformably on Mississippian limestones in two areas near Galbraith Lake, 68°27′N. 149°19′W.; the Permian and Triassic Sadlerochit formation overlies the Wahoo Limestone east of the lake. Unconformities suggest uplift during Late Devonian and folding during the Devonian to early Mississippian time. Deposition may have been uninterrupted through Pennsylvanian time however, in part of the area studied. (DGS.)

70395. BROUILLETTE, BENOÎT, 1904- . Le minerai de fer au Canada, analyse des courants commerciaux. (Actualité économique, Apr.-June 1961. année 37, no. 1, p. 68-104, maps, tables, graph.) Refs. Text in French. **Title tr.:** Iron ores in Canada, analysis of commercial trends.

Analyzes and compares the 1952 and 1959 patterns of production and transportation of ores, and their distribution: for domestic use, export, import. Production and developments in northern Quebec and Labrador are described: the Iron Ore Co. of Canada projects at Schefferville and Wabush Lake; the Quebec Cartier at Lake Jeannine and in the Mt. Reed-Mt. Wright areas; and the Wabush Iron Co. east of Wabush Lake. Over 14,000,000 short tons of ore were shipped out in 1959 via the Quebec North Shore and Labrador Railway. (DLC.)

70396. BROWN, C. J. The geology of the Flat River tungsten deposits, Canada Tungsten Mining Corporation Limited. (Canadian mining and metallurgical bulletin, July 1961. v. 54, no. 591, p. 510-13, sections, table.) 5 refs.

Describes general geology of the area approx. 61°30′N. 127°W. in Mackenzie District, structure, mineralogy and genesis of the main ore body. Proven reserves of 1.32 million tons of ore containing 2.51% WO_3 are available in the company's Flat River claims. (DGS.)

BROWN, CARLOS T., *see* Aalskan Science Conference 1960. 1961. No. 69643

70397. BROWN, G. M. Co-existing pyroxenes in igneous assemblages: a re-evaluation of the existing data on tie-line orientations. (Geological magazine, July-Aug. 1961. v.98, no. 4, p. 333-43, diagr., table.) 15 refs.

Presents tie-line data for 12 analyzed igneous pyroxene pairs, including four from the Skaergaard intrusion of East Greenland; it is demonstrated that a precise point of intersection at, or close to Wo_{75} En_{25} in the ternary diagram, does not exist. The tie-lines for metamorphic pyroxenes are compared with the igneous, and are shown to intersect over a similarly wide range, the average (Ca_{82} Mg_{18}) being the same for both assemblages. Genesis of the pyroxene assemblage cannot be elucidated by the assumption of a characteristic tie-line intersection point, nor are optical determinations of value.—From author's abstract. (DGS.)

70398. BROWN, GORDON V. Arctic ASW. (U.S. Naval Institute. Proceedings, Mar. 1962. v. 88, no. 3, p. 53-57, illus.)

Suggests measures for curtailing the mobility of Soviet nuclear-powered submarines in arctic seas in case of war. Small nuclear-powered "killer" submarines would provide the best defense; they should carry homing torpedoes and be aided in their search by aircraft. Nets should be considered to prevent hostile submarines from entering Hudson Bay. The establishment of a NATO anti-submarine defense group is proposed. (DLC.)

BROWN, J., *see* Forrester, R. C., & J. Brown. Predict. oesophageal temp. hypothermia. 1961. No. 71463

BROWN, JAMES HARALD, 1922- , *see* Alaskan Science Conference 1961. 1962.

No. 69644

Kingery, W.D. . . . Project Ice Way. 1962. No. 72796

70399. BROWN, JERRY, *and others.* Mineral composition of some drainage waters from arctic Alaska. (Journal of geophysical research, June 1962. v. 67, no. 6, p. 2447-53, tables, map.) 6 refs. *Other authors:* C. L. Grant, F. C. Ugolini, *and* J.C.F. Tedrow.

Analyzes the chemical and trace element compositions of 39 samples obtained in summers of 1959 and 1960 from streams, lakes, and seepage areas. Columns of synthetic ion-exchange resin were used for sampling. Results are tabulated. For the elements Na, K, Mg, Ca, Sr, and Ba, an average recovery of 96% was realized, but recoveries were low for most trace elements (Fe, Al, Cu, Mn, Pb, Ga, Cd, Co, Zn). Results for major cations followed closely the lithology of the sample area. Details are given of the sampling and analytical procedures. (DLC.)

BROWN, JERRY, *see also* Tedrow, J.C.F., & J. Brown. Soils . . . at high arctic altitudes. 1962. No. 76095

70400. BROWN, MALCOLM, 1916– Man in the North. (*In:* Royal Society of Canada. Canadian population . . . symposium, 1962, p.136-47.) Refs.

Discusses limitations imposed on man by cold climate; cold acclimation, its physiology and biochemistry; acclimation in Eskimos and whites; local adaptation to cold; shelter and clothing; morbidity and mortality; psychology. (DLC.)

70401. BROWN, R. G. B. The aggressive and distraction behaviour of the western sandpiper *Ereunetes mauri.* (Ibis, Jan. 1962, v.104, no.1, p.1-12, illus., tables.) 20 refs.

Describes the breeding biology and the aggressive and distractive behavior of this bird from observations in the Hooper Bay area of western Alaska during the summer of 1960. The motivation of the distraction displays is analyzed in detail and attributed to the attack and escape tendencies; the brooding tendency is not primarily involved. The function of these displays is discussed in relation to human and other predators. (CaONM.)

70402. BROWN, ROBERT R., *and* **W. H. CAMPBELL.** An auroral-zone electron precipitation event and its relationship to a magnetic bay. (Journal of geophysical research, Apr. 1962. v.67, no.4, p.1357-66, table, graphs.) 4 refs.

Examines the relationship on the basis of simultaneous observations in Alaska (mostly at College) of X ray intensity at balloon altitudes, ionospheric absorption of cosmic noise, geomagnetic micropulsations in the 5-30 sec. period range, and variations in *H, D,* and *Z.* The analysis shows that an intense electron bombardment of the upper atmosphere was in progress prior to the bay and suggests that the current system of the bay was triggered by the sudden intensification and expansion of the electron precipitation. The motion of the current system of the westward electrojet and the electrons precipitating on the atmosphere was toward the north, indicating that processes well out of the lines of force through the auroral zone were responsible for the movement. From authors' abstract. (DLC.)

70403. BROWN, ROBERT R. Balloon observations of auroral-zone X-rays. (Journal of geophysical research, May 1961, v.66, no.5, p.1379-88, tables, graphs.) 5 refs.

A series of balloon flights launched from the vicinity of College, Alaska, during June-July 1960 show that X rays are detectable with Geiger counters approx. 10% of the time at pressure altitudes of 10-15 mb. The indicated daily flux of electrons with energies greater than 50 kev. is 6×10^{10} particles/cm^2. Late in a magnetic storm with a sudden commencement at 1701 UT on July 14, 1960, the average electron influx exceeded the daily rate by more than a factor of 25. —From author's abstract. (DLC.)

70404. BROWN, ROBERT R. Large-scale electron bombardment of the atmosphere at sudden commencement of a geomagnetic storm. (*In:* International Conference on Cosmic Rays and the Earth Storm, 1961. Proceedings *pub.* 1962, v.1, p.92.)

Reports that in the storm of June 27, 1960, at 0146 *U T,* this bombardment lasted about five minutes during which $3\text{-}9 \times 10^9$ electrons with energy greater than 50 Kev hit one square centimeter of the atmosphere. It caused a brief increase of ionospheric absorption of cosmic radio noise as observed by riometers in Alaska, Sweden, and Norway, and by a balloon-borne radiation detector of X-ray over central Alaska. The riometers at Thule and Resolute Bay did not show the increased ionospheric absorption due to the ionizing effect of the bombarding electrons at the time of the sudden commencement, indicating that the bombardment was confined to the vicinity of the auroral zone. (DLC.)

70405. BROWN, ROBERT R., *and others.* Large-scale electron bombardment of the atmosphere at the sudden commencement of a geomagnetic storm. (Journal of geophysical research, Apr. 1961. v.66, no.4, p.1035-41, table, graphs, diagrs.) 10 refs. *Other authors:* T.R. Hartz, B. Landmark, H. Leinbach, *and* J. Ortner.

Reports observation of a burst of X rays at balloon altitude at College, Alaska, with the onset of a sudden commencement geomagnetic storm at 0146 UT on June 27, 1960. The electron bombardment of the upper atmosphere that gave rise to the X ray occurred on a large scale, as evidenced by riometer records from Alaska, Sweden (Kiruna), and Norway (Alta, Harstad). (DLC.)

70406. BROWN, ROBERT R. West-east motion of an auroral-zone X-ray event. (Journal of geophysical research, Jan. 1962, v.67, no.1, p.31-35, table, diagrs.) 11 refs.

Describes and analyzes balloon-flight and riometer observations of an X-ray event at College, Alaska, June 22-23, 1961. Time delays between X-ray bursts at balloon altitude and increases in ionospheric absorption of cosmic radio noise indicate west-east velocity components of 200-300 m./sec. (DLC.)

BROWN, ROBERT R., *see also* Ortner, J., & *others.* SCNA & geomag. storm. 1962. No. 74545

70407. BROWN, ROGER JAMES EVAN, 1931– Potential evapotranspiration and evaporation observations at Norman Wells, N.W.T. (National Research Council of Canada. Proceedings of Hydrology Symposium no.2, Evaporation, 1961. p.123-27, graph, table.) 2 refs.

Describes sites, instrumentation, and procedures carried out for the Ontario Research Foundation in 1949 and 1955-, and from 1958 for the National Research Council of Canada. The field measurements and the computed Thornthwaite P.E. for 80 days, June 30 - Sept. 17, 1960, showed inconsistent results; possible causes are suggested as sprinkling of water on the surface, and difference in wind speed. P.E. rates appear to be higher through the Kentucky bluegrass at one site than through the sedge, moss and lichen at the other sites. In addition to meteorological factors, physiological, radiational and thermal properties of such plant materials as moss and lichen may help determine the contribution of evapotranspiration to the energy exchange of permafrost. (DLC.)

70408. BROWN, ROGER JAMES EVAN, 1931– A review of permafrost investigations in Canada. (Canadian geographer, winter 1962. v.6, no.3-4, p.162-65.) 14 refs.

Outlines the progress of research since construction of the Alaska Highway and the Canol Project drew attention to problems of permafrost. Activities of the National Research Council of Canada's Division of Building Research are noted, its research station at Norman Wells established in 1952, collection of permafrost distribution data, study of engineering facilities at Inuvik since 1954, construction problems at the Kelsey hydroelectric plant 1958, and at Thompson 1960, its development of drilling and sampling techniques and of thermocouples, etc. Seven other Canadian agencies involved in permafrost research are noted, also the First Canadian Conference on Permafrost in Apr. 1962, attended by 160 delegates. (DGS.)

BROWN, ROGER JAMES EVAN, 1931– , *see also* Leggett, R.F., & *others*. Permafrost invest. Can. 1961. No. 73391

70409. BROWN, S. G. Observasjoner av grindhval *Globicephala* i Nord-Atlanteren. Observations of pilot whales *Globicephala* in the North Atlantic Ocean. (Norsk hvalfangst-tidende, June 1961. årg. 50, nr. 6, p.225-26, 228-30, 233-54, map, tables,) 24 refs. Text in Norwegian and English.

Reports observations from ocean weather ships, merchant vessels and others on the seasonal distribution and range of this species. It occurs throughout the year in the North Atlantic approx. 45 - 50 N. and probably from the Bay of Biscay to Newfoundland. Schools of less-than-ten to about two hundred are recorded, and other species have been noted accompanying the schools. The behavior of the whales towards vessels shows no definite pattern; some types are similar to that of captive pilot whales, particularly taking a vertical position in the water with head and neck above the surface. (DLC.)

BROWNING, K. M., *see* Gemmill, C.L., & K.M. Browning, Effects of pentobarbital . . . 1962. No. 71626

70410. BROWNING, LEVI. Five years of medical observations in the colonies of the Russian-American Company, by staff physician Romanovsky and Dr. Frankenhauser, 1-2. (Alaska medicine, June, Sept. 1962. v.4, no.2, p.33-37; no.3, p.62-64; illus., tables.)

Diseases prevalent at various seasons are discussed by Romanovskii, the causes usually given are weather and winds, also overeating or consumption of unripe berries. Considerable space is devoted to "parotitis" and syphilis, their incidence, symptoms and treatment. Small-pox vaccination is also reported. In pt. 2 rheumatic diseases are described, and in greater detail "syphilis", its incidence and measures against it. Small-pox vaccination, hospitalized patients, surgical cases, vital statistics, etc. are also considered. (CaMAI.)

70411. BRUCE, DONALD DALE. Developments in Alaska in 1960. (American Association of Petroleum Geologists. Bulletin, June 1961. v.45, no.6, p.993-98, maps, tables.) Refs.

Petroleum exploratory and development drilling operations increased during the year; surface mapping and geophysical activities decreased. Active wells numbered 31, as compared with 20 in 1959. Eighteen oil companies had surface parties in the field, six of them in the Cook Inlet area. (DGS.)

70412. BRUDIN, I. D. Biometeorologiia. (Priroda, Apr. 1961. god 50, no.4, p.23-30, illus.) 5 refs. Text in Russian. **Title tr.:** Bio-meteorology.

Defines bio-meteorology as the science of the effect of atmospheric (physical) factors on biological activity. Response of birds to weather changes is described; migration, including wild geese and ducks, and bird vocalization generally are considered. Response of aquatic animals to weather; and that of plants are discussed, also biological responses in weather prognosis. (DLC.)

70413. BRÜCK, KURT, *and* **M. BRÜCK.** Der Energieumsatz hypotermer Frühgeborener. (Pflügers Archiv für die gesamte Physiologie, 1960. Bd. 272, Heft 1, p.27-28.) 2 refs. Text in German. **Title tr.:** Energy metabolism in hypothermic prematures.

Premature, 1-2 day-old babies brought in a hypothermic condition to the hospital, showed, up to a body temperature of 32°C., an increased metabolism, when compared with minimal values of normothermic controls. During the rewarming (at 32-34°C.) energy metabolism dropped. Concepts on the thermoregulation at this age, are discussed. (DLC.)

BRÜCK, MONICA, *see* Brück, K., & M. Brück. Der Energieumsatz . . . 1960. No. 70413

BRUEVICH, S. V., *see* Pacific Science Congress. 1961. No. 74619

70414. BRUK, S. I., *and* **V. I. KOZLOV.** Naselenie zemnogo shara; osnovnye ėtno-demograficheskie pokazateli. (Sovetskaia ėtnografiia, May-June 1962, no.3, p.160-77, tables.) Refs. Text in Russian. **Title tr.:** World population; basic ethnic

and demographic indices.

Statistical study of population density, fluctuation and migration, ethnic and linguistic stocks, etc. Absolute figures and percentage of total world population are given for, among others, The Ugrian language group (13,500,000; 0.4%), Samoyed (30,000), Tungus-Manchu (3,050,000; 0.1%), Yeniseian (1,000), Paleosiberian (20,000), Eskimo-Aleut (60,000). Ethnically, the Baykal and arctic races form part of the Siberian branch of the great Mongoloid race which also includes the Amerindian branch (Indians, Eskimos). The Lapponoids were formed by ancient mixing of the great Europoid and Mongoloid races. (DLC.)

70415. BRUK, S. I., *and* **V. I. KOZLOV.** Osnovnye problemy ėtnicheskoĭ kartografii. (Sovetskaia ėtnografiia, Sept.-Oct. 1961, no.5, p.9-26.) Refs. Text in Russian. Summary in English. **Title tr.:** Basic problems of ethnic cartography.

Discusses mapping techniques and methods of classifying ethnic groups: territorial, economic, cultural, racial, linguistic, etc., especially in an area with population of diverse origin. An ethnic-territorial division is favored; its weakness for a numerically small people occupying a vast territory, e.g. Eskimos, Evenki Tungus, can be overcome by spacing the hachures to indicate population density. (DLC.)

70416. BRUMMER, J. J., *and* **E. L. MANN.** Geology of the Seal Lake area, Labrador. (Geological Society of America. Bulletin, Sept. 1961. v.72, no.9, p.1361-82, plates, tables, maps & sections incl. fold.) 11 refs.

Reports especially the copper mineralization of the Seal Lake syncline in central Labrador. Copper occurrences, associated only with the upper flows and sills of the thick sequence of mafic and sedimentary rocks, were found to be of no economic value during detailed investigations, 1950-1956. The rocks including the Precambrian Seal Lake group, and underlying Letitia Lake group and granite-anorthosite complex, are mapped and described; the physiography, metamorphism, and geological history are outlined. Low grade niobium-thorium-rare earth deposits occur in the southwest part of the area. (DGS.)

70417. BRUN, ESKE, 1904– . Grønland under sidste krig. (Atuagagdliutit: Grønlandsposten, Jan. 1, 1961. Ukiut 101-iat, nr. 1, p.8,+.) Text in Danish and Eskimo. **Title tr.:** Greenland during the second world war.

Administrator describes measures which enabled maintenance of living standards, especially supply services from the United States. The setting up of the American bases and of the northeast Greenland sledge patrols is mentioned. (SPRI.)

BRUN, ESKE, 1904– , *see* Denmark. Greenland. 1961. No. 70974

BRUNDAGE, ARTHUR L., *see* Sweetman, W.J., & A.L. Brundage. Forage crops Alaska . . . 1960. No. 76049

70418. BRUNE, JAMES N. Correction of initial phase measurements for the Southeast Alaska earthquake of July 10, 1958, and for certain nuclear explosions. (Journal of geophysical research, Aug. 1962. v.67, no.9, p.3643-44, diagrs.) 11 refs. Columbia University Lamont Geological Observatory. Contribution 557.

The corrected values of the amplitude and initial phase for this earthquake (cf. No. 68480, 68756) are given in a diagram, and the initial phase measurements given in No. 63656 and elsewhere are revised because of an error of π in correcting for the instrumental phase shift. (DLC.)

70419. BRUNE, JAMES N. Radiation pattern of Rayleigh waves from the Southeast Alaska earthquake of July 10, 1958. (Canada. Dominion Observatories; Publications of the Dominion Observatory, Ottawa, 1961. v.24, no.10, p.373-83, graphs, tables.) 20 refs. Paper presented at the Symposium on Earthquakes Mechanism, Helsinki, 1960. *Also issued as:* Columbia University. Lamont Geological Observatory, contribution no. 478.

Long-period Rayleigh wave data obtained during the IGY are used to measure the initial phases and amplitudes of Rayleigh waves as a function of azimuth for the Mt. Fairweather earthquake. A simple relation is indicated between the radiation pattern and the fault motion, with four sectors of initial phase and a four-lobed pattern of amplitudes. (DLC.)

BRUUN, B., *see* Padget, P., & *others*. Geochem. prospecting Norw. 1960. No. 74620

70420. BRUUN DE NEERGAARD, HELGA. Den unge grønlaenderinde idag. (Grønland, June 1961, nr. 6, p.211-15, illus.) Text in Danish. **Title tr.:** The young Greenland woman today.

Points to lack of opportunitites for further training, and recommends extension of the domestic science school studies, more opportunities for training in Denmark, and apprenticeship in law for Greenland with required attendance at evening classes. (CaMAI.)

BRYANT, D. A., *see* Ogilvie, K.W., & *others*. Rocket observations . . . 1962. No. 74477

BRYN, KNUT ØRN, *see* Neumann, H., & K.Ø. Bryn. X-ray patterns mineral . . . 1958. No. 74307

70421. BRYSON, REID ALLEN, 1920– , *and* **P. M. KUHN.** Some regional heat budget values for northern Canada. (Geographical bulletin, May 1962. no.17, p. 57-65, graph, tables.) 9 refs.

Estimates heat budget data for climatological purposes as revealed by modification of a column of air moving over the surface. Using both mean monthly and daily upper air and surface data for northern Canada, a regional Bowen ratio is computed from an aerological energy budget approach. Elsasser radiation computations are made from the mean soundings, the net heat added (or lost) in the column is computed, evaporation is estimated, and finally, the Bowen ratio and the complete heat budget are evaluated from the "climatological" soundings and trajectories according to the residual equation $L_o = R\mu S - E_o$. where L_o is the convective heat transfer at the interface, R is the albedo of the surface, S is the subsurface heat storage, E_o is the evaporation. (DGS.)

BRYSON, REID ALLEN, 1920– , *see also*

Sabbagh, M.E. & R.A. Bryson. Aspects of the precipitation . . . 1962. No. 75307

Sabbagh, M.E., & R.A. Bryson. Objective precipitation climatology . . . 1962. No. 75308

70422. BRYZGALOV, L. Svet kul'tury nad Maklakovom. (Master lesa, Jan. 1962. god 6, no.1, p. 26, illus.) Text in Russian. **Title tr.:** The light of culture over Maklakovo.

Describes activities of the House of Culture at Maklakovo, a lumbering combine center on the Yenisey River in Krasnoyarsk Province: its permanent exhibit on the lumbering industry, its classes with over 100 students, mostly workers, its musical and dramatic performances, etc. (DLC.)

70423. BUBÎAKIN, A. A. Opredelenie diametra ballera rulîa ledokolov i sudov ledovogo plavaniîa. (Sudostroenie, Dec. 1962. god 28, no.12, p. 13-15, graph, tables.) 8 refs. Text in Russian. **Title tr.:** Calculation of the diameter of the rudder stock of icebreakers and ships for ice navigation.

Discusses the force of the bending stress of ice on the rotating rudder stock and ways to eliminate this source of ship disablement. Correct rudder stock diameters, best suited to withstand ice stress are calculated for different types of icebreakers and other vessels. (DLC.)

70424. BUCH, DAN, *and* **H. ØLGÅRD.** Byggeri i Grønland, specielt med henblik på betonarbejder . . . Building activity in Greenland with special reference to concrete work.

English translation by H.A.G. Nathan of No. 57143 pub. by the National Research Council of Canada, as its Technical translation no. 1020, 1962. 39 p., illus., diagr. (CaONA–translation only.)

70425. BUCHWALD, N. FABRITIUS, *and others.* List of parasitical fungi and hosts of such fungi. Denmark, Finland, Norway, Sweden; 1, *Pinus, Populus, Quercus.* (Norway, Norske skogforsøksvesen. Meddelelser, 1961. bd. 17, hefte 1, (nr.59), p. 1-36.) *Other authors:* V.V. Kujala, F. Roll-Hansen, E. Björkman, *and* A. Käärik.

Lists fungus species which cause disease in pine, poplar and oak; for each is stated trees attacked in North and/or South Norway, Sweden and Finland, Denmark; degree of danger to the tree is indicated by symbol. In part 2, host trees are listed by citing the fungus species which attack it, and broad locality. (DA.)

70426. BUCHWALD, VAGN, *and* **H. SØRENSEN.** An autoradiographic examination of rocks and minerals from the Ilímaussaq batholith, south west Greenland. København, 1961. 35 p. 4 plates, tables, map, diagr. (Meddelelser om Grønland, bd. 162, nr. 11.) 21 refs.

Reports on the examination of this rock complex since 1956: radioactivity of the rocks increases from the early naujaite to the later lujavrite and hydrothermal veins. Radioactive minerals are eudialyte, steenstrupine, monazite, britholite, and possibly thorite. The radioactivity of several types of steenstrupine in the lujavrites and hydrothermal veins varies from rather weak to strong; the weakly radioactive grains being anisotropic and the others isotropic. The crystals may be zoned with isotropic, strongly radioactive central parts and anisotropic, weakly radioactive marginal zones. The cause of this distribution is discussed.—From author's abstract. (DGS.)

70427. BUCHWALD, VAGN. The iron meteorite "Thule," North Greenland. (Geochimica et cosmochimica acta, Sept. 1961. v.25, no.2, p. 95-98, graphs & illus. on plates.) 6 refs.

Describes a 48.6 kg. siderite found in 1955 on a nunatak near Thule. It is classified as a medium octahedrite with 8.13% Ni and other normal constituents. Micro-hardness of the phases is given. Examination of the well-preserved crust indicated heat ablation of about 1.6 mm./sec. during passage through the atmosphere. (DLC.)

70428. BUCK, W. KEITH, *and* **J. F. HENDERSON.** The rôle of mineral resources in the development and colonization of northern Canada. (*In:* Royal Society of Canada. Canadian population . . . symposium, 1962, p. 73-117, map, graphs, tables) Refs.

Outlines northern mineral distribution, and discusses the economic aspects of mineral development in the Yukon and Northwest Territories. Territorial production by five companies, and probable developments of lead and zinc at Pine Point, tungsten at Flat River, Mackenzie District, oil and gas on the mainland and Arctic Islands, and iron in the Hudson Bay region are considered, also market demand and production costs. Approx. $4.75 per ton should be added to costs because of special problems (discussed) of transportation, power, labor, heating, capital investment, and supplies. Effects of mineral development in fostering permanent settlement are considered negligible. (DLC.)

BUCK, W. KEITH, *see also* National Northern Development Conference. 1961. No. 74224

70429. BUCKINGHAM, WILLIAM J. The Logan Mountains, 1960. (American alpine journal, 1961. v.12, no.2, issue 35, p. 306-318, illus.) Ref.

Recounts climbing activities of a four-man party in July-Aug. 1960, in southwestern Mackenzie District between the headwaters of the South Nahanni and Frances Rivers, mostly the Brintnell Lake area. Three earlier expeditions there are noted; about 18 first ascents were made by the Buckingham party; most major peaks in the vicinity have now been climbed, although numerous routes are still unexplored. (DLC.)

70430. BUCKSAR, RICHARD G. The frontiers recede, a brief history of transportation in the Canadian Northwest. (North, Nov.-Dec. 1961. v.8, no.6, p. 16-23, illus.)

Deals with transportation needs and facilities during eight stages in development of this area from 1792 to 1960. The earliest methods of travel by foot and boat, introduction of dogs and horses during the gold rush era, and completion of the White Pass and Yukon Railways in 1900 are outlined as is construction of the Alaska Highway during World War II. (DLC.)

70431. BUDANOV, V. I., *and others.* O priznakakh sovremennykh vertikal'nykh dvizheniĭ beregov dal'nevostochnykh morei. (*In:* Vsesoîûznoe soveshchanie po izucheniîû chetvertichnogo perioda. Materialy . . . 1961, t.1, p.143-59, illus., map, profiles.) 43 refs. Text in Russian. *Other authors:* A.T. Vladimirov, A.S. Ionin, P.A. Kaplin, *and* V.S. Medvedev. **Title tr.:** On signs of contemporary vertical movements of shores of the Far-Eastern seas.

Reports study of the Chukchi, Bering, Okhotsk and Japanese seashores. Areas of relatively sub-

mergent, emergent, and stable coast are delineated on the chart. Each type of coast is analyzed, and the rate of vertical movement outlined. Methods are discussed for determining these movements. (DLC.)

70432. BUDANOV, V. I., *and others.* Present-day vertical movements of the Far Eastern seacoasts of the USSR. (Pacific Science Congress, 9th. *Bangkok, Thailand,* 1957. Proceedings *pub.* 1961. v.12, geology and geophysics, p.42-48, map, diagrs.) 17 refs. *Other authors:* A.S. Ionin, P.A. Kaplin, V.S. Medvedev, *and* A.T. Vladimirov. Presented at a symposium on nature, location, and origin of the Circum-Pacific continental margin.

Reports investigations (cf. No. 49977 and 49978) of movements of the Chukchi, Bering and Okhotsk seacoasts. From the relative heights of old and new beach ridges, and from characteristic geomorphic features, evidence is presented of rising, subsiding, and stable coastal regions (mapped) in Kamchatka Poluostrov and Magadanskaya Oblast. The speed of these vertical displacements differs regionally. (DI.)

70433. BUDANTSEV, L. IU., *and* I. N. SVESHNIKOVA. Novye paleobotanicheskie nakhodki na Zapadnom Shpitsbergene. (Akademiia nauk SSSR. Doklady, Mar. 11, 1961. t.137, no.2, p.377-79, map.) 5 refs. Text in Russian. **Title tr.:** New paleobotanical finds in Vestspitsbergen.

Reports on Carboniferous, Lower Cretaceous and Tertiary fossil flora as collected in 1959 at 11 sites, including Pyramiden, Grumant, Barentsburg. Taxodiaceae, Cupressaceae, Betulaceae, Tiliaceae, and others are represented. (DLC.)

BUDASHEVA, ANNA IL'INISHNA, 1926– , *see* Voloshimova, N.A., *and* A.I. Budasheva. Lituolidy . . . 1961. No. 76427

70434. BUDD, G. M. Acclimatization to cold in Antarctica as shown by rectal temperature response to standard cold stress. (Nature, Mar. 3, 1962. v.193, no. 4818, p.886, illus.) 7 refs.

Reports on skin and rectal temperature reactions of four men exposed to a standard cold stress, before, during and after a year's sojourn in the Antarctic. The results indicate that acclimatization enhances man's ability to maintain core temperature. (DLC.)

70435. BUDINA, L. P. Serye lesnye dlitel'nosezonno-merzlotnye pochvy so vtorym gumusovym gorizontom Krasnoiarskogo kraia. (Pochvovedenie, Dec. 1961, no.12, p.29-39, tables.) 21 refs. Text in Russian. Summary in English. **Title tr.:** Gray forest soils of prolonged seasonal freezing with a second humus horizon in the Krasnoyarsk region.

Describes formation conditions, chemical properties and occurrence of the second horizon of these soils, studied at 57°-58°N. 91°-93°E. on the left bank of the Yenisey. They form under extreme continental conditions with long severe winter and a short frost-free period. Their chemical properties are: weak acidity, a rather high degree of base saturation, and a constant clay content throughout the profile. Second humus horizon is considered to be a relic from previous soils. (DLC.)

70436. BUDYKO, MIKHAIL IVANOVICH, 1920– . O termicheskoĭ zonal'nosti Zemli. (Meteorologiia i gidrologiia, Nov. 1961, no.11, p.7-14.) 9 refs. Text in Russian. **Title tr.:** The temperature zonality of the earth.

Challenges the concept of the climatic thermal zones, hot, moderate, and cold, as due to the difference in mean height of the sun over the horizon in these zones. From study of the radiation and thermal balance of the earth, it can be shown that during May-July, the total radiation per unit area of the horizontal surface in the region of the North Pole is higher than the total radiation on the Equator, because of the long polar day. Considering that temperature on the Equator changes but little when the ice regime in the Arctic changes, the author shows that, in absence of polar ice, the air and water temperature in the Central Arctic should be 10-20°C. in summer, and 5-10°C. in winter. By using the formula

$$\sqrt[4]{\frac{I(1-\alpha)}{4\sigma}}$$

(with I the solar constant, α albedo of a dry snow crust, and σ the Stefan-Boltzmann constant), the mean temperature of the earth covered completely with a dry snow crust, causing a transparent atmosphere, should be -87°C. It is also shown that the variations of mean height of the sun in different latitudes are not the only cause for thermal zonality in the Northern Hemisphere. The observed zonality originated during the glaciation period, and is maintained by the still existing ice crust of the Arctic which lowers the middle-latitude temperature considerably. Present-day thermal zonality was preceded by a generally dry climate over the entire earth which had a weakly expressed thermal zonality that existed for a longer geologic period than the periods of glaciation, intermittently with longer dry periods. The presently existing ice crust of the Arctic is considered to be unstable; it may disappear in a geologically short time, when a meteorological period without climatic zones would prevail. A sequence of explosive volcanic eruptions may reverse this dry situation: screening the earth's surface from the insulation by a great amount of dust injected into the stratosphere, and making a stable ice sheet cover the entire earth. (DLC.)

BUDZINSKI, E., *see* McDiarmid, I.B., *and others.* Direct measurement of charged particles . . . 1961. No. 73682

70437. BÜDEL, JULIUS. Glaziologische Arbeiten der Deutschen Spitzbergen-Expedition 1959. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.253-55.) Text in German. Summary in English. **Title tr.:** Glaciological investigations of the German Spitsbergen-Expedition 1959.

Summarizes results of a month's research in July-Aug. 1959, on permafrost, solifluction phenomena, etc. on Barents Island, in preparation for the main expedition in 1960. (DWB.)

70438. BÜDEL, JULIUS. Zu Fridtjof Nansens hundertstem Geburtstag. (Geographische Rundschau, Dec. 1961. Jahrg. 13, No. 12, p.465-70.) Text in German. **Title tr.:** Fridtjof Nansen centenary.

Reviews the main activities of this Norwegian explorer, statesman and humanitarian. (DLC.)

70439. BUEN, HELGE. *Sphagnum riparium* in Norway. (Nytt magasin for botanikk, 1961. v.9, p.25-31, illus., tables, map.) 10 refs.

Discusses earlier descriptions of this peatmoss, habitats, form of stem-leaves and branch-leaves, pores of branch leaves. The plant is common in Norway, to the northernmost areas. (DLC.)

70440. **BÜTLER, HEINRICH.** Continental Carboniferous and Lower Permian in central East Greenland. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.208-213, map.) Ref.

Summarizes the more important work from 1911, much of it by the Lauge Koch expeditions since 1947, on the distribution, lithological characteristics, position, and stratigraphy of these predominantly coarse-clastic continental, Upper Carboniferous and Lower Permian deposits; they are found in a 370-km. long coastal belt, approx. 71° 15′-74°20′N. The belt is broadest (30 km.) on Traill Ø.; to the west, it is generally bounded by faults. Absence of intraformational angular unconformities indicates a period of uninterrupted subsidence. Unsolved problems are the Devonian-Carboniferous boundary, and Carboniferous-Permian boundary. (DLC.)

70441. **BÜTLER, HEINRICH.** Devonian deposits of central East Greenland. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.188-96, table.) Refs.

Summarizes the stratigraphy of this 300-km. long, 5600 sq. km. zone extending with interruptions from 71°30′ to 74°15′N. along the East Greenland fjord region, based on author's work on L. Koch's expeditions from 1947. In this zone, continental Devonian rocks interstratified with volcanites overlie Caledonian-folded formations; the sequence of beds 7000-8000 m. thick constitutes the upper part of the Middle Devonian and the entire Upper Devonian; it is called the East Greenland Old Red Sandstone. Five series are identified in the northern part of the zone, Hudson Land; these were the result of late Caledonian orogenic phases which activated the older Caledonian mountain structure. The five are separated by marked angular unconformities and basal conglomerates. Neither the beginning of Middle Devonian, nor the end of Upper Devonian deposition has been determined. (DLC.)

70442. **BUGGE, AAGE, 1896–** . Ved Jonathan Petersens død. (Grønland, Dec. 1961, nr. 12, p. 469-71, port.) Text in Danish. **Title tr.:** On Jonathan Petersen's death.

Obituary of this Greenland organist and teacher, 1881–1961, active as composer of hymns and songs, including the Greenland national anthem, also, as poet, translator and writer of textbooks. His poetry is strongly influenced by Danish literature and he served as an intermediary between the two cultures. (CaMAI.)

70443. **BUKANOV, V. V.** Apatit iz zhil al'piĭskogo tipa na Pripoliarnom Urale. (Vsesoiuznoe mineralogicheskoe obshchestvo. Zapiski 1961. ser. 2, chast' 90, vyp.5, p.591-98, illus., tables.) 22 refs. Text in Russian. **Title tr.:** The apatite of the Alpine-type veins in the Subpolar Ural.

Presents a crystallographic and mineralogic description of apatite found in the mountain crystal veins of Subpolar Ural. Chemical composition, X-ray analysis, forms and optical properties of apatite crystals are reported and data tabulated. (DLC.)

70444. **BUKHMENOV, V.** Podlednyĭ lov ondatry. (Sel'skoe khoziaĭstvo Sibiri, Mar. 1962. god 7, no.3, p.86, illus.) Text in Russian. **Title tr.:** Trapping muskrat under the ice.

Describes the device invented and used in the Khanty-Mansi National District. Holes are made through the river ice, which attract the muskrats, abundant on the lower Ob; and traps are set at the lower opening under the water. (DLC.)

70445. **BUKS, I. I.** Vozmozhnosti ispol'zovaniia osobennostei rastitel'nogo pokrova pri geologicheskom kartirovanii v usloviiakh IAkutskogo Zapoliar'ia. (Moskva. Universitet. Vestnik, ser. 5, geografiia, Nov.-Dec. 1961, no.6, p.48-53.) Text in Russian. **Title tr.:** Possibilities for the use of vegetation features in geologic mapping under conditions of Yakutia, above the Polar Circle.

Reports an aerial-geologic survey carried out during 1957-1960 in the Olenek-Lena interfluve at 68°-70°N. A geobotanic method was used for geologic mapping as the vegetation cover is undisturbed by man's activity and each lithologic variety of rock is covered by specific vegetation, which appears clearly on air photographs. Vegetation is closely related to soil, and soil, if residual, reveals the underlying bedrock. Examples are presented of how the vegetation reveals Cambrian limestones, thermokarst relief forms, Jurassic rocks, kimberlite bodies, and other geologic features of the area. (DLC.)

BULAEVSKIĬ, D. S., *see* Flerov, B.L., *and others.* Osobennosti . . . svintsovo-tsinkovogo orudeneniia . . . 1962. No. 71441

70446. **BULAKH, A. G.** Èksplozivnye brekchii Tur'ego poluostrova i vozrast terskoĭ svity peschanikov; Kol'skiĭ poluostrov. (Izvestiia vysshikh uchebnykh zavedeniĭ. Geologiia i razvedka, Mar. 1962. god 5, no.3, p.44-53, illus.) 16 refs. Text in Russian. **Title tr.:** Explosive breccias of the Turiy Peninsula and age of the Terskiy series of sandstones, Kola Peninsula.

Reports a detailed study of "intraformational conglomerates" in the Turiy Peninsula in 1956-1958, with conclusion that they are explosive breccias. They are deposited in sandstones, and are 0.5-15 m. thick, 3-70 m. in length. They consist of sandstone, pyroxenites, granodiorites and porphyry rocks. Deposition, morphology, composition and other features are described and origin discussed. Stratigraphy and age of the Terskiy sandstone series is evaluated and considered to be Jotnian. (DLC.)

BULAKH, A. G., *see also* Kukharenko, A.A., *and others.* Sul'fat-monatsit . . . 1961. No. 73199

70447. **BULATOV, L. V.** Okeanograficheskaia ekspeditsiia v Karskoe more v 1961 g. (Problemy Arktiki i Antarktiki, Sbornik statei, 1962. vyp. 10, p.98-99, table, map.) Text in Russian. **Title tr.:** Oceanographic expedition to the Kara Sea in 1961.

Reviews the July 22-Oct. 11, 1961 cruise of the R/V *Shtorm:* 281 hydrological stations were made at great depths in all parts of the sea, 3736 salinity determinations made, 44 bottom cores taken, and materials collected for determination of the Atlantic water inflow. Author was head of the expedition. (DLC.)

BULL, COLIN B. B., *see* Loewe, F., *and others.* Reconn. Sukkertoppen Tasersiaq. 1962. No. 73580

70448. **BULLARD, ROBERT W.**, *and* **J. R. CRISE.** Effects of carbon dioxide on cold-exposed human subjects. (Journal of applied physiology, July 1961. v.16, no.4, p.633-38, illus.) 14 refs.

In subjects exposed to 5°C. and breathing 2.5-6% carbon dioxide, shivering was inhibited. After CO_2-inhalation, shivering and metabolism greatly increased. The probable mechanism of this behavior is discussed. (DLC.)

70449. **BULLARD, ROBERT W.** Effects of hypoxia on shivering in man. (Aerospace medicine, Dec. 1961. v.32, no.12, p.1143-47, illus., table.) 14 refs.

Study of the effects of hypoxia combined with cold of about 5°C. Breathing 10% O_2 increased shivering and oxygen consumption for some 15 minutes. Hypoxia was often followed by much reduced shivering. Heat rate and pulmonary ventilation were higher in hypoxic cold-exposed subjects than in controls. (DLC.)

70450. **BULMASOV, A.P.** Oblast' i usloviia primeneniia geofizicheskikh metodov razvedki v raionakh mnogoletnei merzloty. (Akademiia nauk SSSR. Vostochno-Sibirskii filial, *Irkutsk*. Materialy po podzemnym vodam Vostochnoi Sibiri, 1957, p. 157-63.) 4 refs. Text in Russian. **Title tr.**: Range and conditions for using geophysical prospecting methods in permafrost regions.

Discusses structural, and engineering geology, hydrogeology and mining fields, and Eastern Siberia, Yakutia and the far North as the areas where geophysical methods can be applied. Seismic, electric, magnetic and gravimetric prospecting are reviewed and their applications characterized. (DLC.)

70451. **BUNAK, VIKTOR VALERIANOVICH, 1891–** , *Editor.* Contemporary raciology and racism. Bloomington, Ind., 1961. 146p. (International journal of American linguistics, v.27, no.3, pt.2.) Refs.

Symposium of five papers, translated into English by E.W. Count. They were sent in typescript to the United States in 1946 to present the then current Soviet-Russian views on race genesis and racism as opposed to Nazi-German theories. The papers are listed below, and that by Roginskii, q.v., is abstracted.

Bunak, V.V. Race as historical category.

ROGINSKII, IA. IA. Racial differentiation and the psyche.

Debets, G.F. Anthropological material as a source of history.

Levin, M.G. The northern race and nordicism.

Cheboksarov, N.N. The racial types of the German people. (DLC.)

BUNCE, G. E., *see* Blair, E., *and others*. Serum glutamic oxalacetic transaminase hypothermia. 1961. No. 70246

70452. **BUNIN, B. I.** Syr'evaia baza dlia proizvodstva progressivnykh mineral'nykh stroitel'nykh materialov v Zapadnoi IAkutii. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskii filial. Nauchnye soobshcheniia 1960. vyp.3, p.33-39.) Text in Russian. **Title tr.**: Raw materials for production of modern mineral construction materials in western Yakutia.

Reviews silicate masses, mineral cotton, keramzite, fibrolite, cellular concrete, gypsum, and other construction materials distributed in the Markha, Daldyn, Irelekh, Malaya Botuobuya, and Vilyuy River regions. For each region in turn, the production possibilities for these materials are appraised. (DLC.)

BURBANK, LAWRENCE, *see* Alaskan Science Conference 1960. 1961. No. 69643

70453. **BURBURY, D. W. P.** The high-latitude north-south asymmetry of cosmic rays. (Physical review, May 15, 1952. v.86, p.577-78, diagr.)

Reports on the experimental study of the north-south asymmetry of cosmic rays at Hobart, Tasmania for zenith angle 30 degrees under 12 cm. lead, the excess being in the north. The value for the asymmetry obtained is 0.0056 ± 0.0013; it is considered to be due to the secondary radiation effect, and not necessarily to invoke any asymmetry in the primary parent radiation. The asymmetry is explained as being produced by the rapid rate of energy loss by ionization in the lower atmosphere. Confirmed by V. Hovi, q.v. (DLC.)

70454. **BURCH, G. E.**, *and* **A. R. HALE.** Relation of morphology of volar cutaneous blood vessels of man to countercurrent thermal flow in thermal regulation. (Angiology, June 1962. v. 13, no. 6, p. 247-53, illus., tables.) 6 refs.

Describes the microstructure of these vessels in the digit and their functional aspects. Specifically, their role in countercurrent thermal flow and in heat exchange between skin and environment is indicated. (DLC.)

BURE, KRISTJAN, 1884– , *see* Denmark. Greenland. 1961. No. 70974

70455. **BURGESS, FRED E.** Two-time homesteader. (Alaska sportsman, June 1961. v. 27, no. 6, p. 32-38, illus.)

Veteran farmer relates experiences since 1958 on the Kenai Peninsula, Alaska. Farming problems of the area also its potentialities for pulpwood timber and for raising of beef cattle are noted. (DI.)

70456. **BURGNER, ROBERT L.** Sampling red salmon fry by lake trap in the Wood River lakes, Alaska. (*In:* Koo, T.S.Y., Studied of Alaska red salmon . . . 1962, p. 315-48, illus., tables, map.) 19 refs.

Describes a sampling system utilizing floating traps to measure abundance of fry. Catches were heaviest in the first month after ice breakup, and fell sharply after the middle of July. Magnitude and pattern of catch varied from year to year. Varying availability of the fry presents a serious problem in assessing their abundance in littoral areas. Attempts to utilize the lake traps in the pelagic area did not give reliable results. (DI.)

70457. **BURGNER, ROBERT L.** Studies of red salmon smolts from the Wood River lakes, Alaska. (*In:* Koo, T.S.Y., Studies of Alaska red salmon . . . 1962, p. 247-314, illus., tables, maps.) About 60 refs.

Study aimed at determining fluctuations in abundance and their causes, of growth and survival. The relationship between number of parent spawners and smolts was very variable in the period 1949-1955. Amount of early growth and timing of sea-

sonal migrations were found to depend on the time of breakup and the temperatures following it. Size at seaward migration varied with the lake of origin, and influenced marine survival and age of returning spawner. (DI.)

70458. BURGUTTO, ÎA., *and* KHRAPOVITSKIĬ. Skorostnaîa obrabotka sudov v Murmanskom rybnom portu. (Rybnoe khozîaĭstvo, 1962. god 38, no. 9, p. 54-60, illus., table.) Text in Russian. **Title tr.:** High-speed servicing of vessels in the Murmansk fish port.

Discusses the size (increasing, 650,000 t. in 1961) of fish-catches landed at Murmansk, the biggest fishing port of the Soviet Union. The order of cargo discharge and of servicing the vessels is outlined. Machines and mechanization introduced into these activities are noted; and the effects of mechanization, mechanization of cleaning the vessel, speeding the turn around, etc. are discussed. (DLC.)

70459. BURKHANOV, VASILIĬ FEDOTOVICH. Ledîanye plavuchie ostrova Tsentral'noĭ Arktiki. *(In his:* Na ledîanom ostrove, 1962, p. 210-232, illus., map.) Text in Russian. **Title tr.:** Floating ice islands in the Central Arctic.

Reviews so-called discoveries of hypothetical lands by Gillis, Andreev, Sannikov, Bradley, Tukput and others, and the sighting by Makarov on icebreaker *Ermak* in 1899, of a large floating iceberg or ice island and later, in 1941-56, by Soviet flyers, nine large and many smaller floating ice islands, three of them now known as T-1, T-2 and T-3, as reported in No. 33829. Studies of the shelf ice on northern Ellesmere Island, American studies of T-3 and Soviet studies of North Pole-6 are compared: dust layers on the last are considered similar to the dust on T-3 and on Ellesmere shelf ice, but that does not exclude the possibility of ice islands forming in other similar areas including Franz Joseph Land and Severnaya Zemlya. Evidence is cited that North Pole-6 has been drifting about much longer than T-3. Jules Vernes' prediction of the possibility of ice islands in his novel *Le pays des fourrures,* also is noted. (DLC.)

70460. BURKHANOV, VASILII FEDOTOVICH. Lomonosov i Arktika. (Moskva. Universitet. Vestnik, ser. 5, geografiîa, Sept.-Oct. 1961, no. 5, p. 28-34.) Text in Russian. **Title tr.:** Lomonosov and the Arctic.

Outlines some ideas concerning the arctic regions expressed by Mikhail Vasil'evich Lomonosov, 1711-1765: search for a passage from the Atlantic Ocean to India by the Siberian seas, heat exchange between sea and air through ice, formation of sea ice, ice drift, etc. Later achievements by Russian scientists along lines of Lomonosov's thinking are summarized. (DLC.)

70461. BURKHANOV, VASILIĬ FEDOTOVICH, *Editor.* Na ledîanom ostrove. Sostavil V. M. Paseţskiĭ. Moskva, Gos. izd-vo geograf. lit-ry, 1962. 238 p. col. front., illus., plates, ports., tables, maps. 74 refs. Text in Russian. **Title tr.:** On an ice island; V. M. Paseţskiĭ compiler. Sequel to No. 50009.

Collection of eight reports on the drift, life and work of the Soviet drifting stations North Pole-6, 7 and 8, by the heads of the annual teams; also two papers dealing with the origin and discovery of ice islands floating in the Arctic Basin. An introduction by A. F. Treshnikov stresses the importance of the work of these stations for systematic studies of the Arctic Basin. Basic literature in Russian (15 items), English (58), and German (1) is listed at end. All ten papers are described in the Arctic Bibliography under their authors' names, viz (titles tr.):

SYCHEV, K. A. On a drifting ice island.

DRIAŢSKIĬ, V. M. The International Geophysical Year in the Central Arctic.

SERLAPOV, S. T. On the route of the drifting ice.

ANTONOV, V. S. At the last stage.

VEDERNIKOV, V. A. 2068 km. on drifting ice upon the ocean; at the Pole of Relative Inaccessibility.

BELOV, N. A. On the ice along the shores of the Canadian Arctic.

ROGACHEV, V. M. The first communist youth drifting station.

BLINOV, N. I. The communist youth drifting station continues its voyage.

DIBNER, V. D. Floating ice islands and the glaciers which originated them.

BURKHANOV, V. F. Floating ice islands in the Central Arctic. (DLC.)

70462. BURKHARDT, M. D., *and others.* Sea conditions, North Atlantic Ocean. (Mariners weather log, Mar. 1962. v. 6, no. 2, p. 35-43, maps.) *Other authors:* J. M. Kipper *and* E. J. Joseph.

Isolines of the frequency of occurrence of 5, 8, 12 and 20 ft. high seas are presented for Feb., May, Aug., and Nov., based on data reported under the International Sea State Code used prior to 1949. Charts include Labrador Sea, Baffin Bay - Davis Strait, Denmark Strait and Greenland Sea north to approx 67°N. Ice limits are also shown. (DLC.)

70463. BURN, J. H. The effect of temperature on the response to drugs. (British medical bulletin, Jan. 1961. v. 17, no. 1, p. 66-69, table.) 29 refs.

Reviews the effects of lowered temperature of the organism or of isolated organs on their response to drugs. Acetylcholine and choline acetylase are considered. Temperature and fibrillation, and duration of action potential are also discussed. (DNLM.)

70464. BURNAZIÂN, A. I., *and others.* Obespechenie radiaţsionnoĭ bezopasnosti na atomnom ledokole "Lenin." (Sudostroenie, 1961. god 27, no. 8, p. 11-14, illus.) Text in Russian. *Other authors:* S. M. Gorodinskiĭ, I. D. Kamyshenko, IÛ. G. Nefedov, *and* V. N. Praveţskiĭ. **Title tr.:** Provision for radiation safety on the atomic icebreaker *Lenin.*

Describes method and facilities for protection against radiation contamination. The nuclear power machinery is isolated in a central area and protective clothing is worn by all who enter it. This area is surrounded by a conditionally-safe buffer zone equipped to control spread of radiation

in case of a leak. Hot water, heating steam, etc., are produced in a third, unconditionally safe zone; the entire atomic installation is encompassed in layers of water, steel and heavy concrete as "biologic protection." Waste water containing a minute amount of radioactive matter is collected in tanks and the major part of the short-lived radioactive materials allowed to disintegrate before disposal. Radiation-control covers on machinery and pneumatic isolation clothing for workers is supplied, in case of emergency repair, etc. (DLC.)

BURNER, C. J., *see* Alaskan Science Conference 1960. 1961. No. 69643

70465. BUROV, G. M. Dolgovremennye poseleniia na r. Vis, bassein Vychegdy. (*In:* Materialy po arkheologii Evropeiskogo Severo-Vostoka, 1962. vyp. 1, p. 3-41, illus., map.) Approx. 20 refs. Text in Russian. **Title tr.:** Semi-permanent settlements on the Vis River, Vychegda basin.

Describes the pottery and stone tools excavated in 1959 by the three-man Vychegda archeological party of the Academy of Sciences' Komi Branch, headed by the author. The artifacts were found in hummocky elevations on the flood plain at the confluence of the Vis and Simva Rivers, near Sindor village (62°48′N. 51°57′E.). The inventory is considered middle third millennium B. C. to the first millennium A. D., i.e. neolithic through early iron age. It is dated by pottery style and ornament patterns and by comparative analysis of the flaking techniques and typology of the lithic material. Ethno-cultural links with the White Sea and Volga-Oka foci are noted but no definite ethnogenetic affiliation established. The predominance of pottery over stone objects suggests constant reoccupation of the sites during the off-hunting season rather than occasional use by transient hunters. (DLC.)

70466. BUROV, G. M. Stoianki na Sindorskom ozere. (*In:* Materialy po arkheologii Evropeiskogo Severo-Vostoka, 1962. vyp. 1, p. 42-64, illus., tables, map.) 10 refs. Text in Russian. **Title tr.:** Camp sites on Lake Sindorskoye.

Describes the stone artifacts and pottery discovered by the Vychegda archeological party (noted *supra*) on the shore and islands of Lake Sindorskoye, the largest along the Vym-Vishera watershed. Test diggings at nine multi-layer sites yielded over a thousand flint objects (tabulated): retouched and unretouched spalls and flakes, scrapers, blades, arrow points and core tools. They mostly belong to the early bronze age, third quarter of the 2nd millennium B. C. The dating is based primarily on the serrated retouch technique of arrow points, similar to White Sea projectiles of that period, and dentate pottery of the Vis-Simva River type. Finds of several bronze fragments (celts, buckles, etc.) and pottery of a later development stage indicate repeated camp-site use to the iron age. Despite certain typological similarities, a marked diversity (even different kinds of flint) is shown by the Lake Sindorskoye and neighboring Vis-Simva complexes, reflecting distinct bronze age manifestations. (DLC.)

70467. BUROV, G. M. Stoianki s mikrolitycheskim inventarem na r. Vychegde. (Sovetskaia arkheologiia, 1961. god 5, no.1, p.247-55, illus., map.) 6 refs. Text in Russian. **Title tr.:** Sites with microlithic inventory on the Vychegda River.

Reports a 1957 survey by the Academy of Sciences' Komi Branch in the upper Vychegda basin: seven sites with some two thousand flint micro-tools: lamellar blades, end-scrapers, burins, and flakes. The artifacts are considered mesolithic in age from comparison with upper Kama River materials. The discovery indicates an earlier peopling of the Vychegda region than the early second millennium B.C., as previously assumed. (DLC.)

BUROV, G. M., *see also* Lisitsyna, N.K. Arkheologicheskie issledovaniia . . . 1962. No. 73527

70468. BURSA, ADAM S. The annual oceanographic cycle at Igloolik in the Canadian Arctic 2; the phytoplankton. "Calanus" series no.17. (Canada Fisheries Research Board. Journal, July 1961. v.18, no.4, p.563-615, illus., tables, map.) Approx. 75 refs. In sequence to No. 58370.

Reports on the year round (Sept. '55 - Sept. '56) hydrographic and plankton studies. Phytoplankton began to increase in April, reached a peak at mid-August and declined rapidly by the end of that month. Diatoms constituted the main biomass and food for the marine fauna. The elements of the phytoplankton are described, including three new flagellates. (DI.)

70469. BURSA, ADAM S. Phytoplankton of the *Calanus* expeditions in Hudson Bay, 1953 and 1954. "Calanus" series no.18. (Canada. Fisheries Research Board. Journal, Jan. 1961. v.18, no.1, p.51-83, illus., tables, map.) 56 refs.

Quantitative and qualitative study of material collected during July - Sept. from depths of 10, 25, 50 and 100 meters. Temperature, salinity and oxygen are also recorded from these levels. The most abundant heterogenous populations were found in the mouth of Hudson Bay. The most productive layer was at a depth of 10 m. with large populations still found at 25 m. The composition of the plankton shows, in the main, a great similarity to that on both sides of the Atlantic. (DI.)

70470. BURTON, ALAN CHADBURN, 1904–
A critical survey of methods available for the measurement of human peripheral blood flow. (*In:* Ciba Foundation Symposium. Peripheral circulation in man, 1954. p.3-22, illus.) 15 refs.

Discusses general concepts and terminology and describes specific methods, viz: direct observation of blood vessels, circulation time, the dye dilution, clearance, thermal, calorimetric and plathysmographic methods. None was found to be "without criticism." They are applied in the study of hypothermia, frostbite, etc. (DLC.)

70471. BURTON, PHILIP, J. K., *and others*. Bird notes from Vest-Spitsbergen in the summer of 1957. (Stavanger. Museet. Sterna, Dec. 1960. bd. 4, hefte 4, p.113-40, 6 illus., 2 tables.) 14 refs. Summary in Norwegian. *Other authors:* N.G. Blurton-Jones *and* C.J. Pennycuick.

Reports on numbers, activity and associations of scores of identified species; in many cases the ecological factors and biotopes are from observations by members of the British Vest-Spitsbergen Expedition, the Reading University Zoological Expedition and the University College London Zoological Society Spitsbergen Expedition. (DLC.)

70472. BURWASH, RONALD ALLAN, 1925– . Geology of the Rusty Lake area, 64B/12, east half, Granville Lake Mining Division, Manitoba. Winnipeg, 1962. 31 p. fold. map. (Manitoba. Dept. of Mines and Natural Resources. Mines Branch. Publication 60-3.) 12 refs.

Reports and maps (1 in.:1 mi.) the geology of this approx. 165 sq. mi. area, 56°30′-45′N. 90°30′-45′W., investigated in 1960. Eighteen rock units, described in detail, occur in five formations: the Wasekwan series of metamorphosed basic volcanics and clastic sediments; pre-Sickle intrusions of hornblende diorite and biotite-hornblende tonalite; the metasedimentary Sickle series; Kisseynew-type gneisses; and post-Sickle granitic intrusives. Relationships between the formations are discussed; structural features are described; and an inferred sequence of deposition, deformation, and intrusion is outlined. Mineral explorations in 1959 and 1960 by Hudson Bay Exploration & Development Co. are noted. (DGS.)

70473. BURWASH, RONALD ALLAN, 1925– . Precambrian K-Ar dates from the western Canada sedimentary basin. (Journal of geophysical research, Apr. 1962. v.67, no.4, p.1617-25, table, diagr., map.) 27 refs. *Other authors:* H. Baadsgaard *and* Z.E. Peterman.

Presents results of age determinations made in a University of Alberta program since 1950. Nine outcrop samples of 56 studied were from northern Manitoba, six were biotite, the others hornblende and muscovite. Age of these samples ranged from 1.72 to 2.62 b.y. Dates obtained for all 56 samples indicate that the extensive Churchill province of the Canadian Shield was affected strongly by the Hudsonian orogeny at 1.65 to 1.85 b.y. The subsurface extent of this province can be roughly outlined. Since the Hudsonian orogeny, the Churchill province has had minor basaltic magmatic activity, possibly related to the Keweenawan of the Lake Superior region. (DLC.)

70474. BURWASH, RONALD ALLAN, 1925– , *and* **H. BAADSGAARD.** Yellowknife - Nonacho age and structural relations. (*In:* Royal Society of Canada, The tectonics of the Canadian Shield, 1962, p.22-29, maps, tables.) 16 refs.

Summarizes results of 1958 study of the southern part of the Nonacho sedimentary belt (61°N. 110°W.) and the adjacent granite rocks; indications of the pre- and post-Nonacho granites were found by mapping and potassium/argon dating. The basal Nonacho conglomerate contains boulders with muscovite dated at 2400 m.y. The underlying gneissic complex gives biotite dates of 1800 m.y. and probably represents a basement of Yellowknife age reactivated during the Churchill orogeny. The Nonacho-granite contact is mapped as unconformable where a basal conglomerate is present, as intrusive where the basal beds are metarkose. The Nonacho series and the Great Slave group were both deposited on a shelf of the Yellowknife craton, which may have extended as far south as Lake Athabasca; the Nonacho deposition probably took place prior to 2500 m.y. ago; deposition of the Great Slave group must have occurred between 2480 and 2200 m.y. ago. Summary data are tabulated. (DGS.)

BURWASH, RONALD ALLAN, 1925– , *see also* National Research Council. Symposium . . . International Upper Mantle Project. 1961. No. 74227

70475. BUSH, ERNEST R. Developments in Alaska in 1961. (American Association of Petroleum Geologists. Bulletin, June 1962. v.46, no.6, p.1032-41, maps, tables.) 3 refs.

Reviews the most active year of the Alaska petroleum industry to date. Two new gas fields were discovered on the Kenai Peninsula; production in both wells was from the Tertiary Kenai formation. Geophysical activity increased 83% over 1960. Surface mapping remained at about the 1960 level; 25 exploratory wells were spudded, 16 in 1960. Surface geologic mapping and development drilling is expected to be less in 1962; exploratory drilling and geophysical exploration to maintain 1961 rates. Small-scale map shows location of exploratory wells; exploratory drilling in the Cook Inlet area is also mapped. Selected 1961 publications on Alaska are listed. (DGS.)

70476. BUSSEN, I. V., *and others.* Amfibolovye peridotity severo-vostochnykh predgoriĭ Luĭavrurta. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniĭa . . . 1962, p.44-48, illus., tables, map.) 6 refs. Text in Russian. *Other authors:* V.V. Kolesnikova *and* N.G. Pomerantseva. **Title tr.:** Amphibole peridotites in the northeastern foothills of the Luyavrurt.

Presents a mineralogic description of amphibole peridotites discovered in the Vavnbed and P"yalkimporr Mts., near Pal'gozero, Kola Peninsula. Mineralogic composition of these ultrabasic rocks is reported and the containing minerals are described: olivine, amphibole, feldspar, biotite, chlorite and others. (DLC.)

70477. BUSSEN, I. V. Gigantskie eruptivnye brekchii Lovozerskogo shchelochnogo massiva. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniĭa . . . 1962, p.38-43, maps, diagr.) 4 refs. Text in Russian. **Title tr.:** Gigantic eruptive breccias of the Lovozero alkaline massif.

Describes the distribution, composition and other features of eruptive breccias, in the Luyavrurt, Kola Peninsula. The breccias vary in area from several m^2 to 1-2 km^2 Two groups are distinguished: those having fragments of enclosing rocks and cement of alkaline rocks, and those of which both cement and fragments are of alkaline rocks. Much can be learned about the geology of a massif and its formation, through study of eruptive breccias. (DLC.)

70478. BUSSEN, I. V., *and* **A. S. SAKHAROV.** Kompleks-pluton évdialitovykh luĭavritov v Lovozerskikh tundrakh; geologicheskoe stroenie. (*In:*

Akademiia nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniia . . . 1962, p.27-37, illus., map, cross-sections.) 6 refs. Text in Russian. **Title tr.**: Complex-pluton of eudialyte-lujavrites in the Lovozero tundras; geologic structure.

Outlines the geology and petrography and other features of this intrusion in the Lovozero massif of Kola Peninsula as studied in 1956-1959. Three phases in this intrusion are recognized, the composing rocks are reported and their occurrence outlined. The porphyroid and inequigranular texture of lujavrites and other rocks is analyzed. Primary layering and petrogenesis of these rocks are evaluated. (DLC.)

70479. BUSSEN, I. V., *and* A. S. SAKHAROV. Pervichnaia rassloennost' intruzivnykh massivov kak proiavlenie magmaticheskoĭ differentsiatsii. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniia . . . 1962, p.14-26, cross-sections.) 37 refs. Text in Russian. **Title tr.**: Primary layering of intrusive massifs as showing magmatic differentiation.

Discusses the petrogenesis of layered basic intrusions and the hypothesis of plutonic emplacement. The Lovozero alkaline massif is analyzed and the origin of primary layering and mechanisms of differentiation are interpreted. Opinions of other investigators are reviewed. The Bushveld complex (South Africa), Stillwater complex (Montana), Skaergaard intrusion (Greenland), and others are compared. The authors' own hypothesis is offered in describing the sequence of events, namely that of primary layering in magma occurred before its emplacement. This is not considered final answer to the question of origin however, and further studies are suggested. (DLC.)

BUSWELL, ARTHUR S., *see*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

70480. BUSYREV, V. M. Metodika issledovaniia sistemy razrabotki po trudoemkosti proizvodstvennykh protsessov. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.9-15, tables.) Ref. Text in Russian. **Title tr.**: Methods of investigating mining systems according to the labor consumption of their production processes.

Discusses ways of analyzing labor and the wages component in cost of production of apatite ore, and offers data from operations (by induced block caving) of the S.M. Kirov mine on Kola Peninsula. Production of 1000 t. of ore requires from 47.7 to 29.5 worker/shifts, and wages represent 65-68% of the production costs. There was a 10-15% decrease in labor consumption when the permissible maximum for a piece of ore rose from 400 mm. to 500 mm.; a further increase of maximum size to 600-700 mm. is recommended. (DLC.)

70481. BUSYREV, V. M. Snizhenie trudoemkosti minnoĭ otboĭki na rudnike im. Kirova. (Gornyĭ zhurnal, Apr. 1961, no.4, p.30-32, diagrs., table.) Text in Russian. **Title tr.**: Reducing the labor consumption of ore blasting at the Kirov Mine.

Describes briefly the thick, gently sloping stratum of apatite-nepheline ore of medium difficulty worked by induced block caving, ore blasting and panel cutting. When the distance between blast holes was increased from 6.9 to 9 m. and the height of blocks from 8.5 to 10 m., the amount of ore blasted increased from 405 to 810 m^3 per hole and the effectiveness of the whole operation rose by 25%. (DLC.)

70482. BUTAKOVA, E. L., *and* L. S. EGOROV. Maĭmecha-Kotuĭskiĭ kompleks formatsiĭ shchelochnykh i ul'traosnovnykh porod. (*In:* Akademiia nauk SSSR. Otdelenie geologo-geograficheskikh nauk. Petrografiia Vostochnoĭ Sibiri, t.1, 1962, p.417-589, illus., tables, maps & diagrs. incl. fold.) 60 refs. Text in Russian. **Title tr.**: Maymecha-Kotuy formation complex of alkaline and ultrabasic rocks.

Reviews geologic and petrographic studies of the area in northeastern Krasnoyarskiy Kray during 1938-1958, and outlines the geologic structure of Maymecha-Kotuy magmatic province. Effusive and genetically connected vein rocks such as melanocratic nepheline basalts, trachybasalts, andesite, meymecites and others are reported and their petrography and chemical composition outlined. Composite alkaline-ultrabasic and alkaline intrusions are treated. The Gulya, Bor-Uryakh, Kugda, Magan, Odikhincha, and Nemakit intrusions, are characterized as to their geologic structure, petrography, mineralogy and chemistry. Metasomatic and contact-metamorphic rocks are described. Carbonatites of composite intrusions are analyzed noting their geologic, petrographic, and mineralogic features. Phlogopite and titanomagnetite are described as useful minerals. The origin of the Maymecha-Kotuy magmatic complex is discussed, as is the relationship of the complex to kimberlites. (DLC.)

70483. BUTAKOVA, E. L. Shchelochnye i ul'traosnovnye effuzivy Maĭmecha-Kotuĭskogo magmaticheskogo kompleksa severa Sibirskoĭ platformy. (Vsesoiuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.258-59.) Text in Russian. **Title tr.**: Alkaline and ultrabasic effusives of the Maymecha-Kotuy magmatic complex in the north of the Siberian platform.

Notes an approx. 1500 km^2 area where alkaline ultrabasic and subalkaline effusives, mainly Lower Triassic age, are distributed. They are considered products of platform magmatism and are divided into three series. Conditions of their occurrence are briefly characterized. (DLC.)

70484. BUTAKOVA, E. L. Tektonicheskie usloviia obrazovaniia kompleksa shchelochnykh i ul'traosnovnykh porod severa Sibirskoĭ platformy. (Geologiia i geofizika, 1961, no.1, p.34-44, fold. map.) 19 refs. Text in Russian. Summary in English. **Title tr.**: Tectonic conditions for the forming of alkaline and ultrabasic rock complexes in northern Siberian platform.

Reports on the Maymecha-Kotuy complex of alkaline and ultrabasic rocks about 30,000 km^2 in area. Four lavatic and one tuffaceous series are

distinguished, and the magmatic cycle is compared with a corresponding cycle of trap magmatism in the Tungusskiy syncline. The trap formation and the Maymecha-Kotuy complex are considered to have been formed by the same tectonic-magmatic cycle. (DLC.)

70485. BUTENKO, A. K., *and* **S. I. STEPANOV.** Dolgovremennye avtonomnye ustanovki dlīā izmereniīā techeniĭ v melkovodnykh raĭonakh moriā. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p.9-12, illus.) Refs. Text in Russian. **Title tr.:** Durable automatic devices for measuring currents in shallow marine areas.

Describes the setting up and recovery of self-recorders from ships in drift and at anchor in Kara and Laptev Seas during 1957-1958. The recorders were mounted in frames (two types described) placed on the bottom in waters 10-28 m. deep and kept in place by means of 100-kg. anchors connected to the frame by cable. Another cable connects the anchor to an identification buoy on the surface Satisfactory results of observations are reported, but some weak points in the construction. (CaMAI.)

BUTIN, E., *see* Vil'chevskiĭ, O., & E. Butin. ĪAmal'skie mastera. . .1962. No. 76388

70486 BUTKOVICH, THEODORE R. Studies of the age hardening of processed snow. Hanover, N.H., June 1962. iv, 12 p. illus., graphs, tables. (U.S. Army. Corps of Engineers, Cold Regions Research and Engineering Laboratory, Research report 99.) 13 refs.

Summarizes results of work done at Site 2, Greenland Inland ice, during a two-month test period, in a trench about 100 ft. long, 8 ft. wide, excavated by a Peter snow miller and immediately backfilled to provide material for the test. Purpose: to determine snow suitability for construction. Measurements of density, homogeneity, ram hardness, and temperature were made; results showed that the age-hardening process is a formation of new bonds between the grains by both a sublimation and a surface migration process, influenced by the heterogeneity of grain size and other factors. Compressive strength of processed snow increases with time, progressing to about the strength of naturally compacted unprocessed snow of like density in about 50 days. Other mechanical properties also appear to behave according to the same law with aging; each property can thus be determined at a given time if the others are known. (DI.

BUTLER, J., *see*

National Research Council of Canada. . .muskeg research conference 1960. 1961. No. 74228

National Research Council of Canada. . .7th Muskeg Conf. 1961. No. 74229

BUTLER, R. A., *see* Perlman, H.B., & *others*. Cochlear blood flow. . .1959. No. 74727

BUTLER, W. H., *see* Ellison, R.G., & *others*. Further studies. . .hypothermia. 1960. No. 71247

BUTOMA, B. E., *see* Razin, V. Kurs. . .1961. No. 75071

70487. BUZUEV, A., *and* **A. RYVLIN.** K raschetu soprotivleniīā ledokola pri dvizhenii v melkobitykh l'dakh. (Morskoĭ flot, Aug. 1961. god 21, no. 8, p.36–38, tables, graphs.) Ref. Text in Russian. **Title tr.:** Calculating the resistance encountered by an icebreaker moving through a field of block ice.

Compares resistance values obtained *in situ* on the Northern Sea Route with such calculated according to a formula developed in the laboratories of the Arctic and Antarctic Institute in Leningrad. Considerable deviations from the theoretical values were determined mainly due to the variation in size of the ice cakes, 0.6–1.8m. thick and 1-20 m. wide. Reasonable approximation was achieved under conditions of low ice concentration (up to 8 on a 1–10 scale): modifications to the formula are proposed for higher concentration (7–9 and 9–10). Measurements were made with the icebreaker *I. Stalin* and *Kapitan Belousov*. (DLC.)

70488. BUZYKIN, A. I. Uluchshit' ispol'zovanie lesosechnogo fonda v lesakh Komi ASSR. (Lesnoe khoziāĭstvo, Jan. 1961. god 14, no.1, p.21–23.) Text in Russian. **Title tr.:** Utilization of the timber resources of the forests in Komi ASSR must be improved.

Reviews the resources: 1.9 billion m³ of commercial timber; and production: 15.5 million m³ in 1955, 17.5 million in 1959, and 18.2 million m³ planned for 1965. The present 25% wastage of usable timber must be reduced. Several lumbering establishments in Komi ASSR are criticized on their production data. (DLC.)

70489. BYCHKOV, V. A., *and* **S. V. DOROFEEV.** O povedenii sekacheĭ morskikh kotikov v garemnyĭ period ikh zhizni. (Zoologicheskiĭ zhurnal, 1962. t.41, vyp.9 p.1433–35.) Text in Russian. Summary in English. **Title tr.:** The behavior of fur-seal bulls during the harem period of their life.

Reports observations on tagged animals made in 1958–1960 on Tyuleniy Island in the Sea of Okhotsk. It was found that census-taking by counting heads in the harem is inaccurate as a certain number leaves the rookeries for an unknown length of time. Only by determining and adding the number of "absentees" to that counted, can the size of the bull population be ascertained. (DLC.)

70490. BYCHKOVA, R. V dalekoĭ tundre. (Eniseĭ, 1961, no.4 (32), p.81–87.) Text in Russian. **Title tr.:** In the distand tundra.

Deals with the author's trip by reindeer-sledge in Taymyr National District from Volochanka to Ust'-Boganida, administrative center of the Nganasan-Samoyed kolkhoz, described by Faĭnberg, No. 57947. Its cultural activities, centered in the club, are described: performance of a Nganasan play, folk-tale recitals, concerts, listening to special broadcasts in Nganasan, etc. Daily life of reindeer herders and their families in their hide-covered cabins on runners, cultural and political interests of the aborigines, etc. are sketched. (DLC.)

70491. BYERS, ALFRED RODDICK. Major faults in western part of Canadian Shield with special

reference to Saskatchewan. (*In:* Royal Society of Canada, The tectonics. . .1962. p.40–59, maps, diagr.) 89 refs.

Late major faults in Saskatchewan together with similar faults in Mackenzie District (Yellowknife, Russell Lake, Marian River, Macdonald, Bathurst Inlet), form a regional pattern of north to north-northwest-trending left-hand wrench faults and northeast-trending thrusts and right-hand wrench faults. The major fault systems cut across belts of folding which involve sedimentary and volcanic rocks of several ages, as well as intervening areas of igneous and metamorphic rocks. The faults are Late Precambrian with some evidences of post-Devonian or even post-Cretaceous displacements. An approx. north-south counterclockwise couple appears to be the most logical of the three possible stress orientations causing the faulting in this 320,000 sq. mi. area. The extensive bibliography includes numerous maps. (DGS.)

70492. BYERS, FRANK MILTON, 1916– . Petrology of three volcanic suites, Umnak and Bogoslof Islands, Aleutian Islands, Alaska. (Geological Society of America. Bulletin, Jan. 1961. v.72, no.1, p.93–128, diagrs., maps & tables incl. fold.) 95 refs.

Reports on the chemistry and petrology of volcanic rocks on these Aleutian Islands, investigated 1946–1948. Chemical and petrographic modal analyses of 36 specimens and spectrographic analyses of 19 were made; results are tabulated and discussed. Petrochemical differences found between the hypersthenic aluminum-rich lavas of southwestern Umnak, the basaltic shield volcano on northeastern Umnak, and the slightly alkalic lavas of Bogoslof are related (tentatively) to the tectonic positions of the rocks with respect to the axis of the Aleutian Islands arc. (DGS.)

BYKOVA, A. V., *see* Borodin, L.S., & A.V. Bykova. O tsirkonievom shorlomite. 1961. No. 70337

70493. BYLINSKIĬ, E. N. Novye dannye po stratigrafii chetvertichnykh otlozheniĭ i paleogeografii basseĭna r. Mezeni. (Akademiia nauk SSSR. Doklady, Dec. 21, 1962. t.147, no.6, p.1421–24, diagr.) 8 refs. Text in Russian. **Title tr.:** New data on the stratigraphy of Quaternary deposits and the paleogeography of the Mezen' River basin.

Reports a 1961 field study on the lower and middle Mezen'. A new stratigraphic scheme for Quaternary deposits is presented and interpreted. Deposits previously considered continental glacial are found to be ice-glacial-marine deposits with rich micro- and macrofauna. A large boreal transgression is recognized. Other components of the Quaternary are alluvial or lacustrine-swamp deposits. The two glaciations found by other scientists are not substantiated. (DLC.)

70494. BYON, Y. K., *and* **E. F. ADOLPH.** Oxygen in tissues during deep hypothermia. (Journal of applied physiology, Sept. 1961. v.16, no.5, p.827–30, illus.) 10 refs.

Study of oxygen tension in the brain stem, leg muscle, and abdomen at temperatures below 17°C. Additional effects of forced breathing of air, oxygen or nitrogen were also investigated. It is concluded that pulmonary ventilation, or systemic blood flow, or an unidentified factor can limit survival of the hypothermic rat. (DLC.)

BYRNE, J. L., *see* Plummer, P.J.G., & J.L. Byrne. *L. Monocytogenes* lemmings. 1950. No. 74832

CADE, TOM J., *see* Hobbie, J.E., & T.J. Cade . . . breeding golden eagles . . . 1962. No. 72170

CADOT, M., *see* Chevillard, L., & *others.* Variations somatiques . . . 1962. No. 70724

CAGELL, WALTER, *see* Nordfeldt, S., & *others.* Smältbarhetsförsök med renar . . . 1962. No. 74373

70495. CALDWELL, D. F., *and others.* Effect of environmental temperature on conditioning in the new-born poikilothermic rat. (Nature, Sept. 29, 1962. v. 195, no. 4848, p. 1314-15, illus.) 4 refs. *Other authors:* R. Brand *and* J. Werboff.

Account of experiments with animals, made hypothermic to 28° and 23° C. rectal temperature. Higher level of conditioning was found in the 28° group than in animals cooled to 23° C. (DLC.)

70496. CALLENDAR, G. S. Temperature fluctuations and trends over the earth. (Royal Meteorological Society. Quarterly journal, Jan. 1961. v. 87, no. 371, p. 1-12, graphs, tables.) 28 refs.

Includes note of the spectacular warming in most parts of the subarctic zone during the 1920's and 1930's, and a marked cooling in some subarctic regions in 1948-1956. Annual temperature deviations for the zones from the mean 1901-1930, °C x 100, are tabulated, including the subarctic 60° - 73° N. (DGS.)

70497. CALLOMON, J. H. The Jurassic system in East Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v. 1, p. 258-68, tables.) 15 refs.

Reviews knowledge of the richly developed Jurassic sediments found in a long, narrow, discontinuous strip along the east coast 70° - 77° N.; fullest and least disturbed development is in the broad, shallow basin of the Scoresby Sund region. The faunas of the Liassic closely resemble those of northwestern Europe; those of the Middle Jurassic are peculiar to the Arctic and can be correlated with the European succession only at the top (Lower Callovian). The Upper Jurassic starts in the Oxfordian with faunas of northwest European type and finally passes with no considerable break into the Cretaceous. Ammonites comprise the leading fossil group in quality and profusion. (DLC.)

CALVERT, D.N., *see* Moore, K.E., & *others.* Tissue catecholamine content . . . 1961. No. 74104

70498. CAMERON, A. BRYCE. Queen Elizabeth Islands of arctic Canada and their petroleum prospects. (Oil in Canada, Mar. 9, 1961. v. 13, no. 18, p. 18-38, illus., maps, graphs.) 23 refs. Paper presented to Institute of Petroleum, London.

Geological and economic appraisal of the more important arctic island areas. Physical geography is outlined; population, transportation, communications, administration, etc. are briefly treated. His-

torical account of exploration is given. These islands contain a great variety of geological formations with abundant signs of petroleum within many large closed structures similar in size to those in the Middle East. Photointerpretation has been supplemented by geological field work. Continuous drilling throughout the year might cost $2,000,000. Rapid development is possible: with some oil exported by tanker directly to West European and East Canadian markets within a year of discovery; later a shuttle service during a four-month ice-free season carrying oil to intermediate storage near Godthåb, southwest Greenland, for year-round transport to world markets. Numerous photo mosaics, maps of geologic and ice conditions, and a work-feasibility graph supplement the text. (DGS.)

70499. CAMERON, E. LEE. Peat moss in Manitoba. Winnipeg, 1948. 11 p. (Manitoba. Dept. of Mines and Natural Resources. Mines Branch. Bulletin no. 48-1.) 4 refs.

Describes the characteristics and uses of peat mosses, and their occurrences in Manitoba. An extensive deposit along the Hudson Bay Railway from Mile 350 to Churchill contains high quality moss: 22.0 absorptive value, dry; 3.5% ash content, dry. Its development may be hampered by its remoteness, the short field-work season, and permafrost, but further investigation is warranted. (DGS.)

70500. CAMERON, H. L. Water current and movement measurement by time-lapse air photography; an evaluation. (Photogrammetric engineering, Mar. 1962. v. 28, no. 1, p. 158-63, illus., diagrs.) 6 refs.

Describes application of this method developed by author in 1949 and tested at sea and in rivers including areas in the Arctic and sub-Arctic. The method uses stereophotography to measure surface movement as evidenced by eddies, form lines, floating ice, etc. The measurable range of velocities is 0.25 - 14 mi./hr. using standard photography on scales 1 in. 500 - 5,000 ft. Results of ice movement observations by satellite (Tiros II) are also promising. Radarscope photography could be used in the Arctic under weather conditions unfavorable for aircraft or photography. (DLC.)

70501. CAMERON, THOMAS WRIGHT MOIR, 1894– The incidence and diagnosis of hydatid cyst in Canada. *Echinococcus granulosus* var *canadensis*. (Parassitologia, *Roma,* 1960. v. 2, no. 3, p. 381-90, map.)

Account of a series of surveys made in 1952-1955 with an introductory outline of conditions in Canada since 1883. The incidence in the Northwest as determined by the Casoni reaction was found to be high: 10-40% among Indians; among Eskimos of the Eastern Arctic: 23%. Cysts were found in lungs of various species of deer, and adult parasites in wolves. Human infections usually come from dogs which have fed on deer lungs. (DNLM.)

CAMERON, THOMAS WRIGHT MOIR, 1894– , *see also* Davis, L.E., & T.W.M. Cameron. Trichinosis NWT. 1961. No. 70894

Royal Society of Can. Evolution...1960. No. 75235

CAMP, PAUL R., *see* Brill, R., & P.R. Camp. Properties of ice. 1961. No. 70376

70502. CAMPBELL, FINLEY A. Lazulite from Yukon, Canada. (American mineralogist, Jan. - Feb. 1962. v. 47, no. 1/2, p. 157-60, tables.) 5 refs.

Describes occurrence, chemical composition, optical properties, and X-ray diffraction data, of this rare phosphate mineral, collected in 1959 along the Blow River near Mt. Fitton (60° 30′N. 138° 45′W.) in the Richardson Mts., Yukon Territory. The lazulite is found as open space fillings and veinlets in quartzitic Jurassic sediments. Composition is given as $(Mg_{.8}\ Fe_2)Al_2\ (PO_4)_2\ (OH)_2$. (DGS.)

70503. CAMPBELL, H. HOYLE, *and* **F. G. WALKER.** Continuous epidural analgesia in treatment of frostbite; a report of three cases. (Canadian Medical Association. Journal, Jan. 14, 1961. v. 84, no. 2, p. 87-90, illus.) 3 refs.

Presents a brief outline of the physiology forms, and analgesic treatment of cold injury, and cases of frostbite of the feet in two men 47 and one 66 years old. Continuous epidural analgesia and administration of anticoagulants appeared to be effective in relieving peripheral vasospasm and in preventing retrograde thiambosis. (DNLM.)

CAMPBELL, J.S., *see* Héroux, O., & J.S. Campbell. A study of the pathology. . .1960. No. 72129

70504. CAMPBELL, JOHN M. An anthropologist looks at the Arctic National Wildlife Range. *(In:* Alaskan Science Conference...1961. Proceedings, *pub.* 1962, p. 53-58.)

Discusses the archeological significance of this northeastern Alaska area and appeals for preservation of its esthetic values. Part of the Range lies on the Arctic Slope, a route of access to interior North America from Bering Strait. Archeological sequences to 8,000 or 10,000 yrs. ago have been established to the east (Firth River) and west (Anaktuvuk Pass) of the Range area. (CAMAI.)

70505. CAMPBELL, JOHN M. The Kogruk complex of Anaktuvuk Pass, Alaska. (Anthropologica, 1961, n. ser. v. 3, no. 1, p. 3-20, illus.) 12 refs.

Describes a homogeneous series of about 570 stone artifacts, mostly chert: flakes including retouched and bifaces, flake-cores and core tools, blades and microblades, gravers, scrapers, saws, etc. These finds of 1959 were near the excavations reported in No. 57214. Despite certain typological differences, the Kogruk implements show affinities to the old British Mountain complex of Yukon, the Mousterian tradition of Europe, and the Siberian paleolithic of Lake Baykal and Lena River. (DSI.)

70506. CAMPBELL, JOHN M. The Tuktu complex of Anaktuvuk Pass. (Alaska. University. Anthropological papers, May 1961. v. 9, no. 2, p. 61-80, illus.) 10 refs.

Reports the discovery in 1959, of a site on a kame terrace north of the summit of this pass in the Brooks Range, northern Alaska. Over 1,500 stone implements, about 80% unretouched spalls, were found mainly in association with hearths (three) within a 12 x 10 ft. surface structure. The artifacts are described in major categories: projectile points, notched and flaked blades, bifaces, scrapers, microblades and -cores, pebble tools, ground or rubbed implements, etc. The Tuktu culture is character-

ized by small nuclear family groups occupying hide-covered hemispherical houses in summer. A sexual division of labor and a large-game hunting economy supplemented by fishing are implied by the diversity of artifacts. The site is considered a distinctive arctic complex, possibly up to three-four thousand years old. Only the corner-notched points show affinities to previous finds: the Lockhart River complex (No. 24105), the Ratekin site (No. 54918), and the Palisades assemblage at Cape Krusenstern. (DLC.)

CAMPBELL, JOHN M., *see also* Alaskan Science Conference 1960. 1961. No. 69643

70507. CAMPBELL, N. J. Some oceanographic features of northern Hudson Bay, Foxe Channel, and Hudson Strait. Ottawa, Sept. 30, 1959. 29 p., maps, graphs. (Canada. Fisheries Research Board, Manuscript report series, Oceanographic and limnological, no.46.) 17 refs. Mimeographed.

Preliminary results of temperature, salinity, and oxygen observations obtained on two cruises of the Canadian icebreaker *Labrador* in June - Aug., Oct. 1955 and Aug. 1956. Some water characteristics, seasonal changes, and currents are noted; a complete synoptic treatment was not possible.(DN-HO.)

CAMPBELL, N.J., *see also* International Symposium on Arctic Geology, 1960. . . . 1961. No. 72392

70508. CAMPBELL, RICHARD BRADFORD, 1921- *and* J. O. WHEELER. Glenlyon, Yukon Territory. Ottawa, Surveys and Mapping Branch, 1960. Fold. map sheet 28.5 x 22.5 in. (Canada. Geological Survey, Preliminary series, map 25-1960, sheet 105L.)

Shows in some detail, on scale of 1 in: 4 mi., the distribution of about thirty rock and surficial units in this region, 62° - 63° N. 134° - 136° W., north of Whitehorse. Tintina valley marks a major geological discontinuity across which the sedimentary sections are very different, though possibly and partially of the same age. Only a Lower Mississippian limestone yielded fossils denoting a definite geologic age. Paleozoic rocks northeast of the valley have no known counterparts to the southwest, but may be related to Upper Devonian and Mississippian rocks in northern Yukon and Alaska. The rocks southwest of Tintina are similar to Mississippian strata in the Pelly and Cassiar Mts. farther south. The granitic rocks may be divided by an assumed fault passing through Drury Lake valley; those to the northeast more uniform in composition than those to the southwest. Work on the lead-zinc deposit at the south end of the Glenlyon Range is noted. (DGS.)

CAMPBELL, RUSSELL HARPER, 1928– , *see* Kachadoorian, R., *& others*. Geologic investigations...Project Chariot...1961. No. 72604.

70509. CAMPBELL, W. G. The search for oil in the Yukon Territory. (Canadian geographical journal, Oct. 1961. v. 63, no. 4, p. 120-29, illus., maps.)

Describes explorations since 1953, in the Eagle Plains area of the northern Yukon, and considers the possibilities for oil discovery and development. Geologic structures appear favorable and initial discovery was made in 1959; but problems (described) of transportation, isolation of personnel, and permafrost make exploration and drilling more difficult and expensive than farther south. If sufficient oil (at least one billion bbls.) is found, new means of transportation, e.g. atomic icebreakers and submarines, could aid in marketing; and the discoveries eventually could be developed competitively. (DGS.)

CAMPBELL, W. G., *see also* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

70510. CAMPBELL, W. S., *and* P. L. HUBERT. The ionospheric disturbance of November 12 and 16, 1960. (Canadian journal of physics, Apr. 1961. v. 39, no. 4, p. 614-16, tables, diagr.)

Summarizes absorption effects recorded at five Canadian stations, including Resolute Bay and Churchill. Main features of the blackouts are tabulated; durations of the blackouts are quite similar at the two high-latitude stations. (DLC.)

70511. CAMPBELL, WALLACE H., *and* S. MATSUSHITA. Auroral-zone geomagnetic micropulsations with periods of 5 to 30 seconds. (Journal of geophysical research, Feb. 1962. v. 67, no. 2, p. 555-73, table, graphs.) 39 refs.

Reports observations during one year (1959-1960) at College, Alaska. The average activity of micropulsations was 4.5 times that in middle latitudes; average amplitude maximized at about 0.65_γ near 0600 LMT; the minimum of 0.24_γ occurred at about 1900 LMT. Relationships are established with *K*-indices, auroral coruscations of 3914 Å emission, auroral ionospheric absorption, and electron bremsstrahlung. The development during micropulsation storms is outlined. Evidence is found that storms result from an ionospheric current system set up at times of primary electron bombardment. (DLC.)

70512. CAMPBELL, WALLACE H., *and* H. LEINBACH. Ionospheric absorption at times of auroral and magnetic pulsations. (Journal of geophysical research, Jan. 1961. v. 66, no. 1, p. 25-34, table, graphs, diagrs.) 27 refs.

Reports study Mar.-Apr. 1960 at College, Alaska, showing that variations in the absorption of cosmic noise are closely related to magnetic field micropulsations and short period coruscations of λ3914. At times of polar-cap type absorption, magnetic micropulsation amplitudes were diminished. Auroral ionization in the *E* region, estimated from a particular luminosity-height profile, accounted for at least 50% of the absorption.–From authors' abstract. (DLC.)

70513. CAMPBELL, WALLACE H. Magnetic field micropulsations and electron bremsstrahlung. (Journal of geophysical research, Oct. 1961. v. 66, no. 10, p. 3599-3600, graph.) 2 refs.

Reports observation, June 28, 1960, of enhanced magnetic micropulsation activity near College, Alaska, simultaneous with increases in the intensity of bremsstrahlung from energetic electrons. (DLC.)

70514. CAMPBELL, WALLACE H. Some auroral zone disturbances at times of magnetic micropulsation storms. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceed-

ings *pub.* 1962, v. 1, p. 112-16, graphs.)

Reports on investigations of magnetic field fluctuations coincident with auroral luminosity pulsations of 5-30 sec. period. The view that these pulsations of the geomagnetic field in the auroral zone arise at times of electron precipitation is tested by measurements carried out near College, Alaska, Sept. 1959-Sept. 1960, using a two-meter loop antenna of 21,586 turns; the method is described. The test indicates that the observed micropulsations result from ionospheric currents set up at the onset of a geomagnetic storm with the arrival of a solar-terrestrial disturbance front. The pitch angles of the trapped particles are periodically agitated, and resulting modulation of the precipitation of these particles into the ionosphere produce pulsating ionospheric current systems which cause microvariations in the geomagnetic field intensity observed at the earth's surface. (DLC.)

70515. CAMPBELL, WALLACE H., *and* M. H. REES. A study of auroral coruscations. (Journal of geophysical research, Jan. 1961. v. 66, no. 1, p. 41-55, tables, graphs, diagrs.) 40 refs.

Analyzes observations at College, Alaska, Nov. 1959 - Apr. 1960. Short period variations in the N_2^+ (0, 0) auroral emission band represent 5% of total light in the 3914 Å region. These quasi-periodic coruscations have a dominant period of 6-10 sec. They attain maximum amplitude in predawn hours and are closely related to magnetic field micropulsations and ionospheric absorption of cosmic noise. Spectroscopic triangulation shows that the variations originate in the *E* region. The profile of the electron density associated with the aurora has a maximum value of 1.1×10^6 electrons $cm.^3$ at 98 km.–From authors' abstract. (DLC.)

CAMPBELL, WALLACE H., *see also* Brown, R.R. & W.H. Campbell. Auroral-zone electron precipitation . . . 1962. No. 70402

CAMPBELL, WILLIAM J., *see* Reed, R.J. & W. J. Campbell. Equilibrium drift stn. A. 1962. No. 75089

70516. CANADA. ADVISORY COMMITTEE ON NORTHERN DEVELOPMENT. Government activities in the North 1961. Ottawa, Dept. of Northern Affairs and National Resources, July 1962. 166 p. maps, tables, graphs. Mimeographed. In sequence to No. 63739.

Reports the 1961 operations and 1962 plans of Canadian federal agencies working wholly or partly in the North. Their scope generally is similar to that indicated in No. 57217. The organizational changes, new agencies or new activities reported are as follows:

Geographical Branch, which incorporated the functions of the former Canadian Board of Geographical Names.

Dept. of National Health and Welfare. Northern Health Service, which took over former operations of the Indian Health Service in the Northwest Territories, and whose developing services and plans in the Northwest and Yukon Territories are outlined.

Dept. of Northern Affairs and National Resources, whose National Historic Sites Division reconstructed a theater and sternwheeler at Dawson City, Yukon Territory; Industrial Division established the Canadian Eskimo Art Committee to advise on graphic art; and Northern Co-ordination and Research Centre planned a scientific research station at Inuvik, Mackenzie District, to be built in 1962.

Increased activities and/or facilities are reported by some agencies, e. g. the Canadian Broadcasting Corp., and sections of the Dept. of Northern Affairs' Northern Administration Branch, such as the Industrial Division which is responsible for Eskimo cooperatives (increased to 12), for tourism, etc. The Dept. of Fisheries' Conservation and Development and Inspection Services also extends its work with the cooperatives' fish and marine mammals projects, with sport fishing, and planned commercial lake fishing in the Northwest and Yukon Territories. The long-term Polar Continental Shelf Project is carried out mainly in the area between Borden and Meighen Islands. Territorial revenues during fiscal year 1960-1961, totalled $6,079,379.41 in Northwest Territories and $5,625,322.73 in the Yukon, and expenditures, $48,305,942 and $22,159,743.09 respectively. Graphs, appended to this report, indicate production since 1951 of minerals in both territories, oil and gas in the Northwest Territories. (CaMAI.)

CANADA. BOARD ON GEOGRAPHICAL NAMES, *see Arctic.* Geographical names . . . 1961. No. 69842

CANADA. CANADIAN BROADCASTI NG CORP., *see* Canada. Govt. activities N. 1961. 1962. No. 70516

70517. CANADA. DEPT. OF AGRICULTURE. Research hi-lites, Whitehorse experimental farm. Mile 1019, Alaska Highway, Yukon Territory, 1955-56, 1957-58. 2 v.: 28, 22 p. tables.

Reports progress in the study of problems of agricultural production in the Yukon. A 12-year weather summary is tabulated. Horticulture, cereal and forage crops, field and animal husbandry and poultry, are evaluated and recommendations given on the basis of successes. Results from off-station test plots at 13 sites in southern and central Yukon are reported. The 1957-58 issue reviews achievements and research results with a list of the accomplishments and research, with a list of recommended varieties for the region. Marked increase is noted in yield of tender garden crops when grown under plastic shelters in the garden. (CaONA.)

CANADA. DEPT. OF AGRICULTURE *see also*
Canada. Govt. activities N. 1961. 1962. No. 70516
Ehrlich, W.A., & *others.* Soil . . . Nelson R. . . . 1959. No. 71213

70518. CANADA. DEPT. OF AGRICULTURE. *Experimental Farms Service.* Dominion experimental substation, Fort Simpson, Northwest Territories: progress report, 1947-1953. Ottawa, Queen's Printer, 1954. 48 p. illus., tables, map.

Reviews major lines of work since establishment of this most northerly unit of the Experimental Farms Service in 1947, to explore agricultural potential and to accumulate reliable data of crop

response. Particular attention is directed to valleys of the Mackenzie River system and principal settlements of Great Slave Lake. The 85-acre substation is located at 61°52′N. 121°21′W., 415 ft. elevation, on an island at the junction of the Liard and Mackenzie Rivers. The work is devoted primarily to determining the most suitable varieties, cultural practices, and fertilizers for various crops, especially vegetables. Physiography and soil conditions are described and climatic records tabulated. Performance of cereal crops, horticulture, forage crops, ornamental plants, crop rotations, tillage, fertilizer trials, and seed piece trials for potatoes are discussed, and data tabulated. Off-station activities at Yellowknife are reported. Appended are: population distribution in 1951 for District of Mackenzie; summary report on exploratory soil survey along the water route from Waterways Alta. to Aklavik N. W. T. by A. Leahey; and tables of temperature, precipitation and frost data for settlements in northwest Canada. (CaONA.)

70519. CANADA. DEPT. OF AGRICULTURE. *Experimental Farms Service.* Dominion experimental substation, Whitehorse, Yukon Territory; progress report, 1945-1952. Ottawa, Queen's Printer, 1952. 43 p. illus., tables.

Describes the establishment of this station in 1944 at Mile 1019 on the Alaska Highway, 60°45′ N. 137°35′ W. 2,000 ft. elevation. Its purpose is to provide information on farming so that the local market may eventually be serviced. By 1952, a hundred acres were under cultivation in crop or pasture. Meteorological data are tabulated; average summer temperature at the station is 51.4°F., yearly precipitation 8-12 in. Animal husbandry, field husbandry, grain and forage crops, horticulture, insect pests, irrigation, ornamental plants, and poultry are discussed, performances evaluated, and recommendations given. Off-station cooperative activities are described. (CaONA.)

CANADA. DEPT. OF CITIZENSHIP AND IMMIGRATION. *Indian Affairs Branch, see* Canada. Govt. activities N. 1961. 1962. No. 70516

70520. CANADA. DEPT. OF FISHERIES. Aluminum gillnetters for Pacific coast. *(Its:* Trade news, Jan. 1961. v. 13, no. 7, p. 12, illus.)

Describes 50 boats being built in British Columbia for the Alaskan salmon fishery. Advantages of aluminum boats are noted: ease and low cost of maintenance and repair, no deterioration, virtual unsinkability, also less weight and greater capacity than wooden boats. Costs are approximately the same. (DI.)

70521. CANADA. DEPT. OF FISHERIES. Halibut survey. *(Its:* Trade news, May 1961. v. 13, no. 11, p. 11.)

Outlines plans of survey, on distribution of halibut and other bottom fishes on the continental shelf of Alaska, to be carried out by the International Pacific Halibut Commission. Three vessels have been chartered for a year-round operation covering some 40,000 sq. mi. The operation exceeds anything done before in this field. (DI.)

70522. CANADA. DEPT. OF FISHERIES. "Ilkalupik," the arctic char. *(Its:* Trade news, Apr. 1962. v. 14, no. 9, p. 3-5, illus.)

Describes and illustrates commercial char fishing and freezing by Eskimo cooperatives, established in northern Canada by the Dept. of Northern Affairs. Most of the catch is taken in river mouths, from mid-Aug. to late Sept., with gill nets. (DI.)

70523. CANADA. DEPT. OF FISHERIES. International fisheries commissions. *(Its:* Trade news, Jan. 1961. v. 13, no. 7, p. 8-11.)

Reviews Canada's participation in, and contributions to the work of ICNAF, INPHC, etc., agreements and conventions, research symposia, research vessels, etc. (DI.)

70524. CANADA. DEPT. OF FISHERIES. North Pacific fur seals. *(Its:* Trade news, Mar. 1961. v. 13, no. 9, p. 3-4, illus.)

Reports on the 1961 meeting of the North Pacific Fur Seal Commission; the 1960 research activities of the member governments (United States, Canada, USSR, Japan) concerning pup mortality, high male mortality, overcrowding on Pribilof Islands, migration, etc. (DI.)

CANADA. DEPT. OF FISHERIES, *see also* Canada. Govt. activities N. 1961. 1962. No. 70516

CANADA. DEPT. OF FISHERIES. *Conservation and Development and Inspection Services, see* Canada. Govt. activities N. 1961. 1962. No. 70516

CANADA. DEPT. OF FORESTRY, *see* Canada. Govt. activities N. 1961. 1962. No. 70516

70525. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. Annual report calendar year 1958-1960. Ottawa, Queen's Printer, 1960-1961. 2 v.: 143, 159 p. illus., maps, incl. col. fold., graphs. Refs.

Summarizes activities during the calendar year. Those in the North include helicopter-supported geologic mapping: Operations Fort George, Back River, Coppermine, Pelly, etc.; the Polar Continental Shelf Project which set up a base at Isachsen on Ellef Ringnes Island and began detailed investigations; Canadian Committee on Oceanography to coordinate and advise on activities in that field; Bedford Institute of Oceanography at Halifax to be completed in 1962; Northern Development Roads program; and others. Appendices of supplementary data, and photos amplify the report. (DLC.)

70526. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. Étude de la croûte terrestre. (Revue canadienne de géographie, 1962. v. 16, no. 1-4, p. 49-50.) Text in French. **Title tr.:** Study of the terrestrial crust.

Notes geophysical studies planned by the Canadian federal observatory. Among them are investigations of the position of the Magnetic North Pole, of a magnetic anomaly on Ellesmere Island, and of the structure and thickness of the earth's crust at Schefferville, northern Quebec. The magnetic field is to be charted over a 1,250,000 sq. mi. area of the far North, and gravimetric surveys made of an intrusive body at Coppermine in Mackenzie District, and of the polar continental shelf from Isachsen, Ellef Ringnes Island. (DGS.)

70527. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. Three islands in thearctic archipelago are named after Canadian governors general. Ottawa, 1962. 2 p. Mimeo. Also reported in Canadian mining and metallurgical bulletin, Apr. 1962, v. 55, no. 600, p. 269.

Reports the naming of Vanier, Massey, and Alexander Islands, respectively 375, 200, and 215 mi. off the northwest coast of Bathurst Island in the Sverdrup Basin, a favorable area for oil and gas. They are named for Georges P. Vanier, Vincent Massey, and Earl Alexander of Tunis. (CaOG.)

CANADA. DEPT. OF MINES & TECHNICAL SURVEYS, *see also*

Canada. Govt. activities N. 1961. 1962. No. 70516

Ontario. Report of Moosonee Harbour . . . 1961. No. 74525

70528. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. *Geographical Branch.* Gazetteer of Canada: Ontario. Ottawa, Queen's Printer, 1962. vi, 614 p. fold. map. *(Its:* Gazetteer of Canada series, no. 10.)

Lists some 42,000 populated places and topographic features in Ontario, together with adjacent marine physical features in Hudson and James Bays. Name, type, general location, and coordinates are given for each listing, and some principal features are shown on the map at scale 1 in.: 100 mi. Settlements, rivers and other features in the northern part of the province (covered by the *Arctic Bibliography)* are included. (DGS.)

70529. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. *Geographical Branch.* Selected bibliography of Canadian geography with imprint 1959, 1960. Ottawa, 1961, 1962. Text in English and French. 2 v.: 75, 85 p. *(Its:* Bibliographical series no. 27 and 28.)

Annual listings (cf. No. 63750) of books, pamphlets, periodical literature, and, separately, maps. (DGS.)

CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. *Geographical Branch, see also* Canada. Govt. activities N. 1961. 1962. No. 70516

70530. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. *Mineral Resources Division.* Metal and industrial mineral mines in Canada, June 1961. Ottawa, Queen's Printer, 1962. 27 p. graph, table. *(Its:* Operators list 2.)

Lists about a score of mines in northern Canada producing: copper, gold, zinc, etc., p. 5; gold, p. 9-11; iron ore, p. 11; nickel-copper, p. 14, silver-lead-zinc, p. 16. No industrial mineral mines are noted in the North. (DLC.)

70531. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. *Mineral Resources Division.* Metallurgical works in Canada; non-ferrous and precious metals, Sept. 1961. Ottawa, Queen's Printer, 1962. 19 p. map, tables. *(Its:* Operators list 1, pt. 2.)

Lists copper and nickel-copper smelters and refineries at Flin Flon and Thompson, Man., notes recovery of cadmium, gold and silver at Flin Flon, cobalt oxide at Thompson. Zinc refining is also carried on at Flin Flon. Data are given on operator, location, representative, product, rated annual capacity, etc. as of Aug. 1961. (DLC.)

70532. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. *Mineral Resources Division.* Milling plants in Canada, metallic ores. Ottawa, Queen's Printer, 1961, 1962. 2 v.: 47, 49 p., tables. *(Its:* Operators list 3, part 1.) Refs.

Lists the principal mining companies in this category, with brief notes on each mill's status in June of these years. International Nickel Co. of Canada's Thompson, Man., integrated plant and Quebec Cartier Mining Co.'s iron ore crusher at Lac Jeannine, Que. began operation in early 1961. Three gold ore processing plants in the Yellowknife area; the Iron Ore Co. of Canada's crusher at Schefferville, Que., nickel-copper plants of Sherritt Gordon Mines and North Rankin Nickel Mines at Lynn Lake, Man., and Rankin Inlet in Keewatin District, respectively; and the United Keno Hill Mines' silver-lead-zinc concentrator in the Mayo area of Yukon Territory were operating in June, 1962. The Galkeno silver mine and the Port Radium uranium plant are idle. Part 2, Industrial Minerals, lists no plants in Northern Canada. (DLC.)

70533. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. *Mineral Resources Division.* Petroleum refineries in Canada. Ottawa, Queen's Printer, Jan. 1961, Jan. 1962. 2 v.: 29, 31 p., map, graphs, tables. *(Its:* Operators list 5, 1961, & 1962.)

Annual survey; includes basic data on the Imperial Oil Ltd. refinery at Norman Wells, Mackenzie District. Crude oil capacity of this plant increased from 1350 to 1500 bbl./day, 1960-1962. (DLC.)

70534. CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. *Mineral Resources Division,* and **GEOLOGICAL SURVEY OF CANADA.** Principal mineral areas of Canada. Map 900A, 12th edition. Ottawa, 1962. Printed by the Surveys and Mapping Branch. New edition of No. 50071.

Fold. col. map 36 x 33 in., scale 1:7, 603, 200, 1 in.: 120 mi. Producing areas in the North include Schefferville, with iron ore; Lynn Lake, Thompson, Chisel Lake in Manitoba: nickel, lead, zinc and copper; Yellowknife, Rankin Inlet, and Norman Wells, Northwest Territories: gold, nickel, copper and oil; Dawson and Mayo districts and Carmacks in the Yukon: gold, silver, lead, zinc, cadmium, and coal. Operating companies, selected minerals, and important potential producing areas are indicated. Major rock types are shown. Mineral production is tabulated by type and by province for 1961, and total production of Canada listed for 1941-1961. In this period, total value has increased four-fold, per capita value about three-fold. (DGS.)

CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. *Mines Branch, see* Canada. Govt. activities N. 1961. 1962. No. 70516

CANADA. DEPT. OF MINES AND TECHNICAL SURVEYS. *Surveys & Mapping Branch, see* Canada. Govt. activities N. 1961. 1962. No. 70516

CANADA. DEPT. OF NATIONAL DEFENCE, *see* Canada. Govt. activities N. 1961. 1962. No. 70516

70535. CANADA. DEPT. OF NATIONAL HEALTH AND WELFARE. Annual report for 1959, 1960, on the Radioactive Fallout Study Program. Ottawa,

May 1960, Dec. 1961. 2 v.: 64, 54 p. graphs, tables. (*Its:* Radiation Protection Division, CNHW: RP-3, CNHW: RP-4.) Refs. Prepared by P. M. Bird, A. H. Booth *and* P. G. Mar.

Describes radioactive fallout measurements at some two dozen sampling stations, eight in arctic or subarctic Canada, viz: Aklavik, Coral Harbour, Fort Churchill, Moosonee, Resolute, Whitehorse, Yellowknife, and Goose Bay. Analytical data on total beta activity of fallout particles in the air and in precipitation are tabulated. Measurements of strontium-90 in milk powder and in a number of human bone specimens are also included. In general, fallout levels in Canada during 1960 declined gradually from peak values in mid-1959; overall average concentration in the air at ground level was 0.3 d.p.m. (disintegrations per minute) per cu. m. in both years. Precipitation samples showed a marked decrease in values in 1960, but displayed a spring-summer peak as in 1959. Details of equipment and techniques are given in the report for 1959. The previous two reports contain no arctic data. (DWB.)

70536. CANADA. DEPT. OF NATIONAL HEALTH AND WELFARE. Government expenditures on health and social welfare, Canada, 1927 to 1959. Ottawa, 1961. 95 p. (*Its:* Social Security Series, Memorandum 16.)

Includes (p. 17, 31, 32, 38, 49, 79, 81) data on such expenditures for Yukon Territory and Northwest Territories. (CaONA.)

70537. CANADA. DEPT. OF NATIONAL HEALTH AND WELFARE. *Northern Health Service.* Health services plan, Northwest Territories, 1962-1967. Ottawa, 1961. various pagings. Mimeo.

Describes the work of the Northern Health Service in the Territories, the cost of certain facilities shared by Federal and Territorial Governments. An inventory of the facilities and recommendations for their expansion are given. Inadequacy of the present services and difficulties of tending needs of a small, scattered population under prevailing climatic conditions are discussed. Details of financing the program and a plan for distributing costs are presented. Tables of supporting statistical information are appended. (CaONA.)

CANADA. DEPT. OF NATIONAL HEALTH AND WELFARE. *Northern Health Service, see also* Canada. Govt. activities N. 1961. 1962. No. 70516

70538. CANADA. DEPT. OF NATIONAL HEALTH AND WELFARE. *Research and Statistics Division.* Hospital care in Canada, recent trends and developments. Ottawa, 1960. 102p. 35 appended. tables, graphs. (*Its:* Health care series, memorandum no. 12.) Refs.

Hospital use, resources, costs, and financing arrangements since 1948 are discussed and tabulated. The Yukon and Northwest Territories are included in some of the statistics, and these reflect the high incidence of tuberculosis among Eskimos and Indians, e.g. TB first admissions in 1958 was 3.2‰ in the territories compared to 0.5 for all Canada. Northwest Territories births and deaths in hospital were considerably below the national average, as were general hospital occupancy and personnel-patient ratios in NWT-Yukon. (DLC.)

70539. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. Northern welfare '62; symposium on northern social work. Ottawa, 1962. 73 p. illus., map. (*Its:* Northern Administration branch. Welfare Division.)

Contains twenty popular sketches and poems, as listed below, a few* described under their authors' names, q.v.:

Rudnicki, W. A. A sampling from northern Canada. Chief of the Welfare Division sketches the general trends in industrial and cultural development: urbanization, acclimation of whites, acculturation, health and welfare services, etc.

Akeeko is writing. An old Eskimo from a small settlement in Keewatin District relates his experiences in contacts with whites.

Neville, F. J. Northern social work. Superintendent of Welfare for the Arctic District discusses ecological, cultural and socio-dynamic factors in social workers' activities in small isolated communities, attitudes of Eskimos and Indians, hazards of isolation for city-bred whites, etc.

Hefler, J. N. Law and custom. Head of Family Services shows how compatible are the Child Welfare Ordinance adoption provisions and the Eskimo adoption practices; no conflict is anticipated between them.

Eregatuk, A. Aklavik. An Eskimo student in a teacher training course in Ottawa describes present-day life at Aklavik, increasing job opportunities for Indians and Eskimos, etc.

*SPENCE, I. The trend toward settlement.

*COMPTON, F. M. The transitional community.

*ZUKERMAN, H., *and* N. ZUCKERMAN. A community council.

*STEWART, D. N. Notes on drinking problems.

*GREEN, R. J. Rehabilitation.

Harrison, P. Home for Christmas. Social worker describes the return by plane of 41 Eskimo patients from the TB sanatorium at Hamilton, Ontario.

Saulnier, J. M. The first trip. Head of the Rehabilitation Services for the Northwest Territories describes a 3,000-mile inspection flight-tour of northern posts and routine rescue operations, by the arctic Patrol.

*GAGNÉ, R. C. Language culture.

Stewart, T. D. Cross Roads. Short-story on acculturation: Eskimo boy persuades his father to abandon traditional seal hunting in favor of wage employment in a settlement.

Murdoch, P. E. Igloo tale Short-story dealing with Eskimos' evaluation of the white man.

Williamson, R. G. H. Mining town. Poetic tale of man and machine.

Four poems by M. Panegoosho (an Eskimo girl), F. J. Neville, A. E. Spalding, R. G. H. Williamson.

Appended are biographical notes on the authors and a map showing location of social and welfare institutions in Mackenzie and Keewatin Districts, Baffin Island, Manitoba, and Quebec. (CaMAI.)

70540. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. Yukon,

its riches and romance. Ottawa, Queen's Printer, 1962. 32 p., illus., maps. 22 refs.

Contains brief general information on location, geology, climate, population, administration, history, mining and other natural resources, transportation, and communications. Tourist attractions, immigration and customs requirements, hunting, trapping, sports fishing, etc. are described. Information is given on land acquisition and disposal, commercial enterprises, mining and prospecting, and organizations with branches in the Territory. Temperature data for Whitehorse, Watson Lake, Mayo Landing, and Dawson are included, also a table of traffic regulations, with clearance and loading restrictions, and a map of transportation and resource development. (CaOGB.)

CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES, *see also*

Canada. Govt. activities N. 1961. 1962. No. 70516

Ontario. Report of Moosonee Harbour. . . 1961. No. 74525

CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES, *Industrial Div., see* Canada, Govt. activities N. 1961. 1962. No. 70516

CANADA. DEPT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *National Historic Sites Division, see* Canada. Govt. activities N. 1961. 1962. No. 70516

70541. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Northern Administration and Lands Branch. Arctic Division.* Arctic fur trade. Ottawa, 1959. 2 p. Photostat.

Reviews briefly the fur trade in Canada from 1670 through its 20th century extension into the Arctic. Early trade between whalers and Eskimo hunters is mentioned; the demand for white fox on the European market in the early 20th century, expansion of Hudson's Bay Co. activities northward, competition with independent traders through the 1920's – 1930's, etc. At present the Company has 30 posts in the Arctic. A trapping economy has superseded hunting among the Eskimos. (CaONA.)

70542. CANADA. DEPT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Northern Administration and Lands Branch. Arctic Division.* Report of timber reconnaissance George and Koksoak Rivers, Jul.–Aug. 1958. 31 p. tables, 11 plates 3x5 in., maps incl. 2 fold. Mimeo.

Describes part of an economic survey of the eastern Ungava Bay area to assess natural resources for development as Eskimo industries. This part involved the lower 60 mi. of the Koksoak River to Fort Chimo, including the lower reaches of the Ford River. The geography and climate of the area are outlined. Distribution and habitat are given for the timber, which is black spruce, larch, balsam fir and white spruce, the first two predominating. Volume and utilization are evaluated on the basis of field work and interpretation of airphotos. In the Koksoak area the average volume/acre is low, and the small 4–10 in. tree size limits commercial use. In the George area, heavy density timber occurs in relatively large pockets and its commercial use for dimension lumber, railroad ties, and log houses, is possible for a limited time. Waterway transport to a milling site near tide water is feasible. Analyses of tree samples from 23 plots on the Koksoak and 46 on the George are tabulated. (CaONA.)

70543. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Northern Administration Branch. Resources Division.* Statistical report on oil and gas activities 1920–1960: Northwest Territories, Yukon Territory, Arctic Islands and Canada lands under water. Ottawa, Queen's Printer, 1962. 33p. map, tables, graphs. (*Its:* Statistical report no. 1.)

Records by tables and graphs, the expenditures, production, and other pertinent data, in six categories, viz: exploration and development, production, disposition, reserves, ratios, and pipeline transportation. (CaONA.)

70544. CANADA. DEPT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Northern Administration Branch.* Schedule of wells, Northwest Territories and Yukon Territory 1920–1961. Ottawa, Queen's Printer, 1962. vii, 60 p. fold. maps & tables. (*Its:* Schedule no. 2.)

Annotated list of the (about 175) wells drilled and completed in these two territories to the end of 1961. A geological preface outlines the strata penetrated by the wells and refers to recent sources. Description is given of the land survey systems in use south of and north of 70°N.; well locations are indicated by grid-section-unit and by latitude and longitude. Five structure test holes drilled in 1961 are reported. The wells are indexed according to oil companies; and to year of completion or abandonment. An index map, scale 1 in. = 100 mi., shows areas described and accompanied by tables of formations. (DLC.)

CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Northern Administration Branch, see also* Canada. Govt. activities N. 1961. 1962. No. 70516

70545. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Northern Administration Branch. Community Planning Group.* A settlement handbook for northern administrators, edited by J.R. Lotz. Ottawa, Sept. 1962. 43 p. Mimeographed. (Industrial Division report.) Refs.

Presents papers on community planning and development, based on current work of this Group. Six refer to northern Canada, viz:

The development of northern communities, by J. R. Lotz, p. 2–9. Suggestions are made for: siting of buildings; zoning; provision of water, sewer, and garbage collection services; health and sanitation education of Eskimos; fire protection; road layout; and encouraging local self-government.

Northern housing and health, by J. S. Willis, p. 10–16. 2 refs. The chief of Northern Health Services discusses the need of improved housing and sanitary facilities for Eskimos and Indians, and the minimal housing standards needed to ensure health. The single room,16 x 16 ft.rigid-frame house planned by the Government for Eskimo housing, is considered not adequate.

Municipal organization in the Northwest Territories, by P. B. Parker, p. 17–21. *Outlines* provisions of three NWT ordinances dealing with municipal and local improvement districts and area development, also of the federal-territorial program

for assistance to community centers.

Community development and adult education, by F. L. McKay, p. 27–29. *Discusses* the need of educating formerly nomadic Eskimos and Indians for community living and responsibilities. Author is in Adult Education Section of the Branch.

The role of the Industrial Division in community development, by R. A. Jenness and J. R. Lotz, p. 30–34. *Explains* Division policies and activities; area resource surveys; sponsorship of community improvement projects, commercial enterprises, and cooperatives; introduction of new techniques, equipment, and industries; promotion of markets for northern products; etc. Fostering of local initiative and responsibility is stressed.

The characteristics of northern communities, by W. M. Hlady, p. 35–43. Ref. Reprinted from: *Northern community newsletter* Nov. 1961 – Jan. 1962, v. 1, no. 1–3. *Considers* three groups of characteristics: the physical: location, natural resources, population size and composition, etc.; the operational: local government, organizations, leadership, etc.; and the intangible: traditions, values and attitudes, religious beliefs, etc. (CaMAI.)

70546. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Northern Co-ordination and Research Centre.* The population of the Northwest Territories and the Yukon 1951–1961. Ottawa, Jan. 1, 1962. 5 p.

Contains figures assembled for working purposes of the Centre, from Bureau of Statistics data of 1951, 1956, and 1961 preliminary. Population is shown for districts and major settlements, also for 28 health districts; figures for Eskimos, Indians, and whites are indicated; distribution of Eskimos (11,835) is given for 1961. Northwest Territories population increased from 16,004 to 22,998, Yukon Territory, 9,096 to 14,628, in 1951–1961. (CaMAI.)

CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Northern Co-ordination and Research Centre, see also* Canada. Govt. Activities N. 1961. 1962. No. 70516

70547. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Resources Division.* Mining in the North 1961. Ottawa, Feb. 1962. 31 p. maps incl. 2 fold., tables.

Reports production by mineral and major company, exploration, and development in three mining districts of Yukon Territory and three in the Northwest Territories. Value of output at $19,992,484 in NWT and $12,986,911 for the Yukon is compared to 1960 at $26,481,649 and $13,330,198, respectively. Mineral claims in the Yukon (2462) increased over 1960; those in NWT (1429) decreased. Important discoveries were made of copper-silver in the Redstone River area of southwestern Mackenzie District, silver-lead-zinc in the Watson Lake area of south-eastern Yukon, and gold at Contwoyto Lake in eastern Mackenzie District. Production is to start in 1962 at the Canada-Tungsten Flat River project in western Mackenzie District, and to cease at North Rankin Nickel Mines on Hudson Bay. Road construction and mining accidents are reported, also proposed changes of mining districts, and a federal government assistance program for prospectors in Yukon and NWT. (CaMAI.)

70548. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Resources Division.* Prospectors' assistance program, Yukon and Northwest Territories. Ottawa, Queen's Printer, 1962. 7 p. map.

Explains the program of earned assistance announced in July 1961: the Dept. to repay part (up to 50%) of a two-man prospecting party's expenses, on evidence of costs, work accomplished, etc. Conditions, requirements, application form, etc. are included. (CaONA.)

70549. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Travel Bureau.* Hunting in Canada, a brief description of Canada's resources of big and small game, 1961-1962. Ottawa, Queen's Printer, 1961. 36 p.

Includes information for the northern areas of the provinces, and for Yukon and Northwest Territories: black bear and moose are hunted in Quebec and Ontario: most of northern Ontario is a game preserve; northern Manitoba is not easily accessible. In the Yukon, mountain sheep and goat, moose, caribou, bear, grouse, ptarmigan, and waterfowl are hunted in areas outside sanctuaries and preserves, which are listed; non-resident hunters must employ registered guides; transportation facilities are described. In Northwest Territories, hunting is mainly reserved for dependent residents; sport hunting of upland game birds, waterfowl, buffalo, black bear, and seal is allowed occasionally and opportunities are increasing; for other big game animals, there is no open season. Transportation is described. (CaOGB.)

70550. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Water Resources Branch.* Proceedings of Hydrology Symposium no. 2, evaporation, held . . . . Toronto on 1 & 2 March, 1961. Ottawa, Queen's Printer, 1961. 263 p. illus., maps, diagrs., graphs, tables. Refs.

Deals mainly with temperate regions and conditions; but two of the 11 prepared papers, discussing arctic or subarctic conditions, are described in this Bibliography under the authors' names, viz:

WILLIAMS, G. P. Evaporation from water, snow and ice.

CAVADIAS, G. S. Evaporation applications in watershed yield determination. (DLC.)

70551. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Water Resources Branch.* Surface water supply of Canada. Arctic and western Hudson Bay drainage, and Mississippi drainage in Canada, in British Columbia, Alberta, Saskatchewan, Manitoba, the Northwest Territories and western Ontario; water year 1957-58, 1958-59. Ottawa, Queen's Printer, 1961-1962. 2 v., 513, 536 p., map, tables. (*Its:* Water resources paper no. 125, 127.) Refs.

Includes hydrometric survey data from streams and rivers in Northern Manitoba, all of Northwest Territories, that part of Yukon Territory lying east of the Rocky Mountain Divide, also the Nelson and Hayes River basins in Ontario. Stream-flow water-level, and meteorological data are given for Oct. 1, 1957–Sept. 30, 1958. Scope and contents are similar to earlier reports, No. 50079, etc. (DGS.)

70552. CANADA. DEPT. OF NORTHERN AF-

FAIRS AND NATIONAL RESOURCES. *Water resources Branch.* Surface water supply of Canada. Atlantic drainage, southeastern Quebec, . . . and Newfoundland, water years 1958–59 and 1959–60. Ottawa, Queen's Printer, 1961. 143 p. map, tables. (*Its:* Water resources paper no. 130.) Refs.

Includes discharge data from four Labrador streams: Ashuanipi, Hamilton, Naskaupi, and Unknown or Atikonak. (DGS.)

70553. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Water Resources Branch.* Surface water supply of Canada. Pacific drainage, British Columbia and Yukon Territory, water year 1958–59, Ottawa, Queen's Printer, 1962. 388 p. map, tables. (*Its:* Water resources paper no. 128.) Refs.

Includes results of the hydrometric survey investigations on lakes and streams in the Yukon which drain to the Pacific: area covered includes most of the Territory; data are presented, p. 332-75, on the Alsek and Yukon Rivers and their tributaries. Period covered is the year ended Sept. 30, 1959. Some earlier data not in previous reports, cf. No. 63767, also are given. (DGS.)

70554. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Water Resources Branch.* Surface water supply of Canada. St. Lawrence and southern Hudson Bay drainage, Ontario and Quebec, water year 1957–58. Ottawa, Queen's Printer, 1962. 326 p. map, tables. (*Its:* Water resources paper no. 126.) Refs. In sequence to No. 63768.

Includes, in the southern Hudson Bay drainage, hydrometric survey data for basins of the Albany, Moose, Nottaway Rivers and for the main Harricanaw River. The Rupert River data refer to area covered by this Bibliography. (DN-HO.)

70555. CANADA. DEPT. OF NORTHERN AFFAIRS AND NATIONAL RESOURCES. *Water Resources Branch.* Water power resources of Canada 1961. Ottawa, Mar. 1962. 26 p. illus., graph, tables. (*Its:* Bulletin no. 2721–61.)

Annual review with discussion and tabulation of water-power distribution in the provinces and territories, an outline of current construction of generating stations, including Kelsey on the Nelson River, the rate of hydro-electric power development, and industrial use of power. Establishment of the Northern Canada Power Commission in 1948 is noted. Approx. one-fifth of the total electric energy generated in Canada is used by the pulp and paper industry, and approx. half of installed water-power capacity on Dec 31, 1961 was located in Quebec. Availability of water-power resources has facilitated mining development. (DLC.)

CANADA. DEPT. OF PUBLIC WORKS, *see* Ontario. Report of Moosonee Harbour . . . 1961. No. 74525

CANADA. DEPT. OF TRANSPORT, *see* Canada. Govt. activities N. 1961. 1962. No. 70516.

70556. CANADA. DEPT. OF TRANSPORT. *Ice Information Office.* Hudson Bay route, 1962. Ottawa, 1962. 3p. Mimeo.

Reports the Ice Information Office at Churchill, Manitoba opened July 12–Oct. 19, 1962 to advise commercial shipping on routes to this port. Aerial ice reconnaissance was maintained over the Hudson Bay by the Canadian Meteorological Branch. Outbound shipping included 49 grain vessels (listed) which loaded 21,500,000 bu. wheat, close to the 1959 record; two import cargoes were discharged. No ice damage was reported: the best season on record. Ice conditions are given for the shipping season, July 26–Oct. 11. (CaOGB.)

70557. CANADA. DEPT. OF TRANSPORT. *Telecommunications and Electronics Branch.* Radio aids to marine navigation, Atlantic and Great Lakes Ottawa, Queen's Printer, Apr. 1, 1962. 43 p. maps, diagr., tables. (*Its:* v.7 no. 1E.) Issued twice annually, on pr. 1 and Aug. 1, with a supplement on Dec. 1.

Includes note on automatic responder beacon on Charles Island in Hudson Strait; also call signs of 12 arctic (of 49) Dept. of Transport radio stations. Pertinent details on these stations are given; besides Charles Island, automatic radiobeacons are located at Chesterfield Inlet, and at Churchill. Four stations are located on shores of Hudson Strait, four on Labrador Sea. (DLC.)

CANADA. DOMINION OBSERVATORY, *see* Canada. Govt. activities N. 1961. 1962. No. 70516

70558. CANADA. FISHERIES RESEARCH BOARD. Annual report 1960–61 for the fiscal year ended March 31, 1961. Ottawa, Queen's Printer, 1961.

Includes a report of the Arctic Unit (p. 117-20) on exploratory work in several spots off the western and eastern arctic coast and some freshwaters: seal and whale studies and zooplankton investigation. A short section (with illus.) is devoted to the activities of the R/V *A. T. Cameron* in Northwest Atlantic fisheries research. The chapter on oceanography (p. 123–37) covers also arctic waters, currents, and plankton. (DI.)

70559. CANADA. FISHERIES RESEARCH BOARD. Physical and chemical data record, North Pacific surveys, Western Aleutians and Bering Sea, June 27 to August 14, 1958. Ottawa, Queen's Printer, Sept. 22, 1958. 104 p. illus., graphs, tables, map. (*Its:* Manuscript report series, oceanographic and limnological, no. 28.) 3 refs.

Contains the data record for the sixth of a series of surveys designed to describe physical and chemical features, water masses and currents and their seasonal and yearly fluctuations in this important salmon region, contribution to the IGY. Sixty-three of the 97 stations occupied by the CNAV *Whitethroat* were in the area 50°-56°N. 160° W.-170° E. Methods of observations and of chemical analysis are outlined. Corrections are included in stations 57 and 92 data. Bathythermograms are plotted for each station. (DN-HO.)

70560. CANADA. FISHERIES RESEARCH BOARD. *Atlantic Oceanographic Group.* Canadian oceanographic research ships 1961. Ottawa, Queen's Printer, June 1, 1961. 36 p. illus., tables. (*Its:* Manuscript report series, oceanographic and limnological, no. 90.)

Presents basic ship statistics and outlines the scientific facilities on 17 vessels, four of them the CGS *Baffin* (hydrographic surveys), CMS *Labrador* (icebreaker), MV *Calanus,* and *Salvelinus* assigned to arctic waters for hydrographic surveys, icebreaking, marine biology, and fisheries. The *Salvelinus* has mean draft of 3 ft. 8 in. for working in the Mackenzie Delta and other inshore regions. (DN-HO.)

70561. CANADA. GEOLOGICAL SURVEY. Aeromagnetic map, Beaverhill Lake, District of Mackenzie, Northwest Territories. Ottawa, 1962. Map sheet 27.5 x 23.5 in. (*Its:* Surveys and Mapping Branch, Map 1127A, sheet 75I.) Ref. Aeromagnetic-geologic correlation by A. S. MacLaren.

Map, at 1 in: 4 mi. scale of this area 62° - 63°N. 104° - 106°W. in the Thelon River basin. Three distinct magnetic zones are delineated; one of generally low intensity, 1,600-2,000 gammas, with positive anomalies locally 1,000 gammas higher than the background; another generally of slightly higher intensity, containing small and large positive anomalies also low intensity negative anomalies; the third is a series of prominent anomalies with greater than 4,000 gammas intensity, thought to be caused by basin intrusions 2,100-4,100 feet deep. (DGS.)

70562. CANADA. GEOLOGICAL SURVEY. Aeromagnetic map, Wholdaia Lake west, District of Mackenzie, Northwest Territories. Ottawa, 1962. Map sheet 30 x 24 in. (*Its:* Surveys and Mapping Branch, Map 1126A, sheet 75A.) Ref. Aeromagnetic -geologic correlation by A. S. MacLaren.

Map, at 1 in. : 4 mi. scale, of an area 60°-61°N. 104°– 106°W. on the Mackenzie District - Saskatchewan border, based on 16 previously published 1 in.: 1 mi. aeromagnetic maps. Three magnetic zones are delineated: one chiefly higher than 2,500 gammas in intensity, with both positive and negative anomalies; another generally less than 2,500 gammas, with positive anomalies protruding; and the third with several large positive anomalies in a background of smaller negative and positive anomalies. Rock types in each zone are noted. (DGS.)

70563. CANADA. GEOLOGICAL SURVEY. Axel Heiberg and Stor Islands, District of Franklin, Northwest Territories. Ottawa, 1959. Fold. map sheet 30 x 36 in. (*Its:* Surveys and Mapping Branch. Preliminary series, map 36 - 1959, sheets 49, 59, 69, 340 and 560 (parts of).) Ref.

Shows, on scale of 1 in.: 8 mi., distribution of geologic features, icecaps, glaciers, etc. as mapped by personnel of Operation Franklin, 1955, and as summarized by Y. O. Fortier in No. 50087. Extensive areas remain unmapped, though 15 Paleozoic and Mesozoic units are identified, as are two types of intrusives, unconsolidated deposits, glaciers, etc. Geological boundaries established by ground survey and by helicopter reconnaissance are shown. (DGS.)

70564. CANADA. GEOLOGICAL SURVEY. Geological map of Canada. Ottawa, 1955, reprinted with revisions 1962. Map sheet 32 x 31.5 in. (*Its:* Surveys and Mapping Branch, Map 1045A.)

Map on scale 1 in.:120 mi. in 36 colors, showing distribution of intrusive rocks by seven stratigraphic groups, also of the main stratigraphic units of sedimentary and volcanic rocks of Canada. Undivided, combined, and individual stratigraphic units are distinguished. Published and unpublished sources were utilized in the revision. (DGS.)

70565. CANADA. GEOLOGICAL SURVEY. List of geological reports of the Yukon Territory, 1917-1962. Ottawa, 1962. 6 p.

Lists geological map index sheets, 26 memoirs, 17 summary reports, 5 bulletins, and 33 papers. (CaOG.)

70566. CANADA. GEOLOGICAL SURVEY. Raw materials of Canada's mineral industry. Ottawa, Queen's Printer, 1962. viii, 87 p. (*Its:* Paper 62-2.) Refs. Compiled by R. J. Traill; principal contributors W. D. McCartney, S. C. Robinson, H. R. Steacy, R. J. Traill, and D.R.E. Whitmore.

Contains short descriptive notes on many important minerals, ores, fuels, and rocks; the notes were compiled to accompany a collection of 120 specimens illustrating the raw materials described in the annual report, *The canadian mining industry*. Presented according to 76 products, the notes include brief data, as applicable, on: use of product and status of the industry, mineralogy and geochemistry, types of deposits and geographic distribution, and future outlook and potential sources. Included are cobalt from the Lynn Lake area in northern Manitoba, copper from northern Manitoba, placer gold from the Yukon, iron from northern Quebec-Labrador, nickel from Lynn Lake, and from Rankin Inlet in Keewatin District, minor oil production from Norman Wells in Mackenzie District; silver from Mayo in the Yukon, sulphur from the Arctic Islands; tin and tungsten from the Yukon; uranium has come from Great Bear Lake and Marian River in Mackenzie District; and zinc from the Pine Point region near Great Slave Lake. (DGS.)

CANADA. GEOLOGICAL SURVEY, *see also*

Canada. Govt. activities N. 1961. 1962. No. 70516.

Johnston, A. G. Index of publications . . . 1961. No. 72579.

Lowdon, J. A. *& others.* Age determinations . . . 1: isotopic ages. 1960. No. 73610.

Lowdon, J.A., *& others.* Age determinations. . . 2: isotopic ages. 1961. No. 73611.

70567. CANADA. HYDROGRAPHIC SERVICE. British Columbia pilot, Canadian edition; volume II, northern portion of the coast of British Columbia, including the coast of British Columbia from Cape Caution to Portland Inlet together with the Queen Charlotte Islands. 4th ed. 1961, Ottawa, Queen's Printer, 1961. li, 439 p. fold map, diagrs., tables. Refs. Compiled from information to Dec. 31, 1960. Supersedes 3rd edition (No. 33889) and relevant supplement no. 2 of Dec. 31, 1958.

Contains general information similar to the third edition; sailing directions for both sides of Dixon Entrance (p. 261-76) and for Portland Canal (p. 156-63), are included. (DN-HO.)

70568. CANADA. HYDROGRAPHIC SERVICE. Pilot of arctic Canada, volume III, first edition. Ottawa, Queen's Printer, 1961. x, 370 p. illus., tables, index map fold. in pocket. Compiled by T. L. Jones. Issued by Canadian Hydrographic Service and the Surveys and Mapping Branch, Dept. of Mines and Technical Surveys. In sequence to No. 57239.

Deals with the Canadian Western Arctic: coasts and adjacent sea areas whose seaward approaches are normally from the west by way of Bering Strait or from the Mackenzie River, also those parts of the Queen Elizabeth Islands north of Parry Channel and west of Ellesmere and Devon Islands. Included (generally from west to east) are: the mainland coast of Canada from Demarca-

tion Point to Boothia Peninsula; coasts of Banks, Victoria, King William, Prince of Wales, Somerset, Melville, Stefansson, Cornwallis, Bathurst, Axel Heiberg, western and northern Ellesmere, northwestern Devon, and the other Queen Elizabeth Islands. Directions are given for the Canadian Arctic Islands waters and pertinent parts of the Beaufort Sea and Arctic Basin. Climatological summaries for eight stations are provided. (DN-HO.)

70569. CANADA. HYDROGRAPHIC SERVICE. Pilot of arctic Canada, vol. III; supplement no. 1 to the 1961 edition. Ottawa, Queen's Printer, 1962. 37 p.

Contains information on navigation, sites, beacons, facilities, geographic features and names, etc. for the Western Arctic as received to Jan. 19, 1962, including *Notice to Mariners* no. 77, 1962. (DLC.)

70570. CANADA. HYDROGRAPHIC SERVICE. Tidal and oceanographic survey, Hudson Strait, August and September, 1959, data record. Ottawa, Canada, Dept. of Mines and Technical Surveys, 1960. 55 p. illus., tables, graphs, maps. 6 refs.

Presents data collected during the 1959 summer survey from six stations across Hudson Strait. Methods, equipment and personnel are described. Tidal stream and residual current data, also hydrographic data, are tabulated, bathythermograms are graphed, and bottom samples analyzed. (CaOG.)

CANADA. HYDROGRAPHIC SERVICE, *see also Arctic.* Charts Athabasca & Slave. 1962. No. 69841.

70571. CANADA. *Interdepartmental Committee on Federal-Territorial Financial Relations.* Report on the Northwest Territories, 1962. 80 p. Mimeo.

Presents recommendations for modification of existing (till Apr. 1962) arrangements and divisions of responsibility between the Federal and Territorial governments in regard to education, health, welfare, community development, roads, administration of justice, and civil service. Revenues and finances are also dealt with. Committee members are listed. Appended (p. 50-86) are tabular data. (CaONA.)

70572. CANADA. *Laws, regulations, etc.* Canada oil and gas land regulations, Yukon Territory and Northwest Territories. Ottawa. Minister of Northern Affairs and National Resources, 1961. 33 p. (Statutory Orders and Regulations 1961, no. 253.) *Also pub. in:* Canada gazette, pt. 2, June 28, 1961, v. 95, no. 12.

Contains regulations regarding land division, surveys, monuments, exploratory licenses, permits (p. 10-16), oil and gas leases (p. 17-29) fees, and deposits in regard to oil and gas land in the Yukon Territory and Northwest Territories. Canadian oil and gas regulations made 13th April, 1960, are hereby revoked. (CaONA.)

70573. CANADA. METEOROLOGICAL BRANCH. Aerial ice observing and reconnaissance Queen Elizabeth Islands, 1961. Toronto, Nov. 5, 1962. iii, 47 p. 19 maps, table. *(Its:* Circular CIR-3751, TEC-431.) Prepared by D. C. Archibald, M.N. Monsinger, and T. B. Kilpatrick.

Describes and maps for 16 sub-areas, ice conditions north of Lancaster Sound – M'Clure Strait; based on ice coverage, age, topography, puddling, snow cover, ice of land origin, and water features over the area from Apr. 22 to Sept. 13, 1961. Reconnaissance was carried out by a field unit stationed at Resolute; two preliminary, 14 regular flights, and nine tactical flights were made, with two - four observers on each. Ice observers were also assigned CGS *John A. Macdonald, d'Iberville, Labrador, N.B. McLean,* and *C.D. Howe,* and helicopter flights were made from these icebreakers. Shore station reports throughout the year were received from Alert, Eureka, Isachsen, Mould Bay, Resolute, Arctic Bay, and Clyde River. (DWB.)

70574. CANADA. METEOROLOGICAL BRANCH. Arctic summary; a semi-annual summary of meteorological data from the joint arctic and other weather stations on the arctic islands, July-Dec. 1959 to July-Dec. 1961. Ottawa, Queen's Printer, 1961-1962. 5 v.: 152, 152, 152, 173, 173 p. map, tables. In sequence to No. 63783.

Presents tables of daily climatological data, three-hourly synoptic observations, summary of constant pressure data to the 10-mb. level, and special aerological data (freezing levels, tropopause data, and maximum wind level). Stations are: Alert, Clyde, Eureka, Isachsen, Mould Bay, Resolute, and Sachs Harbour. Alert was established in Apr. 1950; Clyde operative 1933-1935, was reactivated in 1942; Eureka started in Apr. 1947; Isachsen and Mould Bay in Apr. 1948; Resolute in Sept. 1947; and Sachs Harbour in Oct. 1955. Prefatory remarks on station locations, instrumentation, and procedures, also notes on the data are included. (DWB.)

70575. CANADA. METEOROLOGICAL BRANCH. Canadian selected, supplementary and auxiliary ships as of March 31, 1961. Toronto, Apr. 24, 1961. 6 p., tables. (Its: Circular CIR-3476.)

Provides details of equipment, instruments, etc. of the commercial and other vessels making voluntary weather observations on the Atlantic and Pacific Oceans, Canadian coastal waters, and the Great Lakes. Eight of these 88 ships operate in the Canadian Eastern Arctic, and two in the Western Arctic. (DWB.)

70576. CANADA. METEOROLOGICAL BRANCH. Canadian selected supplementary and auxiliary ships as of September 30, 1962. Toronto, Oct. 19, 1962. 7 p. stapled, tables. *(Its:* Circular CIR-3742, MAR-10.)

Lists pertinent details of 93 vessels reporting weather observations to the Branch, including 8 plying the Eastern Arctic, and one on the Western Arctic. Instruments normally used on each vessel are noted. (DWB.)

70577. CANADA. METEOROLOGICAL BRANCH. General summaries of hourly weather observations in Canada 1961, part 1, British Columbia, Yukon Territory, Alberta, Saskatchewan, and Manitoba. Ottawa, Queen's Printer, 1962. 390 p. map, tables.

Records, by month, the number of hours with various cloud forms, liquid precipitation, frozen precipitation or thunderstorms, and obstruction to vision; the total cloud in tenths of sky covered (by hours); the number of simultaneous occurrences of specified visibility and ceiling ranges, and the frequency of wind by various visibility or ceiling ranges for each month. Station information, such as latitude, longitude, elevation and site, is given. Seven stations in Yukon Territory and four in north-

ern Manitoba are included. (CaOG.)

70578. CANADA. METEOROLOGICAL BRANCH. Ice thickness data for Canadian stations. Toronto, Oct. 2, 1961. 66 p. map, tables. (*Its:* Circular CIR-3537, ICE-5.)

Lists ice thickness and snow depth data collected during 1958/59 - 1960/61, at some forty stations in arctic and subarctic Canada. Breakup and freeze-up dates for the adjacent water body are also given as available. Equipment, procedure, and observation sites are briefly described. For earlier data, see No. 57245. (DWB.)

70579. CANADA. METEOROLOGICAL BRANCH. Map of Canadian synoptic stations. Toronto, Mar. 5, 1962. map sheet 17½ x 16 in. (*Its:* Circular CIR-3618 NUM 539.)

Shows at approx. 1 in.: 250 mi. station distribution as of March 1962; about 70 of them in the northern area. Details on station locations and reporting programs are pub. in the current edition of No. 50091. (DWB.)

70580. CANADA. METEOROLOGICAL BRANCH. Meteorological observations made by vessels reporting for Canada. Toronto, Dec. 21, 1962. 4 fold. maps & 1 l. text. (*Its:* Circular CIR-3781, MAR-11.)

Depicts on maps the world-wide distribution of shipboard observations in 1960 and 1961 under Canadian Meteorological Service direction. Most arctic observations were made by vessels of No. 70575; in parts of Hudson Strait, and Baffin Bay - Davis Strait, more than 100 observations per five-degree square were made; but arctic waters are considered nowhere adequately covered. (DWB.)

70581. CANADA. METEOROLOGICAL BRANCH. Monthly bulletin, Canadian radiosonde data, 1962. Toronto, 1962-1963. 12 no. approx. 80 p. each, map, tables. (*Its:* Jan.-Dec. 1962 issues, with supplements in June and Dec.) This series began in 1959.

Provides daily values and monthly means of checked data obtained from the rawinsonde ascents at Canadian-operated stations in 1962. Instrumentation, etc. is stated in the Jan. issue. Map shows location of stations, which include 16 in the mainland North, viz: Baker Lake, Churchill, Coppermine, Coral Harbour, Fort Chimo, Fort Smith, Frobisher Bay, Goose Bay, Hall Beach, Inuvik, Moosonee, Nitchequon, Norman Wells, Port Harrison, Trout Lake, Ont., and Whitehorse. Constant pressure data are given for standard pressure levels up to 10 mb. Special aerological data include surface synopitic data, freezing levels, tropopause, and max. wind level. Similar data from seven other stations on the arctic islands are pub. in the semi-annual *Arctic summary.* (DWB.)

70582. CANADA. METEOROLOGICAL BRANCH. Monthly record meteorological observations in Canada, June 1956– Dec. 1961. Toronto, 1959-1962. Dec. 1961 issue: 155 p. maps, tables, refs. in text. Supplements containing late data, in June and Dec. issues as required.

Contains data as in No. 50095, with addition of soil temperatures (Fort Simpson only northern station); and with additional northern stations reporting, e.g. in July 1961: in Yukon Territory 14 stations, Northwest Territories 77, Northern Manitoba 5, Northern Ontario 3, Northern Quebec 13, and in Labrador six. Also included in each issue are regional synopses of temperature and precipitation. (DLC.)

70583. CANADA. METEOROLOGICAL BRANCH. The Nipher shielded snow gauge. Toronto, Jun. 29, 1961. 6 p. diagrs. (*Its:* Circular CIR-3508 INS-100.)

Describes this instrument designed by W. E. K. Middleton to measure snowfall amounts in terms of water equivalent, and designated as the standard Canadian instrument of this type. Construction, installation, choice of site, maintenance, and observing procedure are outlined. An overall view, detail of clamp, and mounting base are shown in diagrams. (DWB.)

70584. CANADA. METEOROLOGICAL BRANCH. Summaries of radiosonde observations in Canada 1947-1953; 1954-1958. Toronto, 1962, 1961. 2 v.: 165, 145 p., map, tables.

Contains monthly mean values of dynamic height, temperature and relative humidity for the standard pressure levels at 30 Canadian radiosonde stations, 18 in the North. Procedures, instrumentation and station data are outlined, locations mapped. Beginning in 1959, upper air data are pub. in the *Monthly bulletin,* and the *Arctic summary, (supra).* (DWB.)

CANADA, METEOROLOGICAL BRANCH, *see also* Thomas, M. K. A bibliography . . . climate. 1962. No. 76118

CANADA. NATIONAL MUSEUM, *see* Canada. Govt. activities N. 1961. 1962. No. 70516

70585. CANADA. ROYAL CANADIAN AIR FORCE. Arctic stations handbook. Ottawa, April, 1962. 84 p. illus., maps, loose-leaf.

Presents photographs and information on airfields, accommodations, and history for eleven stations in the Queen Elizabeth Islands and North Greenland. Photographs only are given of 43 DEW Line stations, also of 16 stations on the Western Arctic (W. of 95°W.) Islands and mainland coast, 12 in the Eastern Arctic, and 22 on the coast of Hudson and James Bays. The handbook was produced for air-crews on reconnaissance work, by 408 (R) Squadron Intelligence Section, RCAF. (CaOGB.)

70586. CANADA. SEISMOLOGICAL SERVICE. Seismological bulletin, seismological series of the Dominion Observatory, Jan.-Mar. 1958- . Ottawa, Queen's Printer. 1959- *in progress.* Issued quarterly, in approx. 80 p. with graphs, tables.

Includes instrumental results obtained at the Resolute seismological station during the three-month period. Summary lists of earthquakes recorded at Resolute are given, with date, time, magnitude, and distance. Calibration curves are provided for each station, including horizontals and verticals for Resolute. (DLC.)

70587. CANADA. WILDLIFE SERVICE. Canadian bird names; French, English, and scientific. Ottawa, Queen's Printer, 1962. 20 p. (*Its:* Occasional papers no. 2.)

Lists some five hundred birds in taxonomic order. This, second, edition has the English names as in the American Ornithologists Union *Check-list,* 5th edition pub. 1957, and the French as drafted by the Comité permanent des noms français des oiseaux du Canada, under Louis Lemieux. A few changes in the French names, and several in

the scientific classification have been made since the first edition pub. in the early 1950's, which has the English vernacular names, as drawn from Peterson and Taverner. (CaONA.)

CANADA. WILDLIFE SERVICE, *see also* Canada. Govt. activities N. 1961. 1962. No. 70516

70588. CANADAIR LIMITED. Advanced systems planning, a preliminary investigation into the problem of northern transportation. Montreal, Canadair Ltd., 1961. 11 p. map, table.

Outlines a systematic study plan to delineate an integrated transportation system for the Canadian North to meet the requirements of mining operations, defense installations, and survey parties. Distance, terrain, and climate are major factors to be considered. The present transportation facilities are considered inadequate. A plan for expansion of airfields to reduce air freight rates is outlined. (CaONA.)

70589. CANADIAN ASSOCIATION OF GEOGRAPHERS. Abstracts of papers presented at the 11th annual meeting . . . Montreal, 1-4 June, 1961. (Canadian geographer, Autumn 1961. v.5, no.3, p.40-46.)

Includes papers dealing with northern areas; viz: "Vallons de gélivation" in central Labrador, a reappraisal, by J.T. Andrews. Unfavorable criticism of Twidale's hypothesis on frost-riven valleys. Notes sur le periglaciaire du Spitsberg, by L.E. Hamelin, q.v. Reconnaissance of glacial features in the western half of the Arctic Red River map area, by W. Henoch. Evidence suggests continental ice sheet covered Mackenzie Lowlands and the plateau to the north. Economic implications of iron mining in permafrost in central Labrador – Ungava, by J.D. Ives, q.v. Unfrozen water in frozen soils, by P.J. Williams. Amount of unfrozen water depends upon the thermal history of the soil, i.e., whether it is cooling or warming. The Yeniseyan slope of the Siberian highland, by B. Zaborski. Structure, geomorphology, glaciation, and migration of people. (DGS.)

70590. CANADIAN BROADCASTING CORPORATION. Annual report 1960-1961. Ottawa, June 30, 1961. 36p. illus., fold. map, tables.

Includes, on p.13, brief notice of short-wave radio service to the Far North initiated on Sept. 4, 1960. Programs beamed from Sackville, N.B., reach the most northerly settlements and the Yukon. The radio station established at Inuvik is the northernmost in Canada; a new station went into operation at Frobisher Bay. Photo shows Ann Padlo, Eskimo radio producer and announcer. Basic radio stations on map include Goose Bay, Frobisher Bay, Fort Churchill, Fort Smith, Hay River, Yellowknife, Whitehorse, Dawson, and Inuvik; a television station at Goose Bay. (DLC.)

70591. CANADIAN BROADCASTING CORPORATION. CBC Northern Service. (North, July-Aug. 1962. v.9, no.4, p.22-25, illus.)

Describes radio facilities and programs initiated with the Northern Messenger in 1933. Since 1958, a limited shortwave service and 13 low-powered standard-band community radio stations have been established. General and special programs of northern interest, including such in Eskimo, and Indian dialects are presented. Whitehorse and Dawson City in the Yukon are directly connected to southern networks by a land line from Edmonton. Full shortwave service to the entire North is planned. (CaMAI.)

70592. *CANADIAN FISHERMAN.* Arctic char fishery developing Canada-wide. (Canadian fisherman, Oct. 1961. v.48, no.10, p.27.)

Notes Eskimo cooperatives for commercial fishing in northern Canada: three for char and one for salmon fishing in the Eastern Arctic; and a char fishery established in summer 1961, at Cambridge Bay in the Central Arctic. Others are planned. (DI.)

70593. *CANADIAN GEOGRAPHER.* Arctic issue. Toronto, winter 1962. (*Its:* v.6, no.3-4, p.93-178, illus., maps, graphs, tables.) Refs.

Memorial to Velhjalmur Stefansson 1879-1962, comprising tribute by the editor, W.G. Dean, eight papers on the North, each abstracted in this Bibliography under the author's name, viz:

WONDERS, W.C. Our northward course.

LØKEN, O. On the vertical extent of glaciation in northeastern Labrador-Ungava.

COLLIN, A.E. Oceanography in the Canadian Arctic.

DUNBAR, M. The drift of North Pole 7 after its abandonment.

LONGLEY, R.W. Super-adiabatic lapse rates in the Canadian Arctic.

LOTZ, J.R. A study in the history of geographical discovery.

BROWN, R.J.E. A review of permafrost investigations in Canada.

RADFORTH, N.W. Organic terrain and geomorphology. (DGS.)

70594. *CANADIAN GEOGRAPHICAL JOURNAL.* Dr. Diamond Jenness: Massey medal, 1962. (Canadian geographical journal, June 1962. v.64, no.6, p.186-87, illus.)

Describes the presentation on May 8, of this award by the Royal Canadian Geographical Society. Dr. Jenness' anthropological and archeological work, including that in Alaska and northern Canada, his major publications on the Copper Eskimos and Canadian Indians are cited. (DGS.)

70595. *CANADIAN GEOGRAPHICAL JOURNAL.* Third presentation of the Society's Massey medal. (Canadian geographical journal, Apr. 1961. v.62, no.4, p.112-13, ports.)

Notes the award Feb. 1961, to Commodore O.C.S. Robertson of the Royal Canadian Navy for work while in command of HMCS *Labrador* in 1954 and 1955. (DGS.)

70596. *CANADIAN MEDICAL SERVICES JOURNAL.* Health in cold climates. (Canadian Medical Services journal, Nov. 1962. v.18, no.10, p.754-58.) Editorial on the World Health Organization Conference on Medicine and Public Health in the Arctic and Antarctic. q.v.

Reviews population and its increase; Eskimo life, old and new; geography as set by climate; "myths" on the Arctic dispelled by the Conference; problems of diet; arctic psychosis, etc. (DNLM.)

70597. *CANADIAN MINES HANDBOOK.* Toronto, Northern Miner Press. July 1959-1962, *in progress.* Annual pub. with various pagination, tables, maps.

Lists, as in No. 50101, the principal active and inactive mining companies, major Canadian

producers of selected minerals, range of mining share prices 1955 – June 1962; maps of mining areas include Quebec – Labrador iron ore areas and Yellowknife, as of May 7, 1962. (DGS.)

70598. *CANADIAN MINING AND METALLURGICAL BULLETIN.* Abstracts of papers to be presented at the 64th annual general meeting, Canadian Institute of Mining and Metallurgy held jointly with the Geological Association of Canada, Ottawa, April 23-25, 1962. (Canadian mining and metallurgical bulletin, Mar. 1962. v.55, no.599, p.193-203.)

Eight of the papers abstracted deal with the North viz:

Koffman, A.A., *and others*. Recent evidence concerning the occurrence and deposition of sulfides in the Pre-Cambrian Shield, p.194.

Van Steenburgh, W.E. The Polar Continental Shelf Project, p.195.

Rozovsky, H. Dust control Carol Project concentration plant Iron ore Company of Canada, p.197.

Morse, S.A. The Kiglapait layered intrusion coast of Labrador, Canada, p.199.

Sharp, D.H. Mechanical plant design at Port Cartier, p.200.

Coulter, R.F. Beneficiation of ores at the Flin Flon concentrator, p.201.

Kenway, R.W. Crude ore handling, Iron Ore Company of Canada, Carol Project, p.202. (DGS.)

70599. *CANADIAN MINING JOURNAL.* Mountain survey by lightweight helicopter. (Canadian mining journal, July 1962. v.83, no.7, p. 56-57, illus.)

Describes use of a Hiller 12E light utility helicopter in geological mapping of a 14,700 sq. mi. area in the Ogilvie Mts. of Yukon Territory, during Operation Ogilvie in summer 1961. The aircraft enabled the eight-man Canadian Geological Survey party to complete in three and one-half months, work previously requiring five-seven years. The 305 h.p. helicopter logged 580 hrs., averaging 420 mi./day in airlift of men, equipment, and supplies. (DGS.)

70600. *CANADIAN MINING JOURNAL.* Swedish mining review 1961. (Canadian mining journal, May 1962. v.83, no.5, p. 66-68.)

Reviews mineral production and developments including those in northern Sweden. Iron ore output at Kiruna and Malmberget, 12.8 and 4.3 million metric tons represents increase over 1960. Activities of the Boliden Co. are noted. (DGS.)

70601. *CANADIAN MINING MANUAL.* 1962 edition. Gardenvale, Que., National Business Publications, Ltd., 1962. 271 p. illus., maps, diagrs., tables. C. Mamen, editor.

Survey of mining operations, mainly in Canada, pub. annually since 1891. The 1962 edition includes operating and cost data in Canadian underground and open cast mines, e.g.: United Keno Hill's Hector, Calumet, Jock, Elsa; also Iron Ore Co. of Canada's Schefferville mines; also such data for Canadian milling plants, e.g.: Consolidated Discovery's Yellowknife plant. Other sections deal with exploration and prospecting, plant engineering and maintenance, and administration. Use of electronic computers in the mineral industry is emphasized. (DGS.)

70602. CANADIAN NATIONAL RAILWAYS. Newfoundland, an industrial survey. Montreal, 1961. 122 p. maps, tables.

Includes general information on transportation, industry, natural resources, and forests of the Labrador part of Newfoundland. Iron ore mining at Ruth Lake, Carol Lake, and Wabush Lake is summarized and data are given on the Twin Falls hydroelectric power site on Unknown River (p. 28). A brief geographical description of Labrador (p. 122-122a) includes tables of population origins and age groups. (CaOGB.)

70603. *CANADIAN SHIPPING.* Department of Transport: Marine Services bring civilization, resources development to far North. (Canadian shipping, Aug. 1961. v.32, n.11, p. 58-80, illus., tables.)

Contains several articles on the operations of the DOT Marine Services. Organization and functions are dealt with p. 59-61, including arctic operations, icebreaking and ice-reconnaissance services, present size of the fleet and projected construction, etc. Data are tabulated (p. 62-65) on 330 vessels including ten heavy and one light icebreakers, six northern supply vessels, one special arctic vessel, a depot ship and some 180 steel landing craft for northern service, also three shallow-draft buoy vessels for the Mackenzie River. The increase in arctic shipping is reviewed from 1953, p. 66-67; annual supply missions now call at 50-odd ports. Piers recently constructed to speed unloading are described p. 68-69, in particular those at Frobisher Bay on Baffin Island, and at Hall Lake in Foxe Basin. Icebreakers and icebreaking operations are described p. 70-71; during the 1960-1961 season, 240 ships were escorted through ice-choked waters and another 189 were given routing advice. The CMS *Eckaloo,* built (1961) for buoy-tending and related work on the Mackenzie River, is described p. 73. The diversified work of helicopters in the North is dealt with p. 74. The world's first isotope-powered automatic weather station, a joint U.S. – Canadian venture, is briefly described p. 77,+, its installation scheduled for Aug. 1961 in the Norwegian Bay area. Departure of CMS *Skua* and *Eider* in July is noted p. 80, first two of 15 vessels to participate in the 1961 arctic re-supply operations. (DLC.)

70604. *CANADIAN WEEKLY BULLETIN.* News notes. (Canadian weekly bulletin. Ottawa, 1961. v.16, no.1-52.)

Current news releases on:

Administration: Northern Affairs Minister W. Dinsdale's visit to Yukon Territory in Jan. 1961 (no.1, p. 4); Commissioner's address at 20th session of the Northwest Territories Council on: growth of territorial self-government, school construction, transportation developments, oil and gas exploration, Eskimo housing, and radio service by the Canadian Broadcasting Corp. (no.5, p. 1-3, +); Prefabricated housing for government workers and Eskimo school children in nine settlements of NWT and northern Quebec (no.8, p. 3; no. 14, p. 4); Inuvik general hospital, 120 beds; Prime Minister's speech at opening of the town of Inuvik in Mackenzie District; July 21, 1961 (no.11, p. 5; no.31, p. 1-2); Expenditures for construction of educational facilities, including family-type hostels, in the Arctic and Mackenzie Districts in 1961-1962 (no.12, p. 5); Canadian oceanographic research program,

1960-1961, and plans for expansion in arctic waters (no.19, p. 3-4; no.34, p. 1-2); U.S.-Canadian atomic-powered automatic weather station described, installed on Axel Heiberg Island, Aug. 1961 (no.31, p. 5; no.36, p. 4); construction plans for the permanent town at Frobisher Bay, Baffin Island, including multi-story, pre-cast concrete structures, innovations in design, etc. (no.32, p. 3-4); Gold Rush Festival plans for 1962 at Dawson City, Yukon Territory; restoration of the Palace Grand Theatre for the festival (no.32, p. 3; no.37, p. 4); seismograph vault to be constructed for Dept. of Mines and Technical Surveys at Schefferville, northern Quebec (no.39, p. 3);

Eskimos: Color-prints from the West Baffin Eskimo Co-operative at Cape Dorset displayed in Ottawa, Feb. 1961; speech by Minister of Northern Affairs at opening of the display; art tour to Cape Dorset in summer 1961 planned (no.8, p. 3-4; no.11, p. 1-2; no.16, p. 6); training of 15 Eskimos in diesel plant operation at Barriefield, Ontario (no.11, p. 5); Eskimo Affairs Committee 12th annual meeting in Ottawa, Apr. 1961 (no.16, p. 3-4); Eskimo fishermen's cooperatives number five, four for arctic char and one for salmon (no.36, p. 5); igloo registration mark, described, to identify authentic Eskimo art (no.37, p. 3); Eskimo dolls from the Port Harrison area of N. Quebec, for sale through the Canadian Handicrafts Guild (no.52, p.3-4);

Expeditions, surveys, patrols: Circulation of the NE Pacific and Bering Sea investigated by means of drift bottles (36,000) released at intervals since Aug. 1956 (no.4, p. 6); Federal-Provincial aeromagnetic survey of Canadian Shield, including parts of Northwest and Yukon Territories to start in summer 1961 and last 12 yrs. at cost of $18 million (no.10, p. 3-4); Polar Continental Shelf Project, 1961 activities (no.11, p. 4); Geological Survey's finds during 1960 field work, including a magnetic anomaly in southern Mackenzie District; and plans for 1961, including 13 parties working north of 60°N. (no.13, p. 4-5; no.23, p. 5); Dept. of Transport's northern operations during summer 1961, including arctic re-supply, the Eastern Arctic Patrol, exploration of hydrographic and ice conditions on potential shipping routes (no.16, p. 3; no.20, p. 3; no.26, p. 4-5; no.27, p. 1-2; no.28, p. 4); Dominion Observatories' summer 1961 program, including an airborne geomagnetic survey of 41,000 mi. in central Canada north to 64°N; gravity investigations with the Polar Continental Shelf Project, and on S. Baffin I., N. Quebec-Labrador, and Hudson Bay; and study of the N. Quebec meteorite crater (no.31, p. 4);

Natural resources and economic development: Oil exploration in Yukon and Northwest Territories, mostly the Liard and Fort Good Hope plains, during winter 1960-1961, at a cost of $10 million (no.7, p. 4-5); permits for mineral exploration in Northwest Territories (no.15, p. 4); mineral exploration in SE. Yukon and SW. Mackenzie District during summer 1961, including a discovery of silver-lead-zinc in the Pelly Mts., to be developed by Conwest Exploration Co. with federal aid for a 110-mi. tote road and an airstrip (no.47, p. 3);

Transportation and communication: Canadian National Railways' activities in 1960, including work on telephone, telegraph, and broadcasting facilities in Yukon territory and telephone facilities at Great Slave Lake and Inuvik, Mackenzie District (no.2, p. 1-3); microwave communication system to be constructed between Grande Prairie, Alberta, and the Alaska-Yukon border, also to the Alberta-Mackenzie District border (no.12, p. 5); development road to be constructed with federal aid in SE. Yukon Territory from the Watson Lake-Ross River road to the Canada Tungsten mine near Flat River, Mackenzie District (no.12, p. 6); monitoring station to be constructed at Fort Smith, to control radio facilities in Mackenzie District and nearby provinces (no.17, p. 4); CMS *Eckaloo,* a shallow-draft vessel for Dept. of Transport buoy-tending operations on the Mackenzie River system, was launched in Apr. 1961, description (no.17, p. 6); road construction and repair in Mackenzie District during 1961-1962 to include 12 projects at cost of $3,892,000 (no.19, p. 2); ice observations, during summer 1961, from four field units and eight Dept. of Transport icebreakers, to aid northern shipping (no.32, p. 2); ferry service across the Mackenzie River at Fort Providence, inaugurated in Aug. 1961 (no.32, p. 6);

Wildlife: Snowy owl banding operation by University of Wisconsin during winter 1960-1961 (no. 20, p. 3); whooping cranes sighted on nesting grounds in Wood Buffalo National Park, Mackenzie District (no.37, p. 4-5); Canadian Wildlife Service summer 1961 aerial survey of mammals and waterfowl in the Queen Elizabeth Islands, disclosed unexpected number of Peary's caribou (no.40, p. 3); geese-banding operation on Baffin Island, summer 1961 (no.48, p. 4);

Others: Rescue of crew of the *Fort Hearne,* sinking in Coronation Gulf, by CMS *Camsell* in July 1961 (no.33, p. 2-3); requests for arctic postal-station cancellations raise problem for Dept. of Transport (no.35, p. 5); (CaMAI.)

70605. *CANADIAN WEEKLY BULLETIN.* News notes. (Canadian weekly bulletin. Ottawa, 1962. v.17, no.1-52.)

Current news releases on:

Administration: Dept. of Northern Affairs' summer work program for student volunteers in the North (no.8, p. 6); naming of Vanier, Massey, and Alexander Islands, in the Sverdrup Basin of the Queen Elizabeth Islands area (no.13, p. 5, map); Frobisher Bay townsite on Baffin Island, first phase of construction including a 28-bed hospital, roads, sewer and water systems, a water-treatment plant, and warehousing, to begin in summer 1962 and embody innovations for northern construction (no.16, p. 3; no.22, p. 1-2); grants of $100,000 for northern research announced by Federal Government (no.22, p. 2); tour of Canadian-U.S. arctic weather stations by Director of the Meteorological Branch and other U.S. and Canadian officials (no. 23, p. 5); Gold Rush Festival at Dawson, Yukon Territory, dedication address by the Minister of Northern Affairs at re-opening of the Palace Grand Theatre on July 1, 1962; Discovery claim on Bonanza Creek declared a national historic site; plans for 1963 festival (no.28, p.1-2, +, p. 3-4; no. 49, p. 3); Northwest Territories Council meeting at Cape Dorset, Baffin Island, July, 1962 (no.31, p. 3);

Eskimos: Fish-processing plant installed at Aklavik, Mackenzie District, to produce food for Eskimo dogs (no.3, p. 4); West Baffin Eskimo

Co-operative established by Cape Dorset Eskimos for production of graphic prints and other projects (no.10, p. 3); Canadian Eskimo Art Committee formed to evaluate Eskimo art (no.11, p. 4); exhibit of Cape Dorset prints, embodying new techniques, at Toronto in Apr. 1962 (no.13, p. 6); boats built by Dept. of Northern Affairs for Eskimo char fishing at George River and Fort Chimo, northern Quebec, and seal and whale hunting at Rankin Inlet and Eskimo Point, Keewatin District (no.26, p. 5); Northwest Territories Council, 23rd session, address of the Commissioner on: Eskimo cooperatives, especially at Cape Dorset and Port Burwell (Labrador); economic problems of Keewatin Eskimos, increased by closing of the mine at Rankin Inlet; Eskimo art; and Eskimo interest in civic affairs (no.32, p. 1-2, +); 40 Eskimos trained, since 1959, to operate diesel-electric power plants for schools in arctic communities (no.36, p. 4); sculptured monuments to be commissioned by the Federal Government to commemorate historical and cultural contributions of Eskimos and Indians (no. 51, p. 5-6);

Expeditions, surveys, patrols: Dept. of Transport's northern operations during 1961, reviewed; and 1962 plans for the Eastern Arctic Patrol, shipment of 85,000 tons of supplies, studies of hydrography, oceanography, etc. (no.5, p. 3-4; no.28, p. 6; no.33, p. 1-2); gravity and geographic studies on northern Baffin Island by a 25-man team from Dept. of Mines and Technical Surveys (no.17, p. 3); National Museum research in summer 1962, including northern projects in zoology, botany, anthropology, and archeology (no.19, p. 1-2); aeromagnetic survey of 500,000 sq. mi. in the Canadian Shield, part of a 12-yr. project (no.19, p. 2); Dept. of Mines and Technical Surveys 1962 program, including topographic surveying on Ellesmere, Baffin, and the Canadian Arctic Islands, and in northern Ontario, and hydrographic charting of Barrow Strait and Amundsen Gulf (no.21, p. 1-2); Geographical Branch 1962 field program to include four parties in the North (no.25, p. 5-6); Dominion Observatory's summer 1962 investigations to include locating the North Magnetic Pole, and mapping the earth's magnetic field over 1,250,000 sq. mi. of the Canadian Arctic Islands (no.27, p. 4); Army survey of 2500-mi. traverse in the Arctic Islands during summer 1962, obtained data for 18 map sheets (no.42, p. 3);

Natural resources and economic development: Herring found in Western Arctic during experimental fishing for stocks with commercial potential (no.3, p. 5-6); buffalo meat from Wood Buffalo National Park, Mackenzie District, sold in southern Canada (no.4, p. 2); mineral and oil development, transportation, tourism, education, etc. north of 60°N. discussed by Minister of Northern Affairs and National Resources in speeches on Jan. 12 and May 20, 1962 (no.4, p. 5-6; no.23, p. 1-2, +); iron ore found in the Yukon-Mackenzie border area, approx. 65°15 N. 130°W. by Crest Explorations Ltd. in summer 1962 (no.32, p. 4); new Yukon Government tourist agency planned (no.39, p. 3); sport fishing and Eskimo crafts attract tourists to NWT (no.42, p. 3); oil sands discovered on northwestern Melville Island (no.43, p. 5);

Transportation and Communication: Canadian Coast Guard fleet including 17 icebreaking vessels, and duties including supply of arctic posts (no.6, p. 5); icebreaking cable-repair ship for Dept. of Transport duty in Eastern Arctic to be completed by 1965, description (no.7, p. 4; no.33, p. 6); Great Slave Lake Railway to be completed for Dec. 1966 production of Pine Point lead-zinc deposits (no.9, p. 3); icebreaking depot ship for Dept. of Transport's annual Eastern Arctic supply operations, to be completed in 1963, description and specifications (no.12, p. 4); Lingman Lake Road, 220 mi., to be constructed in northwestern Ontario from Pickle Crow towards the Manitoba border (no.23, p. 3); new Churchill Harbour tug launched for 1962 navigation season, description (no.25, p. 5); "Aquatrain", a 800-mi. car-ferry run from Prince Rupert, British Columbia, to Whittier, Alaska, inaugurated in May 1962 (no.30, p. 4);

Wildlife: Six bird sanctuaries established in the Western Arctic to protect waterfowl nesting grounds (no.2, p. 4); bison of Wood Buffalo National Park, Mackenzie District, record breaking trophy taken during 1961 sport hunting season (no.3, p. 4); North Pacific Fur Seal Commission, its investigations, and fifth annual meeting in Ottawa, Feb. 1962 (no.7, p. 4; no.8, p. 3);

Other: Canadian Muskeg Research Conference, 8th, at Saskatoon, Saskatchewan, May 1962 (no.9, p. 4); permafrost research conference in Ottawa, Apr. 1962 (no.9, p. 5); new ice islands result from breakaway of part of the Ellesmere ice-shelf; movements of the largest, approx. 60 sq. mi., to be studied by Defence Research Board (no.36, p. 3); array for measuring seismic disturbances under construction near Yellowknife, Mackenzie District (no.45, p. 4). (CaMAI.)

70606. *CANADIAN WELFARE.* Arctic welfare services. (Canadian welfare, May 15, 1962. v.38, no.3, p. 111-13, illus.)

Describes organization of the Northern Welfare Service, a division of Dept. of Northern Affairs and National Resources; it is responsible for services to Northwest Territories; arctic Quebec, and Churchill, Manitoba on behalf of all levels of government; and it serves as advisor to the director on welfare in Yukon Territory. The welfare team accompanies the medical survey group of the annual Eastern Arctic Patrol on the *C. D. Howe,* to bring sick Eskimos to hospital; it helps the family to adjust to absence of a member, keeps the Eskimos hospitalized in the south (400-500 in 1960) in touch with families; gives consultation on welfare problems in settlements. (CaOCU.)

70607. *CANADIAN WELFARE.* Social planning goes north. (Canadian welfare, Jan. 15, 1962. v.38, no.1, p. 37.)

Reports a social-planning council organized by officers and members of the former Yukon Children's Aid Society, a private organization taken over by the government. The council is to carry out preventive measures and social improvements in fields outside the scope of government welfare activities, and to assist generally, the Welfare Dept. of the Yukon Territorial government. (CaOCU.)

70608. CANDELA, J. L. R. Glucose-uptake and insulin sensitivity of the epididymal fat of the rat after exposure to cold. (Medicina experimentalis, 1960. v.3, no.1, p. 84-87, illus.) 3 refs.

Glucose uptake was reduced after exposure of 1, 3, or 12 days to 4°C. but increased after six days' exposure. Insulin sensitivity fell after one and three days exposure, increased after six days

and became normal or slightly raised after 12 days. (DNLM.)

CANNON, JOSEPH N., *see* Keithahn, E.L. Chirikof I. 1962. No. 72713

70609. CAPUTO, MICHELE. Tables for the deformation of an earth model by surface mass distributions. (Journal of geophysical research, Apr. 1962. v.67, no.4, p. 1611-16, diagr., graph, tables.) 16 refs.

Includes a method for computing the displacements the deforming forces for which arise from such loads as are associated with geological structures, ice loads, snow caps, changing atmospheric pressure, and ocean tides. Values of the surface displacements in cm. are listed for various values of the radios of the cap and for values of the elastic parameters. Density and thickness of the mass over the caps has been chosen to give a mean pressure of 10^6 dynes/cm.^{2} over the surface. Displacements for other densities and thicknesses can also be obtained from the tables. Earth tide observations record, besides the direct effect of sun and moon, secondary effects caused by such variable forces as the accumulation and wasting of snow and ice, changes in atmospheric pressure, and variation of water levels near the station.—From author's abstract. (DLC.)

CARAMIA, F., *see* Parentela, A., *& others.* Influenza dell' ipotermia . . . 1961. No. 74648

70610. CARBONNELL, M. Application de la méthode d'aérocheminement à la détermination de la vitesse superficielle de glaciers du Groenland. (Société française de Photogrammétrie, Bulletin, Nov. 1961. no.3, p. 10-14, table.) *Reprinted in:* Expéditions Polaires Françaises, Expédition Glaciologique Internationale au Groenland 1957-1960, Réalisation technique, 1961. Publication no.226, p. 10-14. Text in French. **Title tr.**: Application of the aerial traverse method in the determination of the surface velocity of Greenland glaciers.

Describes briefly the equipment, methods, and results, of photographic missions carried out by the French Air Force in July 1957 and July 1958, also of aerotriangulation in 1960-61, over 20 West Greenland glaciers, near Disko Bugt and Umanak. Mean daily velocity ranged from 1.4 m. for Sarqardliup Sermia on Disko Bay to 11.8 m. for Rinks Isbrae on Umanak. Velocity of Eqip Sermia was determined by 72 aerotriangulation measurements in 1960 to be 4.4 m. per day, with max. and min. displacement of 41 and 3 m., in a 4- or 5-day period. Under favorable conditions, surface velocity could be determined with an error of 5%-10%. Map on a scale of 1:3,000,000 shows location of glaciers studied. (CaMAI.)

CARBONNIER, CHARLES, *see* Tamm, C.O., *&* C. Carbonnier. Växtnäringen . . . 1961. No. 76076

CAREY, S. WARREN, *see* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

CARIGNAN, G. R., *see* Spencer, N.W., *& others.* Electron temperature evidence . . . 1962. No. 75866

70611. CARLBORG, GUNNAR. Arbetslösheten och skogsbruket i Norrbotten. (Skogen, Mar. 31, 1961. årg. 48, nr.7, p. 140, 143.) Text in Swedish. **Title tr.**: Unemployment and forestry in Norrbotten.

Notes land clearance and road building accomplished by unemployed lumbering industry workers, in all 142,000 work days, financed by public and private funds. Some 18,500 hectares were cleared during Jan. 1956 – June 1958, and 41 km. defense roads built. (DA.)

70612. CARLSON, E. H. Preliminary report on Pivert Lake area Mistassini Territory and New Quebec. Quebec, 1962. 9 p. table, fold. map. (Quebec. Dept. of Natural Resources, P.R. no.483.) 6 refs.

Reports the geology, investigated during summer 1961, of this approx. 235 sq. mi. area 52°00′-15′N. 76°00′ - 15′W. extending south from the Eastmain River, and adjoining the Natel Lake area, mapped by Eakins, q.v. A thick sequence of highly deformed, metamorphosed, and locally granitized rocks, mostly of sedimentary and volcanic origin, are intruded, probably by forceful injection, by diorite dikes and sills and later Precambrian granitic rocks. These, of batholithic proportions, are cut by lamprophyre and gabbro dikes. The structural trend is east-northeast, with a large west-plunging synclinal structure inferred in the northern part of the area. A pronounced steeply dipping fault trend strikes N. 70°-90°E. Occurrences of pyrite are noted, also rare-element-bearing pegmatite dikes, and two small quartz-molybdenite veinlets. Distribution of rock types and structural features are mapped, 1:63,360. (DGS.)

70613. CARLSON, LOREN DANIEL, 1915– . Human tolerance to cold. (Journal of occupational medicine, Mar. 1960. v.2, no.3, p.129-31.) 28 refs.

Notes survival of white men (mainly explorers) at very low temperatures, role of shelter and clothing in survival; cold resistance of aborigines in Tierra del Fuego and Australia; cold-acclimation of white men and its physiology; ethnic factors, etc. (DNLM.)

CARLSON, LOREN DANIEL, 1915– , *see also* Honda, N., *and others.* Effects of adrenaline and noradrenaline . . . rabbits. 1962. No. 72227

Honda, N., *and others.* Influence of prior cold exposure . . . 1962. No. 72228

70614. CARMICHAEL, HUGH, *and* **J. F. STELJES.** The solar cosmic-ray increase of November 20, 1960. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.2, p. 293-96, illus., graphs.) 3 refs.

Reports on Nov. 1960 observation by the world network of cosmic ray stations. Occurrence on Nov. 20, of a major solar flare behind the W limb of the sun, producing high energy particles which reached the earth, was indicated by visual, radio, and neutron monitor observations. A magnetic storm and a Forbush decrease may have been caused by this flare. Data from 30 neutron monitors, and ten meson monitors indicated a great increase in cosmic ray intensity at the Resolute Bay, Thule, Churchill, and College stations, and fully as great intensity was recorded at Deep River, approx. 100 mi. from Ottawa. (DLC.)

CARPENTER, B. H., *see* Hamner, K.C., *and others.* Biological clock . . . 1962. No. 71978

70615. CARPENTER, EDMUND SNOW, 1922– Artists of the North; among the Eskimos, observation combines with imagination. (Natural history, Feb. 1962. v.71, no.2, p.8-13, illus. incl. col.)

Discusses stone cuts and sealskin stencils

produced by Eskimos at Cape Dorset, Baffin Island. Though the art forms and techniques are introduced (by James Houston), the choice of subject, artistic approach and rendering are traditional Eskimo. The Eskimos' concept of nature and art is discussed. (DLC.)

70616. CARPENTER, FRANK F. I followed the lure of gold. (Alaska sportsman, Feb.-July 1962. v.28, no.2-7, illus.)

Recounts in a six-installment narrative, his experiences as a prospector and miner in the Ruby gold fields west of Fairbanks, Alaska, during 1911-1918. Author was one of the discoverers of gold on Trail Creek. (DLC.)

CARR, J.G., *see* Bernhard, W.F., *and others.* Studies in balanced hypothermic perfusion. 1961. No. 70170

CARROLL, E., *see* Bernhard, W.F., *& others.* Alterations in myocardial metabolism . . . 1961. No. 70168

70617. CARSOLA, ALFRED JAMES, 1919– *and others.* Bathymetry of the Beaufort Sea. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.I, p.678-89, illus., maps, profiles, table.) 14 refs. *Other authors:* R.L. Fisher, C.J. Shipek, *and* G.A. Shumway.

Outlines selected results of oceanographic surveys from icebreakers during summers 1951, 1957, 1958, in region 123° - 153°W. between the coast and the permanent pack ice. A bathymetric chart is presented. The shelf is about 40 nautical mi. wide, the edge as shallow as 35 fm. The upper slope is relatively steep, the lower less so with increased depth. Floor of the Canada Basin near the continental slope is flat and featureless. The Mackenzie sea valley and Amundsen trough are cut into the slope. Sea-floor photographs on the slope and in the deep basin show a flat, featureless bottom without evidence of ice-rafted pebbles. (DLC.)

70618. CARSON, CHARLES EDWARD, *and* K. M. HUSSEY. Hydrodynamics in three arctic lakes. (Journal of geology, Nov. 1960. v.68, no.6, p.585-600, illus., maps, diagrs., graph, tables.) 18 refs.

Describes currents generated in Imikpuk or Fresh Water Lake, Ikroavik (Ikrowik), and Loon Lake in North Alaska near Barrow, by prevailing winds under different conditions: when there is a large central ice cake present, and when the lake is open. A hypothetical analysis is given for currents generated with ice cakes present, and a typical system is diagrammed from Ikroavik Lake on July 9, 1959. Currents in open lakes differ from those with ice present, but were found the same in all three lakes when open. They have two zones of swift flow in the leeward corners, and a general spiral of circulation, also diagrammed. Previous explanations are discussed; authors' observations are in agreement with viewpoint of R.W. Rex on maximum littoral drift (No. 67713). Basin features related to water motion, e.g., beaches, bars, benches, peat strips, also a thermal phenomenon around the ice cakes, are described. (DGS.)

70619. CARSON, CHARLES EDWARD. The oriented lakes of arctic Alaska. (Dissertation abstracts, Ann Arbor, Mich., Sept. 1962. v.23, no.3, p.992.) Abstract of Ph.D. dissertation in geology to Iowa State University of Science and Technology, 1962; 83 p., supervised by K.M. Hussey.

Tests of major theories explaining the nearly north-south alignment of these lakes revealed that waves and currents driven by bimodal winds prevailing normal to the axes of elongation are the controlling factors of orientation. Detailed mappings and velocity determinations of wind-generated current systems were made with sodium fluorescein dye and aluminum floats; wave-controlled basin morphology and sediment distribution were mapped in both drained and water-filled basins; water temperatures were recorded with thermographs. North-south expansion is accelerated by the wind-driven currents and warmer temperatures in the ends. (DI.)

70620. CARSON, CHARLES EDWARD, *and* K. M. HUSSEY. The oriented lakes of arctic Alaska. (Journal of geology, July 1962. v.70, no.4, p.417-39, illus., maps incl. fold., diagrs., graph, tables.) 21 refs.

Continues discussion (cf. No. 63831, etc.) especially on two active factors, solar radiation and prevailing winds, and a passive factor, ice content of the ground which tend to orient and control these 20 or more endogenic lakes near Point Barrow. Low radiation values and cloud cover indicate little influence of solar radiation. Field tests of the prevailing-wind-origin theory were carried out with mapping velocity determination, and wave-action studies, also water temperature records and observations of the active layer. The combined action of slow basin subsidence by thaw, and wind-oriented wave action are seen in the lake-basin orientation. These processes operate throughout all phases of basin development, with orientation accentuated in later stages by thermal and circulatory processes. Basin morphology consists of sublittoral shelves on the east and west sides and a deeper central basin extending to the north and south ends. Development of the sublittoral profiles soon comes to equilibrium for a given basin depth, since depth in shallow water closely controls wave velocity. At equilibrium, east-west expansion is minimal, but north-south expansion is unimpeded. Acceleration of the latter expansion by currents, waves, and warmer water at the end causes more pronounced orientation in larger basins. (DGS.)

70621. CARSTENS, HARALD. Cristobalite-trachytes of Jan Mayen. Oslo, Oslo University Press, 1961. 10 p. illus., map, tables. (Norway, Norsk Polarinstitutt. Skrifter, nr.121.) 10 refs.

Describes the setting, appearance, and petrologic characteristics of these dome-shaped volcanic rocks found in south Jan Mayen; as indicated on map at scale approx. 1 in:4 km. Resembling truncated cones, the four domes are about 150-200 m. high and 1000 x 600-800 m. at the base. They contain trachytes which are practically devoid of silica minerals; cristobalite, the most abundant silica mineral, is usually found as tiny anhedral grains; it has distinctive optical characteristics. Chemical analyses of seven trachyte specimens are tabulated. Presence of feldspar in cavities is compared with some on Tristan de Cunha. Five photomicrographs show mineralogical and crystallographic features. (DLC.)

70622. CARTER, F. A. G., *and* R. A. J. PHILLIPS. Organizing for northern administration: a practical

problem in decentralization. (Canadian public administration, Mar. 1962. v.5, no.1, p.104-116.)

Describes practical difficulties in implementing structural changes in the Northern Administration Branch of the Canadian Dept. of Northern Affairs and National Resources. The reorganization necessitated by rapid expansion of the Branch, and effective since Jan. 1959, is described. The major change was decentralization of control from Ottawa to the field staff, to bring effective operations and decision-making close to the people served.(CaONA.)

70623. CARTER, H. ADAMS, *and* **L. L. ATHERTON.** Milton Mount McKinley Range Expedition; glaciological research on the North Fork of the Eldridge Glacier. (American alpine journal, 1961. v.12, no.2, issue 35, p.291-96, 8 illus.)

Reports a mountaineering-glaciological expedition by a six-man party in June-July 1960. First ascents were made of two peaks in the North Fork of Eldridge Glacier area, approx. 63°N. 150°10'W. Glaciological work is summarized by the junior author, p.294-96. Bad weather prevented work on 19 of 37 days in the field; excellent photos. (DLC.)

CARTER, J. D., *see*

Denyess, A., & J.D. Carter. Clotting time cold-exposed . . . hamsters. 1961. No. 70976

Denyess, A., & J.D. Carter. Utilization of acetate - I - C^{14} . . . 1961. No. 70977

70624. CASE, JAMES BOYCE. Glacier-mapping activities in the United States. (*In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.359-65, map.) 19 refs.

Supplements No. 50897 by reviewing the progress of glacier mapping in North America, especially in the United States, including Alaska, from the early work of O.J. Klotz in 1895 to the expanded activities of the IGY and the IGC 1959. Proposals for future glacier-mapping programs are offered. (DWB.)

70625. CASSIN, RICCARDO. The south face of Mount McKinley. (American alpine journal, 1962. v.13, no.1, p.27-37, illus.) Translated by Marco T. Einaudi.

Describes a first ascent of the south face July 19, 1961, by six of a seven-man party from the Italian Alpine Club. Three cases of frostbite are noted from the 19-day assault. A technical account, translated by Ursula Corning, gives details of the route. (DGS.)

CASTREN, MATTIAS ALEXANDER, 1813–1852, *see* Kunze, E. Aus der Gründerzeit . . . 1962. No. 73212

70626. CATERPILLAR TRACTOR CO. Fuel systems can also freeze. (Construction world, Dec. 1961. v.17, no.2, p.36, illus.)

Suggests filling the (diesel) fuel tank at the end of a day's work, also draining condensed moisture from the tank, to avoid ice formation in the system. (DLC.)

70627. CAVADIAS, G. S. Evaporation applications in watershed yield determination. (*In:* Canada. Dept. of Northern Affairs and National Resources. Water Resources Branch, Proceedings of Hydrology Symposium no.2, evaporation. 1961. p.170-83, maps, graphs, tables.) 6 refs.

Describes an application of Thornthwaite's evaporation theory to the determination of runoff from the Koksoak, Romaine, Rupert and St. Maurice River watersheds, the first three in Northern Quebec. As a preliminary test, the study methods were applied to five watersheds with adequate flow records in the same general region. Geographic distribution of mean precipitation-evapotranspiration loss (P.E.) values in Canada is also considered and mapped. Ensuing discussion included criticism of both the author's and Thornthwaite's views. (DLC.)

70628. CAVE, A. J. E., *and* **F. J. AUMONIER.** Morphology of the cetacean reniculus. (Nature, Feb. 24, 1962. v.193, no.4817, p.799-800, illus.)

Notes on the presence, in all cetaceans so far examined, of "an intrarenicular prolongation of the muscle and collagen components of the calyx wall in the form of a basket," which surrounds the medullary pyramid. As no such structure is found in other mammals, it is assumed that it is connected with the peculiarities of marine life of the whales. (DLC.)

CEASE, RONALD C., *see* Alaskan Science Conference 1961. 1962. No. 69644

70629. CEDERSTROM, DAGFIN JOHN, 1908– , *and* **T. L. PÉWÉ.** Ground-water data Fairbanks area. Juneau, 1948. 28p. fold. map, tables. Ref. Mimeographed. (U.S. Geological Survey. Open-file report, also issued as Alaska. Dept. of Health and Welfare, Water, hydrological data, no.9.)

Contains tabulated data on about 450 wells in the Fairbanks area, collected during an investigation of the permafrost terrain and water resources of this central Alaskan city. For each well, information is given on owner, driller, depth, location, and quality of water; also on top and bottom of permafrost. (DLC.)

70630. CEDERSTROM, DAGFIN JOHN, 1908– . Ground-water hydrology in Alaska. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.1014-1019.)

Summarizes results of U.S. Geological Survey ground-water studies from 1947, especially in the Fairbanks, Matanuska valley, and Anchorage areas. Large amounts of water might be obtained with relative ease from the saturated gravels and sands of the Tanana valley despite permafrost; geological mapping indicates the possibility of drilling successful wells in the Matanuska valley; wells in the Anchorage area, if properly equipped, would supplement the Ship Creek supply as well as eliminate the need for filtering and the problem of freezing mains. (DGS.)

70631. CEDERSTROM, DAGFIN JOHN, 1908– , *and* **G. C. TIBBITTS,** *Jr.* Jet drilling in the Fairbanks area, Alaska. (*In:* U.S. Geological Survey. Contributions to the hydrology of the United States. Water-supply paper, 1961. no.1539-B, p.B1 - B28, illus.) 9 refs.

Describes the construction and operation of an experimental jet-drilling machine in the submontane area north of Fairbanks. Drilling during July-Aug. 1954 penetrated the Birch Creek schist and the sand-, silt-, and gravel-filled old subordinate valleys, equipment consisting of a double-acting piston pump capable of furnishing fluid at a pressure of 100 psi, a 7-8 hp. type Z single-cylinder engine, and a derrick. A reciprocating motion was provided by a crank that operated a centrally pivoted beam. Drill rods were one-inch extra-heavy pipe; Z-bits and chisel bits were used. Difficulties, etc. are noted. This method is considered

practical for the Fairbanks region and probably other boulder-free alluvial areas. (DGS.)

70632. CEDERSTROM, DAGFIN JOHN, 1908– . Origin of a salt-water lens in permafrost at Kotzebue, Alaska. (Geological Society of America. Bulletin, Sept. 1961. v.72, no.9, p.1427-32, graphs, diagr., table.) 3 refs.

Reports frozen sediments found to 238 ft. depth in drilling a 325-ft. well, but at 79-86 ft. in a gravel lens, highly saline water appeared. It probably originated by fractionation by freezing. Analyses of this water and of slightly saline water from below the permafrost are given.–From author's abstract. (DGS.)

70633. CELIUS, ROLF. Forsøk med byggsorter ved Det norske myrselskaps forsøksstasjon 1940-58. (Norske myrselskap. Meddelelser, Aug. 1961. årg. 59, nr.4, p.132-36, tables.) Text in Norwegian. **Title tr.:** Experiments with barley varieties at the Norwegian Bog Society experiment station, 1940-1958.

Reports work on 11 varieties at the Maeresmyra station: two, the Varde and Hesse, were found superior in hardiness and yield in the Nord Trøndelag climatic conditions. (DA.)

70634. CHABOT, GEORGES, 1890– . Évolution de la population en Suède. (Information géographique, Nov.-Dec. 1962. année 26, no.5, p.207-209, map.) 3 refs. Text in French. **Title tr.:** Population growth in Sweden.

Analyzes the results of the 1960 census with comparable data for 1952. Birth rate in 1960 was highest in Norrbotten Province: 17.11 per 1000. Northern cities grew: Kiruna, 26,804 compared to 19,455 in 1952, and Lulea, 30,614 compared to 24,688. Norrbotten owes its anomalous population increase to industrialization; northern Sweden generally experienced a movement to the cities. (DGS.)

70635. CHAFE, WALLACE L. Estimates reguarding the present speakers of North American Indian languages. (International journal of American linguistics, July 1962. v.28, no.3, p.162–71.) 4 refs.

Presents estimated data on the current use of Indian and Eskimo languages and major dialects, also on the age and geographic distribution of the speakers. There are about 40–50 thousand Inupik and 13–14 thousand Yupik Eskimos, also some 900 Yupik-speaking Eskimos in Siberia; the 7–8 hundred Aleuts considered excludes about 400 on the Commander Islands, USSR. Among major north Canadian and Alaskan Indian-speaking groups are the Montagnais-Nascopi estimated at 5,000, Chipewyan and Tsimshian at 3–4,000 each; the Slave, Tlingits, Kutchin and Tutchone number over 1,000 each. There are some 7–800 each of Dogrib and Haida, 4–600 Hare, Ingalik, Kaska, Koyukon, Yellowknife and Nabesna (Upper Tanana), 300 Ahtena, Beaver, Tanaina and Tanana. Most of the other northern tongues are spoken by less than 100 people. The study is based on a questionnaire circulated in the fall of 1960 among some 250 anthropologists, teachers, government officials, native informants, etc. (DSI.)

70636. CHAFFEE, ROWAND R. J., *and* E. M. MARTIN. The immune response in cold-acclimated mice. (Society for experimental biology and medicine. Proceedings, Nov. 1962. v.111, no.2, p.375–77, table.) 9 refs.

Account of experiments with the antigen coliphage T_2r^+. Four weeks of acclimation at 4°C. or equivalent deacclimation at 23°C. produced no change in levels of circulating coliphage antibodies. (DLC.)

70637. CHAFFEE, ROWAND R. J. Mitochondrial changes during the process of awakening from hibernation. (Nature, Nov. 24, 1962. v.196, no. 4856, p.789–90, table.) 5 refs.

Reports on succinoxidase in mitochondria from hamsters killed during hibernation, controls kept at 5°C. but not hibernating, and animals just awakened from hibernation. The low Qo_2 found in mitochondria of hibernating animals, was not found during arousal, indicating distinct mitochondrial changes occurring during awakening. (DLC.)

70638. CHAFFEE, ROWAND R. J., *and others*. Mitochondrial oxidative enzymes and phosphorylations in cold exposure and hibernation. (American journal of physiology, July 1961. v.201. no.1, p.29–32, table.) 20 refs. *Other authors:* F.L. Hoch *and* C.P. Lyman.

Reports on a comparative study of a hibernator (rat). Mitochondria from cold-exposed rats showed no major changes and normal P:O ratios. In cold-exposed, active or hibernating golden hamsters, oxidative enzymes measured at 37°C. had increased activity and a normal P:O ratio. A temperature-sensitive enzyme in the hibernator is also discussed. (DLC.)

CHAFFIN, YULE M., *see* Ameigh, G.C., & Y.M. Chaffin. Alaska's Kodiak Island. . .1962. No.69738

CHAĬKA, LEONID ANDREEVICH, *see* Ravich, M G., & L.A. Chaĭka. Proterozoĭskie. . .Taĭmyra 1962. No. 75062

70639. CHAĬKOVSKIĬ, V. K. Sviaz' endogennogo orudeneniia s magmatizmom v protsesse razvitiia geosinklinaleĭ. (Sovetskaia geologiia, Mar. 1961, no.3, p.31–43, map.) 18 refs. Text in Russian. Summary in English. **Title tr.:** The connection between endogenic mineralization and magmatism in geosynclinal development processes.

Outlines the character of distribution of various types of endogenic deposits in geosynclinal zones and in respect to space and time. At different stages of geosynclinal development, different magmatic complexes and different kinds of mineralization appear. The Kolyma-Yana-Chukotka geosyncline is reviewed and taken as an example for tectonic-structural analysis. The distribution of different magmatic rocks with inherent mineralization reveals a zonal character. Distinguishing geosynclinal ore zonality is of great importance for prospecting. (DLC.)

70640. CHAIMOFF, C. Nizkei kor etsel tinokot rakim. (Harefuah, 1 Sept. 1961. v.61, no.5, p.164–67, tables.) 28 refs. Text in Hebrew. **Title tr.:** Cold injury in young infants.

Reviews 78 cases recorded in Israel between 1941 and 1959. Main cause: low temperature combined with high humidity. High mortality is attri-

buted to ignorance of possible occurrence, both among the population and the medical profession. Symptoms. laboratory indications and therapy are summarized. (DNLM.)

70641. CHALYSHEV, V. CH. Nakhodka triasovykh ryb i stegotsefalov v Severnom Priural'e. (Akademiia nauk SSSR. Doklady, Feb. 1, 1961. t.136, no.4, p.904–906, text map.) 2 refs. Text in Russian. **Title tr.:** Find of Triassic fishes and stegocephalians in the northern Cis-Ural.

Describes geologic conditions of nine sites of such finds (in 1959) in the Bol'shaya Synya and Malyy Aranets basins. The deposits, horizons, and their fish and stegocephalian specimens are noted, but only *Colobodus* (?) sp. is identified. Peculiar cylindrical bodies present in all the sites are considered to be stegocephalian coprolite. (DLC.)

70642. CHALYSHEV, V. I. Morskoĭ nizhniĭ trias v Severnom Priural'e. (Akademiia nauk SSSR. Doklady, June 21, 1962. t.144, no.6, p.1340–43, cross-section.) 2 refs. Text in Russian. **Title tr.:** The marine Triassic in the region adjoining the Northern Ural.

Outlines the lithology and some paleontologic characteristics of marine Triassic deposits studied in 1959 in the Bol'shaya Synya basin, 60 km. east-northeast of the town of Pechora in Komi ASSR. Sandstones, silts, clays, limestones, pyritic concretions and other rocks are described. Rhythmicity was observed in the sedimentation. Formation conditions of these deposits are discussed. (DLC.)

70643. CHALYSHEV, V. I. Nakhodka otpechatkov dozhdevykh kapel'. (Akademiia nauk SSSR. Doklady, July 1, 1962. t.145, no.1, p.179–80, plate.) 2 refs. Text in Russian. **Title tr.:** A find of raindrop imprints.

Reports study of Permian and Triassic deposits in the Kheyyakha (Khey-Yaga) River basin on the southwestern slope of the Pay-Khoy. In one of the Lower Triassic series, mainly of sandstone composition, imprints of raindrops are identified and described. The small ones are 1.0–2.0 mm. in diameter; the large ones 6.0–7.0 mm. diam.; and there is an intermediate group as well. The conditions of raindrop preservation are described. (DLC.)

70644. CHALYSHEV, V. I. O granitse permskikh i triasovykh otlozheniĭ v basseine r. Adz'vy. (Akademiia nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp.2, Materialy po geologii Komi ASSR, p.50–52, illus., diagr.) 2 refs. Text in Russian. **Title tr.:** Boundary of Permian and Triassic deposits in the Adz'va River basin.

Describes bordering sections of these deposits. Between the gray upper Permian and the Lower Triassic deposits, a 2 m. thick layer of conglomerates is identified for the first time and considered to be the boundary. This layer is described noting the petrographic composition of the pebbles, form of boulders etc. (DLC.)

70645. CHAMBERLAIN, JOSEPH WYAN, 1928– Physics of the aurora and airglow. New York, Academic Press, 1961. xviii, 704p. illus., diagrs. (International geophysics series, v.2.)

Basic work in 13 chapters: radiation in spectral lines; scattering of radiation in finite atmospheres; magnetic fields, charged particles, and the upper atmosphere; occurrence of aurora in space and time; auroral spectroscopy and photometry; the radio-aurora; physical processes in the auroral atmosphere; auroral particles in space; the airglow spectrum; analysis of twilight observations for emission heights; theory of twilight and day airglow; spectral photometry of the night airglow; excitation of the night airglow. The eight appendixes include a glossary of symbols, a list of stations, etc. An exhaustive bibliography of significant works to Jan. 1960, extensive author and subject indexes are added. In this fundamental treatise on polar sky phenomena and the airglow, knowledge of the physics of the aurora and airglow is synthetized from the sources given in the bibliography, and the author's own studies and original research are presented, including the theory of hydrogen emission in aurora, the resonance scattering by atmospheric sodium, the excitation of the oxygen red lines, and an atlas of the auroral spectrum. Considering the radio work in aurora as a comparatively new topic in polar research, author summarizes such work, "so that it would be intelligible to one who, like myself, has had little training in radio physics or engineering." (DLC.)

70646. CHAMBERLAIN, JOSEPH WYAN, 1928– Theory of auroral bombardment. (*In:* International Conference on Cosmic Rays and the Earth Storm. 1961 Proceedings *pub.* 1962. v.1, p.247–48.)

Proposes a new aurora theory based on the assumption that the energetic particles are distributed in longitude irregularly. In their drift in opposite directions, negative and positive particles produce momentary electrostatic fields, arising from excess charges of one sign aligned along a magnetic line of force. As particles drift into this potential, they lose their transverse kinetic energy and a portion of the particles spiral immediately out the end of the flux tube. Ejected into the atmosphere, and having regained their lost transverse kinetic energy in accelerated motion along the magnetic field, the particles bombard the atoms in the upper atmosphere and produce auroras. Hall current produced parallel to auroral motions and affecting the north-south thickness of auroral forms is examined in relation to the proposed theory, as are auroral breakup, daily variations, etc. (DLC.)

70647. CHAMBERLIN, FRANCES D. Mount McKinley, 1962. (Appalachia, Dec. 1962. v.34, no.2, p.181–92, illus.)

Relates experiences of party of seven, led by R. McGowan, climbing Mt. McKinley via the West Buttress route May-June 1962. Author is the third woman to have climbed this peak and the first over this route. (DLC.)

70648. CHAMISSO, ADELBERT von, 1781–1838. Cetaceorum maris Kamtschatici imagines, ab Aleutis e ligno fictas, adumbravit recensuitque Adelbertus de Chamisso, Dr., A.C.N.C.S.; cum tabulis v lithographicis. (Deutsche Akademie der Naturforscher. Nova acta physico-medica Leo-

poldina, 1824. v.12, pt. 1, p.249-62, illus.) Refs. in text. Text in Latin. **Title tr.:** Representations of the Sea of Kamchatka whales carved in wood by Aleuts, drawn and described by Dr. Adelbertus de Chamisso, A.C.N.C.S.; with five lithographed plates.

Cites Pallas' reference in his *Zoogeographia Rossica*, to three species of *Physetus* and six *Balaenus* known to the Aleuts of Unalaska, and represented in wood sculptures brought back by the Kotsebu expedition of 1815-1818. The sculptures are illus. and described as seen from above, below and in profile. Aleut, Russian and Latin names of the whales are supplied, as well as data on actual size and weight, color, outstanding anatomical features, frequency, economic value, etc. (DLC.)

70649. CHANCE, NORMAN A. Conceptual and methodological problems in cross-cultural health research. (American journal of public health, Mar. 1962. v.52, no.3, p.410-17, tables.) 8 refs.

Discusses the reliability of conclusions drawn from answers to hetero-cultural health questionnaires, exemplified by a Cornell Medical Index survey in 1960? It was conducted among North Alaskan Eskimos of varied extraction at Kaktovik, a village community formed in the late 1940-1950's on the Alaskan-Canadian border, and 75% of its male population were employed on the DEW Line. Despite terminological revision of standard questions and the strong acculturation of this Eskimo group, factors of traditional cultural attitude to sickness, work responsibility, decision-making, etc. invalidated the psychiatric section of the questionnaire. Methodological problems are analyzed and suggestions made to improve the scientific value of cross-cultural health surveys: better understanding of the cultural matrix of the group under study and adaptation of terminology to its conceptual pattern. (DLC.)

CHANCE, NORMAN A., *see also* Alaskan Science Conference 1961. 1962. No. 69644

CHANG, J. J., *see* Schmidt, R.F., & J.J. Chang. Aktionspotential . . . 1961. No. 75418

70650. CHANG, KWANG-CHIH. A typology of settlement and community patterns in some circumpolar societies. (Arctic anthropology, 1962. v.1, no.1, p.28-41.) 75 refs.

Discusses the correlation between the physical settlement and the social community types in prehistoric and primitive societies in the far North. Ecological and economic factors are considered responsible for the seasonal settlement pattern: sedentary-seasonal with transient or permanent bases for hunter and fisher tribes; temporary-seasonal for reindeer-herding Chukchis, Koryaks, and Tungus, also caribou-hunting Central Eskimos. A stable community with a cohesive membership core tends toward a unilateral social structure with an oriented village layout characteristic of the *kinship bound* Siberian pattern; a bilateral structure prevails among loosely organized societies composed of strongly knit nuclear families settling in irregular groupments typical for the *kinship free* Eskimo community. In general, unilineality seems favored by sedentary fishers, and bilaterality to prevail among migrant hunters. (DSI.)

CHANTELOU, JENS-FREDERIK, 1893– , *see* Denmark. Greenland. 1961. No. 70974

70651. CHAPLYGIN, EVGENIĬ IL'ICH. K voprosu o vodoobmene cherez proliv mezhdu o. Shpitsbergen i Grenlandiei. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962, vyp.10, p.89-90.) Text in Russian. **Title tr.:** The water exchange through the strait between Spitsbergen and Greenland.

Two strong currents bear the waters in opposite directions: the East Greenland Current carries arctic waters and transformed Atlantic waters southward; the Spitsbergen Current brings the fresh Atlantic waters northward. The heavy ice in the western part of strait has precluded study of the East Greenland Current, except in August 1956, when the diesel-electric ice-reinforced *Ob'* succeeded in collecting some data. They indicated 75% of the water mass, 14% of the heat, and 61% of the salinity brought northward by Spitsbergen Current were present in the East Greenland Current. (DLC.)

CHAPMAN, E. P., 1912– , *see Western miner.* Beryllium NWT. 1961. No. 76532

70652. CHAPMAN, ROBERT MILLS, 1918– , *and* **E. G. SABLE.** Geology of the Utukok-Corwin region, northwestern Alaska. Washington, D.C., U.S. Govt. Print. Office, 1960. p.49-167, illus., tables, maps, diagrs., graphs, incl. fold. on plates 7-20 in separate pocket. (U.S. Geological Survey. Professional paper 303-C. Exploration of Naval petroleum Reserve No. 4 . . ., 1944-53, pt. 3, areal geology.)

Reviews these investigations and outlines the general geography of the 7,500 sq. mi. region, mapped during 1947-1953; particular attention is given to permafrost and related features. Five Cretaceous formations crop out; they consist chiefly of shale, siltstone and sandstone, with a possibly Jurassic unit of siltstone and shale in the southwestern part. Quaternary unconsolidated deposits include the Pleistocene Gubik formation covering the coastal plain, elevated Pleistocene and Recent fluviatile deposits in the foothills, and Recent beach and stream deposits. Major structural element is a basin consisting of the Colville geosyncline and the Chukchi basin. Four positive elements flank the basin; tangential forces originating in two of them produced the present structural pattern. Results of geophysical exploration are outlined; as is the historical geology. Though petroleum possibilities are not strong, some good potential reservoir beds are present; the sandstone and conglomerate in the Kukpowruk, Corwin, and Prince Creek formations offer best possibilities. Beds of bituminous and sub-bituminous coal are common inland and along the Cape Beaufort-Corwin part of the coast. Maps at scale 1:125,000 and sections supplement text. (DGS.)

CHAPMAN, ROBERT MILLS, 1918– , *see also* Alaskan Science Conference 1961. 1962. No. 69644.

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635.

70653. **CHAPMAN, SIDNEY, 1888–** . Electric current in the ionosphere and the aurora. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.1, p.325–28.) 17 refs.

Discusses briefly the system of electric currents due to the disturbing electric current D, consisting of the component D_e of external origin, plus the current $D\text{-}D_e$ induced within the earth by the change in D_e. Theories and hypotheses of scientists who have contributed to the interpretation of the ionospheric disturbance phenomena are reviewed, particularly in regard to polar disturbance (DP) and auroras. (DLC.)

70654. **CHAPMAN, SYDNEY, 1888–** . From Polar Years to Geophysical Year. (Studia geophysica et geodaetica, 1960. roč. 4, no.4, p.313–24.) Refs.

Presents a chronological review of the world scientific activity from the First Polar Year as a cooperative enterprise in 1882–1883, the Second Polar Year of 1932–1933 endorsed by the IUGG. The Polar Year Commission appointed in 1929 continued in being till 1946 and the work of the Polar Year concluded with publication of No. 22824. Stimulus to technical progress in many fields, given by World War II, led to the International Geophysical Year of July 1957-Dec. 1958. The IGY is discussed as a remarkable example of international cooperation. The various developments and phases of organization, and operation of the scientific undertaking, polar expeditions included, are recounted by the author as a participant. (DLC.)

70655. **CHAPMAN, SYDNEY, 1888–** . Solar plasma, geomagnetism and aurora. (Grenoble. Université. École d'été de physique théorique, *Les Houches*. Géophysique exterieure, Lectures. . . 1962, *pub.* 1963. p.373–502, illus., graphs, diagrs. incl. fold.) 122 refs. Text in English.

Presents a thorough study of the interrelation between these solar-terrestrial phenomena. Geomagnetism is discussed in its various aspects. The latest interpretation of the phenomenon of solar plasma is given, introducing a discussion of the mutual influence of the plasma ~~(or solar gas)~~ and the earth's magnetic field. The problems associated with the parts *M, S, L,* and *D* of the geomagnetic field, the *D* field morphology, and the relation to the auroral of these field phenomena are treated in chapter 4. An account of the problems of *DP, Dst,* and *DR* (R for ring) conclude the monograph. (DLC.)

70656. **CHAPMAN, SYDNEY, 1888–** . Sun storms and the earth: the aurora polaris and the space around the earth. (American scientist, Sept. 1961. v.49, no.3, p.248–84, illus., diagrs., charts , graphs.) 26 refs.

Discusses auroras as seen from the University of Alaska, their origin and nature. They are believed caused by particles of hot ionized gas expelled from the sun during storms and caught in the earth's magnetic field in passage through the radiation belts surrounding the earth. Possible subsequent motions of these particles (electrons and protons) are traced to account for their production of thin ribbons of light during the first auroral phase, and the active auroras of the second phase. Also discussed are the auroras' visibility zones, height, light, geographical location, and relation to the earth's magnetic field and to the sunspot cycle. (DGS.)

CHAPMAN, SYDNEY, 1888– , *see also*

Akasofu, S.I., & S. Chapman. Ring current & neutral line discharge theory, aurora. 1962. No. 69593.

Alaskan Science Conference 1960. 1961. No. 69643.

70657. **CHAPSKIĬ, KONSTANTIN KONSTANTINOVICH, 1906–** . Nekotorye ėkologicheskie obosnovaniia sezonnoĭ dinamiki areala belomorskoĭ populiatsii grenlandskogo tiulenia, *Pagophoca groenlandica.* (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ, 1961. vyp.12, p.150–63.) 26 refs. Text in Russian. **Title tr.:** Some ecological bases of seasonal dynamics in the area of the White Sea population of the Greenland seal *Pagophoca groenlandica.*

Discusses earlier ideas on the migrations of this seal in European and American waters and their aims; the place of drift ice in these movements; movements in different areas of the White Sea; biological and growth rhythms and migrations; conditions in the White Sea attracting reproducing seal herds. (DLC.)

70658. **CHAPSKIĬ, KONSTANTIN KONSTANTINOVICH, 1906–** . Sovremennoe sostoianie i problemy sistematiki lastonogikh. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ, 1961. vyp.12, p.138–49.) 45 refs. Text in Russian. **Title tr.:** Present state and problems of cetacean taxonomy.

Notes that the group is well known and studied, but various problems still awaiting clarification or additional research. As such, he considers: improving the taxonomy and basing it on phylogeny; review of little studied groups; elucidation of functions and "causal analysis of diagnostic indices;" making diagnosis more accurate and clarifying relations above and within the species grouping. (DLC.)

70659. **CHARAKHCH'IAN, A. N.,** *and others.* Cosmic ray intensity bursts in the stratosphere in November 1960. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.2, p.360–65, table, graphs.) 4 refs. *Other authors:* V.F. Tulinov *and* T.N. Charakhch'ian.

Reports on the 70 measurements of cosmic ray intensity at 64°N. during Nov. 14–23, 1960, when three outbursts of cosmic ray intensity in the stratosphere, associated with solar flares occurred. The dependence of the number of double coincidences, and the number of discharges in the counter upon the altitude and the time dependence of cosmic ray intensity during the Nov. 15 outburst are discussed, as is the cosmic energy spectrum of the events observed. The energy range was found to be 1.3–3.0 Bev, and the arrival of the solar flares corpuscular stream at the earth was found to cause an enhancement in the proton total intensity in

addition to a sharp softening of the proton energy spectrum. (DLC.)

70660. CHARAKHCH'IAN, A. N., *and others.* Nekotorye dannye o kosmicheskikh luchakh ot solntsa. (Geomagnetizm i aeronomiia, 1961. t.1, no.2, p.150–52, tables.) 7 refs. Text in Russian. *Other authors:* V.F. Tulinov *and* T.N. Charakhch'iian. **Title tr.:** Some data on cosmic rays from the sun.

Discusses large bursts in the intensity of cosmic radiation observed in the stratosphere at +64° geomagnetic latitude, and attributed to protons of 100-200 Mev energy, generated by the solar chromospheric flares, and transported to the earth by the solar corpuscular streams with frozen-in magnetic fields. Data on cosmic ray bursts in the stratosphere are supplied which may be of practical interest for protection of astronauts from harmful radiation during flights in space rockets. (DLC.)

70661. CHARAKHCH'IAN, A. N. *and others.* Vspyshki intensivnosti kosmicheskikh luchei v stratosfere v noiabre 1960 g. (Geomagnetizm i aeronomiia, 1961. t.1, no.4, p.494–99, tables, graphs.) 4 refs. Text in Russian. *Other authors:* V.F. Tulinov *and* T.N. Charakhch'iian. **Title tr.:** Cosmic ray intensity flares in the stratosphere in November, 1960.

Presents the results of measurements of cosmic ray intensity in the stratosphere, at 64° (Murmansk), 51°, and 41°N. Three intensity flares on Nov. 14, 15, and 21, 1960 were studied, and associated with the chromospheric flares on the sun. On Nov. 15, at 8:30 universal time, the rays' intensity was found 500 times the normal at 64°N. From 70 measurements made in the stratosphere, the previously derived existence of magnetic traps for protons in the corpuscular streams ejected by the sun during chromospheric flares was confirmed. Energy of the protons observed at 64°N. was found to be ~150 Mev. (DLC.)

CHARAKHCH'IAN, T. N., *see*

Charakhch'iian, A.N., *& others.* Cosmic ray intensity bursts, Nov. '60. 1962. No. 70659

Charakhch'iian, A.N., *& others.* . . . o kosmicheskikh luchakh ot solntsa. 1961. No. 70660

Charakhch'iian, A.N., *& others.* Vspyshki intensivnosti kosmicheskikh luchei . . . 1961. No. 70661

70662. CHARD, CHESTER STEVENS, 1915- . Eskimo remains from Shalaurova Island, Siberia. (Alaska. University. Anthropological papers, Dec. 1961. v. 10, no. 1, p. 83-76, illus.) 5 refs.

Summarizes finds on this island, 60 km. east of Cape Shelagskiy, northernmost point of Chukotka, reported by N.A. Beregovaia, No. 63368. (DSI.)

70663. CHARD, CHESTER STEVENS, 1915- . First radiocarbon dates from the USSR. (Arctic anthropology, 1962. v. 1, no. 1, p. 84-86.) 4 refs.

Presents 35 datings made by the Radiocarbon Laboratory of the Institute of Archeology at Leningrad by the scintillator method and another (unnamed) laboratory using a proportional counter. Three of the C_{14} datings pertain to northern material: birchbark from a cliff burial at Vorob'yevo on the upper Lena submitted by A. P. Okladnikov, 2,840 ± 95 yrs. B. P.; and two objects from ancient eruption layers of the Shiveluch Volcano on Kamchatka collected by G.S. Gorshkov: 1500 ± 170 and 2,100 ± 200 yrs. B. P. (DSI.)

70664. CHARD, CHESTER STEVENS, 1915- . Maritime culture in the North Pacific: age and origin. (International Congress of Americanists, 34th, *Vienna,* 1960. Proceedings *pub.* 1962, p. 279-83.) 6 refs.

Ethnogenetic study of American and Asiatic coastal cultures with distinctive maritime pattern, based on recent field work in Alaska, eastern Siberia, and Hokkaido. Age comparisons of archeological finds suggest the hypothesis of a maritime, Eskimoid, cultural tradition arising in southwestern Alaska about 2,000 B.C. For yet unknown reasons (population explosion?) it expanded in the first millennium B.C. to the Bering Strait, and southward along both sides of the Pacific to Hokkaido and Puget Sound. So-called Eskimo elements in the Dorset culture may have been involved in the expansion eastward across arctic America also southwest to Sakhalin Island. Ecological factors blocked a westward spread along the arctic shore of Asia.

Russian-language version pub. as: Proiskhozhdenie khoziaistva morskikh okhotnikov severnoi chasti Tikhogo okeana, in *Sovetskaia etnografiia,* Sept.-Oct. 1962, no.5, p.94-99. (DSI.)

70665. CHARD, CHESTER STEVENS, 1915- New developments in Siberian archaeology. (Asian perspectives, Summer 1961 pub. 1962. v. 5, no. 1, p. 118-26.)

Summarizes 18 of the papers read at the Scientific Conference on the History of Siberia and the Far East: Section of Archeology (cf. No. 66967). (DSI.)

70666. CHARD, CHESTER STEVENS, 1915- Northeast Asia. (Asian perspectives, Summer-winter 1960 *pub.* 1961. v. 4, no. 1-2, p. 7-16.)

Reports on major field work in 1959, including: salvage, by the Angara Expedition under A.P. Okladnikov, of paleolithic-through-iron-age sites in the inundation zone of the Bratsk hydroelectric project; excavations of the Verkholenskaya Gora late paleolithic site by the Irkutsk Regional Museum; Okladnikov's discovery near Tetyukhe, Maritime Province, of unifacial blade arrow points reminiscent of northern Yakutia, the Kolyma and Chukotka, indicating a possible penetration by some arctic group; and M.G. Levin's find of an engraving tool with iron point in an Old Bering Sea period grave of the Uelen cemetery. Current English translations of Russian ethnographic publications are reviewed; an annotated list is added of 82 books, articles, and reviews, mostly Russian publications of 1957-1960. (DLC.)

70667. CHARD, CHESTER STEVENS, 1915- . Northeast Asia. (Asian perspectives, Summer 1961 *pub.* 1962. v. 5, no. 1, p. 16-20.)

Lists some 35 publications, mostly 1960, including eight of arctic interest, also translations of Russian publications, etc.; Soviet archeological fieldwork in 1960 is summarized. (DSI.)

70668. CHARD, CHESTER STEVENS, 1915- . Old World sources for early lithic cultures. (International Congress of Americanists, 33rd, *San José, Costa Rica,* 1958. Proceedings *pub.* 1959. v. 1, p. 314-20.) 8 refs.

Discussion of the American, Siberian, and east Asiatic pre-neolithic aimed at tracing the origins of American aborigines. No antecedents for typical New World traits (e.g. pressure flaking technique) are found in paleolithic sites of interior northeast Asia, leaving the Asiatic Pacific coastal zone as the only probable ethnic source for the peopling of America. An indigenous American development is suggested, of the pre-neolithic cultures which derived from crude chopping-tool traditions introduced from Asia in pre-Wisconsin times. Some subsequent reverse cultural transmissions to Asia are considered possible. Physical and linguistic diversity of the New World may be the result of comparatively recent (about 5,000 years ago) interhemisphere movements via the Bering Strait associated with, among others the maritime Eskimoid horizon. (DSI.)

70669. CHARD, CHESTER STEVENS, 1915- . Russian source materials for the racial history of northern Eurasia. (Arctic anthropology, 1962. v. 1, no. 1, p. 117-25.)

Summarizes content of 31 Russian paleoanthropological publications of 1948-1961; ten of them deal with northern peoples, of which the more important are: V.P. Alekseev on Nganasan Samoyeds No. 38517; G.F. Debets on Kamchatka and Siberian tribes No. 21378 and 21380, and M.G. Levin on Chukchis and Eskimos No. 23806. Subject and chronological indexes are appended. (DSI.)

70670. CHARD, CHESTER STEVENS, 1915- Sternberg's materials on the sexual life of the Gilyak. (Alaska. University. Anthropological papers, Dec. 1961. v. 10, no. 1, p. 13-23.)

Translation of chapter 9 of No. 26166 dealing with sexual freedoms of the Gilyaks: group marriage, extramarital and premarital adventures, accessibility of girls and married women, courting and abduction, liaison taboos (forbidden degrees of kinship), and suicides, etc. Some biographical notes on the author, L. IA. Shternberg, are given in introduction. (DSI.)

70671. CHARD, CHESTER STEVENS, 1915- . Time depth and culture process in maritime northeast Asia. (Asian perspectives, Winter 1961 *pub.* 1962. v. 5, p. 213-16.)

The prehistoric economic pattern of the Sea of Okhotsk and adjacent Pacific coastal regions indicates an original inland-oriented economy typified by the Kamchadals. The maritime culture is an alien intrusion from the north introduced about two thousand years ago by Bering Sea Eskimos from an ancestral hearth in southwestern Alaska. (DSI.)

CHARD, CHESTER STEVENS, 1915- , *see also*

Larichev, V.E. Microlithic . . . Trans-Baikal. 1962. No. 73316

Okladnikov, A.P., & I.A. Nekrasov. Ancient settlements . . . 1962. No. 74493

Okladnikov, A.P. Paleolithic Trans-Baikal. 1961. No. 74497

Pacific Science Congress. 1961. No. 74619

CHARETTE, D.J., *see* Nickel, E.H., & D.J. Charette. Add. data . . . barylite . . . 1962. No. 74321

70672. CHARLES, J.L. The organic terrain factor in northern railway construction. (*In:* National Research Council of Canada . . . Proceedings of the Seventh Muskeg Research Conference . . . 1961. p. 126-32.)

Discusses ways of economizing on costs, time and materials, in railroad building upon muskeg. Construction and maintenance are discussed and exemplified in the Canadian National Ry. Lynn Lake - The Pas branch line and the Quebec, North Shore and Labrador Ry. Author recalls experience in 1913 on the Hudson Bay Ry., cf. No. 57320. (DLC.)

70673. CHARLES, J.L. Railways march northward. (Canadian geographical journal, Jan. 1961. v. 62, no. 1, p. 2-21, illus., map.)

Describes existing and proposed rail lines in northern Canada, also some problems of location and construction caused by muskeg, permafrost, etc. Author's experiences as a reconnaissance engineer for the Hudson Bay Ry. in 1913-1914 and 1927-1928 are recounted; older survey methods contrasted with present use of aircraft and photography. Preliminary surveys in 1959 for a line through British Columbia and Yukon Territory to Alaska are noted. (DGS.)

70674. CHARNOLUSSKIĬ V.V. "IAshcher" permskogo zverinogo stilia. (*In:* Akademiia nauk SSSR. Institut ėtnografii. Trudy t. 78, Sibirskiĭ . . . 1962, p. 258-66, illus., table, map.) Refs. Text in Russian. **Title tr.:** The dragon of the Permian animal style.

Describes cast copper plaquettes with so-called shamanistic ornamentation belonging to the 6-12th centuries A.D., found on both sides of the Urals mainly in the Kama River region. The dragon is considered a composite representation of various totemic animals, which might be used in turn for a study of regional clan distribution. Accumulations of these dragon-ornamented plaquettes in the Ukhta area indicates its importance as a watershed cult center visited by Uralic tribesmen on their way to fishing grounds in the lower Pechora basin and the seacoast. (DSI.)

70675. CHASSAIN, A. Étude du quotient respiratoire chez le rat au cours de l'exposition au froid. (Journal de physiologie, 1961. t. 53, no. 2, p. 294-96.) 6 refs. Text in French. **Title tr.:** Study of the respiratory quotient in the rat exposed to cold.

Discusses methodology and previous studies of respiration during hypothermia and the respiratory quotient (exchange ratio) in rats at thermal equilibrium and during cold exposure. Three successive phases in the respiratory quotient are distinguished and described. (DNLM.)

70676. CHASSAIN, A., *and* **E. FLORENTIN.** Étude du quotient respiratoire chez le rat au cours

de l'exposition au froid. (Journal de physiologie, 1961. t. 53, no. 4, p. 655-68, illus., tables.) 17 refs. Text in French. Summary in English. **Title tr.:** Study of respiratory quotient in the rat exposed to cold.

Reports study by open-circuit method at ambient temperatures of 30° to 4° C. during both the transient state (first 20 minutes of cold exposure) and during the steady state. Hyperventilation noted in the first instance indicates that pulmonary ventilation is affected by physical stimuli originating from the thermoreceptors. In the steady state, values of the respiratory quotient are determined and compared with the ambient temperatures. The role of fats and carbohydrates in thermogenesis is also discussed. (DNLM.)

70677. CHASSAIN, A., *and* **D. BARGETON.** Ventilation au froid chez le rat. (Journal de physiologie, 1961, t. 53, no. 3, p. 543-60, illus., tables.) 14 refs. Text in French. Summary in English. **Title tr.:** Ventilation due to cold in the rat.

Reports study of pulmonary ventilation in unanesthesized, unrestrained rats at neutral (30°C.) temperature and in cold environments down to 5° C., with observations lasting 90 minutes. Tidal and minute volumes, as well as respiratory frequency are recorded. The response to temperature change was very rapid, the biological equilibrium being restored almost as soon as the thermal balance. Increase of ventilation was proportional to increase in metabolic rate. (DNLM.)

CHATO, J.C., *see* Mark, V.H., *& others.* Localized cooling . . . 1961. No. 73812

70678. CHATONNET, J., *and others.* Action calorigénique de l'adrénaline et de nor-adrénaline dans les conditions de thermogénèse maximum au froid. (Journal de physiologie, 1961. t. 53, no. 2, p. 296-98.) 8 refs. Text in French. *Other authors:* M. Tanche and J.D. Guieu. **Title tr.:** Calorigenic action of adrenalin and noradenalin during maximal heat production due to cold.

Presents summary and discussion of recent work on the effect of these two hormones on heat production of normothermic and cold-exposed animals; differences in action of the two substances, and differences in their effects at various degrees of hypothermia. (DNLM.)

70679. CHATONNET, J. Les commandes nerveuses de la thermorégulation chimique. (France.) Centre national de la recherche scientifique. Colloques nationaux, 1955. p. C103-C112.) 37 refs. Text in French **Title tr.:** Nervous controls, of chemical thermoregulation.

Reviews his own and others' studies specifically kinds and classification of controls; methods of study; controls of muscle activity, thermogenic activity of the liver; sympathetic nervous system and adrenalin secretion; specific heat nerves. (DLC.)

70680. CHATONNET, J. Nervous pathways in the chemical regulation against cold and their central control. *(In:* Symposia on arctic biology and medicine 1960. Proceedings, 1; neural aspects of temperature regulation, *pub.* 1961. p. 225-54, illus.) 47 refs.

Review, with discussion, of three ways the nervous system activates heat production; by increasing the specific activity of innervated organs, like muscle; by non-specific activation of emergency functions of the sympathetic or epinephrine complex; and by increased metabolism and heat production of the liver, viscera, etc. The quantitative aspect of each of these factors and the conditions under which they operate are analyzed. Brief discussion, p. 246-49, follows the paper. (DLC.)

CHATONNET, J., *see also* Descotes, J., *& others.* L'hypothermie . . . 1960. No. 70988

70681. CHEATHAM, JAMES S. The state of Alaska's mental health. (Alaska medicine, Dec. 1961. v. 3, no. 4, p. 84.)

Describes the precarious condition of psychiatric resources in this state, recent legislative budgetary cutbacks, gradual progress, and developments for the near future. (DNLM.)

CHEBOKSAROV, N.N., *see* Michael, H.N. Studies . . . ethnogenesis. 1962. No. 73967

70682. CHEBOTAREVA, NINA STEPANOVNA, *and others.* Stratigrafiia chetvertichnykh otlozhenii srednei Leny i nizovii Aldana. *(In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t. 3, p. 220-28, profiles, diagrs.) 13 refs. Text in Russian. *Other authors:* N.P. Kuprina *and* I.M. Khoreva. **Title tr.:** Stratigraphy of the Quaternary deposits of the middle Lena and lower Aldan.

Reports field study in the Lena basin between the Vitim and the Aldan and at the mouth of the Aldan. The Lena valley is divided into three parts. Quaternary deposits are well developed; their Lower, Middle, and Upper series are identified; spore-pollen analyses, flora and fauna, lithologic characteristics are described. (DLC.)

70683. CHEESEMAN, J.T. East coast groundfish sales prospects. (Canadian fisherman, June 1962. v. 49, no. 6, p. 51, illus.)

The Newfoundland Minister of Fisheries considers groundfishing prospects: increased production and marketing, despite foreign competition, by use of improved gear and equipment; and maintenance of the present production of salted fish, if new markets can be found. International conservation in the Northwest Atlantic is needed, also a 12-mile territorial limit along the Canadian coast. (DI.)

70684. CHEKALOV, A. Zhivye traditsii v narodnom iskusstve. (Iskusstvo, 1961. god 24, no. 1, p. 16-25, illus. incl. color.) Ref. Text in Russian. **Title tr.:** Living traditions in folk-art.

Describes the style, painting, carving and modelling techniques, ornamentation, etc. of 18th-20th century folk art. Painted clay toys from the Arkhangel'sk Province and modern Chukchi bone sculptures from Uelen are included. (DLC.)

CHEKOTILLO, ANDREĬ MARKOVICH, 1886- , *see* Stotsenko, A.V., *& A.M.* Chekotillo. Voprosy terminologii . . . 1962. No. 75947

70685. CHEKOTILLO, K.A. Osobennosti tsirkuliatsii promezhutochnykh vod severnoĭ chasti

Tikhogo okeana. (Akademiĭa nauk SSSR. Institut okeanologii. Trudy 1961. t. 45, p. 113-22, tables, maps.) 8 refs. Text in Russian. Summary in English. **Title tr.:** Characteristics of circulation of intermediate waters in the northeast Pacific.

Based on the winter 1958-59 investigations of the *Vitiaz'* concerning the 800-1000 m. layer in the intermediate waters. The existence of two circular flows is postulated: an inner, moving clockwise, and an outer one running in the opposite direction and including the Alaska Current and its southwestern extensions. Two centers of intermediate and deep water formation are indicated, one in the Gulf of Alaska, the other off Honshu. (DLC.)

70686. CHEKOTILLO, K.A. Vertikal'nye dvizheniĭa vod u tikhookeanskogo poberezh'ĭa severnoĭ Ameriki. (Akademiĭa nauk SSSR. Institut okeanologii. Trudy 1961. t. 45, p. 123-29, illus., table, maps.) 7 refs. Text in Russian. Summary in English. **Title tr.:** Vertical water movements along the Pacific coast of North America.

Reports a hydrodynamic study indicating a number of alternating belts of upwelling and sinking having a meridional extent. Along the American coast from 30° to 55° N. a zone of upwelling is located. A region of intensive sinking is found in the southwestern part of the Gulf of Alaska. (DLC.)

CHEKOTILLO, S.A., *see* Pacific Science Congress. 1961. No. 74619

70687. CHELISHCHEV, N.F. O dvukh geneticheskikh gruppakh pegmatitov Monchegorskogo plutona. (Akademiĭa nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh ėlementov. Trudy 1962. vyp. 8, p. 249-63, illus., tables.) 8 refs. Text in Russian. **Title tr.:** On two genetic groups of pegmatites of Monchegorsk plutonic rocks.

Describes the two groups, which differ in geologic position, morphology of the bodies, mineralogic composition, geochemical characteristics, and genetic formation. Various features of the pegmatites are analyzed and compared; formation conditions are interpreted; chemical composition is reported. Presence of iron, nickel and copper and rare elements such as Se, Zr, Be and Sr are also noted. (DLC.)

70688. CHEMEKOV, IŬ.F. Neotektonika Dal'nego Vostoka SSSR. *(In:* International Association for Quaternary Research. Neotektonika SSSR . . . 1961, p. 231-36.) 10 refs. Text in Russian. **Title tr.:** Recent tectonics of the USSR Far East.

Gives a brief account of recent tectonic movements including geosynclinal foldings of the Kuril - Kamchatka, Siberian platform, and Sea of Okhotsk areas. Various tectonic structures, and age of movements are summarized. The Kuril-Kamchatka geosynclinal zone is characterized by development of lineal structures of high vertical amplitude. (DLC.)

70689. CHEMEKOV, IŬ. F. Problemy chetvertichnogo oledeneniĭa Severo-Vostoka i Dal'nego Vostoka SSSR. *(In:* Leningrad. Vsesoĭuznyĭ n.- i. geologicheskiĭ institut. Trudy 1961, t.64, Problemy chetvertichnogo . . . , p.119-34, tables, maps.) Text in Russian. **Title tr.:** Problems of Quaternary glaciation in the Northeast and Far East of the USSR.

Summarizes the basic problems in the areas east of the Lena including parts of Yakutia, Magadan Province and Kamchatka: the existence of Pleistocene glaciation, the number of glaciations, and their extent, paleogeographic conditions of the glacial and interglacial periods, classification of paleoglacial landscapes, problems of the metachronism and synchronism of glaciations, glaciations and marine transgressions, climatic fluctuations, etc. In the Northeast three, in the Far East four, and in Siberia five glaciations are recognized and stratigraphically correlated. The paleogeographic regions of this wide area are described. (DLC.)

70690. CHEMEKOV, IŬ.F. Stratigrafiia i paleogeografiia antropogena Dal'nego Vostoka SSSR. *(In:* Vsesoĭuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t. 3, p. 293-304.) 12 refs. Text in Russian. **Title tr.:** Stratigraphy and paleogeography of the Anthropogene of the Soviet Far East.

Outlines stratigraphy of the Lower, Middle, Upper, and Recent Quaternary deposits of this wide area including Kamchatka, and the coastal areas of the Bering and Okhotsk Seas. Distribution, lithologic and paleontologic characteristics of the deposits are described. Traces of four glaciations are recognized. Paleogeography of the region is briefly characterized. (DLC.)

CHEMEKOV, IŬ.F., *see also*

Ganeshin, G.S., & *others*. Karta . . . 1961. No. 71580

Ganeshin, G.S., & IŬ. F. Chemekov. S.V. Obruchev . . . 1961. No. 71582

70691. CHEREMENSKIĬ, G. A. Vliianie mnogoletneĭ merzloty na teplovoe sostoianie mezozoĭskikh otlozheniĭ Berezovskogo raĭona. (Akademiĭa nauk SSSR. Doklady, May 21, 1962. t. 144, no. 3, p. 633-35, diagr.) 8 refs. Text in Russian. **Title tr.:** Effects of permafrost on the thermal status of Mesozoic deposits of the Berezovo region.

Describes permafrost, tectonic-structural and hydrogeologic factors in the thermal regime of the Mesozoic deposits, lying immediately below the Quaternary in this region of Tyumen Province where the permafrost is thin and sporadic. Data from geothermal measurements in various wells are reported. A temperature inversion to 800 m. depth is found due to the permafrost. Average geothermal gradient for Mesozoic-Cenozoic stratum is 4.9° C. /100 m. (DLC.)

CHEREMISINA, R.A., *see* Berger, T.S., & *others*. Novye dannye o severnoĭ granitse . . . 1962. No. 70151

70692. CHEREMISINOVA, E.A. Diatomovye morskikh mezhlednikovykh otlozheniĭ v basseĭne Onegi. (Akademiĭa nauk SSSR. Doklady, July 21, 1961. t. 139, no. 3, p. 692-95, diagr.) 3 refs. Text in Russian. **Title tr.:** The diatoms of marine interglacial deposits in the Onega River basin.

This flora is correlated with that of the Severnaya Dvina and Varzuga basins. Analysis of

42 samples of marine interglacial deposits from the Verkhnyaya Telza (63°05'N. 39°14'E.) River sites is reported: the diatom complex consists of about ten forms, *Melosira sulcata, Isthmia nervosa, Havicula distaus,* etc.; their distribution is described. The character of boreal sea and its extent are discussed. (DLC.)

70693. CHEREPANOV, ALEKSEĬ IGNAT'EVICH. Nauchno-issledovatel'skie raboty Biologicheskogo instituta. (Sel'skoe khozīāĭstvo Sibiri, Aug. 1961. god 6, no. 8, p. 80-83.) Text in Russian. **Title tr.:** Research work of the Biological Institute.

Outlines work of this institute (author, director) of the Siberian Division of the Academy of Sciences. It is concentrated in three fields: animal ecology, especially of pests, the water vole *Arvicola terrestris,* the Siberian egger, and blood-sucking insects; soils; West Siberian forests. Field work on insects around Salekhard, and control of *Dendrolimus sibirica* are noted. (DLC.)

70694. CHEREPANOV, ALEKSEĬ IGNAT'EVICH. Poznanie pochvennoĭ ėntomofauny Zapadnoĭ Sibiri. (Akademiīa nauk SSSR. Sibirskoe otdelenie. Izvestiīa 1961, no.1, p.105-112.) 71 refs. Text in Russian. **Title tr.:** Study of the soil fauna of Western Siberia.

Offers a general outline of this fauna, based on the literature: in tundras north of 66° N. between the Ural and the Yenisey River, it is 80% mites (Collembola), the remainder dipters and beetles. In some areas of the Obdorsk tundra, the click beetle is common up to 20 larvae-m² soil and moss. In the taiga zone 66° - 58° N. the soil fauna is richer; its composition and those of several more southerly zones, are described. (DLC.)

70695. CHEREPNIN, L. M. Rastitel'nost' Krasnoīārskogo kraīa. *(In:* Krasnoīārskaīa . . . ėkspediīsiīa. Prirodnye usloviīa . . . 1961, p.160-87, map.) 58 refs. Text in Russian. **Title tr.:** Vegetation of Krasnoyarsk Province.

Considers this province as three phytogeographic zones: Taymyr or polar-arctic, Yenisey or boreal-forest, and Sayan or mountain forest and steppe. Each is treated in turn and divided in smaller zones. The polar-arctic is described as arctic desert and arctic tundra. The dominant plant formations and prevailing plants are noted, and various studies of the flora are briefly reviewed. (DLC.)

70696. CHEREPOV, E. I. V Sibirskom nauchnom gorodke. (Akademiīa nauk SSSR. Vestnik, Sept. 1961. god 31, no.9, p.40-47, illus.) Text in Russian. **Title tr.:** In the Siberian city of scientists.

Describes visit of the Chairman of the Council of Ministers of the USSR to this community at Novosibirsk, center of the Siberian Division of the Academy: it covers over one thousand hectares, and houses six thousand scientific workers and their families. Several institute buildings completed or under construction are illus. (DLC.)

70697. CHERKASOV, E. D., *and* B. G. APANASENKO. Techenie perelomov v usloviīakh Arktiki. (Vestnik khirurgii, 1962. t.88, no.4, p.66-69, table.) 4 refs. Text in Russian. Summary in English. **Title tr.:** The course of fractures under arctic conditions.

Reports on some two hundred cases, in patients living one-four years in the Arctic. Conservative therapy was used, with special emphasis on increased vitaminization and ultraviolet radiation. Routine stimulation of callus formation was also applied. Under these conditions no significant influence of the Arctic was noted. The authors are from "a navy-hospital" suggesting that the patients were sailors. (DNLM.)

CHERKESOVA, S. V., *see* Nekhorosheva, L. V., & S.V. Cherkesova. Stratigrafiīa . . . 1961. No. 74262

70698. CHERMENSKIĬ, M. P., *and others.* Osnovnye napravleniīa razvitiīa transportno-ėkonomicheskikh sviāzeĭ i transportnoĭ seti Krasnoīārskogo Priangar'īa. (Akademiīa nauk SSSR. Sibirskoe otdelenie. Transportno-ėnergeticheskiĭ institut. Trudy 1960. vyp.10, p.47-68, tables, maps.) 15 refs. Text in Russian. *Other authors:* A.A. Logacheva *and* M.K. Bandman. **Title tr.:** Main trends in development of transportation-economy relationships and of the transportation network in the Angara River region within Krasnoyarsk Province.

Discusses the natural economy of the Angara region as affected by its inadequate transportation network. Estimates are made of the construction and improvements required on waterways and automobile roads. The airlift projected for 1975 is discussed in relation to resource development. The construction and reconstruction plans for the transportation network are given. (DLC.)

70699. CHERMENSKIĬ, M. P. Transportnoe osvoenie Angaro-Pitskogo zhelezorudnogo basseīna. (Akademiīa nauk SSSR. Sibirskoe otdelenie. Transportno-ėnergeticheskiĭ institut. Trudy 1960. vyp.10, p.77-83, tables, map.) Text in Russian. **Title tr.:** Transport as means of opening up the Angara-Pit iron ore basin.

Discusses the inadequate transportation situation and analyzes the railroad, and the railroad-waterway (Angara) alternatives for developing a facility to carry iron ore and other minerals mined in the basin to the metallurgical combines in the Bol'skoy Uluy, Abalakovo or Stalinsk regions. The railroad system is shown to be the more economical of the two. (DLC.)

CHERNĪĀK, G. E., *see*

Shvedov, N.A., & *others.* Novaīa stratigraficheskaīa skhema . . . 1961. No. 75636

Solomina, R.V., & G.E. Chernīāk. O kamennougol'nykh otlozheniīākh . . . 1961. No. 75821

Solomina, R.V., & G.E. Chernīāk. *Orulgania* . . . 1961. No. 75822

70700. CHERNĪĀK, S. Transportnoe obsluzhivanie severo-vostochnykh raīonov Dal'nego Vostoka i ostrova Sakahlin. (Rechnoĭ transport, Jan. 1961. god 20, no.1, p.5-8, tables, map.) Text in Russian. **Title tr.:** Transportation services of the northeast area of the Far East and Sakhalin Island.

Describes present and planned rail and water freight routes between Sretensk, the terminal of a Trans-Siberian Railroad branch line on the Shila River, and the mining centers of Magadan Province, fisheries of Kamchatka, etc. Ship and ferry-boat routes through the Okhotsk and adjoining seas to Far East ports are mapped including Magadan (two routes in 1960, four more planned) and Petropav-

lovsk-on-Kamchatka (one now, more planned). Distances and operating costs of the land and sea routes are discussed and tabulated. (DLC.)

70701. CHERNĬAVSKIĬ, FELIKS BORISOVICH, 1935– . Materialy po biologii snezhnogo barana, *Ovis nivicola* Esch., v Korĭakskom nagor'e. (Moskovskoe obshchevsto ispytateleĭ prirody, otdel biologicheskiĭ. Biŭlleten' 1961. t.66, vyp.6, p.61-76, illus., table.) 29 refs. Text in Russian. Summary in English. **Title tr.:** Materials to the biology of the snow sheep, *Ovis nivicola* Esch., in the Koryak highland.

Reports a study conducted in the center of this range in 1959 and 1960. It revealed the favorite habitat of this species to be grasslands bordering the rocks with no migration, seasonal or other. Population density was 1.3 individuals per km². Group associations, breeding, gestation and lambing, mortality (high), enemies, etc. are also dealt with. (DLC.)

70702. CHERNĬAVSKIĬ, FELIKS BORISOVICH, 1935– . Novaĭa forma snezhnogo barana iz Korĭakskogo nagor'ia. (Akademiĭa nauk SSSR. Doklady 1962. t.145, no.5, p.1174-76, tables.) 5 refs. Text in Russian. **Title tr.:** A new form of snow sheep from the Koryak highland.

Describes: Ovis nivicola koriakorum ssp. n. from skulls and skins collected in 1960-1961. Morphometry of skull and horns, body size, color in adults and young and its seasonal changes, also geographic distribution are considered. (DLC.)

70703. CHERNĬAVSKIĬ, FELIKS BORISOVICH, 1935– . O razmnozhenii i roste snezhnogo barana. (Zoologicheskiĭ zhurnal, 1962. t.41, vyp.10, p.1556-66, illus., tables.) 25 refs. Text in Russian. Summary in English. **Title tr.:** Reproduction and growth of the snow sheep.

Reports a study of the bighorn (*Ovis nivicola* Esch.) in the Koryak Mts. in 1959-1961, supplemented by information from Chukchi hunters and other sources. Age and sex composition of the population studied, reproductive behavior and lambing, appearance and development of young, lactation, wintering and mortality of the offspring, etc. are considered. A summary of growth in size and weight, up to the age of 14 years, concludes the account. (DLC.)

CHERNĬAVSKIĬ, FELIKS BORISOVICH, 1935– . *see also* Kapitonov, V.I., & F.B. Chernĭavskiĭ. Vorob'inye ptitsy . . . 1960. No. 72649

70704. CHERNIGOVSKIĬ, N. TROFIMOVICH. Aktinometricheskie issledovaniia v Arktike. (Mezhvedomstvennoe soveshchanie po aktinometrii i atmosfernoĭ optike. 2d *Leningrad,* 1959, *pub.* 1961. Aktinometriia i atmosfernaia optika, p.69-72, tables.) Text in Russian. **Title tr.:** Actinometric investigations in the Arctic.

Reviews observations initiated in 1921. The present net consists of 14 coastal and two drift stations, of which Dikson, Uyedineniya, Mostakh, and Cape Shmidta have 15-20 years of record. In all the stations, observations are made on direct, dispersed, total, reflected and effective radiation balance. The Soviet Arctic is considered in three sections: the Barents and Kara Seas area comprising the Western Arctic; Cape Chelyuskin to Alaska, the Eastern; and the Arctic Ocean area is the Central Arctic. Radiation features of each are briefly characterized and some data given on total, effective and other kinds of radiation. (DLC.)

70705. CHERNIGOVSKIĬ, N. TROFIMOVICH. Al'bedo poverkhnosti sushi i moria v Arktike. (*In:* Lietuvos TSR Mokslu Akademija. Aktinometrijos . . . 1962, p. 181-87, tables.) Text in Russian. Summary in Lithuanian and English. **Title tr.:** Albedo of the land and sea surfaces in the Arctic.

Reports tabulated results from observations at 14 stations during 1935-1957. The annual course of albedo and the amplitude of fluctuation are given for tundra, open sea, drift ice, rocks and ice sheets covering the islands. Dependence of the sea surface albedo upon cloudiness, solar altitude and water transparency is noted. Total reflected and absorbed radiation are calculated. Some 10% more is absorbed by the land than the sea surface; and three times as much by land than by glacier surface. (DLC.)

70706. CHERNIGOVSKIĬ, N. TROFIMOVICH. Nekotorye kharakteristiki radiatsionnogo klimata TSentral'noĭ Arktiki. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.229, Radiatsionnyĭ i teplovoĭ balans Arktiki, p.54-83, tables.) 6 refs. Text in Russian. **Title tr.:** Some characteristics of radiation climate of the Central Arctic.

Analyzes the results of actinometric observations by the drifting stations North Pole -2, -3, -4, -5, -6, and -7 from April 1950 to April 1957. The Soviet Arctic aquatoria was subdivided into three regions: one 75°-80°N., a second 80°-85°N., and the Pole area itself 85° - 90°N. The peculiarities of radiation climate of the eastern and the Pole areas of the Arctic Ocean are discussed. The most important formative factors were found to be the high value of total radiation during the spring - summer season (1.41 kcal/cm.² per min.); high reflectivity of the ice-pack surface (albedo of 78%); and low values of effective radiation. As average for a year, the radiation balance in the eastern zone was found to be 1.5 kcal/cm.², and 0.0 kcal/cm² in the Pole zone. (CaMAI.)

70707. CHERNIGOVSKIĬ, N. TROFIMOVICH. Osnovnye kharakteristiki radiatsionnogo klimata TSentral'noĭ Arktiki. (*In:* Lietuvos TSR Mokslu Akademija. Aktinometrijos . . . 1962, p.251-56, table, graph.) Text in Russian. Summary in Lithuanian and English. **Title tr.:** Main characteristics of the radiation climate in the Central Arctic.

Reports actinometric data from measurements by Soviet drifting stations during 1950-1957. Main characteristics of radiation climate are summarized. Annual course and values of total, reflected, absorbed, effective radiation and radiation balance in the Central Arctic is 0.5 Kcal./cm². (DLC.)

70708. CHERNIGOVSKIĬ, N. TROFIMOVICH. Radiatsionnye svoistva poverkhnosti ledianogo pokrova TSentral'noĭ Arktiki; tezisy. (Mezhvedomstvennoe soveshchanie po aktinometrii i atmosfernoĭ optike. 2d, *Leningrad,* 1959, *pub.* 1961. Aktinometriia i atmosfernaia optika, p. 81-82.) Text in Russian. **Title tr.:** Radiation properties of ice cover surface in the Central Arctic; précis.

Notes seasonal and daily changes in albedo of snow and ice; radiation through ice and snow.

Further studies are expected. No data are given. (DLC.)

CHERNIGOVSKIĬ, N. TROFIMOVICH, *see also* Leningrad. Arkticheskiĭ . . . institut. Radiatsionnyĭ i teplovoĭ balans . . . 1961. No. 73407

CHERNIKOV, OLEG ANATOL'EVICH, *see* Kolgina, L.P., & *others*. Litologiia . . . 1961. No. 72898

70709. CHERNOV, GEORGIĬ ALEKSANDROVICH. Bazal'ty rr. Beloĭ, Bol'shoĭ Svetloĭ i Kumushki-Volongi na severnom Timane. (*In:* Akademiia nauk SSSR. Komi filial. Geologicheskiĭ institut. Materialy . . . 1961, p.86-101, illus., profiles, maps.) 9 refs. Text in Russian. **Title tr.:** Basalts of the Belaya, Bol'shaya Svetlaya and Kumushka-Volonga Rivers in northern Timan.

Describes Devonian basalts; distribution sections, composition, texture and other properties. The flow of basaltic magma is treated in detail for each river and outcrop location in turn. Its age and phases and contacts with sedimentary rocks are described. (DLC.)

70710. CHERNOV, GEORGII ALEKSANDROVICH. Devonskie Hercynella Polĭarnogo Urala. (Paleontologicheskiĭ zhurnal, 1961, no.2, p.20-27, plates.) 10 refs. Text in Russian. **Title tr.:** Devonian *Hercynella* of the Polar Ural.

Describes a stratigraphic section of Devonian deposits in the Lek-Yelets River region, on the western slope of the Polar Ural. The fauna is noted, especially *Hercynella* molluscs, of which four new species are systematically described: *H. comiensis, H. parvula, H. plana,* and *H. uralica.* (DLC.)

70711. CHERNOV, GEORGIĬ ALEKSANDROVICH. Mif o Pytkovom kamne. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Sept.-Oct. 1962. t.94, vyp.5, p.435-42, illus., maps.) 34 refs. Text in Russian. **Title tr.:** The myth of the Pytkov Kamen' Mountains.

Reviews various hypotheses concerning the composition and origin of the Pytkov Kamen' area 68°30'N. 56°E. These hills used to be considered a ridge or horst consisting of crystalline or metamorphic schists. Later studies reveal that they are moraine hills, and that there are no outcrops nor crystalline, nor metamorphic schists, nor Paleozoic deposits. To prevent further misunderstanding author summarizes briefly the geologic structure and tectonic development of Bol'shezemel'skaya Tundra and adjacent areas of the Timan, the Ural and Pay-Khoy, and presents a new map of the region. The basement of Bol'shezemel'skaya Tundra consists not of Riphean metamorphic schists, but older, possibly crystalline rocks. Pytkov Kamen' mountains should be completely forgotten. (DLC.)

70712. CHERNOV, GEORGIĬ ALEKSANDROVICH. Nizhniĭ karbon Pechorskoi griady. (*In:* Akademiia nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.56-93, illus., maps incl. fold., cross-sections.) 48 refs. Text in Russian. **Title tr.:** Lower Carboniferous of the Pechora ridge.

Describes the stratigraphy and paleogeography of the Lower Carboniferous widely distributed in this area and up to 350 m. thick. It consists of carbonates and terrigenous deposits of marine origin, Due to a rich fauna of foraminifers, ostracods, corals, and brachiopods the deposits can be divided into the various horizons distinguished for the Russian platform. Tournaisian and Visean deposits are described in detail noting their lithology and facies. The paleogeography of the region in the Devonian period is analyzed. (DLC.)

70713. CHERNOV, GEORGIĬ ALEKSANDROVICH. Novye dannye o perspektivakh neftegazonosnosti Bol'shezemel'skoĭ tundry. (Akademiia nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp.2, Materialy po geologii Komi ASSR, p.64-72, illus., table.) 30 refs. Text in Russian. **Title tr.:** New data on oil-gas prospects in the Bol'shezemel'skaya Tundra.

Reports 1958 and 1959 investigations in the eastern part of the Tundra. Devonian deposits in the Ayach-yaga, Bol'shaya and Malaya Usa River basins were examined, their oil and gas properties analyzed. The several direct signs of bitumen, salt and gas sources raise prospects of obtaining productive oil. The Ayach-yaga Middle Devonian deposits are considered especially favorable. (DLC.)

70714. CHERNOV, GEORGIĬ ALEKSANDROVICH. Novye dannye po stratigrafii verkhnego devona v vostochnoĭ chasti Bol'shezemel'skoĭ tundry. (Akademiia nauk SSSR. Doklady, Jan. 1, 1961 t.136, no.1, p.183-86.) 6 refs. Text in Russian **Title tr.:** New data on the stratigraphy of Upper Devonian deposits in the eastern part of the Bol'shezemel'skaya Tundra.

Reports a detailed investigation in 1958-1959 in the Usa and Ayach-yaga (tributary to the Vorkuta) basins. The Frasnian stage of these deposits is rich in fuana: gastropod, coral, ostracod, brachiopod and others; the Famennian stage is poor, consisting of dolomites and limestones. Several horizons of Upper Devonian deposits are distinguished. (DLC.)

70715. CHERNOV, GEORGIĬ ALEKSANDROVICH. Stoianki v basseine r. Adz'vy, Bol'shezemel'skaia tundra. (*In:* Materialy po arkheologii Evropeiskogo Severo-Vostoka, 1962. vyp.1, p.65-102, illus., table, maps.) 10 refs. Text in Russian. **Title tr.:** Camp sites in the Adz'va River basin, Bol'shezemel'skaya Tundra.

Provides additional information on the finds of 1952 (cf. No. 39255). The quantity and variety of scrapers and their worn working edges suggest use also as wood-working tools. Arrow points, show great diversity in size and shape: leaf-shaped, lanceolate, lozenge-shaped, with straight, notched, and pointed stems. Small rhombic points are new for this area. Lamellar blades of high grade flint, or chalcedony, contrast with other implements of poor quality stone. Ornamented pottery sherds, two stone fish, a human figurine fragment, and other lithic objects are mentioned. Several tools of Karelian workmanship indicate cultural ties with the west. Complete absence of metal artifacts is noted. Comparison with other regional sites suggests habitation of the Adz'va basin from the late third-early second through the first millennium B.C. (DLC.)

70716. CHERNOV, I. M. Gidrometeorologicheskoe obsluzhivanie rechnogo flota na Enisee. (Rechnoĭ transport, Sept. 1961. god 20, no.9, p.39.) Text in Russian. **Title tr.:** Hydrometeorological services for the river fleet on the Yenisey.

Describes activities of the Krasnoyarsk Hydrometeorological Service Administration (author is the head of its hydrological forecasting section). The Service operates 92 stations on thirty streams of the Yenisey basin. Their data are used to compute long-term forecasts on river breakups, ice jams, etc., also to broadcast twice-daily bulletins on actual conditions as well as short-term forecasts. The Yenisey basin has a total of 8,350 km. navigable waterways; 2,927 km. with guaranteed depths. (DLC.)

70717. CHERNOV, IU. I., *and* **S. M. USPENSKIĬ.** Rol' nasekomykh v pitanii nekotorykh arkticheskikh ptiţ. (Moskovskoe obshchestvo ispytateleĭ prirody, otdel biologicheskiĭ. Biūlleten', 1962. t.67, vyp.4, p.26-31, tables.) Text in Russian. Summary in English. **Title tr.:** The role of insects in the diet of some arctic birds.

Reports an investigation based largely upon examination of stomach contents of over 260 birds, belonging to 15 species. Conditions in northwestern Yakutia, during June-Aug. 1959 were considered. Chironomid and tipulid larvae and imagos, comprised the main food. (DLC.)

70718. CHERNOV, V. M., *and* **M. M. STENAR'.** Zhelezorudnaīa formaţsiīa Karelii i ee sopostavlenie s analogichnymi formaţsiīami Baltiĭskogo i Ukrainskogo kristallicheskikh shchitov. (*In:* Akademiīa nauk SSSR. Karel'skiĭ filial. Problemy geologii . . . 1961, p.102-107, fold. table.) 16 refs. Text in Russian. **Title tr.:** The iron ore formation of Karelia and its correlation with analogous formations of the Baltic and Ukrainian crystalline shields.

Describes the composition and age of the iron ore formation in the Kostomukzhskoye (64°41′N. 30°52′E.), Gimol'skoye and Khedo Lake regions of Karelia. Its Lower Proterozoic age is established. Stratigraphic correlation is made with formations in Finland, Sweden, Norway, Kola Peninsula and the Ukraine. (DLC.)

70719. CHERNOVA, N. A. Differentsirovannaīa trappovaīa intruziīa g. Zub v Noril'skom raĭone. (Geologiīa i geofizika, 1961, no.5, p.65-72, table, map, plates.) 5 refs. Text in Russian. Summary in English. **Title tr.:** The differentiated trap intrusion of Mt. Zub in the Noril'sk region.

Describes the morphology and petrographic-petrochemical characteristics of this unique intrusion. It differs from others in having a quartz-norite with idiomorphic orthopyroxene type of rock, and in the wide distribution of hybrid rocks. The complicated structure, processes of crystallized differentiation, assimilation of the enclosing rocks, etc. are discussed. According to mineralogical composition and genesis, five horizons of this intrusion are distinguished and each is described. (DLC.)

70720. CHERNYSHENKO, I. Posil'nyĭ trud na blago rodine. (Sotsial'noe obespechenie, Aug. 1962. god 23, no.8, p.40.) Text in Russian. **Title tr.:** Work within one's forces is contributed for the common good.

Notes voluntary shop-work activities of the elderly and handicapped at the Home for Invalids in Magadan. Proceeds from sale of their products help maintain the Home and improve its facilities. (DLC.)

70721. CHERNYSHEVA, NINA EVGEN'EVNA, 1912– . Kembriĭskie trilobity semeĭstva Oryctocephalidae. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.127. Paleontologiīa i biostratigrafiīa, vyp.3, p.3-63, tables, plates.) 33 refs. Text in Russian. **Title tr.:** Cambrian trilobites of fam. Oryctocephalidae.

Presents a systematic description of 12 species distributed in the Olenek and Anabar River basins and other northern areas of the Siberian platform. To this family of seven genera and more than forty species, some new ones are added and described: *Oryctocephalus vicinus, O. limbatus, Tonkinella valida, Cheiruroides arcticus,* n. spp., etc. Correlation is made with Cambrian trilobites of North America and other regions. (DLC.)

70722. CHERNYSHEVA, NINA EVGEN'EVNA, 1912– . Stratigrafiīa kembriīa Aldanskoĭ anteklizy i paleontologicheskoe obosnovanie vydeleniīa Amginskogo īarusa. Leningrad, Gostoptekhizdat, 1961. 348 p. tables, plates, map, diagrs. (Leningrad. Vsesoīūznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy, nov. seriīa, t.49. Biostratigrafiīa paleozoīa Sibirskoĭ platformy.) 92 refs. Text in Russian. **Title tr.:** Cambrian stratigraphy of the Aldan anticline and paleontologic substantiation of the separation of the Amga stage.

Presents a detailed stratigraphic-paleontologic account of the Amga stage of Middle Cambrian deposits of the Amga basin and adjacent areas of southern Siberian platform. The stratigraphy is outlined from study of trilobites, in the first part of the monograph; the second, systematic part, describes 66 belonging to 33 genera, 17 families, and 9 superfamilies. Their geologic and geographic distribution and phylogeny are outlined. Some of the forms are new, identified by the author. (DLC.)

CHERSKIĬ, NIKOLAĬ VASIL'EVICH, *see* Vasil'ev, V. G., & *others.* Problema proiskhozhdeniīa almazov. 1961. No. 76345

70723. CHERVĬAKOV, V. I. Opyt postroĭki atomnogo ledokola "Lenin." (Sudostroenie, 1961. god 27, no.8, p.40-46, illus.) Text in Russian. **Title tr.:** Construction experience on the atomic icebreaker *Lenin.*

Describes new methods and technological innovations in the design; construction of hull and superstructure and launching of the *Lenin:* selection of construction materials, processing of stainless steel, welding, measures to prevent hull deformation, problems of hermetic sealing, machinery installation, especially the nuclear generators, etc. Testing of equipment on scale models, in dry dock, and under actual navigation conditions is outlined, as are the construction and operation of launching gear, etc. (DLC.)

CHESHIKHINA, K. G., *see* Tarkhova, M. A., & K. G. Cheshikhina. Melovye intruzii . . . Dzhugdzhur. 1961. No. 76086

70724. CHEVILLARD, LOUIS, *and others.* Variations somatiques et métaboliques chez le rat vivant à différentes températures. (Journal de physiologie, 1962. t.54, no.2, p.314-15.) 11 refs. Text in French. *Other authors:* M. Cadot, M. C. Guntz-Arnal, *and* R. Portet. **Title tr.:** Somatic and metabolic variations in the rat living at different temperatures.

Reports animals kept at 30, 20 and 5°C. since the age of about two months. Those kept in the cold showed an over-development of essential organs, especially the kidney, heart and lungs, while the liver, spleen, adrenals and thyroid differed less from the controls. Basal metabolism was lowered in animal acclimatized to elevated temperatures. (DNLM.)

CHICHAGOV, V. P., *see* Akademiia nauk SSSR. *Institut geografii.* Dal'nii Vostok . . . 1961. No. 69546

70725. CHIGIR, V. G. Formy rel'efa, obuslovlennye merzlotnymi protsessami, na ostrovakh Krasnoflotskikh, Severnaia Zemlia. (*In:* Moskva. Universitet. Geograficheskii fakul'tet. Voprosy geograficheskogo merzlotovedeniia . . . 1962, p.81-88, illus.) 4 refs. Text in Russian. **Title tr.:** Relief forms, conditioned by congelation processes, in the Krasnoflotskiye Islands, Severnaya Zemlya.

Reports on frost action and geographic observations generally made in 1957-1959. Position and structure of these small islands at approx. 78°40′N. 98°45′E., together about 10 km² in area, are described. Three surface levels: 7-10, 15-20, and 30 m. are distinguished. Frost weathering and solifluction processes are treated in some detail. Development of stone rings, stone stripes, stone polygons, stone streams, hummocks, polygonal tundra, and other structural forms of relief are analyzed. (DLC.)

70726. CHIKHOV, O. P. Predvaritel'nye nauchnye rezul'taty glatsiologicheskikh issledovanii na Novoi Zemle. (*In:* Akademiia nauk SSSR. Institut geografii . . . Materialy glatsiologicheskikh . . . 1961. vyp.3, p.15-19, illus.) 4 refs. Text in Russian. **Title tr.:** Preliminary scientific results of glaciological investigations on Novaya Zemlya.

Reports work of 1957-1959 at the two stations: Bar'yer Somneniy (76°07′N. 62°39′E.) and Ledorazdel'naya (75°52′N. 62°44′E.). Temperature, precipitation and other components of climate are reviewed and data given. The area of glacier feeding is 650-680 m. above sea level and consists of a firn layer 16-18 m. thick. Temperature of this firn-ice layer is reported. Movement and thawing of the glacier are characterized. (DLC.)

CHINARINA, ANTONINA DMITRIEVNA, 1930– , *see*

Mironova, N. V., & *others.* Raspredelenie . . . ryb 1957 g. 1962. No. 74052

Mironova, N. V., & *others.* Raspredelenie . . . ryb 1958 g. 1962. No. 74053

CHINDIN, V. V., *see* Bialobzheskii, G. V., & *others.* Osobennosti . . . dorog . . . 1962. No. 70196

CHIPPINDALE, N. K., *see* Dodimead, A. J., & *others.* Oceanographic data record . . . 1961. No. 71054

CHIRKOV, A. M., *see* Shteinberg, G.S., & *others.* Magnitnaia s"emka. . . 1962. No. 75608

CHIRKOV, N. P., *see* Kuz'min, A.I., & *others.* Nekotorye rezul'taty . . . kosmicheskikh luchei. 1962. No. 73251

70727. CHISLENKO, LEONID LEONIDOVICH, 1931– . Rol' Harpacticoida v biomasse mezobentosa nekotorykh biotopov fitali Belogo moria. (Zoologicheskii zhurnal, July 1961. t.40, vyp.7, p.983-96, illus., tables.) 16 refs. Text in Russian. Summary in English. **Title tr.:** The role of Harpacticoida in the biomass of the mesobenthos of some plant biotopes in the White Sea.

Discusses the term "mesobenthos" as including animals not over 2 mm. in size, and suggests further differentiation of the term. Inspection of seven algal species showed that the most important mesobenthal component living on them are harpacticoid crustaceans. Their biomass in the mesobenthos is compared to that of calanoids in the plankton. (DLC.)

70728. CHISTOTINOV, L. V. O vozmozhnosti primeneniia gamma-izlucheniia dlia nabliudenii za dinamikoi vlazhnosti pochv i gornykh porod. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Severo-Vostochnoe otdelenie. Teplo- i massoobmen . . . 1961, p. 85-90, tables, diagr.) 7 refs. Text in Russian. **Title tr.:** Possible use of a gamma-ray log for observation on moisture dynamics in soils and rocks.

Describes methods, equipment and techniques of experimental gamma-ray logging tests: the penetrating power of gamma rays is calculated and a formula derived for determining soil and rock moisture dynamics. In the Suntar-Khayata Range, field tests were made in 1959 to 60 cm. depth in the upper layer, where moisture fluctuated from 0 to 27%. Density of soils and moisture dynamics were determined. (DLC.)

70729. CHITWOOD, PHILIP E. 1960 Alaska commercial fisheries catch and production statistics. Juneau, 1961. 19 p. tables, graph. (Alaska. Dept. of Fish and Game. Statistical leaflet, no. 1.)

Presents data assembled from sales records and fishery operators' annual reports. Number of fishermen, boats, kinds of gear according to region: southeastern, central, western, are reported, as are quantity in lbs. and value of catch of fish and shellfish species by region and by type of gear. The salmon catch is tabulated in numbers of fish for each region, species, and gear, also for the 24 districts; average weights of salmon species in 1960, 1959, and 1958 are compared. Data on transporting, wholesaling, and manufacturing of fishery products are indicated by region, and the quantity and value given by species for fresh, frozen, cured, and canned fishery products and by-products. Cases of canned products are enumerated by species and region. (DI.)

70730. CHIZHOV, O. P. Glatsiologicheskie issledovaniia na Novoi Zemle. (Issledovaniia lednikov i lednikovykh raionov, 1961. vyp. 1, p. 99-108, tables, map.) 4 refs. Text in Russian. Summary in English. **Title tr.:** Glaciological investigations on Novaya Zemlya.

Reports studies by the Institute of Geography expedition, 1957-1959, on the northern island in the region of Russkaya Gavan', 74°45′ - 76°15′N. 62° - 63° 15′ E. Observations were made at two permanent stations as well as during field trips. Ice temperatures in two bore holes (15 and 30 m. deep) as tabulated show decreasing temperature with depth, indicating the presence of melt water at the 0° C. level; and this inference is supported by the high temperatures of the water in nearby lakes. All evidence points to receding glaciation

on Novaya Zemlya. The recession however, is limited to the lower zones; firn and firn ice continue to accumulate in the upper parts of the ice sheet. (CaMAI.)

70731. CHIZHOV, O.P., *and* V.S. KORĬAKIN. Recent changes in the regimen of the Novaya Zemlya ice sheet. (*In:* International Association of Scientific Hydrology. Pub. 58, Symposium of Obergurgl 1962, p. 187-93, graphs.) 19 refs. Summary in French.

Investigations by the Academy of Sciences' Institute of Geography expedition in 1957-1959 enable the annual accumulation and ablation on this ice sheet to be traced from 1896 to 1959. Results also show agreement between the mass budget for the past 25 yrs. and the deglaciation mapped in the 1930's and 1950's. Graphic comparison is made of summer mean temperature at Russkaya Gavan', mass budget of the Novaya Zemlya ice sheet, and of the Shokal'skiy Glacier, remains of snow on the accumulation area, and alimentation type ratio. Changes in accumulation and ablation are shown to have been accompanied by changes in the character of the nourishment of the ice sheet. (DGS.)

CHIZHOV, O.P., *see also*

Akademiĭa nauk SSSR. Materialy. . .aktinometricheskie nablīudeniĭa. 1961. No. 69549

Akademiĭa nauk SSSR. Materialy. . .dopolnitel'nye nablīudeniĭa. 1961. No. 69550

Akademiĭa nauk SSSR. Materialy . . . meteorologicheskie nablīudeniĭa. 1961. No. 69547

Akademiĭa nauk SSSR. Institut geografii. . . .Novaĭa Zemlĭa, snezhnyĭ pokrov. 1962. No. 69551

70732. CHIZHOVA, N.G. Nekotorye novye dannye o chetvertichnykh otlozheniĭakh Vostochnogo Paĭ-Khoĭa. (Leningrad. Vsesoīūznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy, nov. ser. 1961. t. 67, Materialy po geologii Urala, sbornik statei, p. 129-32.) 10 refs. Text in Russian. **Title tr.:** Some new data on the Quaternary deposits of Eastern Pay-Khoy.

Reports a field study in the Kara Bay and River region, describing and interpreting a geologic section of Quaternary deposits. Old marine deposits are identified by such molluscs as *Astarte borealis, Mya truncata,* arctic boreal types, and diatom analysis is also reported. Marine transgression and Quaternary history of the region is discussed. (DLC.)

70733. CHOCHIA, NIKOLAĬ GRIGOR'EVICH, *and others.* Muzhinskiĭ Ural i ego geologicheskoe stroenie. (Leningrad. Vsesoīūznyĭ neftīanoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp. 186. Geologicheskiĭ sbornik 6, p. 152-75, maps, profiles.) 4 refs. Text in Russian. *Other authors:* S.G. Galerkina, M.A. Droznes ĭŪ. F. Zakharov, I.P. Krokhin, I.L. Kuzin, *und* G.I. Lazukov. **Title tr.:** The Muzhi Ural and its geologic structure.

Reports a 1960 joint study of the area approx. 65° - 66° N. 64° - 65° E. Outcrops of Cretaceous bedrocks, linear-ridged forms of relief, and tectonic structure of the region are described. Stratigraphy of the Paleozoic basement and Quaternary deposits is outlined and a geologic map of the region included. Recent tectonic movements are identified and characterized. An unsolved problem remains: whether moraines of the Zyryanka glaciation were deposited. (DLC.)

CHOCHIA, NIKOLAĬ GRIGOR'EVICH, *see also* Kuzin I.L., & *others.* Osnovnye cherty paleogeografii . . . 1961. No. 73248

70734. CHOQUETTE, L.P.E., *and others.* Note on the occurrence of *Echinococcus multilocularis* Leuckart, 1863 in the arctic fox in Canada. (Canadian journal of zoology, Oct. 1962. v. 40, no. 6, p. 1167.) Ref. *Other authors:* A.H. MacPherson *and* J.G. Cousineau.

Reports this parasite from a fox taken on Banks Island; other records of the last two years are also noted. (DLC.)

70735. CHOWN, BRUCE, *and* M. LEWIS. The blood group and secretor genes of the Eskimo on Southampton Island. (Canada. National Museum. Bulletin no. 180, Anthropological ser. no. 57, Contributions to anthropology 1960, pt. 1 *pub.* 1962. p. 181-90, tables diagrs.)

Reports a study of over 200 inhabitants of Southampton Island (65° N. 85° W.). Of the two subpopulations, the Aivilik showed more admixture of Caucasoid blood than the Okomiut. The blood group gene frequencies of the "pure-blood" fractions of these populations differ only in Rh system. In this respect they also differ from other Eskimos. It is tentatively suggested that these differences indicate genetic drift. (DLC.)

CHOWN, BRUCE, *see also*

Lewis, M. & *others.* Blood groups . . . 1961. No. 73474

Lewis, M., & B. Chown. Glood groups Eskimo. 1961. No. 73473

Pacific Science Congress. 1961. No. 74619

70736. CHOWNING, ANN. Raven myths in northwestern North America and northeastern Asia. (Arctic anthropology, 1962. v. 1, p. 1-5.) 18 refs.

Condensed from a master's thesis based on literature through the 1940's. The origin and diffusion of these myths are discussed, as well as differences in the character, stature, human and divine traits of the Raven in his role of culture hero, trickster, and dupe. Raven myths are considered to have originated with interior Alaskan Athapaskans and reached Paleosiberians(Chukchis, Koryaks, Kamchadals) through the Western Eskimos before spreading to the Northwest coast Indians. (DSI.)

70737. CHRISTIANSEN, BENGT O. Beveren i Nord-Norge. (Ottar, Mar. 1960, no. 1 (23), p. 8-10, illus.) Text in Norwegian. **Title tr.:** The beaver in north Norway.

Notes imminent re-introduction of beaver into this area, where formerly, it was abundant, but had practically disappeared by mid-19th century, and from Troms about 1800. (DI.)

70738. CHRISTIANSEN, BENGT O. Dyreliv i

Nord-Norge. Tromsø, 1961, 31 p. (Ottar, June 1961, no. 2 (28).) 17 refs. Text in Norwegian. **Title tr.:** The fauna in north Noway.

Lists the most common mammals, birds, reptiles, amphibians and invertebrates, and gives a survey of the marine fauna. Fresh-water fish are reviewed in a separate chapter by Magnus Berg. A range extension of many species results from the rise in air and water temperatures during the last hundred years. (DI.)

70739. CHRISTIANSEN, HANS C., 1906- . Greenland, fascinating part of a greater Denmark. Copenhagen, Royal Greenland Trade Dept., 1961. 30 p. illus. Address before Raymond E. Miller's Public Relations Seminar at the Harvard Univ. Graduate School of Business Administration, Boston, Mass., Oct. 18, 1960.

Reviews the functions of the Royal Greenland Trade Co. (Kongelige Grønlandske handel) formed in 1774 as a Danish government agency with trade monopoly, its role in resource development, supply service, etc. The Royal Greenland Trade Dept., with the author as managing director, is its successor. The fishing industry is discussed as the basis of future economic development in Greenland. Private enterprise has been encouraged since 1950, to compete with the department, and now has 20% of the sales. The main problems of economic development are inefficiency of producers, high cost of imports, and unrealistic price control support in remote areas. (CaONA.)

70740. CHRISTIANSEN, HANS C., 1906- . Grønland og faellesmarkedet; Grønlandske problemer ved Danmarks eventuelle indtraeden i faellesmarkedet. (Grønland, Oct. 1962, nr. 10, p. 375-92.) Text in Danish. **Title tr.:** Greenland and the common market. Greenland problems connected with Denmark possibly joining the Common Market.

Discusses whether if Denmark should join this trade bloc, certain preferred-treatment conditions could be retained in Greenland as regards customs, tariffs, restriction of settlement and economic activity to Danish citizens, state subsidies, regulation of competition, and the special fund for counteracting world market fluctuations. (DLC.)

70741. CHRISTIANSEN, HANS C., 1906- . Grønlands butikker pa grønlandske haender? (Grønland, Sept. 1961, nr. 9, p. 351-57, illus.) Text in Danish. **Title tr.:** Greenland's stores in the Greenlanders' hands?

Contains text of radio broadcast describing plans for the Royal Greenland Trade Co. retail stores to pass gradually into private ownership. It could be done immediately at Nanortalik in South Greenland, and Qutdligssat on Disko. Suggestions for financing such projects are given. Private enterprise has 10-20% of the retail trade in Greenland and in Godthåb about 45%. (CaMAI.)

70742. CHRISTIANSEN, HANS C., 1906- . Grønlandske erhvervsproblemer i fortid, nutid og fremtid. (Atuagagdliutit: Grønlandsposten, Jan. 26 - Feb. 23, 1961. Ukiut 101-iat, nr. 3, p. 4-7; nr. 4, p. 6-7; nr. 5, p. 3-5, illus., port., tables.) Text in Danish and Eskimo. **Title tr.:** Greenland trade problems past, present and future.

Contains an historical survey of the activities of Royal Greenland Trade Co., which was set up in 1774, had the monopoly in Greenland between 1775 and 1950, and in the beginning handled trade with Iceland, the Faroe Islands, and Finnmark also. Repeated attempts to introduce private enterprise failed. Current problems, principles and conflicts between economic and political interests are discussed. (CaMAI.)

70743. CHRISTIANSEN, HANS C., 1906- . Den grønlandske konjunkturudligningsfond. (Grønland, Nov. 1961, nr. 11, p. 420-29, table.) Text in Danish. **Title tr.:** The Greenland fund for counteracting fluctuating market conditions.

Discusses the fund set up in 1952 to protect Greenland producers from effects of sudden drop in price on the export market. The fund is financed from the net export profit of the Greenland Trade Co., from tariffs paid by private authorized exporters and from interest on capital assets. Proposal to devote assets of the fund to investment in production is noted. The fund is considered to serve its purpose well however, and should be maintained. (CaMAI.)

70744. CHRISTIANSEN, HANS C., 1906- Mens taeppet går ned for det grønlandske pengevaesen. (Grønland, Dec. 1962, nr. 12, p. 441-56, illus., tables.) Text in Danish. **Title tr.:** As the curtain falls on the Greenland monetary system.

Reviews the system: currency was introduced in 1801-1802 at Godhavn and notes were issued for the entire west coast in 1804. The separate monetary system is evaluated; the pros and cons of its retention are discussed. The main objection to abrogation is the greater difficulty it involves in the control of dutiable imports to Greenland. (DLC.)

70745. CHRISTIANSSON, HANS. The Russian settlement at Russekeila and land rise in Vestspitsbergen. (Arctic, June 1961. v. 14, no. 2, p. 112-18, illus., maps.) 14 refs. Translated from Swedish, by W. Blake, Jr.

Discusses the possibilities of postglacial land emergence, from observations at Russekeila on Isfjorden during inter-Nordic archeological-ethnographical expeditions in 1955 and 1960. Evidence from a kitchen midden 15-17 m. from the sea and two meters above high-tide level, indicates that the land has not risen appreciably for over a hundred yrs. Similar evidence from Murchisonfjorden, presented by Blake, q.v., and the Amsterdamøya area in northwestern Vestspitsbergen (No. 39801) shows no land rise in those areas during the past 100-350 yrs. (DI.)

70746. CHRISTIE, ROBERT LORING, 1926- . Northeastern Ellesmere Island, District of Franklin. Ottawa, Queen's Printer, 1962. 15 p. table, fold. map. (Canada Geological Survey. Paper 62-10.) 8 refs.

Introductory remarks on accessibility, travel methods, topography, and earlier exploration are followed by summaries of general, structural, glacial, and economic geology, with map, scale 1 in: 8 mi., showing historical sites and geology: 20 rock types ranging from early Paleozoic gneisses and schists to unconsolidated deposits of Recent

age. Orogenic deformation probably took place in three different periods: the Paleozoic or earlier, post-Silurian to pre-Pennsylvanian; and late Cretaceous or early Cenozoic. Some folding has occurred; the Lake Hazen fault zone represents considerable movement. Besides the currently active icecaps and valley glaciers, more extensive former glaciation is evident. The coal seam at Watercourse valley is the only deposit being exploited at present. Amber nodules found on the east end of Lake Hazen are probably the source of amber beads discovered in ancient Eskimo dwellings in this region. (DI.)

70747. CHRISTOFFERSEN, TOR. Malmdannelsene i Sulitjelmafeltet. (Tidsskrift for kjemi, bergvesen og metallurgi, Dec. 1962. bd. 22, nr.10, p.237-38, diagr.) Text in Norwegian. Summary in English. **Title tr.:** Ore developments in the Sulitjelma region.

Evaluates several theories of the origin of these northern Norway pyrite deposits. The volcanic character of surrounding rocks is noted, and the gabbro considered a basic tuff. Origin of the ore is suggested to have been a syngenetic exhalative sedimentary of sulfide mud. Later mobilization and recrystallization has given the ore its hydrothermal feature. This hypothesis differs markedly from earlier theories, and tectonic, mineralogical and chemical mapping is urged for a more complete understanding. (DLC.)

70748. CHRISTOPHERSEN, ERLING. Nansen og Polhøgda. (Norsk geografisk tidsskrift, 1961. hft. 1-2, p.39-46, illus.) Text in Norwegian. **Title tr.:** Nansen and Polhøgda.

Discusses the house outside Oslo built and occupied by Nansen from 1900 till 1930. It was bought from his heirs and given to Det Norske Videnskaps-akademi which in 1947 transferred it to Det Norske Geografiske Selskab. A foundation, Det Norske Geografiske Selskabs Stiftelse Polhøgda, was formed, and the property repaired by 1958; a new foundation, Fridtjof Nansen-Stiftelsen på Polhøgda was set up, and Kristian Nissen made curator. The research programs on cartography, relationships between peoples, etc. are noted. (DLC.)

70749. CHRYSLER, K. M. A fresh look at the 49th State and how it's making out. (U.S. News and world report, Sept. 4, 1961. v.51, no.10, p.50-52, map, illus.)

Reports a four-week, 4,000 mile survey in summer 1961 of economic conditions in Alaska. The small population (226,000), high prices and wages, living conditions, and natural resources, oil and natural gas the most promising, are discussed. Unemployment is high, and federal government spending accounts for 40% of all income. Improved transportation and cheap power are needed to attract investment. (DLC.)

70750. CHUDAKOV, I. V kraĭu almazov. (Grazhdanskaĭa aviatsiĭa, Feb. 1961. god 18, no.2, p.26-27, illus.) Text in Russian. **Title tr.:** In the land of diamonds.

Describes the role of aviation in Yakutia diamond discoveries: daily scheduled and non-scheduled flights to and from the Amakinskaĭa Expedition base at Nyurba; airlift of personnel and supplies to advance parties by helicopter and plane; air-geophysical survey and mapping initiated in the Daldyn and Mirnyy area in 1955; help in locating the Udachnaya kimberlite pipe, etc. (DLC.)

70751. CHUDINOV, IÛ. V. O blokovom stroenii Polĭarnogo Urala. (Akademiĭa nauk SSSR. Doklady, Feb. 1, 1961. t.136, no.4, p.907-910, map.) 3 refs. Text in Russian. **Title tr.:** On block structure of the Polar Ural.

Presents a structural map of the area based on two years' field work and interpretation of airphotos, especially in the Sob', Bol'shaya Khadata and Shchuch'ya River basins. Typical tectonic features are the faults and crush zones. Faults of northeastern, northwestern and meridional directions are briefly characterized. Several independent blocks are identified. (DLC.)

70752. CHUGAEVA, M. N. Novyĭ ranneordovikskiĭ rod podsemeĭstva Hystricurinae iz basseĭna Kolymy. (Paleontologicheskiĭ zhurnal, 1962, no.3, p.61-64, plate.) 7 refs. Text in Russian. **Title tr.:** A new early Ordovician genus of subfam. Hystricurinae from the Kolyma basin.

Reports on a find from the El'genchak (63° 56′N. 150°49′E.) basin in Magadan Province. This new trilobit, *Omuliovia mira* n. gen., n. sp., belonging to fam. Solenopleuridae and subfam. Hystricurinae is described from material consisting of about 20 cranidia and five appendages. (DLC.)

70753. CHUGAEVA, M. N. O paleozoĭskikh otlozheniĭakh Verkhnego Polovinnogo kamnia, pravyĭ bereg Kolymy. (Akademiĭa nauk SSSR. Doklady, Mar. 11, 1961. t.137, no.2, p.400-402, diagr.) 7 refs. Text in Russian. **Title tr.:** On Paleozoic deposits of the Verkhniy Polovinnyy Kamen', right bank of the Kolyma.

Reports on stratigraphic investigations in the area 50-55 km. above Sredne-Kolymsk. Middle Ordovician and Devonian deposits are identified from the graptolites, brachiopods, tabulate and rugose corals. Cross-sections of Devonian are correlated with those of the Omulevka Mts. (DLC.)

70754. CHUGAEVA, M. N. Ordovikskie otlozheniĭa Selennĭakhskogo krĭazha. (Akademiĭa nauk SSSR. Doklady, Mar. 1, 1961. t.137, no.1, p.158-61, table.) 5 refs. Text in Russian. **Title tr.:** Ordovician deposits of the Selennyakhskiy Range.

Reports (from 1959 studies in this area 69° 10′N. 139°40′E.) on the Lower, Middle and Upper Ordovician deposits divided into various local formations. Cross-sections are described, the ostracod, nautiloid, trilobite and other fauna noted. These deposits are correlated with the Ordovician of the Siberian platform and the Omulevka Mts. (DLC.)

70755. CHUGUNOVA, R. V. K voprosu o klassifikatsii gareĭ. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. Nauchnye soobshcheniĭa, 1960. vyp.3, p.67-70.) 11 refs. Text in Russian. **Title tr.:** Classification of burned forest.

Proposes a classification of burned-over forests worked out for southwestern Yakutia. Five

groups are distinguished according to the degree of fire effect, and each is characterized. The rate at which the burned-over areas are covered with new growth is considered also, and four types of vegetation reproduction under such conditions, are recognized, and described. The speed and stages of regrowth are discussed. (DLC.)

70756. CHUGUNOVA, ZINAIDA EFIMOVNA. Osnovnye prichiny gibeli zelenykh nasazhdeniĭ v g. ĭAkutske i puti ikh ustraneniĭa. (Akademiĭa nauk SSSR. ĭAkutskiĭ filial. Doklady 1957. v.8, p.51-66, illus., tables.) 8 refs. Text in Russian. **Title tr.:** Basic causes of death among the foliage plantings in Yakutsk and means of their elimination.

Analyzes the adverse local factors, some of which like permafrost, low precipitation and, to some extent, poor soils, cannot be changed. Some others are amenable to improvement, e.g. low quality of stock, wrong planting periods, poor care, etc. and these are discussed, as the causes of failure in foliage plantings. (DLC.)

70757. CHUGUNOVA, ZINAIDA EFIMOVNA. Vyrashchivanie posadochnogo materiala dliă ozeleneniia g. ĭAkutska. (Akademiĭa nauk SSSR. ĭAkutskiĭ filial. Doklady, 1957. v.8, p.34-50, illus., tables.) 3 refs. Text in Russian. **Title tr.:** Raising planting materials for greenery in Yakutsk.

Describes arrangement of beds in the nurseries, periods of sowing and watering, preparation of roots and wildings, also of poplar cuttings. The physiology of nutrition, growth of trees and shrubs studied, osmotic pressure, and effect of soils, also are dealt with. Plants most successful for landscaping under conditions of Yakutsk are discussed. (DLC.)

CHUKANIN, KONSTANTIN IVANOVICH, *see*

Ragozin, A.I., & K.I. Chukanin. Napravleniia . . . ſsiklonov i antiſsiklonov . . . 1961. No. 75025

Ragozin, A.I., & K.I. Chukanin. Preobladaiu-shchie traektorii ſsiklonov . . . 1961. No. 75026

70758. CHUMACHENKO, N. Po sibirskim motivam. (Dekorativnoe iskusstvo SSSR, Mar. 1962, no.3, (52), p.20-23, illus. incl. col.) Text in Russian. **Title tr.:** Siberian patterns.

Describes efforts of Natalia V. Kasatkina, a painter in Krasnoyarsk, to introduce ornamental patterns traditional among northern peoples into the modern textile and leather goods manufactured locally. Examples are shown: woven rugs and wearing apparel, machine embroideries, appliqué work, etc. based on Dolgan, Samoyed and Evenki-Tungus bead work and fur "mosaics." (DLC.)

CHUMAKOV, N. M., *see* Zhuravleva, Z.A., & *others*. Stroenie i vozrast otlozheniĭ . . . 1961. No. 76685

70759. CHURCH, JAMES F. The climatology of migratory polar high and extratropical low centers over eastern Asia and the North Pacific. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Proceedings, *pub.* 1959. v.13, meteorology, p.19-46, charts, graph.) 6 refs.

Presents data on monthly mean speeds, pressures, and frequencies of migratory lows and highs along mean tracks in the area (80°E.-100°W.) north of 30°N. from 1946 through 1950. Lows varied seasonally about 40-50/month, and highs 25-35. Lows moved slightly faster than highs, and both moved fastest in March. (DI.)

CHURCH, RICHARD E., *see*

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

Péwé, T.L., & R.E. Church. Age spit Barrow. 1962. No. 74767

70760. CHURINOVA, M. P. Volny na tropopauze nad vysokimi shirotami za period Mezhdunarodnogo geofizicheskogo goda. (Leningrad. Glavnaia geofizicheskaia observatoriia. Trudy 1962. vyp.134, p.38-74, tables, graphs.) 21 refs. Text in Russian. **Title tr.:** Waves in the tropopause at high latitudes for the IGY period.

Reports on the fluctuation of the height of this transition layer between troposphere and stratosphere as shown by radiosondes of drifting station North Pole-7, the Dikson Island, Kheysa Island (Franz-Joseph Land) and Voyeykovo (near Leningrad) stations for July 1957-Dec. 1958. Average monthly height of the tropopause and air temperature at the tropopause level are calculated, data tabulated and evaluated. A relationship is noted between fluctuation of the tropopause and tropospheric waves of pressure and temperature. Forms of circulation and changes of cyclonic and anticyclonic fields are described. (DLC.)

CIER, J. F., *see* Hermann, H., & J.F. Cier. L'hémodynamique périphérique . . . 1955. No. 72127

CIRCLE, HOMER, *see* Alaskan Science Conference 1961. 1962. No. 69644

70761. CLAIRMONT, DONALD H. Notes on the drinking behaviour of the Eskimos and Indians in the Aklavik area. Ottawa, Sept. 1962. 13 p. tables. (Canada. Dept. of Northern Affairs and National Resources. Northern Co-ordination and Research Centre, 62-4.)

Summarizes a report, based on 1961 field work and prepared for the Northern Affairs' Committee investigating social adjustment problems. Aklavik has no local facility selling liquor or beer. The nearest source of supply is Inuvik and transport is costly: $40 by chartered aircraft. Drinking is prevalent however, and the pattern among men and among women is described. Arrests for intoxication are tabulated by age, sex, and ethnic origin: Indian, Eskimo, and mixed breeds of Indian-Eskimo, Eskimo-white, and Indian-white. The greater number of Eskimos charged with drunkenness is attributed to their easier access to alcohol than Indians and to their greater number in the 20-40 year age bracket. Most arrests are in the 20-24 year group, least in the 45 and over. Eskimos and white mingle more readily than Eskimos and Indians, or Indians and whites; and younger people more frequently than older. The community attitude toward drinking, the law-enforcement policy of the RCMP, and the relationship between crime and alcohol consumption are discussed. On the whole the behavior pattern of acculturated aborigines tends to blend with that of the Euro-Canadians of similar socio-economic background and age category. (DLC.)

70762. CLARK, GEORGE, 1905– . Heat dissipation functions following experimental anterior hypothalamic lesions in cats. *(In:* Symposia on arctic biology and medicine 1960. Proceedings, 1; neutral aspects of temperature regulation, pub. 1961, p.149-92, illus., tables.) 29 refs.

Reviews research on the dual center theory, which claims separate regions for nervous integration of heat dissipation, and for heat conservation. Work of the past two decades was not crucial enough to confirm this theory and a body of studies is incompatible with it. Author got "good evidence" for localization of heat maintenance activities but not for those of heat loss. Appended, p.178-89, is discussion of the paper. (CaMAI.)

70763. CLARK, GEORGE R., *and others.* International Fisheries Commissions. (Canada. Dept. of Fisheries. Trade news, Jan. 1961. v.13, no.7, p.8-11.)

Excerpts from speeches at the Fisheries Research Board meeting in Jan. 1961, reviewing Canadian participation in and the work of these commissions. The International Commission for the Northwest Atlantic Fisheries is dealt with by W.R. Martin and W. Templeman, and the International North Pacific Fisheries Commission by A.W.H. Needler. (DI.)

70764. CLARK, GEORGE R. North Pacific problems. (Canada. Dept. of Fisheries. Trade news, May 1962. v.14, no.11, p.3-5.)

Excerpts from the Deputy Minister of Fisheries' statement at a meeting of the Canadian Section, International North Pacific Fisheries Commission in Apr. 1962. The Canadian position on abstention provisions concerning salmon and other species in the INPF Convention is reiterated, also the position on Japanese and Soviet trawling in halibut areas south of the Aleutians. Soviet and Japanese replies are noted. (DI.)

CLARK, K. C., *see* Alaskan Science Conference 1961. 1962. No. 69644

70765. CLARK, R. E. The limiting hand skin temperature for unaffected manual performance in the cold. Natick, Mass., Feb. 1961. iv, 4 p. graph. (U.S. Army. Quartermaster Research and Engineering Center. Environmental Protection Research Division. Technical report EP-147.) 4 refs.

Reports the hands of 12 men cooled to 55° and 60°F. skin temperature, with performance times to complete a standard knotting task measured at selected intervals. When hand skin temperature fell to 55°F. performance was severely hindered, but at 60°F., was unaffected. Implications for the use of auxiliary heating devices are noted. (DWB.)

70766. CLARK, SAMUEL DELBERT. The social development of Canada, an introductory study with select documents. Toronto, Univ. of Toronto Press, 1942. 484 p.

Includes a chapter, p.308-379, on mining society in British Columbia and the Yukon. The development of social organization in the Yukon during the Klondike Gold Rush, 1898-1902, is reviewed. Welfare, crime, morality, culture, education, religion, etc. are depicted in some forty selections. Excerpts are reprinted in *North*, May-June 1962, v.9, no.3, p.1-10 (copy at CaMAI.) (DLC.)

70767. CLARKE, ARTHUR H., *Jr.* On the composition, zoogeography, origin and age of the deep-sea mollusk fauna. (Deep-sea research, July-Oct. 1962. v.9, p.291-306, graphs, tables.) 38 refs. Based in part on Ph.D. thesis to Harvard University, 1960.

Presents some conclusions from analysis of information on this fauna at 1000 fm. and deeper: its differences from typical shallow-water mollusc fauna in composition and feeding, the latter most striking among the bivalves. The abyssal and shallow-water bivalve faunas at Point Barrow, Alaska, have greater similarity than do those of New England or Puerto Rico. Off East Greenland, filter-feeding bivalves have declined to secondary importance in the 100-200 m. interval. Data from Kuril-Kamchatka Trench at 6000-9000 m. indicate that in favorable localities deep-sea plankton may constitute a more important food source for filter-feeding molluscs than previously realized. (DLC.)

CLARKE, G. M., *see* Kelly, G.F., & *others.* Racial comparison redfish . . . 1961. No. 72721

70768. CLARKE, K. H. J. The position of the Canadian non-ferrous mineral industry in the world economy. (Canadian Institute of Mining and Metallurgy, Transactions, 1961, v.64, p.490-505, graphs, tables.) Refs.

Traces the development of the Canadian copper, lead, zinc, and nickel industries in the 20th century, noting the Flin Flon discovery in 1915 and first production of zinc and copper in 1930; discovery of nickel-copper ore near Lynn Lake, Man. in 1947; the Thompson, Man. project; the copper-nickel mine at Rankin Inlet on the west side of Hudson Bay; the Pine Point lead-zinc ore deposit near Great Slave Lake, etc. In world production for 1959, Canada stood fifth in copper and lead, third in zinc, and first in nickel (61%). Intense competition at home and abroad necessitates reduction of costs, and relief from heavy taxes; technological advances, and price stability also are important factors in progress. (DI.)

70769. CLARKE, P. J. Preliminary report on Gras Lake area Saguenay County. Quebec, 1961. 10 p. fold. map. (Quebec. Dept. of Natural Resources. Geological Surveys Branch. Preliminary report no. 453.) 9 refs.

Maps at scale 1 in.: 1 mi. and describes the stratigraphic and structural geology of the area 52°15′-30′N. 67°00′-30′W., between Mt. Reed and Mt. Wright, northern Quebec, as investigated in 1960. The Precambrian rocks include biotite and hornblende paragneisses, granulitic gneisses, and migmatites, overlain by a metasedimentary group of marble, quartzite, and iron-bearing rocks, i.e. the Wabush Lake formation overlain, in turn, by gneisses and schists. The metasedimentary rocks and gneisses have been intruded by a basic, differential series of peridotite, gabbro, hornblende syenite and pegmatite, and a probably unrelated series of granite and pegmatite. Despite strong deformation of the rocks, regional trends are quite uniform. In the central, northern, and western parts of the area, broad north-northwest- and west-trending anticlines of the basement rock separate synclines and basins of the metasedimentary rock. The iron deposits are noted, one of them, at Fire Lake, held by the Quebec Cartier Co., containing possibly 200 million tons of ore. (DGS.)

CLARKE, R. S. J., *see* Provins, K.A., & R.S.J. Clarke. Cold & manual performance. 1960. No. 74975

70770. CLEMENT, MARY T. Effects of freezing, freeze-drying and storage in the freeze-dried and frozen state on viability of *Escherichia coli* cells. (Canadian journal of microbiology, Feb. 1961. v.7, no.1, p.99-106, illus., tables.) 17 refs.

These cells were resistant to freezing at -78° C. when suspended in H_2O, 7.5% glucose, 4.5% glycerol, milk or serum, but not when in saline. Survival after freezing and cold storage depended on the composition of the suspending medium and storage temperature. Glycerol provided the most consistent protection. (DLC.)

CLIBBON, PETER B., *see* Hamelin, L.E., & P.B. Clibbon. Vocabulaire périglaciaire . . . 1962. No. 71970

70771. CLINE, M. J., *and* **T. A. WALDMANN.** Effect of temperature on erythropoiesis and red-cell survival in the frog. (American journal of physiology, Sept. 1962. v.203, no.3, p.401-403, illus.) 11 refs.

Comparative study of animals kept at 24°-26° C. and at 4°C. Peripheral hematocrit decreased during the period of cold exposure. The life span of the erythrocytes was apparently longer in the cold, but could not be established, due to the inconsistency of the hematocrit and volume parameters. (DLC.)

CLOGSTON, J., *see* Skrettingland, K.R., & *others*. Evaluation . . . boots. 1961. No. 75721

CLOUD PHYSICS CONFERENCE, 2ND, WOODS HOLE, MASS., JUNE 1959, *see* Mason, B.J. Nucleation & growth ice crystals. 1960. No. 73861

CLOWES, G. H. A., *Jr., see*

Kameya, S., & *others*. A study of oxygen consumption . . . 1960. No. 72636

Neville, W.E., & *others*. Profound hypothermia . . . 1961. No. 74310

Oz, M., & *others*. Relationship of blood volume . . . 1960. No. 74596

70772. COACHMAN, LAWRENCE K., *and* **C. A. BARNES.** The contribution of Bering Sea water to the Arctic Ocean. (Arctic, Sept. 1961. v.14, no.3, p.147–61, maps, graphs, table.) 33 refs. *Also issued as:* Contribution no. 249 of the Dept. of Oceanography of the Univ. of Washington.

Summarizes the characteristics, especially temperature-salinity of these waters as they flow north through Bering Strait, and as they modify the surface water, deeper water, and ice cover of the western Arctic Ocean. Analysis of about 200 deep-water stations reveals regularity in the vertical distribution of temperature and salinity. The shallow 75–100 m. depth, temperature maximum observed in the western as distinct from the eastern Arctic Basin is maintained by advection from some external source, in part the flow through the Strait. Bering Sea water apparently flows north into Chukchi Sea, where it mixes with Siberian shelf water then joins the general circulation in the area northwest of Point Barrow. The intruding Bering Sea water separates deeper Atlantic water from Arctic Ocean surface water; this Bering water may be traced by the shallow temperature maximum; but it affects ice conditions in the Basin very little. (DGS.)

70773. COACHMAN, LAWRENCE K., *and* **C. A. BARNES.** Surface water in the Eurasian basin of the Arctic Ocean. (Arctic, Dec. 1962. v.15, no.4, p.251–77, maps, graphs, tables.) 35 refs. *Also issued as:* Contribution no.264 of the Dept. of Oceanography of the Univ. of Washington.

Reports results of re-appraisal and interpretation of data from 74 oceanographic stations (of >400 occupied), listed according to vessel and source. Surface water occupies the uppermost 200m. It is almost continuously supplied by continental runoff from Siberia which mixes with and collects saline water, to a few hundred times its original volume, as it crosses the arctic shelf seas. The surface water then flows directly to the exit from the basin between Spitsbergen and Greenland. Three layers of surface water are distinguished, on the basis of temperature and salinity features. Variations and ranges within each layer are thought the result of geographic location, presence of ice cover, seasonal changes, convection, and advection. Lowest layer, from 100 m. down to the Atlantic water, shows evidence of mixing with the subsurface layer, as well as evidence of continuous replenishment. Prevalence of the cold subsurface layer in this basin is explained by a proposed model, which recognizes the submarine canyons, notably the Svyataya Anna in the Kara Sea, as important factors in mixing and cooling and as primary sources of the subsurface water. (DLC.)

COACHMAN, LAURENCE K., *see also* Alaskan Science Conference 1960. 1961. No. 69643.

Nutt, D.C., & *others*. Dissolved nitrogen. . . 1961. No. 74445.

Scholander, P.F., & *others*. Radio-carbon & O^{18} . . .icebergs. 1962. No. 75421.

70774. COATS, ROBERT ROY, 1910– , *and others*. Geologic reconnaissance of Kiska Island, Aleutian Islands, Alaska. (*In:* U.S. Geological Survey. Bulletin, 1961. no. 1028–R, p.563–81, illus., table maps incl. col. fold. in pocket. Investigations of Alaskan volcanoes.) 19 refs. *Other authors:* W.H. Nelson, R.Q. Lewis, *and* H.A. Powers.

Presents results of reconnaissance mapping in 1947 and 1951, on this westernmost of the Rat Island group of the Aleutians. Two major elements constitute the geology: the Middle Tertiary Vega Bay formation, a mass of deformed submarine volcanic rocks, forms the southern half; the young, composite, and desitic volcano Kiska occupies the northern part. The volcano is underlain and flanked on the south by the Late Tertiary Kiska Harbor formation. The island was sculptured first by marine and fluvial erosion, only the southern part was later modified by glaciation. A thin coating of volcanic ash, most of it probably derived from nearby Little Sitkin or Segula volcanoes, forms a discontinuous cover. Map at scale 1:63,360 shows geologic features and submarine contours. (DGS.)

COATS, ROBERT ROY, 1910– , *see also* Pacific Science Congress. 1961. No. 74619

70775. COBB, EDWARD HUNTINGTON, 1916– , *and* **R. KOCHADOORIAN.** Index of metallic and nonmetallic mineral deposits of Alaska, compiled from published reports of federal and state agencies through 1959. Washington, D.C., U.S. Govt. Print. Office, 1961. v, 363 p. map fold. in pocket, diagr. (U.S. Geological Survey, Bulletin 1139.) Approx. 175 refs.

Contains references to data on mines, prospects, and reported occurrences of valuable or potentially valuable minerals exclusive of mineral fuels, fissionable materials, and bulk construction materials, such as sand and gravel. Arrangement is based on the U.S. Geological Survey 1:250,000 quadrangles, names of mines, etc. listed alphabetically under each quadrangle. Numerous cross references, also a binomial coordinate location system, are included. (DLC.)

COBLE, ROBERT KIYUSM 1928– , *see* Kingery, W.D. . . . Project Ice Way. 1962. No. 72796

70776. CODY, W. J. New plant records from the upper Mackenzie River valley, Mackenzie District, Northwest Territories. (Canadian field-naturalist, Apr.-June 1961. v.75, no.2, p.55-69.) 19 refs.

Reports a 1955 botanical survey in the vicinity of Fort Simpson, at the junction of Liard and Mackenzie Rivers, also upstream 150 mi. to the southeast and downstream 30 mi. Some 118 species are listed with field notes, including 78 new for the area. (CaOGB.)

70777. COHEN, RONALD. An anthropological survey of communities in the Mackenzie-Slave Lake region of Canada. Ottawa, June 1962. 119 p. tables, maps. (Canada. Dept. of Northern Affairs and National Resources. Northern Co-ordination and Research Centre, 62-3.) 13 refs.

Comparative study of social and economic conditions based on 1960 field work. The white and non-white population and settlement patterns, and the economy, social organization, and acculturation process of the Indians and mixed breeds are considered in five communities in turn: Forts Providence, Simpson, Norman, Good Hope, and McPherson. The socio-economic relations between whites and non-whites at the urban centers of Yellowknife (little contact), Hay River (highly segregated), and Aklavik-Inuvik (most integrated) are sketched. Fort-towns and urban centers have an ethnically mixed population both permanent and transient. Local settlements and camps, economically dependent on the trading centers, are composed of aborigines. Mining and lumbering are the major industries of the area, fur trade of lesser importance. Hunting and fishing are still vital to the aboriginal economy, but wage labor is preferred. Jobs are scarce, though vocational training increases employment opportunities. Welfare and relief payments form a large part of the aborigines' cash income. Less social distinction exists between Indians and metis than between both and the whites. Attitude of whites toward non-whites varies, though usually condescending and formal; contacts are minimal except for children who mix freely, and teachers involved in community projects. School attendance increases. Problems of vocational and leadership training are discussed. The socio-economic factors, especially the expansion of urbanism, affecting acculturation are analyzed. Statistical data and town plans of these settlements are included. (CaMAI.)

70778. COLE, ALLEN E. Suggestion of a second isopycnic level at 80 to 90 kilometers over Churchill, Canada. (Journal of geophysical research, Sept. 1961. v.66, no.9, p.2773-78, graphs.) 16 refs.

Examines the distribution of atmospheric density over Ft. Churchill on the basis of observations with rocket-borne instrumentation (falling spheres, grenades, pressure gages, etc.). A reduction in seasonal and interdiurnal variability at 80-90 km. strongly suggests presence of a second isopycnic level in this region. Daily and seasonal density profiles appear to converge and cross at this altitude.—From author's abstract. (DLC.)

COLE, JOHN D., *see Military engineer.* Polar engineering . . . 1961. No. 74020

70779. COLE, K. D. Interaction of trapped radiation and the DS current system. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.1, p.296-300, graphs, table, map.) 18 refs.

Suggests that the swollen atmosphere above electric currents in the ionosphere creates (by atmospheric scattering) a reservoir of geomagnetically trapped particles with lower than usual mirror points. Mirror points may be further lowered by kinking of F_m=constant surfaces produced by electric currents and hydromagnetic waves. Geomagnetically trapped particles may also be precipitated into the atmosphere by collision with the (Doppler shifted) hydromagnetic waves. Auroral luminosity may be created thereby and also by King and Roach's mechanism in conjunction with joule heating by ionospheric electric current. Some auroral statistics are qualitatively explained using an average DS current system.—Author's abstract. (DLC.)

COLE, W. H., *see* Griffiths, J.D., *& others.* The influence of thermal stress . . . 1961. No. 71851

COLEMAN, ELIZABETH M., *see* Barnett, S.A., *& others.* Mortality growth . . . 1960. No. 70036

70780. COLLIN, ARTHUR EDWIN, 1929– . Oceanography in the Canadian Arctic. (Canadian geographer, winter 1962. v.6, no.3-4, p.120-28, maps, graphs.) 13 refs.

Reviews investigations, etc. since 1951, noting advances in knowledge of bathymetry, circulation, sea ice, and water-mass characteristics. Distribution of oceanographic stations of surface currents, and September ice conditions are mapped; representative T-S conditions are graphed. The Canadian Arctic Islands may be considered an obstruction separating the waters of the Arctic Ocean and Baffin Bay below a limiting depth of about 250 m. in Barrow Strait, Queens Channel and Smith Sound. Total eastward transfer of water through the archipelago is estimated at about 40,000 cu. km. per year. (DGS.)

COLLIN, ARTHUR EDWIN, 1929– , *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

70781. COLLINDER, BJÖRN, 1894– . Proto-Lappish and Samoyed. (Uppsala. Universitet. Årsskrift, 1954, no.10, Språkvetenskapliga sällskapets i Uppsala. Förhandlingar, Jan. 1952 - Dec. 1954, p.93-118.) 29 refs.

Comparative study of the morphological structure, etymology, and vocabulary of Lappish to determine its position within the Finno-Ugric

family. Lappish is considered an independent descendant of the Uralic mother-tongue. Morphological affinities with Balto-Fennic and Samoyed are attributed to the phonetic-prosodic conservatism of these languages. The persistence of about 50 Uralic words now common only to Samoyed and Lappish is attributed to their subarctic isolation, not to a Samoyed substratum in Lappish. No evidence is found that Lapps exchanged their primordial vernacular for a Finno-Ugric idiom. (CtY.)

COLLINGE, HARRY K., *see* National Northern Development Conference. 1961. No. 74224

70782. COLLINS, C., *and others*. High-frequency radio-wave black-outs at medium and high latitudes during a solar cycle. (Canadian journal of physics, Jan. 1961, v.39, no.1, p.35-52, tables, diagrs.) 26 refs. *Others authors:* D.H. Jelly *and* A.G. Matthews.

Compares VHF riometer and HF ionosonde data from ten Canadian stations. The occurrence patterns of ionosonde blackouts show two distinct types of absorption events: polar-cap and auroral. Analysis of all blackouts observed during 1949-1959 show markedly different variations of the two types of events during the 11-year solar cycle. Other temporal and spatial features of the phenomena are discussed also. (DLC.)

70783. COLLINS, C., *and* **D. H. JELLY.** Ionospheric disturbance at the time of cosmic ray increases. (Nature, *London,* Jan. 14, 1961. v.189, no.4759, p.128-29, graphs.) 6 refs.

Discusses inconclusively the relationship of f_{min}. anomalies observed at Resolute, Baker Lake, and Ottawa, Jan. 20-23, 1957, to solar flares and cosmic ray increases. (DLC.)

COLLINS, C., *see also* Jelly, D.H., *& others*. Polar cap & auroral absorption. 1962. No. 72535

70784. COLLINS, FLORENCE RUCKER, *and* **M. C. BREWER.** Core tests and test wells, Barrow area, Alaska. Washington, D.C. U.S. Govt. Print. Office, 1961. p.569-644, tables, maps, 5 fold. graphs in pocket. (U.S. Geological Survey. Professional paper 305-K, Exploration of Naval Petroleum Reserve no.4 and adjacent areas, Northern Alaska, 1944-53; part 5, subsurface geology and engineering data.) 6 refs.

Presents detailed geologic and engineering data obtained by drilling ten test holes. Five were relatively shallow core tests, drilled for stratigraphic information; five were test wells 2,505 to 4,020 ft. deep, two of which produced a flow of gas sufficient to heat the Navy's base camp near Point Barrow. One or more of the holes penetrated the Gubik formation (Pleistocene), Cretaceous shale, Jurassic siltstone, sandstone and shale, Triassics oolites, limestone and siltstone, and pre-Mesozoic rocks. The gas came mainly from the Jurassic beds. Structure is complex, with steep dips in both Mesozoic and pre-Mesozoic beds. Temperature-measurement studies were made in two test wells by M.C. Brewer. Anomalous results observed in one are traceable to proximity of the ocean and a brackish lagoon. The other supplied gas to the Navy base camp until the well was destroyed by fire in Mar. 1950. Graphic logs of the ten holes, also a graph of relative abundance of heavy minerals in six holes are included. (DLC.)

70785. COLLINS, HENRY BASCOM, 1899–
Eskimo cultures. (Encyclopedia of World Art, New York, McGraw-Hill Book Co., v.5, 1961, col. 1-28, illus. incl. 12 plates, map.) Approx. 85 refs.

Stylistic analysis of Eskimo art from prehistoric to modern times in North Alaska, Canada and Greenland. Its manifestations inherent in each culture stage are discussed, the Old Bering Sea styles 1-3, Punuk, Ipiutak, Dorset, etc. treated in turn; implements, radiocarbon datings, ornament types, evolution of decorative patterns, carving techniques, tattooing are discussed as well as present-day art. Parallel developments in south and southwest Alaska (including Aleut art), St. Lawrence and the Diomede Islands, and eastern Siberia are sketched; the close affinities of Ipiutak sculptural art with the bronze and iron age Eurasiatic animal style are noted. The so-called winged objects typical for the Old Bering Sea culture are discussed. Dorset multiple-head carvings with European features in West Greenland and eastern Canada are considered portrayals of Norse settlers of southwest Greenland in the 10th century A.D. Numerous and excellent illus. (DLC.)

COLLINS, S. C., *see* Jacob, S.W., *& others*. Experimental . . . cryobiology. 1961. No. 72506

70786. COLYAR, A. B. Conference on medicine and public health in the Arctic and Antarctic, November 1962. (Alaska medicine, Dec. 1962. v.4, no.4, p.83-84.)

Notes the initiator (the World Health Organization) of this Conference at Geneva, Aug. 28-Sept. 1962, participating countries; uniqueness and unity of the Arctic and Antarctic; recent changes in the former, and corresponding medical needs. The 33 papers presented are listed.* (CaMAI.)

70787. COMBS, ANDREW C. Techniques and results of infrared surface-temperature measurements in New Jersey and Greenland. Fort Monmouth, N.J., Apr. 1961. 24 p. illus., diagrs., graphs, tables. (U.S. Army Signal Research and Development Laboratory. Technical report 2193.)

Discusses the meteorological significance of this method and describes with illus. the Barnes R-4D1 industrial radiometer. Laboratory and flight tests were made, including four helicopter flights near Tuto, North Greenland, in Aug. 1960. Results under these operating conditions indicate approx. ±2°C. accuracy in determining absolute temperature of terrain surfaces. Relative temperature differences are believed to be more significant than absolute values of target temperatures, because of noise and several variables. (DWB.)

70788. ***COMMERCIAL FISHERIES REVIEW.*** Alaska fisheries exploration and gear research. (Commercial fisheries review, July 1962. v.24, no.7, p.10.)

* Conference documents in approx. 500 pages are to be abstracted in vol.13 of the Arctic Bibliography. A set of the documents is in CaONA. Nine of the papers are pub. in WHO public health papers no.18, 1963.

Outlines plans for exploratory bottom fishing to last July-Nov. 1962: six cruises to study commercial potentialities of bottom fish and shellfish and relevant scientific problems; the third year of the Bureau's Alaska Exploratory Fishing and Gear Research Base. (DLC.)

70789. *COMMERCIAL FISHERIES REVIEW.* Alaska fisheries investigations. (Commercial fisheries review, July, Aug. 1962. v.24, no.7, p.10-12; no.8, p.9-10, illus.)

Notes on salmon fry migrations; king-crab catches and research; salmon studies at Little Port Walter; fisheries studies of SCUBA-divers; indexing of migrant salmon in Auk Creek and Bay; herring spawning, etc. (DLC.)

70790. *COMMERCIAL FISHERIES REVIEW.* Trends and developments: Alaska, new biological laboratory at Auke Bay. (Commercial fisheries review. U.S. Fish and Wildlife Service, June 1961. v.23, no.6, p.14, illus.)

Describes the location near Juneau; studies and scope of field work planned, which includes both salt and fresh-water species: herring, king crab, salmon; and problems. (DI.)

70791. *COMMERCIAL FISHERIES REVIEW.* Trends and developments: fur seals, Pribilof 1961 harvest. (Commercial fisheries review. U.S. Fish and Wildlife Service, Nov. 1961. v.23, no.11, p.18-19, illus.)

Reports gross receipts for the U.S. Government, reinstatement of harvesting female seals (stopped in 1911), effects of overpopulation, segregation of "bachelors", vital statistics, early conditions on these islands. (DI.)

70792. *COMMERCIAL FISHERIES REVIEW.* Trends and developments: fur seals, prices for Alaska seals skins drop at spring 1961 auction. (Commercial fisheries review. U.S. Fish and Wildlife Service, July 1961. v.23, no.7, p.18.)

Data on number of pelts and prices realized at the auction sale in St. Louis, Mo. Prices on sheared or "Lakoda" skins, recently introduced on the market, are included. (DI.)

70793. *COMMERCIAL FISHERIES REVIEW.* Trends and developments: Greenland, fishing industry 1960. (Commercial fisheries review. U.S. Fish and Wildlife Service, Jan. 1961. v.23, no.1, p.66.)

Contains data on shipments to Denmark and other countries; frozen fillet production; cod catches and sales; shrimp canning; etc. Conditions of local fishermen, foreign competition and a 12-mile coastal fishing limit are also noted. (DI.)

70794. *COMMERCIAL FISHERIES REVIEW.* Trends and developments: salmon, outlook for Bristol Bay red salmon run in 1962 is poor. (Commercial fisheries review. U.S. Fish and Wildlife Service, Jan. 1962. v.24, no.1, p.27.)

Study by three different agencies indicates a run of 6-12 millions, against 37 millions in 1960 and 18 millions in 1961. Anticipated runs are noted according to districts, also causes of low run. (DI.)

70795. *COMMERCIAL FISHERIES REVIEW.* Trends and developments: sealing, hunting by Canadians, Norwegians, and Russians in Northeast Atlantic. (Commercial fisheries review. U.S. Fish and Wildlife Service, June 1961. v.23, no.6, p.51, illus.)

Notes on the past and decline of Newfoundland sealing; Soviet sealing off the coast of Newfoundland in 1961; their methods; activities of Norwegian hunters. (DI.)

70796. COMPTON, F M. The transitional community. (*In:* Canada. Dept. of Northern Affairs and National Resources. Northern welfare . . . 1962. p.17-20.)

Sketches characteristic features of a community with a heterogeneous Eskimo-Indian-White population and an economy based chiefly on wage employment and welfare payments. The most pressing problems for social workers are to relieve intra-group and cross-cultural tensions, eliminate residual forms of parochialism hampering communal integration, foster local civic responsibility for economic and social programs, organize recreational and community projects, etc. The variety of needs and the broad scope for professional work are described to attract social workers to the North. (CaMAI.)

70797. COMSTOCK, GEORGE W., *and* **R. N. PHILIP.** Decline of the tuberculosis epidemic in Alaska. (U.S. Public Health Service. Public health reports, Jan. 1961. v.76, no.1, p.19-24, illus., tables, map.) 13 refs.

Reports on three tuberculin surveys done between 1949 and 1960 among the Eskimos of the Yukon-Kuskokwim delta. Infection rates were estimated from test results among children aged less than three years. They dropped from 24.6% at the beginning to 1.1% at the end of the period. Results of the improvement are discussed. (DLC.)

70798. COMSTOCK, GEORGE W. Histoplasmin sensitivity in Alaskan natives. (American review of tuberculosis and pulmonary diseases, Apr. 1959. v.79, no.4, p.542, table.) 5 refs.

Reports on 509 testings conducted among Eskimos and 15 Indians of the Yukon delta. Three persons had reactions of five or more mm. of induration. No specific histoplasmin sensitivity is believed to exist in this population. (DNLM.)

70799. COMSTOCK, GEORGE W., *and* **M. E. PORTER.** Tuberculin sensitivity and tuberculosis among natives of the lower Yukon. (U.S. Public Health Service. Public health reports, July 1959. v.74, no.7, p.621-34, illus., tables, map.) 25 refs.

Reports on tests given in 1957 to 2,211 natives in 19 villages, using as antigen 5 T.U. of PPD-S. Little non-specific tuberculin sensitivity was detectable. Prevalence of positive reactions were found to increase with age, reaching 96% in the 15-19 yr. age group. This represents a yearly infection rate of 15%; but it appears to have been even higher 20 years ago. Comparison with two other areas in the United States is also presented. (DNLM.)

COMSTOCK, GEORGE W., *see also*

Philip, R.N., & *others*. Serologic and skin test . . . tularemia . . . 1962. No. 74775

Porter, M.E., & G.W. Comstock. Ambulatory

chemotherapy. . . 1962. No. 74913

70800. COMTOIS, PAUL. Participation du Canada à l'étude du manteau terrestre. (Revue canadienne de géographie, 1961. v.15, nos.1-4, p.60-63.) Text in French. **Title tr.:** Participation of Canada in the study of the terrestrial mantle.

Notes geological and geophysical investigations, some in northern Canada, as part of this International Union of Geodesy and Geophysics project: studies of the geology and paleomagnetism of the Precambrian Shield; observations of chemical changes to 10,000 ft. in the stratified ultrabasic Muskox intrusion in the Coppermine region of Mackenzie District; seismic observations at northern stations, also, with aid of explosives, on the Polar Continental Shelf. A circular depression, possibly of meteoritic origin, in Hudson Bay is to be examined. (DGS.)

70801. CONANT, MELVIN. Canada's role in western defense. (Foreign affairs, Apr. 1962. v.40, no.3, p.431-42.)

Discusses the function of Canada in protecting from Soviet attack the strategic forces of the West, largely the U.S. nuclear air force. Resultant political and economic strains on the Canadian government and people are examined. The importance of the geographic position of Canada across the polar routes between the USSR and U.S. is briefly discussed, as are the Canadian contributions to defense arrangements in the alert (the early warning lines) and the missile and aircraft interception. (DI.)

70802. CONANT, MELVIN. The long polar watch; Canada and the defense of North America. New York, Published for the Council on Foreign Relations by Harper, 1962. 204 p. map, footnote refs.

Discusses arrangements and policies for North American defense since World War II and their effects on Canadian national policy and on U.S.-Canadian relations. The role and strategic importance of the Canadian Arctic are reviewed in the light of changing technology and requirements since 1946. Defenses erected in the 1950's against manned bombers, are no longer adequate against long-range missiles and possible future space weapons. Especially dangerous are the nuclear-powered, missile-launching submarines, also the air-to-surface nuclear missiles; and anti-missile stations in northern Canada, Alaska, and Greenland are required by 1965-1967. Canadian anti-submarine patrols, expanded studies of oceanography, meteorology, ice conditions, etc. in northern waters would be valuable. (DLC.)

70803. CONDON, WILLIAM HENRY, 1921– . Geology of the Craig quadrangle, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1961. p.B1-B43, maps incl. col. fold. in pocket. (U.S. Geological Survey. Bulletin 1108-B.) 33 refs.

Summarizes data on this 7,000 sq. mi. area 55°-56°N. 132°-134°30′W., within the Tongass National Forest, in Southeast Alaska. Sedimentary, volcanic, and metamorphic rocks of Paleozoic and Mesozoic age are exposed as complexly folded and faulted sequences. Scattered Tertiary volcanic rocks occur in two regions. Thin glacial deposits and narrow bands of alluvium comprise the Quaternary. Well-defined major lineaments strike northward to northwestward. Faulting in the Paleozoic, through the Mesozoic, and at present is noted. Metallic mineral deposits, copper, copper-iron, gold, etc. are explored mainly near Hetta Inlet, approx. 55°15′N. 132°40′W., and Kasaan Peninsula. Col. map at scale 1:250,000 shows geology, and location of 106 mineral deposits. (DGS.)

CONKLE, CHARLES Y., *see* Alaskan Science Conference 1961. 1962. No. 69644

70804. CONNAUGHTON, PETER J., *and* F. J. LEWIS. Hypothermia below 25°C. for one day in the rat. (Journal of applied physiology, Jan. 1962. v.17, no.1, p.107-109, illus.) 7 refs.

Reports on two groups of rats submitted to hypothermia, one of them in a poorly ventilated lucite cylinder. The latter showed a significantly increased rate of survival. Hematocrit, respiratory and heart rate are noted. (DNLM.)

70805. CONNAUGHTON, PETER J., *and others*. Prolonged hypothermia below 25°C. for periods over 20 hours: influence of therapy and technique on survival. (Surgery, Aug. 1961. v. 50, no. 2, p. 372-81, illus., table.) 27 refs. *Other authors:* G. Holt *and* F. J. Lewis.

Reports study, including physiologic changes of some hundred dogs: 5% CO_2 in oxygen, splenectomy, saline, partial exsanguination, chlorpromazine, heparin or Dibenzylene did not significantly increase survival. Cortisone or Vasoxyl produced uniform mortality. Reserpine produced good results which were due, however, to changed technique. (DLC.)

70806. CONNAUGHTON, PETER J., *and* F. J. LEWIS. Use of glycerol and chloroform in heart preservation by freezing. (Surgical forum, 1961. v.12, p.177-79.) 4 refs.

Reports studies on isolated rabbit hearts perfused with Ringer glycerol or Ringer chloroform and cooled or frozen. Certain limitation of glycerol became apparent and it did not prevent consistently freezing injury. Chloroform behaved similarly, but one heart frozen to -20°C. for 30 min. recovered normally. (DNLM.)

70807. CONNE, G., *and others*. L'hypothermie et son contrôle biochimique. (Praxis, Apr. 27, 1961. Jahrg. 50, no. 17, p. 431-35, illus., table.) Text in French. *Other authors:* C. Raymond and M. Rebagliati. **Title tr.:** Hypothermia and its biochemical control.

Reviews the effects of hypothermia in O_2-consumption of tissues, biological effects of cold: reduction of metabolism, of thermoregulation, muscular and cardiac activity, etc. Surgical utilization of hypothermia, lethal temperature, and rewarming are dealt with. Techniques of experimental hypothermia and ventricular fibrillation are considered, as well as some biochemical aspects of hypothermia: acid-base equilibrium, pH, oxyhemoglobin saturation, etc. (DNLM.)

70808. CONNELL, FREDERICK MARTIN, 1884–

A plea for taxation relief to encourage exploration in northern Canada. (Western miner and oil review, Oct. 1961. v.34, no.10, p.52.) Paper

presented at the National Northern Development Conference, Edmonton, Sept. 1961.

Discusses this need and presents text of a brief submitted to the Dept. of Resources and Development in Nov. 1952 and the Royal Commission on Canada's Economic Prospects in Jan. 1956. It proposes a tax exemption period of at least ten years for mines north of 57°N. This would attract long-term risk capital for exploration and development, also enable initial profits to be used for facilities for the new mining communities. (DGS.)

70809. CONSOLIDATED DISCOVERY YELLOWKNIFE MINES LTD. Annual report, 15th, 1961. Toronto, Consolidated Discovery Yellowknife Mines Ltd., 1961. 18 p. map.

Contains statements of operations and earned surplus, balance sheet, consulting engineer's and mine manager's reports. Interests in other mine properties are summarized. Tonnage and grade of ore are declining at the company mines 50 mi. northeast of Yellowknife in Mackenzie District. From 1950-1961, 701,695 ounces of gold were produced at a net profit of over $6,000,000. (CaONA.)

CONSTANT, M. A., *see* Pollack, I.P., & *others*. Effect of hypothermia . . . 1 . . . 1960. No. 74860

COOK, ANNE B., *see* Alaskan Science Conference 1961. 1962. No. 69644

COOK, DONALD J., *see* Thomas, B.I. & *others*. Placer mining Alaska, methods costs. 1959. No. 76114

70810. COOK, FRANK A., *and* **V. G. RAICHE.** Freeze-thaw cycles at Resolute, N.W.T. (Geographical bulletin, Nov. 1962. no.18, p.64-78, graph, tables.) 18 refs.

Presents 1960 soil-temperature data from two sites near the ionosphere station, based on continuous Speedomax records from five levels: air, ground surface, and at depths of 2.5, 10, and 20 cm. Most such cycles were recorded on the ground: only 23 in the range 28°-32°F., 18 in 28°-34°F., and 7 in 25°-35°F. At 2.5 cm. depth and below, only the annual cycle was recorded. Short-term and small-amplitude crossings of the freezing line were numerous: 194 in the air, and 170 on the ground during the summer. Most actual cycles occurred in May and June. Their significance is difficult to determine and their parameters to define. Effectiveness of fluctuations across the freezing line depends in part on thermal conductivity and water content of the soil and on the speed and duration of temperature changes. The importance and vigor of this process in arctic regions apparently are overrated. (DGS.)

70811. COOK, FRANK A. Hourly air and near-surface soil temperatures at Resolute, N.W.T. (Arctic, Dec. 1961. v.14, no.4, p.237-41, tables, graphs.) 5 refs.

Analyzes data collected at this station (74°43′N. 95°59′W.) Oct. 1959-Sept. 1960. Mean hourly temperatures at two sites were recorded at five levels: about the ground surface, at the surface, and in the active layer of permafrost at depths of 2.5, 10.0, and 20.0 cm. Temperatures fluctuate more at the ground surface than above or below. Standard deviations are higher in winter when the diurnal variation, interrupted by the continuous darkness, is replaced by random variations. Deviations are highest in Nov.-Dec. when rapid cooling follows the disappearance of the sun, and in April when rapid warming follows its return and the re-establishment of the diurnal variation. Hourly soil temperatures in percentages of frequency for Jan. and July are graphed; and monthly and yearly means of hourly temperature, with standard deviations and degrees of skewness are tabulated. (DGS.)

70812. COOK, FRANK A. The periglacial bulletin, *Biuletyn peryglacjalny*. (Canadian geographer, Autumn 1961. v.5, no.3, p.36-37.)

Reviews the general format, significant contributions (only four from North America), and multilingual character of this important Polish journal, pub. since 1954 and edited by J. Dylik, at Łódź. (DGS.)

70813. COOK, FRANK A. Periglacial phenomena in Canada. (*In:* International Symposium on Arctic Geology, Proceedings 1961. v.2, p.768-80, table.) 100 refs.

Surveys the literature on this phase of geomorphology dealing with Canada. Attention is given to permafrost, patterned ground, pingos, etc., as active phenomena commonly found or important in this area. (DGS.)

70814. COOK, FRANK A., *and* **V. G. RAICHE.** Simple transverse nivation hollows at Resolute, N.W.T. (Geographical bulletin, Nov. 1962. no.18, p.79-85, illus., diagr., table.) 10 refs.

Describes, with quantitative data on angles and dimensions, eight hollows on the north-facing slope of Signal Hill facing Resolute Bay. Geomorphology of the area is characterized; snow banks are semi-permanent to permanent features. Regardless of overall dimensions, the backwall slope is generally 20-23° and that of the floor 5-7°. The angle formed by the two planes is approx. 165°. Of unknown origin, these hollows, once established, seem to develop according to physical laws. They form in periglacial and other regions were semi-permanent snow banks allow both nivation and solifluction to take place in established depressions or hollows. Near Resolute all types are present; simple transverse forms are most common. (DGS.)

70815. COOK, SHERBURNE FRIEND, 1896– , *and* **R. W. BELKNAP.** Cold injury at the cellular level. Fort Wainwright, Alaska, Oct. 1961. 14 p. tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-14.) 5 refs.

Study of tissue slices and homogenates of rats cooled to 15°C. Slices of liver showed an increased metabolic rate (QO_2), those of the kidney cortex, a lowered one. Transitory increases in wet-dry ratios were seen in liver, kidney and heart. There were indications that the enzyme system involved in moving pyruvate into the TCA cycle is potentiated. (CaMAI.)

70816. COOKE, ALAN. A compendium of errors: a note on the lowest official temperature for North

America, 1910-1947. (Arctic, Dec. 1961. v.14, no.4, p.247-48, table.)

Presents evidence that the -79°F. recorded at Fort Good Hope, Mackenzie District on Dec. 31, 1910 was erroneous. Analysis of weather records at that station Dec. 29, 1910-Jan. 1, 1911, indicates that the minimum thermometer was misread 10 degrees by the meteorological observer. (DGS.)

70817. COOKE, ALAN. Vilhjalmur Stefansson. (Beaver, Winter 1962. outfit 293, p.52-54, illus.)

Biographical sketch describing his expeditions from 1906 to 1918 and commenting on the importance of his work. (DI.)

COOLEY, E. F., *see* Alaskan Science Conference 1961. 1962. No. 69644

COOLEY, RICHARD A., *see* Rogers, G.W., & R.A. Cooley. Alaska's population . . . 1962. No. 75172

COONRAD, WARREN LEE, *see*

Hoare, J.M., & W.L. Coonrad. Geologic map . . . 1961. No. 72166

Hoare, J.M., & W.L. Coonrad. Geologic map . . . 1961. No. 72167

70818. COOPE, GEOFFREY RUSSELL. A Pleistocene coleopterous fauna with arctic affinities from Fladbury, Worcestershire. (Geological Society of London. Quarterly journal, Mar. 30, 1962. v.118, pt.1, no.469, p.103-123, illus., maps, tables.) 23 refs.

Describes a fauna of fossil beetles obtained from a sample of peat-like material near the River Avon in England. Most of the species are still extant, their distributions chiefly in arctic Scandinavia and northern Russia. Ecological and climatic conditions at the time of deposition of the "peat," radio-carbon dated to 38,000 yrs. B.P., are indicated by present-day requirements of the species. The "peat" accumulated in a pool of standing water, surrounded by patches of sedges and willow. Similarity of present-day climate of northern Europe to the Pleistocene climate of Fladbury cannot be established. (DGS.)

70819. COOPER, K. E. The circulation in hypothermia. (British medical bulletin, Jan. 1961. v.17, no.1, p.48-51.) 53 refs.

Stressing the manifold pitfalls and difficulties in the study of hypothermia, author summarizes research on circulation, cardiac output, coronary blood flaw, regional blood flow, and cardiac arrhythmias. (DNLM.)

COOPER, SUSAN C., *see* Pacific Science Congress. 1961. No. 74619

COOPER, THEODORE, *see*

Musacchia, X.J., & *others*. Effect of hibernation . . . 1962. No. 74175

Willman, V.L., & *others*. Ventricular function . . . 1961. No. 76570

70820. COOPER, WILLIAM SKINNER, 1884– . Vegetation of the Northwest-American Province. (Pacific Science Congress. 8th, *Quezon City, Philippines,* 1953. Proceedings *pub.* 1957. v.4, botany, p.133-38.)

Describes this coastal coniferous forest, including the hemlock-Sitka spruce climax of southeastern and southern Alaska. Large trees and luxuriant undergrowth are characteristic. In the Alaskan portion, the forest has reappeared and advanced with glacial recession. Western and mountain hemlock extend north to the Kenai Peninsula, and the spruce (still advancing) to Kodiak Island and the Alaska Peninsula. Extensive areas of muskeg are apparently encroaching on the forest. (DGS.)

70821. COOTE, GEORGE F. Here's how waterborne seismic work evolved in the Arctic. (World oil, Sept. 1962. v.155, no.4, p.76-81, illus., port., map, sections.) 3 refs.

Describes a trial seismic survey in the Mackenzie River channel near Norman Wells in 1959; also a 1960 survey which completed 100 mi. of profiling in June-July downstream from Norman Wells. Cost of approx. $700/mi. based on 450 mi. of tests, compares favorably with that of truck-mounted surveys in Alberta, and much less than that in bush or muskeg regions. Economical mapping of seismic reflection data was tested in 1961 with a new type of portable continuous recorder, using repeated explosions from a gas gun as an energy source. In gas exploder surveys in Canadian lakes and on the upper Mackenzie River, profile sections generally deteriorated in quality where current speed exceeded four knots or water depth was less than five ft.; cost was calculated at approx. $60/mi. This type of survey however, is more acceptable to government fisheries authorities than are the regular marine seismic operations. (DGS.)

70822. COPELAND, DONALDA McKILLOP. Remember, nurse. Toronto, Ryerson, 1960. 250 p. illus.

Describes the life and living conditions of the Eskimos at Coral Harbour, Southampton Island, at the mouth of Hudson Bay, where the author was the first public health nurse during 1950-1955. Case histories of TB, respiratory, and other illnesses are given. Attitudes and way of life of the Eskimos in transition from a primitive culture to modern civilization are depicted. (CaONA.)

70823. COPELAND, MURRAY JOHN, 1928– . Canadian fossil Ostracoda, Conchostraca, Eurypterida, and Phyllocarida. Ottawa, Queen's Printer, 1962. ix, 57 p. + 12 plates, diagrs., tables. (Canada. Geological Survey. Bulletin 91.) Refs.

Contains six papers on several diverse Paleozoic arthropods, three dealing with areas in northern Canada, viz: Some leperditiid ostracods from northern Canada, p.1-8; Devonian Conchostraca from Melville Island, Canadian Arctic, p.12-17; and Additional Silurian Arthropoda from the Canadian Arctic, p.52-54. Well-preserved leperditiid ostracods recently found at several localities in Yukon Territory and on Victoria Island, but hitherto unrecorded from North America, are similar to specimens from USSR and Western Europe. They are thought to be Middle Devonian. Fossil Conchostraca from Melville Island were considered of Carboniferous age, but recent discoveries indicate Middle or Upper Devonian. In addition to the Silurian arthropods treated earlier, No. 63997, other phyllocarid and eurypterid remains obtained from Cornwallis, Baillie-Hamilton, and Devon

Islands are described, including the first record of the eurypterid gen. *Carcinosoma*? from the Canadian Arctic. (DI.)

COPELAND, R. J., *see* Ingall, L.N., & R.J. Copeland. Op. report gravity meter survey . . . 1961. No. 72368

70824. CORBEL, JEAN, 1920– . Les îles-de-glace, étude de géographie physique. (Revue de géographie de Lyon, 1961. v.36, no.2, p.155-72, illus., plates, maps, diagrs.) 41 refs. Text in French. **Title tr.:** The ice islands, study of physical geography.

Reviews their structure, origin, and relation to the coastal ice shelves from which they derive. Ice islands result from an excess local accumulation of snow, due to the wind. Northeast Ellesmere Island-northern Greenland is a zone particularly favorable for these conditions, which are rare on the Siberian coast. Preservation of ice islands depends on their remaining in very cold areas or continuing to receive a surplus of snow. The effects of ocean currents and coastal relief on their geographical distribution are discussed. (DGS.)

70825. CORBEL, JEAN, 1920– . Morphologie périglaciaire dans l'Arctique. (Annales de géographie, Jan.-Feb. 1961. an.70, no.377, p.1-24, illus., maps, diagrs., graphs.) 25 refs. Text in French. **Title tr.:** Periglacial morphology in the Arctic.

Reviews work on the relation between the various climatic types and the so-called periglacial processes. Arctic climates are summarized, and climatic variations accentuated by permafrost are noted. Distribution of mean annual temperature, mean annual precipitation, snow cover, and permafrost are mapped. Differential erosion is discussed; Kongsfjorden, Svalbard is shown to have a total erosion of 35 m^3/yr./km^2 of which less than 1% is depth. The local character of periglacial phenomena is emphasized, and the combined effect of vegetation and wind, sorted circles, patterned ground, pingos, etc. are noted. (DGS.)

70826. CORBEL, JEAN, 1920– Neiges et glaciers. Paris, Libr. Armand Colin, 1962. 224 p. maps, graphs, tables. 41 refs. Pocket-size paperback. Text in French. **Title tr.:** Snows and glaciers.

Comprehensive survey, from the meteorological conditions that create falling snow to pre-Quaternary glaciers and glacial paleoclimatology. Distribution of snow and ice at present and during maximum Pleistocene glaciation are noted in the introduction. Snow, its physical origin, measurement, and accumulation, as well as its hydrological and geomorphological effects, are discussed; followed in chap. 2, by a description of snowfall in polar, subpolar, middle latitude and other climatic regions, including examples from Greenland-Ellesmere-Svalbard, Labrador-Northern Quebec, Norway, etc. The process of change from snow to névé to ice is summarized, as are the factors causing glacial advance, recession, or equilibrium. Examples of glacier-types from various regions are dealt with in some detail: McCall Glacier in Northern Alaska, Sermikavsak in West Greenland, the Greenland Inland Ice, Salmon in Southeast Alaska, etc. The complex problem of glacial erosion is considered, noting such factors as movement, velocity, type of rock base, and the minor processes of meltwater erosion. Distinction is made between strictly glacial and non-glacial or related erosion processes. The main types of glacial morphology are described briefly: alpine and non-alpine, the latter including Scandinavian, polar, and tropical. Past glaciations are treated mainly according to their deposits which may indicate the climate of the period. Other methods of reconstructing past glaciers and climates are also noted, as pollen, sediment or faunal analysis, radiocarbon, etc. Chronology of the early and late Quaternary is outlined, from the Guntz and Mindel epochs to the Wurm and the five divisions of the Holocene. Statistics for the Antarctic, Arctic, for snow and glacier characteristics, are tabulated. (DWB.)

CORBIN, M., *see* Komarov, V.D. Water permeability frozen sand. 1961. No. 72909

CORKILL, R. A., *see Polar record.* News notes. 1961-62. No. 74847

70827. CORLETT, JOHN. Distribution of redfish larvae in the western Barents Sea. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.150, ICES/ICNAF Redfish Symposium, p.188-93. table, maps.) 11 refs.

Account of distribution and length composition of larvae collected intermittently, mainly with plankton hauls. Most larvae were caught over deep water west of the shelf. Spawning is most intense between 72° and 73°N., Apr. 20-June 20. Temperatures, Soviet fishing, etc. are also noted. (DI.)

70828. CORLETT, JOHN. Dry weight of plankton in the western Barents Sea 1957-1959. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v.16, p.68-69, tables, map.)

Records of plankton, in grams under one sq. m. from an area between the Scandinavian hump and Spitsbergen. A comparison indicates that the year 1958 had a larger standing crop than either of the other two, particularly in late summer and fall. (DI.)

CORLEY, NORA TERESA, *see* Arctic Institute N. Am. Library . . . 1961-62. No. 69855

CORNING, URSULA, *see* Cassin, R. South face Mt. McKinley. 1962. No. 70625

70829. CORRIGAN, CAMERON, *and others*. Antibodies to viral and other antigens in blood serum of children resident in the Northwest Territories; a preliminary report. (Canadian journal of public health, July 1962. v.53, no.7, p.284-89, tables, map.) 6 refs. *Other authors:* E.J.K. Penikett, *and* M.E. Williams.

Reports preliminary survey of sera from 249 children, with sera for comparisons from 65 children resident in Alberta. Psittacosis antibody was 7.6% and measles antibody 42.5% in the NWT. against 1.5% and 27.7% in Alberta. No incidence of antibodies to *Coxiella burnetti, Brucella abortus* or

Pasteurella tularensis was noted and all sera were negative to the Kolmer syphilis test. (DNLM.)

70830. CORTE, ARTURO E., *and* **A. HIGASHI.** Experimental research on dessication cracks in soil. Wilmette, Ill., Aug. 1960. vi, 48 p. illus., diagr., graphs, tables. (U.S. Army. Corps of Engineers. Snow Ice and Permafrost Research Establishment. Research report 66.) 8 refs.

Proposes a simple theory for crack formation and development by soil dessication, based on sixty laboratory experiments utilizing samples of Bloomington (Illinois) till with maximum particle size of 1 mm. diam. held in flat wooden containers. Slurry of the soil or loose compacted soil saturated with water by an ice sheet method was dessicated in containers approx. 85 x 60 x 7 cm. Relative humidity of the air was about 35%. The crack pattern depends more upon the thickness of the soil sample than upon temperature or humidity, though differences in the bottom material, as wood, glass, sand, cause some effect. The area of cells formed by crack patterns has a log normal size distribution; total length of cracks decreases with increase in sample thickness. The number of sides of cells also depends on the thickness. Cracking was found to begin at the center of the soil layer and to progress to the surface or bottom with uneven speed. Various stages of the experiments are illus.; a table of principal facts on each experiment is appended.—From authors' summary. (CaMAI.)

70831. CORTE, ARTURO E. The frost behavior of soils: laboratory and field data for a new concept: part 1: vertical sorting. Hanover, N.H., July 1961, iv, 22 p. illus., graphs, tables. (U.S. Army. Cold Regions Research and Engineering Laboratory. Research report 85, pt.1.) 32 refs.

Describes laboratory experiments carried out with special cabinets in which saturated soil samples were subjected to alternate freezing and thawing cycles. Tests included series with both freezing and thawing from the top, and with freezing from the bottom and thawing from the top. Soil materials used were well-graded, sandy gravels; all would be classified as "non-frost-susceptible." Rate of movement of individual particles depended on the direction and rate of freezing; shape also was a factor. Analysis of samples by layers showed that freeze-thaw cycles produced a sorting of fine particles downward and coarse upward, as well as changes in density. Vertical sorting is produced only with freezing rates greater than 10mm./hr. Comparison with natural conditions near Thule North Greenland shows that vertical sorting is observed in well graded materials with and without fines (<0.074 mm. fraction) if they are or were saturated. Changes in volume also take place. (DWB.)

70832. CORTE, ARTURO E. The frost behavior of soils, laboratory and field data for a new concept, part II; horizontal sorting. Hanover, N. H., Sept. 1962. iv, 20 p. illus., graphs. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Research report 85, pt. 2.) 10 refs. Contract DA-11-190-ENG-118.

Reports study of horizontal sorting produced by a vertical freezing plane in heterogeneous and skip-graded mixtures, the soils used classified as "non-frost-susceptible" or "never frost-heaving moraine soil." Fine particles migrated away from the freezing front in a parabolic path; coarse (7.9 - 10 mm. diam.) particles also migrated, but to a less extent than the fines; rate of volume change was greater at the lower freezing rates than at higher rates. Field tests also were made in transported materials near Thule, Greenland, where horizontal sorting was a two-dimensional phenomenon in which sorting was produced in both horizontal and vertical directions, a process observed in the grain-size range of non-frost-susceptible soils. A new criterion for frost behavior is recommended which recognized the effect of freeze-thaw cycles under field conditions with a large range of particles sizes. (DGS.)

70833. CORTE, ARTURO E. Relationship between four ground patterns, structure of the active layer, and type and distribution of ice in the permafrost. Hanover, N. H., Feb. 1962. viii, 82 p. text, illus., tables, graphs, diagrs., + 12 fold. maps & diagrs. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Research report 88.) 46 refs.

Reports study of ground patterns by means of trenches cut in the outwash near Thule, North Greenland: circular and linear depressions in unsorted material, polygonal troughs in unsorted material, sorted circles, and irregular mounds and depressions of low relief formed in unsorted finer-grained material. Correlation is made between surface pattern, grain size and structure of the active layer, and type and distribution of ground ice. Classification of the active layer as disturbed, slightly disturbed, and undisturbed is based on the conditions of primary depositional bedding and the presence or absence of vertical sorting. Other features of the active layer are an accumulation of fines at the bottom of the active layer and on top of stones, and a silicious calcareous evaporite on the lower surface and clean washed coarser particles beneath the larger stones. Fabric analysis of four kinds of ground ice is presented: ice wedge, relict ice, ice mass, and ice lens, as well as analysis of the contact of ice wedges with relict and mass ice. Practical applications are given for the selection of foundation sites and the location of non-frost-susceptible building materials.—CRREL. (CaMAI.)

70834. CORTE, ARTURO E. Vertical migration of particles in front of a moving freezing plane. (Journal of geophysical research, Mar. 1962. v.67, no.3, p. 1085-90, illus., diagr., graphs.) 2 refs.

Demonstrates a principle of particle segregation by freezing, using a transparent freezing cabinet in which a sample of distilled water freezes from the bottom upward. The freezing frontline travels vertically and the particles are carried against gravity. An important factor in particle migration is shown to be the shape of the particle or its contact area with the interface. The other important factors are particle size and rate of freezing. Fine particles migrate under a wide range of rates of freezing, coarser particles, at slower and narrower range. For determining frost behavior of soils in permafrost regions, freezing from the bottom upward is a more reliable test than freezing from the topdown. Freezing from the bottom more closely approximates freezing of the active

layer above permafrost; also friction with the cylinder testing wall is eliminated. The implication of this principle in engineering and studies of soil genesis in cold regions is emphasized.–From author's abstract. (DLC.)

COTELL, IRENE M. BROWNE, *see Polar record.* Field work. 1961-62. No. 74848

COTTLE, WALTER H., *see* Alaskan Science Conference 1961. 1962. No. 69644

70835. COUGHLIN, THOMAS G. Manning the DEW Line. (Roundel, June 1962. v.14, no.5, p.16-21 illus.)

Describes the organization, responsibilities, and general procedures at DEW Line sites, with examples from Cape Parry the westernmost Canadian site, Cambridge Bay in the central section, Station Fox near Foxe Basin, and Cape Dyer facing Baffin Bay at the eastern end. Personnel, their backgrounds, duties, etc. are outlined; photos show working and living conditions. (DLC.)

COULTER, ELIZABETH BOLE, 1932- , *see* Coulter, H.W., & E. B. Coulter. Geology of the Valdez . . . 1961. No. 70836

Coulter, H. W., & E. B. Coulter. Preliminary geologic map . . . 1962. No. 70837

70836. COULTER, HENRY WELTY, 1920– , *and* **E. B. COULTER.** Geology of the Valdez (A-5) quadrangle Alaska. Washington, D.C., 1961. Fold. col. map sheet 50 x 30 in. with descriptive notes. (U.S. Geological Survey. Geologic quadrangle maps of the United States, GQ-142.) 15 refs.

Maps on a scale of 1 in:1 mi. the geology of this 200-sq. mi. area across the Chugach Mts., 61°-61°15′N. 145°30′-145°52′30″W. The Richardson Highway crosses the range at snowy Thompson Pass. Glaciers or perennial snowfields cover about a third of the map-area, much of it inaccessible. Extensive outcrops of the Late Cretaceous? Valdez group as well as two small bodies of intrusive quartz monzonite are the only bedrock shown. Most prominent structural features is the pronounced east-west foliation. Pleistocene glacial deposits are absent in spite of ample evidence of one or more periods of extensive glaciation. Two post-Pleistocene glacial episodes are indicated by drift, moraine, and associated alluvium; are identified as the Marshall Pass less than 4,000 years in age, and the Worthington glaciation, probably several hundred years old. Coarse rubble derived principally by frost and colluvial action from the Valdez group is widespread. (DGS.)

70837. COULTER, HENRY WELTY, 1920– , *and* **E. B. COULTER.** Preliminary geologic map of the Valdez-Tiekel belt, Alaska. Washington, D.C., 1962. map 28 x 28 in. (U.S. Geological Survey. Miscellaneous geologic investigations map I-356.)

Map, scale 1:96,000, or 1 in.: 1.5 mi., shows Cretaceous? or Tertiary? rocks, also Pleistocene and Recent deposits in an irregular belt extending northeastward from Valdez, over Thompson and Marshall Passes to the Tiekel River, roughly 61°N. 146°15′W. to 61°30′N. 145°W. Map deals mainly with glacial and alluvial deposits and offers structural data also. Deposits of the post-Pleistocene Marshall Pass and Worthington glaciations are shown, on the basis of 1957-1959 mapping. (DGS.)

70838. COULTER, R. F. Beneficiation of ores at the Flin Flon concentrator. (Canadian mining and metallurgical bulletin, June 1962. v.55, no.602, p. 375-87, illus., diagrs., tables.) 4 refs. *Also issued as:* Canadian Institute of Mining and Metallurgy, Transactions, 1962, v.65, p. 200-212.

Includes general description and photomicrographs of ores processed from the main Flin Flon and three satellite mines. Operations of the concentrator are described, with diagrams, photographs, and results of analyses. (DLC.)

COUNT, EARL W., *see* Bunak, V.V. Contemporary raciology. . . 1961. No. 70451

COUSINEAU, JACQUES G., *see* Choquette, L.P.E., *& others. . . . E. multilocularis . . .* fox. 1962. No. 70734

70839. COVINO, BENJAMIN G., *and* **H. E. D'AMATO.** Mechanism of ventricular fibrillation in hypothermia. (Circulation research, Feb. 1962. v.10, no.2, p.148–55, illus., tables.) 11 refs.

Reports study of hypothermic dogs, cats, rabbits and rats aimed at determining the validity of the circus movement theory and the ectopic center theory in explaining cardiac fibrillation. Results obtained afford direct evidence that the former can account for these movements. (DLC.)

COVINO, BENJAMIN G., *see also*

Rennie, D.W., *& others.* Phys. insulation Korean diving women. 1962. No. 75107

Rennie, D.W., *& others.* Phys. regulation . . . 1962. No. 75108

70840. COWAN, IAN McTAGGERT, 1910– . Science and the wilderness. (Wilderness Conference, 6th biennial, *San Francisco.* Proceedings, 1960. p.65–78.)

Discusses the value of wilderness to modern man, and describes the Rocky Mountain Parks of Canada, their vegetation and wildlife in general. Numerous representatives of this fauna are discussed in detail: their biology, habits, range, etc. Included are: the ptarmigan, Richardson's grouse, beaver, elk, moose, wolf, bear, etc. (DLC.)

70841. COWAN, L. I. Cuprosklodowskite, kasolite and schoepite from Great Bear Lake, Northwest Territories, Canada. (Canadian mineralogist, 1962. v.7, no.2, p.331–32.)

Reports identification of these three minerals on pitchblende specimens, by means of X-ray diffraction powder patterns, which are identical with powder patterns of known samples from Czechoslovakia and Katanga. The kasolite was found on a single large specimen from Labine Pt. on Great Bear Lake. (DGS.)

70842. COWIE, J. W. Contributions to the geology of North Greenland. København, C.A. Reitzel, 1961. 47 p. illus., maps, sections, table. (Meddelelser om Grønland, bd.164, nr.3.) 56 refs.

Deals with the stratigraphy, three measured sections, of the unmetamorphosed sediments of north Inglefield Land, also the igneous and metamorphic rocks of the Precambrian basement complex, the sandstones and dolomites of the Thule Group as well as the Cambro-Ordovician beds overlying the dolomite; based on Aug. 1957 field study, supplemented by aerial photographic interpretation. Detailed measurements were made of sections near Kap Ingersoll (approx. 79°N. 69°W.),

near Hatherton Bugt to the southwest, and near Etah; beds are described, composite vertical sections from three areas are shown, and correlations are suggested. Comparison is also given between the base of the Cambrian in five Greenland areas and in three areas of the Queen Elizabeth Islands. The basement complex provides evidence of a number of sedimentary, tectonic, metamorphic, and igneous episodes prior to the deposition of the late Precambrian sediments. The last unconformably overlie the basement with their beds almost parallel to its peneplain-like surface. Historical geology of Inglefield Land and the Bache Peninsula on Ellesmere Island suggests marine transgression in Precambrian times; the sediments of the Thule Group were deposited; then regression of the sea, and erosion created an unconformity, accompanied by igneous activity. Submergence took place also in the Cambrian, Ordovician and Silurian, interrupted or concluded in other areas by strong folding and faulting. Subsequent geological history is marked by further peneplanation, by igneous intrusions in Tertiary time, and by Quaternary glaciation. (DGS.)

70843. COWIE, J.W. The lower Palaeozoic geology of Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961, v.1, p.160–69, map, table.) 9 refs.

Notes locations of outcrops, all in the northern half of Greenland, and mentions main workers on the lower Paleozoic (through Silurian). The stratigraphic successions in the east, northeast, and northwest are summarized; age relationships are discussed based on fossil faunas and breaks in the sequences. New conclusions emerge from this examination; also a correlation between these three portions of Greenland, and with the major stratigraphic units of North America and Europe is attempted. (DLC.)

COWIE, J. W., *see also* Apollonio, S., & *others.* Devon I. Exped. 1961. No. 69832

COWLEY, R. ADAMS, *see* Bessman, S.P., & *others.* Relation of blood pH. . . 1961. No. 70186

70844. CRAIG, BRUCE GORDON, 1922– , *and* J.G. FYLES. Pleistocene geology of arctic Canada. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.403–420, maps, table.) 33 refs.

Preliminary outline of Pleistocene history of this region, some areas and some parts of the geological record treated in detail, the Cordillera omitted entirely. Continental ice-sheets formerly covered the region except some western Queen Elizabeth Islands, where evidence indicates only local glaciation. Three principal ice-sheets or glacier complexes partly coalesced during their maximum stand; these are called the Wisconsin Laurentide–, the Ellesmere–Baffin glacier-complex, and the Cordilleran ice-sheet. Interglacial deposits are widely distributed in the Mackenzie delta. Gravels, sands, and silts of the late Tertiary or earliest Pleistocene Beaufort formation occupy the western parts of the westernmost islands. These deposits seem to have originated far to the east and southeast; pollen studies indicate the Beaufort formation may form a late stage in the transition from the warm Tertiary to the cool Pleistocene. Large moraines and prominent ice lobes were features of the outermost northwest Wisconsin Laurentide ice-sheet; within the marginal zone, a radial pattern of drumlins, eskers, etc., record the retreat towards the Keewatin ice-divide, which was ice-free about 7,000 years ago. Limit of post-glacial marine submergence increases in elevation from the periphery to the interior of the area covered by the Laurentide ice-sheet. In the northwest, isostatic adjustment was complete before final eustatic rise of sea level 5,000–6,000 yrs. ago. Radiocarbon ages of post-glacial materials are summarized on map and table. (DLC.)

70845. CRAIG, BRUCE GORDON, 1922– . Surficial geology of northern District of Keewatin, Northwest Territories. Ottawa, Queen's Printer, 1961. 8 p. fold. map, tables. (Canada. Geological Survey. Paper 61–5.) 10 refs.

Brief description of the abundant variety of glacial landforms in the area 66°N. to the arctic coast, 90°–102°W., based on data collected in 1960, on the helicopter-supported Operation Back River. Pattern of ice retreat is indicated as orderly, and southward from the coast. Extensive post-glacial marine submergence is also indicated. Radiocarbon ages were determined for marine shells from five localities; rapid early emergence during isostatic readjustment, with subsequent decrease is indicated. Map 7–1961 scale 1 in = 16 mi., shows distribution of features described. Appendix: *Palaeontological remarks on shells collected. . . .* by F.J.E. Wagner, p.7–8, tables, 2 refs. notes presence of *Macoma, Yoldia arctica,* and other marine animal communities in formerly submerged areas. (DGS.)

70846. CRAIG, HARMON, *and* **D. LAL.** The production rate of natural tritium. (Tellus, Feb. 1961. v.13, no.1, p.85–105, tables, graphs, diagrs., maps.) 50 refs.

Presents results of deuterium and tritium analyses of precipitation from Chicago, North Greenland, and Pacific islands. A consistent general relationship between these isotopes is indicated when no synthetic tritium from thermonuclear explosions is present. The global mean production rate of natural tritium is calculated as 0.5 ± 0.3 atoms/cm^2 sec. Calculation of the cosmic ray production rate, based on cosmic ray and nuclear cross section data, gives a predicted mean global production rate of 0.25 ± 0.08 atoms T/cm^2 sec. Variation in the production rate over an average solar cycle is ±4.5%. (DLC.)

70847. CRAIG, RICHARD ANSEL, 1922– *and others.* The stratospheric warming over North America in 1957. I – III. Tallahassee, Fla., 1961. 3 v.: 22, 17, 18 p. maps, graphs. (Florida State University. Dept. of Meteorology, Contract AF 19 (604)–5471, scientific report no. 1–3.) Refs. *Other authors:* M.A. Lateef, *and* R.A. Mitchem.

Describes meteorological conditions in the stratosphere over North America and the adjacent North Atlantic Ocean during the intense warming of mid-Jan. – mid-Feb. 1957. Procedures used in analysis and computation are outlined in some detail. Height, temperature, vorticity and vertical motion at the 100-mb surface are reported in pt. 1; in pt. 2, the same parameters at the 50-mb surface are reported and comparison made with the 100-mb conditions. The third report extends the discussion

to the 25-mb surface. The cyclonic center near the North Pole filled up slowly and moved southward over Baffin Island, to a position as far south as 50°N. Other developments such as the large-scale downward vertical-motion distribution are stated. Analysis is mapped at two-day intervals for each pressure surface. (DWB.)

70848. CRAMER, EDWARD J. The sheefish of arctic America. (Alaska sportsman, Nov. 1962. v.28, no.11, p.18-20, illus.) Alaska wildlife library no.31.

Describes: Stenodus leucichthys: physical characteristics and appearance, distribution in Alaskan rivers north from Bristol Bay, migrations, size, food, spawning, and potentialities as a sport fish. Sheefish prefer darkness, occupy dark waters by day and increase their activities at night. Besides the migratory form, a resident lake variety has been found in the Mackenzie River basin. (DI.)

CRAMPTON, E. W., *see* Friend, D.W., & E.W. Crampton. The adverse effect of raw whale liver . . . 1961. No. 71502

70849. CRARY, ALBERT PADDOCK, 1911– , *and others.* The United States glaciological researches during the International Geophysical Year. (Journal of glaciology, Mar. 1962, v.4, no.31, p.5-24, map.) 69 refs. *Other authors:* W.O. Field *and* M.F. Meier.

Reviews the program in Antarctica and that in northern latitudes including Alaska, Arctic Basin and Greenland. Observations carried on at the Lemon Creek, Chamberlin and McCall Glaciers, also others farther south are briefly reviewed. The American Geographical Society's two programs on Alaskan glaciers are cited. Three drifting stations in the Basin are noted. The status of the earth's ice cover, its past and present fluctuations are discussed. (DLC.)

70850. CRAWFORD, JOHN S. In the land of the Tikchiks. (Alaska sportsman, Nov. 1960. v.26, no. 11, p.38-41, +, illus., map.)

Describes this unsettled area, approx. 75 miles north of Bristol Bay, Alaska, as observed while surveying salmon spawning grounds. The six Tikchik lakes, ranging from ten to fifty miles in length, and the five Wood River Lakes to the south comprise an important lake system. Landscape and wildlife are noted, as are experiences while fishing for arctic grayling and char. (DI.)

70851. CRAWFORD, SALLY. Yukon cattle drive. (Alaska sportsman, Jan. 1962. v.28, no.1, p.12-13, illus.)

Describes the driving of about a hundred head of cattle from Pyramid Harbor on the Lynn Canal to the Klondike gold fields in summer 1897. Experiences on the trail, which skirted Chilkat Pass, and in Dawson are recounted, mostly from reminiscences of one of the drivers, Jack Brooks. The beef sold for $1.25-2.50/lb. (DI.)

70852. CREAGER, JOE S., *and* **D. A. McMANUS.** Preliminary investigations of the marine geology of the southeastern Chukchi Sea. Seattle, Wash., May 1961. vi, 46 p. maps, diagrs., graphs, tables. (Washington. University. Dept. of Oceanography, Technical report no. 68; its Reference 61-15. Contract AT-45-1-540 of the U.S. Atomic Energy Commission assisted by Contract Nonr-477(10) Project NR 083 012 Office of Naval Research.) 15 refs.

Describes the bathymetry and bottom sediments of offshore waters (> 10 fm.) in this part of Chukchi Sea, from an oceanographic survey (*Brown Bear* cruise 236) in Aug.-Sept. 1959 in connection with Project Chariot. Soundings show some underwater salients and valleys, the largest valley extending 70 mi. northward from Cape Prince of Wales. Bottom sediments disclose a wide range of size grades, with broad regional trends: the best-sorted are in the sand area along the Shishmaref coast, approx. 66°30′N. 166°W. Coarse sediments occur in Bering Strait and along the shore from Cape Lisburne to Kivalina, indicating fast currents, heavy wave action, or (probably) a nearby source of sediment. Silts and fine sands are more prevalent. Heavy mineral separations indicate sediments near the Chariot site containing 12% zircon and 10% magnetic lithic fragments as well as 48% of lithic fragments and mineral aggregates. Foraminifera were scarce and unevenly distributed. Calcium carbonate values were highest (7-14%) north of Little Diomede I. and near shore between Cape Lisburne and Point Hope; its highest values related to coarser sediments, and the higher values (0.7-1.9%) of organic carbon to the finer-size sediment, in the northwest of the area and nearshore in Kotzebue Sound. Some 120 surface grab samples and 11 short gravity cores were analyzed; 183 additional samples and a 744 cm. piston core collected in 1960 are to be inlcuded in the final report. (DI.)

CREAGER, JOE S., *see also* Pacific Science Congress. 1961. No. 74619

CREASI, VINCENT JOSEPH, 1916– , *see* Putnins, P.H., & *others.* Some further studies . . . Greenland area. 1961. No. 74993

CRESS, PAUL H., *see* Apollonio, S., & *others.* Devon I. Exped. 1961. No. 69832

CRISE, J. R., *see* Bullard, R.W., & J.R. Crise. Effects CO_2 & cold. 1961. No. 70448

70853. CROMIE, WILLIAM J. Preliminary results of investigations on arctic drift station Charlie. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.690-708, illus., maps, diagr., graphs.) 10 refs.

Reports on submarine geologic investigations, June-Oct. 1959: methods, tentative results of seismic studies, core sampling, bottom photography, and trawling. Station Charlie, originally designated Alpha-II, drifted north, then west, an average 4.5 mi./day. A bathymetric profile was constructed across part of the Chukchi shelf, and angles of slope computed from seismic reflections. Piston cores taken on the Chukchi continental peninsula showed great uniformity and absence of layers. Bottom photos show rocks and abundant marine life in shallow water; but few and different in deep water. Seismic reflection techniques were used for determinations of dip and stroke of bottom sediments. Relative and continuous absolute values of the magnetic field were measured. A vertical seismometer, installed on the ice pack, recorded at least one earthquake. Small variations in atmospheric pressure were registered continuously on a microvariobarograph. Detailed and overall drift tracks, selected bottom photos,

bathymetric profile, and seismic record of an Aug. 18, 1959 earthquake in Wyoming-Montana, are included. (DLC.)

70854. CROMWELL, DAVE. Counting the caribou. (Alaska sportsman, Aug. 1960, v.26, no.8, p.47, map.)

Reports locations and approximate numbers of seven caribou herds in Alaska and adjacent Yukon. The Arctic herd of 300,000 is the largest; and the Nelchina (50,000) suffers the most hunting pressure. The others, the Porcupine, Steese-Fortymile, McKinley-Minchumina, Mulchatna-Rainy Pass, and the Alaska Peninsula herds range from fifty down to ten thousand head. The population has increased since 1945. Management information studies are being made by the Alaska Dept. of Fish and Game. (DI.)

70855. CRONE, G. R. Sir James Mann Wordie, C.B.E. (Geographical journal, Mar. 1962. v.128, pt. 1, p.122-24.)

Obituary of this British scientist, 1889-1962, noting his participation and leadership in arctic expeditions. He was a founder member of the board of the Scott Polar Research Institut. Another obituary, by T.E. Armstrong, pub. in *Arctic* June 1962, p.170-71. (DGS.)

70856. CROSSLEY, A. F. Hail in relation to the risk of encounters in flight. (Meteorological magazine, Apr. 1961. v.90, no.1065, p.101-110, tables, graph.) 16 refs.

Considers possibilities and prevention of damage to supersonic aircraft by hail. Its characteristics in various areas are described. In polar regions, it is rare, associated with frontal conditions rather than convection, and small (1 cm. or less diam.) or in the form of graupel. It presents little danger to present-day aircraft. (DLC.)

CROSSWHITE, HENRY M., *see* Fastie, W.G., & *others*. Far ultra-violet auroral spectra . . . 1961. No. 71345

70857. CROWE, B. W., *and others*. Time lags between first 32°F. and 0°F. readings in autumn at Fort Smith, Prince Albert and The Pas and similar occurrences at Winnipeg and Regina. Toronto, Nov. 8, 1962. 3 p. tables. (Canada. Meteorological Service, Circular CIR-3756, TEC-434.) *Other authors:* C.L. Kuchinka, *and* W.A. Ross.

Mean time lags over the period 1916-1960 were computed for these stations. Frequency distributions of the time lags were prepared and standard deviations of the mean time lags were obtained. Results are tabulated. In most years, the first 32°F. reading in the autumn at Regina should be expected about 12 days after the first such occurrence at Fort Smith; the first sub-zero reading nine days after Fort Smith. The first 32°F. reading at Winnipeg should occur eight days after such at Prince Albert, Sask., and the first sub-zero reading is likely eight days after Prince Albert and The Pas, Man. (DWB.)

CROWHURST, J. J., *see Western miner*. Can. Tungsten Corp. 1962. No. 76533

70858. CROWLEY, FRANCIS A. Gravity observations along the northern coast of Ellesmere Island. Bedford, Mass., Feb. 1961. 7 p. graph, table. (U.S. Air Force. Cambridge Research Laboratories, GRD Research notes no.53; AFCRL 251.) 5 refs.

Describes briefly a gravity survey consisting of some 90 stations taken along this coast between McClintock and Markham Fjords, in the spring of 1961. Sea-level estimates of gravity are given in the form of a table of free-air anomalies; the magnitude of some anomalies reflects variations in ocean depth. Fairly good correspondence between the gravity and seismic data is possible by forming a simple two-dimensional model of the selected deep. Value of these observations is enhanced by remoteness of the area. (DWB.)

CRUMPTON, C. W., *see* Afonso, S., & *others*. Temperature variations . . . 1962. No. 69500

70859. CRUTCHER, HAROLD LEE, 1913– . Meridional cross sections; upper winds over the Northern Hemisphere. Washington, D.C., U.S. Govt. Print. Office, June 1961. ii, 307 p. graphs, table. 15 x 10 1/2 in. (U.S. Weather Bureau. Technical paper no.41.) 35 refs.

Indicates graphically the vertical distribution of eight selected wind statistics along every 10 degrees of longitude, in seasonal form, from the 850-mb surface to the 100-mb surface, for the Northern Hemisphere, generally extending to about 85°N. Text describes upper wind characteristics and discusses methods of "chart" preparation. The cross-sections or "charts" are presented in sets for meridians 10° apart, beginning at 0°. Each meridional set contains seasonal charts for each of the eight wind statistics selected. Data are considered sufficiently precise for many purposes; but accuracy is limited by the relative short five-year record "the good-weather bias", and uneven reliability of observations. (DWB.)

70860. CRUTCHFIELD, JAMES A. An economic evaluation of alternative methods of fishing regulations. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.125-40.)

Considers regulation of North Pacific fisheries, including the Alaskan salmon, halibut, and other, in terms of economic efficiency. Methods of regulation are examined: closed fishing periods, closed areas, size limits, quotas, gear restrictions, and restriction of number of boats. The last is recommended as the most efficient, to be supplemented as necessary by the other methods. (CaMAI.)

70861. CURRY, LESLIE. Climatic change as a random series. (Association of American Geographers. Annals, Mar. 1962. v.52, no.1, p.21-31, tables, charts.) Refs.

Explains climatic change as an indeterminate process working through the heat storage of the tropical oceans. Fluctuations in heat resulting from random events, can be of the magnitude and duration of ice ages. Cooler oceans circulate less energy to higher latitudes, thus causing lower temperature and larger icecaps. (DI.)

70862. CURRY-LINDAHL, KAI, 1917– Fjällämmeln, *Lemmus lemmus*, i Sverige under 1960; fakta och teorier. (Fauna och flora, 1961. årg. 56, häfte 1-2, p.1-26, illus., map.) 39 refs. Text in Swedish. Summary in English. Title tr.: The

lemming, *Lemmus lemmus* in Sweden in 1960; facts and theories.

Reports the normal three-four year cycle in Sweden disrupted since 1941-1942, though not uniformly so throughout its distribution area. The population was at peak in spring 1960, and the increase so rapid as to indicate reproduction in winter months. The owl and long-tailed jaeger populations responded to the lemming abundance, but not the rough-legged hawk nor any mammal. Several features of behavior, periodicity, and migration are discussed, various theories reviewed. A certain stress coincident with population peak, producing disturbance of the endocrine equilibrium is indicated as a factor in the spectacular mass migration of lemmings. (DLC.)

70863. CURRY-LINDAHL, KAI, 1917– . The irruption of the Norway lemming in Sweden during 1960. (Journal of mammalogy, May 1962. v.43, no.2, p.171-84, map.) 17 refs.

Describes the "total" lemming year in Sweden, 1959-60: its high reproduction rates, spreading and its causes: psychological rather than lack of food or predation; physiological unbalance as cause of population crash. (DLC.)

70864. DAETZ, GERALD M. Alaskan challengers of the sea. (Natural history, June-July 1959. v. 68, no. 6, p. 335-47, illus.)

Outlines the distribution and numerical decline of Steller's sea lion. The young and their development, general behavior and motion, food, lactation, the fur, reproduction, sense organs, social and sexual behavior are dealt with in turn. Effects of storm upon rookeries is discussed; ways of swimming, and vocalization are described, and information is given on the geographic location of rookeries. (DLC.)

70865. DAGELAĬSKIĬ, V. B. Razval'tsovannye konglomeraty severo-zapadnoĭ chasti svity polmos, Kol'skii poluostrov. (Akademiīa nauk SSSR. Laboratoriīa geologii dokembriīa. Trudy 1961. vyp. 12, Voprosy geokhronologii i geologii, p. 166-75, illus., map.) 2 refs. Text in Russian. **Title tr.:** Laminated conglomerates in the northwestern part of the Polmos series, Kola Peninsula.

Describes lower Proterozoic laminated conglomerates, discovered by the author in the Oarek''yavr Lake region, Limtayok River basin (68°39′N. 35°12′E.) Geologic structure of the region, petrographic properties of the conglomerates, their geochronologic data and stratigraphic position are discussed. (DLC.)

DAGELAISKII, V. B., *see also*

Bondarenko, L.P., & V.B. Dagelaĭskiĭ, Ob ėulizitakh . . . 1961. No. 70316

Maslenikov, V.A., & *others*. Drevneĭshie gornye porody . . . 1961. No. 73856

70866. DAHL, EILIF. Refugieproblemet og de kvartaere geologiske metodene. (Naturen, 1962. årg. 86, nr. 3, p. 160-76, illus., text map.) Text in Norwegian. **Title tr.:** The refuge problem and Quaternary geological methods.

Analyzes the ways in which the mechanical and chemical destruction of bedrock may be utilized as evidence of continental or only local glaciation, and lack of glaciation in western and northern Norwegian localities where biogeographic refuges are believed to have existed during the glacial period. Differences in the extent and situation of glacial striae, moraines, and erratics are distinguished for local and widespread glaciation. Recognition of residue from residual weathering is discussed, including boulders that may appear to have been transported. Several instances of chemical alteration of minerals are considered: the biotite-hydrobiotite-vermiculite series, micaceous minerals altered to illite, the development of montmorillonite, etc. In certain areas at certain elevations, there is a marked increase in the rate of weathering. Unlike Labrador however, no exact substage of glacial time can be associated with Pleistocene weathering products in Norway. (DGS.)

70867. DAHLBERG, ALBERT A. Aleut-Konyag prehistory and ecology, 1961. Preliminary report of the dentition study of two isolates of Kodiak Island. (Arctic anthropology, 1962. v. 1, no. 1, p. 115-16.)

Describes results of morphological and pathological studies, based on direct observations, casts and X-rays, of some two hundred Eskimo residents of Old Harbor and Kaguyak, Kodiak Island. Of interest is the low incidence of *torus mandibularis* in both groups and the large teeth in the Old Harbor isolate. Caries showed a high incidence in all age groups, especially in the early ones. (DSI.)

DAHLGREN, GEORGE, *Jr.*, *see*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1961. No. 69644

70868. DAHLSKOG, STEN. Vår naturvård; en skrift om Svenska naturskyddsföreningen och dess verksamhet. (Sveriges natur, Feb. 1961. årg. 52, nr. 1, p. 16-27, illus., map.) Text in Swedish. **Title tr.:** Preservation of nature: the Swedish Association for the Preservation of Nature and its activities.

Describes the organization and functions of this association which has an advisory role in conservation matters; also the administration and activities in conservation at the national (under Bureau of Public Domains and Academy of Sciences), the county and local levels. Various types and degrees of plant and animal protection in Sweden, national and local park maintenance, forest, memorial and nature reservations, bird sanctuaries, etc. are characterized briefly. The Association's own reservations and the 15 national parks are described in more detail and their locations shown on map. The Swedish Conservation Fund was established for nature preservation through land purchase or regulation, virgin landscape cultivation, and breeding of extinct species of plants and animals. (DA.)

DAILEY, LOIS A., *see* Dailey, R.C., & L.A. Dailey. Eskimo Rankin Inlet. 1961. No. 70869

70869. DAILEY, ROBERT C., *and* L. A. DAILEY. The Eskimo of Rankin Inlet: a preliminary report. Ottawa, June 1961. 106 p. illus., diagrs., graph, tables, sketch-maps. (Canada. Dept. of Northern

Affairs and National Resources. Northern Co-ordination and Research Centre, 61-7.) 24 refs.

Reports their 1958 study at the North Rankin Nickel Mines on northwest Hudson Bay. The development of the mine since its discovery in 1928 and introduction of local Eskimo labor in 1956 are sketched. Some 80 Eskimo men and several women, recruited in part from various coastal and inland settlements are currently employed at the mine. The general plan and population composition of the white and the old and new Eskimo communities, their housing and facilities, etc. are described. The Eskimo kinship system and family relationship including marriage and adoption regulations, diet and nutrition, health and hygiene are dealt with. Statistical data are given on birth and mortality and the major illnesses listed. Eskimo wage differential for skilled and unskilled labor, staff salaries, monthly net incomes and expenditures are discussed and tabulated. Acculturative influences of contacts with whites have brought about substantial organizational though little structural changes in the Eskimo socio-cultural system. Some social segregation of Eskimos is noted, which should be alleviated by involving them in mine-community life. Several recommendations are made for Eskimo development: raising wages and removing fringe benefits, teaching the use and value of money, making the public health and education programs more effective, reevaluating Canadian government officials' approach to Eskimo assimilation, etc. (CaMAI.)

70870. DALBY, RONALD. Twentieth century school. (North, Mar.-Apr., July-Aug. 1962. v. 9, no. 2, p. 14-16; no. 4, p. 12-18; illus.)

Recounts observations and experiences as teacher on Baffin Island in 1960-1961, at Arctic Bay and at two camps 35 mi. distant. The Iglulik Eskimo children's behavior and activities are described. Their earlier maturity than southern children, the cooperative attitude of parents, and close child-teacher relationships are noted. (CaMAI.)

DALGLEISH, PETER, *see* National Northern Development Conference. 1961. No. 74224

DALMATOV, BORIS IVANOVICH, *see* International Conference on soil mechanics . . . 1961. No. 72383

70871. *DAL'NIĬ VOSTOK.* Stikhi nanaĭskikh poĕtov. (Dal'nii Vostok, May-June 1961. god 29, no.3, p. 51-56.) Text in Russian. **Title tr.:** Poems of Nanaets poets.

Presents eight poems in Russian translation relating to present-day Gold life; by Andreĭ Passar, Vladimir Zaksor, and Ermish Samar. (DLC.)

DALY, KATHLEEN (MRS. PEPPER), *see* Pepper, G., & K. Daly. People of the North. 1962. No. 74719

D'AMATO, HENRY E., *see* Covino, B.G., & H.E. D'Amato. Mechanism ventricular fibrillation . . . 1962. No. 70839

70872. DANIELS, FARRINGTON, *Jr.*, 1918– , *and* **P. T. BAKER.** Relationship between body fat and shivering in air at 15°C. (Journal of applied physiology, May 1961. v.16, no.3, p.421-25, illus., tables.) 11 refs.

Reports experiment with 31 men of widely varying body-fat content. Lower skin temperature and 0_2-consumption as well as less shivering showed that thick subcutaneous fat provides insulation against cold. No simple relationship between body temperatures and shivering was found. (DLC.)

DANILEVICH, S.I., *see* Komlev, L.V., & *others.* O vozraste shchelochnykh intruziĭ . . . 1961. No. 72912

DANILOGORSKIĬ, E.P., *see* Gavrikov, S.I., & E.P. Danilogorskiĭ. Ébir-Khainskiĭ . . . 1961. No. 71602

70873. DANILOV, I.D., *and others.* Konkretsii v tolshche serykh valunnykh suglinkov Vorkutskogo raĭona. (Akademiia nauk SSSR. Doklady, June 21, 1962. t.144, no.6, p. 1351-54, tables.) 4 refs. Text in Russian. *Other authors:* A.V. Makedonov *and* V.I. Dembskaia. **Title tr.:** Concretions in the gray boulder loam stratum in the Vorkuta region.

Reports petrographic investigation and chemical analyses of concretions of gray boulder loams distributed in Quaternary deposits. They vary in size from several mm. to 4 cm. and are made up of pyrite, gypsum, iron sulphate, etc. Two phases are noted in their formation. Generally considered of glacial origin, the concretions are thought by the author to have been formed most probably in coastal-lagoon areas of the sea. (DLC.)

70874. DANILOV, I. D. O genezise tolshchi serykh valunnykh suglinkov Vorkutskogo raĭona. *(In:* Moskva. Universitet. Geograficheskii fakul'tet. Voprosy geograficheskogo merzlotovedeniia . . . 1962, p.141-49, illus., tables.) 11 refs.. Text in Russian. **Title tr.:** On the genesis of the gray boulder loam stratum of the Vorkuta region.

Describes the Pleistocene stratum deposited on the watershed areas of Bol'shezemel'skaya Tundra, an average 40-60 m. thick. Its composition, roundness of boulders, total analysis of material, water extracts from the loams, the vegetative and woody inclusions and other features are reported. A glacial-marine origin of this stratum is considered: a marine basin with icebergs and fast ice which affected petrographic composition and roundness of boulder. Hydrometeorologic conditions of marine transgression are also noted. (DLC.)

70875. DANILOV, I. D. Rel'ef i chetvertichnye otlozheniia iugo-zapadnogo sklona Paĭ-Khoia. (Moskva. Universitet. Vestnik, ser.5, geografiia, Nov.-Dec. 1962, no.6, p.56-62, table.) 5 refs. Text in Russian. **Title tr.:** Relief and Quaternary deposits of the southwestern slope of Pay-Khoy.

Reports his 1961 study in the basin of the Korotaikha and its right tributaries: the Nyamdo-Yu and Khey-Yaga. Relief of the area is described. Quaternary deposits are up to 60-75 m. thick. A section consisting of four horizons is described in detail noting their composition and fauna. (DLC.)

70876. DANILOVA, N. S. Zhil'nye l'dy i bugristye torfianiki raiona g. Salekharda. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy 1962. t.19, p.75-80, illus.) 10 refs. Text in Russian. **Title tr.:** Vein ice and peat mounds in the Salekhard region.

Describes peat mounds 10 km. north of Salekhard covered with a network of frost-fissures. The peat bogs are 2-3 m. thick, and about 0.5-1.0 m. below the surface, ice veins are found, as des-

cribed and illus. Vein ice is concluded to be of epigenetic origin. (DLC.)

70877. DANĬUSHEVSKAĬA, A. I., *and* **N. S. SPIRO.** Fiziko-khimicheskaĭa kharakteristika uglevodorodov bitumov osadochnykh porod tsentral'nogo sektora Sovetskoĭ Arktiki. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik stateĭ po geokhimii osadochnykh porod, 1961, vyp.2, p.91-108, tables, diagrs.) 14 refs. Text in Russian. **Title tr.:** Physical-chemical characteristics of hydrocarbon bitumens of sedimentary rocks in the central region of the Soviet Arctic.

Reports chemical investigations of hydrocarbon bitumens collected from Sangar and Chay-Tumus coal deposits and from Cambrian and Permian sandstones, siltstones and dolomites of the Olenek region. In hydrocarbons from coal bitumen, highly condensed aromatic components prevail, whereas those from bitumen of rocks are characterized by light hydrocarbons. Other features also are characterized. (DLC.)

70878. DANĬUSHEVSKAĬA, A. I. Opyt primeneniĭa khromatografii dlĭa razdeleniĭa smolistoĭ chasti bituma Sangarskogo kamennogo uglĭa. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik stateĭ po geokhimii osadochnykh porod, 1961, vyp.2, p.145-56, illus., tables, graphs.) 12 refs. Text in Russian. **Title tr.:** An attempt at using chromatography for separation of the resinous part of bitumen from Sangar hard coal.

Reports chromatographic investigation of the resinous part of bitumen extracted with spirit benzol from Sangar coal. Composition of the bitumen, physical-chemical properties of solvents and resinous fractions of coal are reported. Coal and petroleum resins are compared. The chromatography method is found unsuitable for analyzing the asphaltene part of coal bitumen. (DLC.)

70879. DANĬUSHEVSKAĬA, A. I., *and* **N. S. SPIRO.** Spektrofotometricheskie kharakteristiki nekotorykh bitumov tsentral'nogo sektora Sovetskoĭ Arktiki. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik stateĭ po geokhimii osadochnykh porod, 1961, vyp.2, p.132-44, tables, diagrs.) 7 refs. Text in Russian. **Title tr.:** Spectrophotometric characteristics of some bitumens in the central region of the Soviet Arctic.

Reports a geochemical study of bitumen and oils of the Nordvik, Lena, Olenek, and other regions. Absorption spectra of these substances are reported. Quantitative and qualitative spectrophotometric characteristics of bitumen and hydrocarbons are described and illus. by graphs. The techniques and instruments used, spectrophotometer, filters, etc. are noted. (DLC.)

DANĬUSHEVSKAĬA, A. I., *see also*

Spiro, N.S., & A.I. Danĭushevskaĭa. K razvitiĭu novogo metoda . . . 1961. No. 75874

Spiro, N.S., & A.I. Danĭushevskaĭa. Sopostavlenie adsorbtsionnykh kharakteristik bitumov . . . 1961. No. 75878

DANOVICH, K.N., *see* Rozhkov, A.S., & *others.* Ob izmenenii soderzhaniĭa polisakharidov . . . 1961. No. 75241

70880. DANSGAARD, WILLI. Grønlands inlandsis bevaeger sig 150 m/år. (Ingeniørens ugeblad, May 5, 1962. årg. 6, nr.18, p.8.) Text in Danish. **Title tr.:** The Greenland inland ice moves 150 m./year.

Describes studies of the Jakobshavn Glacier in 1958: C^{14} analyses for age determinations, and O^{18} analyses for paleotemperature studies. The age of the ice was less than a thousand years in 90% of the cases; maximum velocity 270 m., minimum 110 m./year. The results point the dangers of the proposed use of the icecap as dumping ground for radioactive waste materials. (DLC.)

70881. DANSGAARD, WILLI. The isotopic composition of natural waters with special reference to the Greenland ice cap. København, 1961. 120 p. diagrs., tables, graphs, map. (Meddelelser om Grønland, bd. 165, nr. 2.) 105 refs. Summaries in Russian and Danish.

Reports measurements of O^{18} and deuterium in samples of ocean water, fresh water, atmospheric water vapor, and precipitation from tropical to polar climates. Correlations were found between air temperature and the O^{18} content of fresh waters and of precipitation; the isotopic latitude effect in precipitation is shown along the West Greenland coast and at high altitudes on the icecap. Measurements of the isotopes in glacier ice were made during the Arctic Institute Greenland Expedition in 1958. Seasonal variations, with air temperature, in O^{18} and deuterium are shown to be preserved for several hundred years in an iceberg and a temperate glacier. Formation sites on the icecap were determined for each of 11 icebergs by correlating its O^{18} measurement with the mean annual air temperature distribution. Distances and velocities of travel by these icebergs from formation sites to outlet glaciers are calculated; a faster turnover is indicated for the icecap than was hitherto considered. Correlation is shown between the ages of the icebergs and their O^{18} contents. (DGS.)

70882. DANSGAARD, WILLI. The origins and velocities of icebergs determined by O^{18} and C^{14} analysis. *(In:* International Geographical Congress 1960. Physical geography . . . 1961. p.40-47, graphs, table.) 9 refs.

Describes sampling technique and measurements of the O^{18} content of icebergs; then demonstrates a close correlation between the annual means of the air temperature and of the O^{18} content of the precipitation. The part of the Greenland Inland Ice producing the iceberg can be determined from the O^{18} measurements, and rate of movement of the ice by C^{14} datings of Nutt and Scholander, q.v. Weighted mean velocity is 154 ± 15 m./yr., for eight ice samples. (DGS.)

DANSGAARD, WILLI, *see also* Scholander, P.F., & *others.* Radio-carbon & O^{18} . . . icebergs. 1962. No. 75421

70883. *DANSK FISKERITIDENDE.* Grønlandske fiskerianlegg og fiskerier øker i betydning. (Fiskets gang, July 27, 1961. årg. 47, nr. 30, p.524.) Text in Norwegian, summarized from Dansk Fiskeritidende, 1961, nr.26. **Title tr.:** Greenland fish-products plants and fisheries increase in importance.

Reports the processing plants under expansion in Greenland as among the largest in Greater Denmark. The shrimp plant in Kristianshåb is to produce five million cans/year and the freezing plant in Sukkertoppen three million pounds of frozen fillets. A new privately owned plant at Godthåb with the Greenland Trading Co. only a shareholder

is under development. Danish research vessels, financed by the Greenland Council, are experimenting with the floating trawl, as a possible replacement for long-line equipment. (DA.)

70884. DASHZĖVĖG, DĖMBĖRĖLIĬN. Pervai̯a nakhodka mamonta v Mongolii. (Priroda, Aug. 1962. god 51, no.8, p.118.) Text in Russian. **Title tr.:** First find of a mammoth in Mongolia.

Reports a complete skeleton uncovered in an old alluvial deposit of the Ugtaal River valley, central Mongolian People's Republic. The remnants are of a late type of *Elephas primigenius*. (DLC.)

70885. DAT͡SENKO, V. A. Rezul'taty polevykh rabot Eniseĭskoĭ ėkspedit͡sii za 1961 god. (Leningrad. Nauchno-issled. institut geologii Arktiki. Informat͡sionnyĭ sbornik, 1962. vyp.27, p.47-53.) Text in Russian. **Title tr.:** Results of field work of the Yenisey Expedition in 1961.

Reviews this expedition consisting of six geologic mapping-prospecting parties, a rock-study division, four thematic detachments and a geophysical party. It worked in two sections: one in the Noril'sk, the other in the Turukhansk region. Leaders of the various parties, the sites examined, topics of study, and scientific work are stated. Prospects for copper-nickel ores, piezooptic raw materials and coal were found; materials collected for the stratigraphy of Paleozoic deposits, petrologic data on the tuff-lava stratum, etc. More detailed studies are projected for the Yerbuklikan and Nėkongdokon River basins. (DGS.)

DAVIDOVA, N. I., *see* Pacific Science Congress. 1961. No. 74619

70886. DAVIDOVICH, N. V. Predvaritel'nye rezul'taty rabot po opredeleniĭu sostavli̯a̯ushchikh teplovogo balansa novozemel'skikh lednikov v period ablі̯a̯t͡sii. *(In:* Akademii̯a nauk SSSR. Institut geografii . . . Materialy gli̯a̯t͡siologicheskikh . . . 1961. vyp.3, p.32-33, graphs.) Text in Russian. **Title tr.:** Preliminary results of determinations of heat balance components of Novaya Zemlya glaciers in the ablation period.

Reports actinometric observations and temperature measurements of Shokal'skogo glacier at various depths, made during the ablation period, which lasted from June 16 to July 31 in 1958. Radiation balance of the surface, turbulent heat exchange between surface and atmosphere, turbulent moisture exchange, condensation and other components of heat balance are calculated. Two periods in ablation June 16 - July 10, July 11-31, are distinguished and characterized. (DLC.)

DAVIDOVICH, N. V., *see also*

Akademii̯a nauk SSSR. Materialy . . . aktinometricheskie nabli̯udeni̯a. 1961. No. 69549

Akademii̯a nauk SSSR. Materialy . . . dopolnitel'nye nabli̯udeni̯a. 1961. No. 69550

Akademii̯a nauk SSSR. Materialy . . . meteorologicheskie nabli̯udeni̯a. 1961. No. 69547

Akademii̯a nauk SSSR. Materialy . . . meteorologicheskie nabli̯udeni̯a. 1961. No. 69548

70887. DAVIDSON, ALEX T. The forward look. (North, May-June 1961. v.8, no.3, p.8-11.)

Considers prospects and problems of hard rock minerals development in northern Canada. On the basis of geology, the North represents a substantial share in the increase in Canadian metal production, predicted by the Davis report (No. 57554): 3/4 billion dollars/yr. by 1980, with additional 20,000 men employed. But competition from more accessible and less costly areas, is expected to limit each expansion by 50%. A two billion dollar investment, public and private, is needed for mineral and oil development during the next 20 yrs. (DLC.)

70888. DAVIDSON, ALEX T. Oil and gas exploration in northern Canada. (Polar record, Jan. 1961. v.10, no.67, p.359-64, map.)

Discusses discovery and development prospects, Canadian government policies, and implications for development of the North. The oil potential in Yukon and Northwest Territories and the Arctic Islands is up to $200,000,000,000. Low cost oil, capable of competing on world markets, could be produced by efficient land-holding patterns, unit operation of fields, wide well-spacing, etc. Obligations on permits now held require an expenditure of over $400,000,000 for exploration in the next ten years. Production, starting within the next 15 yrs., would continue for at least 40 yrs. (DI.)

DAVIDSON, DONALD THOMAS, 1919– , *see* Alaskan Science Conference 1961. 1962. No.69644

DAVIES, IDRIS L., *see* National Northern Development Conference. 1961. No. 74224

70889. DAVIES, J. A. Albedo measurements over sub-arctic surfaces. Montreal, July 1962. viii, 86 l. illus., diagrs., graphs, tables, 2 fold. maps. (McGill University. Arctic Meteorology Research Group, Publication in meteorology no. 52; *also issued as:* McGill Sub-arctic Research Laboratory, McGill sub-arctic research papers no.13.) 19 refs. Mimeographed.

Reports albedo measurements from the air in June-Aug. 1961 in Quebec-Labrador, and discusses some associated problems. Incoming solar and sky radiation, also short wave radiation reflected from the ground surface, were measured by a Kipp and Zonen Solarimeter, mounted on a Cessna 180 floatplane or a two-engine Piper Apache. Ground covers and flight coverage from the Knob Lake base are described. Small scale maps show the distribution of the five zonal subdivisions of the boreal forest, also the flight routes, north to Fort Chimo, south to Seven Islands, east to several areas, and west to Lake Kaniapiskau. Results are described by cover type; ground and airborne measurements show some disagreement on the effect of scattering and shadowing. Automatic and continuous recording of albedo is recommended to show small changes in the three variables: ground cover-types, clouds above, and shadowing by clouds. (CaMAI.)

70890. DAVIES, J. F. Mineral deposits in the Churchill geologic province, Manitoba. (Canadian mining journal, Apr. 1962. v.83, no.4, p.60-62, map.) Paper presented at the Prospectors and Developers Association Convention, Toronto, Mar. 11-14, 1962.

Discusses potentialities for mineralization, especially in the dominant sedimentary gneisses, in this area of northern Manitoba. The view that these rocks are unfavorable for mineral deposits is discredited by several important discoveries. Recent examples include: nickel at Thompson; copper near Sherridon; gold near Nokomis Lake, east of Sherridon; and copper-zinc near Fox Lake,

southwest of Lynn Lake. (DGS.)

70891. DAVIES, JANE SANGSTER. A collection of plants for the McGill Laboratory. *(In:* McGill University. McGill Sub-arctic Research Lab. Field research. . . 1960-61, *pub.* 1962, p.97-101.)

Lists ten sites visited during the summer of 1961, including disturbed sites as Fort Chimo and Seven Islands, sub-alpine meadow at Snowy Channel 12 mi. northwest of Schefferville, and open lichen woodland near Lac Jeannine. The collection has 74 lower-plant, 114 monocotyledon, and 355 dicotyledon specimens; 29 families are represented. (DWB.)

70892. DAVIES, JOHN A. Radiation measurements over vegetation covers of Labrador-Ungava. *(In:* McGill University. McGill Sub-arctic Research Lab. Field research . . . 1960-61, *pub.* 1962. p.1-16, illus., map, table.) 9 refs.

Summarizes results of air-borne measurements of the albedo of major cover-types as well as ground measurement of net radiation flux and albedo of different surfaces. The June-Aug. 1961 program included north-south aerial traverse and partial east-west coverage. The six cover-types are described. Results compared with 1957 readings (No. 58933) show close correspondence of median albedo values for lichen woodland, but noticeable differences for other cover-types; e.g., bare lichen, bog, and muskeg. All cover-types showed a significant range of values, depending on such factors as latitude, elevation, season, and number of observations. Values for open water varied greatly with time (9 a.m. - 6 p.m.) of observations. Instrumentation and methods are described. (DWB.)

70893. DAVIES, JOHN A. A survey of two years' weather records in the Ferriman Mine area, June 1959 - June 1961. *(In:* McGill University. McGill Sub-arctic Research Lab. Field research . . . 1960-61, *pub.* 1962. p.76-96, graphs, tables.) 8 refs.

Attempts to show a relation between the air temperature and wind record from two Ferriman sites about seven mi. northwest of Schefferville, and the extensive occurrence of permafrost throughout the area. The official Knob Lake station and the two mine area stations are described as to site and instrumentation. Calculation methods for obtaining mean temperatures and wind mileages are outlined, as are problems encountered. Conclusions are tentative, as five years' data are considered necessary for statistical comparison of the three stations. Wind differences are due to elevation; permafrost occurs as a function in the interplay of two factors: sub-freezing mean annual air temperature, and a receptive ground surface in the form of bare tundra ridges. (DWB.)

DAVIES, KENNETH, *see* Agy, V., & K. Davies. Worldwide patterns . . . blackout . . . 1962. No. 69513

70894. DAVIES, L. E. C., *and* **T. W. M. CAMERON.** Trichinosis in the Northwest Territories. (Canadian Medical Services Journal. Feb. 1961. v.17, no.2, p.99-104, tables.) 16 refs.

Reports on 618 tests made in 1957-58 along the arctic coast of Canada. The highest incidence was found in Eskimos of the central region; the highest hydatid incidence in areas where caribou exist. Case histories are presented. Introductory review is included of earlier records of human and wild-animal trichinosis from Canada and arctic areas generally. (DNLM.)

DAVIES, R.B., *see* Swain, A., & *others.* Long-distance migration of salmon. 1962. No. 76041

70895. DAVIES, WILLIAM EDWARD, 1917– , *and* **D. B. KRINSLEY.** Caves in northern Greenland. (National Speleological Society, Bulletin, July 1960. v.22, part 2, p.114-16, illus., map.) Ref.

Describes a dozen large solution caves, visited in June 1960 in a valley about 15 mi. north of Centrum Sø (80°24′N. 22°22′W.). Bed rock is the Ordovician-Silurian Centrum limestone. Color and composition of the cave "fill" suggest warmer climatic conditions at the time of deposition, probably similar to those in the Mammoth Cave area of Kentucky at present. Other such caves are known in Greenland. Sketch map, scale approx. 1 in. = 10 mi., of the general area has inset showing locations of caves visited. (DGS.)

70896. DAVIES, WILLIAM EDWARD, 1917– , *and* **D. B. KRINSLEY.** Evaluation of arctic ice-free land sites, Kronprins Christian Land and Peary Land, North Greenland, 1960. Bedford, Mass. June 1961. ix, 51 p. illus., maps, graphs, tables. (U.S. Air Force. Cambridge Research Laboratories. Air Force surveys in geophysics no. 135, AFCRL 469.) Refs.

Describes June-July 1960 investigations of ten sites for unprepared emergency airfields, mainly the unconsolidated surface deposits and related ground features. An outline of glacial sequence in the area has been established: the active zone above permafrost is about 24-30 in. thick. Pertinent data are given for each site, where possible. Changes are suggested for the east half of the Brønlund Fjord runway, found unsafe from early June to mid-July. Helicopter transport and air support are described. Most unprepared sites in North Greenland are not suitable for long natural airfields; but minor grading would enable the development of many 5000-ft. airstrips suitable for heavy aircraft. Numerous sites are suited, without grading, to 2000-ft. runways for light aircraft. Soils are strong enough at all sites to support heavy aircraft except during the two-week melt season in late May or June. Helicopters are well-suited for field work in this area. (CaMAI.)

70897. DAVIES, WILLIAM EDWARD, 1917– . Glacier caves in Svartisen, Norway. (National Speleological Society. Bulletin, July, 1961. v.23, pt.2, p.75.)

Describes caves in Østerdalsisen, a large outlet glacier in the eastern part of Svartisen 66°40′N. 13°56′E. The caves along the northern part of the glacier front are regular melt channels about 1.5 m. high and up to three m. wide. The floors are bedrock with gradients of about 8% toward the glacier center. The caves extend about 100 m. into the glacier. A bedrock cave along the southern part of the glacier front, formerly a marginal channel overridden by the glacier, is 3-5 m. wide, 2-5 m. high and about 300 m. long. The cave is an active melt area and in many places the ice ceiling has collapsed; the remaining part of the cave is covered by ice only a few m. thick.—From CRREL. (DLC.)

70898. DAVIES, WILLIAM EDWARD, 1917– , *and* D. B. KRINSLEY. The recent regimen of the ice cap margin in North Greenland. *(In:* International Association of Scientific Hydrology. Pub. 58, Symposium of Obergurgl 1962, p.119-30, illus., maps, tables.) 29 refs. Summary in French.

Discusses the icecap margin from Kap York on the west coast through Pearyland and south to Nioghalvfjerdsfjorden approx. 79°N. 19°W., on the east coast. Field investigation of 1953 and 1956-1960, and photographic interpretation indicate a retreat of 2-8 km. during the last 50 yrs., or a 10-100 m. diminishing in thickness at relatively stagnant ice fronts. Outlet glaciers at Independence Fjord and Hagen Fjord along the northeast margin have retreated farther than the outlet glaciers at Kap York, Inglefield Bredning and Petermann Gletscher along the northwest. Several northwest coast glaciers, such as Brother John Gletscher at Etah, are now stagnant; their advances, recently ceased, were nourished from the independent lobes of the main icecap which received greater accumulation, The independent icecaps of northeast Greenland have diminished very little in recent time. A slightly positive net balance of accumulation over ablation and calving seems indicated. Extensive net ablation in the peripheral zone, also a possible lag in the outward movement of accumulated material may be responsible.–From authors' abstract. (DGS.)

70899. DAVIES, WILLIAM EDWARD, 1917– . Surface features of permafrost in arid areas. *(In:* International Geographical Congress 1960. Physical geography . . . 1961. p.48-56 , illus., map, table.) 4 refs.

Describes permafrost and soil conditions in several places in the Polaris Promontory and Jørgen Brønlunds Fjord areas of North Greenland, as investigated by U.S. Geological Survey personnel 1956-1958, for the Arctic Terrain Research program of the U.S. Air Force Cambridge Research Center. Comparison is made with similar areas in the Copper River basin of Alaska, and in parts of northern Canada. Data from the Greenland areas indicate that the formation of surface features of permafrost in these polar desert regions is arrested or retarded in spite of temperature extremes.(DGS.)

70900. DAVIES, WILLIAM EDWARD, 1917– . Surface features of permafrost in arid areas. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.981-87, illus., map, table.) 4 refs.

Summarizes observations of U.S. Geological Survey personnel during 1956-1958 in North Greenland, especially near Brønlunds Fjord and on Polaris Promontory. This high-arctic desert was found in great contrast with wet-soil permafrost conditions as in the Arctic Slope of Alaska, though physical characteristics of the active zone are similar in the two regions. The top of the permafrost is uniform, with flat or gently sloping surface; the ground surface in the regions studied, however, shows few characteristic features of permafrost or severe frost action. Only many small, polygonal dessication cracks, irregular polygons, and shrinkage cracks were observed. Permafrost in arid areas produces generally increased soil compaction, steady and uniform moisture content, and a high-shear strength. (DLC.)

DAVIES, WILLIAM EDWARD, 1917– , *see also* Needleman, S.M., & *others*. . . . Centrum Sø . . . 1962. No. 74244

70901. DAVIS, A. E. Road construction for forestry practice in Northern Ontario. *(In:* National Research Council of Canada . . . Proceedings of the Seventh Muskeg Research Conference . . . 1961. p.92-102.)

Describes two main types of roads used by the Spruce Falls Power & Paper Co. of Kapuskasing, one a winter road, and the other gravel surfaced. Construction methods, limitations, and advantages of both types are outlined, as are recurring problems of drainage, culvert installation, maintaining contact with road crew, etc. Symbols used by the Company to indicate vegetal cover and peat structure are explained in the appendix.(DLC.)

70902. DAVIS, L. R., *and* K. W. OGILVIE. Rocket observations of solar protons during the November 1960 events, 2. (Journal of geophysical research, May 1962. v.67, no.5, p.1711-16, tables, graphs.) 14 refs. In sequence to No. 74477.

Presents results of observations from Ft. Churchill during the Nov. 15 event. Four spectra showing a flattening toward the threshold energy of 4.0 Mev. and a rise at even lower energies are given. The decay of intensity was proportional to $1/T^3$ above 100 Mev. A plot of the riometer observation against integral intensity of solar protons above 10 and 100 Mev. is given for eight rocket shots. A large intensity of α particles was observed about 2000 U T on Nov. 16.–From authors' abstract. (DLC.)

70903. DAVIS, L. R., *and others*. Rocket observations of solar protons on September 3, 1960. (Physical review letters, May 1, 1961. v.6, no.9, p.492-94, tables, graphs.) 4 refs. *Other authors:* C.E. Fichtel, D.E. Guss, *and* K.W. Ogilvie.

Presents results of observations by means of Geiger counter and nuclear emulsion on two rocket flights (to 130 km. altitude) from Ft. Churchill, Manitoba, during a solar particle event. Proton flux values are tabulated and the integral and differential energy spectra are given and discussed briefly. (DLC.)

DAVIS, L. R., *see also* Ogilvie, K.W., & *others*. Rocket observations . . . 1962. No. 74477

70904. DAVIS, PERRY HUME. Alaska conservation, G. I. style. (Alaska sportsman, July 1961. v.27, no.7, p.14-17,+, illus.)

Describes U.S. Army conservation activities in Alaska since 1955: The Military Wildlife Conservation agents are trained in special courses at the University of Alaska to instruct Army personnel on conservation practices, state fish and game laws, etc., and to cooperate in projects of government biologists: the stocking of sport-fishing sites in the Anchorage area, tagging of moose calves in the Palmer-Wasilla area, etc. Army posts serve as refuges for game, e.g. the bison herd at Fort Greely. (DI.)

DAVIS, STANLEY NELSON, 1924– , *see* Hartshorn, J.H., & *others*. Investigations of ice-free sites . . . 1961. No. 72056

DAVIS, T.C., *Jr.*, *see* Ragle, R.N., & T.C. Davis. Greenland traverses. 1962. No. 75022

70905. **DAVIS, T. NEIL,** *and* **D. S. KIMBALL.** The auroral display of February 13-14, 1958. College, Alaska, Jan. 1962. 24 l. maps, graphs, tables, plates. (Alaska. University. Geophysical Institute, Geophysical research report UAG-R120.) 11 refs. *Also issued as:* Scientific report no.2, NSF grant no. G 14782.

Presents nearly 150 detailed synoptic maps of this display depicting the auroral configurations as well as the magnitude and direction of magnetic disturbance at five-minute intervals, as determined from nine observing stations in Alaska, where eight all-sky cameras were operated during the IGY. The remarkable complexity of an auroral display is clearly shown; as are the orderly position, configuration, sequence of type, and motions of auroral forms. Results indicate the difference in morphology of an auroral display as observed by a network from that observed by a single station; also pronounced but imperfect relationships of the position, magnitude, and orientation of magnetic disturbance with the position, intensity, and configuration of auroral forms. (DGS.)

70906. **DAVIS, T. NEIL.** An investigation of the morphology of the auroral displays of 1957-58. College, Alaska, Apr. 1961. viii, 107 l. illus., maps, diagrs., graphs, tables. (Alaska. University. Geophysical Institute, Scientific report no.1, NSF Grant no. G14782; *also* Geophysical research report UAG-R117.) 68 refs. Mimeographed.

Presents results of study of the visual aurora, based on the all-sky camera records obtained during the IGY. from a closely-spaced network of Alaskan stations, also additional stations extending from Choteau, Montana, across Canada to Thule. Morphological aspects studied include the time and latitude dependency of the incidence, azimuthal alignment, direction of horizontal motion of auroral forms, also relation of these aspects to magnetic disturbance. Auroral incidence has a single diurnal maximum at 22 hours approx. geomagnetic time at geomag. latitudes 60° to 68°; near latitude 70° three maxima appear at 17, 23, and 03-04 hours. Farther north, two maxima occur at about 16 and 04 hours; these merge into a single peak at the geomagnetic pole. Azimuthal alignment of auroral forms is nearly geomag. east-west at geomag. lat. 55° - 68°; from lat. 68° to 80° alignment is transitional to the approx. sun-ward alignment noted above lat. 80°. At the auroral zone, horizontal auroral motions are westward in the evening and eastward in the morning; meridional motions are southward throughout the night. Reversal from westward to eastward motion occurs abruptly, but at different times. Patterns representing the average incidence, alignment, and direction of motion of the aurora throughout the north polar region are deduced from the results of analysis. These patterns are centered about the boreal geomagnetic pole and are fixed with regard to the direction toward the sun. Association of the alignment and direction of auroral forms with the density and direction of ionospheric currents is indicated. Description of the all-sky cameras used, also techniques evolved for reducing the data, are given. (DGS.)

70907. **DAVIS, T. NEIL.** The morphology of the auroral displays of 1957-1958, 1; statistical analyses of Alaska data. (Journal of geophysical research, Jan. 1962. v.67, no.1, p.59-74, diagrs., graphs, map.) 19 refs.

Reports study of the variation of auroral phenomena with local time and geomagnetic latitude, using data from a meridional array of all-sky cameras in Alaska. The form of the diurnal variation depends on the criteria used for auroral activity: criteria based on the counting of forms peak near local midnight; those based on total luminosity in the sky show high activity in the morning hours. Maximum incidence occurs near 66°30′N. geomagnetic latitude; distribution with latitude 60° - 70° N. is determined. Although the southern extent of auroras retreats northward after local magnetic midnight, the southward motion of individual forms observed south of the auroral zone peak predominates over the northward motion throughout the night.—From author's abstract. (DLC.)

70908. **DAVIS, T. NEIL.** The morphology of the auroral displays of 1957-1958, 2: detail analyses of Alaska data and analyses of high-latitude data. (Journal of geophysical research, Jan. 1962. v.67, no.1, p.75-110, tables, graphs, diagrs., maps.) 43 refs.

Reports study based on all-sky camera records from Alaska, Canada, Greenland, and Sweden. The diurnal variation of auroral incidence at 60° - 68° N. geomagnetic latitude has a single maximum. Near 70°N. three maxima occur; at and above 75°, two. These maxima verge into a single peak at the geomagnetic pole. The azimuthal alignment of auroral forms is nearly geomagnetic east-west at 55° - 68° and approximately in the direction of the sun above 80°. Horizontal motions at the auroral zone are westward in the evening and eastward in the morning; meridional motions are primarily southward throughout the night. A detailed association of the alignment and direction of motion of auroral forms with the magnitude and direction of ionospheric currents is indicated; the current is generally parallel to the alignment and opposite in direction to motion within the forms. Patterns are deduced representing average incidence, alignment and direction of motion throughout the polar region; they are centered about the geomagnetic pole and are fixed with respect to the direction toward the sun.—From author's abstract. (DLC.)

70909. **DAVIS, T. NEIL,** *and* **C. J. ECHOLS.** A table of Alaskan earthquakes, 1788-1961. College, Alaska, Aug. 1962. 4, 41 l. map, table. (Alaska. University. Geophysical Institute, Geophysical research report no.8; also UAG-R 131.) 64 refs.

Lists chronologically the known earthquakes of approx. 5 or greater magnitude; location, general remarks, date and time, latitude and longitude if known, magnitude, focal depth (> 50 km.), and source materials, are tabulated. Map approx. 1 in.: 400 mi. shows locations of quakes since 1898. Several destructive ones are specially noted, e.g. one of 8.6 magnitude Sept. 10, 1899, in Southeast Alaska; M 7.3, July 22, 1937, Central Alaska; M 7, south-central Alaska, Oct. 16, 1947; M 8, Southeast Alaska, July 10, 1958; the last produced the giant wave in Lituya Bay. (DGS.)

DAVIS, T. NEIL, *see also* Alaskan Science Conference 1960. 1961. No. 69643

70910. **DAVIS, THOMAS R. A.** Chamber cold acclimatization in man. Fort Knox, Ky., May 19, 1961.

2, 8 p. illus., table. (U.S. Army Medical Research Laboratory. Report no.475.) 20 refs. Also reported in *Journal of applied physiology* Nov. 1961, p.1011-15.

Reports a study of nude subjects exposed daily during March or September to about 12 or 14°C. for eight hours. Cold acclimatization was achieved after 3-4 weeks exposure, as best indicated by decrease or extinction of shivering. Heat production did not decrease, an aspect which is discussed. (DNLM.)

70911. DAVIS, THOMAS R. A. The effect of heat acclimatization on artificial and natural cold acclimatization in man. Fort Knox, Ky. Aug. 25, 1961. 2, 7 p. illus. (U.S. Army Medical Research Laboratory. Report no. 495.) 7 refs. Also reported in *Journal of applied physiology* Sept. 1962, p.751-53.

Reports six men cold-acclimatized by nude exposure to about 14°C. for 28 days and subsequently heat-acclimatized for 21 days. The results indicate that cold and heat acclimatization are not mutually exclusive and can exist simultaneously in an individual. (DNLM.)

70912. DAVIS, THOMAS R. A. Experimental cold acclimatization in man. Fort Knox, Ky., Dec. 19, 1960. 2, 8 p. illus., table. (U.S. Army Medical Research Laboratory. Report no.457.) 19 refs.

Men exposed to cold (11.8 ± 0.5°C.) for 8 hours daily during one month, showed a significant drop of shivering the 10th day while heat production remained 30-40% above normal throughout the experiment. Basal metabolism and surface temperatures did not change but rectal temperature fell in the middle of the experiment and remained lowered till its end. (DNLM.)

70913. DAVIS, THOMAS R. A., *and* **D. R. JOHNSTON.** Seasonal acclimatization to cold in man. (Journal of applied physiology, Mar. 1961. v.16, no. 2, p.231-34, illus., tables.) 16 refs.

Reports study of two groups exposed once monthly to a standard cold stress, one from October to February, the other from February to September. In the former, shivering decreased to a January 7% value and cold induced heat production of 52% as compared with the initial, October values. The "summer" group showed increased shivering, culminating in September. No significant changes in rectal or skin temperature were noted throughout the study. (DLC.)

DAVIS, THOMAS R. A., *see also*

Di Giovanni, C., & *others*. Microbiol. & sanitation military op. 1962. No. 71032

Poe, R.H., & T.R.A. Davis. Cold exposure . . . 1962. No. 74838

70914. DAVYDOV, A. F. Letne-osennīaīa past'ba olenei. (Sel'skoe khozīaĭstvo Severo-Zapadnoĭ zony, July 1961. god 4, no.7, p.59-61.) Text in Russian. **Title tr.:** Reindeer pasturing in summer and fall.

During the snowless period of the year, the herds range the valleys and the banks of rivers and lakes. In the rugged tundras of Kola Peninsula, such pasturage is limited and the herds move from place to place at 25-30 km./day. Measures to reduce these movements and increase use of the pastures by proper herding and consideration of weather conditions are discussed with technical details. (DLC.)

70915. DAVYDOVA, IŪ. S., *and* **V. I. TRESHCHEVA.** Ispol'zovanie kitovogo mīasa dlīa pishchevykh tseleĭ. (Rybnoe khozīaĭstvo, 1962. god 38, no.5, p.66-69, tables.) 3 refs. Text in Russian. **Title tr.:** Utilization of whale meat for nutrition.

Reports the chemical composition of whale meat and describes Soviet experiments in canning and sausage manufacture based on whale meat, with formulas, etc. The products are evaluated and their chemical composition given. Special dishes from whale meat also are noted. (DLC.)

70916. DAVYDOVA, N. I., *and others*. Volnovaīa kartina pri glubinnom seĭsmicheskom zondirovanii na profile Magadan-Kolyma. *(In:* Soveshchanie po glubinnomu seĭsmicheskomu zondirovaniīu zemnoĭ kory . . . v SSSR, *pub.* 1962, p.133-45, diagrs., graphs.) 13 refs. Text in Russian. *Other authors:* IĀ. B. Shvartsman *and* G. A. IĀroshevskaīa **Title tr.:** Wave picture of deep seismic soundings along the profile Magadan-Kolyma.

Reports work in 1959 along a 430 km. route from Magadan to Ust'-Srednikan on the Kolyma; instruments and methods of the work are described. Three groups of waves: P^{o}, P^{*} and P are registered and their paths, speed, kinematic and dynamic characteristics are described. The boundary of the Mohorovičić discontinuity lay at 32-38 km. depth. Approximately at 20 km. was the limit of the "basaltic" layer, and at 5-7 km. depth possibly that of the Verkhoyansk complex. Other features of these soundings are interpreted. (DLC.)

DAWSON, B., *see* Lim, R., & *others*. Circulatory arrest . . . 1961. No. 73501

DAWSON, K.B., *see* Bloom, H.J.G., & K.B. Dawson. Enhanced effect . . . X-irradiation . . . 1961. No. 70257

70917. DAWSON, WILLIAM RYAN, 1927- Evolution of temperature regulation in birds. *(In:* Symposia on arctic biology and medicine. Proceedings 1962, p.45-71.) 95 refs.

Reviews the phylogeny and high specialization of the bird, then deals with their body temperature, temperature control by behavioral means, neural thermoregulation, chemical and metabolic regulation, physical thermoregulation, and its ontogeny. The presumptive evolutionary steps and order of temperature regulation in birds are discussed, its origin from rudimentary reptilian function postulated and mechanisms common to both, like panting, are pointed out. (CaMAI.)

70918. *DAWSON COUNCILMAN NEWSLETTER.* Dawson, Fall 1961- *in progress?*

Published twice yearly, in approx. 5 p. mimeographed, reporting on matters discussed and resolutions passed at the Fall and Spring sessions of the Yukon Territorial Council. (CaONA.)

70919. DAY, J. H. Reconnaissance soil survey of the Takhini and Dezadeash valleys in the Yukon Territory. Ottawa, Queen's Printer, 1962. 78 p. illus., tables, maps incl. 1 fold. 7 refs. (Canada. Dept. of Agriculture. Research Branch.)

Describes a survey made in the summers of 1957-1958, of 441,050 acres in southwestern Yukon, including the valleys of the Yukon River between Whitehorse and Lake Laberge, the Takhini, and the Dezadeash between Champagne and the big bend where the river turns south to join the Alsek, and the area west of the big bend of the Dezadeash to

Bear Creek summit. A geographical description of the area is given. The brown wooded soil group covers 57% of it, the regosol group 11%, poorly drained meadow 2%, gleysol groups 3%, chernozemic dark gray (grass land) 6%, and well-drained gray wooded soils 2%. The survey procedure is described, and classification system explained. Each group and its subdivisions are characterized. Results of physical and chemical analyses are tabulated, and a soil map at 1:126,720 scale is included. Of the whole area, 30.6% is good arable, 16.0% is fair, 17.0% poor, and 36.4% is non-arable land. Appended is acreage table of soil series and land types; also glossary. (CaOGB.)

DEAN, WILLIAM GEORGE, 1921– , *see* *Canadian geographer.* Arctic issue. 1962. No. 70593

70920. DEANE, R. E. Geology of lacustrine clays. (National Research Council of Canada. Associate Committee on Soil and Snow Mechanics. Technical memorandum no.69, Proceedings of the Fourteenth Canadian Soil Mechanics Conferences, 13 and 14 October 1960, *pub.* 1961, p.174-84, map.) 7 refs. Discussion by J.A. Elson.

Discusses the distribution, deposition, characteristics, etc. of varved clays, in Pleistocene lakes of mainland Canada. Deposition features as temperature, density, turbidity, pH concentration, etc. are also contrasted with such in glacial lakes on Baffin Island and the Lake Hazen area on Ellesmere. (DLC.)

DEANE, R.W., *see* Heinrich, W.E., & R.W. Deane. Occurrence of barylite. . .1962. No. 72094

70921. DEARBORN, CURTIS HOWARD, 1912– . Performance of 127 potato varieties in Alaska, 1951-1959. Palmer, Alaska, June 1960. 26 p. plates, table. (Alaska. University. Agricultural Experiment Station. Bulletin 29.)

Lists and evaluates varieties tested for interior Alaska. Four white potatoes are recommended for commercial production, a red-skinned and a pink-skinned variety for specialty use, and two yellow for home gardening. Physical defects cause more losses than disease. (DA.)

DEARBORN, CURTIS HOWARD, 1912– , *see also* Alaskan Science Conference 1960. 1961. No. 69643

70922. De ARMOND, ROBERT NEIL, 1911– And a town grew. (Alaska sportsman, Aug. 1960. v.26, no.8, p.34-37, +, illus.)

Reviews development of Juneau since 1880, from gold mining camp to state capital of Alaska. Early mining days, staking of the first claims by Juneau and Harris, problems with Indians, and the anti-Chinese riots of 1886 are recounted. This community sponsored the first political convention in Alaska in 1881, became temporary capital in 1900 later the Territorial capital. Mining, fishing and lumbering have been primary industries; but mining declined after the Treadwell Mine explosion in 1917, and ended when the Alaska-Juneau closed in 1944. (DI.)

70923. De ARMOND, ROBERT NEIL, 1911– And so it was named: Girdwood. (Alaska sportsman, June 1962. v.28, no.6, p.40-41, illus.)

Reviews development of this incorporated third-class city on the Alaska Railroad and Sterling Highway south of Anchorage. It was founded in the early 1900's as a supply and transfer point for the Crow Creek gold-mining district, and named after one of the prospectors. Several of the placer and lode mining enterprises are noted. The community is now the gateway to the Mount Alayeska ski area. (DI.)

70924. De ARMOND, ROBERT NEIL, 1911– They were named for *Pinta.* (Alaska sportsman, Feb. 1962. v.28, no.2, p.29-30, illus.)

Describes the U.S. Navy steam tug *Pinta,* based at Sitka 1884-1897, and recounts her activities in Alaskan waters. Several places in Southeast Alaska were named after the vessel. (DLC.)

DeARMOND, ROBERT NEIL, 1911- , *see also* *Alaska sportsman.* Ferry. 1962. No. 69642

DEAVERS, S., *see* Hoff, H.E., & *others.* Potassium distribution. . .1961. No. 72187

70925. DEBENHAM, FRANK, 1883– . When the ice melts. (Geographical magazine, Mar. 1962. v.34, no.11, p.630-38, illus., map.)

Describes the Greenland and Antarctic ice-caps, and considers probable effects of their melting on world shore lines, climate, and gravity distribution. Removal of the icecap weight would result in shift in position of the Poles, as evidenced by movement of the North Pole six inches per yr. near Greenland. (DLC.)

70926. DEBEȚS, GEORGIĬ FRANȚSEVICH. O putiakh zaseleniia severnoĭ polosy Russkoĭ ravniny i vostochnoĭ Pribaltiki. (Sovetskaia ėtnografiia, Nov.-Dec. 1961, no.6, p.51-69, tables, graphs.) 30 refs. Text in Russian. Summary in English. Title tr.: The settlement pattern of the northern belt of the Russian plain and eastern Baltic.

Paleoanthropological analysis of the stone and bronze age population: groups of mixed European and Siberian (Mongoloid) origin were the initial settlers of the area. Indices of prehistoric (local) and modern crania are discussed and tabulated, including: Ostyak, Vogul, Samoyed, Lapp, Yakut, Tungus, and Gold. (DLC.)

70927. DEBEȚS, GEORGIĬ FRANȚSEVICH. The skeletal remains of the Ipiutak cemetery. (International Congress of Americanists, 33rd, *San José, Costa Rica,* 1958. Proceedings *pub.* 1959, v.2, p.57-64, tables.) Refs. in text.

Physical anthropological study of skeletons from the Ipiutak and Tigara cemeteries and their relation to Eskimo-Aleuts and Paleosiberians, based primarily on the author's work at the New York Natural History Museum in 1957-1958. Ipiutak and Tigara peoples are considered coeval branches descendent from a common ancestral type, related in turn, to ancestral Aleuts. A possible connection may exist between these two ancestral groups and the ancestors of modern Yukaghirs. Comparative data for flatness of face and protrusion of nose are tabulated for Ipiutak, Tigara, Yukaghirs, Tungus, Aleuts, Kwakiutl Indians, etc.; also skull and long bone measurements for male and female Ipiutak and Tigara. (DSI.)

DEBIJADJI, R., *see*

Pantelić, D., & *others.* E.C.G. Changes . . . hypotension . . . 1960. No. 74639

Pantelić, D., & *others.* E.C.G. changes . . . 1960. No. 74640

70928. DECAUD, J., *and* E. KESSLER. Étude du débit sanguin de la main lors d'un changement brusque de la température locale. (Journal de physiologie, 1961. t.53, no.3, p.561-78, illus., tables.) 37 refs. Text in French. Summary in English. **Title tr.:** Study of blood debit in the hand due to a sudden change of local temperature.

Reports responses to sharp temperature changes in the hand of males and females, 25 and 35 years old. The change in blood flow took place within 10 seconds following cold immersion, reaching a steady level long before the tissue does. This indicates that the vascular response to a local thermal stimulus is induced by a reflex mechanism. (DNLM.)

70929. DECAUD, J., *and* E. KESSLER. Réactions vaso-motrices de la main lors d'un changement brusque de la température locale. (Journal de physiologie, 1961. t.53, no.2, p.314-15.) 6 refs. Text in French. **Title tr.:** Vasomotor reactions of the hand due to sharp change in local temperature.

Reports on plethysmographic observations, with the hand plunged into water of 33.6°, 41°, and 19°C. In the last case, prompt dilation followed immersion, and was succeeded by a 60% decrease in 8 seconds. In the sixth and tenth second after immersion, conditions resemble those observed after forty minutes. (DNLM.)

70930. De CELLES, LEONCE. The greater snow goose. (Roundel, Oct. 1962. v.14, no.8, p.18-20, illus., map.) Reprinted from *Blue Bell,* Bell Telephone Co. of Canada.

Describes migration, nesting, feeding habits of these large (4.5 ft. wing spread) birds, who winter near Cape Hatteras, N.C., visit Quebec from late March to early May, and breed on Bylot Island, 73°N. 80° W. The species was nearly extinct in 1900; in 1956, 28,000 flew north in May and 80,000 returned in September. (DLC.)

70931. DECLOITRE, LUCIEN. Sur quelques thécamoebiens récoltés en Norvège. (Hydrobiologia, Feb. 15, 1962. v.19, no.2, p.179-82, illus., table.) Text in French. **Title tr.:** On some thecamoebaea collected in Norway.

Presents brief notes on 24 species of protozoans on lichens and mosses collected at Gratangen near Narvik. One, *Centropyxis halophila* var. *gigas,* is new to science, and 17 are reported for the first time from Norway. (DGS.)

70932. DEDEEV, V. A., *and others.* Stroenie dosredneĭūrskogo fundamenta Zapadno-Sibirskoĭ nizmennosti v svete novykh dannykh. (Sovetskaĭa geologiĭa, July 1962, no.7, p.26-40, maps.) 9 refs. Text in Russian. *Other authors:* V.D. Nalivkin, T.N. Simonenko, V.N. Sokolov, *and* N.V. Shablinskaĭa. **Title tr.:** Structure of the pre-Middle Jurassic basement of the West Siberian plain in the light of the new data.

Reports a new tectonic map for West Siberia including northern areas of Tyumen and Krasnoyarsk Provinces, its compilation based on gravity and magnetic data. Five folding systems, Proterozoic, Baykalian, Caledonian, Hercynian and Kimmeridgian, are distinguished and briefly characterized. (DLC.)

70933. DEDĬURIN, A. Za aktivnyĭ metod ledokol'nykh provodok; iz opyta ledokola "Moskva." (Morskoĭ flot, Jan. 1962. god 22, no.1, p.35-36.) Text in Russian. **Title tr.:** An effective method of icebreaker escort; experience with the icebreaker *Moskva.*

Reports improved results of convoy operations on the Northern Sea Route in 1961, achieved by increasing the speed of the convoy from 3-4 to 8-10 kts. At the higher speed, the larger ice blocks are thrown clear of the channel broken, which remains practically ice-free for 200 m. behind the icebreaker. (DLC.)

70934. DEDOK, T. A. O nekotorykh predstaviteliākh rannekamennougol'nykh brakhiopod Novoĭ Zemli. (Paleontologicheskiĭ zhurnal, 1961, no.3, p.57-60, illus.) 7 refs. Text in Russian. **Title tr.:** Some early Carboniferous brachiopods of Novaya Zemlya.

Describes systematically *Buxtonia(?) mirabilis* and *Brachythyris pseudogracilis* n. spp., also *Paulonia ranovensis* n. ssp. from the Lower Carboniferous of the southern island of Novaya Zemlya. (DLC.)

70935. DEE, RONALD, *and others.* Circulatory effects of pulmonary hypothermia. (Surgical forum 1961. v.12, p.180-81, illus.) 2 refs. *Other authors:* R.H. Goetz, M. Rohman, V.M. Goetz *and* D. State.

Reports on conditions in the dog submitted to cold perfusion of the lungs. The effect of temperature changes, cooling or rewarming, was manifest in the pulmonary vascular bed and brought about by its musculature. (DNLM.)

DEE, RONALD, *see also* Goetz, R.H., & *others.* Temp. changes & pulmonary circ. 1962. No. 71722

70936. DEEHR, CHARLES S. A spectrophotometric study of the aurora of 27 November 1959 at College, Alaska. College, Alaska, May 1961. iii, 29 p. illus., map, graphs, tables. (Alaska. University, Geophysical Institute. Scientific report no.10, NSF Grant no. Y/22.6/327; *also* Geophysical research report UAG-R119.) 32 refs.

Describes observations of a relatively rare auroral phenomenon, a high latitude red arc which occurred at about 350 km. above the earth, on this date. Absolute intensities of λ 6300, λ 5577, and λ 5893 obtained photometrically are given for the period during which the red arc was visible. The spectroscopic film was calibrated to allow deduction of significant intensity measurements. Absolute intensities of various auroral emissions in the geomagnetic zenith were deduced from the spectrograms for the periods during the night when the cloud cover was not too heavy. Spectrograms and all-sky camera pictures of the red arc are discussed and a diagram of the associated disturbance magnetic field effects is given. (DGS.)

DEEHR, CHARLES S., *see also* Rees, M.H., & C.S. Deehr. . . . atmospheric sodium emission . . . 1962. No. 75092

70937. DEES, LOLA T. Ambergris. Washington, D.C., 1961. 8 p. illus. (U.S. Fish and Wildlife Service. Fishery leaflet 517.) 6 refs.

Discusses occurrence and price of this substance; its source, the sperm whale: physical and chemical properties; use; identification; substitutes. (DI.)

70938. DEFANT, ALBERT, 1884– .Physical oceanography. Oxford, England, Pergamon Press 1961. 2 v.: xvi, 729 p.; viii, 598 p. illus., maps,

diagrs., graphs & tables incl. fold. Approx. 1600 refs. In preparation 1925-1945, revised, brought up-to-date and translated from German 1957-1960.

Describes the three-dimensional structure and movements, material and energy characteristics of the hydrosphere. Physical and chemical properties of sea water, regional variations in the oceanographic factors and their periodic variations are dealt with, also different types of ocean currents and the periodic movements of the water in waves, tides and related phenomena. Sea ice, its formation, terminology, physical and chemical properties, ice conditions in the Arctic and Antarctic, are treated in chap. 8, p.243-84. Glaciation in polar areas and icebergs, the effect of polar-ice conditions on the atmospheric and oceanic circulation, chiefly in the North Atlantic, are also discussed. Theoretical and regional treatment of ocean circulation includes polar currents of the northern hemisphere, also the stratospheric or deep circulation, p.662-69, 680-93. Treatment of tides includes the discussion of the Sea of Okhotsk, Bering Sea, White Sea, and the North Polar Basin and data from five arctic harbors. Reviewed by K.F. Bowden in *Deep-sea research* Jan./Feb. 1962, p.79-80. (DN-HO.)

70939. DEGE, WILHELM, 1910– . Meine Umsegelung des Nordostlandes von Spitzbergen. (Hamburg. Universität. Geographisches Institut. Festschrift zum 70. Geburtstag des ord. Professors der Geographie Dr. Ludwig Mecking, 1949, p.79-96, maps, profiles.) 18 refs. Text in German. **Title tr.:** My circumnavigation of Nordaustlandet, Spitsbergen.

Reports a trip aboard a German U-boat Sept. 17-21, 1944. The geologic and geomorphic features of the island are described, noting the distribution of land forms, glaciers, frost action, etc. Seven landscapes are distinguished according to climatic, morphologic and glaciologic criteria. (DLC.)

70940. DEGTÎARENKO, ÎU. P. Drevnee oledenenie Korîakskoĭ gornoĭ sistemy. *(In:* Leningrad. Vsesoîuznyĭ n.-i. geologicheskiĭ institut. Trudy 1961, t.64, Problemy chetvertichnogo . . . p.135-40.) Text in Russian. **Title tr.:** Ancient glaciations of the Koryak mountain system.

Discusses the number, stages and age of glaciations in the Koryak Mts. based on own studies and evaluation of the literature. Despite the fact that two-three glaciations have been indicated by others, author recognizes only one upper Quaternary glaciation consisting of possibly six-seven stages. The absolute age of this glaciation is discussed, and considered to be about 2500-4000 yrs. B.P. (DLC.)

70941. DEGTÎARENKO, ÎU. P. K stratigrafii chetvertichnykh otlozheniĭ vostochnoĭ chasti Korîakskoĭ gornoĭ sistemy. *(In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.271-84, diagr.) 13 refs. Text in Russian. **Title tr.:** On the stratigraphy of Quaternary deposits in the eastern part of the Koryak mountain system.

Lower, Middle, Upper and Recent Quaternary deposits are distinguished and described, noting their distribution, types, spore-pollen and diatom analyses and other properties. Upper Quaternary deposits are mostly distributed in the Koryak Range. (DLC.)

70942. DEGTÎAREV, V. Za 69-ĭ parallel'îu. (Komsomol'skaîa zhizn', Apr. 1962, no.8, p.25-26.) Text in Russian. **Title tr.:** Beyond the 69th parallel.

Describes political and educational activities among children and young industrial workers at Noril'sk where author is the Young Communist League secretary. (DLC.)

70943. DEGTÎAREVA, A. A. Osobennosti razvitiîa planktona v Barenîsevom more v 1958-1959 gg. (Murmansk. Poliîarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozîaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biûlleten' 1960. no.1 (11), p.14-16, illus., table.) Text in Russian. **Title tr.:** Developmental characteristics of the Barents Sea plankton in 1958-1959.

Reviews material collected on over 1450 stations, from layers down to 100 m. Main forms, their biomass, its seasonal and 1958:1959 fluctuations, are considered. (DLC.)

70944. DE JONG, PIETER, *and others.* The role of regional sympathectomy in the early management of cold injury. (Surgery, gynecology and obstetrics, July 1962. v.115, no.1, p.45-48, illus.) 5 refs. *Other authors:* M.R. Golding, P.N. Sawyer, *and* S.A. Wesolowski.

Reports study of 33 cases of cold injury suffered in New York, with 27 patients submitted to sympathectomy. Description of injuries, management, effects of sympathectomy, physiotherapy, and sequelae are described. (DLC.)

DELAAT, A., *see* Wilt, J.C., & *others.* Sendai virus antibodies. 1961. No. 76584

70945. DELÎAMURE, SEMEN LÎUDVIGOVICH, 1913– O neobkhodimosti vsestoronne i sistematicheski issledovat' parazitov promyslovykh morskikh mlekopitaîushchikh. (Akademiîa nauk SSSR. Ikhtiologicheskaîa komissiîa. Trudy soveshchaniĭ, 1961. vyp.12, p.222-32, tables.) 28 refs. Text in Russian. **Title tr.:** The necessity of a many-sided and systematic study of the parasites of common marine mammals.

Reviews the number of publications on this subject (600) and of species known (174), Russian studies, economic losses, groups and problems requiring further study. A table covering six pages lists, in taxonomic order, some 120 species, with hosts, location of infection, and occurrence in Russian waters. (DLC.)

70946. DELL, P., *and* **M. BONVALLET.** Physiologie de la thermo-sensibilité périphérique et des mécanismes thermorégulateurs centraux. (France. Centre national de la Recherche scientifique. Colloques nationaux 1955, p.C83-C101, illus.) 26 refs. Text in French. **Title tr.:** Physiology of peripheral thermosensitivity and the central thermoregulatory mechanisms.

A brief review of recent studies on peripheral heat-sensitivity and central thermoregulation. Thermoregulation is found to be not solely the function of the central nervous system, but also of its periphery. The working mechanism of the latter as well as the location, and role of the center in regulating peripheral metabolic phenomena is given special consideration. (DLC.)

70947. DELOST, P., *and* **G. LANDAUD.** Différences dans la croissance somatique de souris élevées à la température climatique d'hiver et à une température constante de 25°C. (Société de Biologie, *Paris.* Comptes rendus 1962. t.156, no.7, p.1308-

12, tables.) 12 refs. Text in Frenchl **Title tr.:** Differences in body growth of mice raised in winter climate and at a constant temperature of 25°C.

Reports a weight and size study conducted during January, February and March. The group raised in the open, showed a slower growth, varying according to sex and to type of growth. Food intake was higher in this group. (DLC.)

DEMBSKAĬA, G. I., *see* Abramov, V.P., & G.I. Dembskaĭa. Novye svedeniĭa o mezozoĭskikh otlozheniĭakh . . . 1961. No. 69465

DEMBSKAĬA, V.I., *see* Danilov, L.D., & *others*. Konkretsii . . . 1962. No. 70873

DEMCHENKO, A.V., *see* Sher, S.D., & A.V. Demchenko. O znachenii . . . 1962. No. 75577

70948. DEMCHENKO, G. V. Palinologicheskoe obosnovanie vydeleniĭa triasovykh otlozhenii v razreze Bakhynaĭskoĭ opornoĭ skvazhiny; Priverkhoĭanskiĭ progib. (Leningrad. Vsesoiuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961, vyp.186. Geologicheskiĭ sbornik no.6, p.84-88, table.) 6 refs. Text in Russian. **Title tr.:** Palynological substantiation for separation of Triassic deposits in the Bakhany stratigraphic well section, Verkhoyansk foredeep.

Reports identification of spore and pollen in Triassic deposits, taken at the 2752.4 to 2768.7 m. depth in the Bakhany test hole, in the Lena valley. Among the spores, fam. Marattiaceae is predominant with species *Danaeopsites parvispinellatiformis; Neocalamites punctatus* is also found. Pollen are mostly *Pagiophyllum variabilis* species, fam. Araucariaceae. (DLC.)

70949. DEMENITSKAĬA, RAISA MIKHAĬLOVNA, *and others*. Itogi izucheniĭa geologicheskogo stroeniĭa zemnoĭ kory v Tsentral'noĭ Arktike geofizicheskimi metodami. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.11, p.91-95, maps, diagrs.) 4 refs. Text in Russian. *Other authors:* A.M. Karasik *and* Iu.G. Kiselev. **Title tr.:** Results of investigation of the geologic structure of the earth's crust in the Central Arctic by geophysical methods.

Reviews magnetic, seismic and other geophysical investigations in the central basin and adjacent seas. A schematic map of earth-crust thickness, developed from these data, is presented and interpreted. This thickness is 30-33 km. on the ocean shelf, on the continental slope about 10-15 km., the Nansen trough about 4-8 km., on the Lomonsov Ridge possibly 15-20 km. The latest geophysical and morphologic data show the possibility of uplifts or ridges in the Nansen trough. Other crustal features are briefly commented upon. (DLC.)

70950. DEMENITSKAĬA, RAISA MIKHAĬLOVNA. Metodika izucheniĭa stroeniĭa kristallicheskoĭ chasti obolochki Zemli. (Sovetskaĭa geologiĭa, Jan. 1959, no.1, p.92-111, diagrs., graphs, 8 maps incl. 1 fold.) 17 refs. Text in Russian. Summary in English. **Title tr.:** A method of studying the structure of the crystalline part of the earth's mantle. English translation available: ACIC translation TC345, 1962.

Discusses the geologic structure of the earth's crystalline mantle, and demonstrates a method using Bouguer gravity anomalies to obtain a first approximation to the depth of the Mohorovičić discontinuity. Crustal thickness of continents and oceans is calculated and plotted on maps which include arctic regions. Seismically determined crustal thickness is calculated to 65 and more km. and plotted. Distribution of granite, basalt and ultrabasite layers is also reported. The crystalline mantle at 10, 20, 30, 50, 60 and 70 km. depths is demonstrated and discussed. Fold. map, with arctic area insert, shows earth crust thickness (at 2-7, 7-10, 10-15 and ten km. intervals to 65 km. and more) to the Moho surface. (DLC.)

70951. DEMENITSKAĬA, RAISA MIKHAĬLOVNA. Osnovnye cherty stroeniĭa kory Zemli po geofizicheskim dannym. Leningrad, Gostoptekhizdat, 1961. 224 p. tables, maps incl. fold., diagrs., graphs. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t.115.) Approx. 450 refs. Text in Russian. **Title tr.:** Main features of the earth's crustal structure according to geophysical data.

Presents a systemized outline of the structure of the earth's mantle. For an understanding of the crustal structure, the entire crystalline shell should be studied above and below the Mohorovičić discontinuity, i.e. to 70-80 km. depth. Methods of such an investigation are described. The seismic and gravity data collected and the crustal structure for continental and oceanic regions are presented in a series of maps and discussed. Submarine deep-structure of the Arctic Ocean is included, p.151-61. (DLC.)

70952. DEMENT'EV, GEORGIĬ PETROVICH, Ptitsy nasheĭ strany; 2. izd. Moskva, Izd-vo Moskovskogo universiteta, 1962. 168 p. illus., map, table. (Moskovskoe obshchestvo ispytateleĭ prirody. Sredi prirody, vyp.54.) Text in Russian. **Title tr.:** The birds of our country, 2nd ed.

Semi-popular work fully illus. with black-and-white drawings. The four chapters deal with the history of bird-study in Russia from earliest times; the avifauna of the country and its composition, including the birds of the tundra, mountains, and sea; bird structure and life, including reproduction, migration, and molt; practical and economic value of birds. This is an enlarged and newly illus. edition of a text which first appeared in 1949 (No. 21413). (DLC.)

70953. DEM'IANOV, N. I., *and* **S. I. STEPANOV.** Sravnenie uslovii raboty samopistsev techenii pri avtonomnoĭ postanovke na stantsiiakh raznykh konstruktsii. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovanii, sbornik statei, vyp.1, p.29-32, tables.) 2 refs. Text in Russian. **Title tr.:** A comparison of performance of current self-recorders in the automatic installation on stations of different constructions.

Compares two systems of sea current recorders installed down to 12 m. below the surface in open sea, and left there for several days or weeks. The system which has no floating signals, proved superior to that with a signal float, which distorts the record when the swell is 3 points or more. (CaMAI.)

70954. DEMIDIUK, L. M. Effektivnoe ispol'zovanie tepla solnechnoĭ radiatsii pri primenenii dozhdeval'no-drenazhnogo metoda ottaivaniĭa merzlykh

gruntov. (Merzlotnye issledovaniia. Sbornik statei, 1961. vyp.2, p.198-213, tables, graphs.) 7 refs. Text in Russian. **Title tr.:** Effective utilization of solar radiation heat by using the sprinkling-drainage method for thawing frozen ground.

Reports a 1958 study on this method in the Debin River (left tributary to the Kolyma) valley, near the Burkhala mine in Magadan Province. The degree of heating by solar radiation, heat content of the sprinkling water, and intensity of its application were studied. The practicality of sprinkling 24 hrs./day, and the time of year for such work were also considered. The optimal intensity of sprinkling for the Burkhala mine was found to be 0.2 $m^3/m^2/hr$. It can be carried on from the first ten days of May to the first ten of September. (DLC.)

70955. DEMIDOV, P.G., *and* **M. V. POPOV.** O srokakh i kharaktere lin'ki zaĭtsa-belíaka v IAkutii. (Akademiia nauk SSSR. IAkutskiĭ filial. Nauchnye soobshcheniia 1961. vyp.5, biologiia, p.95-99, tables.) 7 refs. Text in Russian. **Title tr.:** Dates and character of molt of the white hare in Yakutia.

Reports a study of skins from adult animals and of natural conditions. The evaluation is made in ten-day periods, April through November. Geographic variations in the (two) molting periods are also noted. (DLC.)

DEMIDOVICH, L.V., *see* Berson, G.L., & L.V. Demidovich. Nekotorye dannye o treshchinovatosti porod . . . 1961. No. 70176

DEMIDOVICH, O.A., *see* Bondarenko, V.M., & *others*. Pervye rezul'taty . . . 1961. No. 70317

70956. DEMIN, I.D. Opredelenie splochennosti l'dov sudovymi radiolokatsionnymi stantsiiami. (Morskoĭ flot, Mar. 1961. god 21, no.3, p.12-14, graph.) Text in Russian. **Title tr.:** Determining the concentration of ice with ship-borne radar.

Discusses the ability of "Don" and "Neptun" type radars to determine the size of floes and their density of concentration. The operational range of a radar set is shown graphically as a function of its resolving power, when used for determining concentration. Accuracy is high in hummocked ice fields; under other ice conditions, block size and concentration may be overestimated easily. The poor echo from smooth-surface ice is another source of error. (DLC.)

DENAVIT, M., *see* Naquet, R., & *others*. Ralentissements . . . 1962. No. 74218

70957. DENEUVERT, HUGUES. La ligne BMEWS. (Géographia, Sept. 1961. no.120, p.51-55, illus., maps.) Text in French. **Title tr.:** The BMEWS Line.

Describes briefly, the ultimate three bases, their equipment, procedures, shortcomings, etc. Sketch maps show alignment of the DEW, BMEWS, and the proposed ACE HIGH Lines, as well as the three bases. (DGS.)

70958. DEN HARTOG, STEPHEN L., *and* **N. A. OSTENSO.** Gravity and magnetic observations from ice island ARLIS-II, 1 July to 6 October, 1961. Madison, Wis., Sept. 1962. 26 p. maps, graphs, tables. (Wisconsin. University. Geophysical and Polar Research Center. Research report 62-7 under Office of Naval Research contract NONR 1202(16); also Contribution no. 90.) 7 refs.

This ice island rediscovered 210 km. north of Point Barrow May 23, 1961, drifted generally 515 km. (320 mi.) toward the northwest during June 20-Oct. 31, 1961. It is 5.6 km. long, 2.4 km. wide, 20 m. thick, and has a rock-strewn surface, giving it the appearance of land. The gravity observations were made with a Worden Master geodetic gravimeter model 121, through the floor of a heated building. Readings were often difficult, and there was uncertainty as to drift characteristics of the gravimeter, estimated accuracy of observed gravity is ± 10 mgls. Free air and Bouguer anomalies and water depths are graphically compared, also tabulated. A Varian M-49 proton precession magnetometer was read concomitantly with the gravimeter; data are tabulated along with K-indices from Barrow, but are of limited value. (CaMAI.)

70959. DENISOV, A. P., *and others.* O zavisimosti fizicheskikh svoĭstv apatita ot primesi redkikh zemel' i stronttsiia. (Geokhimiia, 1961, no.8, p.666-75, tables, diagrs.) 16 refs. Text in Russian. Summary in English. *Other authors:* O.B. Dudkin, N.A. Elina, R.A. Kravchenko-Berezhnoĭ, *and* L.I. Polezhaeva. **Title tr.:** On the dependence of the physical properties of apatite upon admixture of rare earths and strontium.

Reports chemical and mineralogic study of Khibiny apatite and its content of lanthanides and strontium. Chemical, X-ray, and optical analyses are given. Physical properties of the apatites change noticeably in cases when the calcium is replaced by lanthanides or strontium. (DLC.)

70960. DENISOV, A. S. Lineĭka dlia vychisleniia redukttsionnykh popravok k pokazaniiam glubokovodnykh termometrov. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p.128-30, illus.) Text in Russian. **Title tr.:** A slide rule for computation of reductions to the readings of deep-sea thermometers.

Proposes and describes a slide rule for the processing of deep-sea thermometric data of any sea or ocean. The instrument gives 15-20% economy of time compared with identical calculations by aid of graphs, and is not less accurate than the calculations made with an appropriate formula on paper. (CaMAI.)

70961. DENISOV, A. S. Opyt raboty s batometrom bol'shoĭ emkosti. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.10, p.92-93, illus.) Ref. Text in Russian. **Title tr.:** Experience with a large capacity water-sampler.

Describes device for hoisting up to 100-liter samples from various depths. It was constructed by A.P. Lisitsyn and V.L. Glazunov in the Institute of Oceanology, Academy of Sciences, and tested successfully on a 1961 cruise of the R/V *Shtorm* in the Kara Sea. (DLC.)

70962. DENMARK. *Geodaetisk institut.* Bulletin of the Seismological Station Ivigtut. København, 1929-1960. 21 no.

Contains seismological readings from this West Greenland station at 61°12′N. 48°11′W., its lithologic foundation gneiss, height above sea level 20 m. The instruments, Wiechert 1,000 kg. horizontal and 1,300 kg. vertical seismographs, were damaged by blasting in the nearby cryolite

quarry in 1952 and the recording was stopped in 1953. An old Milne-Shaw seismograph was installed in 1955, and in 1957 a Willmore short-period vertical seismograph, but the latter broke down after about a month, and the records showed so much seismic noise that the experiment was not repeated. The Milne-Shaw recording was maintained with interruptions until June 1960, when operations stopped owing to the high level of microseisms and man-made noise and to lack of qualified operators. No. 21 is the last bulletin from the Ivigtut seismic station; it includes microseismic readings for 1957-58 and readings of microseismic storms 1959. For the Nord and Scoresbysund seismic stations, see No. 50503-50504. (CaMAI.)

DENMARK. Geodaetisk institut, *see also* Helk, J.V. The mapping of Greenland . . . 1961. No. 72102

70963. DENMARK. *Meteorologiske institut.* Magnetisk årbog, 2den del: Grønland. Magnetic yearbook, part 2: Greenland, 1951-1958. A, observations made at Godhavn. Charlottenlund, 1960-1962. Issued yearly in approx. 40 p. graph, tables. Text in English. In sequence to No. 50506.

Reports hourly means, extreme values and ranges of H, D, and Z, all tabulated as are K- and C-indices; these are followed by tables of mean diurnal inequalities of the magnetic elements H, D, Z, and I (inclination). Information on the instruments in introductory remarks in the 1951 issue, in others, procedures, methods of determining magnetic elements, base-line values, staff changes, etc. are described for this West Greenland magnetic observatory. (DLC.)

70964. DENMARK. *Meteorologiske institut.* Magnetisk årbog, 2den del: Grønland. Magnetic yearbook, part 2: Greenland, 1957- . B, Observations made at Thule. Charlottenlund, 1962. xv, 28 p. graph, tables. First yearbook from Thule Magnetic Observatory, 77°29′N. 290°50′E.

Contains data for the first part of the International Geophysical Year. Information on the two normal- and one quick-run magnetographs is tabulated. Tables of hourly means, extremes, and ranges of H, D, and Z are given for 1957 for Thule as are K- and C- indices. Mean diurnal inequalities of H, D, Z, and I, are also tabulated, as for Godhavn. Introductory remarks are similar to those in the Godhavn yearbooks, *supra.* Data accumulated since 1947 have been worked up, and results obtained prior to 1957 are to be published later. H.B. Frandsen has been in charge of the observatory since its establishment at its present location in 1955. (DLC.)

70965. DENMARK. *Meteorologiske institut.* Summaries of weather observations at weather stations in Greenland 1954-1958. Charlottenlund, 1961. 248 p. tables, diagrs. In sequence to No. 50507.

Presents data for 15 stations, based on synoptic surface observations, mostly eight/day: number of occurrences of concurrent wind speed and direction within specified ranges: frequency of surface winds in percent; number of simultaneous occurrences of specified visibility ranges and cloud ceilings; number of occurrences of fog, precipitation, and drifting snow; number of occurrences of specified values of surface temperatures. Coordinates and elevation are given for the 15 stations: Upernavik, Egedesminde, Holsteinsborg, Sukkertoppen, Godthåb, Frederikshåb, Narssaq, Nord, Danmarkshavn, Daneborg, Kap Tobin, Aputiteq, Angmagssalik, Tingmiarmiut, Prins Christian Sund. (DN-HO.)

DENMARK. Meteorologiske institut, *see also* Lassen, K. Geophysical activity in Greenland . . . 1961. No. 73334

70966. DENMARK. *Ministeriet for Grønland.* Betaenkning afgivet af det av Ministeren for Grønland under 19. februar 1959 nedsatte udvalg vedrørende besejling af Grønland. København, Statens trykningskontor, 1959. 174 p. tables, graphs, fold. diagr., fold. map. Text in Danish. **Title tr.:** Report by the Committee on Greenland Navigation, established by the Minister for Greenland on Feb. 19, 1959.

Reports on a study of the year-round navigation conditions between Denmark and Greenland and in Greenland coastal waters, also the adequacy of and possibilities for improving safety- and rescue services. Volumes of cargo and passenger transport are reviewed and future prospects considered. Ice and weather conditions are examined and navigational aids outlined. Continued year-round navigation is recommended despite the risks involved, as interruption during the winter months would cause serious strain in Greenland's economic development. Appended are answers to questionnairs submitted to ships' captains and various statistical information. (AIKøbenhavn.)

70967. DENMARK. *Ministeriet for Grønland.* Billet til Grønland, og hvad så? København, 1960. 122 p. illus., tables, fold. map. Text in Danish. **Title tr.:** Ticket to Greenland, and then what?

Guidebook for Danes seeking employment in Greenland, with an introduction to the country's geography, history, administration, etc. Wages and employment conditions are outlined, as are living conditions and personal effects required or desirable for the sojourn in Greenland (normally two years). Air- and ship transportation facilities from Denmark are described, and papers required for emigration and immigration are listed. Services provided by the various government agencies in Greenland: savings banks, post offices, police, public health, church, schools, etc. are outlined. Recreational facilities are described. Appendices include: game preservation laws, a table of sailing distances, and a list of populated places with the number of inhabitants. Foreword by K. Lindberg; illus. by F. Bramming. (CaMAI.)

70968. DENMARK. *Ministeriet for Grønland. Grønlands tekniske organisation.* Byggeriet i Grønland; saertryk af artikler i "Byggeindustrien." København, 1959. 23 p. illus., diagrs. (*Its:* GTO publikation nr. 3.) Text in Danish. **Title tr.:** Building in Greenland; reprints of articles in *Byggeindustrien.*

Contains four papers dealing with various aspects of the work:

G.P. Rosendahl, in *Byggeriet i Grønland* (Building in Greenland) p.3-7, provides a general introduction, reviewing the economic and technical conditions responsible for the current increase in construction activities. The establishment of the Greenland Technical Organization is described as are trends in the transition from own-home building to organized housing construction.

Town planning (*Byplanlaegning i Grønland*) is discussed by O. Himmelstrup, p.8-11. The un-

precedented population increase has forced reconsideration of plans worked out about 1950. Many of the present (some 170) populated places are expected to be abandoned in favor of the major population centers. The development is elucidated and exemplified in Godthåb and Sukkertoppen.

Building design (*Projektering af bygninger i Grønland*) is dealt with by P. Jensen and O. Himmelstrup, p.12-19. It covers the civil engineering as well as the architectural aspects: water supply, sewerage, roads, ports, electric power, design of residential and commercial buildings.

H.J. Hansen's contributions, *Tilrettelaeggelse og udførelse af byggeriet i Grønland* (Organization and execution of construction work), deals with the work of the contractor, performed under the supervision of District Engineers of the Greenland Technical Organization. Construction costs are about double those in Denmark. (SPRI.)

70969. DENMARK. *Ministeriet for Grønland. Grønlandsudvalget.* Den økonomiske politik i Grønland efter 1950 samt statistisk oversigt for Grønland 1948-1958. København, May 1960. 96 l. tables. Mimeo. (*Its:* Dokument nr. 2.) Text in Danish. **Title tr.:** Economic policy in Greenland after 1950 and a statistical survey of Greenland 1948-1958.

Report by the Greenland Commission of 1960 on the progress in economic development according to the guidelines established in 1950. Trade, employment, prices, taxes, wages, etc. are dealt with; government investment and subsidies are considered. Statistical data are included on population, public health, schools, production, trade, wages, prices, government finances.

(AIKøbenhavn.)

70970. DENMARK. *Ministeriet for Grønland. Udvalget for Samfundsforskning i Grønland.* Alkoholsituationen i Vestgrønland. København, 1961. 174p. tables, graphs. 43 refs. Text in Danish. Summary in Greenlandic and English. **Title tr.:** The alcohol situation in West Greenland.

Report by the Committee for Social Research in Greenland, on the consumption of alcohol 1949-1959, and on the effects of the derationing of alcoholic beverages in 1954. Conditions prior and subsequent to derationing are reviewed on the basis of various reports 1935-1960, and statistics are presented on the distribution of consumption (including purchase of malt for home brewing) according to population groups. No universal relationship can be established between consumption and number of cases of gonorrhea, accidents, or criminal offenses, but drinking in many isolated cases tends to undermine the family economy. The climate (low temperature) appears to have no effect on the degree of intoxication and Greenlanders and Danes exhibit similar resistance to intoxication. The attitude of the population to drinking is discussed; the temperance movement is found to be gaining support. (AIKøbenhavn.)

70971. DENMARK. *Ministeriet for Grønland. Udvalget for Samfundsforskning i Grønland.* Familie og aegteskab i Vestgrønland I. København, 1961. 110p. tables. 9 refs. Text in Danish. Summary in Greenlandic and English. **Title tr.:** Family and marriage in West Greenland, I.

Report by the Committee for Social Research in Greenland on the effects of the Marriage Act of 1955 providing for judicial separation and divorce. It did not result in numerous or precipitate dissolutions of marriage. The 43 cases dealt with by the district courts or the Governor during 1955-1959 are discussed together with information from interviews with the parties involved, and from the official records. Financial and other problems consequent upon breakup are recognized and recommendations are presented to alleviate them. Status of children after marriage dissolution is considered; administrative problems are discussed. No material reason is found to uphold the *decree nisi* provision in the Act. (AIKøbenhavn.)

70972. DENMARK. *Ministeriet for Grønland. Udvalget for Scmfundsforskning i Grønland.* Uddannelsessituationen i Vestgrønland I, II. København, 1961. 2 v.: 116, 58 p. tables, graphs, diagrs. 30 refs. Text in Danish. Summary in Greenlandic and English. **Title tr.:** The educational situation in West Greenland, I, II.

Report by the Committee for Social Research in Greenland, discussing the relationship between educational requirements and opportunities under conditions of rapid social and technical development. The effect of Danish culture is examined, in particular the problem created by a well educated Danish "superior" class vs. the less educated, "lower" native class. Laws, regulations, etc. governing the school system are reviewed, its organization and effectiveness examined. Problems posed by long distances in scattered communities also by the native attitude to education are outlined; language problems are discussed. Recommendations are presented for short- and long-term educational policies. Some statistical material is included. (AIKøbenhavn.)

70973. DENMARK. *Statsministeriet.* Igdlut nutât: byg bedre. København, 1954. Approx. 140 l. illus., diagrs., tables. Text in Danish and Greenlandic. **Title tr.:** Build better.

Guidebook on the construction, purchase, and renting of houses in Greenland. All phases of the operations and transactions are dealt with: raising of capital, selection of lot, planning, building and equipping the structure, etc. (AIKøbenhavn.)

70974. DENMARK. *Udenrigsministeriet.* Greenland. 3d ed. Copenhagen, 1961. 191 p. illus., maps, diagrs.

New edition of No. 44601, edited by K. Bure and translated by R. Spink and A. Anslev. The chapter on East Greenland, by E. Mikkelsen (p.113-42) is substantially expanded to describe changing social and economic conditions. A new chapter, Greenland defence, by J.H.J. Jegstrup (p.177-92) deals with the duties of the Royal Danish Navy and Air Force, Greenland in World War II, postwar U.S. defense activities, organization and responsibilities of the Greenland Command, etc. The other chapters were brought up to date where pertinent, otherwise reprinted with little or no change. They are:

Therkilsen, K.R. Greenland: mountain, sea, and ice, p.9-28.

Brun, E. The Greenland administration, p.29-42.

Rosing, K. The Greenlanders past and present, p.43-66.

Nielsen, F. Greenland culture, p.67-88.

Borum, V. Greenland daily life, p.89-98.

Therkilsen, K.R. From kayak to cutter: Greenland industries and occupations, p.99-112.

Seidenfaden, G. The scientific exploration of Greenland, p.143-56.

Chantelou, J.F. The rational surveying of Greenland, p.157-64.

Westphall, P. Greenland in the age of technical science, p.165-76. (DLC.)

DENMARK. Udvalget for samfundsforskning i Grønland, *see* Barfod, P. Uddannelsesproblemer . . . 1962. No. 70025

70975. DENSON, ELEY P., *Jr., and* S. L. MURRELL. Black brant population of Humboldt Bay, California. (Journal of wildlife management, July 1962. v.26, no.3, p.257-62, tables.) 16 refs.

Account based on bag checks 1957-1960, field observations, recoveries from Alaska bandings, etc. Population counts indicate that at least 25% of the continental stock spends some time in the Bay. Effects of hunting are assessed. (DLC.)

70976. DENYESS, ARLISS, *and* J. D. CARTER. Clotting time of cold-exposed and hibernating hamsters. (Nature, Apr. 29, 1961. v.190, no.4774, p. 450-51, illus., table.) 8 refs.

Golden hamsters exposed to 5 ± 1°C. for 0, 2, 8 weeks, and over 12 weeks (hibernating) showed a change in concentration of plasma lipid. This increased the clotting time with viper venom and had but a slight effect on the activity of brain thromboplastin. The accompanying increase of plasma heparin is probably connected with the change in plasma lipid. (DLC.)

70977. DENYESS, ARLISS, *and* J. D. CARTER. Utilization of acetate-I-C^{14} by hepatic tissue from cold-exposed and hibernating hamsters. (American journal of physiology, May 1961. v.200, no.5, p. 1043-46, illus., tables.) 17 refs.

Account of conditions after 48 hrs. and 8 weeks in the cold (6 ± 1°C), during hibernation, and 6 hrs. after arousal, supported by *in vitro* tests. It is concluded that cold-exposed and hibernating hamsters have 'biochemical lesions' in the glucokinase reaction and some other step in the glycolytic processes of the liver. (DLC.)

70978. DE PERCIN, FERNAND P., 1921– The summer climate of the Lake Peters area, Brooks Range, Alaska, an interim report. Natick, Mass., Nov. 1958. 10 p. illus., map, graphs, tables. (U. S. Quartermaster Research and Engineering Center. Environmental Protection Research Division. Research study report RER-25.)

Describes briefly measurements of solar radiation, air and soil temperature, wind speed and direction, cloudiness, precipitation, visibility, etc. made three times daily at Lake Peters camp, July 12 - Aug. 27, 1958 in connection with geophysical investigations of the IGY. Instruments and observational program are noted; and results discussed tentatively. Cooling effect of the early morning valley breeze, control of wind direction by N-S orientation of the valley, prevalence of cloudy skies and low ceilings, frequent light rain or drizzle are mentioned. These observations are also described in No. 62289. (DGS.)

70979. DEPOCAS, FLORENT, 1923– . Biochemical changes in exposure and acclimation to cold environments. (British medical bulletin, Jan. 1961. v.17, no.1, p.25-31, table.) About 100 refs.

Study of the problem with special emphasis on the rat and its intermediary metabolism. The elucidation of the shift from shivering to non-shivering thermogenesis in acclimated rats, and the role of noradrenaline in mediating this process, is appreciated; desired advances are indicated. (DNLM.)

70980. DEPOCAS, FLORENT, 1923– Body glucose as fuel in white rats exposed to cold: results with fasted rats. (American journal of physiology, May 1962. v.202, no.5, p.1015-18, tables.) 14 refs.

Study of liver and muscle glycogen concentration in warm- and cold-acclimated rats, fasting at 30° or 6°C. Cold-acclimated rats at 6°C. showed higher glucose concentration, higher volume of distribution, and somewhat higher turnover-rate of glucose than warm acclimated rats at 6°C. The fasted animals increased their heat production in the cold by increased glucose oxydation, proportionate to the increased energy metabolism, as did the non-fasted rats. (DLC.)

DEPOCAS, FLORENT, 1923– , *see also*

Hart, J.S., & *others.* Thermal & metab. responses . . . Eskimos cold. 1962. No. 72054

Masironi, R., & F. Depocas. Cold exposure & respiratory $C^{14}O_2$. 1961. No. 73855

70981. DE QUERVAIN, MARCEL R. On the work carried out by the group "Glaciology Inlandsis" of the International Glaciological Greenland Expedition 1959-60, EGIG. (*In:* International Geographical Congress 1960. Physical geography . . . 1961, p. 217-23.)

Lists a score of projects planned for this three-man group in the snow measurement program of this expedition. Selected, preliminary results from four expedition stations are presented, dealing with accumulation, temperatures, core samples, evaporation, crystallography, drifting of snow, and ice flow. Ensuing discussion concerned design of snow drift sampler, density and temperature of snow-covered ice. (DGS.)

DERBENEVA, M. M., *see also* Tiutiunov, I.A., & M.M. Derbeneva. Nekotorye fiziko-khimicheskie . . . svoĭstva pochv . . . 1961. No. 76162

DERBLOM, H., *see also* Omholt, A., & *others.* Hα in auroral glow. 1962. No. 74522

70982. DERBYSHIRE, EDWARD. The deglaciation of the Howels River valley and the adjacent parts of the watershed region, central Labrador-Ungava. Montreal, June 1962. 23p. illus., maps incl. fold. (McGill University. McGill Sub-Arctic Research papers no.14; *also issued as:* McGill University. Geography Dept. Miscellaneous papers no.4.) 37 refs. Mimeographed.

Presents nine conclusions based on detailed examination in 1956-1958, of this area within 54°40′ - 55°15′N. 66°45′ - 67°35′W., part of the divide between southeasterly-flowing Atlantic waters and those flowing north to Ungava Bay. Field evidence is mapped on a scale of about 1 in.: 3 mi., most remarkable glacial modification is the widespread till. Glacial erosion is chiefly shown in the many shallow rock-bound lakes. Conclusions

support views of J.D. Ives, No. 65431, 65433, and others. Final ice movements on a regional scale was probably north-northwest, parallel to the ridges of the sedimentary rocks of the Labrador Trough and to the western rim of the Howells valley. Subglacial and submarginal drainage were most effective in later stages of deglaciation. Estimated annual loss of ice indicates rapid downwasting of the ice sheet in this district. Summer temperatures were evidently at least as high as at present; certainly during the isolation of the ice masses in the major valleys, the glacial regimen was strongly negative. (DWB.)

70983. DERBYSHIRE, EDWARD. Fluvioglacial erosion near Knob Lake, central Quebec-Labrador, Canada. (Geological Society of America. Bulletin, Sept. 1962. v.73, no.9, p.1111-26, illus., maps.) 40 refs.

Presents a systematic appraisal of more than 200 glacial drainage channels studied in the field and on maps and aerial photographs. Field research, completed in 1957, covered a 10-mi.-long area between Snowy Lake and Knob Lake. Channels are genetically classified on the basis of morphology, disposition, and related disposition. Rarity of fluvioglacial deposits at the surface compared to the unsorted drift, together with evidence that the glacial drainage was mainly subglacial, support author's view that deglaciation of this central part of the Quebec-Labrador plateau was marked by little ice movement and by isolation of ice masses in the wide valleys. Maps show distribution of features studied; details are illus. on aerial and ground photos. (DGS.)

70984. DERBYSHIRE, EDWARD. Knob Lake: a field research centre. (Geographical journal, Sept. 1961. v.127, pt.3, p.340-43, map.) 20 refs.

Reviews work, since 1954, of the McGill Subarctic Research Laboratory in Northern Quebec and Labrador, and notes several scientific problems requiring further investigation. Fields included are geology, geomorphology, climatology, botany, zoology, economic geography, and sociology. Glacial geomorphology, especially the retreat of the last ice sheet, is specially emphasized. Emended by R.N. Drummond and others in the same journal, Mar. 1962, v.128, pt.1, p.125-26. (DGS.)

DERIUGIN, B. A., *see* Bakalov, S.A., *& others.* Radiatsionnyĭ i teplovoĭ balans . . . v Arktike. 1959. No. 69964

DERIUGIN, KONSTANTIN MIKHAĬLOVICH, 1878–1938, *see* Nesis, K.N. . . . tikhookeanskie litorinovye relikty? 1961. No. 74302

70985. DËRPGOL'TS, V. F. K geokhimii podzemnykh (rudnichnykh) vod i atmosfernykh osadkov eniseĭskogo sektora Arktiki. (Akademiia nauk SSSR. Doklady, Nov. 11, 1962. t.147, no.2, p.469-70, table.) Text in Russian. **Title tr.:** On the chemistry of ground (mine) water and atmospheric precipitation in the Yenisey sector of the Arctic.

Reports and evaluates more than 2500 hydrochemical analyses made in the upper Pyasina River basin. In some four hundred mine-water analyses, O, S, Na and Ni were predominant elements (besides the H_2O dissolvent); in 157 analyses of snow and rain water O, Na, S, Ca were. Other analyses also are characterized. Mine water was found to carry away 47 tons of nickel and 2.7 tons of copper in a year. (DLC.)

70986. DERVIZ-SOKOLOVA, T. G. Floristicheskie nakhodki na krainem severo-vostoke Chukotskogo p-ova. (Akademiia nauk SSSR. Botanicheskiĭ institut. Botanicheskie materialy gerbariia, 1961. t.21, p.480-83.) 6 refs. Text in Russian. **Title tr.:** Floristic finds in the extreme northeast of the Chukchi Peninsula.

Notes on three species collected in the Mys Dezhnev area: *Anemone multiceps* (Greene) Standley, *Papavar walpolei* Porsild, and *Saussurea viscida* Hult. All three are also found in Alaska. (DLC.)

70987. DERVIZ-SOKOLOVA, T. G. Osoki severo-vostoka Chukotki, sobrannye v 1958-1959 gg. (Akademiia nauk SSSR. Botanicheskiĭ institut. Botanicheskie materialy gerbariia, 1961. t.21, p.67-79.) 10 refs. Text in Russian. **Title tr.:** Sedges of northeastern Chukotka collected in 1958-1959.

Account with emphasis on ecology and geographic distribution. Each form is dealt with as to synonyms, morphology, ecotype and phenophase, occurrence in other areas, differential diagnosis, etc. (DLC.)

70988. DESCOTES, J., *and others.* L'hypothermie par voie intra-péritonéale; données expérimentales. (Pathologie et biologie, Dec. 1960. v.8, no.23-24, p.2259-64, illus., table.) Text in French. Summary in English. *Other authors:* M. Tanche *and* J. Chatonnet. **Title tr.:** Hypothermia by the intra-peritoneal route; experimental data.

Authors describe a simple way of cooling: by pouring cold fluid into the abdominal cavity. By this method it is possible to produce a temperature of ca. 30°C. in a 15 kg. dog in 10-20 min. Surgical application is envisioned. (DNLM.)

70989. DESKAU, MARTIN. North to the midnight sun. (Interavia, Dec. 1961. v.16, no.12, p.1690-93, illus., table, diagrs., map.)

Describes visit to Finland including trip by air Helsinki-Nordkapp-Helsinki. Finnish air lines, routes, and planes, and the aircraft construction industry are outlined. (DLC.)

DETTERMAN, ROBERT LAWRENCE, 1919– , *see* Keller, A.S., *& others.* Geology of the Shaviovik . . ..1961. No. 72719

70990. DE TURK, JOHN E., *and* **L. J. BERRY.** Body temperature and carbohydrate values in normal and endotoxin-poisoned mice exposed to lowered environmental temperatures. Fort Wainwright, Alaska, Aug. 1962. 25 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 62-4.) 55 refs.

Except for the first 24 hrs., mice exposed individually to 5°C. showed rectal temperatures within normal limits. Fasted animals at 5°C. did not maintain core temperature beyond 6-12 hrs. and died within 24 hrs.; their carbohydrate reserves were depleted in the liver, muscle and whole body in three hours, but in fed rats in five hours and only in the muscle. Endotoxin poisons accelerated depletion. (CaMAI.)

70991. DEUTSCH, E. R., *and* **N. D. WATKINS.** Direction of the geomagnetic field during the Triassic period in Siberia. (Nature, *London,* Feb. 18,

1961. v.189, no.4764, p.543-45, table, diagr., maps.) 12 refs.

Presents results of analysis of 32 oriented rock samples from five exposures in the northern part of the Yenisey River system. The direction of magnetization furnishes a Triassic North Pole near 65°N. 156°E., which conforms within limits of error to some point on the smoothed "European" Pole track. The result differs from three of four Pole positions relating to North America also from the African and Australian Poles. (DLC.)

DEUTSCHE GESELLSCHAFT FÜR POLARFORSCHUNG, *see* Tiedemann, K.H. Polarforschung. 1961. No. 76134

70992. DEVÏATOVA, ÉLEONORA IVANOVNA. K istorii chetvertichnogo perioda Severa v svete novykh dannykh po basseinu r. Onegi. (*In:* Vsesoiūznoe soveshchanie po izucheniiū chetvertichnogo perioda. Materialy. . . 1961, t.2, p.24-31, map.) Text in Russian. **Title tr.:** On the history of the Quaternary period of the North in the light of new data from the Onega River basin.

Outlines the stratigraphy of Quaternary deposits in the Onega, Verkhnyaya Telza, and Somba basins, and other areas of Arkhangel'sk Province. Glacial, interglacial, marine and other deposits are described, noting their fauna and flora, and spore-pollen analyses of some are reported. An interglacial sea in the Onega basin is discussed, and climatic changes during the Quaternary are analyzed. (DLC.)

70993. DEVÏATOVA, ÉLEONORA IVANOVNA. Stratigrafiīa chetvertichnykh otlozhenii i paleogeografiīa chetvertichnogo perioda v basseine reki Onegi. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 90 p. diagrs., maps incl. fold. (Akademiīa nauk SSSR. Komi filial. Institut geologii.) 86 refs. Text in Russian. **Title tr.:** Stratigraphy of the Quaternary deposits and paleogeography of the Quaternary period in the Onega River basin.

Reports field studies of 1951-1957 on the middle Onega. Spore-pollen analyses, mollusc and diatom determinations, mineralogic and mechanical analyses of the deposits are reported. Two glaciations and an interglacial period are recognized. During the latter, a boreal transgression is identified and its transgressive and regressive stages evaluated. Spore-pollen analyses indicate climatic fluctuations and changes in the vegetation cover. The advance and disappearance of glaciers of the Valdai glaciation are analyzed. (DLC.)

DEVIRTS, A. L., *see* Grosval'd, M.G., & *others.* K istorii golotsena . . . 1961. No. 71880

70994. DEVOLD, FINN, 1902– , *and others.* International herring investigations in the Norwegian Sea, June 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v.16, p.174-76, maps.) *Other authors:* H. Einarsson, J. Joensen, *and* I.G. IUdanov.

Reviews the areas covered by Soviet, Norwegian, Icelandic and Danish research vessels; scientists in charge of each, methods, stations, main concentrations of herring found. (DI.)

70995. DEVOLD, FINN, 1902– . The Norwegian herring fisheries in 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959 *pub.* 1961. v.16, p.167-69, tables, map.)

Includes information on catches, also comparison with those of 1958; study of the Polar Front and herring migrations, temperature and concentrations of this fish; their location for fishermen. (DI.)

70996. DEVOLD, FINN, 1902– . Rapport over sildeinnsiget 1960. (Fiskets gang, Apr. 21, 1960. arg. 46, nr.16, p.232-36, graphs.) Text in Norwegian. **Title tr.:** Report on the 1960 herring run.

Reports on hydrographic investigations made by R/V *G.O. Sars* and *Johan Hjort* at a net of stations in the eastern Norwegian Sea from Stad to Røst, 62°20′ - 67°30′N., Jan. 1-18, and repeat cruise by the *G.O. Sars,* Jan. 20-Feb. 26. The herring schools were located and forecasts made of place and time for arrival of herring in Norwegian waters. On the first trip, salinity and temperature were measured to 500 m. depth; the temperatures normal except for a Polar Front at about 64°N. Forecasts made on the second trip proved correct. (DA.)

70997. DEVOLD, FINN, 1902– . Sildeinnsiget 1962. (Fiskets gang, Apr. 26, 1962. arg. 48, nr.17, p.255-57, graphs.) Text in Norwegian. **Title tr.:** The 1962 herring run.

Reports on the R/V *Johan Hjort* cruises of Jan. 11-26 and Feb. 12-Mar. 3, 1962, to map areas of the Norwegian Sea (62°N. - 65°30′N. 14°W. - 6°E.) where herring move toward spawning grounds off the Norwegian coast, to locate the schools as they approach land. On Jan. 18, the herring were still in arctic waters; so oceanographic investigations were continued and the boundary between the East Iceland - Arctic Current and Atlantic waters delineated. On the second cruise, the herring were located at 10°W. in areas of 7°C. surface temperature; on Feb. 14 schools were located from 2°W. to 2°E. in a belt 25 mi. north to south: two weeks later they reached the Norwegian banks, and the fishing fleet began operations. (DA.)

DeVRIES, H., *see* Scholander, P.F., & *others.* Radio-carbon & O^{18} . . . icebergs. 1962. No. 75421

70998. de WEERDT, MARK MURRAY. The Court of Appeal for the N.W.T. (North, Sept.-Oct. 1962. v.9, no.5, p. 10-13, illus.)

Describes this court constituted in July 1960, its functions, procedures, members (seven judges). It hears appeals from judgements of the North Territories courts; above it, as last resort, is the Supreme Court of Canada. (CaMAI.)

70999. DeWITT, RONALD N. The occurrence of aurora in geomagnetically conjugate areas. (Journal of geophysical research, Apr. 1962. v.67, no.4, p. 1347-52, illus., graphs, diagrs.) 4 refs.

Analyzes all-sky camera records of auroras observed simultaneously at Farewell, Alaska, and Campbell Island in the South Pacific. The conjugate auroras are found to undergo similar variations in brightness, form, and motion. Breakup is also simultaneous at the two stations. (DLC.)

DeWITT RONALD N., *see also*

Alaskan Science Conference 1961. 1962. No. 69644

Basler, R.P., & R.N. DeWitt. Heights ionospheric irregularities. 1962. No. 70060

DeWOLFE, B.B., *see* Alaskan Science Conference 1961. 1962. No. 69644

DeWOLFE, R. H., *see* Alaskan Science Conference 1961. 1962. No. 69644

DEY, P. K. *see* Roy, A., & *others*. Angiographic study hypothermia . . . 1960. No. 75232

71000. DEZHKIN, VADIM VASIL'EVICH, 1930– . Sovremennoe rasprostranenie bobrov v Evrazii. (Zoologicheskiĭ zhurnal, Jan. 1961. t.40, vyp.1, p. 106-116, map.) Approx. 80 refs. Text in Russian. **Title tr.:** Present distribution of beavers in Eurasia.

Includes distribution on the Kola Peninsula, Arkhangel'skaya Oblast', Komi ASSR and northern Fennoscandia. The areas inhabited by beaver, their race or origin, location of populations, etc. are noted. (DLC.)

71001. D'ĬACHENKO, T. F. O svīazi shtormov na Murmanskom proberezh'e s osnovnymi formami t͡sirkulīat͡sii atmosfery. (*In:* Leningrad. Arkticheskiĭ . . . institut. Trudy 1961. t.235, Sbornik stateĭ po sinopticheskoĭ meteorologii, p. 66-69, tables.) Text in Russian. **Title tr.:** On the relation of storms on the Murman Coast to the main forms of atmospheric circulation.

Establishes a correlation between the frequency of storms of various directions, and the simultaneously prevailing form of circulation (eastern, western, meridional). The reasonably good relationships could be used in long-range storm forecasts for the area. (SPRI.)

71002. D'ĬAKONOV, ALEKSANDR MIKHAĬLOVICH. Obzor vidov morskikh zvezd roda Henricia Gray iz severo-zapadnykh chasteĭ Tikhogo okeana. (Akademiīa nauk SSSR. Zoologicheskiĭ institut. Issledovaniīa dal'nevostochnykh moreĭ SSSR, 1961. vyp.7, p.5-46, illus. on plates, tables.) 13 refs. Text in Russian. **Title tr.:** Review of the starfish species of the genus *Henricia* Gray from the northwestern Pacific.

Following an account of earlier studies, of taxonomic methods applied and a key, 28 species are described, including five new, and synonyms, anatomy and morphology, comparative data, and distribution are given. Over half of the forms occur in arctic areas. Plates with numerous photographs and drawings aid in identification of this difficult group. (DLC.)

71003. D'ĬAKONOV, F. V. ĬAkutiīa, k 40-letiīu ĬAkutskoĭ ASSR. (Geografiīa v shkole, Jan.-Feb. 1962. god 25, no.1, p.19-25, map.) 3 refs. Text in Russian. **Title tr.:** Yakutia, the 40th anniversary of Yakut ASSR.

Outlines the present status and prospects of industry and agriculture in Yakutia: the transportation system and main industrial centers, the diamantiferous areas of the Vilyuy basin, lumbering, the Sangara, Dzhebariki-Khay, Kangalassy and Zyryanka coal deposits; gold mining in the Aldan basin and eastern sections; development of an industrial center based on iron and coal in the south. (DLC.)

71004. D'ĬAKOV, A. G., *and* Z. V. BARTOSHINSKIĬ. Transportirovka i kharakter iznosa almazov alliīvial'nykh rossypeĭ Zapadnoĭ ĬAkutii. (*In:* Akademiīa nauk SSSR. ĬAkutskiĭ filial. Almazy ĬAkutii . . . 1961, p.123-35, tables.) 16 refs. Text in Russian. **Title tr.:** Transport and character of wear of the alluvial placer diamonds of western Yakutia.

Discusses the behavior of placer diamonds in the alluvial transport of the Vilyuy, Markha, Tyung and other rivers of Yakutia, with data on their size, form, specific weight, hardness, resistance to erosion and crushing. The quantity of crushed diamonds of the Vilyuy, Markha and Tyung basins is reported. Morphologic types of diamond crystals and their resistance are discussed. The hardness and chemical stability of diamonds are evidenced in their great resistance to stream wear and transport. (DLC.)

71005. D'ĬAKOV, A. G. Zakonomernosti razmeshcheniīa molodykh almazonosnykh rossypeĭ Sibirskoĭ platformy. (Akademiīa nauk SSSR. Komissiīa po probleme zakonomernosti razmeshcheniīa poleznykh iskopaemykh. Zakonomernosti razmeshcheniīa poleznykh iskopaemykh 1960. t.4, rossypi, p.192-97.) 9 refs. Text in Russian. **Title tr.:** Distribution laws of young diamond-bearing placers of the Siberian platform.

Discusses the abundance and position of primary diamond deposits, geomorphic structure of the region, weathering processes, the transport ability of rivers, and other factors determining the distribution of diamond placers in western Yakutia, especially in the Malaya Botuobuya and Vilyuy River regions. Morphologic features of the Quaternary alluvial deposits are summarized. Climate, physical geographic conditions, the durability of diamond crystals, the river net and other related matters are discussed with a view to clarifying the prevailing patterns in diamond placers distribution. (DLC.)

71006. D'ĬAKOV, K. N. Rezul'taty opytov po izucheniiū migrat͡sii vlagi v promerzaīūshchikh gruntakh s pomoshch'īū radioaktivnykh izlucheniĭ. (*In:* Materialy po laboratornym issledovaniīam merzlykh gruntov, 1961. sbornik 4, p. 81-85, table, graphs, diagrs.) 4 refs. Text in Russian. **Title tr.:** Results of experimental studies of moisture migration in freezing soils by means of radioactive emissions.

Reports on study of (upward) water migration in samples of sandy loam. In one test mildly radioactive CS_2CO_3 was dissolved in the water admitted to the lower surface of a freezing (from above) and an unfrozen soil sample. Measurements made 11 days later showed 2-2.5 higher content of radioactive cesium in the frozen sample than in the unfrozen. Another experiment using radioactive $FeSO_4$ showed pure water reaching the upper surface of the 20 cm. thick soil sample while that containing $FeSO_4$ reached only 13 cm. height. A third test was made in which the variously freezing and thawing soil was exposed in part to a strong exterior source of radiation. Moisture migration during freezing appeared to be reduced in the irradiated sections, as evidenced by the absence of swelling. (DLC.)

D'ĬAKOV, N. I., *see* Gnevushev, M.A., & *others*. Ob okraske īakutskikh almazov. 1961. No. 71713

71007. DIBNER, A. F. Stratigraficheskoe znachenie sporovo-pyl't͡sevykh kompleksov iz permskikh otlozheniĭ Imangdinskogo kamennougol'nogo mestorozhdeniīa Norjl'skogo raĭona. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, 1961. vyp.26, p.76-90, illus. on plates, tables, incl. fold., text map.) 23 refs. Text in Russian.

Title tr.: Stratigraphic significance of spore-pollen complexes from Permian deposits of the Imangda hard coal deposits of the Noril'sk region.

Reports on more than 300 samples from four drillings. More than a hundred spore and pollen species are identified, calamites, horsetails, ferns, and lycopods, predominating. Two complexes are distinguished and characterized. The paleobotany of Noril'sk region in Permian time is interpreted. (DLC.)

71008. DIBNER, V. D. Dokembriĭ i paleozoĭ Shpitsbergena; po novym literaturnym dannym. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ sbornik, 1962. vyp.27, p.21-29.) 23 refs. Text in Russian. **Title tr.**: The Precambrian and Paleozoic of Spitsbergen according to new literature data.

Reviews stratigraphy of these deposits as treated in recent studies of English, Polish, Norwegian and other scientists. Archean (?), Hecla Hoek formation, Downtonian and Devonian, lower Carboniferous, middle and upper Carboniferous and Permian deposits are described noting their distribution, thickness, facies, stratigraphy and and other features. (DGS.)

71009. DIBNER, V. D., *and* **L. D. MIROSHNIKOV.** IUrskie otlozheniia Gornogo Taĭmyra. (Geologiia i geofizika, 1962, no.3, p.11-22, map, cross-section) 7 refs. Text in Russian. Summary in English. **Title tr.**: Jurassic deposits of mountainous Taymyr.

Presents a stratigraphic description of Jurassic bedrocks and drift beds found in the Chelyuskin Peninsula, based on the literature and on own field and laboratory studies. Upper Lias, Middle Jurassic(?), Oxfordian, Kimeridgian and lower Volga stages are distinguished and the fauna characterized. Continental coal-bearing deposits are also described, noting the spore and pollen complexes, as belonging to the top of Jurassic system. These deposits are over 300 m. thick. Their formation conditions and the paleogeography are interpreted. (DLC.)

71010. DIBNER, V. D., *and others.* Litologiia i usloviia formirovaniia mezozoĭskikh otlozheniĭ Zemli Frantsa-Iosifa. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.121, vyp.18, sbornik stateĭ po geologii i neftegazonosnosti Arktiki, p.44-74, illus., fold. diagr.) 27 refs. Text in Russian. *Other authors:* V.K. Razin *and* Z.Z. Ronkina. **Title tr.**: Lithology and formation conditions of the Mesozoic deposits of Franz Joseph Land.

Describes these deposits as Upper Triassic, all series of Jurassic, Lower Cretaceous and Cenomanian, together approx. 2000 m. thick. Their lithologic properties, microscopic description and mineralogic analyses are reported. They are divided stratigraphically into stages. Terrigenous and authigenous minerals are characterized. Horizontal and diagonal laminations are described. Paleogeographic conditions are discussed for the formation of Mesozoic deposits. (DLC.)

71011. DIBNER, V. D. Neogenovye otlozheniia na severo-vostoke Zemli Frantsa-Iosifa. (Akademiia nauk SSSR. Doklady, June 11, 1961. t.138, no.5, p.1163-65, illus., map.) Text in Russian. **Title tr.**: Neogene deposits in northeastern Franz Joseph Land.

Describes Pliocene (?) deposits found in 1957 on Cape Sugrobova, Gofmana Island. Results of spore-pollen analyses show conifers predominating, *Pinus* of Diploxylon subgenera, *Picea* sp. and others. (DLC.)

71012. DIBNER, V. D. Nizhnemelovye otlozheniia Zemli Frantsa-Iosifa. (Moskva. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ neftianoĭ institut. Trudy 1961. vyp.29, Trudy Vsesoiuznogo soveshchaniia po utochneniiu unifitsirovannoĭ skhemy stratigrafii mezozoĭskikh otlozheniĭ Russkoĭ platformy, t.3, melovaia sistema, p.60-67.) Text in Russian. **Title tr.**: The Lower Cretaceous deposits of Franz Joseph Land.

Describes the stratigraphy of the sedimentary-effusive stratum, which is divided into the Tikhaya Bay and the Solsberi series. For each, the distribution, lithology, thickness, sections, composition and floral characteristics are described. (DLC.)

71013. DIBNER, V. D. Novye dannye po paleogeografii antropogena Zemli Frantsa-Iosifa v svete pervykh rezul'tatov radiokarbonovykh issledovaniĭ. (Akademiia nauk SSSR. Doklady, June 1, 1961. t.138, no.4, p.893-94.) 5 refs. Text in Russian. **Title tr.**: New data on the paleogeography of the Anthropogene [Quaternary] of Franz Joseph Land in the light of the first results obtained with the radioactive carbon method.

Reports absolute age (4250 ± 90 years) for driftwood found on 10 m. boulder-gravel terrace on the south coast of Zemlya Aleksandry Island. For the 20-23 m. terrace, absolute age is 8500-10,000 years extrapolated, i.e. approx. the boundary between Pleistocene and Holocene (Recent). This 20-23 m. terrace is correlated with a 31-36 m. terrace in Vestspitsbergen and Nordaustlandet, and its relief and paleogeographic features are described and interpreted. (DLC.)

71014. DIBNER, V. D. Plavuchie ledianye ostrova i porozhdaiushchie ikh ledniki. (*In:* Burkhanov, V.F. Na ledianom ostrove, 1962, p.198-209, illus., plate.) Text in Russian. **Title tr.**: Floating ice islands and the glaciers which originated them.

The first ice island is claimed to have been discovered by a Soviet flyer in 1941; and the numerous ice islands observed by Russian as well as nearly 65 by American flyers and scientists are noted. Data from studies of the existing glaciers on the north coasts of Greenland and Ellesmere Island are compared with results of studies of ice islands T-1, T-2, T-3 and North Pole-6, and with analyses of core samples from various parts of the arctic sea bottom. The ice islands are concluded to have originated on Ellesmere Island. Five periods of the building up of glaciers in that area are distinguished: 5000-2500 years ago, the period of glacier accumulation on the coastal shelf; 2500-1600 years ago, the ablation of glaciers; 1600-800 years ago, new accumulation; 800-400 years ago, end of the last accumulation period; 400 years ago to the present has been a period of ablation of glaciers on the shelf caused by a general warming of the Arctic and an increase of atmospheric circulation. The ice island North Pole-6 is said to have started its drift in the Arctic Basin far earlier

(probably 50 years ago), than did ice island T-3. (DLC.)

71015. DIBNER, V. D. Primenenie aėrometodov v issledovanii vysokoshirotnykh raĭonov sovremennogo oledeneniia. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Jan.-Feb. 1962. t.94, vyp.1, p.61-65, illus., map.) Text in Russian. **Title tr.:** Use of aerial methods in study of contemporary glaciation in high latitude regions.

Outlines the geologic, glacial and geomorphic observations made during 1953 in Franz Joseph Land by air reconnaissance, air photography and air mapping. A 14,805 km. route was covered and observations made at 770 points. Air photographs interpreted have proved of value in determining distribution of glaciers, icebergs, hills, dikes and other surface features. Data obtained are found advantageous for mapping. Similar and supplementary work in 1956 and 1957 is noted. (DLC.)

71016. DIBNER, V. D. Stratigrafiia iurskikh otlozheniĭ Zemli Frantsa-Iosifa. (Moskva. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ neftianoĭ institut. Trudy 1961. vyp.29, Trudy Vsesoiuznogo soveshchaniia po utochneniiu unifitsirovannoĭ skhemy stratigrafii mezozoĭskikh otlozheniĭ Russkoĭ platformy, t.2, iurskaia sistema, p.166-71.) 10 refs. Text in Russian. **Title tr.:** Stratigraphy of the Jurassic deposits of Franz Joseph Land.

Reports the Lower, Middle and Upper Jurassic are represented in the archipelago, the first by continental the latter two by marine deposits. These deposits are divided into stages noting their distribution, thickness and paleontological characteristics, mostly belemnite fauna. Some layers of the Middle-Upper, however remain stratigraphically unseparated. (DLC.)

71017. DIBNER, V. D. Stratigrafiia melovykh otlozheniĭ ostrovov Barentsovo-Karskogo shel'fa i Gornogo Taĭmyra. (Akademiia nauk SSSR. Doklady, June 11, 1962. t.144, no.5, p.1113-14, fold. table.) 4 refs. Text in Russian. **Title tr.:** The stratigraphy of Cretaceous deposits of the Barents - Kara shelf islands and of mountainous Taymyr.

Presents a stratigraphic table of time-rock units of the Cretaceous system in Franz Joseph Land, Novaya Zemlya, the central Kara Sea islands (Sverdrup, Arkticheskogo Instituta, Uyedineniya), Severnaya Zemlya, and mountainous Taymyr. The Cretaceous deposits are divided into stages, substages and zones. Lithologic and paleontologic characteristics of each unit are given. Assisting specialists are cited. (DLC.)

71018. DIBNER, V. D. Stratigrafiia vekhnetriasovykh i iurskikh otlozheniĭ ostrovov Barentsevo-Karskogo shel'fa i Gornogo Taĭmyra. (Akademiia nauk SSSR. Doklady, Aug. 1, 1961. t.139, no.4, p.947-49, table.) 4 refs. Text in Russian. **Title tr.:** The stratigraphy of Upper Triassic and Jurassic deposits of the Barents - Kara shelf islands and of mountainous Taymyr.

Presents a correlated stratigraphic scheme of these deposits for Novaya Zemlya, Franz Joseph Land, Severnaya Zemlya and Taymyr. It was worked out by geologists and paleontologists of the Institute of Geology of the Arctic. (DLC.)

71019. DIBNER, V. D. Triasovye otlozheniia gor Byrranga. (Geologiia i geofizika, 1961, no.8, p.28-35, map, fold. diagr.) 7 refs. Text in Russian. Summary in English. **Title tr.:** Triassic deposits of Byrranga Mts.

Reports new material on the stratigraphy and in part, the paleogeography of the Triassic of Taymyr Peninsula. A complete stratigraphic section of Triassic deposits is identified on the Fad'yu-Kuda River (73°56′N. 97°19′E.) and for the first time described, noting distributed series, with thickness, flora and fauna. (DLC.)

71020. DIBNER, V. D. Zarosli ivy mokhnatoĭ za sem'desiat piatoĭ parallel'iu. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, July-Aug. 1961. t.93, vyp.4, p.334-36, map.) Text in Russian. **Title tr.:** *Salix lanata* thickets beyond the 75th parallel.

Describes two areas and some spots covered with this willow, in all a few score hectares in the Malakhay-Tari River valley, on the southern slopes of the Byrranga Mts. The growth is described. This find at 75°10′N., indicates a penetration of willows 300 km. farther north than the previously accepted limit of forest vegetation at 72°33′N. in the Khatanga region. (DLC.)

71021. DICK, T. M. Description of air bubbling systems at Cambridge Bay and Tuktoyaktuk, N.W.T. *(In:* National Research Council of Canada . . . Symposium on Air Bubbling, 1961. p.70-77, map, diagrs., graph.) *Its:* Technical memorandum no.70.

Describes, with plans and sections, the pneumatic de-icing systems installed in 1960 and 1959 at these settlements, on the south shore of Victoria Island and at the Mackenzie River mouth, respectively. The Tuktoyaktuk bubbler has been quite effective, keeping thin the ice around the wharf. Cambridge Bay burpers have been unable to cope effectively with the ice, probably because of salinity and temperature factors. Ventilation and radiator troubles were encountered at Tuk-tuk; water vapor freezing in the supply lines caused difficulty at Cambridge Bay. Details of the compressor houses and wharf installations are shown on plans and sections. Air temperature max. and min. and ice thickness away from bubblers at Tuktoyaktuk are graphed for Oct. 1959 - Apr. 1960. (DN-HO.)

71022. DICKENS, CLENNELL. Transportation in the North. (Western miner and oil review, Oct. 1961. v.34, no.10, p.76.) Paper presented at the National Northern Development Conference, Edmonton, Alta., Sept. 1961.

Describes the air services network and the role of the utility aircraft in northern exploration and development. The present system of regular and charter services is adequate for the next few years. Federal funds for development of air-strips, similar to those provided for roads, are suggested. (DGS.)

71023. DICKENS, H. BRIAN. Construction in permafrost: obstacles of soil and climate. (Canadian consulting engineer, Jan. 1960. v.2, no.1, p.33-37, illus., map.) 2 refs. *Reprinted as* National Research Council of Canada. Division of Building Research, Technical paper no.86.

Discusses in non-technical terms several properties of permafrost significant in northern construction; especially those connected with thawing, e.g. ice content, temperature equilibrium, imperviousness to water, etc. Construction methods found effective in preserving the frozen condition of the ground are outlined. Careful site selection, application of known techniques, and attention to detail, offset high costs by diminishing failures in engineering projects. (DLC.)

71024. DICKENS, H. BRIAN. Work of the Division of Building Research in northern Canada. (Arctic circular, Dec. 1961. v.14, no.2, p.28-35.)

Describes work of Permafrost Section of this National Research Council of Canada agency since 1950, at its research station at Norman Wells and elsewhere. Construction and performance of facilities in continuous permafrost were observed at Inuvik in Mackenzie District, and such in discontinuous permafrost in northern Manitoba. Permafrost properties and distribution in Canada, also ground temperatures at 100- and 200-ft. depths were investigated, and methods devised for measuring ground temperatures and for obtaining data on subsurface soil conditions. Economical northern housing was studied. (CaMAI.)

DICKENS, H. BRIAN, *see also* Leggett, R. F., & *others*. Permafrost invest. Can. 1961. No. 73391

71025. DICKEY, WOODROW WILSON, 1916–
A study of a topographic effect on wind in the Arctic. (Journal of meteorology, Dec. 1961. v.18, no.6, p.790-803, maps, graphs, tables.) 7 refs.

Attempts to explain quantitatively a particular topographical effect on the surface wind at the Barter Island station, Northern Alaska, on the basis of Nov. 1954 - Dec. 1957 data. The effect is attributable to the knob of the Brooks Range, which extends northward to the arctic coast in eastern Alaska, as demonstrated with a simple model barrier opposing specified winds. It is termed the corner effect, caused by essentially horizontal flow being forced around the end of a topographic barrier. Wind anomalies at other arctic locations similarly may be explained as air flow around arbitrarily shaped barriers under specified conditions. (DGS.)

71026. DICKSON, W. J., *and* **E. G. LEGER.** Muskeg trafficability research program, Vehicle Mobility Laboratory, CARDE. (*In:* National Research Council of Canada . . . Proceedings of the Eighth Muskeg Research Conference . . . 1962. p.1-9.) 19 refs.

Summarizes preliminary work of the Laboratory since its establishment at the Canadian Armament Research and Development Establishment in 1958; also contributions of the Canadian oil industry in vehicle design and operation on muskeg. Radforth's seven requirements and J.G. Thomson's suggested procedure for vehicle design are listed. The four-phase VML program as planned is: selection of type areas of muskeg according to Radforth's classification; micro-topographic survey of the surface of each type area; measurement of the surface and sub-surface strength of each type; and determination of the optimum vehicle geometry and power requirement to negotiate each type. First phase of the program is completed and some survey work is to be carried out in 1962. Several design suggestions were made in the discussion. (DLC.)

DiCOSTANZO, CHARLES J., *see* Alaskan Science Conference 1960. 1961. No. 69643

71027. DIEBOLD, E. J. Power rectifier takes severe environment. (Electronics, June 9, 1961. v.34, no.23, p.124, 126-27, illus.) 2 refs.

Describes power supply equipment for the klystrom transmitting tubes of BMEWS radars. Rectifier elements rated at 70,000 v., 400 amp. peak are required for a beam power supply of 30,000 v. 9 amp. The elements are contained in metallic tanks able to withstand operating or storage temperatures of -65°to + 105°C. A large number of identical silicon rectifier cells connected in series allows continued operation with a plurality of failed individual elements without detriment to the operative cells. (DLC.)

71028. DIETRICH, GÜNTER, *and others*. On the relationship between the distribution of redfish and redfish larvae and the hydrographical conditions in the Irminger Sea. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.150 ICES/ICNAF Redfish Symposium, p.124-39, illus., maps.) 15 refs. *Other authors:* H.J. Aurich *and* A. Kotthaus.

Study based on material from seven cruises over Denmark Strait and the Irminger Sea. The bottom topography is outlined and distribution of temperature, salinity, turbidity and currents described. "Remarkable agreement" was found between distribution of turbidity and of larvae. Trawling studies revealed that adult fish avoid temperatures below 3°C., but no correlation between distribution and temperature was found in waters of 3° to 7.5°C. (DI.)

71029. DIETRICH, GÜNTER. Some thoughts on the working-up of the observations made during the "Polar Front Survey" in the IGY 1958. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v.149, Contributions to Special IGY Meeting 1959. p.103-110, illus., maps.) 11 refs.

Discusses the past, current and future plans phases in the Polar Front Survey project, which includes East Greenland waters; temperature distribution, horizontal and vertical; annual fluctuation of surface temperatures; oxygen distribution; water movements. A great part of the study is based on sections between Kap Farvel and Flemish Cap in the Grand Banks. (DI.)

71030. DIETRICHSON, BRYNJULF. Om dannelse av de norske kisforekomster. (Tidsskrift for kjemi, bergvesen og metallurgi, Feb. 15, 1962. bd.22, nr.2, p.42-43.) Text in Norwegian. Summary in English. **Title tr.:** On the origin of the Norwegian pyrite deposits.

Discusses the state of knowledge and differing views on the origin of these deposits in the Sulitjelma and other regions. The known, widely scattered pyrite ores may represent only small parts of a possibly Precambrian nickeliferous pyrrhotite mother lode. (DLC.)

71031. DIETZ, ROBERT SINCLAIR, 1914– , *and* G. A. SHUMWAY. Arctic Basin geomorphology. (Geological Society of America. Bulletin, Sept. 1961. v.72, no.9, p.1319-29, plates, maps, profiles.) 25 refs. Paper presented at the International Sym-

posium on Arctic Geology, 1960, and abstracted, p.644, in its Proceedings, q.v.

Describes the geomorphic features, from echo-sounding profiles taken by the *Nautilus* in 1958 and *Skate* in 1959. Features along a track from Pt. Barrow, Alaska to the North Pole, thence to the Atlantic include: the Alaskan continental slope and rise, Canada Basin at 3850-3900 meters depth, Chukchi Cap, Central Arctic Rise at 2000-3700 m., Central Arctic Basin at 3940 m., Lomonosov Ridge, Eurasia Basin at 4090-4500 m., Region of Seamounts, probably a continuation of the Atlantic Mid-Oceanic Ridge, at 4235-5335 m.; and Nansen Ridge. Elevations of the rises above the ocean floor are also given, the highest being Lomonosov Ridge with a summit elevation of 1290 m. Differences in the Canadian, Russian, and American names of these features are noted, also variants among the American names. (DGS.)

DIETZ, ROBERT SINCLAIR, 1914– , *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72192

71032. DI GIOVANNI, CLETO, *Jr., and others.* Some microbiological and sanitary aspects of military operations in Greenland. (Arctic, June 1962. v.15, no.2, p.155-59, illus., tables, map.) 4 refs. *Other authors:* J.W. Rachlin, B.F. Barquist, E.S. Dooley, *and* T.R.A. Davis.

Describes, from a longer report (cf. No.64724.) studies of sanitation practices and problems of wound healing and fly-borne contamination at Camp Tuto, 14 mi. from the Thule Air Force Base, supplemented with data from two camps on the icecap. Bacteria from water supplies, from surface snow, and soil and also bacteria from wounds and from flies were isolated, identified and counted. No evidence of water contamination was found though bacteria appear to survive the arctic winter in the soil. (CaMAI.)

DIGREE, BERTHA, *see also* Ameigh, G.C., & Y. M. Chaffin. Alaska's Kodiak Island . . . 1962. No. 69738

71033. DIKOV, NIKOLAĬ NIKOLAEVICH. Po sledam drevnikh kostrov; arkheologi idut po Chukotke. Magadan, Magadanskoe khizhnoe izd-vo, 1960. 106 p. illus., map. Text in Russian. **Title tr.:** On the track of ancient camp-fires; an archeological traverse of Chukotka.

Comprehensive account of his field work of 1957-1959, on the Anadyr', Amguema, Mayn, and Belaya Rivers, Lake Chirovoye, Ayon Island, Uelen and Vankarem. The peopling of Chukotka about 2,000 B.C. and establishment of neolithic then bronze age cultures (approx. 1,000 B.C.) are traced; and the inventory of main sites described, especially the multi-layered Ust'-Belaya burial place. A settled or semi-settled way of life is inferred from the presence of thin-walled pottery, a fish-smoking kiln and meat storage pits, also the location of sites on lake shores and at reindeer crossings of river. Cranial measurements of an Ust'-Belaya skull are those of a reindeer Chukchi-Yukaghir ancestral type. Affinities of bronze artifacts and pottery to Lake Baykal and Yakutian finds reflect mutual cultural exchange, possibly ethnic links. The spread of agriculture and cattle raising to the Middle Lena basin brought the northward expansion of southern groups to a close; a virtual isolation of continental Chukotka ensued, with reversion to the stone age, which persisted to the 17th century A.D. A different highly specialized sea-mammal hunting culture was developed on the Pacific littoral by ancestral Eskimos and coastal Chukchis. Excavations at Uelen and test diggings in the Cape Shmidta-Vankarem region revealed three culture stages: Uelen-Okvik, Old Bering Sea, and Punuk. The find of a toggle harpoon head in a bronze age burial (ca. 1,000 B.C.) at Ust'-Belaya suggests a local development of old Eskimo culture in interior Chukotka. This hypothesis is supported by the parallel existence of continental and coastal culture traits on Ayon Island similar, respectively, to Ust'-Belaya and Old Bering Sea. (DLC.)

DIKOV, NIKOLAĬ NIKOLAEVICH, *see also*

Lisitsyna, N.K. Arkheologicheskie issledovaniia. . .1962. No. 73527

Krizhevskaia, L. IA., & *others.* Rabota sektorov Instituta arkheologii. . .1962. No. 73149

DINGLE, WALTER B., *see* National Research Council of Canada. . .muskeg research conference 1960. 1961. No. 74228

DINSDALE, WALTER G., *see* National Northern Development Conference. 1961. No. 74224

71034. *DISCOVERY.* Gravel on an ocean bottom. (Discovery, July 1961. v.22, no.7, p.274-75, map.)

Describes studies, at the Lamont Geological Observatory, of the source area and method of transport of sand and gravel dredged in the Central Arctic Basin (84°-85°N. 138°-152° W.) by the U.S. - IGY drifting station Alpha in 1957-58. The material, of Permo-Carboniferous age, was apparently rafted to its present location in icebergs, probably from Axel Heiberg Island, Ellesmere Island, or the northern coast of Greenland. (DGS.)

71035. DIUNIN, ARKADIĬ KONSTANTINOVICH. Isparenie snega. Novosibirsk, Izd-vo Sibirskogo otdeleniia AN SSSR, 1961. 120 p. illus., tables, graphs, plates. (Akademiia nauk SSSR. Sibirskoe otdelenie. Transportno-énergeticheskiĭ institut.) 67 refs. Text in Russian. **Title tr.:** Evaporation of snow.

Reviews previous studies and outlines the theoretical considerations. Snow evaporation studies under negative temperature conditions and the methods used in 1957-1960 at the Ogurtsovo meteorological station near Novosibirsk are described. Most of the experiments were made in cold installations, isolated from wind and precipitation, using artificial wind. Three kinds of experiments are described in detail, including the 1959-1960 winter work on the natural snow-cover surface. Various factors affecting evaporation are analyzed, that from the flat snow surface, that of snow bodies and flakes, and that under snow drift, and their data reported. Main factors increasing the speed of evaporation are: mixing of snow by drift and dispersion, blowing wind, solar radiation, and the inflow of heat from the ground. (DLC.)

DIUNIN, ARKADIĬ KONSTANTINOVICH, *see also* Bialobzheskiĭ, G.V., & *others.* Osobennosti . . . dorog . . . 1962. No. 70196

71036. DIVIN, VASILIĬ AFANAS'EVICH. Vasiliĭ Mikhaĭlovich Golovnin, 1776-1831. *(In:* Kuznetsov, I.V., *ed.* Liudi . . . 1962, p.402-418, port., map.) Refs. Text in Russian.

Describes his life and round-the-world voyages on the *Diana* and the *Kamchatka,* cf. No. 34940, 34941. His published works and some others about him are listed. (DLC.)

71037. DIX, W. F. Preliminary report on the geology of the Gods Lake area, Gods Lake Division, Manitoba. Winnipeg, 1948. 7 p. fold. map. (Manitoba. Dept. of Mines and Natural Resources. Mines Branch. Preliminary report 47-4.)

Reports and maps at scale 1 in.: 1 mi. the stratigraphic and structural geology of this area, 54°30′-45′N. 94°00′-15′W. The volcanics and interbedded sediments (rarer) of the Hayes River group are overlain unconformably by Oxford group sediments, in a few places, and are intruded by granite, granodiorite, porphyry, etc. The Hayes River lavas occupy the apparent north limb of an anticline, and the Oxford sediments a compressed syncline. Numerous shear zones have resulted from faulting. Folding and faulting of the lavas probably preceded the intrusion of the granite masses. (DGS.)

71038. DMITRIEV, E. ÎA. Itogi geologorazvedochnykh rabot na neft' i gaz za 1961 g. v novykh raĭonakh RSFSR. (Geologiîa nefti i gaza, May 1962. god 6, no.5, p.1-8.) Text in Russian. **Title tr.:** Results of the 1961 geologic prospecting for oil and gas in the new regions of the RSFSR.

Reports eight oil and five gas deposits, also many oil and gas pools found. Komi ASSR had important discoveries: in the Zapadno-Tebukskoye Silurian deposits, six productive horizons with large oil reserves, the light oil yield is 60 tons/day; also the Vostochno-Savinoborskoye and the Michayuskoye oil deposits. Geologic prospecting in the Vilyuy syncline, Anabar anticline, and the Aldan massif are reported, the Sobo-Khainskoye gas deposits of the lower Vilyuy area are noted with a 350,000 m.³/daily yield; in Tyumen Province discoveries also are noted. (DLC.)

71039. DMITRIEV, E. ÎA., *and others.* Ocherednye zadachi geologorazvedochnykh rabot na neft' i gaz v Zapadnoĭ Sibiri. (Geologiîa nefti i gaza, Sept. 1962. god 6, no.9, p.4-11, map, profiles.) Text in Russian. *Other authors:* L.I. Rovnin *and* ÎU. G. Ėrv'e. **Title tr.:** Immediate tasks of geologic prospecting for oil and gas in West Siberia.

Presents a tectonic map of the Mesozoic-Cenozoic eras of Tyumen province including the arctic areas. Large regional structures such as arches and depressions are distinguished and characterized in respect to gas and oil prospects. Some discoveries are reported and the reserves and yield noted. Further geologic prospecting, drillings, construction of a gas line between Berezovo and Serov (Ural), and other means are discussed to speed and increase discovery of oil and gas and their utilization in production. (DLC.)

DMITRIEVA, A. A., *see* Al'tshuler, V.M., & A.A. Dmitrieva. Nekotorye okeanologicheskie raschety . . . PÉS. 1961. No. 69731

DMITRIEVA, N. G., *see* Akademiîa nauk SSSR. *Institut geografii.* Dal'nieĭ Vostok . . . 1961. No. 69546

DOBKINA, Ė. I., *see* Grosval'd, M.G., & *others.* K istorii golot͡sena . . . 1961. No. 71880

71040. DOBRET͡SOV, V. B. Otkrytaîa dobycha uglîa v Noril'ske. (Ugol', Mar. 1962. god 37, no.3, p.24-25.) Text in Russian. **Title tr.:** Open-mining of coal at Noril'sk.

Describes the Kayyerkan deposit and the open-mining system used there. The deposit consists of ten layers 0.6-5.0 m. thick, enclosed in permafrost. The coal resources are estimated at 30 million tons. The open-mining plan is expected to produce 750,000 t. of coal a year. It involves the removal of 4.5 million m.³ of frozen ground. Organizational details of the winter, spring and summer work and the use of mechanized equipment for excavation and transportation are discussed. (DLC.)

71041. DOBRET͡SOVA, L. A. Korma i pastbishcha severnykh oleneĭ v Tomponskom raĭone ÎAASSR. (Akademiîa nauk SSSR. ÎAkutskiĭ filial. Doklady 1957. v.8, p.16-24.) 7 refs. Text in Russian. **Title tr.:** The fodder and pastures of reindeer in the Tompo District, Yakut ASSR.

Reports study in a district which occupies the eastern and part of the western Verkhoyansk Range. Seasons, climate, snow cover and fodder components are outlined. Seasonal sojourn and movements of reindeer are described as are the nature and distribution of pastures, nutritive value of fodders, food preferences (Iceland moss, leaves of willows and other shrubs, rose-bay, berries, grass); etc. (DLC.)

71042. DOBRET͡SOVA, L. A. Rastitel'nost' verkhoviĭ r. Moly (Charky). (Akademiîa nauk SSSR. Sibirskoe otdelenie. ÎAkutskiĭ filial. Nauchnye soobshcheniîa, 1959. vyp.2, p.79-84.) 5 refs. Text in Russian. **Title tr.:** The vegetation of the upper Mola (Charky) River.

Discusses the stream's sources (ca. 66°N. 140°E.) and the geomorphology of this little known section of the Yana basin. The climate, the plant associations, including three kinds of tundra and their main plant components are described. Some two hundred local species are listed, Latin names, in taxonomic order. (DLC.)

DOBRET͡SOVA, L. A., *see also* Shcherbakov, I.P. Rastitel'nost' . . . Villûîa. 1962. No. 75557

71043. DOBRONRAVOVA, N. P. Ėnergotraty rybakov-aborigenov na Krainem Severe. (Voprosy pitaniîa, 1962. t.21, no.6, p.36-40, tables.) 4 refs. Text in Russian. Summary in English. **Title tr.:** Energy expenditure of native fishermen in the Far North.

Reports a study carried out in northern Yamal-Nentsy National District in June-July during the peak of fishing activities. Daily energy losses among the Samoyed fishermen were as high as 5602 cal. (when rowing); on motor boats, losses were 4282 cal.; when not fishing they dropped a further 320 cal. on the average. (DLC.)

71044. DOBROVOL'SKIĬ, ALEKSEĬ DMITRIEVICH, *and* **V. S. ARSEN'EV.** Gidrologicheskaîa kharakteristika Beringova moriîa. (Akademiîa nauk SSSR. Institut okeanologii. Trudy 1961. t.38, p.64-96, illus., tables, maps.) 15 refs. Text in Russian. **Title tr.:** Hydrological characteristics of the Bering Sea.

Presents a basic outline of conditions according to recent studies from the *Vitîaz', Nerpa* and other vessels. Following a sketch of the bottom relief and horizontal structure of the sea and its

approaches, temperature and salinity are discussed in their vertical and horizontal distributions, at different seasons, both in the central part of the Sea and in the Anadyr Bay. Based on these data, the extent and distribution of the different water masses are determined and described. Temperature conditions for secondary areas are also presented, as well as the seasonal course of temperature in two areas. Heat content and exchange are discussed, and a map of surface currents in the Bering Sea is offered. (DLC.)

71045. DOBROVOL'SKIĬ, ALEKSEĬ DMITRIEVICH. Otto Evstaf'evich Kot͡sebu, 1788-1846. (*In:* Kuznet͡sov, I.V., *ed.* Li͡udi . . . 1962, p.439-49, port., map.) 7 refs. Text in Russian.

Describes his voyages and discoveries, including those in Kamchatka, Bering Sea and Alaska, cf. No. 9192, 9193. (DLC.)

71046. DOBROVOL'SKIĬ, V. P. Ob ėlektricheskoĭ anizotropii merzlykh gornykh porod. (Merzlotnye issledovaniĭa. Sbornik statei, 1961. vyp.2, p.157-64, graphs, diagrs.) 6 refs. Text in Russian. **Title tr.:** Electrical anisotropy of frozen ground.

Offers formulas for calculating the macro- and micro-anisotropy of frozen Salekhard area soils for known electrical parameters of the soil components. The electrical resistance of sand proved to be much greater than that of loam in the soil temperature range 0° to −2°C. In stratified sand-loam soils, anisotropy increased with a temperature change from 0° to −1.8°C.; there was almost no change from −1.8° to −3.5°C; and anisotropy decreased from −3.5° to −8.0°C. Under natural conditions, the max. values of the coefficient of anisotropy were found in frozen ground consisting of interlayers of coarse and fine grained fractions, and in ground with max. development of cryogenic textures along the bedding lines. The temperature gradient in the soils is as important as the presence of stratified structures and textures with different electrical properties. The temperature gradient causes a gradient of electrical resistance and, subsequently, anisotropy of the electrical properties of the frozen ground. Results of temperature vs. coefficient of anisotropy calculations are graphed. Anisotropy studies are expected to increase the accuracy of the quantitative interpretation of vertical electric soundings of frozen ground.—From CRREL. (DLC.)

71047. DOBROVOL'SKIĬ, V. P. Primenenie ėlektrorazvedki metodom soprotivleniĭ pri izyskaniĭakh pod gidrostroitel'stvo v usloviĭakh mnogoletnemerzlykh gornykh porod. (Merzlotnye issledovaniĭa. Sbornik statei, 1961. vyp.1, p.190-207, diagrs., map.) 11 refs. Text in Russian. **Title tr.:** Application of the electric-resistance survey method to exploration for hydraulic construction under conditions of permafrost rock.

Reports tests on samples taken in an undisturbed state with natural moisture content from deposits in the vicinity of the proposed Salekhard hydroelectric plant. Various lithologic samples, such as sands, sandy loams and loams were tested in the laboratory under temperature conditions of 18° to -10°C. Specific electric resistance data are reported and diagrammed. The method of electric resistance survey is discussed in general and as applied to permafrost. The procedure is outlined and illus. by profiles and map. (DLC.)

DOBROVOL'SKIĬ, V. P., *see also*

Ananĭan, A.A., & V.P. Dobrovol'skiĭ. Ob ėlektroprovodnosti . . . 1961. No. 69751

Ananĭan, A.A., & V.P. Dobrovol'skiĭ. Udel'naĭa ėlektroprovodnost' . . . 1961. No. 69753

71048. DOBY, FRED W. Antarctic runways and roads. (Military engineer, Nov.-Dec. 1961. v.53, no.356, p.452-54, illus.) Ref.

Describes the construction and maintenance of such facilities on snow-covered ice at McMurdo Sound. Runways for ski-equipped aircraft are prepared by removing the snow from the ice and pulverizing and leveling the ice surface. Ice chips and water are used to fill swales and low spots in the ice during repair. Roads are built by compacting and grading the snow. An experimental snow runway similarly constructed on the Ross Ice Shelf supported ski-equipped but not heavy, wheeled aircraft. (DLC.)

71049. DOBY, FRED W. Seabees in Alaska. (Military engineer, Sept.-Oct. 1961. v.53, no.355, p.350, illus.)

Reports work done by Mobile Construction Battalion 9 on Kodiak and Adak Islands, Mar.-Oct. 1960: surfacing of taxiways, restoration of water and electrical systems, warehouses, pier and storage facilities, etc. (DLC.)

71050. *DOCK AND HARBOUR AUTHORITY.* Trade at Port Churchill in 1960. (Dock and harbour authority, Oct. 1961, v.42, no.492, p.186.)

Notes 48 ships loaded 19,582,500 bu. of grain during the navigation season, July 23 - Oct. 15; additional berthage facilities are under construction to expedite turnaround, and 4,851,000 bu. in storage to open the 1961 season. Aerial ice surveys are flown from bases at Churchill and Frobisher, to protect vessels en route through Hudson Bay and Strait. (CaOGB.)

71051. DODD, ARTHUR V. Mesoclimatic temperature differences in the Fort Greely, Alaska, area. Natick, Mass., Apr. 1962. iv, 26 p. illus., col. maps, graphs, tables. (U.S. Quartermaster, Research and Engineering Command, Earth Sciences Division, Technical report ES-3.) 9 refs.

Supplements his paper to the 12th Alaskan Science Conference, with 12 photographs of selected observation sites, illustrating the great local temperature differences that may occur in the Fort Greely area, due to nearby mountain passes and frequent air mass changes in winter. Differences as great as 40°F. between sites one mile apart but in different terrain, are not unusual in clear winter weather. Maps show typical patterns of temperature differences from the Federal Aviation Agency Weather Station at Fort Greely, Big Delta, during winter and summer cold spells; maps are designed to aid selection of military test sites. *Mesoclimatic* is explained as intermediate between macroclimatic and microclimatic. (CaMAI.)

DODD, ARTHUR V., *see also*

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

Robison, W.C., & *others*. Muskeg research. 1962. No. 75152

71052. **DODIMEAD, ALLAN J., *and* F. FAVORITE.** Oceanographic atlas of the Pacific subarctic region 1958. Ottawa, Apr. 10, 1961. 6 p. plus 41 charts and graphs, table. (Canada. Fisheries Research Board, Manuscript report series, oceanographic and limnological, no.92.) Refs.

Presents data from 588 oceanographic stations between 35° - 55°N. 140°E. - 120°W., about a hundred of them within the Gulf of Alaska, Aleutian waters, and Bering Sea, stations made by members of the International North Pacific Fisheries Commission and other agencies in the summer. Horizontal and vertical charts show distributions of temperature, salinity, density and the anomaly of dynamic height. The oceanographic features thus depicted, together with the results of salmon tagging and distribution studies are expected to elucidate problems of salmon environment and migration routes. (DN-HO.)

71053. **DODIMEAD, ALLAN J., *and others*.** Oceanographic data record, North Pacific surveys, July 10 to September 6, 1960. Ottawa, Oct. 12, 1960. 329 p. illus., map, graphs, tables. (Canada. Fisheries Research Board. Manuscript report series, oceanographic and limnological, no.82.) 8 refs. *Other authors:* L.F. Giovando, R.H. Herlinveaux, R.K. Lane, *and* H.J. Hollister.

Presents tabulations of observed and interpolated serial oceanographic station data and subsequent computations, also reproductions of bathythermograms, collected in the northeast Pacific including the Gulf of Alaska by a two-vessel survey. A Gulf of Alaska cruise carried out by the CNAV *Oshawa*, Aug. 8 - Sept. 6, as part of the Canadian contribution to the International North Pacific Fisheries Commission and for the IGY deep water circulation program. Observations of temperature, salinity, dissolved oxygen, light penetration, plankton, weather and marine life, were made. (DN-HO.)

71054. **DODIMEAD, ALLAN J., *and others*.** Oceanographic data record, North Pacific surveys, May 16 to July 1, 1961. Ottawa, Sept. 20, 1961. 337 p. illus., maps, graphs, tables. (Canada. Fisheries Research Board. Manuscript report series, oceanographic and limnological, no.101.) 4 refs. *Other authors:* F.M. Boyce, N.K. Chippindale, *and* H.J. Hollister.

Similar in scope to the July-Sept. 1960 survey, *supra;* but the 1961 survey was not connected with the IGY. About 25 stations were made in the Gulf of Alaska. (DN-HO.)

71055. **DODIN, D. A., *and* V. S. GOLUBKOV.** K probleme trappovogo magmatizma severo-zapadnoĭ okrainy Sibirskoĭ platformy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ sbornik, 1962. vyp.28, p.28-37, fold. table.) 8 refs. Text in Russian. **Title tr.:** On the problem of trap magmatism in the northwestern part of the Siberian platform.

Separates four subprovinces of trap magmatism: northern, two central and a southern. Each is characterized. Development of magmatism proceeded in six tectonic magnetic cycles; of which the first is Permian and all the others Triassic. Thickness of the volcanic complex in various provinces is noted. The northern subprovince is the richest with copper-nickel deposits and other resources; the central subprovinces are less promising; the southern is insufficiently investigated as yet. (DGS.)

71056. **DOGO, G.** Comportamento, su ospite omologo, di tessuti cutanei umani ibernati. (Società italiana di biologia sperimentale. Bolletino, Oct. 15, 1961. v.37, no.19, p.992-94.) Text in Italian. **Title tr.:** Behavior of "hibernated" human skin tissues, in a homologous host.

Skin tissues, aseptically removed and kept, at temperatures of 4° to 8°C., showed blocked or reduced biological activity and no irreversible cellular changes, for 4-12 weeks. When transplanted, they first "take" and subsequently are eliminated, which is claimed to indicate their survival over the storage period. Behavior of different parts of the skin, and with different lengths of storage, in the host, is also described. (DNLM.)

71057. **DOHERTY, JAMES E., *and* M. HARA.** The effect of citrate infusion on the electrocardiogram of the hypothermic and normothermic dog. (American heart journal, Feb. 1961. v.61, no.2, p.225-35, illus., tables.) 12 refs.

Account of experiments on animals infused with buffered acid dextrose citrate solution. The most striking change observed in all but one hypothermic dog was in an electrical alternans of the T wave. Such change was also observed in a human patient under hypothermia and rapid transfusion. It is not an ominous sign in animal or man. (DLC.)

DOHERTY, JAMES E., *see also* Hara, M., *& others*. Citric acid metab. . . . hypothermic dog. 1961. No. 72016

71058. **DOLGIKH, BORIS OSIPOVICH.** Bytovye rasskazy énetsev. Moskva, Izd-vo Akademii nauk SSSR, 1962. 244 p. illus., fold map. (Akademiia nauk SSSR. Institut étnografii. Trudy, nov. ser., t.75.) Refs in text. Text in Russian. **Title tr.:** Enets genre tales. In sequence to *infra*.

Twenty-seven autobiographical and historical episodes as narrated in Russian by a 63-year Enets Samoyed, Roman Alekseevich Silkin (Deli Pédakhaz Bay) in 1948. The tales provide ethnographically interesting details on the way of life, customs, and occupations of the tundra- and forest-Enets in the late 19th - early 20th centuries. Biographical, ethnographic, etc. data, commentaries, and glossary of approx. 170 local Russian idioms are included. (DLC.)

71059. **DOLGIKH, BORIS OSIPOVICH.** Mifologicheskie skazki i istoricheskie predaniia énetsev. Moskva, Izd-vo Akademii nauk SSSR, 1961. 243 p. (Akademiia nauk SSSR. Institut étnografii. Trudy, nov. ser., t.66.) Refs. in text. Text in Russian. **Title tr.:** Mythological tales and historical legends of the Enets.

Presents twelve myths and 33 legends collected during late 1948-Jan. 1949 in the Ust'-Port - Dudinka region from Russian-speaking informants. Appended is a glossary of some four

hundred local words coined by Russian old-timers and characteristic of the Russian now spoken by the Samoyeds and Dolgans. The material and spiritual culture, folklore, etc. of the tundra and forest Enets Samoyeds, past and present, are discussed in the introduction. The tundra or Khantayka Enets (approx. 200) belong to two kolkhozes in the Ust'-Yeniseysk and Avam Districts. The forest or Karasinsk Enets (100) work for the agricultural experiment farm at Noril'sk. (DLC.)

71060. DOLGIKH, BORIS OSIPOVICH. O pokhoronnom obriāde ketov. (Sovetskaiā arkheologiiā, 1961. god 5, no.3, p.102-112, illus.) Approx. 40 refs. Text in Russian. **Title tr.:** Mortuary customs of the Yeniseians.

Discusses two predominant kinds of burial: in the ground and in a tree stump, the latter now used only for infants. Former funeral practices and their vestigial remains are described. Burial was near a river, the grave clothes cut in several places, the grave lined with planks and a fire lit during the ceremony. Broken pieces of the belongings were placed on the grave and, among reindeer herders, part of a slaughtered reindeer also. No funeral feasts were held. Comparisons are made with customs of neighboring Samoyeds (Enets, Sel'kups), Evenki Tungus, etc., and affinities with Ostyak rites noted. Bronze age Karasuk culture (upper Yenisey-Ob region) traits survive in copper ornaments of the Enets and Nganasan Samoyeds. The role of Yeniseian tribes as intermediaries between southern and northern cultures is discussed. (DLC.)

71061. DOLGIKH, BORIS OSIPOVICH. Rodovaiā ėkzogamiiā u nganasan i ėnt͡sev. (*In:* Akademiiā nauk SSSR. Institut ėtnografii. Trudy t.78, Sibirskiĭ . . . 1962, p.197-225, tables, map.) 5 refs. Text in Russian. **Title tr.:** Clan exogamy of Nganasans and Enets.

Study of the marriage system of two Samoyed groups, the Nganasans and tundra Enets of the Taymyr National District, based on data of the 1926/1927 census (tabulated). Divisions into patrilineal exogamous clans, marriage taboos, and restrictions on endogamic unions, traces of ancient matrilineal phratries, etc. are discussed. The surviving preference for exogamous marriages among members of these two groups is noted. (DSI.)

71062. DOLGIKH, BORIS OSIPOVICH, *and* **L. A. FAĬNBERG.** Some parallel features in the culture of Samoyeds and Eskimos. (International Congress of Americanists, 33rd, *San José, Costa Rica,* 1958. Proceedings *pub.* 1959, v.2, p.88-97, illus.) Refs. in text.

Comparative study of similarities in the material culture of eastern Samoyeds (Enets, Nganasans) and Eskimos: clothing, dwellings, reindeer-hunting methods, games, etc. No genetic links are implied: common features are ascribed to convergent socio-economic conditions. An ancient Yukaghir substrate discernible in both cultures may be a factor also. Chukchis are considered recent migrants to the Arctic from regions now occupied by Koryaks. (DSI.)

DOLGIKH, BORIS OSIPOVICH, *see also*

Akademiiā nauk SSSR. Sibirskiĭ ėtnograficheskiĭ sbornik . . . 1962. No. 69545

Gardanov, V.K., *&* *others.* Osnovnye napravleniiā ėtnicheskikh profėssov . . . 1961. No. 71588

Michael, H.N. Studies . . . ethnogenesis. 1962. No. 73967

Vashchenko, P.T., & B.O. Dolgikh. Predaniiā o totemicheskikh . . . 1962. No. 76331

71063. DOLGIN, I. M., *and* **S. I. SOKOLOV.** Aėrologiiā v Arktike. (Morskoĭ flot, Dec. 1961. god 21, no. 12, p.38-40, illus., map.) Text in Russian. **Title tr.:** Aerology in the Arctic.

Discusses the importance of aerological observations to shipping and aviation, and reviews the development of investigations since 1932. Since then, the number of stations has grown to 30 as shown on map, and the number of radiosonde ascents to 20,000/year. During the IGY, rockets were launched from Hayes Island. Results of the Russian aerological program in the Arctic are published annually. (DLC.)

71064. DOLGIN, I. M., *and others.* Itogi meteorologicheskikh issledovaniĭ v Arktike i Antarktike. *(In:* Vses. nauchnoe meteorologicheskoe soveshchanie 1961, t.1, *pub.* 1962, p.58-71, table, graphs, diagrs., chart.) Text in Russian. *Other authors;* D.L. Laĭkhtman, N.P. Rusin, *and* A.F. Treshnikov. **Title tr.:** Results of meteorological investigations in the Arctic and Antarctic.

Summarizes the investigations and compares the two polar regions. Air temperature, distribution of winds and moisture are outlined. The radiation regime is characterized. Turbulent heat and moisture exchange are reviewed. Ice features in the Arctic Basin are noted. (DLC.)

71065. DOLGIN, I. M. Nekotorye rezul'taty issledovaniiā atmosfery nad Severnym Ledovitym okeanom. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.11, p.31-36, chart, graph.) 19 refs. Text in Russian. **Title tr.:** Some results of investigation of the atmosphere over the Arctic Ocean.

Summarizes meteorological work of the North Pole drifting stations during the last 25 years, with attention given to work from aircraft. Distribution of cyclones and anticyclones, their trajectories; temperature and pressure variations; temperature and heights of the tropopause; radiosonde observations, etc. are summarized. (DLC.)

DOLGIN, I. M. *see also*

Leningrad. Arkticheskiĭ . . . institut.Aėrologicheskie nablīudeniiā . . . 1961. No. 73401

Leningrad. Arkticheskiĭ . . . institut. Materialy . . . "Severnyĭ Polīus-6" i "Severnyĭ Polīus-7" 1958/59 god. 1962. No. 73406

Leningrad. Arkticheskiĭ . . . institut. Uchashchennye aėrologicheskie nablīudeniiā . . . 1959. No. 73410

71066. DOLGINOV, SHMAIĀ SHLEMOVICH, 1917- . *and others.* Nekotorye rezul'taty izmereniiā postoiānnogo magnitnogo poliā zemli s 3. iskusstvennogo sputnika zemli nad territoriei SSSR. (Geomagnetizm i aėronomiiā, 1962. t.2, no.6, p. 1061-75, fold. map, graphs, tables.) 6 refs. Text

in Russian. *Other authors:* L.N. Zhuzgov, N.V. Pushkov, L.O. Tiurmina, *and* I.V. Friazinov. **Title tr.:** Some results of measurement of permanent magnetic field of the earth over the territory of the USSR from the third artificial satellite.

Describes the method and the meteorological properties of the apparatus used for these measurements, including such of the Siberian magnetic anomaly. The anomaly's maximum field intensity was found to be at approx. 62°N. 110-111°E. (geog. lat. and long.); it was more than 61,500 γ, i.e. higher than that at the North Magnetic Pole. (DLC.)

71067. DOLGOVA, E. I. Spiral distribution of ionospheric magnetic disturbances. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.1, p.137-39, graph.)

Reports on the investigation of diurnal variation of basic disturbance phenomena in the ionosphere: absorption, the drop in critical frequency of the *F2* layer, sporadic ionization at the *E* layer depending on the situation of the station with regard to the auroral zone. A spiral distribution of these phenomena was obtained, and Störmer's precipitation theory suggested as a possible explanation of such distribution. Ionospheric observations during the IGY period recorded at 48 stations north of 50°N. lat. served as basis for this conclusion, including data from the Resolute Bay, Dikson, Churchill, College, and the Greenland stations. (DLC.)

71068. DOLGUSHIN, L. D. Main features of the modern glaciation of the Urals. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.335-47, maps, graph, tables.) 19 refs.

Outlines main features of 66 glaciers, 33 of them in the Polar Ural. Peculiar traits include location below the theoretical snow line, and formation by snow drifting into hollows on lee slopes. Other characteristics include abundant nourishment and intense ablation, rapid motion of deep portions and very deep bottom and rock margin. Recent glaciers of the Urals are a relict phase of cirque-valley glaciation, separate from the great Pleistocene glaciation. Ural glaciers are currently in retreat. (DWB.)

71069. DOLGUSHIN, L. D. Osnovnye osobennosti sovremennogo oledeneniia Urala. (Akademiia nauk SSSR. Institut geografii. Materialy gliatsiologicheskikh issledovanii. Khronika obsuzhdeniia, 1961. vyp.1, p.22-28, illus., maps, diagr.) 9 refs. Text in Russian. **Title tr.:** Mean features of present glaciation of the Ural.

Notes some seventy glaciers now in the Urals, together more than 16 km.^{2} in area. In the Polar Ural, 67°30′ - 68°09′N., and Subpolar Ural, 64°40′ - 65°20′N., 67% of the glaciers are on the western slopes, only 33% on the eastern. Their exposure, nourishment, snow line, and other features are summarized. They are divided into two groups: corrie and corrie-valley glaciers, and slope-ravine glaciers. Their ablation, accumulation and evolution are characterized. Ural glaciers are considered a specific type of present mountain glaciation. (DLC.)

71070. DOLMATOVSKAIA, G. Konets dereviannykh ulits. (Ogonëk, Jan. 1961. god 39, no.4, p.8, illus.) Text in Russian. **Title tr.:** Wooden streets are disappearing.

Outlines the reconstruction of Arkhangel'sk: the old wooden houses replaced by modern structures; site preparation on the marsh peat ground, etc. The work is headed by the architect V.M. Kibirov. (DLC.)

71071. DOMBROVSKAIA, KH. R. Nekotorye samaropsisy vorkutskoi serii Pechorskogo basseina i ikh stratigraficheskoe znazhenie. *(In:* Materialy po geologii . . . Evropeiskoi chasti SSSR, sbornik statei 1961, vyp.1, p.90-112, tables, map, plates.) 14 refs. Text in Russian. **Title tr.:** Some *Samaropsis* in the Vorkuta series of the Pechora basin and their stratigraphic significance.

Reports a study of Permian deposits in the Pechora coal basin of Komi ASSR, in particular that of flora of *Samaropsis* gen. described from seeds. Systematic description is given of *S. tuberculata, S.* aff. *tuberculata, S. oblongata, S. microtuberculata,* and *S. tuberculiformis* n. spp. and some others previously identified are included in a systematic account. The stratigraphic position of these fossil plants is established and outlined. (DLC.)

DOMENICO, S. N., *see* Beach, F.K. Muskeg, signal & noise. 1961. No. 70083

71072. DOMINIKOVSKII, V. N., *and others.* Fatsial'nye osobennosti fosforitonosnosti Sibirskoi platformy. (Sovetskaia geologiia, Sept. 1962, no.9, p.113-21, map.) 24 refs. Text in Russian. *Other authors:* V.I. Dragunov *and* V.L. Librovich. **Title tr.:** Facies features of phosphorite-bearing deposits of the Siberian platform.

Describes Middle Ordovician and Devonian phosphorite-containing deposits distributed in the Podkamennaya Tunguska, Chuna, Kureyka, Moyero, Kulyumbe basins and other regions of Krasnoyarsk Province and Yakutia. In the Middle Ordovician, the following varieties are distinguished: phosphorite shells, detritus phosphorites, phosphorite conglomerates and phosphate-ferriferous rocks. Climate, deposition conditions and facies of these deposits are characterized. Devonian phosphorites contain *Favosites* corals, which reveal their formation conditions. (DLC.)

71073. DONAHUE, T. M. A note on polar blackouts. (Journal of atmospheric and terrestrial physics, Feb. 1961. v.20, no.1, p.76-79, graphs.) 9 refs.

Discusses the night-time recovery phenomenon in polar absorption events. It is pointed out that because of scattering and refraction in the troposphere and because of absorption by zone, appreciable attenuation of visible light occurs during twilight at altitudes far above the surface of the earth, i.e. the effective shadows line lies well above the geometrical one (cf. No. 54243). Conclusion is reached that the twilight effects in polar blackouts are explicable in terms of the detachment of electrons from negative oxygen ions in the region of 50 km. and higher by visible light. The ions involved may well be O^- as well as O_2^-. (DLC.)

DONALD, D. E., *see* Albin, M.S., & *others.* Hypo-

thermia . . . spinal cord . . . 1961. No. 69667

71074. DONALDSON, WILLIAM G., 1921- Current notes on problems in standards and electronic measurements, DEW Line. (IRE transactions on instrumentation, Sept. 1960. v.I-9, no.2, p.89-94, tables, diagrs.)

Describes some of the problems encountered on the DEW Line, including those related to system testing and maintenance, the development of a calibration system and selection of calibration equipment, and the development of test-equipment calibration instructions. More than 80 types of test equipment are required to keep the communication and radar systems operating within specified tolerances. Function and operation of the Federal Electric Corp. standards laboratory at Paramus, N.J., are described as is its associated mobile calibration team which visits the six main DEW Line stations every 180 days. Auxiliary and intermediate stations have their test equipment calibrated at the main stations. The standards used are certified by the U.S. National Bureau of Standards and the National Research Council of Canada. (DLC.)

DONETS, IU. L., *see* Grits̆enko, M.M., & IU.L. Donets. Iz opyta stroitel'stva . . . 1960. No. 71867

DONHOFER, S., *see* Szegvári, G., & *others*. Effect of hypoxia . . . 1961. No. 76065

71075. DONN, WILLIAM L., *and* **M. EWING.** Atmospheric waves from nuclear explosions, part 2; the Soviet test of 30 October 1961. (Journal of the atmospheric sciences, May 1962. v.19, no.3, p.264-73, graphs, tables.) 13 refs.

Presents partial results of a combined empirical-theoretical study of the propagation of acoustic-gravity waves in the atmosphere. Atmospheric waves from the strongest of the Soviet explosions on Novaya Zemlya are described as recorded at nine stations, approx. 3500-13,000 km. from source. Detailed records from sensitive microbarographs and long period seismographs are reproduced and wave characteristics described. Similarity of the empirical data to some theoretical models is found in cases of wide distribution of data. Speed of propagation of the energy front was determined to be 324 m.p.s., close to that of the Krakatoa eruption of 1883. (DWB.)

71076. DONN, WILLIAM L., *and others*. Pleistocene ice volumes and sea-level lowering. (Journal of geology, Mar. 1962. v.70, no.2, p.206-214, maps, tables.) 24 refs. Columbia Univ. Lamont Geological Observatory Contribution no. 524; Air Force Cambridge Research Laboratories Contract AF 19(604) 7442. *Other authors:* W.R. Farrand *and* M. Ewing.

Revises estimates of late Pleistocene ice volumes and resulting sea-level lowering, based on new knowledge of present ice thicknesses and of the extent of the Pleistocene glaciation in the Canadian Arctic and Siberia. The thickness of Pleistocene ice sheets has been determined by applying the thickness-area ratio of existing ice in Greenland, the Antarctic, etc. (tabulated) to the revised areas (mapped) of the past ice sheets. Revised values are given for the classical Wisconsin, early Wisconsin, and Illinoian glacial stages. The last is shown to be the stage of maximum glaciation, with consequent sea-level decrease about 50% greater than that usually given for the Wisconsin.–From authors' abstract. (DGS.)

DONN, WILLIAM L., *see also* Ewing, M., & W.L. Donn. Pleistocene climate changes. 1961. No. 71322

71077. DONOVAN, DESMOND THOMAS. Cretaceous of East Greenland. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.274-77, table.)

Summarizes the seven-odd fossil-bearing, Cretaceous formations of East Greenland; sedimentation may have been continuous from the Upper Jurassic into the first two stages of the Cretaceous; the next two stages are unrepresented. The next three are all present in clastic marine facies, predominantly shaly found on Trail and Geographical Society Islands. At least three younger horizons are recognized, but their stratigraphy is poorly known. (DLC.)

71078. DONTCHEFF, L. Renseignements fournis par l'emploi de l'éthanol sur les oxydations cellulaires dans la thermogenèse. (France. Centre national de la Recherche scientifique. Colloques nationaux, 1955. p.C187-C197, illus., tables.) 10 refs. Text in French. **Title tr.:** Information obtained by the use of ethanol on cellular oxidation during thermogenesis.

Having explained the method of utilizing the coefficient of ethyl oxidation (CEO) for determination of O_2-consumption, author reports on the effects of alcohol oxidation in rats, of adrenalin and thyroxine in combination with cold stress. Adrenalin had no effect on "elementary respiration" (as defined by E. Le Breton), but thyroxine and probably some phases of cold adaptation reduced the substitution of glucose by alcohol. The effects on diurnal fluctuations in heat production, are also discussed. (DLC.)

DONTSOVA, E. I., *see* Kukharenko, A.A., & E.I. Dontsova. K probleme genezisa karbonatitov. 1962. No. 73195

DOOLEY, ELMO S., *see* Di Giovanni, C., & *others*. Microbiol. & sanitation military op. 1962. No. 71032

71079. DORFMAN, MOISEĬ DAVYDOVICH, *and others*. Del'khaĭelit iz Khibin. (Akademiia nauk SSSR. Mineralogicheskiĭ muzeĭ. Trudy 1961. vyp. 12, p.191-95, tables.) 2 refs. Text in Russian. *Other authors:* E.N. Belova *and* N.N. Neronova. **Title tr.:** Delhayelite from Khibiny.

Describes a new mineral from pegmatites in Kola Peninsula. Found in 1952 in Yukspor and subsequently in Rasvumchorr mountain, it was tentatively called mineral no. 3. It is now identified with the new silicate mineral described by T.G. Sahama and K. Hytönen in 1959, from the Belgian Congo and named delhayelite. Delhayelite of the Khibiny massif is described noting its physical properties, chemical composition, X-ray analysis, and other features. (DLC.)

71080. DORFMAN, MOISEĬ DAVYDOVICH. Mineralogiia pegmatitov i zon vyvetrivaniia v iioliturtitakh gory IUkspor Khibinskogo massiva. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1962. 168 p. illus., graphs, tables, maps & diagrs. incl. fold.

(Akademiia nauk SSSR. Kol'skiĭ filial.) Over 100 refs. Text in Russian. **Title tr.:** Mineralogy of pegmatites and the weathering zones in ijolite-urtites of the Yukspor mountain of the Khibiny massif.

The study consists of three parts: the first deals with the geology, petrography and mineralogy of the jacupirangite-urtite series of rocks and their pegmatites. In the second, lineal zones of weathering and minerals of this type of weathering are described. The third discusses the age and genesis of chemical weathering; this phenomenon, which leads the lineal zones of weathering, is widely distributed in the Khibiny alkaline massif and reaches 500 m. depth. Its effects are visible on the relief forms. Its occurrence is noted also in apatites, of importance for fertilizer production. Two types of this weathering are recognized and described; both are considered preglacial in age. Minerals of both are characterized. (DLC.)

71081. DORMAN, LEĬB ISAAKOVICH, *and others.* Issledovanie variatsiĭ intensivnosti kosmicheskikh luchei i svoĭstv korpuskuliarnogo potoka vo vremia magnitnoĭ buri v iiule 1958 g. (Geomagnetizm i aeronomiia, 1961. t.1, no.3, p.326-32, tables, graphs.) 5 refs. Text in Russian. *Other authors:* E.V. Kolomeets *and* G.A. Sergeeva. **Title tr.:** A study of intensity variations of cosmic rays and corpuscular stream properties during the magnetic storm of July, 1958.

Discusses solar activity, geomagnetic field, auroras, and ionospheric phenomena in connection with the magnetic storm in July 1958. The relationship of the magnetic storm to the cosmic ray energy is analyzed from the data of 36 worldwide stations, including Resolute Bay, Churchill, Murchison Bay and College. Variation of the magnetic field intensity in the corpuscular stream, due to chromospheric flare on the sun on July 7, and the excessive magnetic diurnal variations caused by the flare in the Southern and Northern Hemispheres are compared. (DLC.)

71082. DORMAN, LEĬB ISAAKOVICH, *and* **E.V. KOLOMEETS.** Statisticheskiĭ analiz "malykh" vspyshek kosmicheskikh luchei v spokoĭnye dni v period maksimuma solnechnoĭ aktivnosti. (Geomagnetizm i aeronomiia, 1961. t.1, no.5, p.653-57, graphs.) 18 refs. Text in Russian. **Title tr.:** Statistical analysis of little flares of cosmic rays in quiet days during the maximum period of solar activity.

Investigates the effect of the relationship between an increase in cosmic rays intensity, and the index of 451 chromospheric flares recorded in 1957-1959 at the Climax, Uppsala, Churchill, Mawson, Resolute Bay, and Thule stations. The investigations indicated a diffuse propagation of solar corpuscles during the maximum solar activity period. (DLC.)

DORMAN, LEĬB ISAAKOVICH, *see also*

Blokh, IA. L., & *others.* . . . vliianiia magnitnykh bur' na kosmicheskie luchi . . . 1960. No. 70256

Kaminer, N.S., & *others.* Magnitnaia buria . . . 1961. No. 72637

71083. DORMIDONTOV, A. S. Osobennosti raspredeleniia lenskikh sigovykh na mestakh ikh nagula. (Voprosy ikhtiologii, 1961. t.1, vyp.3 (20), p.453-61, tables.) 13 refs. Text in Russian. **Title tr.:** Pecularities in the distribution of Lena whitefishes on their spawning grounds.

Discusses the economic value of four coregonid species of the Lena, and reviews earlier studies. Summer and winter distribution in the area of the Tumansk arm of the Lena delta is outlined and that in other arms also. Distribution of the fishes depends primarily on water temperature and salinity. In this respect the four species mostly responded in different ways. (DLC.)

71084. DOROFEEV, D. A. Odin iz tipov vol'framovykh mestorozhdeniĭ vostochnoĭ IAkutii. (Materialy po geologii i poleznym iskopaemym IAkutskoĭ ASSR. IAkutskoe geologicheskoe upravlenie, 1961. vyp.5, p.12-31, illus., maps.) 5 refs. Text in Russian. **Title tr.:** One of the tungsten deposit types of eastern Yakutia.

Describes geologic structure of the region and the tungsten deposits of the middle Shirokaya (approx. 65°40′N. 154°30′E.) basin, part of the Kolyma system, as studied in 1955, 1956 and 1958. They are genetically connected with tin and copper deposits and are found in granitoid intrusions. Stages of mineralization and individual minerals are described. This type of deposit is connected with scheelite-bearing skarns and such skarns, it is suggested, should be searched for. (DLC.)

DOROFEEV, D.A., *see also* Flerov, B.L., & *others.* Osobennosti . . . svintsovo-tsinkovogo orudeneniia . . . 1962. No. 71441

71085. DOROFEEV, P. I. O nakhodke miotsenovoĭ flory v nizov'iakh r. Obi. (Akademiia nauk SSSR. Doklady, May 21, 1962. t.144, no.3, p.649-51, table, plate.) 14 refs. Text in Russian. **Title tr.:** A find of Miocene flora on the lower Ob.

Reports over 40 forms of wood, shrub, meadow and swamp flora from the right bank of the Ob, in the Khanty-Mansi National District. Some of the forms are identified by the author. Comparison is made with the flora of other regions of Siberia. (DLC.)

DOROFEEV, P. I., *see also* Baranova, IU. P., & P.I. Dorofeev. O vozraste nagaevskoĭ tolshchi. 1962. No. 70016

71086. DOROFEEV, SERGEĬ VASIL'EVICH, 1898–1962. Sovetskie issledovaniia morskikh kotikov v severnoĭ chasti Tikhogo okeana. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ, 1961. vyp.12, p.164-69, table.) Text in Russian. **Title tr.:** Soviet investigations of fur seals in the North Pacific.

Discusses the stock of *Callorhinus ursinus* L.; prospects of increasing their number on Russian areas (harems); international conservation agreements of 1911 and 1957; Soviet research of this species; birth and death rates, and causes of death. (DLC.)

DOROFEEV, SERGEĬ VASIL'EVICH, 1898-1962, *see also* Bychkov, V.A., & S.V. Dorofeev. O povedenii sekacheĭ . . . 1962. No. 70489

DOROGOSTAĬSKAIA, E.V., *see* Tikhomirov, B.A., & E.V. Dorogostaiskaia. Bugry pucheniia . . .

71087. DORONIN, IŪ. P. K metodike rascheta radiatsionnogo balansa snezhno-ledianogo pokrova v Arktike. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.229, Radiatsionnyĭ i teplovoĭ balans Arktiki, p.84-89, tables.) 4 refs. Text in Russian. **Title tr.:** On the method of calculating radiation balance of the snow and ice cover in the Arctic.

Analyzes the relationship of the radiation components to meteorological characteristics, and develops a method of calculating the total radiation balance of snow and ice cover in the Arctic during the spring-summer season without direct measurements. (CaMAI.)

71088. DOROSHENKO, VASILIĬ V. Development of written languages among the peoples of the North. (American review on the Soviet Union, Mar. 1947. v.8, no.2, p.43-51.) 2 refs.

Reviews 19th century attempts and Soviet measures to reduce to writing the languages of most of the 26 peoples living between Kola Peninsula and Kamchatka. Selection of a literary language among the spoken dialects, introduction of a single alphabet and its adaptation to individual phonetic requirements, expansion of existing vocabulary, etc. are described. Work of the Committee of the Small Peoples of the North is sketched. (CtY.)

71089. DOSTAL', V. G. Vizhne-Obskiĭ lesopromyshlennyĭ kompleks. (Lesnaia promyshlennost', Sept. 1961. god 39, no.9, p.4-7, plate, tables, map.) Text in Russian. **Title tr.:** The lower Ob lumber industry complex.

Notes the 380 km. Ivdel'-Ob River railroad, to be completed within two years, will give access to over 400 million m³ mature timber adjacent to the line and to over a billion m³ on the middle and lower reaches of the Ob. Plans are discussed for setting up an integrated system of logging, lumber, wood-working, paper and cellulose plants. (DLC.)

71090. DOSTOVALOV, B. N. Issledovanie morozobiĭnogo i diageneticheskogo rastreskivaniia porod. (Merzlotnye issledovaniia, Sbornik statei, 1961. vyp.2, p.80-95, graphs, diagrs.) 6 refs. Text in Russian. **Title tr.:** Investigation of the frost and diagenetic fracturing of rocks.

Attempts to establish the laws and regularities of these processes in rocks and in homogeneous soil formations, taking into account the physical nature of the formation, external and internal stresses and strains, and moisture (or ice) content. The temperature gradient is found to be the basic factor in splitting. The geometry of splitting is also examined in reference to the formation as a whole where tetragonal splitting, predominates, and to the cracks themselves, their width, depth, and progression. Tensiometric study of stresses in formations is reported, with emphasis on the annual cycle, the system of horizontal and vertical measurement in three mutually perpendicular planes, and the temperature and moisture gradients. Typical morphologic consequences of frost and dessication splitting are mentioned.–From CRREL. (DLC.)

71091. DOTSON, WILLIAM A. Operational details of project Polynya. (*In:* National Research Council of Canada. . .Symposium on Air Bubbling, 1961. p.58-69, maps, diagrs.) *Its:* Technical memorandum no.70.

Describes site, installation, methods, and results in 1958-1960 of the pneumatic de-icing system at De Long Pier, Thule, North Greenland. First results were only partially successful; changes in Sept. 1959 improved the flow of air. Reduction and weakening of ice in the pier area was achieved, and the initial freezeup delayed 45 days/yr. Problems of power failure, ice drifting into the bubble area, etc. are noted. (DN-HO.)

71092. DOTT, R. H., *Jr.* Permo-Triassic diastrophism in the western Cordilleran region. (American journal of science, Oct. 1961. v.259, no.8, p.561-82, map, table.) 106 refs.

Presents evidence collected since 1954, including some from Alaska and Yukon Territory, of tectonic disturbances in this geosyncline during the late Permian and earlier Triassic interval. Wide absence of recognized Lower and Middle Triassic units, presence of the pre-late Triassic intrusions, angular unconformities, and the character of coarse clastic material suggest the interval was one of complex diastrophism, plutonism, volcanism, and elevation of lands in much of the Cordillera. This evidence confirms the concept of essentually continuous orogeny and epeirogeny in portions of generally subsiding orthogeosynclinal belts.–From author's abstract. (DGS.)

71093. DOUGLAS, ROBERT JOHN WILSON, 1920–, *and* D. K. NORRIS. Camsell Bend and Root River map-areas. District of Mackenzie, Northwest Territories 95 J and K. Ottawa, Queen's Printer, 1961. 36 p. graphs, tables, 2 maps fold. in pocket. (Canada. Geological Survey. Paper 61-13.) 17 refs.

Presents results of geological mapping in Operation Mackenzie 1957 reconnaissance survey: the Camsell Bend map area 62°-63°N. 122°-124°W., the Root River to the west, 124°-126°W. Geomorphic features are outlined. Stratigraphic, structural, and economic geology are treated in turn. Folding and faulting are noted; the former is the main structural element in the southern Mackenzie and Franklin Mts. Four oil wells and find of copper ores in the Whittaker Range approx. 62° 30′N.125°W. are reported. Maps at scale 1 in.: 4 mi. show preliminary geological data overprinted on topographic base, contour interval 500 ft. (DGS.)

71094. DOUGLAS, ROBERT JOHN WILSON, 1920–, *and* S. DUFFELL. Some aspects of phanerozoic epeirogenic and orogenic events that involve Precambrian rocks. (*In:* Royal Society of Canada, The tectonics . . . 1962, p.149-61, maps.) 20 refs.

Discusses the probable deformation undergone during Paleozoic and subsequent time by the exposed parts of the Canadian Shield, as indicated by the covering sedimentary rocks. Special effects of volcanism, caldera subsidence and normal faulting upon the Shield are considered; also the involvement of Precambrian crystalline and stratified rocks in the structures of the orogenic belts adjoining the craton or core is dealt with. Reactivation of Precambrian faults in phanerozoic sedi-

ments is well illustrated in the Pine Point region near Great Slave Lake. Tertiary movement along lines of weakness within the Paleozoic rocks, and possibly also on the basement faults themselves, resulted in complex folding in the Mackenzie Mts., unique among the fold belts of North America. (DGS.)

71095. DOVGER, V. I. Obratnoe rasseiānie radiovoln polīārnymi siīāniīāmi. (Akademiīā nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniīū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polīārnye siīāniīā i svechenie nochnogo neba. Sbornik stateĭ, 1961. no.6, p.7-11, illus., graphs.) 4 refs. Text in Russian. Summary in English. **Title tr.:** Backscattering of radiowaves by auroras.

Discusses the radio echo wave scattering from auroras observed on Dikson Island from August 1958 to May 1960. Groups of scattering spots were observed in a 300-400 km. line, and about 20 km. wide along the auroral arc. A drift of these radio echo mirrors was observed at 1000 m./sec. in west-to-east direction. (DLC.)

71096. DOWNER, AARON, H. Newfoundland. (Canadian mining journal, Feb. 1961. v.82, no.2, p.118-19.)

Reviews mining activities during 1960, including two iron ore developments in the Wabush Lake area of Labrador. These are the Carol Lake Project of the Iron Ore Co. of Canada, and the Wabush Iron Co. development on Little Wabush Lake. The former is scheduled to begin production in 1962, reaching eventually seven million tons of concentrates per yr. A hydroelectric development at Twin Falls on the Unknown River is to supply power to both sites. (DGS.)

71097. DOWNEY, J. A., *and* R. F. MOTTRAM. The effect of regional cooling of the conscious rabbit on its oxygen consumption. (Journal of physiology, Apr. 1962. v.161, no.1, p.16P-17P) Ref.

Reports on rabbits cooled to 18-34°C. by immersion and on cooling blood vessels. Cooling produced a rise in O_2-consumption and often in body temperature. The ratio of heat produced and extracted was 2.0 for cooling the internal carotid, 1.0 for cooling jugular blood and 0 to 1 for other sites. The effect of brain cooling was also studied. (DLC.)

71098. DRAGESUND, OLAV. Norwegian immature herring investigations in 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v.16, p.170-71, tables, map.)

Discusses origin, size and composition of 1959 catches, age composition in different areas, year classes, distribution of the O-group in the Barents Sea, size distribution in this group. (DI.)

71099. DRAGESUND, OLAV. Norwegian tagging experiments in 1958, 1959. (International Council for the Exploration of the Sea. Annales biologiques 1958, 1959, *pub.* 1960, 1961. v.15, p.131-32; v.16, p.172-73, map, tables.) Ref.

Reports on herring tagging, including the arctic waters of Norway and returns from fish caught off Iceland. Migration routes and age groups are reconstructed from the returns. The 1959 report lists categories and localities of herring tagged; tagging experiment with the O-class; 1958 and 1959 returns from the different experiments, composition of catches as judged from them. (DI.)

71100. DRAGESUND, OLAV. Småsild- og feitsildtokt med f/f "G. O. Sars" i tiden 28. september til 29. oktober 1960. (Fiskets gang, Jan. 19, 1961. årg. 47, nr. 3, p.59-63, tables, graphs, sketch map.) Refs. Text in Norwegian. **Title tr.:** Cruise of the R/V *G.O. Sars* Sept. 28-Oct. 29, 1960 to investigate young and fatty herring.

Reports a trip to map the immature herring distribution in the area 69°10′-75°40′N. 5°-55°E., to collect samples, and to carry out tagging and oceanographic studies. Results are tabulated and graphed. Young herring were fewer in northern and northeastern Barents Sea than in 1959 and about the same near the Norwegian coast; the 1959 age group may be more numerous than the 1951-1958 as fatty herring, and later as large and spring herring. (DA.)

71101. DRAGESUND, OLAV, *and* P. HOGNESTAD. Småsild- og feitsildtokt med F/F "G. O. Sars" i tiden 30. august til 28. september 1961. (Fiskets gang, Jan. 4, 1962. årg. 48, nr. 1, p.6-9, tables, graphs, sketch maps.) 3 refs. Text in Norwegian. **Title tr.:** Young and fatty herring cruise of R/V *G. O. Sars*, Aug. 30-Sept. 28, 1961.

Presents results of this cruise in North Norway and Bjørnøya waters, central and southeastern Barents Sea, to map young-herring distribution, collect biological samples, etc. The 1961 year class is smaller than the 1960 and 1959; and it had greater distribution in fjord areas. Average length of mature and young fish in various areas is shown, as are Sept. temperature curves at 0 - 250 m. depth at various fjord mouths. Barents Sea isotherms in Oct.-Nov. 1960 and Sept. 1961 are shown; 6,150 herring were tagged. (DA.)

71102. DRAGESUND, OLAV, *and* P. HOGNESTAD. Småsildundersøkelser i Nord-Norge 1960/61. (Fiskets gang, Sept. 7, 1961. årg. 47, nr. 36, p.619-24, tables, graphs.) 4 refs. Text in Norwegian. **Title tr.:** Investigations of young herring in North Norway 1960/61.

Reports distribution studies along the Norwegian coast, in northeastern Norwegian Sea and the Barents Sea. At the entrance to fjords 68°30′-70°N., the less-than-a-year age group predominated, and in Finnmark, Bjørnøya and Barents Sea waters, that and the year-old group mingled, in early October; during the latter half, schools near the entrance migrated into the fjords to winter at lower temperatures. In certain fjords in Troms however, some wintered in a warm, intermediate layer. In spring, the herring left the Troms fjords, earlier than the Finnmark. Tagging (7,800 herring) was carried out in seven localities, recoveries (herring tagged in Troms and Finnmark waters) showed 15.5-20.6% mortality. (DA.)

DRAGUNOV, V. I., *see* Dominikovskiĭ, V.N., & *others.* Fatsial'nye osobennosti . . . 1962. No. 71072

DRAMBIANTS, S. P., *see* Altukhov, K.A., & S.P. Drambiants. Iz Tikhogo okeana . . . 1961. No. 69733

71103. DREMLIUG, VALENTIN VALENTINOVICH. Ob opredelenii nekotorykh elementov morskikh voln s pomoshch'iu radiolokatora. (Leningrad. Arkticheskii i antarkticheskii nauchno-issledovatel'skii institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovanii, sbornik statei, vyp.1, p.135-38, illus.) 2 refs. Text in Russian. **Title tr.:** Determination of certain elements of sea waves by radar.

Explains the principle of measuring the length of sea waves, their period, and velocity by means of radar. The method of photographing the radar image of the sea surface turbulence, and subsequent interpretation of the photograph used on hydrostation Moryana in 1957 is considered inferior to the measuring of the elements on an oscillograph screen with the running reflected wave impulses. The sources of possible error in the radar determination of sea surface turbulence are discussed. (CaMAI.)

71104 DREMLIUG, VALENTIN VALENTINOVICH. Radiolokatsionnyi metod nabliudenii nad morskimi techeniiami. (Leningrad. Arkticheskii i antarkticheskii nauchno-issledovatel'skii institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovanii, sbornik statei, vyp.1, p.111-16, illus., tables.) 3 refs. Text in Russian. **Title tr.:** Radar observation method for sea currents.

Summarizes the experimental investigations carried out during expeditions of 1956-1959. Observations made with a radar system installed aboard a ship determine the displacement of specially constructed radio-reflector beacons installed on buoys having underwater sails. By determining the locations of radio-beacons from the ship, and taking into consideration the wind direction and velocity, and simultaneous sea-wave motion, the velocity of the ocean current is determined. (CaMAI.)

DRENOV, N. V., *see* Boruchinkina, A.A., & *others.* Stratigrafiia . . . 1961. No. 70339

71105. DRETTNER, BÖRJE. Vascular reactions of the human nasal mucosa on exposure to cold. (Acta oto-laryngologica 1961, Suppl. 166, p.1-109, illus., tables.) About 120 refs.

Comprehensive study of the problem and its relation to the common cold. Fifty subjects were investigated both when infection-free and during upper respiratory infections. Temperature and color of nasal passages and mucosa, their responses to low temperature, effects of foot or back cooling, and of general skin-cooling are studied as are the influence of cold-inspired air, sexual differences in nasal temperature on exposure to cold and in susceptibility to the common cold, physiological responses of persons with non-allergic and allergic rhinopathies, etc. (DNLM.)

71106. DREW, J. V., *and* **J. C. F. TEDROW.** Arctic soil classification and patterned ground. (Arctic, June 1962. v.15, no.2, p.109-116, illus., table, diagrs.) 10 refs. Nebraska. Agricultural Experiment Station paper no. 999.

Discusses relationships between soils and patterned ground, observed in northern Alaska; and suggests a classification descriptive of both. Such is desirable because of the extent to which frost action and the microrelief of patterned ground influence soil morphology in arctic areas. Specific ground patterns often occur with particular genetic soils. The patterned-ground classification by A.L. Washburn (No. 48863) with minor revisions, could be integrated with that of the soil types. (DI.)

DREW, J. V., *see also* Mikhailov, I.S. Pochvennye issledovaniia na severe Aliaski. 1961. No. 73981

71107. DREWERY, ELLEN M. But *why* do you like living in the North? (North, Mar.-Apr. 1961. v.8, no.2, p.18-19, illus.)

A government office worker in Fort Smith, Mackenzie District, describes life in the North: lack of adventure, personal relationships in an isolated settlement, scenic beauty. (DLC.)

71108. DREWES, HARALD, 1927– , *and others.* Geology of Unalaska Island and adjacent insular shelf, Aleutian Islands, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1961. p. 583-676, illus., graphs, maps & tables incl. fold. in pocket. (U.S. Geological Survey. Bulletin 1028-S. Investigations of Alaskan volcanoes.) 67 refs. *Other authors:* G.D. Fraser, G.L. Snyder, *and* H.F. Barnett, Jr.

Presents results of a reconnaissance in summers 1953-1954 of this 1,200 sq.-mi. rugged island in the eastern Aleutians. The oldest rocks, the early Miocene Unalaska formation, consist of altered andesitic intrusive and extrusive rocks, and sedimentary rocks derived from similar igneous rocks. Three small granodiorite batholiths and 25 smaller plutons are described; compositions of the average plagioclase of the holocrystalline rocks are given; results of chemical analyses support the mineralogical data. Makushin Volcano forms a broad, glacier-capped, truncated cone rising 6680 ft. above sea level on the northern bulge of the island. Much of the island is discontinuously veneered by a thin mantle of till, volcanic ash, humus, and soil. Inferences regarding glacial and structural geology are extended by interpretation of a submarine contour map covering 12,000 sq. mi. of the surrounding area. Geologic map of Unalaska and adjacent submarine areas, scale 1:250,000 extends 53°-54°15′N. 165°40′–167°50′W. (DGS.)

71109. DRIATSKII, V. M. Mezhdunarodnyi geofizicheskii god v Tsentral'noi Arktike. (*In:* Burkhanov, V.F. Na ledianom ostrove, 1962, p.53-73, illus., plate.) Text in Russian. **Title tr.:** The International Geophysical Year in the Central Arctic.

Describes the drift, life and work of the drifting station North Pole-6 on an ice island in 1957-58. Author was leader of its second (first relief) team, which arrived in relays on four consecutive days and took over the station on April 19th. Characteristics of the personnel, construction of an ionospheric station for the IGY, ice and weather conditions are sketched. Beginning of observations for IGY on July 1, drawing a geodetic plan of the island at scale 1:40,000 are reported. The expert on auroras, V. Moiseev, arrived on Oct. 13. A chess tournament with the Moscow Academic Theater (Malyi teatr), was won by the station team. A moving picture was made of the station in Dec-

ember. The glaciologist, A.M. Astaf'ev arrived to study the ice island. Release of four radiosondes daily for ten days from Dec. 12 for the IGY is noted. Visiting artists from Moscow on March 6 gave literary, musical and acrobatic performances. A new relief team took over on Apr. 12, 1958. (DLC.)

DRIATSKIĬ, V. M., *see also*

Leningrad. Arkticheskiĭ . . . institut. Materialy . . . tom 1. 1962. No. 73403

Leningrad. Arkticheskiĭ . . . institut. Materialy . . . "Severnyĭ poliūs-6", "Severnyĭ poliūs 7" 1957/58 goda; tom 2 . . . 1961. No. 73404

Leningrad. Arkticheskiĭ . . . institut. Materialy . . . "Severnyĭ poliūs-6" i "Severnyĭ poliūs-7" 1957/58 goda; tom 4. 1961. No. 73405

71110. **DROBYSHEVA, S. S.** Raspredelenie kapshaka, ėvfauzievykh rachkov, v iūzhnoĭ chasti Barentseva moria. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biūlleten', 1960. no.1 (11), p.11-13, table, map.) Text in Russian. **Title tr.:** Distribution of euphausiid crustaceans in the southern Barents Sea.

Reports on the two most common species of these planktonic shrimps, which constitute an important food source of cod and haddock. Horizontal and depth distribution, temperature limits, long-term fluctuations, etc. are considered. (DLC.)

71111. **DROZDOV, M.** Puti ispol'zovaniia novykh ob"ektov promysla na Dal'nem Vostoke. (Rybnoe khoziaĭstvo, 1961. god 37, no.10, p.46-50.) Text in Russian. **Title tr.:** Ways to realize new industrial possibilities in the Far East.

Presents a general review of the fisheries industry, including Bering Sea and Kamchatka waters. Recent advances in catches, species utilized: redfish, halibut, coalfish, their food value, vitamins, etc. are set forth. (DLC.)

DROZNES, M.A., *see* Chochia, N.G., & *others.* Muzhinskiĭ Ural . . . 1961. No. 70733

DRUGOVA, G.M., *see* Sudovikov, N.G., & *others.* Petrografiia . . . 1962. No. 75977

DRURY, HORACE FEATHERSTONE, 1915– *see* Rodahl, K. Studies on the blood . . . 1954. No. 75157

71112. **DRURY, WILLIAM HOLLAND, 1921–** Breeding activities of long-tailed jaeger, herring gull and arctic tern on Bylot Island, Northwest Territories, Canada. (Bird-banding, Apr. 1960. v.31, no.2, p.63-79, map, illus.) 37 refs.

Reports on breeding terns and on early stages of the breeding cycle of jaeger and gull, as observed June 12-July 29 at the Aktineq River mouth on the 1954 Bylot Island Expedition. The displays of these three subgroups of Laridae, the nonbreeding of the jaeger, and the delayed breeding of the tern are discussed. (CaONA.)

71113. **DRURY, WILLIAM HOLLAND, 1921–** Observations on some breeding water birds on Bylot Island. (Canadian field-naturalist, Apr.-June 1961, v.75, no.2, p.84-101, map, illus.) 3 refs.

Reports extensive observations of the red-throated loon, greater snow goose, oldsquaw, and king eider, during June 12-July 29 at the Aktineq River mouth. The Bylot Island Expedition, 1954 was supported by the New York Zoological Society. (CaOGB.)

71114. **DRURY, WILLIAM HOLLAND, 1921–** Studies of the breeding biology of horned lark, water pipit, Lapland longspur, and snow bunting on Bylot Island, Northwest Territories, Canada. (Bird-banding, Jan. 1961. v.32, no.1, p.1-46, maps, illus., tables.) 76 refs.

Reports detailed observations on the breeding biology, ecological factors and behavior differences of the four species, as studied at the Aktineq River mouth. Ecological questions such as survival of the four species together without competition, and adaptations which allow them to breed successfully in the Arctic are discussed, as is the relation of large northern clutch sizes to annual production and the short breeding season (p.28-35). Courtship behavior of Lapland longspurs is compared with studies of other buntings, with conclusion that unusually large geographical and interspecific differences exist among buntings, or their evolutionary relations are not clear. There appear to be adaptive changes in territorial behavior during the early part of the longspur's breeding. (CaONA.)

71115. **DRUSHCHITS, IŪ. G.** Novye dannye po stratigrafii tretichnykh otlozheniĭ Palanskogo raiona Kamchatki. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.155-62.) 6 refs. Text in Russian. **Title tr.:** New data on the stratigraphy of Tertiary deposits in the Palana region of Kamchatka.

Reports study of Tertiary deposits in the Palana (59°03′N. 159°48′E.), Kinkil' and other river basins. Sections of Paleogene and Neogene deposits are described, noting lithology and flora and fauna of the layers. Correlation is made with similar deposits of the Tigil' and other regions. (DLC.)

71116. *DRUZHBA NARODOV.* Stikhi poėtov respublik Rossiĭskoĭ Federatsii. (Druzhba narodov, July 1962, no.7, p.15-28.) Text in Russian. **Title tr.:** Poems by RSFSR poets.

Translations of poems by, among others: Al'bert Vaneev, a Zyryan, and Semen Danilov, Yakut. (DLC.)

71117. **DRUZHININA, M. F.** K voprosu provedeniia prakticheskikh zaniatiĭ po sovremennomu russkomu iāzyku v natsional'nykh pedagogicheskikh vuzakh. (Yakutsk. Universitet. Uchenye zapiski, 1960. vyp.7, seriia obshchestvennykh nauk, p.91-100.) Ref. Text in Russian. **Title tr.:** Speech-laboratory work in contemporary Russian, in teacher-training schools of national groups.

Discusses the need for intensified oral speech training for the mastery of Russian phonetics and morphology by Yakut students. Linguistic structures presenting prime difficulties are noted and compared to Yakut. (DLC.)

71118. **DUBAR', G. P.** Opyt kompleksnogo ispol'zovaniia dannykh absolūtnogo vozrasta i mineralogicheskogo analiza dlia resheniia zadach paleogeografii; na primere Lenskogo bassein a. (Akademiia nauk SSSR. Doklady, Mar. 1, 1962. t.143, no.1, p.175-78, tables.) 9 refs. Text in Russian. **Title tr.:** On the use of absolute age data and those of mineralogic analysis in the solution of paleogeo-

graphic problems, as exemplified in the Lena basin.

Examines Mesozoic sedimentary deposits of the lower Aldan region to ascertain the source of its components. Mineralogic composition of the rocks, grain size and roundness of the dispersed material indicate that the latter derived from the Stanovoy Mts. area during the Jurassic and Cretaceous. This was confirmed by absolute age determination of biotite from the Mesozoic rocks, by potassium-argon and rubidium-strontium methods. (DLC.)

DUBAR', G. P., *see also* Zaporozhtseva, A.S., & *others*. O posledovatel'nom zameshchenii kal'tsievykh tseolitov . . . 1961. No. 76643

DUBECZ, E., *see*

Hársing, L., & *others*. Hypothermia . . . 1961. No. 72048

Hársing, L., & *others*. Hypothermia . . . inulintérre. 1961. No. 72050

Hársing, L., & *others*. Hypothermia . . . kicserélödésére. 1961. No. 72049

71119. DUBIKOV, G. I. Osobennosti rasprostraneniia mnogoletnemerzlykh porod v severnoi chasti Zapadno-Sibirskoi nizmennosti; po profiliu g. Salekhard, pos. Urengoi. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy 1962. t.19, p.25-31, profile.) 9 refs. Text in Russian. **Title tr.**: Distribution features of permafrost in the northern part of West Siberian plain, according to the Salekhard-Urengoy profile.

Reports on permafrost conditions along an approx. 250-mi. profile between Salekhard and the village Urengoy on the Pur River. Distribution varies significantly, depending on the lithologic composition of rocks, relief, ground water and other local conditions. In valleys of large rivers and where beds are young, permafrost has developed in a single, "upper", layer only; in older parts of the beds a two-layer development prevails. In watershed areas, a so-called monolithic permafrost stratum predominates. (DLC.)

71120. DUBNIE, AMIL. Transportation and the competitive position of selected Canadian minerals. Ottawa, Queen's Printer, 1962. 140 p. illus., maps incl. 3 fold. in pocket, tables. (Canada, Dept. of Mines and Technical Surveys. Mineral Resources Division. Mineral survey 2.) Refs.

Presents a general survey of the transportation of minerals and its effect on economic development, from the early fur-trade period to date. Transport media: water, road, rail, pipeline, and air routes are reviewed; and craft are discussed; the canoe, essential to northern prospecting; flat-bottomed boats, shallow draft barges and scows for northern rivers, and tugs. Large-scale water transport is used in the Mackenzie basin and Yukon Territory, and is important throughout the North. Nearly all post-war railway construction has been based on mineral industry development, e.g. the Sherridon-Lynn Lake, and Sipiwesk-Thompson lines in Manitoba, and the Quebec North Shore and Labrador Railway. Importance of cost factor in all forms of transport is emphasized. Federal government interest in road building, and the Northern Development Roads program in the Yukon and Northwest Territories are noted. Aircraft have a virtual monopoly in exploration and supply in the North; typical northern aircraft are shown, various types compared. Regional transportation methods, routes and costs are outlined for the leading mineral-producing areas, e.g. Quebec - Labrador, Northern Manitoba - Saskatchewan, Mackenzie River basin, the Yukon, etc. Selected transportation costs are compared for Canadian and foreign minerals, showing advantages to some Canadian shippers and possible future developments, in copper, lead, zinc, and iron ore. Road and rail maps at 1 in.: 80 mi., and an airline map at 1 in.: 160 mi., are folded in pocket. (DLC.)

71121. DUBNIE, AMIL. Transportation of minerals in northern Canada. (Mining engineering, May 1961. v.13, no.5, p.462-66, map, tables.)

Discusses such environmental factors in overland transportation as muskeg, permafrost; also the relative importance of water, rail, road, air, and pipeline transport. Existing facilities in the access areas indicate the railways to be basic, and to be supplemented by other forms as large mineral deposits are developed. (DGS.)

DUBOTOVKO, IU. V., *see* Gnevushev, M.A., & *others*. Ob okraske iakutskikh almazov. 1961. No. 71713

DUBROVIN, O. V., *see* Nogid, L.M., & O.V. Dubrovin. O vlazkostnom soprotivlenii . . . 1962. No. 74371

71122. DUBROVINA, Z. M. Dmitrii Vladimirovich Bubrikh kak issledovatel' finno-ugorskikh iazykov. (Leningrad. Universitet. Uchenye zapiski 1962. no.314, seriia filologicheskikh nauk, vyp.63, Finno-ugorskaia filologiia, p.5-18.) 18 refs. Text in Russian. **Title tr.**: D.V. Bubrikh, student of Finno-Ugric languages.

Reviews the professional career and publications of this prominent Russian philologist including his work on Karelian and Komi-Zyryan. (DLC.)

71123. DUBROVSKAIA, T. Stroitel'stvo detskogo sada v Vorkute. (Doshkol'noe vospitanie, Jan. 1962. god 35, no.1, p.22-23.) Text in Russian. **Title tr.**: Construction of a kindergarten in Vorkuta.

Head of the Vorkutugol' Combine kindergarten states construction of the new building delayed by lack of funds, and the teaching staff, inadequate for 102 children (instead of the expected fifty) with another forty seeking admission. (DLC.)

71124. DUCHAINE, WILLIAM A. Integration in Alaska. (Beaver, summer 1961. outfit 292, p.48-53, illus.)

Discusses the adjustments of Eskimos and other natives to wage employment and business. Educational and vocational training programs at Mt. Edgecumbe High School and elsewhere under the U.S. Bureau of Indian Affairs are described. Under its relocation program, some six hundred families have been resettled since 1957: 80% outside of Alaska; 70% have adjusted successfully. (DI.)

71125. DUDKIN, O. B. K mineralogii IUksporskogo mestorozhdeniia apatita. *(In:* Akademiia nauk SSSR. Kol'skii filial. Voprosy geologii . . . 1961, p.29-42, illus., table.) 6 refs. Text in Russian. **Title tr.**: On the mineralogy of the Yukspor apatite deposits.

These deposits in the Khibiny massif are characterized by irregular distribution of ores of various texture, and occurrence of veins and peg-

matites. The main rock building minerals are apatite, pyroxene and sphene. Secondary and accessory minerals are also described. The mineral composition is analogous with that of the Khibiny apatite deposits, especially with those of Kukisvumchorr. (DLC.)

71126. **DUDKIN, O. B.** Osobennosti razvitiia gipergennykh protsessov v apatitovoĭ rude Khibinskikh mestorozhdeniĭ. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy geologii . . . 1961, p.43-52, illus., tables.) 7 refs. Text in Russian. **Title tr.:** The development features of supergene processes in the apatite ore of the Khibiny deposits.

Describes alteration and alteration products resulting from the action of descending surface waters in the Khibiny apatite ores. Zones of supergene processes or chemical weathering are described. The most intensive weathering occurs in fissures caused by tectonic movements. Size of these fissures and intensity of weathering are outlined. Minerals formed and replaced by supergene processes are described. (DLC.)

DUDKIN, O. B., *see also* Denisov, A.P., & *others.* O zavisimosti fizicheskikh svoĭstv apatita . . . 1961. No. 70959

71127. **DUFEK, GEORGE JOHN, 1903–** . Nuclear power for the polar regions. (National geographic magazine, May 1962. v.121, no.5, p.712-30, col. illus.)

Discusses the advantages and potentialities of atomic energy for providing light and heat in polar areas, illustrated by its use at the U.S. Army's Camp Century in the Greenland icecap. The 1500 kw. nuclear plant and its successful testing, as observed on Oct. 2, 1960, are described. The plant supplies the entire power needs of this under-ice installation, and can operate for two yrs. on 43 lbs. of uranium. Other facilities of the community are noted, including the water supply melted from the ice by steam. (DI.)

71128. **DUFFELL, S.** "Roads to resources" western Ontario project. (Canadian mining journal, Apr. 1961. v.82, no.4, p.77-79.)

Describes a federal-provincial government investigation in 1959-1961, of the mineral potential of a 60,000 sq. mi. area in northwestern Ontario, to determine need and routes for roads. Aeromagnetic and geological surveys are being carried out, also analyses of bedrock samples and geophysical studies. Deposits of gold, iron, and other metals are known in the survey area. (DGS.)

DUFFELL, S., *see also* Douglas, R.J.W., & S. Duffell, Phanerozoic events, Precambrian rocks. 1962. No. 71094

DUFRESNE, CYRILLE A., *see* Pfleider, E.P., & C.A. Dufresne. Transporting open-pit production . . . 1961. No. 74770

DUGGAL, S. P., *see*

Pomerantz, M.A., & S. P. Duggal. . . . Cosmic ray intensity Nov. 20, 1960. 1961. No. 74871

Pomerantz, M.A., & *others.* Observations . . . cosmic rays . . . 1961. No. 74869

Pomerantz, M.A., & *others.* Solar-produced cosmic rays . . . 1961. No. 74870

DuJARDIN, R. A., *see* Evans, E.L., & R.A. DuJardin. Unique beryllium . . . 1962. No. 71307

DUK, VLADIMIR LEONT'EVICH, *see* Shurkin, K.A., & *others.* Belomorskiĭ kompleks . . . 1962. No. 75625

71129. **DULBERGER, LEON H.** Sonar guides submarines under polar ice. (Electronics, Mar. 24, 1961. v.34, no.12, p.18-19, illus., map.)

Notes instrumentation of the *Seadragon* on its 1960 cruise from the Atlantic to the Pacific through Canadian Arctic Islands waters: sonar, underwater television, and inertial navigation gear. Sonar gave continuous information on overhead ice thickness, distance to ice and to bottom, location and outline of polynyas, and location of icebergs. (DLC.)

71130. **DULBERGER, LEON H.** Sonar to survey Arctic Ocean Shelf transmits through ice and water. (Electronics, Aug. 4, 1961. v.34, no.31, p.44-45, diagr.)

Describes equipment designed for the Canadian Dept. of Mines and Technical Surveys by Edo Ltd., Cornwall, Ontario, and used on the Polar Continental Shelf Project. The sonar is transported to desired locations on the ice by a helicopter based on Isachsen Island. The transducer is coupled to the ice by a layer of high-viscosity oil to achieve maximum sound transfer, thus permitting measurements to be made without drilling down to water. Regular operation is obtained through eight ft. of ice; maximum range is 1,900 yds. A block diagram of the system is included. (DLC.)

71131. **DULOV, V. I.** Literatura po istorii Sibiri, vyshedshaia v 1960 godu; kratkiĭ kritiko-bibliograficheskiĭ obzor. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961, no.8, p.131-35.) 36 refs. Text in Russian. **Title tr.:** Literature on the history of Sibiria published in 1960; a brief bibliographical review.

Lists and describes 36 monographs and scientific papers; and notes two conferences held in 1960 on the history of Siberia, also plan for publication of a five-volume monograph on the history of Siberia and the Far East. (DLC.)

71132. **DUL'ZON, ANDREĬ PETROVICH.** Byloe rasselenie ketov, po dannym toponimiki. (Voprosy geografii, 1962. Sbornik 58, Geograficheskie nazvaniia, p.50-84, table, fold. map.) Approx. 25 refs. Text in Russian. **Title tr.:** Former habitation area of the Kets according to toponymic data.

Morphological analysis of geographic names of Yeniseian (Ket, Kott, Arin, Pumpokolets, Assan) origin or adaptation from heterolingual substrates. Tribal movements and distribution since the 16th - 17th centuries within the Ob-Yenisey region, roughly 52° - 67°N. 73° - 95°E., are discussed and mapped. (DLC.)

71133. **DUL'ZON, ANDREĬ PETROVICH.** Drevnie peredvizheniia ketov po dannym toponimiki. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Nov.-Dec. 1962. t.94, vyp.6, p.474-82, fold. map.) 24 refs. Text in Russian. **Title tr.:** Ancient migrations of Yeniseians according to toponymic data.

Linguistic analysis of West Siberian toponymics in an attempt to trace the movements of Yeniseian tribes (Kets, Assans, Arins, Kotts, Pumpokolets) along the Ob-Yenisey tributaries, since the 16th century. Suffixes characteristic of the various dialects are the main criteria used in

attributing geographic name formation to a specific tribe. Vestiges of substrate Yeniseian toponymics in now heterolingual areas indicate one-time occupancy by Yeniseian groups. (DLC.)

71134. DUL'ZON, ANDREĬ PETROVICH. Voprosy étimologicheskogo analiza russkikh toponimov substratnogo proiskhozhdeniîa. (Voprosy îazykoznaniîa, 1959. god 8, no.4, p.35-46, table.) 13 refs. Text in Russian. **Title tr.:** Problems of an etymological analysis of Russian toponymics of substrate origin.

Linguistic study of geographical names in West Siberia introduced into Russian directly from a Ket-Yeniseian substrate or after experiencing heterolingual superstrate changes through Samoyed, Ostyak, Turkic, etc. influence. The morphological and semantic structure of Ket toponymics is analyzed and their original meaning interpreted. Ket geographical nomenclature derived exclusively from concepts of practical import to hunters, fishers, and gatherers. Substrate Ket and the superstrate Sel'kup-Samoyed, Turkic, and Russian variants are discussed and tabulated. (DLC.)

DUMOND, D. E., *see* Alaskan Science Conference 1961. 1962. No. 69644

71135. DUNBAR, CARL OWEN, 1891– . Permian invertebrate faunas of central East Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.224-30, illus.) 8 refs.

Describes the major faunal classes represented in the Permian collections of the Danish East Greenland expeditions. Brachiopods predominate; bryozoans and pelecypods are secondary; two ammonite and a belemnite species represent the cephalopods; gastropods, corals, sponges, and echinoderms are unimportant; fusulines are lacking. The belemnite *Dictyoconites groenlandica* Fischer is unique for the Permian. Seventeen of the 38 species of brachiopods are illustrated. Close similarities are found with the faunas of Ellesmere Island and boreal Europe; a noteworthy association exists with some brachiopods of lower latitudes. Closest faunal ties establish the Greenland section as Upper, but not necessarily uppermost, Permian. The brachiopod fauna of the northeast Greenland Permian has nothing in common with that of central East Greenland. (DLC.)

DUNBAR, CARL OWEN, 1891– , *see also* Ross, C.A., & C.O. Dunbar. Faunas . . . 1962. No. 75208

71136. DUNBAR, MAXWELL JOHN, 1914– . The evolution of stability: natural selection at the level of the ecosystem. (*In:* Royal Society of Canada. Studia varia 4, Evolution symposium, 1960, p.98-109.) 29 refs.

Considers the evolution of stability through natural selection in high latitude ecosystems, i.e. complexes of interacting and interdependent organisms and physical factors of the environment. In contrast to the stable (ideal) systems of tropical areas, those in polar and temperate regions are oscillating, a symptom of non-adaptation attributed to the shorter period during which they have evolved. The high latitude systems are evolving toward greater stability however, and some examples are given among marine fauna and sea birds in cold climates. Selective mechanisms tend toward survival of the system rather than the individual or species. (DLC.)

71137. DUNBAR, MAXWELL JOHN, 1914– . The life cycle of *Sagitta elegans* in arctic and subarctic seas, and the modifying effects of hydrographic differences in the environment. (Journal of marine research, Mar. 15, 1962. v.20, no.1, p.76-91, table, graphs, map.) 13 refs.

Covers material collected during 1947-1956 from Ungava, Frobisher and Hudson Bays, also from Foxe Basin, on *Calanus* expeditions. Field and laboratory methods are described briefly. The plankton species *S. e. arctica* has a two-year life span, a two-phase, or alternating, breeding cycle: two distinct population groups, breeding in different years; also a long, July-Feb. spawning period. Hydrographic differences between the four water bodies cited, though small, are reflected in the biology of *Sagitta*. Tidal turbulence in Ungava Bay and Frobisher Bay appear to remove the young of the year quickly, or to cause such vertical mixing that they are not properly sampled. The special conditions in brackish Lake Ogac, on the southwestern shore of Frobisher Bay, produce rapid growth, small size, and a single-phase or nonalternating breeding cycle.—From author's abstract. (DLC.)

71138. DUNBAR, MAXWELL JOHN, 1914– . The living resources of northern Canada. (*In:* Royal Society of Canada. Canadian population . . . symposium, 1962, p.125-35.) 12 refs.

Discusses potentialities for utilization and development of biological, mostly marine fishery, resources. Increased productivity can result in changes in fish distribution. Such changes can be caused by natural processes, as the appearance of capelin in Ungava Bay in 1959 due to warming of those waters; they can also be effected by man's manipulation, e.g., the suggested construction of a dam across Bering Strait would warm the eastern arctic coastal waters and extend the productive subarctic mixed-water zone northward into Baffin Bay. Fresh-water fisheries might be enriched by fertilization of lakes; arctic char fishing could be expanded. (DLC.)

71139. DUNBAR, MOIRA. The drift of North Pole 7 after its abandonment. (Canadian geographer, winter 1962, v.6, no.3-4, p.129-42, illus., maps, tables.) 19 refs. Presented at the Canadian Association of Geographers' annual meeting Hamilton, Ont., 1962.

Notes this Russian ice-floe station abandoned on Apr. 11, 1959 at 85°14′N. 33°03′W. or about 70 nautical miles north of Cape Morris Jesup, Greenland; and on Apr. 9, 1961, the remains of it seen and photographed by the RCAF at 70°28′N. 67°30′W., or about 16 mi. east-southeast of Cape Christian, Baffin Island; a landing made subsequently, and the buildings and equipment examined. Alternative routes of the station's drift are indicated: one via Robeson Channel - Smith Sound - Baffin Bay, 1035 mi. long; the other down the east coast and across Baffin Bay, 3100 mi. long. Drift patterns, winds, ice, etc. on the two routes are

compared, with conclusion that North Pole-7 drifted the west route to Cape Christian, and probably melted during the summer of 1961. (DGS.)

71140. DUNBAR, MOIRA. HMS *Resolute,* a study in international relations. (Beaver, winter 1961. outfit 292, p.11-17, illus., map.)

Recounts from contemporary records the abandonment of this Franklin Search vessel off southeast Bathurst Island by Belcher in May 1854, her drift south to Davis Strait, and salvage in Sept. 1855 by an American whaler. From the salvagers, she was purchased by the United States government, refitted and presented to the British Navy. Built for arctic service and obsolete, she was broken up in 1878, and a desk made from her timbers was presented to the President of the United States. (DI.)

71141. DUNBAR, MOIRA. Note on the formation of thrust structures in young sea ice. (Journal of glaciology, June 1962, v.4, no.32, p.147-50, illus., graph.) 2 refs.

Discusses formation process of interlocking thrust in young sea ice (cf.No. 55963, 64302) as observed from the icebreaker CMS *John A. Macdonald* in the Canadian Arctic during the summer of 1961. As a vessel ploughs through young ice, a series of small folds is formed in the ice by the divergent crest of the bow wave. The friction caused by the ice tends to slow the movement of the crest, and to set up a process of tightening or twisting the folds which causes the ice to rupture. This rupture occurs not along a fold or wave crest but along the line formed by the combination of the crests; and it occurs suddenly with a little upward burst. Several photos of thrust structures are included and the approximate relationship between the line of fracture and the crest of the bow wave is diagrammed. (DLC.)

DUNBAR, MOIRA, *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

71142. DUNCAN, DAVID ROBARDSON LINCOLN, 1909– . Alaska's Mental Retardation Diagnostic Clinic continues operation in Anchorage. (Alaska's health and welfare, Feb. 1962. v.19, p.4.)

Discusses finances, number of children evaluated and re-evaluated, procedures of examinations, treatment, etc. (DLC.)

71143. DUNCAN, DAVID ROBARDSON LINCOLN, 1909– . Bacillary dysentery in the Anchorage area. (Alaska medicine, Dec. 1961, v.3, no.4, p.79-80.)

Reports incidence during part of 1961, types, current epidemics, sanitary deficiencies and causes, carriers. (DNLM.)

71144. DUNCAN, DAVID ROBARDSON LINCOLN, 1909– . Food poisoning can result from lack of care. (Alaska's health and welfare, Oct. 1962. v.19, p.2.)

Discusses nature and occurrence of food poisoning, types of bacteria producing it, incidence of botulism in Alaska, prevention, hygiene of food. (DLC.)

DUNCAN, DAVID ROBARDSON LINCOLN, 1909– ., *see also* Alaska. Division of Health. The McGrath project . . . 1962. No. 69622

DUNCAN, G. M., *see* Forbes, J.C., & G.M. Duncan. Effect of tryptophan-niacin deficient diet . . . 1961. No. 71459

71145. DUNCAN, JOHN KENNETH. The frequency and duration of geomagnetic storms. Washington, D.C., May 1961. 183 l. maps incl. fold., graphs, tables. (U.S. Hydrographic Office, Informal oceanographic manuscripts no.12-61.) 52 refs. Unpub. ms.

Tabulates the frequency and duration of geomagnetic disturbances of sunspot origin, based on the published geomagnetic range index K. Two types of disturbance, severe and moderate, are defined. Annual and monthly variations in the number and length of individual disturbances and in total storm time are shown in tables and histograms. Four-month to 56-year records from 127 magnetic observatories, including 25 in arctic and subarctic areas were studied. The longest and most severe storms occur near the equinoxes, severe storms more often in March than in September. Maximum storm months are generally in summer at the high latitude stations: Tikhaya Bay, Baker Lake, College, Dikson, Godhavn, Resolute Bay, Sitka, and Sodankylä, exceptions were Tromsø and Lerwick; 1957 and 1946 were the stormiest years at most stations. Additional discussion is provided on each arctic station record. (DN-HO.)

71146. DUNCAN, KENNETH. The Angnasheotik: an account of the invention of a spiritual entity among the Ungava Eskimos. (Arctic, Dec. 1962. v.15, no.4, p.289-94.) 6 refs.

Discusses fears of ghosts and graveyards among the Labrador Eskimos, resulting from contacts with whites. Among spirits feared are the Angnasheotik, described by three informants from the Fort Chimo area of northern Quebec as ghosts of white men who molest Eskimo and Naskopi Indian women. The origin of belief in the Angnasheotik is considered, and the hypothesis discussed that they represent expression of hostile attitudes toward whites. (DI.)

71147. DUNCAN, R. A. Universal-time control of the arctic and antarctic *F* region. (Journal of geophysical research, May 1962. v.67, no.5, p.1823-30, diagr., graphs, map.) 9 refs.

"Electron densities in the *F* region above Antarctica vary with universal time. Similar, but weaker, behavior is found above the Arctic. In both hemispheres, maximum electron densities occur close to the time of local noon at the geomagnetic pole. Some evidence suggests that during equinox, negative ions are produced by proton bombardment and subsequently are detached by sunlight."—Author's abstract. (DLC.)

71148. DUNDO, O. P. Stratigrafiia melovykh otlozhenii basseina srednego techeniia r. Velikoi; Korīakskii khrebet. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.62-72, map., diagr.) 3 refs. Text in Russian. **Title tr.:** Stratigraphy of the Cretaceous deposits in the middle reaches of the Velikaya River basin, Koryak Range.

Presents a preliminary report on this area approx. 64°N. 175°E., the mainly terrigenous deposits about 7000 m. thick. A stratigraphic column is offered dividing the Cretaceous deposits into four rock series. Each series is described, noting the lithologic properties, flora and fauna. (DLC.)

71149. DUNGEY, J. W. The interplanetary field and auroral theory. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.2, p.15-19, graph.) 4 refs.

Constructs a theoretical model of the auroral theory, assuming an approximately southward interplanetary magnetic field due to an interplanetary plasma wind whose velocity lies nearly in the plane of the ecliptic, being coplanar with the interplanetary field and the earth's dipole. A picture of the interplanetary plasma flow around the earth is given based on hydromagnetic principle. Such a construction permits an interpretation of some auroral phenomena, and the auroral zone at higher latitude on magnetically exceptionally quiet days. (DLC.)

71150. DUNKIN, T. G. Considerations for landing aircraft on floating ice. (Canadian aeronautics and space journal, May 1962. v.8, no.5, p.93-98, table, graphs, map.) 9 refs.

Deals with the strength requirements of ice for aircraft landing, the preparation of landing strips, and landing and taxiing procedures. Data are graphed on the critical velocity of moving loads over ice on shallow and deep water, the radius of influence of loads on floating ice, and the ice thickness for safe landing vs. aircraft landing weights for fresh-water and sea ice. Formulas are given for determining the diminution of ice thickness in spring, and thickening of the ice cover by artifical removal of snow or flooding. Recommendations are offered on landing techniques and the preparation of runways.—From CRREL. (DLC.)

71151. DUNN, ETHEL, *and* **S. P. DUNN.** Sovremennoe khoziaistvo, kul'tura i byt malykh narodov Severa. (American anthropologist, Aug. 1962. v.64, no.4, p.885-88.) Text in English. **Title tr.:** Contemporary economy, culture, and customs of the small peoples of the North.

Exhaustive summary and review of No. 62917, whose publication is considered a result of the Council of Ministers directive of March 20, 1960 for the small peoples of the North to be a settled population by 1963. The objectivity of the papers is noted and the volume recommended to students of the Soviet system and of directed cultural change in general. (DSI.)

DUNN, ETHEL, *see also*

Dunn, S.P., & E. Dunn. Directed culture change . . . 1962. No. 71152

Stephen, P., & E. Dunn. Directed culture change . . . Soviet studies. 1962. No. 75932

71152. DUNN, STEPHEN P., *and* **E. DUNN.** Directed culture change in the Soviet Union: some Soviet studies. (American anthropologist, Apr. 1962. v.64, no.2, p.328-39.) 17 refs.

Reviews recent evolutionary and/or acculturative trends mainly among non-Russian minorities, as reflected in Soviet ethnographic literature of the 1950's. Russian scientists' criticism of socio-economic measures affecting the peoples of the North, as exemplified in current conditions among Koryaks and Samoyeds, are discussed p.330-32. Slow progress is attributed mainly to sluggish technology at the kolkhoz level; to poor coordination between the traditional and the introduced economy, substitution of production brigades for clan and family teams, etc. Educational and medical facilities have been over-centralized into the regional culture base to the hardship of nomads, etc. Too many dialects have been reduced to writing, restricting the circulation of publications, etc. The main obstacles to a rise in living standards however, are still ecological factors. (DSI.)

DUNN, STEPHEN P., *see also* Dunn, E., & S.P. Dunn. Sovremennoe khoziaistvo . . . 1962. No. 71151

71153. DUNNING, R. W. A note on adoption among the Southampton Island Eskimo. (Man, Nov. 1962. v.62, p.163-67, tables.) 16 refs.

Study of the Aivilik and Okumiut Eskimo adoption customs, based on field work in summer 1957. Social benefits and increased reliance on wage labor rather than trapping have bolstered the Eskimo economy and reduced the number of families willing to part with their children. Main reasons, besides demographic and kinship considerations, are discussed for out-adoption (death of parents, surplus child) and in-adoption (no issue or no male child). Social status of the family head, expressed by the number of dependants he can support, is considered an added factor for in-adoption. (DSI.)

DUNPHY, J. ENGELBERT, *see* Jacob, S.W., & *others*. Experimental . . . cryobiology. 1961. No. 72506

DURFEE, M. C., *see* Alaskan Science Conference 1961. 1962. No. 69644

71154. DURHAM, JOHN WYATT, 1907– , and Y. SASA. A comparison of the fauna of the Poronai formation of Japan with west American middle Tertiary faunas. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Proceedings *pub.* 1961. v.12, geology and geophysics, p.276.)

Compares 23 species of marine molluscs from this formation on Hokkaido with specimens from American formations, including the Poul Creek of the Yakataga region of southern Alaska. Resemblances are close for over half the species; a similar age is indicated. A correlation of Middle Tertiary formations of Hokkaido, Alaska, Washington, and Oregon is suggested. (DI.)

71155. DURHAM, WILLIAM F., *and others*. Insecticide content of diet and body fat of Alaskan natives. (Science, Dec. 8, 1961. v.134, no.3493. p.1880-81, table.) 3 refs. *Other authors:* J.F. Armstrong, W.M. Upholt, *and* C. Heller.

Reports study of DDT and DDE content of the diet and body fat of Eskimos, living in isolated, primitive conditions. None of the substances was present in the diet, except in two white owls which contained low levels of DDT and DDE. The Eskimos were found to store much less DDT and DDE in their body fat than does the general population of the United States. (DLC.)

71156. DURKINA, A. V. Granit͡sa devona i karbona Timano-Pechorskoĭ provint͡sii. (*In:* Soveshchanie po utochneniiu unifit͡sirovannykh stratigraficheskikh skhem paleozoia . . . Karbon, 1962, t.3, p.96-102.) Text in Russian. **Title tr.:** The boundary of the Devonian and Carboniferous in the Timan-Pechora province.

Discusses physical and paleontologic evidences for distinguishing this boundary. Deposition conditions, the foraminifer, brachiopod, ostracod and other fauna of Famenian and Tournaisian

deposits are analyzed. The Dzhebolskaya stratum as an independent substage of the Tournaisian stage is considered most suitable for delimiting the Devonian and Carboniferous. (DLC.)

71157. DURRER, JOHN L., *and* **J. P. HANNON.** Glucose tolerance and insulin sensitivity of the cold-exposed beagle dog. Fort Wainwright, Alaska, Oct. 1961. 6 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-32.) 10 refs.

Male dogs from moderate climate first kept warm indoors as controls and then exposed to arctic winter outdoors, showed "little, if any" effect of cold adaptation on insulin sensitivity. Cold acclimation however, was associated with increased glucose tolerance. (CaMAI.)

71158. DURRER, JOHN L., *and* **J. P. HANNON.** Seasonal variations in the caloric intake of dogs living in an arctic environment. Fort Wainwright, Alaska, Oct. 1961. 9 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-33.) 12 refs. Also reported in *American journal of physiology* Feb. 1962, p.375-78.

Variations in the average daily caloric intake and body weight were studied in five huskies and five beagles. In both groups there was a minimum food intake in mid-summer, with a rise in early winter. It is suggested that the seasonal changes in insulation (fur) are supplementary to the changes in caloric intake. (CaMAI.)

DURRER, JOHN L., *see also* Alaskan Science Conference 1960. 1961. No. 69643

71159. DUTILLY, ARTHÈME ANTOINE, 1896– , *and* **E. LEPAGE.** Exploration botanique des rivières Swampy Bay et Caniapiscau, dans le bassin de la Baie d'Ungava. (Naturaliste canadien, Nov. 1962. v.89, no.11, p.293-329.) 11 refs. Text in French. **Title tr.:** Botanical exploration of the Swampy Bay and Kaniapiskau Rivers, in the basin of Ungava Bay.

Describes a trip from Schefferville to Fort Chimo in Aug. 1961 by truck and canoe to note the continuity of flora in this region of ferrous and dolomite rocks. The 37 stations made en route are described. Some 305 plants are listed by family, with field notes, location, frequency, etc. Of these, two species represent an extension of known areas, five were first seen in the area, five have retreated from their northern limits, and 23 have northern limits in this area. (CaOG.)

DUTRO, JOHN THOMAS, 1923– , *see*

Brosgé, W.P., & *others*. Paleozoic sequence . . . 1962. No. 70394

International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

Sable, E.G., & J.T. Dutro. New formations DeLong Mts. 1961. No. 75309

71160. DVALI, M. F. Granitsa tretichnogo i chetvertichnogo periodov na severo-vostoke Azii. (*In:* Soveshchanie. . .stratigraficheskikh skhem . . . 1961, p.238-48.) 38 refs. Text in Russian. **Title tr.:** The boundary between the Tertiary and Quaternary periods in northeast Asia.

Discusses this problem for Chukotka, the Koryak Range, Kamchatka, and other areas, and reviews the literature on this boundary in Europe, European Russia and North America. The present stage of investigation does not permit this separation to be drawn in northeast Asia, but it should be based on biostratigraphic criteria. (DLC.)

71161. DVININ, EVGENIĬ ALEKSANDROVICH, 1906– . Kraĭ, v kotorom my zhivem. Murmansk, Murmanskoe knizhnoe izd-vo, 1959. 280p. illus. Text in Russian. **Title tr.:** The land we live in.

Outlines the development and present conditions of Murmansk Province; in nine sections, the first a survey of the geomorphology of the Kola Peninsula, its climate, "hundred thousand lakes," tundra, taiga, flora, fauna and mineral resources. The archeology and history of the area is traced to 1917, the Revolution, civil war, intervention, and the establishment of Soviet rule reviewed. Recovery of the fisheries, beginning of scientific exploration, and the Kara Sea expeditions; discovery of apatite, nepheline and other valuable ores and minerals, and the beginning of industrialization are described. The main events of the northern front in the second World War are sketched. Present-day activities are treated in some detail: the development and modernization of the fisheries, the mining of apatite, nickel, copper and rare elements; the activities of I.G. Ėĭkhfel'd and the Polar Experimental Station of the Plant Cultivation Institute in Khibiny, and their influence on the collective and state farms, on the reindeer industry, and on the living conditions of the local Lapps (Saami), Zyryans (Komi) and Samoyeds (Nenets). Social problems and community facilities are discussed; housing which cannot keep pace with the population growth; the school system, libraries, movies, theaters, hospitals, health services, etc. Finally a comparison is drawn between present-day Kola and Alaska, lauding conditions of the former, discrediting the latter. The Murman reindeer herds have increased 50,000 - 90,000 in 1950-1958; the towns of Murmansk, Kirovsk Monchegorsk, Olenegorsk, Zapolyar'ye, etc. are depicted with their plants and facilities. A brief biography of the author is given on verso of title page. (DLC.)

71162. DVORKIN, E. N. O deviatsii magnitnykh sistem izmeritelei techenii. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210. Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p.85-90, graphs.) 2 refs. Text in Russian. **Title tr.:** On the deviation of magnetic systems in current meters.

Discusses the problem as studied in Alekseev's automatic current-meter BPV-2r in the Laptev Sea in 1954. The self-recorder, one meter off the port side of the vessel measures current horizons at 2-5 m. below surface. Results, though tentative, indicate that current measurements in surface layers can be made from shipboard. Readings are graphed and mathematically analyzed. (CaMAI.)

71163. DVORKIN, E. N., *and* **S.I. STEPANOV.** Opredelenie glubiny pogruzheniia samopistsev avtonomnykh stantsiĭ s pomoshch'iu avtografov

glubiny. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik stateĭ, vyp.1, p.35-37. table.) Ref. Text in Russian. **Title tr.**: Determination of submergence depth of self-recorders of automatic stations with the aid of depth auto-recording devices.

Discusses the method of installation of automatic stations for oceanic currents recorders at a predetermined depth to 30 m. Results of 1958 tests in the Kara Sea are given. (CaMAI.)

71164. DYDINA, L. A. Posledovatel'nost' smeny tipov sinopticheskikh protsessov v Arktike v sviazi s preobrazovaniiami osnovnykh form tsirkuliatsii atmosfery. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.240, Voprosy dolgosrochnykh prognozov pogody . . . p.68-87, maps, tables, graphs.) 5 refs. Text in Russian. **Title tr.**: Sequence in the change of types of synoptic processes in the Arctic, as related to conversion of basic forms of atmospheric circulation.

Presents results of a study of the successiveness of elementary synoptic processes (ESP), depending on a conversion of the basic forms of circulation of the atmosphere in the Arctic. The recurrence of groups of processes related to the macroconversion forms of atmospheric circulation are discussed, as is localization of baric fields during several successive elementary synoptic processes occurring after the initial type of the process related to conversions in the form of circulations. Data obtained on the variations of wind direction and velocities, and those on the probability of localization of baric fields are used for the 8-10 day range of weather forecast in the Arctic. (CaMAI.)

71165. DYDINA, L.A. Vetrovoĭ i temperaturnyĭ rezhim v raĭonakh Grenlandskogo i Barentseva moreĭ v sviazi s tipami sinopticheskikh protsessov v Arktike. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.240, Voprosy dolgosrochnykh prognozov pogody . . . p.177-208, tables.) 8 refs. Text in Russian. **Title tr.**: The wind and temperature regime in the Greenland and Barents Sea regions, and its relation to synoptic processes in the Arctic.

Investigates the dominant character of baric fields over these seas during synoptic processes typical of the Arctic, and the probability of their position there. Prevailing winds and their velocities are determined, as are deviations of temperatures from the 10-day standard, and their dependability for each type of process during the navigation period in these seas. The mean probability of baric field positions was found to be 78% for the Sea of Greenland, and 83% for the Barents Sea. The data thus obtained may be used in predicting wind and temperature for 3 and 8-10 days in the region of these seas. (CaMAI.)

DYDINA, L. A. *see also*

Leningrad. Arkticheskiĭ . . . institut. Rukovodstvo . . . 1961. No. 73408

Leningrad. Arkticheskiĭ . . . institut. Sbornik stateĭ po sinopticheskoĭ meteorologii. 1961. No. 73409

DYEA TRAIL, see Alaska sportsman. Snowslide Chilkoot Pass. 1962. No. 69641

DYKERS, J. R., *Jr., see* Yonce, L.R., *& others.* Vascular resistance . . . 1962. No. 76609

DYKINS, J. E., *see* Kingery, W.D. . . . Project Ice Way. 1962. No. 72796

71166. DYRING, ERIC, *and* **B. ROSÉN.** Standard errors at harmonic analysis on cosmic ray data. (Tellus, Feb. 1961. v.13, no.1, p.113-18, tables.) 6 refs.

Presents three methods of calculating standard errors and applies them to data obtained with neutron monitors at Uppsala in Sweden and Murchison Bay in Svalbard. The results are compared for periods of one day to three-year means, showing good similarity. Only in a few cases did the addition of a second harmonic markedly reduce the standard error. (DLC.)

71167. DYRING, ERIC. Statistical studies of the performance of cosmic ray recording instruments. (Tellus, Feb. 1962. v.14, no.1, p.33-43, tables, graphs, diagrs.) 9 refs.

Presents a method to determine the variance of statistical fluctuations in cosmic ray data derived from the neutron monitor, duplex cubical counter telescope, and directional telescopes. Standard deviation of the error distribution is estimated for instruments at Uppsala, Murchison Bay (Svalbard), and Mt. Wellington. The results are compared with the Poisson distribution which is shown to give an underestimate. (DLC.)

DYRING, ERIC, *see also*

Liljequist, G.H. Arktisk utpost . . . 1960. No. 73499

Sandström, A.E., *& others.* Direction cosmic ray anisotropy. 1962. No. 75368

71168. DYSON, JAMES LINDSAY, 1912– . The world of ice. New York, Knopf, 1962. xvii, 292 xiii p. illus., map. 120 refs.

Examines the formation, distribution, and characteristics of glaciers and sea-ice; discusses their effects on earth's surface waters, climate, and on man, noting the sinking of the Titanic by a relatively small iceberg in 1912. History of a glacier is traced from the parent snow field to its disappearance in climatic change, etc. Scientific methods of determining glacial history and climatic changes are outlined. Conditions in Alaska and Greenland are cited and illus. on forty-odd of the 60 plates. Numerous references are given to more detailed sources. The glossary defines a hundred or more terms. (DGS.)

71169. DZERZHINSKII, F. IA. Osobennosti stroeniia cherepa imperatorskogo pingvina *Aptenodytes forsteri* Gray, i dlinnoklŭvoĭ kairy *Uria aalge* Pont. (Nauchnye doklady vysshei shkoly, biologicheskie nauki, 1962, no.2, p.44-48, illus.) 14 refs. Text in Russian. **Title tr.**: Peculiarities of skull structure in the emperor penguin *Aptenodytes forsteri* Gray and the common murre *Uria aalge* Pont.

Reports a comparative study of these forms, showing convergent evolution and adaptation for underwater swimming with the aid of wings. Skull anatomy at hatching is given particular consideration, and peculiar and functional traits are noted. (DLC.)

71170. **DZHANIBEKOV, A. F.** Geologicheskoe stroenie i neftegazonosnost' Michaĭuskogo vala Pechorskoĭ depressii. (Geologiĭa nefti i gaza, Feb. 1962. god 6, no.2, p.13-17, maps, profile.) Text in Russian. **Title tr.**: Geologic structure and oil-gas properties of the Michayuskiy swell in the Pechora depression.

Reports deep drillings and seismic sounding in this swell in the southern part of the Pechora depression in Komi ASSR. Quaternary, Triassic, Permian, Carboniferous and Devonian deposits are described. In Givetian and Eifelian stages of the Devonian deposits, productive beds are distinguished; a gusher of light oil is described, its properties are characterized. Givetian deposits, according to structural-tectonic conditions, lithology and facies, are considered the most favorable for oil and gas accumulation. (DLC.)

71171. **DZHINORIDZE, N. M.** Verkhneĭurskie otlozheniĭa severnoĭ chasti Priverkhoĭanskogo progiba. (Leningrad. Vsesoiuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961, vyp.186. Geologicheskiĭ sbornik no.6, p.44-52, map, diagrs.) 11 refs. Text in Russian. **Title tr.**: Upper Jurassic deposits in the northern part of the Verkhoyansk trough.

Presents stratigraphic description of Callovian, Oxfordian and Kimeridgian stages of Upper Jurassic deposits up the Lena River from Bulun to Zhigansk. The deposits studied by the author in the Bulun area are correlated with those farther south studied by others. (DLC.)

71172. **DZHORDZHIO, N. V.** Nabliudenie nochnogo neba vblizi zony polĭarnykh siĭaniĭ. (Akademiĭa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polĭarnye siĭaniĭa i svechenie nochnogo neba. Sbornik statei, 1962. no.8, p.15-16.) Text in Russian. Summary in English. **Title tr.**: Airglow observation near the auroral zone.

Discusses the results of observations of airglow in the ranges of λ4278Å, λ5300Å, λ5577Å, λ5893Å, and λ6300Å made with a spectrophotometer at the Loparskaya station during the IGY. Evidently, in the region of the auroral zone, a permanent additional emission exists during the maximum of solar activity, even during the calm airglow in the zenith. (DLC.)

71173. **DZHORDZHIO, N. V.** Zakonomernosti mertsaniĭa polĭarnykh siĭaniĭ. (Akademiĭa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polĭarnye siĭaniĭa i svechenie nochnogo neba. Sbornik statei, 1962. no.8, p.17-20, graphs.) 2 refs. Text in Russian. Summary in English. **Title tr.**: Regularities in auroral pulsation.

Discusses the pulsation intensity of auroras and of pulsating patches. Simultaneous observations with three electrophotometers were carried out at Loparskaya station during 36 cloudless and moonless nights from Jan. 1958 to Dec. 1959. Synchronous emissions in λ 3914, λ 5577, and λ 6545Å were recorded, and the pulsations were found to coincide with the changes in the variations. The short period pulsations are thought to arise because of an uneven influx of solar corpuscles. (DLC.)

71174. **DZIUBENKO, I. I.**, *and* **IU. A. NADUBOVICH.** Opyt skorostnogo fotografirovaniĭa polĭarnykh siĭaniĭ. (Geomagnetizm i aèronomiĭa, 1962. v.2, no.6, p.1143-44.) 9 refs. Text in Russian. **Title tr.**: Experience in high-speed photography of auroras.

Explains that the effective aperture of the aurora camera S-180 is, at least, two times smaller than its geometric maximum aperture 1:1.5. This necessitates an exposure of 5-20 seconds, and during this period the movements in and of the aurora make its photographic image displaced, and lacking in detail. Use of a zenith camera Jupiter-3, with an aperture 1:1.5 and a higher light transmission coefficient (0.91) is proposed. Experimental photographs of auroras obtained with a Jupiter-3 at Tiksi, Feb.-Mar. 1962 with exposures of 0.3-5.0 sec. showed a better resolution and film density than those obtained with the S-180. A further step in shortening the exposure time suggested: by adapting electron-optical amplifiers to aurora cameras. (DLC.)

71175. **DZIUBENKO, V. I.**, *and* **IU. A. NADUBOVICH.** Rezul'taty odnovremennykh radiolokatsionnykh, fotograficheskikh i fotoèlektricheskikh nabliudeniĭ polĭarnykh siĭaniĭ. (Geomagnetizm i aèronomiĭa, 1961. t.1, no.4, p.620-22, graphs.) Text in Russian. **Title tr.**: Results of simultaneous radar, photographic, and photoelectric observations of auroras.

Presents diagrams of amplitude *versus* time variation of radio signals reflected by auroras. Simultaneous observations of radio-wave reflections from auroras were carried out at Tiksi in Feb.-March, 1960, by radar, electrophotometer, and moving-picture camera directed to the same point of the northern sky. It was found from the data analysis that: reflections appear only when the aurora has a considerable gradient of brightness; no reflections were observed from auroras brighter than 2; and the amplitude maximum has a time lag of 3-6 min. with respect to the maximum brightness of the aurora. (DLC.)

71176. **EAGAN, CHARLES J.** The effect of depth of immersion on the responses of the finger in ice water. Fort Wainwright, Alaska, Oct. 1961. 11 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical note 60-4.) 11 refs.

Reports experiments with fingers immersed to the levels of the first or second joint. In a shallowly immersed finger, there is less cold-induced vasoconstriction, a tendency toward an earlier reactive vasodilatation, and less intense pain sensation. (CaMAI.)

71177. **EAGAN, CHARLES J.** The origins of heat lost from extremities in ice water. Fort Wainwright, Alaska, April 1961. 12 p. illus. tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical note 60-13.) 9 refs.

Reports on heat losses, during ice-water calorimetry, from the human finger (for 30 min.) and the rabbit ear (for 5 min.). It is estimated that convection transfer accounts for 97.5% of heat loss in man, 90% in the rabbit. Nearly all the remainder is attributed to local heat debt. (CaMAI.)

71178. **EAGAN, CHARLES J.** Reactive error in the measurement of rectal temperature in the cold.

Fort Wainwright, Alaska, Mar. 1961. 11p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical note 59-20.) 10 refs.

Reports an assessment, indicating that the "reactive error" in measurement (defined by Burton, 1954, q.v.) may amount to 1°C., though usually its value is 0.3°C. A new term, "interactive error," is defined indicating an error caused by a general change in the animal's condition at the time of measurement (e.g. fear). (CaMAI.)

EAGAN, CHARLES J., *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

71179. EAKINS, P. R. Preliminary report on Natel Lake area Mistassini Territory and New Quebec. Quebec, 1961. 10 p. fold. map. (Quebec. Dept. of Natural Resources. Geological Surveys Branch. P.R. no. 454.) 2 refs.

Maps at scale 1 in.: 1 mi. and describes the stratigraphic and structural geology of the area 52°00′-15′N. 75°20′-76°W. along the Eastmain River as investigated in 1960. Precambrian rocks, overlain by Pleistocene and Recent deposits, include meta-sediments, metavolcanics ("greenstones"), acidic and basic intrusives rocks, gneissic quartz diorite, granitic rocks, and late basic dikes; each of the last four groups is separated by intrusive contacts. The area is structurally complex due to strong deformation and metamorphism of the rocks during at least two periods of folding and intrusion. Possibilities of finding gold and base metals are noted. (DGS.)

EALES, L., *see* Terblanche, J., *& others.* Renal function . . . hypothermia. 1961. No. 76103

71180. EARDLEY, ARMAND JOHN, 1901– History of geologic thought on the origin of the Arctic Basin. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.607-621, maps incl. fold. in v.3, diagrs., profile.) 13 refs.

Presents limited evidence indicating that the Arctic Basin is underlain by oceanic crust and the subsidence theory as to its origin, hardly tenable. Theory that the Lomonosov Ridge is a fold belt conflicts with theory that the adjacent basin on the European side is a rift belt, unless they are separated by appreciable time interval. Both the fold-belt and rift-belt concepts seem incompatible with the orocline (tectonic) version of continental drift. (DLC.)

71181. EARL, JAMES A. Balloon measurement of solar cosmic rays at Fort Churchill, Canada during July 1959. (Journal of geophysical research, Oct. 1961. v.66, no.10, p.3095-3102, table, graphs.) 6 refs.

Reports observations on July 11, 12, and 18, of solar cosmic ray intensities many times greater than those measured simultaneously at Minneapolis. During a small influx of radiation which occurred at 1730 UT, July 11, the excess Geiger counter rate at Ft. Churchill was 100 ± 25 times as great as the corresponding rate at Minneapolis. Measurements of the dependence of excess rate on atmospheric depth indicate that the energy spectrum of the rays did not change significantly over a period of ten days. — From author's abstract. (DLC.)

71182. EARL, PAUL W. New impetus in Quebec. (Western miner and oil review, Apr. 1961. v.34, no.4, p.65-70, illus.)

Reviews the mineral industry during 1960, and explains a change in development policy under the Natural Resources Act, with the Dept. of Hydraulic Resources and Dept. of Mines merged into a new Dept. of Natural Resources to coordinate intensive development planned. Northern Quebec, certain areas excepted, was reopened to prospecting and staking. Completion of the Quebec Cartier Co. $200 million iron ore project (illus.) in the Mt. Reed area is noted. (DI.)

EARLE, H. R. V., *see* Wilbraham, A.B. East coast . . . 1962. No. 76553

EARNEST, DON, *see* Alaskan Science Conference 1960. 1961. No. 69643

EASTMAN, F. G., *see* Mark, V.H., *& others.* Localized cooling . . . 1961. No. 71812

EATON, CYRUS, *see* National Northern Development Conference. 1961. No. 74224

71183. EBBESEN, HANS. The schools in Greenland are still bilingual. (Eskimo, June-Sept., Dec. 1961. v.59, p.8-11; v.60, p.11-19.) Also pub. in Danish in *Grønland,* Aug. 1961, nr.8, p.281-88, illus.

School inspector in northern Greenland discusses problems and policies of using both Greenlandic and Danish in teaching Greenlandic children. Under this bilingual system (described), the Greenlanders do not learn Danish adequately. Remedies are discussed, and exclusive use of Danish in the first two grades is advocated. Alaskan and Canadian methods, with Eskimo children taught exclusively in English are cited. Appended (p.15-19) are comments of G.M. Rousselière the Oblate with statement of missionaries' view favoring use of Eskimo in schools. (DI.)

71184. EBELING, FREDRIK HARALD, 1909– Vindens betydelse för skogens avverkning och föryngring i de norrländska höjdlägena; ett genmäle. (Norrlands skogsvårdsförbund. Tidskrift, 1961. nr.2, p.169-80, graphs.) Text in Swedish. **Title tr.:** The importance of wind to forest yield and regeneration in high elevations of Norrland; a reply.

Discusses climate-temperature (à propos paper by Anders Holmgren, q.v.) and presents graphically the unusually low temperature prevailing in 1955 in pine-plant plots at high elevation. Its adverse effect on vegetation, especially the pine plants is stressed, and this combined with the deep snow cover, late snow melting, short growing season, effect of insects and fungi on weakened trees, and wind, is considered responsible for the death of the pine plantings. (DA.)

71185. EBERLEIN, G. DONALD. Possible Alaskan sites for nuclear reaction experiment in limestone. (*In:* U.S. Geological Survey. Trace elements investigations report. 1961. no. TEI-780, p.34-45, map, 2 tables.) 5 refs. Mimeographed.

Reports on potential sites for an underground nuclear explosion in a thick sequence of high-calcium limestone, primary criteria being purity and thickness. Six areas: two each on the Seward Peninsula and in Southeast Alaska, one each near Fairbanks and in the Wrangell Mts. are appraised.

Field evaluation prior to serious consideration of any site is advised. (DGS.)

71186. EBERT, PAUL A., *and others.* Physiologic changes accompanying profound hypothermia. (Surgery, gynecology and obstetrics, Aug. 1961. v.113, no.2, p.138-42, illus.) 11 refs. *Other authors:* L.J. Greenfield, J.W. Gilbert *and* A.G. Morrow.

Reports on investigation of total systemic vascular resistance and of carotid, hepatic, splanchnic, renal and femoral blood flow in dogs cooled to 35° to 10°C. Results indicate that drop in total systemic vascular resistance during deep hypothermia is mainly due to a drop in flow resistance through the muscle masses. (DLC.)

71187. EBERT, PAUL A., *and others.* The relationship of blood pH during profound hypothermia to subsequent myocardial function. (Surgery, gynecology & obstetrics, Mar. 1962. v.114, no.3, p.357-62, illus., table.) 7 refs. *Other authors:* L.J. Greenfield, W.G. Austen *and* A.G. Morrow.

Reports experiments with dogs cooled to 12°-10°C. and made acidotic or alcalotic during cardiopulmonary bypass. Total body O_2-consumption was unaffected by change in the pH. Severe depression of ventricular function developed in the acidotic dogs, while definite protection of the heart was rendered by alcalosis. (DLC.)

EBERT, PAUL A., *see also* Greenfield, L.J., & *others.* Cardiac denervation . . . hypothermia . . . 1962. No. 71838

71188. EBNER, FRANCIS K. Moose horn recovery at Barker Lake. (North, Nov.-Dec. 1962. v.9, no.6, p.28-30, illus.)

Recounts procedures and difficulties of recovering from this lake near Yellowknife, Mackenzie District, the locked horns of two moose. While in combat in winter 1960 they had broken through the ice cover and drowned. The locked horns were deposited in the author's museum collection on the Northwest Territories, at Hay River. (CaMAI.)

ECHOLS, CAROL JUEDES, *see*

Alaskan Science Conference 1961. 1962. No. 69644

Davis, T.N., & C.J. Echols. . . . Alaskan earthquakes . . . 1962. No. 70909

ECKER, LAWRENCE, *see* Akademiia nauk SSSR. Soviet geog . . . 1962. No. 69535

ÉCOLE PRATIQUE DES HAUTES ETUDES, CENTRE DES ÉTUDES ARCTIQUES ET ANTARCTIQUES, *see Inter-Nord.* 1961– *in progress.* No. 72399

71189. EDDY, AMOS. A statistical model for the mid-latitude tropopause and jet stream layer. Montreal, May 1962. vi, 13 l. maps, graph, tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 50.) 7 refs. *Also issued as:* U.S. Air Force. Cambridge Research Laboratories, Contract no. AF 19 (604)-8431, Scientific report no.6; AFCRL 62-812.

Charts (of northern North America) of the tropopause and level of maximum wind for May 17, 1959 are derived from objective analyses of the 500, 300, 150 and 100 mb. height and wind fields. Regression equations based on 24-hr. changes are developed to permit reconstruction of the tropopause-jet stream layer, given the history and current 500 mb. data. This new "derived" layer is examined statistically with respect to its adequacy as a three-dimensional first-guess field for the current objective analyses for this layer, as well as a method for forecasting the layer from a barotropic 500-mb. prognostic chart. (CaMAI.)

ÉDEL'MAN, M. S., *see* Solîankin, E.V., & M.S. Édel'man. Nekotorye rezul'taty reisa . . . 1961. No. 75818

EDERSTROM, HELGE ELLIS, 1908– , *see* Larson, A.L., & H.E. Ederstrom. Blood glucose changes induced by cold . . . 1962. No. 73325

71190. EDHOLM, OTTO GUSTAF, 1909– Hypothermia and the effects of cold: introduction. (British medical bulletin, Jan. 1961. v.17, no.1, p.1-4.)

General review of modern research in hypothermia with emphasis on developments since 1950. Experimental, field and clinical "landmarks" are considered, with cold adaptation especially noted. (DNLM.)

71191. EDWARDS, ALLAN M., *and* **G. C. GRAY.** Observations on juvenile hypothyroidism in native races of northern Canada. (Canadian Medical Association. Journal, May 20, 1961. v.84, no.20, p.1116-24, illus., table.) 9 refs.

Account of extensive clinical and laboratory investigations of an Eskimo man aged 37, oldest of the cases, and three Indians, two of them girls, aged 8 and 11, from the far North. Unusual features and clinical aspects of this disorder are presented and illus. with numerous photographs; problems of therapy are discussed. (DNLM.)

EDWARDS, D. S., *see* Hammerschmid, L.J. Rearward communications BMEWS. 1961. No. 71977

71192. EDWARDS, H. W. The closed ice box of East Siberia. (U.S. Naval Institute. Proceedings, July 1961. v.87, no.7, p.54-58, illus., map.)

Discusses Soviet fortifications in the Okhotsk Sea region during the post-World War II period. Japanese fishermen are constantly harassed to restrict their use of the Sea, while Russian vessels frequently violate Japan's three-mile territorial limit. Soviet military forces in the area, serve as buffer for arctic bases and increase the threat to Japanese and American defenses in the Pacific and Alaskan area. (DLC.)

71193. EDWARDS, ROBERT L. The fishes of Richmond Gulf, Ungava, Canada. (American Philosophical Society. Proceedings, Apr. 21, 1961. v.105, no.2, p.196-205, maps, graphs, tables.) 6 refs.

Contains description of this gulf on the eastern side of Hudson Bay, approx. 56°20′N. 76°20′W., its hydrography and nature of bottom, followed by an annotated list of 17 forms of fish collected. Frequency, size, food and predators, economic value, etc. are considered. Three species are new to the Hudson Bay list. (DGS.)

71194. EDWARDS, T. H. Artists of the North. (Bank of Montreal, Staff magazine, Feb. 1959, p.2-4.).

Describes briefly the efforts of the Canadian Handicraft Guild since 1949, to foster Eskimo stone carving for the southern market. No attempt has been made to change the traditional art, though

the carvings are often done with steel tools. Ivory, steatite, serpentine, and granite are the mediums. Role of this work in maintaining economic independence of these Eskimos is stressed. (CaONA.)

71195. EFIMISHIN, N. S. Nekotorye pokazateli sostoianiia organizma pri primenenii gipotermii. (Vestnik khirurgii, 1961. t. 86, no. 3, p. 86-90, tables.) 26 refs. Text in Russian. Summary in English. **Title tr.:** Some indicators on the condition of the organism during hypothermia.

Account of observations on 115 patients operated under local anesthesia and mild neuroplegic hypothermia. Considerable hypotonia, tachycardia were accompanied by smooth and rare breathing. Blood sugar, bilirubin and residual nitrogen were also recorded in some of the patients. (DNLM.)

71196. EFIMOV, A. I. Nekotorye osobennosti ispol'zovaniia podzemnykh vod pri razlichnykh gidrogeologicheskikh usloviiakh v IUzhnoi i TSentral'noi IAkutii. (Akademiia nauk SSSR. Vostochno-Sibirskii filial, *Irkutsk.* Materialy po podzemnym vodam Vostochnoi Sibiri, 1957, p.172-76.) Text in Russian. **Title tr.:** Some features of ground water utilization under the different hydrogeologic conditions of southern and central Yakutia.

Discusses thickness of permafrost and ground water in the Aldan-Olekma mountain range, Lena-Vilyuy depression and other areas. Geomorphic, geologic and hydrologic conditions vary in these regions and permafrost does not necessarily increase in thickness with increasing latitude. Presence of not-frozen rocks depends upon such factors as depth of the base level of erosion, density of the river net, filtration properties of rocks, tectonic conditions. Possibilities of utilizing ground water from Quaternary, Mesozoic and Cambrian deposits are briefly characterized. (DLC.)

EFIMOV, R. I., *see* Kirsanov, A.I., & R.I. Efimov. Drobovoe burenie. . .1961. No. 72818

71197. EFIMOVA, A. F. List pal'my iz tretichnykh otlozhenii Penzhinskoi guby. (Paleontologicheskii zhurnal, 1961, no.4, p.170-71, illus.) Ref. Text in Russian. **Title tr.:** A palm leaf from the Tertiary of Penzhina Bay.

Describes a leaf fragment of a true palm tree, found in 1959 in late Eocene deposits on the Kamchatka side of this bay. The fragment is 91 mm. long, 81 mm. wide; three rays are recognized. Pollen of other plants (listed) was found as well. The warm climate of their time is noted. (DLC.)

EFIMOVA, Z. N., *see* Maramzin, A.V., & *others.* K voprosu o temperaturnom rezhime . . . 1961. No. 73979

71198. EFREMOV, IU. K. Zakon ob okhrane prirody Sovetskoi Rossii i uchastie shkoly v ego vypolnenii. (Geografiia v shkole, Jan.-Feb. 1961. god 24, no.1, p.2-7.) Text in Russian. **Title tr.:** The law for the Protection of Nature in Soviet Russia and participation of the schools in its implementation.

Outlines this conservation law of Oct. 27, 1960 for the RSFSR. The need for new regulation of renewable resources is illustrated from the fur industry, where an organization pays penalties for exceeding the catch limits while the organization chief receives an award for overfullfilment of the plan. Respect for the natural resources and understanding of the significance of their legal protection should be taught in the schools. (DLC.)

71199. EFREMOV, P. E. O fol'klore Niurbinskogo i Suntarskogo raionov; soobshchenie po materialam fol'klornoi poezdki 1960 goda. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskii filial. Nauchnye soobshcheniia, 1961. vyp.6, p.83-89.) Ref. Text in Russian. **Title tr.:** Folklore of the Nyurba and Suntar Districts; report based on data of the folkloristic trip in 1960.

Describes work of the Yakut Institute of Language, Literature and Linguistics in the Nyurba (upper Vilyuy) and Suntar River regions, also in the El'gyayskiy and Nyurbinskiy sovkhozes. The field parties mainly studied the use of traditional folklore subjects in current literature, the development of a new Soviet Yakut folk literature, and the collection of materials on the late Yakut writer, A.A. Ivanov-Kiundé. Several variants of the traditional Yakut epos *olonkho,* historical and genre tales, songs, etc. were recorded. Traditional folklore, important in the literature of the 1920-1930's, is now little known, and should be collected before completely forgotten. (DLC.)

EFREMOVA, S. V., *see* Ginzburg, I.V., & *others.* Kolichestvenno-mineral'nyi sostav . . . 1962. No. 71694

EFUNI, S. N., *see* Zhmur, V.A., & *others.* ÉÉG nabliudeniia . . . 1961. No. 76674

EGAN, WILLIAM A., *see* Alaska. Governor's message: appropriations for . . . 1962. 1961. No. 69624

71200. EGEDE, HANS POULSEN, 1686–1758. En skrivelse fra Hans Egede til Søetatens generalkommissariat. (Grønland, Mar. 1961, nr.3, p.115-18, illus.) Text in Danish. **Title tr.:** Letter from Hans Egede to the general commissariat of the navy.

Contains text of this Danish missionary's plea in 1731 for continued support of the Greenland colonies despite the decision after death of Frederik IV, to abandon the colonizing project. (CaMAI.)

71201. EGELAND, ALV, 1932– , *and others.* A study of the statistics of VHF oblique auroral reflections. (Annales de géophysique, Mar. 1962. t.18, fasc. 1, p.23-44, map, graphs, tables.) 28 refs. Summary in French. and in Russian. *Other authors:* J. Ortner *and* B. Hultqvist.

Presents results of a statistical analysis of diurnal and seasonal variations in auroral echo activity at 92.8 Mc./s, based on observations at the Kiruna Geophysical Observatory. Analysis was made also of duration and signal strength. Recording was carried out almost continuously from Oct. 1957 to May 1960. The transmitter at Kemi, the recorder at Kiruna, as well as methods of data reduction and analysis are described briefly. Principal results included: evidence of two daily maxima of auroral echoes, during 03-06 hrs. and 12-16 hrs. 15°E. meridian time; a marked maximum in frequency of occurrence for Sept. and Oct. 1958 and 1959; great variation in length of auroral reflection periods, most less than 10 min. duration; general weakness of strength of echoes; correlation between echo occurrence and magnetic activity, with no echoes recorded at Kiruna during the greatest geomagnetic disturbance. This absence of echoes may be attributed to a southward shift of the auroral zone, and/or to absorption of the 90 Mc./s waves by the strongly ionized layer which exists below

70 km. during polar cap absorption events. (DWB.)

EGELAND, ALV, 1932– , *see also* Ortner, J., & *others*. New sporadic layer . . . 1960. No. 74544

71202. EGEREV, KONSTANTIN EFIMOVICH. Élektricheskiĭ metod opredeleniĭa kasatel'nykh reaktsiĭ, raspredelennykh po bokovoĭ poverkhnosti vmorozhennoĭ v grunt nagruzhennoĭ svai. (Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Trudy 1958. t.14, p.10-39, illus., tables, graphs, diagrs.) 4 refs. Text in Russian. **Title tr.**: An electrical method of determining the tangential reactions at the lateral surface of a loaded pile frozen into the ground.

Presents a formula for calculating the tangential reaction from measured stresses in the pile surface, and reports results of laboratory and field studies in Moscow and Yakutsk on piles under tension and compression. Measurements were made with resistors attached at various intervals along the inner walls of tubular Duralumin piles, one resistor being mounted for control in the part of the pile above (frozen) ground. The mean tangential stress obtained for the upper five-cm. section of the piles was 9.15 kg./sq. cm. in ground of 46% moisture content and -3.3°C. temperature, at a loading rate of 8.65 kg./sq. cm./hr. during 23 hrs. —From CRREL. (DLC.)

71203. EGEREV, KONSTANTIN EFIMOVICH. O silakh smerzaniĭa grunta s fundamentom. *(In:* Materialy po laboratornym issledovaniĭam merzlykh gruntov, 1961. sbornik 4, p.156-65, illus., tables, graph., diagrs.) 11 refs. Text in Russian. **Title tr.**: Adfreezing strength of ground to foundations.

Reviews results (unsatisfactory) of laboratory research on this problem and describes briefly a new method introduced by author in 1958 (reported *supra*). This (electrical) method uses data obtained on loaded piles under actual field conditions, specifically at Yakutsk. (DLC.)

71204. EGGVIN, JENS. Some results of the Norwegian hydrographical investigations in the Norwegian Sea during the IGY. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v.149, Contributions to Special IGY Meeting 1959, p.212-18, illus., maps.)

Reports on the autumn 1958 cruise. Temperature and salinity were recorded at standard levels surface to bottom in the Norwegian and Greenland Sea, and are mapped in horizontal and vertical distribution. Water masses, their distribution and movements, O_2-distribution and currents are also discussed. (DI.)

71205. EGIAZAROV, B. KH. Verkhneproterozoĭskie magmaticheskie formatsii Severnoĭ Zemli. *(In:* Akademiĭa nauk SSSR. Otdelenie geologo-geograficheskikh nauk. Petrografiĭa Vostochnoĭ Sibiri, t.1, 1962, p.720-34, tables.) 8 refs. Text in Russian. **Title tr.**: Upper Proterozoic magmatic formations of Severnaya Zemlya.

Distinguishes two formations: basic rocks and acid rocks. The former consist of metamorphosed, quartz, and amygdaloidal diabases. The acid formation consists of metamorphosed effusives and granites and granodiorite-porphyry. The petrography of these formations is summarized. (DLC.)

71206. EGOROV, L. S., *and* S. M. PROKHOROVA. Preuvaritel'nye itogi polevykh tematicheskikh rabot v Maĭmecha-Kotuĭskoĭ flogopitonosnoĭ provintsii. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ sbornik, 1962. vyp.27, p.30-39, table.) 2 refs. Text in Russian. **Title tr.**: Preliminary results of field work in the Maymecha-Kotuy phlogopite-bearing province.

Reports 1961 field study of the Gulya, Bor-Uryakh and Magan phlogopite intrusions, located in the Maymecha-Kotuy River basins. Its purpose was a petrographic investigation of intrusive and metasomatic formations, and determination of the composition and types of phlogopite deposits. On the origin and classification of the latter, new data were obtained: four types of these deposits are distinguished and described and suggestions are made where further studies should be concentrated. (DGS.)

EGOROV, L. S., *see also*

Butakova, E.L., & L.S. Egorov. Maĭmecha-Kotuĭskiĭ kompleks . . . 1962. No. 70482

Leningrad. N.-i. Institut geologii Arktiki. Gulinskaĭa intruziĭa . . . 1961. No. 73413

71207. EGOROV, N. E. Obuchenie zverovodstvu v shkolakh IAkutii. (Shkola i proizvodstvo, Aug. 1962. god 6, no.8, p.18-21.) Text in Russian. **Title tr.**: Training for fur farming in Yakut schools.

Describes elective courses in fox- and mink-raising, recently introduced for ninth (next to last)-grade students. The different kinds of experiment and training stations affiliated with the schools or the state and collective farms are noted, their organization and operation sketched. The practical work and study courses are outlined. Animals best suited to the various regions of Yakutia are indicated: polar fox for the tundra zone, silver fox for the forest tundra and taiga, etc. Mink raising is suggested for kolkhozes and sovkhozes of the Kolyma and Vilyuy River districts. (DLC.)

71208. EGOROV, O. V., *and others.* K metodike opredeleniĭa vozrasta zaĭtsa-beliaka *Lepus timidus gichiganus.* (Akademiĭa nauk SSSR. IAkutskiĭ filial. Doklady 1957. v.8, p.124-34, illus., tables.) Text in Russian. *Other authors:* M.V. Popov *and* IU. V. Labutin. **Title tr.**: Method of age determination of the white hare *Lepus timidus gichiganus.*

Outlines a way of establishing the age till the 12th month of life. It is based on changes in the degree of fusion between epiphyses and diaphyses of some bones. Earlier methods are stated to enable age determination to an age of 3-4 months only. (DLC.)

71209. EGOROV, O. V. Nekotorye itogi izucheniĭa belki v IAkutii. (Akademiĭa nauk SSSR. IAkutskiĭ filial. Doklady 1957. v.8, p.92-106, table.) 5 refs. Text in Russian. **Title tr.**: Some attempts to study the squirrel in Yakutia.

Reports on field work conducted during 1953-55 (except in mid-winter) chiefly in the southern part of the republic. The four ecological zones, their nature and vegetation, and the food available to squirrels are described. Food and population dynamics, seasonal changes in the diet, reproduction and fertility, migrations, estimated numerical distribution, prospects of exploitation, etc. are considered. (DLC.)

71210. **EGOROV, O. V.,** *and* **V. I. PERFIL'EV.** Nekotorye osobennosti pitaniĭa filina v basseĭne r. Peleduĭa, ĭu.-z. ĬAkutiĭa. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. ĬAkutskiĭ filial. Nauchnye soobshcheniĭa, 1959. vyp.2, p.57-61, tables.) Text in Russian. **Title tr.:** Some characteristics of diet of the eagle-owl in the Peleduy River basin of southwestern Yakutia.

Authors discuss the variability in the diet of this bird as seen in the different areas of Yakutia, and the food composition of specimens found on the middle reaches of the Peleduy River as estimated from bone remnants. Some 18 mammals, 18 birds and (undetermined) fish, are listed, as food components with frequencies and percentage of total, noted. The high proportion of fish remnant is discussed. (DLC.)

EGOROVA, L.N., *see* Polenova, E.N., & *others.* Sopostavlenie . . . 1962. No. 74851

EGOROVA, M.V., *see* Il'inskiĭ, O.K., & M.V. Egorova. TSiklonicheskaĭa deĭatel'nost . . . 1962. No. 72347

EGOROVA, N.A., *see* Vtorushin, A.V., & *others.* O khrome . . . 1961. No. 76453

71211. **EGOROVA, T. V.,** *and others.* Prichiny kolebaniĭ chislennosti krasnoĭ r. Ozernoĭ. (Voprosy ikhtiologii, 1961. t.1, vyp.3 (20), p.439-47, illus., tables.) 4 refs. Text in Russian. *Other authors:* F.V. Krogius. I.I. Kurenkov, *and* R.S. Semko. **Title tr.:** Causes of fluctuation in numbers of *Oncorhynchus nerka* in the Ozernaya River. Translated into English by O.A. Mathisen.

Describes briefly this Kamchatkan river, earlier studies, and methods used in the present one. Date are presented for the period 1935-1959 on age, size and weight composition of the spawning population of sockeye salmon; year classes of the stock, percentage of spawners, loss from catches (Russian and Japanese), and rate of survival. Japanese catches in the sea are considered responsible for the decline in spawning stock. Discussed, especially effects of Japanese fishing, in *Pacific fisherman,* Mar. 1962, v.60, no.4, p.35. (DLC.)

EHMERT, A., *see* Pfotzer, G., & *others.* . . . X-ray bursts in the auroral zone. 1962. No. 74771

71212. **EHRENBERG, CARIN EKLUNDH** Tillväxt och grenutveckling hos tallavkommor. (Skogen, Jan. 6, 1961, årg. 48, nr. 1, p.6-8, illus., table, graph.) Meddelande från Statens skogsforskningsinstitut. Text in Swedish. **Title tr.:** Growth and branch development in pine offspring.

Notes the role of inheritance versus environment of utmost importance in tree-breeding research. In selection of parent trees, only phenotype is considered, consideration of genotype has not been possible. Work by the State Forest Research Institute in 1957-1960 is reported on offspring of various combinations of plus and minus trees. Branch angle proved to be an inherited characteristic, relatively little affected by environment. Absolute length of branches increased with increasing plant height but the relative length (i.e. branch length/height) tended to decrease more in plus than in minus offspring. Height increment was greater in plus x plus than in minux x minus combinations but was variable and considerably affected by environment. (DA.)

71213. **EHRLICH, W. A.,** *and others.* Soil survey of a cross-section through the upper Nelson River basin along the Hudson Bay railway in northern Manitoba. Winnipeg, Manitoba, 1959. 48p. illus., tables, maps incl. 1 fold. (Manitoba. Dept. of Agriculture and Conservation. Soils report no.10.) *Other authors:* L.E. Pratt, J.A. Barr, *and* F.P. Leclaire.

Reports a summer 1957 survey, a joint project by the federal and provincial Depts. of Agriculture, provincial Dept. of Mines and Natural Resources' Land Branch, and the University of Manitoba Dept. of Soils. Approx. 275,000 acres were covered by the survey proper and 285,000 additional acres by air-photo interpretation. The surveyed portion lies diagonally across the clay area approx. 53°51′-56°N. in the upper Nelson basin. The upland soils consist mainly of solozenetic grey wooded soils developed on lacustrine clay. Other well to imperfectly drained soils occupy very small areas: orthic grey wooded soils on lacustrine clay and silt deposits, and podsol soils on lacustrine sand deposits. The swamp areas consist of bog and half-bog soils, with the deeper peat deposits predominant. A soil distribution map at 1:100,000 scale is included. Estimated suitability for agricultural use is shown (table). Frost hazards, low arable acreage, and low natural fertility are the limiting factors. Coarse grains, forage crops, and some vegetables have be grown successfully on the Wabowden Experimental substation at approx. 54°55′N. (CaOGB.)

EIDENFADEN, GUNNAR, 1908– , *see* Denmark. Greenland. 1961. No. 70974

71214. **EIDHEIM, HARALD.** Samane, nokre aktuelle problem. (Sameliv 1959-1960, *pub.* 1961, p.34-47.) Text in Norwegian. **Title tr.:** The Lapps, some topical problems.

Discusses troublesome aspects of the integration of Lapps into Norwegian society. Their economic status is below the local average, mainly due to the sharp increase in population (100% in central Finnmark since 1920) without any corresponding expansion in industry and trade; lack of emigration is also a factor. The Lapps have a feeling of inferiority, mainly because of the language barrier. Further, the Norwegians are taught little in school about the history and culture of the Lapps. (SPRI.)

71215. **EIDMANN, HUBERTUS.** Über die Entwicklung von *Evetria resinella* L. (Entomologisk tidskrift, 1961. årg. 82, häfte 1-2, p.60-63, 3 illus.) 12 refs. Text in German. **Title tr.:** On the development of *Evetria resinella* L.

Discusses distribution and nature of this pine-twig moth, responsible for the pine gall common to Europe. It is found in northern Russia and approx. to the Arctic Circle in Sweden. In the northern part of its range in Sweden, *E. resinella* requires three years for the life cycle. (DLC.)

71216. **EIDNES, ASBJØRN.** Skolen og kulturlivet i Nord-Norge. Tromsø, 1960. 22p. illus., tables. (Ottar, Sept. 1960. nr. 25; 1960: nr.3.) Text in Norwegian. **Title tr.:** Schools and cultural life in north Norway.

Surveys the organization of education. The number of one- or two-grade primary schools has been reduced by centralization, but it is still above the national average, particularly in Troms; in Finnmark, the long distances have made boarding schools necessary. Development of continuation schools has been slow in north Norway because of lack of specialized teachers and premises. Three of the country's 72 folk high schools are in the North, which has 47 secondary schools (29 in Nordland), several vocational schools, three teacher-training colleges, but no university. The increasing number of pupils and the shortage of schools and teachers are major problems, as is the position of Lappish. Cultural and research institutions, museums, etc. are also surveyed. (DI.)

71217. EILBERT, LEO R. Indoctrination procedures for personnel assigned to arctic sites. Fort Wainwright, Alaska, Apr. 1961. 97p. tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60–12.) 20 refs.

A study aiming "to develop an indoctrination course designed to prepare Air Force enlisted personnel for assignment to remote AC and W sites in Alaska." The developed course consists of a thorough briefing on local conditions, especially concerning working, living and recreational conditions, safety and climate. Slides with actual scenes of the sites are of considerable aid. An evaluation of the course showed that the men attending it had a more positive attitude towards the site of assignment immediately after the course, but not six months later. (CaMAI.)

71218. EINARSSON, HERMANN. The fry of *Sebastes* in Icelandic waters and adjacent seas. (International Council for the Exploration of the Sea. Rapports et procès verbaux des réunions 1961. v.150, ICES/ICNAF Redfish Symposium, p.199-200.)

Summarizes study of material (*S. marinus* and *S. viviparus*) collected during 1903-1939 and 1948-1952 in Icelandic waters and the Irminger Sea. Horizontal and vertical distribution, size analysis, extrusion of young, food, etc. are recorded. (DI.)

EINARSSON, HERMANN, *see also*
Alekseev, A.P., & *others*. International investigations . . . 1961. No. 69692
Devold, F., & *others*. International herring investigations . . . 1961. No. 70994

EINAUDI, MARCO T., *see* Cassin, R. South face Mt. McKinley. 1962. No. 70625

EISEMAN, B., *see* Malette, W.G., & *others*. Hypercapnia . . . 1961. No. 73764

EITZMAN, D. D., *see*
MacCanon, D.M., & D.D. Eitzman. O_2-inhalation & responses cold. 1961. No. 73674
MacCanon, D.M., & *others*. Effect of oxygen inhalation . . . 1962. No. 73673

71219. EKERN, A. Kraftfôrblandinger med og uten sildemjøl til mjølkedyr. (Norden, Dec. 1, 1960. årg. 64, nr.23, p.663.) Text in Norwegian. **Title tr.:** Mixed-meal cake with and without herring meal for milch cows.

Reports experiments of the Norwegian Agricultural College 1956-1959: the herring component raises the nutrient value of the meal cake, and ensures sufficient protein in the cattle feed. (DA.)

71220. EKIMOVA, I. V. Materialy po parazitofaune ryb r. Pechory. (Voprosy ikhtiologii, 1962. t.2, vyp.3 (24), p.542-48, tables.) 11 refs. Text in Russian. **Title tr.:** Materials on the parasite fauna of fishes of the Pechora River.

Reports on examinations of 200 specimens belonging to 16 common species of the lower Pechora. Some 65 species of parasites were found, 35 of them for the first time in fish of this river. Records include: taxonomic aspects of parasites, hosts, location of invasion, zoogeographic information, etc. (DLC.)

EKLUND, CARL ROBERT, 1909-1962, *see*
Alaskan Science Conference 1961. 1962. No. 69644.
Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

EKMAN, L., *see* Andersson, B., & *others*. Activation of the thyroid . . . 1962. No. 69768

71221. EKMAN, S.R. Thermal drilling in Isfallsglaciären, Kebnekajse. (Geografiska annaler, 1961. v. 43, no. 3-4, p. 422, diagr.) Ref.

Describes a thermo-borer used on this glacier in March 1961, preparatory to digging a tunnel in Feb. 1962. Each of a number of drillings stopped 50-60 cm. short of the glacier bed, because of till content. The thermo-borer diameter was 50 mm., the hole diameter became 55-60 mm. Mean ice temperature was -4°C. (DWB.)

EKOOMIAK, SARAH, *see* Singittuk, W., & *others*. Letters. 1961. No. 75671

71222. EKSTRÖM, AUGUST. Litet prat om potatis. (Västerbotten, Mar. 1961. årg. 34, nr. 2, p. 54-56, illus.) Text in Swedish. **Title tr.:** Remarks on potatoes.

Notes the Bentje and King Edward replacing other varieties in Västerbotten by 1961. The potato-growing area should not be expanded until the Västerbotten potato is established on the national market. There are too many small (unprofitable) potato farms, too few large units. The chief problems are storage and sorting machines; cooperative facilities are recommended. (DA.)

71223. ELAGIN, I.N. Lesnye kul'tury na Kamchatke. (Lesnoe khoziaĭstvo, July 1961. god 14, no. 7, p. 30-33, illus., table.) Text in Russian. **Title tr.:** Silviculture in Kamchatka.

Reports results from ten years' cultivation of imported and local species. Experiments with the imported trees failed, except with pine which grows satisfactorily in the Kamchatka valley. Local species are more promising: stony birch *(Betula ermani)* in the south and dwarf pine *(Pinus pumila)* in the north. (DLC.)

71224. ELAGIN, I.N. Sezonnoe razvitie kamennoberezniakov Kamchatki. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1962, no. 7, p. 94-102, diagr., tables.) 7 refs. Text in Russian. **Title tr.:** Seasonal development of birch forests in Kamchatka.

Reports 1959-1960 phenological observations of *Betula ermani* at 560 m. and 920 m. elevation on

the slopes of the extinct Ploskiy Volcano near Kozyrevsk (56°N. 160°E.) in northern Kamchatka. The seasonal phenomena of growth: budding, bud opening, leaf formation, summer vegetation, formation of terminal buds, autumnal coloring, seeding, and shedding, are presented and compared with similar phenomena of other trees and plants. The economic value of *Betula ermani*, 30% of the Kamchatka forests, is stressed. Data on soils and weather conditions in the studied area are included. (DLC.)

71225. **ELAGIN, I.N.** V kamennobereznikakh Kamchatki. (Priroda, Jan. 1961. god 50, no. 1, p. 106-107, illus.) Text in Russian. **Title tr.:** In the birch woods of Kamchatka.

Describes the relict form *Betula ermani* Cham., its wood, distribution in Kamchatka, seasonal development and growth. The undergrowth of these forests and its main elements are also briefly treated. (DLC.)

71226. **ELCHIBEGOFF, IVAN M.** USSR international timber trade. (Journal of forestry, Oct. 1961. v. 59, no. 10, p. 753-60, tables.) 7 refs.

Discusses the timber resources, their accessibility for export, and significance as a source of foreign exchange for the USSR. Reserves, potentialities, planned developments, transportation and shipping facilities of six timber bases are described. Included are Karelian ASSR, Arkhangel'sk Province (with two billion cu. m. estimated reserves), Komi ASSR (2.5 billion cu. m.), Krasnoyarskiy Kray (14.5 billion cu. m.), and the Soviet Far East (11.6 billion cu. m.). Proposed timber export ports near the Pechora River mouth in Komi and the Ob in Tyumen are noted, also plans to expand the port of Igarka in Krasnoyarskiy Kray. Timber exports, tabulated for 1922-1959, may reach an annual value of 3½ - 4½ million dollars by 1965. (DI.)

ELDORADO AVIATION LTD., *see* Eldorado Mining & Refining Ltd. Annual report . . . 1962. No. 71227

71227. **ELDORADO MINING AND REFINING LTD.** Annual report Eldorado Mining and Refining Ltd. and subsidiaries, Eldorado Aviation Ltd., Northern Transportation Co. Ltd. Ottawa? 1962. 21 p.

Reports its 1961 uranium production, all from the Beaverlodge mine on Lake Athabasca, Saskatchewan; the Port Radium Mine on Great Bear Lake in Mackenzie District ceased operations in 1960. History of each company is reviewed, its operations and finances stated. The uranium refinery at Port Hope, Ontario is described. (CaONA.)

71228. **ELDRIDGE, V.W.** "No sweat" in the Arctic. (Roundel, Apr. 1961. v. 13, no. 3, p. 9-11, illus.)

Describes routine weekly service flight by a Royal Canadian Air Force C119 from Trenton in southern Ontario via Winnipeg, Churchill, Resolute Bay, and Thule to Alert on northern Ellesmere. Peculiar radio reception, unpredictable weather conditions, and other features of arctic flying have little effect on the routine. (DN-HO.)

71229. **EL'ÎANOV, A.A.**, *and* **V.M. MORALEV.** Novye dannye o vozraste ul'traosnovnykh i shchelochnykh porod Aldanskogo shchita. (Akademiîa nauk SSSR. Doklady, Nov. 21, 1961. t. 141, no. 3, p. 687-89, table, diagr.) 9 refs. Text in Russian. **Title tr.:** New data on the age of ultrabasic and alkaline rocks of the Aldan shield.

Reports a study of the ultrabasic and basic rocks of the Ingili (58°25′N. 134°41′E.) massif; they gave some evidence of being Precambrian, and absolute age determinations by potassium-argon and other methods confirmed it: the Aldan shield and its old Precambrian rocks have an age of 650 ± 50 million years. (DLC.)

71230. **ÊL'ÎANOV, M.D.** Chetvertichnye otlozheniîa i rossypi zolota verkhov'ev Kolymy i Indigirki. (Sovetskaîa geologiîa, Feb. 1961, no. 2, p. 133-44, section.) 24 refs. Text in Russian. Summary in English. **Title tr.:** Quaternary deposits and gold placers on the upper Kolyma and Indigirka.

Outlines the stratigraphy and genetic types of the area. Lower, middle, upper, and recent Quaternary deposits are identified and described, alluvial, deluvial, glacial, and other types reported. Gold placers, connected mostly with alluvial deposits, are found on the river valley terraces, usually at 1000-1800 m. elevation. Most placers of the Kolyma - Indigirka area are Quaternary in age. Mode of occurrence, types, and other features are discussed; prospecting methods briefly mentioned. (DLC.)

71231. **ELIASSEN, EINAR.** Changes of blood volume in the pre-hibernating and deep-hibernating hedgehog. (Nature, Dec. 16, 1961. v. 192, no. 4807, p. 1047-49, illus.) 4 refs.

Reports a study designed to elucidate the considerable drop in blood volume, from 8% of the animals' weight at normothermia to 2-3% at 5° C. body temperature in the "winter animals." Blood and urine analyses, and spleen weight made during different stages of hibernation and in the awake state indicate that "the blood volume is decreased mainly by way of red cell destruction and ensuing plasma excretion." (DLC.)

71232. **ELIASSEN, EINAR,** *and* **H. LEIVESTAD.** Sodium and potassium content in the muscles of hibernating animals. (Nature, Nov. 4, 1961. v. 192, no. 4801, p. 459-60, illus.) 6 refs.

Reports a "surprisingly high" N-content found in the muscles of two hibernating mammals, as compared with that of non-hibernators. It remained fairly constant over the year despite great fluctuations in body temperature. An increase in muscle K in the first part of the hypothermic period, preceded, and linked with, a marked hemolysis. (DLC.)

ELINA, N.A., *see* Denisov, A.P., *& others*. O zavisimosti fizicheskikh svoĭstv apatita . . . 1961. No. 70959

71233. **ELISEEV, A.I.** K voprosu o proiskhozhdenii izvestniākovykh brekchiĭ karbona grīady Chernysheva. (Akademiîa nauk SSSR. Doklady, May 11, 1959. t. 126, no. 2, p. 351-54.) 8 refs. Text in Russian. **Title tr.:** On the origin of Carboniferous limestone breccias in the Chernysheva Ridge.

Describes limestone breccias in the Vangyr River basin and other areas of the Pechora Ural.

Their age and origin are still in dispute, and information is presented in support of a sedimentary origin. They are considered products of the outwash of sea waves and currents. Further studies are urged. (DLC.)

71234. ELISEEV, A.I. Litologiia famenskikh i nizhneturneĭskikh otlozheniĭ reki Vangyra; iūzhnaia chast' griady Chernysheva. (*In:* Akademiia nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p. 127-55, illus., cross-section.) 23 refs. Text in Russian. **Title tr.**: Lithology of the Famennian and lower Tournaisian deposits of the Vangyr River, southern part of the Chernysheva Ridge.

Describes a cross-section of these deposits, noting five rhythms of their sedimentation. Limestone: breccias, conglomerates, gritstones, sandstones and other rocks, are described. Processes of diagenesis such as formation of pyrite, migration of $CaCO_3$, dolomitization of limestones, etc. are characterized. Rhythmicity of the sedimentary process is considered the most characteristic feature. (DLC.)

71235. ELISEEV, A.I., *and* **Z.P. MIKHAĬLOVA.** Novye dannye o verkhnem karbone griady Chernysheva. (Akademiia nauk SSSR. Doklady, July 21, 1962. t. 145, no. 3, p. 631-34.) 9 refs. Text in Russian. **Title tr.**: Recent data on the upper Carboniferous of the Chernysheva Ridge.

Reports a study in the Shar-yu and Zaostrennaya River basins. Sections of these deposits were analyzed, and the fauna, lithologic characteristics and other features are outlined. Seven layers are distinguished, their fauna, foraminifers, brachiopods, corals, and bryozoans, identified. (DLC.)

ELISEEV, ĖRIK NIKOLAEVICH, *see* Eliseev, N.A., & *others*. Ul'traosnovnye i osnovnye intruzii Pechengi . . . 1961. No. 71238

71236. ELISEEV, I.V. Severoural'skie boksitovye rudniki. (Gornyĭ zhurnal, Oct. 1961, no. 10, p. 14-15.) Text in Russian. **Title tr.**: The Northern Ural bauxite mines.

Notes the socialistic competition and increase in labor efficiency in these mines, of which author is director; the more successful teams are cited; production, it is stressed, exceeds the plan. (DLC.)

71237. ELISEEV, L. U Divnykh gor. (*In:* Mariagin, G.A. Goroda, kotorykh nebylo na karte, 1960. p. 75-111.) Text in Russian. **Title tr.**: In the Divnyye Mts.

Outlines the natural resources of Krasnoyarsk Province, and the new towns up the Yenisey, from Dikson (p. 81-84), Dudinka, Noril'sk (p. 88-97), to Divnogorsk (55°58′N. 92°22′E.) recently settled by construction workers on the Yeniseysk hydroelectric station, and Zheleznogorsk at the big Korshunovsk mine. (DLC.)

71238. ELISEEV, NIKOLAĬ ALEKSANDROVICH, 1897- , *and others*. Ul'traosnovnye i osnovnye intruzii Pechengi; geologiia i struktura, petrografiia, mineraly i rudy, geokhimiia nikelia. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 357 p. illus., tables, maps & diagrs. incl. fold. (Akademiia nauk SSSR. Laboratoriia geologii dokembriia. Trudy, vyp. 10.) Approx. 280 refs. Text in Russian. *Other authors:* G.I. Gorbunov, Ė.N. Eliseev, V.A. Maslenikov, *and* K.N. Utkin. **Title tr.**: The ultrabasic and basic intrusions of Pechenga; geology and structure, petrography, minerals and ores, geochemistry of the nickel.

Monograph embodying results of several years' study of more than 110 differentiated intrusive bodies intruded into sedimentary, tuffaceous and volcanic strata. These intrusions and enclosing rocks were altered by auto-, contact-, and hydrothermal metamorphism. Mineralogic investigation of sulfite copper-nickel ores and minerals is fully treated. The structure and texture of the ores are described in detail. X-ray analyses are given for pyrrhotite, pentlandite, chalcopyrite and other minerals. New data are reported on the geochemistry of the nickel, already in commercial production. Genesis of copper-nickel mineralization is discussed. (DLC.)

ELISEEVA, O.P., *see* Ginzburg, I.V., & *others*. Kolichestvenno-mineral'nyĭ sostav . . . 1962. No. 71694

71239. ELIZAROV, A.A. O mezhgodovykh kolebaniiakh intensivnosti Labradorskogo i Zapadno-Grenlandskogo techeniĭ o vozmozhnosti prognoza temperaturnykh usolviĭ v promyslovykh raionakh severo-zapada Atlanticheskogo okeana. (Okeanologiia, 1962. t. 2, vyp. 5, p. 796-809, tables, graphs, map.) 16 refs. Text in Russian. **Title tr.**: On the year-to-year fluctuations in intensity of the Labrador and West Greenland Currents and on possibility of temperature prognosis in the commercial areas of the northwest Atlantic Ocean.

Analyzes standard sections across both currents for which most data are available from the International Ice Observation and Ice Patrol Service and the Murmansk Prospects Survey for 1936-1941, 1948-1959 and 1961. Average temperatures of the 0-200 m. layer are calculated for April 15, May 15, June 15, and for some sections also July 15; and their year-to-year fluctuations are characterized. Temperature fluctuations of the Newfoundland-Labrador-Greenland area waters are compared with the Norwegian and Barents Sea temperatures and a direct relation is established, which has prognostic value. Negative temperature anomalies in the Labrador Current area correspond to positive temperature anomalies in the Nordkapp and Murman Current areas. Interrelation exists also in regard to the intensity of these currents. Prognosis of temperature conditions in the Newfoundland and Labrador region and of ice drift south of 48°N. is outlined. (DLC.)

71240. ELIZAROV, A.A. Obrazovanie skopleniĭ treski v Severo-Tsentral'nom raione Barentseva moria pod vliianiem gidrologicheskikh usloviĭ. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten', 1959. no. 2 (10), p. 25-28, illus., tables, map.) Text in Russian. **Title tr.**: Formation of cod schools in the north-central Barents Sea under the influence of hydrologic conditions.

Reviews the temperature conditions, as

studied intermittently since 1937 along two profiles, followed by outline of cod fisheries in this area during fall-winter, and summer periods. A connection between water temperature (also salinity) and cod population density is established, enabling a prediction of fishing success from hydrographic conditions. (DLC.)

71241. ELLIOTT, LAWRENCE. Alaska's marvelous monster, the king crab. (Reader's digest, May 1962. p. 224, +, col. illus.) Condensed from the *Anchorage times*, Mar. 24, 1962.

Describes the characteristics and habits of these crustaceans, and the development of a frozen king crab industry in Alaska since 1939. Lowell Wakefield of Kodiak Island who pioneered the industry, also initiated winter crabbing to provide Alaska's first year-round fishery. Production in 1961 totalled nearly six million lbs. Alaskan conservation measures, including regulatory agreements with the Japanese, are jeopardized by Russian competition in Bering Sea. (DLC.)

71242. ELLIS, B.G. British Schools Exploring Society expedition to arctic Scandinavia. (Weather, *London*, Mar. 1962. v. 17, no. 3, p. 80-87, illus., map, tables.)

Describes establishment of two field weather stations near the Sulitjelma glacier in northern Sweden Aug. 8-Sept. 2, 1961. Continuous records of temperature, relative humidity, solar radiation, etc. were made, to give the expedition personnel field experience and to record local climatic data. (DWB.)

71243. ELLIS, B.M. Engineers faced formidable challenge in installing Thompson water service. (Northern miner, Apr. 19, 1962. v. 48, no. 4, p. 18, illus., port.)

Outlines problems, and methods used by Underwood, McLellan & Associates Ltd., installing water pipes in the sporadic permafrost at Thompson, Man. for the International Nickel Co. of Canada. Cast iron mains were placed about nine ft. deep; an adaptable loop system, also heated pipes were used to prevent freezing. Some pipes have broken, underground services and foundations have settled, because of melting permafrost. (DGS.)

71244. ELLIS, B.M. A water distribution system for the town of Thompson in northern Manitoba creates engineering problems when permafrost is encountered. (Canadian municipal utilities, Apr. 1962. v. 100, no. 4, p. 28-30, illus.)

Discusses in detail the design and installation of this system. Engineering problems, mainly connected with permafrost, entailed a heated recirculating system under loop-shaped streets. Pipes to houses are insulated and can be heated when not in use. Permafrost patches melt however, causing some foundations to settle and pipes to break. (CaONA.)

71245. ELLIS, DEREK V., *and* **R.T. WILCE.** Arctic and subarctic examples of intertidal zonation. (Arctic, Dec. 1961. v. 14, no. 4, p. 224-35, illus., map, diagr.) 16 refs.

Analysis based on extensive observations of shores on Baffin Island, at Coppermine, and other localities on the north mainland coast and arctic islands of Canada. Populations on rocky shores were found to exist only where shore ice was thinner than the tidal amplitude; in the Arctic proper, they are rare and limited to low levels as exemplified from Coronation Gulf - Boothia Peninsula, Admiralty Inlet, etc. In the sub-Arctic they have a mid-littoral zone dominated by *Balanus balanoides* and fucoids, bordered by infralittoral and supralittoral fringes. Sedimentary shores in the subarctic localities showed dense populations only near low-water level; in the Arctic they are almost barren. (DI.)

71246. ELLIS, DEREK V. Observations on the distribution and ecology of some arctic fish. (Arctic, Sept. 1962. v. 15, no. 3, p. 179-89, map, diagr.) 19 refs.

Reports on work during 1953-1955, mostly in the Coppermine River and delta of Mackenzie District, but extending east to Frobisher Bay, Baffin Island. The 27 species collected and two others observed are listed with notes on their distribution, ecology, and on the taxonomy when specific identification is uncertain. The number of specimens collected, dates, localities, and habitat are cited for each species. Methods are stated. (DI.)

ELLISON, L.T., *see* Ellison, R.G., & *others*. Metabolic alterations . . . 1961. No. 71248

71247. ELLISON, ROBERT G., *and others*. Further studies on myocardial metabolism during elective cardiac arrest and hypothermia. (Surgical forum, 1960. v. 11, p. 198-200.) 10 refs. *Other authors:* S.A. Singal, W.H. Moretz, E.L. Brackney, W.H. Butler, W.C. Maloy, J.H. Rossi, *and* D.P. Hall.

Account on three sets of experiments with general hypothermia of 20°C. and hypoxic arrest of ½ to 4½ hr. Myocardial and liver biopsy was made at intervals, and the material analyzed for glycogen, lactic acid, adenosine triphosphate and phosphocreatine. Glucose content, and effects of its administration, were also studied (DNLM.)

71248. ELLISON, ROBERT G., *and others*. Metabolic alterations of individual organs during cardio-pulmonary bypass and profound hypothermia. (Surgical forum 1961. v. 12, p. 175-77.) 2 refs. *Other authors:* L.T. Ellison, E.L. Brackney *and* T.Y. Yeh.

Reports on dogs cooled by various methods, mostly below 10° C. Results indicate that organs cool at different rates, according to the abundance of blood supply. Differences amounted to as much as 15° C. 0^2-saturation, pH, bicarbonate, etc. of blood from different organs were also studied. (DNLM.)

71249. ELLITSGAARD-RASMUSSEN, K. Geological investigation of Greenland: past and present. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v. 2, p. 1185-87.)

Surveys results of geological work, chiefly that of the Lauge Koch expeditions prior to World War II, and of Grønlands Geologiske Undersøgelse whose activities have grown in scope since its formation in 1946. Improved mapping techniques

since 1954 have resulted in greater coverage of the area from Ivigtut to the Ilímaus-saq alkaline intrusion in South Greenland, etc. Future mapping is indicated. (DGS.)

71250. ELLITSGAARD-RASMUSSEN, K. Geologien i Grønland. (Grønland, Feb. 1962, nr. 2, p. 41-60, illus.) Text in Danish. **Title tr.:** Geological research in Greenland.

Reviews Danish activity with emphasis on recent work in southwest Greenland by Danmarks Geologiske Undersøgelse, established in 1946. The uranium investigations near Narssaq are noted: considerable amounts have been found, but the uranium content of the ore is comparatively low and the economic prospects uncertain. Most of the coast between Nûgssuaq and Kap Farvel has now been investigated and surveyed. (DLC.)

71251. ELLITSGAARD-RASMUSSEN, K. Store krav til udforskning af Grønlands undergrund. (Ingeniørens ugeblad, Mar. 11, 1961. årg. 5, nr. 10, p.18-19, illus.)Text in Danish. **Title tr.:** The great need for investigation of the geology of Greenland.

Discusses the (insufficient) extent of investigations so far, and outlines three main requirements: search for productive minerals to engage more Greenlanders in industry; completion of the geological survey within the next fifty years (for this, fifty geologists would be needed, more than now available); and intensified research on concentration methods. The personnel recruitment situation has improved somewhat. (DLC.)

71252. ELOVSKAĬA, L.G. Nekotorye dannye o pochvakh basseĭna r. Maloĭ Botuobii. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. ĬAkutskiĭ filial. Nauchnye soobshcheniĭa 1959. vyp. 2, p. 51-56, tables.) Text in Russian. **Title tr.:** Some data on soils of the Malaya Botuobuya River basin.

Reports a summer 1956 reconnaissance in the area 61° 41′ - 62° 40′ N. 113° 45′ - 115° 45′ E. Relief, vegetation and soil-forming rocks are reviewed. In the Malaya Botuobuya basin, a type of soil is found which differs from the known types of central Yakutia. It is characterized by an acid reaction through the entire profile. A section is described in detail and the chemical composition is tabulated. Other soils are described also and and their suitability for cabbage, potato and other crops is considered. Mirnyy and Novyy with rapidly growing industry and population provide nearby markets. (DLC.)

71253. ELOVSKAĬA, L.G. Opyt vyrashchivaniĭa kapusty na zasolennykh pochvakh s primeneniem mineral'noĭ podkormki. (Akademiĭa nauk SSSR. ĬAkutskiĭ filial. Nauchnye soobshcheniĭa, 1961. vyp. 5, Biologiĭa, p. 27-31, tables.) Text in Russian. **Title tr.:** Attempt at growing cabbage on saline soils with application of mineral supplements.

Describes the soil: a meadow-chernozem solonchak, its profile, chemical composition of latter, and the effect of various fertilizers, and fertilizer-combination added. All, except potassium, produced increased crops. A combination of N+P produced top yields. The experiments were carried out at the Yakutsk sovkhoz in 1959. (DLC.)

71254. ELOVSKAĬA, L.G. Pochvy territorii Chuchur-Muranskoĭ opytno-biologicheskoĭ laboratorii. (Akademiĭa nauk SSSR. ĬAkutskiĭ filial. Nauchnye soobshcheniĭa, 1961. vyp. 5, Biologiĭa. p. 3-11, tables, map.) Text in Russian. **Title tr.:** The soils in the region of the Chuchur-Muran experimental biological laboratory.

Describes the location 7 km. northwest of Yakutsk, the 100-hectare area studied, and the general character of these soils. The morphological and physico-chemical qualities are analyzed in the more common kinds, viz meadow-chernozem, chernozem-meadow, alluvial-diluvial, and peat-forest, soils. Several profiles are included, and depth of permafrost noted. (DLC.)

71255. ELOVSKIKH, V. V. O vliĭanii stroeniĭa fundamenta Verkhoĭano-Kolymskoĭ geosinklinal'noĭ oblasti na prostranstvennoe raspredelenie rudnykh raĭonov Vostochnoĭ ĬAkutii. (Geologiĭa i geofizika, 1962, no.9, p.3-14, fold. map.) 22 refs. Text in Russian. Summary in English. **Title tr.:** On effect of the basement structure of the Verkhoyansk-Kolyma geosynclinal region on the spatial distribution of the ore-bearing regions of eastern Yakutia.

Reviews from recent geologic and geophysical investigations, the basement structure of this zone. A semi-detailed tectonic map is presented and interpreted to show the structural control of distribution of ore-bearing regions. Old deep faults which appeared in the Precambrian, control a special distribution of gold- and mercury-bearing belts. Younger middle Paleozoic faults control distribution of tin-tungsten deposits of the cassiterite-quartz formation. Transversal faults developed control tin deposits of cassiterite-sulfide formation. (DLC.)

71256. ELSNER, ROBERT WELLINGTON, 1920– , *and others.* Thermal and metabolic responses of arctic Indians to a standard moderate cold exposure at the end of winter. Fort Wainwright, Alaska, Apr. 1961. 11 p. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-4.) 8 refs. *Other authors:* K.L. Andersen and L. Hermansen.

Reports a study of O_2-consumption, and skin and rectal temperature during nights of cold-exposure in eight Indians similarly studied in the previous fall. The results indicate, that except for a tendency to heat conservation by cooling of extremities, no changes of a seasonal nature had taken place during the winter. (CaMAI.)

ELSNER, ROBERT WELLINGTON, 1920– , *see also*

Andersen, K.L., & *others.* Metabolic and thermal responses . . . cold. 1962. No. 69757

Andersen, K.L., & *others.* Physical fitness . . . Lapps. 1962. No. 69758

Milan, F.A., & *others.* . . year in Antarctic & response . . . 1961. No. 74007

71257. ELVER, R. B. The Canadian iron ore industry in 1960. Ottawa, Queen's Printer, 1961. v, 107 p. illus., graphs, tables, maps. (Canada. Dept. of Mines and Technical Surveys. Mineral

Resources Div. Mineral information bulletin MR 51.) Refs.

Presents a detailed survey of developments, production and trade in this industry. Properties in production, under development for production within a few years, and those subject to exploration for iron-bearing material, are shown on maps. Production, consumption and trade data are graphically presented supplementing the text. One producer and three prospective producers are working in Northern Quebec-Labrador, viz: Iron Ore Co. of Canada in both categories, Wabush Iron Co. Ltd., and the Quebec Cartier Mining Co. Other exploration and development companies are included in an annotated list. (DLC.)

71258. ELVER, R. B., *and* **G. E. WITTUR.** The Canadian iron ore industry in 1961. Ottawa, Queen's Printer, 1962. vii, 103 p. illus., maps, graphs, tables. (Canada. Dept. of Mines and Technical Surveys. Mineral Resources Division. Mineral information bulletin MR 59.) Refs.

Contains a detailed account of the year's developments, production and trade in this industry. Maps show 1960 iron ore producers, 1961 prospective producers, and other exploration and development sites in the Labrador-Quebec region. Iron Ore Co. of Canada's Schefferville operations continued to be the main production center, with a comprehensive ore beneficiation program under way to meet severe competition for direct-shipping, medium-grade ores. Its Carol Lake project is expected to be in production by mid-1962; the Wabush Mines project in 1964 or 1965. Quebec Cartier Mining Co. made its first ore shipment from Port Cartier on July 4; the Lac Jeannine deposit is expected to produce 8 million tons of concentrate annually by mid-1962. (DI.)

71259. ELVER, R. B. Direct iron processes and their prospects in Eastern Canada. Ottawa, Queen's Printer, Mar. 1960. v, 63 p. map, diagrs., graph, tables. (Canada. Dept. of Mines and Technical Surveys, Mineral Resources Div. Mineral information bulletin MR 41.) Refs.

Includes, p. 53, 55, 59, brief discussion on the approx. cost of producing sponge or direct iron by several typical processes in the Quebec North Shore area, with comparison of costs for a hypothetical plants at Schefferville, Wabush Lake, and Seven Islands. (DLC.)

71260. ELVER, R. B. Iron ore. (Canadian mining journal, Feb. 1961. v.82, no.2, p.131-35, graphs.)

Reviews production, development, and exploration in Canada during 1960. Production in the Schefferville area of northern Quebec-Labrador decreased to 9,809,000 long tons from 13,059,000 in 1959. Developments are described in the Wabush Lake area of Labrador by the Iron Ore Co. of Canada and by Wabush Iron Co., and in the Mt. Reed area of Quebec by Quebec Cartier Mining Co. Explorations in these areas are noted. (DGS.)

71261. ELVER, R. B. Iron ore. (Canadian mining journal, Feb. 1962. v.83, no.2, p.88-94, graphs, tables.)

Reviews activities in this Canadian industry during 1961. Production at Schefferville in northern Quebec-Labrador continued to decrease, dropping to 7,500,000 long tons. The Iron Ore Co. of Canada development west of Wabush Lake is to start production by mid-1962; it has a 38-mi. link to the Quebec North Shore and Labrador Railway, a 120,000 hp. hydroelectric plant at Twin Falls near Grand Falls, Labrador, an open pit mine connected by fully-automated rail line to a concentration plant which is to produce seven million tons of concentrate per yr.; it has a pellet plant, and a town (Labrador City) for from three-to-six-thousand population. Wabush Iron Co. plans production southeast of Wabush Lake by late 1964-65, to reach six million tons per yr. The Quebec Cartier Mining Co. development in Quebec was completed; a pellet plant and a new mine development are planned. (DGS.)

71262. ELVEY, CHRISTIAN THOMAS, 1899– , *and* **C. RUST** Can you hear the northern lights? (Alaska sportsman, June 1962. v.28, no.6, p.18-19, illus.)

Dr. Elvey discusses sound from auroral displays as not yet proved scientifically, and the noises heard as possibly of other origin. Mrs. Rust describes the lights and the accompanying cracking and hissing sounds heard. (DI.)

71263. EMEL'IANOV, A. Puti povysheniia rentabel'nosti raboty rybnoĭ promyshlennosti Kamchatki. (Rybnoe khoziĭstvo, 1962. god 38, no.9, p.84-90.) Text in Russian. **Title tr.:** Ways of increasing work profitability in the fishery industry of Kamchatka.

Discusses the increase in catches during 1955-60 and the deficits in this industry during the past 15 years; causes of deficits: decrease in salmon landings; increased cost of production, and of maintenance; deterioration in the quality of fish products, and insufficient utilization of the raw material. A series of recommendations for improving the situation is presented. (DLC.)

EMEL'IANOV, IU. M., *see* Nekrasov, V.I., & IU. M. Emel'ianov. Povliiala-li Tungusskaia katastrofa . . . 1962. No. 74277

71264. EMEL'IANOV, V. S. Atomnaia ėnergiia v morskom transporte. (Akademiia nauk SSSR. Vestnik, June 1961. god 31, no.6, p.57-66.) Text in Russian. **Title tr.:** Atomic power in marine transportation.

Discusses construction of nuclear-powered vessels for peaceful purposes, as chairman of the Soviet State Committee for Utilization of Atomic Energy. Icebreakers, tankers and ships planned or under construction in the USSR, United States, England, France, Japan, West Germany, Italy and the Scandinavian countries are reviewed with conclusion that the icebreaker *Lenin* is the only such vessel ready for service. All other countries, including the United States and England, are using nuclear power for military purposes; its utilization for peaceful purposes is deliberately slowed down. (DLC.)

71265. EMSLIE, R. F., *and* **J. M. MOORE,** *Jr.* Geological studies of the area between Lynn Lake and Fraser Lake SE 14-64C Granville Lake Mining Division. Winnipeg, 1961. 76 p. maps (incl. 2 fold.), tables, diagrs. (Manitoba. Dept. of Mines and Na-

tural Resources. Mines Branch Publication 59-4.) 25 refs.

Reports in detail and maps at scale 1 in.: 2000 ft. the geology of this 70 sq. mi. area in northwestern Manitoba, investigated in 1958 and 1959. The structural and stratigraphic relationships of the Wasekwan series are dealt with in the first section, p.1-46. This volcanic-sedimentary series, divided into mine formations, is intruded by a sequence of igneous rocks ranging from strongly foliated regionally metamorphosed salic bodies through gabbro to major intermediate and salic intrusions. Synclinal axes in the central and southern parts of the area are separated by an anticlinal axis. Regional metamorphism and geologic history are discussed. Part two reports petrologic and geochemical studies of the Lynn Lake and Fraser Lake gabbros. The former is indicated as a strongly differentiated layered intrusion in which the nickel-copper ores were derived by separation from the cooling gabbroic magma. Similar rocks in the Fraser Lake gabbro suggest the possible presence of ore deposits. (DGS.)

ENBYSK, BETTY JOYCE, *see* Pacific Science Congress. 1961. No. 74619

ENDOVITSKAIA, I.S., *see* Bondarev, G.I. & *others*. Énergeticheskie zatraty . . . 1962. No. 70318

71266. ENEQUIST, GERD. Geographical changes of rural settlement in northwestern Sweden since 1523. Uppsala, Almqvist & Wiksell, 1959. 43 p. 4 tables, 2 graphs, 3 text maps. (Uppsala. Universitet. Geografiska Institutionen. Meddelanden, ser. A, no.143.) 81 refs. Also issued as Uppsala Universitets Årsskrift, 1959:8.

Analyzes changes in economic life and settlement in the frontier zone during recent centuries, in an attempt to clarify the nature of oecumenical boundaries. Settlement dispersal and regression, economic conditions, multi-occupational settlers and specialization are discussed, together with regional isolation, and resource use. Climate, soils, tree line, inland waters and power, also travel routes are reviewed. Economic activities are dealt with: agriculture, forestry, fishing, hunting, reindeer-breeding and herd migrations, tourism and mining. Regional laws, price regulations, and land ownership are discussed, as is community social life and standards. Variations in settlement by Swedes, Lapps and Finns are noted, as are current changes in population and livelihood in the area. (DLC.)

ÉNGEL'GARDT, V. V., *see*

Akademiia nauk SSSR. Institut geografii . . . . Novaia Zemlia, snezhnyi pokrov. 1962. No. 69551

Zinger, E.M., & V.V. Énge1'gardt. Snegonakoplenie . . . 1961. No. 76699

71267. ENGELSEN, I. Oceanographic research vessel *H. U. Sverdrup*. (International hydrographic review, July 1962. v.39, no.2, p.29-34, illus., diagr.)

Describes this trawler-type, Norwegian *Veritas* class 1A1 (Ice) vessel, launched at Trondheim Feb. 27, 1960. Main specifications include: overall length 127 ft. 7 in., breadth 24 ft. 11 in., depth 13 ft., displacement 400 t. Main engine is a 600-h.p. 6-cylinder, two-stroke diesel, giving maximum speed of 11.6 knots; a 5,000-naut.-mi. range is possible at full speed. Most oceanographic work can be carried out in sea state 4, though difficult in sea state 5. Equipment and laboratory facilities are noted. General arrangement is shown on photo and drawings similar to No. 64402. (DLC.)

71268. *ENGINEERING NEWS-RECORD*. No. 1 Alaskan road problem: permafrost. (Engineering news-record, Feb. 2, 1961. v.166, no.5, p.46-47, illus., map.)

Describes the projected design of the 62 mi. Eureka-Tanana highway, an extension of the present secondary road joining the Alaska Highway at Fairbanks. The route selected involves a 3,500 ft. crossing of the Yukon River by bridge or ferry. Construction techniques to be used over five mi. of permafrost are outlined. Maximum design speed is 50 mph.; expected cost is $50,000/mi. The State's system of primary and secondary highways is mapped with data on mileage and type of road surface. (DLC.)

71269. ENGLAND, C. M. New tools for the geophysicist, "shot popping," a method of seismic reflection surveying found useful in muskeg, water-covered and rugged terrain. (World petroleum, Mar. 1962. v.33, no.3, p.47-48, port.) 8 refs.

Describes this method of drilling shallow holes along the line of profile, firing small charges separately, and recording the shots at two geophone patches. Comparison is made with the (in some respects similar) weight-dropping method as to cost, pattern, coverage, directional sensitivity, etc. In rough terrain or muskeg, the portable drills are easier to use than the heavy weight-dropping equipment. (DGS.)

71270. ENGLISH, T. SAUNDERS Some biological oceanographic observations in the central north polar sea, Drift Station Alpha, 1957-1958. Washington, D.C., Apr.1961. viii, 80 p. map, graphs,tables. (Arctic Institute of North America. Research paper no.13. Contract AF 19(604)-3073, scientific report no.15.) 38 refs.

Presents results of Apr. 1957-Nov. 1958. Water masses were recognized by temperature and salinity characteristics. Primary production is limited to the relatively dilute arctic upper water. The major seasonal environmental change in the central Arctic is in the amount of visible radiation penetrating into the ocean; the time of maximum phytoplankton populations was estimated to be in late July and early August from chlorophyll *a* observations. Variations in photosynthesis were studied in relation to other factors. Production in ponds and leads adds very little to the annual total; in fact, primary production in these waters is very low relative to other ocean areas.—From author's abstract. (DWB.)

71271. ENKVIST, E. The launching of a large ice-breaker. (European shipbuilding, 1960. v.9, no. 2, p.28-46, illus., graphs, diagrs.) 19 refs.

Reviews the mathematical calculations, model tests, and arrangements for launching of the 13,000-ton *Moskva* at Sandvikens Skeppsdocka in Finland. A 13.8 x 15 x 6.7 m. pontoon was used to prevent

tipping and high way-end pressures; it was attached to the vessel by means of three columns welded to the hull. Wire stays and supports were also used. Values of measured water resistance and friction are presented; influence of the propellers on water resistance was determined in the model tests. An approximate formula with empirical coefficients for determining maximum draft at the stern is proposed and a method of calculating pitching and heaving oscillations is described. (SPRI.)

71272. **ENOKIÂN, V. S.** Kamennougol'nye otlozheniîa territorii Pechorskogo ugol'nogo basseĭna. *(In:* Materialy po geologii . . . Evropeĭskoĭ chasti SSSR, sbornik statei 1961, vyp.1, p. 34-41.) 3 refs. Text in Russian. **Title tr.:** Carboniferous deposits in the Pechora coal basin territory.

Describes these deposits outcropping on the surface in the Polar Ural, Pay-Khoy, and Chernysheva Ridge. Three facies complexes are recognized. Lower Carboniferous deposits are divided into Tournaisian, Visean and Namurian stages; the Middle and Upper Carboniferous are also described. Two stages of tectonic movements are noted and briefly characterized. (DLC.)

71273. **ENRIGHT, C. T.** The muskeg factor in the location and construction of an Ontario Hydro service road in the Moose River basin. *(In:* National Research Council of Canada . . . Proceedings of the Eighth Muskeg Research Conference . . . 1962. p.42-58, illus., map, sections.)

Describes geographic features along the 27-mi. route, also design of this single-land road, linking the Mattagami River plants at Little Long generating station north of Kapuskasing, with Pinard transformer station near the Abitibi, about 70 mi. north of Cochrane. Main contract provisions are outlined; instruments are noted for pore pressure and settlement measuring in muskeg areas. A three-mile extension at the eastern end to the Abitibi generating station has been completed. This road is intended to serve as a basic reference for future over-muskeg road-building by the Hydro-Electric Power Commission of Ontario. (DLC.)

71274. **ENTSOVA, F. I.** Triasovye otlozheniîa basseĭna r. Bol'shoĭ Syni, iûzhnaîa chast' Pechorskogo ugol'nogo basseĭna. (Materialy po geologii i poleznym iskopaemym Severo-Vostoka Evropeĭskoĭ chasti SSSR. Sbornik statei, 1962. vyp.2, p.42-48, map.) 7 refs. Text in Russian. **Title tr.:** Triassic deposits of the Bol'shaya Synya River basin, southern part of the Pechora coal basin.

Describes sections of Triassic deposits in outcrops of the Bol'shaya Synya in Komi ASSR. According to lithologic properties, organic remains and presence of concretions, these deposits are divided into two subseries: lower and upper Khey-Yaga as in the Pay-Khoy. Both are described, noting fauna, spore-pollen complexes, distribution, and other features, and both are stratigraphically divided into smaller units. Facies, climate and sedimentation conditions of Triassic deposits are characterized. (DLC.)

71275. **ENTSOVA, F. I.** Vorkutskaîa laguna v permskom periode. (Akademiîa nauk SSSR. Doklady, Aug. 11, 1961. t.139, no.5, p.1185-86.) 13 refs. Text in Russian. **Title tr.:** The Vorkuta lagoon in the Permian period.

Reports investigation of Permian deposits in the middle part of Chernysheva Ridge. Two horizons of reef limestones are identified and described. The reef builders were bryozoans, corals and algae, and the limestones upper Sakmarian-lower Artinskian in age. Distribution of reef limestones is discussed. Barrier reefs and development of the Vorkuta lagoon is described. Paleogeographic conditions are summarized. (DLC.)

ENTSOVA, F. I., *see also* Khaĭtser, L.L., *& others.* O pervichnoĭ okraske . . . 1962. No. 72755

ÉPSHTEĬN, É. M., *see* Leningrad. N.-i. Institut geologii Arktiki. Gulinskaîa intruziîa . . . 1961. No. 73413

71276. **ÉPSHTEĬN, G. M.** Nekotorye voprosy merzlotnoĭ s"emki. (Moskva. Universitet. Vestnik, ser.4, geologiîa, July-Aug. 1961, no.4, p.59-64, table.) 8 refs. Text in Russian. **Title tr.:** Some questions on permafrost surveying.

Discusses some matters of method in surveying and mapping permafrost from experience in the Ob and Amur valleys during 1954-1959, and from literature data. Three groups of problems are considered, as they pertain to the investigation of physical geographic and geologic conditions, to the clarification of prevailing patterns in formation and development of permafrost strata, and to the characteristics of permafrost in small isolated occurrences. (DLC.)

71277. **ÉPSHTEĬN, G. M.** Nekotorye zakonomernosti sezonnogo promerzaniîa i protaivaniîa gruntov v oblasti ostrovnogo rasprostraneniîa mnogoletnemerzlykh porod; na primere doliny verkhnego Amura. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.2, p.45-58.) 6 refs. Text in Russian. **Title tr.:** Some regularities of the seasonal freezing and thawing of soils in an island permafrost distribution area, upper Amur valley.

Shows the depth of seasonal freezing and thawing to vary by as much as a factor of 10, due to the peculiar climatic and geologic-geographic conditions, and describes mapping of the area according to Kudriîavtsev's criteria of soil composition, moisture content, mean annual soil temperature, and the amplitude of temperature fluctuations at the ground surface. Two basic types of seasonally frozen and thawed soils are distinguished, namely, those overlying unfrozen ground and those overlying island permafrost. The two types differ in heat conductivity, heat capacity as well as in conditions of freezing and thawing. Effects of soil composition and moisture content of temperature conditions on freezing and thawing are dealt with. Annual and long-term regimes of freezing and thawing in the area are discussed in some detail. (DLC.)

71278. **ÉPSHTEĬN, G. M.** O preryvistom (po vertikali) stroenii merzlykh gornykh porod, slagaîushchikh poĭmy krupnykh rek; na primere verkhoviĭ r. Amura i nizoviĭ r. Obi. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.1, p.82-89, diagr.) 3 refs. Text in Russian. **Title tr.:** Vertically discontinuous structure of frozen ground comprising the flood

plains of large rivers, as exemplified by the upper Amur and the lower Ob.

Reports studies by Moscow State University Permafrost Dept. in 1954-1959 near Blagoveshchensk and near Salekhard in connection with investigations of water resources. The soil structure is examined in detail and the vertically discontinuous nature of the frozen deposits concluded to be connected with the convective heat exchange in the alluvial water-ground system. Thawed interlayers can form in ground having a high water permeability and a frozen-ground temperature near 0°C. The configuration and thickness of the thawed layers change continually according to changes in the level, regime, and temperature of the alluvial water and the temperature regime of superposed permafrost. Most of the thawed layers freeze periodically due to heat transfer in absence of convective heat exchange (no alluvial water). Lower permafrost horizons may be thawed artificially if the laws are known concerning the relationship between the upper boundary conditions, which determine the conductive heat exchange, and the lower boundary conditions, which determine the convective heat exchange in the alluvial water-ground system.—From CRREL. (DLC.)

71279. ÉPSHTEĬN, R. ĬA., *and* G. P. GRINBERG. Spektrofotometricheskoe opredelenie niobiia v karbonatitakh. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei po geokhimii osadochnykh porod, 1961, vyp.2, p.84-90, tables, diagr.) 8 refs. Text in Russian. **Title tr.:** Spectrophotometric determination of niobium in carbonatites.

Reviews existing methods for determination of niobium in carbonatites and other rocks. A spectrophotometric method, developed by the authors and varying from others, is described, noting its chemical procedures. Results obtained are tabulated and compared with data obtained by other methods. (DLC.)

ÉPSHTEĬN, S. V., *see* Ganeshin, G.S., & *others.* Karta . . . 1961. No. 71580

71280. ÉPSHTEĬN, VENIAMIN MIRONOVICH, 1929– . Obzor ryb'ikh piiavok, Hirudinea, Piscicolidae, Beringova, Okhotskogo i ĬAponskogo morei. (Akademiia nauk SSSR. Doklady 1962. t.144, no.5, p.1181-84.) 25 refs. Text in Russian. **Title tr.:** Survey of fish leeches, Hirudinea, Piscicolidae, from the Bering, Okhotsk and Japan Seas.

Reports on the material assembled since 1900 in the Zoological Institute of the Academy of Sciences USSR. Number of specimens in the collection, locations and geographic distribution, diagnosis, host(s), etc. are noted. (DLC.)

EPSTEIN, SAMUEL, 1909– , *see* Taylor, H.P., & S. Epstein. O^{18}/O^{16} ratios . . . 1962. No. 76090

ÉRASTOVA, V. M., *see*

Altukhov, K.A. & V.M. Érastova. Rezul'taty mecheniia . . . 1962. No. 69734

Kuderskiĭ, L.A., & V.M. Érastova. Materialy po pitaniiu . . . 1962. No. 73173

ERBE, H., *see* Pfotzer, G., & *others.* . . . X-ray bursts in the auroral zone. 1962. No. 74771

71281. ERDMAN, DONALD S. Stranding of a beaked whale *Ziphius cavirostris* Cuvier, on the south coast of Puerto Rico. (Journal of mammalogy, May 1962. v.43, no.2, p.276-77, tables.) 5 refs.

Description, with detailed morphometric account of a stranded female. The species is cosmopolitan. (DLC.)

71282. ERDTMAN, GUNNAR, 1897– , *and others.* An introduction to a Scandinavian pollen flora. Stockholm, Almqvist & Wiksell, 1961. 92 p. 75 plates incl. 1 col. 40 refs. *Other authors:* B. Berglund *and* J. Praglowski.

Contains a glossary of palynological terms and synonyms, followed by descriptions of pollen from angiosperms and gymnosperms and spores from Pteridophyta (p.15-67) including forms occurring in arctic areas. The pollen (spores) of individual species are briefly described in alphabetical order of families (genera) and illus. with excellent photographs on appended plates. A brief description of spores and pollen of families concludes the study. An alphabetical index of scientific names is added. (DLC.)

EREGATUK, ANDREW, *see* Canada. Northern welfare '62. 1962. No. 70539

71283. EREMICHEV, V. Shpalopodbivochnaia mashina. (Master lesa, Mar. 1962. god 6, no.3, p.9, illus.) Text in Russian. **Title tr.:** Tie-tamping machine.

Describes a vibrator developed by the Northern Industrial Research Institute (Sev NIIP) for packing the railroad bed beneath ties. It was tested successfully on the Konetsgorsk narrow-gauge railroad (64°26′N. 40°50′E.) by the Arkhangel'sk lumbering combine. (DLC.)

71284. ERIKSEN, EDVARD ANDREAS. Norsk bergingeniørsyn på geofysiske undersøkelser i vart land. (Tidsskrift for kjemi, bergvesen og metallurgi, Oct. 31, 1961. bd. 21, nr.8, p.176-82, illus., graphs, tables, 4 text maps.) Text in Norwegian. Summary in English. **Title tr.:** A Norwegian mining engineer's view of geophysical investigations in our country.

Reviews geophysical techniques used abroad for tracing of metals, oil, and other raw materials, and suggests an investigation for the whole of Norway, including Svalbard, under private and government auspices. The progress in 1960 of the geophysical mapping of Finland is shown on map, including selected areas in far North. (DLC.)

71285. ERIKSSON, HENRY. Forebyggende vedlikehold av spindelknusere, gruvetransportører, separasjons- og oppredningsmaskiner ved LKAB i Malmberget. (Tidsskrift for kjemi, bergvesen og metallurgi, Apr. 30, 1962. bd. 22, nr.4, p.83-92, illus., text map, 7 graphs, diagr.) Text in Norwegian. Summary in German. **Title tr.:** Preventive maintenance of spindle crushers, mine transports, separation and cleaning machines at LKAB in Malmberget.

Describes the machinery and equipment maintenance system at the Luossavaara-Kiirunavaara Aktiebolaget iron mines in arctic Sweden. The ore is 85% magnetite and 15% hematite. In 1961 over three thousand men were employed and 5.7 million tons of ore were mined; by 1965 output is to increase to 8.3 million tons. New organization, machinery, inspection and servicing practices, statistical methods, personnel data are discussed, and plans outlined for increased production with minimized costs as automation increases. (DLC.)

71286. ÉRISTAVI, K. D., *and others.* O deĭstvii gibernat͡sii i gipotermii na techenie gemotransfuzionnogo shoka v ėksperimente. (Patologicheskaĭa fiziologiĭa i ėksperimental'naĭa terapiĭa, 1961. t.5, no.6, p.30-32, illus.) 11 refs. Text in Russian. Summary in English. *Other authors:* T.O. Zhvaniĭa *and* G.IÂ. Odishvili. **Title tr.:** The effect of hibernation and hypothermia on the course of experimental transfusion shock.

Reports experiments with dogs made hypothermic to 27°C. with the aid of neuroplegics. Transfusion of rabbit blood (5 ml./kg. of body weight) showed a considerably decreased sensitivity to heterogeneous blood in the cooled dogs. (DLC.)

ERKLOO, E., *see* Singittuk, W., & *others.* Letters. 1961. No. 75671

71287. ÉRLIKH, Ė. N. O stroenii kristallicheskogo fundamenta Sibirskoĭ platformy v raĭone Sukhanskogo progiba. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.121, vyp. 18, Sbornik stateĭ po geologii i neftegazonosnosti Arktiki, p.75-82, map.) 6 refs. Text in Russian. **Title tr.:** On the structure of the crystalline basement of the Siberian platform in the Sukhana trough region.

Discusses the structure and morphology of the Sukhana (68°45′N. 118°E.) trough of the Olenek River basin, with main attention given to the displacement of magnetic anomalies. Below the Sinian and Cambrian deposits, Archean strata are identified and relief structure characterized. Proterozoic folding is noted; as are the faults in the basement which control the distribution of kimberlite bodies. (DLC.)

71288. ERLIKH, E. N. Stratifikat͡siia chetvertichnykh vulkanogennykh tolshch Sredinnogo khrebta Kamchatki i nekotorye voprosy ėvoli͡ut͡sii vulkanizma ėtogo raĭona. (Vsesoi͡uznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.117-18.) Text in Russian. **Title tr.:** Stratification of Quaternary volcanic strata of the Kamchatka Sredinnyy Ridge and some problems in the evolution of volcanism of this region.

Summarizes the Quaternary history of volcanism of this ridge based on 1952-1958 study and geologic mapping at 1:1,000,000 scale. Processes of glaciation, geomorphic conditions and other criteria were used for separation of the strata. Various effusive complexes are distinguished. Types of volcanoes and their eruptions, chemical features of effusive rocks, cycles of eruption and other problems are briefly characterized. (DLC.)

71289. ÉRLIKH, Ė. N., *and* V. V. ZHUKOV. Tektonicheskoe stroenie Sukhanskogo progiba. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t.117, Geologiĭa . . . 1961, p.94-112, illus., map, diagrs.) 12 refs. Text in Russian. **Title tr.:** Tectonic structure of the Sukhana downwarp.

Outlines the geologic history and tectonic development of this depression from a study in 1958. It extends 300 x 250 km. and occupies a 60,000 km² area approx. 68°45′N. 118°E. A tectonic map of the area is presented and evaluated. Structure of the downwarp is described. Three groups of faults are distinguished and characterized. Joint patterns are analyzed and graphically reported. (DLC.)

ÉRLIKH, Ė. N., *see also* Tikhomirov, L.I., & É.N. Érlikh. Nekotorye cherty metallogenii . . . 1961. No. 76143

ERMACHENKO, I. A. *see*

Fedosov, M.V., & I.A. Ermachenko. Silica N. waters. 1961. No. 71367

Fedosov, M.V., & I.A. Ermachenko. Usloviĭa . . . gidrokhimicheskogo rezhima . . . 1962. No. 71368

Zaĭt͡sev, G.N., & *others.* Components . . . Norwegian seas. 1961. No. 76624

71290. ERMILOV, A. V. Novye dannye po stratigrafii nizhnepermskikh morskikh otlozheniĭ i͡ugo-zapadnoĭ chasti gri͡ady Chernysheva. (Akademiĭa nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp.2, Materialy po geologii Komi ASSR, p.27-31.) 3 refs. Text in Russian. **Title tr.:** New data on the stratigraphy of lower Permian marine deposits in the southwestern part of the Chernysheva Ridge.

Describes stratigraphically lower Permian deposits as studied in 1959 in the Bol'shaya Synya basin. Sakmarian, Artinskian and Kungurian stages are identified and divided into smaller time-rock units. The foraminifer, brachiopod and bryozoan fauna is noted. (DLC.)

ERMOLAEV, A. A., *see* Ryzhkov, F.N., & A.A. Ermolaev. . . . vsasyvaĭu͡shchego sposoba . . . 1962. No. 75304

71291. ERMOLOV, V. V., *and others.* Osobennosti geologicheskogo deshifrirovaniĭa materialov aėrofotos"emki v raĭonakh Kraĭnego Severa. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t.117, Geologiĭa . . . 1961, p.132-38, illus.) 8 refs. Text in Russian. *Other authors:* ÎA. I. Pol'kin *and* S.A. Strelkov. **Title tr.:** Geologic interpretation of air-photo materials from regions of the far North.

Summarizes value and use of the air photographs for geologic surveying in arctic areas from 15 years' experience. In these areas, it is stressed, vegetation is more closely related to the underlying bedrocks, than in temperate zones, and serves in delineating various geologic features. Air photographs are recommended for study of Quaternary deposits, thermokarst relief, polygonal soils, pingos and other geologic features. (DLC.)

71292. ERMOLOVA, N. M. Materialy po razmnozheni͡u belki v basseĭne reki Tokko. (Akademiĭa nauk SSSR. ÎAkutskiĭ filial. Doklady 1957. v.8, p.107-114, tables.) 3 refs. Text in Russian. **Title tr.:** Materials on the reproduction of the squirrel in the Tokko River Basin.

Reports study of some nine hundred squirrels killed during the warmer part of 1953-54 in this locality in the middle Lena basin. Reproduction, its phases, periods and intensity, death of first litter and its causes (cold), development of the young, etc. are considered. (DLC.)

71293. EROFEEV, B. N., *and* S. F. LUGOV. Okhotsko-Chukotskiĭ vulkanogennyĭ poĭas, ego metallonosnost' i voprosy poiskov. (Sovetskaĭa geologiĭa, Oct. 1962, no.10, p.3-15, text map, diagr.) 24 refs. Text in Russian. **Title tr.:** The Okhotsk-Chukotka volcanic belt, its metal-bearing properties and survey problems.

Reviews the geologic structure and magmatism

of this wide area. Cretaceous gold mineralization in the Amguema River (66°14′N. 177°30′E.) and other regions is described, noting its productive value. Mineralization of mercury, molybdenum is outlined, the deposits and their practical importance indicated. Further prospecting problems and application of geologic-geochemical and geophysical methods are discussed. (DLC.)

71294. EROFEEV, BORIS N. V nedrakh Sibiri otkryt odin iz krupneĭshikh neftegazonosnykh raĭonov mira. (Sovetskiĭ soĭuz, 1962, no.3 (145), p.12-13, col. map.) Text in Russian. **Title tr.:** One of the world's largest oil and gas deposits has been found in the bowels of Siberia.

Describes the discovery of high grade oil in the northern part of the West Siberian lowlands. The first commercial oil strike was made near Shaim, close to the Zaural'ye-Mulym'ye rivulet in the Konda basin. Several other strikes made subsequently on the middle Ob River and in the Khanty-Mansi National District are noted. Map indicates extent of the gas- and oil-bearing region between Omsk and the Kara Sea, and the current drillings. (DLC.)

71295. EROKHIN, E. O bezopasnosti plavaniĭa sudov pri obledenenii. (Morskoĭ flot, Sept. 1961. god 21, no.9, p.15-18, illus., tables, graphs.) Text in Russian. **Title tr.:** Safety of ships during icing.

Reviews conditions conducive to icing at sea and discusses the effects of ice accumulation on a ship's displacement, center of gravity and metacenter, hence stability. It is proposed that ships in arctic service be equipped with diagrams of the critical heeling angle; a universal diagram of this type, constructed from a universal diagram of stability, is shown and its use described. Laboratory experiments on the effect of wind on ice formation and vessel stability are reviewed. For safer navigation in arctic waters, superstructure and rigging should be kept at a minimum, freeboard increased, metacenter lifted. Stationary and portable air heaters should be carried to melt ice and dry wet surfaces. Vaselines and oils are available for coating metallic surfaces. (DLC.)

71296. EROKHINA, A. A. Pochvy i ploshchadi pakhotoprigodnykh zemel' v Krasnoĭarskom krae. *(In:* Krasnoĭarskaĭa . . . ėkspedit͡siia. Prirodnye usloviia . . . 1961, p.143-59, map.) 21 refs. Text in Russian. **Title tr.:** The soils and arable land areas of Krasnoyarsk Province.

Reviews the study of soils in this province. Those of the arctic desert and tundra 70° - 75°N., podsolic-gley soils 65° - 70°N., and the podsolic soils of the 60° - 65° region are briefly characterized. The arable land and other soil types found south of 58°30′N. are described in greater detail. (DLC.)

71297. EROSHCHEV-SHAK, V. A. O zonal'nosti raspredeleniia glinistykh mineralov v osadkakh Atlanticheskogo okeana. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1962. t.56, p.59-69, illus., tables, map.) 29 refs. Text in Russian. Summary in English. **Title tr.:** Zonation in the distribution of clay minerals in the deposits of the Atlantic Ocean.

Reports a study which includes the subarctic areas of this ocean. In the deep-sea sediments of these areas, illite was found to be predominant. Illite is also distributed in the weathering soils and crusts of northern latitudes. The zonation of the marine deposits is thus determined by the zonality of their sources. (DLC.)

71298. EROSHENKO, V. N. Primenenie karbinol'nogo kleia dlia tseleĭ elektrotenzometrii v usloviiakh mnogoletnemerzlykh gruntov. *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.95-100, table, graph, diagr.) 10 refs. Text in Russian. **Title tr.:** Use of carbinol glue for electrotensometric devices under permafrost conditions.

Reports on the experimental tests of electric insulation properties of carbinol glue used in manufacturing of ohmic pickups, and their gluing to the materials whose resistance is investigated. Three experiments carried out in 1958 at -3.2°C. air temperature and 97% humidity in the underground laboratory of the Permafrost Institute at Yakutsk indicated the necessity of thorough moisture insulation of the pickups glued with the carbinol adhesive, when used in permafrost for more than two days. (DLC.)

71299. ERSKINE, RALPH. Town building in the Swedish sub-arctic. (Habitat, *Ottawa,* Nov.-Dec. 1960. p.2-6, illus.)

Presents an architect's ideas for building north of 60°N. in Sweden, applicable to other northern areas. The environment dictates its needs, physical and aesthetic: the town should be built midway on a southern slope, with the industrial or other "works" at the center, and higher residences up-slope to break wind and reflect sunlight. Special architectural and planning forms are discussed. (CaOCU.)

71300. ERVAMAA, PENTTI. The Petolahti diabase and associated nickel-copper-pyrrhotite ore, Finland. Helsinki, 1962. 80 p. 12 plates, illus., map, graphs, tables. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finlande no.199.) 37 refs. Dissertation presented to the University of Helsinki. Translated into English by Paul Sjöblom.

Reports on this deposit, discovered in 1957 in western Finland at 62°50′N. 22°20′E. and investigated by magnetic and gravimetric measurements as well as by drilling. The ore body is estimated to be 80-90 m. long, 4-9 m. thick, and 70-80 m. deep; it is associated with a 5-80 m. thick diabase dike which cuts sharply across the foliation of the surrounding rocks and shows evidence of effective magmatic differentiation, which is the main subject of this paper. General geology of the area is complicated by thick cover of sand and till; the principal rock appears to be a relatively uniform mica gneiss. Basic differentiation product of the parent olivine-basaltic magma, the olivine diabase, contains variable amounts of disseminated pyrrhotite, pentlandite, and chalcopyrite. Abundance of high-temperature exsolution products indicates the start of crystallization at unusually high temperatures as extensive solid solutions of these sulfides. Crystallization probably took place under relatively low water pressure corresponding to hypabyssal conditions. In the other ore types of the deposit, sulfides solidified at lower temperatures. Comparison is made with deposits at Ig-

dlukúnguaq, West Greenland among others. Microscopic and other laboratory tests carried out in 1959-1960 are summarized and results illus. by photomicrographs. (DLC.)

ERVAMAA, PENTTI, *see also* Stigzelius, H., & P. Ervamaa. Lapin . . . 1962. No. 75937

ÉRV'E, IÛ. G., *see* Dmitriev, E. IÂ., & *others*. Ocherednye zadachi geologorazvedochnykh rabot . . . 1962. No. 71039

ERVIN, F. R., *see* Mark, V.H., & *others*. Localized cooling . . . 1961. No. 73812

71301. ÈSHKIN, V. IÛ. Shtol'fsit iz khrustalenosnogo mestorozhdeniia Pripolîarnogo Urala. (Vsesoîûznoe mineralogicheskoe obshchestvo. Zapiski 1962. ser. 2, chast' 91, vyp.2, p.207-211, illus., tables, graphs.) 7 refs. Text in Russian. **Title tr.:** Stolzite from the rock crystal deposits of the Subpolar Ural.

Describes the crystallography and mineralogy of stolzite, an accessory mineral of rock crystal, related with chillagite and wulfenite. Its physical properties are described and results of chemical, X-ray and heat tests are presented. Formation of this mineral is discussed. (DLC.)

71302. ESKOLA, PENTTI, 1883– . Geologicheskie i geokhimicheskie osobennosti kristallicheskogo fundamenta Finliândii. (*In:* Akademiia nauk SSSR. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii. Fiziko-khimicheskie problemy . . . 1961, t.1, p.177-208, illus., diagrs.) 52 refs. Text in Russian. Summary in Finnish. **Title tr.:** Geological and geochemical features of Finland's crystalline basement.

Reviews the main geologic regions of Finland and distribution of the Botnian, Sveccofennian and Karelian formations. Granites and granitization process are described. Tectonic classification of granites is presented and their physico-chemical formation discussed. Absolute age determination of the rocks is summarized. (DLC.)

71303. ESKOLA, PENTTI. Granitization of quartzose rocks. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finlande, 1961. no.196, p.483-98, illus., maps, table.) 13 refs.

Recalls, from 1906 field work near Enontekiö in Finnish Lapland, the occurrence of a granitic-looking rock containing elliptical nodules of quartz with needles of sillimanite, shown in two photos. Possible source of these nodules before or during early stages of granitization is discussed; comparison is made with similar occurrences in southern Canada and elsewhere in Finland. (DLC.)

71304. ESPMARK, YNGVE. Renens försvarsåtgärder vid svalgbroms- och renstyngangrepp. (Zoologisk revy, 1961. arg. 23, nr.2, p.29-37, 5 refs. Text in Swedish. **Title tr.:** The reindeer's means of defense against nose fly and deerfly attack.

Summarizes results of observations on the reindeer's natural protection against its two main parasites, *Cephenomyia trompe* L. and *Oedemagena tarandi* L., in the Torne region and at the Lappväsendets renforskning's reindeer research station at Kuolpa, south of Gällivare in northern Sweden. In the forest reindeer studied, *C. trompe* lays eggs on the body hair. The larvae enter the body either through the skin or as the eggs are licked from the hair and swallowed; the larvae emerge through open wounds in the skin. *Oe. tarandi* lays its eggs in the reindeer nose, and the incubation period is passed in the nasal cavities and throat, causing irritation, nose drip, and coughing, by which means the larvae are ejected when mature. Both parasites overwinter within the animal in the larval stage. Reindeer do not twitch the skin locally as cattle do and horses, but try to prevent the fly from landing by shaking the entire body. Their nervous reaction to the flies varies with their age, color, and physical condition, light-colored individuals and fawns having slower reaction. Physical attitudes when under attack are described. (DLC.)

71305. ESSMAN, WALTER B., *and* **F. N. SUDAK.** Effect of body temperature reduction on response acquisition in mice. (Journal of applied physiology, Jan. 1962. v.17, no.1, p.113-16, illus.) 11 refs.

Reports experiments with moderately hypothermic mice treated with 2.4-dichlorophenoxyacetic acid or saline. In water-escape experiments, normothermic animals acquired a response but the hypothermic mice did not learn to escape. (DNLM.)

ESSMAN, WALTER B., *see also* Sudak, F.N., & W.B. Essman. Maze acquisition. . .hypothermic mice. 1962. No. 75973

ESTANOVE, J.F., *see* Marion, P., & *others*. Données hémodynamiques. . .1960. No. 73811

ESTANOVE, S., *see* Marion, P., & *others*. Données hémodynamiques. . .1960. No. 73811

71306. ÈSTERKES, IÂ. A. Nachalo mekhanizafsii zhivotnovodstva v kolkhozakh IÂkutii. (Akademiia nauk SSSR. IÂkutskiĭ filial. Doklady 1957. v.8, p.238-47, illus., tables.) 2 refs. Text in Russian. **Title tr.:** Beginning of mechanization in animal husbandry in the kolkhozes of Yakutia.

Reviews mechanization in two dairy farms and three cattle-raising farms. Electricity supply and motors, water supply and warming, and mechanization of dairy activities, etc. are considered. The cost of mechanization and its effect on production are also discussed. (DLC.)

ÉTIENNE, J.P., *see* Justin-Besançon, L., & *others*. . .hypothermie accidentelle. . .1960. No. 72601

ÈTINGOV, S. I., *see* Petukhov, P.Z., & *others*. Vliîanie vzryvov. . .1961. No. 74765

EVANS, C. A., *see* Yang, Y.T., & C.A. Evans. Hypothermia in mice. . .1961. No. 76603

71307. EVANS, ERIC LLOYD, 1914– , *and* **R.A. DuJARDIN.** A unique beryllium deposit in the vicinity of Ten Mile Lake, Seal Lake area, Labrador. (Geological Association of Canada. Proceedings, 1961, *pub.* July 1962. v.13, p.45-51, fold. map.) 6 refs.

Describes tentatively this deposit, believed to be unique in size and mineralogy. Barylite and

eudidymite, two rare beryllium minerals, occur throughout a radioactive paragneiss horizon in the Letitia Group volcanics, which in turn form the base of the well-known Seal Lake Group. Field work by Rio Tinto Canadian Exploration Ltd. in 1959, revealed no beryllium minerals, but subsequent microscopic study disclosed some rare minor constituents. Average grade of the paragneiss zones is in the range 0.35-0.40% Be O; preliminary drilling indicate the zones extending to at least 200ft. depth. Niobium is also present together with zinc, some rare-earths, thorium, etc. (DGS.)

71308. **EVANS, G. OWEN,** *and* **W. M. TILL.** The genus *Dermanyssus* De Geer, Acari: Mesostigmata. (Annals & magazine of natural history, May 1962. ser.13, v.5, no.53, p.273-93, diagrs., table.) Refs.

Presents a revision of this genus of mites, utilizing as criteria the "development of the chaetotaxy and of the scleratization of the idiosoma during ontogeny." Among the species is *D. triscutatus* Krantz (No. 59378), with type material from buildings in Holikachuk, Alaska (62°52′N. 159°39′W.), and nesting northern cliff swallows considered host. (DGS.)

71309. **EVANS, HAROLD E.,** *and others.* The Arctic Meteorology Photo Probe. Washington, D.C., Feb. 1962. 33p. illus. incl. 3 with overlays, map, graphs, tables. (U.S. National Aeronautics and Space Administration, Technical note D-706.) 2 refs. *Other authors:* R.C. Baumann *and* R.J. Andryshak.

Describes requirements, vehicles, instrumentation, operations, etc. of this project, under which two Aerobee-100 and one Aerobee-150 rockets took payloads to 47 and 140 miles from Fort Churchill, Man., in Sept. and Oct. 1960. High resolution photographs of a vigorous low-pressure distrubance were obtained at altitudes up to 140 mi., providing a basis for cloud-brightness studies, and indicating the possible use of similar rockets along with weather satellites. Infra red film and a Kodack Wratten 88-A filter produced the best pictures; camera setting was 1/500 sec. at f/8.0. All three payloads were recovered, though satisfactory photographs were obtained only from flight 3. (DWB.)

EVANS, M., *see* Keatinge, W.R., & M. Evans. Respiratory and cardiovascular response. . .1961. No. 72710

EVANS, M. L., *see* Klein, R.L., & M.L. Evans. Effects of ouabain. . .1961. No. 72836

71310. **EVANS, S.** Polar ionospheric spread echoes and radio frequency properties of ice shelves. (Journal of geophysical research, Dec. 1961. v.66, no.12, p.4137-41, table, diagrs.) 10 refs.

Records from Fletcher's Ice Island and three stations in the Antarctic show that downward radiation from an ionosonde aerial is reflected from the sea water under the ice on which the station is built. As the ice is several wavelengths thick, an interference pattern is established which makes it possible to derive the thickness and dielectric constant of the ice and the direction from which ionospheric spread echoes arise. It is shown that range spreading of *F* echoes frequently occurs at vertical incidence in polar regions.—From author's abstract. (DLC.)

71311. **EVDOKIMOV, IU. B.,** *and* **A. G. KOMAROV.** Opyt opredeleniia vozrasta vulkanogennykh porod metodom izmereniia estestvennoĭ ostatochnoĭ namagnichennosti; k voprosu o nalichii kembriia na Poliarnom Urale. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy, nov. ser. 1961. t.67, Materialy po geologii Urala, sbornik statei, p.95-99, tables, graph.) 7 refs. Text in Russian. **Title tr.:** Experiment to determine the age of volcanic rocks by the method of measuring natural residual magnetization; on the existence of the Cambrian in the Polar Ural.

Reports a 1954-1958 study 67°-68°N., describing the Ordovician and pre-Ordovician volcanic formations established. Pre-Ordovician, presumably Cambrian formations, without fauna, were investigated in addition by determining their residual magnetization and the age. Paleomagnetic study indicated the pre-Ordovician rocks to be Middle Cambrian. (DLC.)

71312. **EVDOKIMOVA, T. I.** O toksichnosti nekotorykh mkhov i lishainikov v otnoshenii azotobaktera v pochvakh Karelii. (Pochvovedenie, 1962, no.8, p.88-92, tables.) 11 refs. Text in Russian. Summary in English. **Title tr.:** On the toxicity of several mosses and lichens with respect to *Azotobacter* in Karelian soils.

Reports a study of turfy-podsolic soils in the Kondopoga region and White Sea area of northern Karelia. Some mosses and lichens are established as toxic to the common nitrogen-fixing *Azotobacter chroöcoccus.* The high antibiotic properties of certain moss-lichen covers are shown, especially if such species as *Polytrichum commune, Cladonia alpestris* and *Stereocaulon paschale* are present. (DLC.)

ÉVENBAKH, E., *see* Zenkin, V. Iskusstvo narodov Amura. 1960. No. 76658

EVERETT, K.R., *see*

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

71313. **EVERETT, NEWTON B.,** *and* **L. MATSON.** The red cell and plasma volumes of the rat and of its individual tissues and organs during acclimation to cold. Fort Wainwright, Alaska, Oct. 1961. 18p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-35.) 21 refs. Also reported in *Journal of applied physiology* May 1961, p.557-61.

Study of rats kept at 5°C. for 4 hrs. to 6 weeks, with controls at 24°C. An increase in red-cell content in the whole animal was noted within 24 hrs. of cold exposure reaching in six weeks 20% above control level; increase in plasma volume was slightly less. Hematocrit of heart blood after six weeks was 44.8 against 41.5 for controls.

In general, the somatic parts showed an increase in blood volume, the visceral parts, a decrease. (CaMAI.)

71314. **EVERS, WILHELM.** The problem of coastal genesis, with special reference to the "strandflat", the "banks," or "grounds," and deep channels" of the Norwegian and Greenland coasts. (Journal of geology, Sept. 1962. v.70, no.5, p.621-33, illus., maps, diagrs., profiles.) 21 refs.

Formation and development of these geomorphic features are part of the history of the hinterland; the strandflat is part of a polycyclic *piedmont treppe* or staircase, as is the bankflat. The banks and grounds off the coasts are said to be complex glacial-fluviatile-marine deposits, preserved by ocean currents. Eustatic movements of sea level and isostatic adjustments of former ice-covered areas are also related to the strandflat problem. Author disagrees with the tectonic explanation of O. and H. Holtedahl (cf. No. 51793). Holtedahl adds comment (p.631-33) noting evidence supporting Evers' view and the difficulty in explaining such a large feature without some tectonic disturbance. (DGS.)

71315. **EVGENOV, NIKOLAĬ IVANOVICH, 1888-** , and **V. N. KUPETSKIĬ.** K piatidesiatiletiiu raboty gidrologicheskoĭ ékspeditsii Severnogo Ledovitogo okeana na sudakh "Taĭmyr" i "Vaĭgach," 1910-1915 gg. (Okeanologiia, 1961. t.1, vyp.3, p.571-74, map.) 10 refs. Text in Russian. **Title tr.:** On the 50th anniversary of the Hydrographic Expedition in the Arctic Ocean aboard the *Taĭmyr* and *Vaĭgach,* 1910-1915.

Reviews the program, scientific achievements and some leading members of this expedition which carried out hydrological, hydrobiological and other investigations in the Bering, Chukchi, East Siberian, Laptev, and Kara Seas and an east-west transit of the Northern Sea Route. Major discoveries were made: Severnaya Zemlya, Vil'kitskogo, Zhokhova, Starokadomskogo and Malyy Taymyr Islands. The results of this expedition, still of great value, are soon to be published. (DLC.)

71316. **EVGENOV, NIKOLAĬ IVANOVICH, 1888-** , and **V. N. KUPETSKIĬ.** O nauchnykh rezul'tatakh gidrograficheskoĭ ékspeditsii Severnogo Ledovitogo okeana na ledokol'nykh sudakh "Taĭmyr" i "Vaĭgach" v 1910-1915 godakh. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Sept.-Oct. 1962. t.94, vyp.5, p.367-79, table, graphs, diagrs.) 58 refs. Text in Russian. **Title tr.** On scientific results of the Hydrographic Expedition in the Arctic Ocean with the icebreakers *Taĭmyr* and *Vaĭgach* in 1910-1915.

Reviews the expedition under Vil'kitskiĭ, which discovered Severnaya Zemlya, Vil'kitskogo, Zhokhova, Starokadomskogo and other islands (cf. No. 2120, etc.). All its still uplublished results were ready for publication by the end of 1960. Some of its scientific achievements, hitherto unknown to investigators, are summarized in the fields of meteorology, aerology, auroras, astronomy, oceanography, ice conditions, geology, botany, etc. (DLC.)

71317. **EVLASHIN, L. A.** Políarnye siíaniia krasnogo tsveta tipa A v vysokikh shirotakh. (Geomagnetizm i aéronomiía, 1961. t.1, no.4, p.531-33, table, diagr.) 5 refs. Text in Russian. **Title tr.:** Red colored auroras of type A at high latitudes.

Analyzes the geographical distribution of red i.e. λ6300-λ6364 Å auroras from their spectra, obtained at Murmansk, Mys Shmidta, Piramida, and Bukhta Tikhaya polar stations during the season of 1958-1959. The probability of observing red auroras of RR (tops of rays), RP (spots) and DS (diffuse glow) types is found the lowest in the zone of the most frequent occurrence of auroral displays; and this probability is found to increase with distance north and south from the zone. Assuming that such auroras are induced by the short-range electrons, author arrives at a latidudinal distribution of electrons according to their energies. The highest energy is attributed to the electrons of the "tongs" (prominences) of the outer radiation belt, which penetrate the auroral zone. (DLC.)

71318. **EVLASHIN, L. S.** Prostranstvenno-vremennye variatsii vodoroda v políarnykh siíaniiákh i ikh sviáz' s magnitnymi vozmushcheniíami. (Geomagnetizm i aéronomiía, 1961. v.1, no.1, p.54-58, diagrs., graphs.) 9 refs. Text in Russian. **Title tr.:** Space-time variations of hydrogen in auroras and their relation to magnetic disturbances.

Reports on his observations of hydrogen emission spectrum in the auroras at Murmansk during the seasons of 1957-1959. The hydrogen emission was recorded in more than half the working nights of the three seasons. It was observed that a displacement of hydrogen emission from north and south to the zenith resulted in an increased intensity of the magnetic field, and that a reverse displacement decreased the field intensity. The hydrogen emission was found to appear at the moments of comparatively quite magnetic field, and in the diffuse forms of auroras is caused by the action of protons of a speed of less than 3,000 km./sec. The displacement of the region of hydrogen emission during a quiet field indicates that the cause of geomagnetic disturbances should be sought in the ionospheric processes, but is not due to the postulated gigantic circular currents outside the ionosphere. (DLC.)

71319. **EVLASHIN, L. S.** Vydaíushcheesia políarnoe siíanie 11.II. 1958 g. (Geomagnetizm i aéronomiía, 1962. t.2, no.1, p.74-78, illus., diagrs., graphs.) 11 refs. Text in Russian. **Title tr.:** The remarkable aurora of February 11, 1958.

Reports results of visual, photographic and spectrographic observations of the greatest aurora seen during 1957-1961 at Murmansk. Spectra were obtained with a C-180-S60 all-sky camera at 2, 10, and 12 min. exposures. Intensity, color, dynamics, and other features of this aurora are described. (DLC.)

EVLASHIN, L. S., *see also* Pudovkin, M.I., & L.S. Evlashin. Prostranstvennaía sviáz' políarnykh siíaniĭ . . . 1962. No. 74985

EVONUK, EUGENE, *see* Alaskan Science Conference 1961. 1962. No. 69644

71320. EVSEEVA, N. S. Iz sovremennogo semeĭnogo byta ĭakutov; po materialam BaĭĀgantaĭskogo naslega Ust'-Aldanskogo raĭona ĬAASSR. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. ĬAkutskiĭ filial. Nauchnye soobshcheniĭa, 1961. vyp. 6, p.15-21.) Text in Russian. **Title tr.:** Contemporary family life of the Yakuts; according to data from the Bayaga community in the Ust'-Aldan District of the Yakut ASSR.

Reports a study made in 1959 at Partizan Yegorov, a consolidated kolkhoz located in the former Bayaga *ulus*, near the confluence of the Aldan and Lena Rivers. A typical household consists of five - ten members: parents, children, and widowed or disabled grandparents. Housing, furnishings, position of wife, and survivals of traditional features in husband-wife relationship are described: division of work, behavior in public, courtship and marriage customs. Livelihood is based on wage labor at collective farm enterprises, and some privately-owned livestock: occasional pigs or cows, but no truck farming. Maternity and child care, traditional aspects in child naming, parent - child relationship, are discussed, also children's participation in household and collective farm work, education, etc. (DLC.)

71321. EWING, CLAIR E. Research and development in the field of geodetic science. Bedford, Mass., Aug. 1960. ix, 58 p. illus., maps, graphs, tables. (U.S. Air Force Cambridge Research Laboratories, Air Force surveys in geophysics no.124; AFCRL-TN-60-435.) 22 refs. Thesis, Industrial College of the Armed Forces, Washington, D.C.

Surveys briefly significant activities in geodetic research and development, in the fields of arc measurements, electronic surveying, eclipses and occultations, moon camera, satellites, and gravity measurements. Notable accomplishments in earth-size measurement included: the Hough or 1956 AMS Ellipsoid; Shoran and Hiran, Raydist, Geodimeter, Tellurometer, and Microdist; replacement of eclipse and occultation methods, temporarily, by the moon camera method, and eventually by the satellite method. Earth-shape determination is outlined by the gravity methods, particularly the recently tested airborne gravimeter, and the possible nuclear gravimeter. Of arctic interest were Phase III, IV, and V, 1956, and 1955, of the North Atlantic hiran tie, connecting Greenland with Iceland and Baffin Island. (CaMAI.)

71322. EWING, MAURICE, 1906– , *and* W. L. DONN. Pleistocene climate changes. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.931-41, maps.) 38 refs. *Also issued as:* Columbia University. Lamont Geological Observatory, Contribution no. 413.

Discusses the ice-free condition of the Arctic Ocean as the direct cause of the Pleistocene glaciation in the Northern Hemisphere. Evidence indicating an open Arctic Ocean during the Pleistocene is found in studies of air temperature gradients, postglacial uplifts, arctic seismicity, and the overall heat budget of the arctic area. Glacial-interglacial stages of the Pleistocene are explained by an oscillating meteorological model, which provides a direct source for the large snow accumulation in the regions around the Arctic Ocean and for alternating ice-free and ice-covered states of the ocean itself. Southern Hemisphere glaciation, except for Antarctica, is explained as the result of global cooling produced by the extensive glaciation in northern regions. (DLC.)

EWING, MAURICE, 1906– , *see also*

Donn, W.L., & M. Ewing. Atmospheric waves . . . 1962. No. 71075

Donn, W.L., & *others*. Pleistocene ice volumes, sea-level. 1962. No. 71076

Heezen, B.C., & M. Ewing. Mid-Oceanic Ridge . . . through Arctic Basin. 1961. No. 72089

71323. EWY, ZYGMUNT, *and* **W. KUHL.** Wpływ oziębienia przy strzyży na przemianę energetyczną u owiec. (Acta physiologica polonica, 1961. v.12, fasc.5, p.731-38, illus., table.) 24 refs. Text in Polish. Summary in English. **Title tr.:** Effect of cooling due to shearing, upon energy metabolism in sheep.

Shearing was followed by increased heat loss. To maintain constant body temperature, energy metabolism was raised from 1.233 to 1.506 Kcal/kg /h; respiratory frequency was reduced by 50% and respiratory capacity increased by 26%. O_2-utilization increased 74.6%, Co_2-elimination by 63.5%, and body temperature dropped 1.5%. (DNLM.)

EXPÉDITIONS POLAIRES FRANÇAISES, *see*

Bauer, A. Interprétation des résultats . . . 1961. No. 70073

Carbonnell, M. Application de la méthode . . . 1961. No. 70610

71324. EYDT, H. RONALD, *and others.* The structural aspect of peat. *(In:* National Research Council of Canada . . . Proceedings of the Seventh Muskeg Research Conference . . . 1961. p.12-35, map, graphs.) 5 refs. *Other authors:* J.M. Stewart *and* N. W. Radforth.

Radforth in introduction points out that the water factor determines the special control and characteristic features of vegetation association with peat. One group of examination techniques preserves the natural spatial arrangement, while it reveals the kinds of tissues present. The second group destroys the natural spatial arrangement during pollen analysis and visual examination. Eydt discusses the paleoecological sequence of selected peat samples from Fort Churchill, Man. Plant change and water-table fluctuation are believed to have taken place in this area. Stewart compares cuticular analysis with other methods by means of a core from the Capetown Bog near Hamilton, Ont.; the new cuticular method appears to be useful in determining peat structure. (DLC.)

71325. EYTHÓRSSON, JÓN PÉTUR, 1895– . Report on sea ice off the Icelandic coasts, Oct. 1959 - Sept. 1960. (Jökull, 1960. ár 10, p.27-28.)

Presents data on the distance of the ice boundary from Cape Straumnes, as observed at irregular intervals. The coasts were free of drift ice during the period; a few icebergs or blocks of ice were sighted from the northwestern promontories. (CaMAI.)

71326. EZHOVA, VERA. Fakel vo mgle.(Fizkul'tura i sport, Nov. 1961. god 31, no.11, p.28-29, port.) Text in Russian. **Title tr.:** A beacon in the dark.

Biographical sketch of the philosopher and historian, N.G. Chernyshevskiĭ while a political deportee to Siberia: the journey under guard through the taiga of Yakutia, the years 1872-1883 as prisoner in the Vilyuysk fort. (DLC.)

71327. **F., K.** Nord-Norges høyeste fjell. (Naturen, 1962. årg. 86, nr. 6, p 380-81.) Text in Norwegian. **Title tr.**: North Norway's highest mountain.

Reviews early estimates of heights and presents results of recent measurements by the Norwegian Geographic Survey. The highest peaks are Oksskolten in the Okstind Mts.: 1915.35 m., Suliskongen in Sulitjelma: 1913 m., Okshornet in the Okstinds; 1907 m., and Storsteinfjellet in Skjomen; 1901 m. Aside from other peaks with the same massifs, only Jiekkevarri in Troms, at 1833 m., is more than 1800 m. above sea level. (DGS.)

FAAS, RICHARD W., *see* Hussey, K.M., & R.W. Faas. Foraminiferal paleoecology . . . 1961. No. 72274

FABIANO, E. B., *see* Knapp, D.G. . . . magnetic storms. . . 1961. No. 72864

71328. **FABRICIUS, JENS S.** Danish ice reconnaissance in Greenland. *(In:* International Geographical Congress 1960. Physical geography . . . 1961. p.57-61.) 10 refs.

Outlines work and publications of the Nautical Section of the Danish Meteorological Institute dealing with ice conditions in Davis Strait since 1890 and in Denmark Strait, Greenland Sea, and Barents Sea since 1895. The Danish government re-opened the former U.S. base Narssarssuaq in 1959, and twice-weekly reconnaissance flights facilitate year-round shipping in Greenland waters. (DGS.)

71329. **FADEEV, N. S.** Osobennosti biologii kambal. (Priorda, Mar. 1961. god 50, no.3, p. 113.) Text in Russian. **Title tr.**: Peculiarities of plaice biology.

Author describes several species of these bottom fish swimming in the eastern Bering Sea at depths from about 0.5 - 1 m. and down, with an undulating movement. This unusual phenomenon is assumed to be associated with spawning. (DLC.)

71330. **FAEGRI, KNUT, 1909-** Maps of distribution of Norwegian plants, I: the coastal plants. Oslo, Oslo University Press, 1960. 134 p. 162 maps on 54 plates. About 350 refs.

Presents maps of the distribution of 156 plants, with notes on earlier maps, first Norwegian record, reliability of data, altitude limits, habitat. (NPOslo.)

FAFIOTTE, MARC, *see* Barbier, D., & *others*. Mission aérieene . . . 1962. No. 70023

71331. **FAGAN, L. F.**, *and* **J. C. MOTT.** Chemoreceptors and shivering. (Journal of physiology, 1961. v.159, no.1, p.26P-27P.) 3 refs.

Presents summary of results from experiments with rabbits. The five kinds of techniques described "support the idea that chemoreceptor stimulation inhibits shivering." (DLC.)

71332. **FAHRIG, WALTER FREDERICK, 1926-** Petrology and geochemistry of the Griffis Lake ultrabasic sill of the central Labrador Trough, Quebec. Ottawa, Queen's Printer, 1962. ix, 39 p. illus., maps incl. 3 fold. in pocket, diagrs., graphs, tables. (Canada. Geological Survey. Bulletin 77.) 26 refs.

Describes in detail this "alpine type" peridotite sill mapped by author in 1950-51 (No. 28969). The ultrabasic rocks in the west half of this map (55° - 55°15′N. 65°30′- 66°W.) were probably originally feldspathic peridotite with 50-60% olivine. Orientation of olivine crystals suggests their intrusion in a silicate liquid of gabbroic composition. Lower and upper parts of the sills are more gabbroic than the middle parts. Most of these ultrabasic sills are overlain by thick gabbro sills, but chemical data suggest that the ultrabasic rocks and the gabbros were intruded independently and are not the result of fractional crystallization in place. The ultrabasic rocks may have been intruded prior to or during the folding of the enclosing volcanic rocks. (DLC.)

FAIL, J. H., *see* Fuhrman, F.A., & *others*. . . . tissue respiration . . . 1961. No. 71524

71333. **FAĬNBERG, L. A.** Terminologiĭa rodstva nganasan kak istoricheskiĭ istochnik. *(In:* Akademiĭa nauk SSSR. Institut ėtnografii. Trudy t. 78, Sibirskiĭ . . . 1962, p.226-37.) 7 refs. Text in Russian. **Title tr.**: Nganasan kinship terminology as historical source.

Study of this Samoyed tribe based partly on field work with the Northern Ethnographic Expedition's Taymyr party in 1957. Nganasan kinship terminology preserves vestiges of an erstwhile levirate and sororate, also intermarriage between older and younger generations; matrilineal and patrilineal descent is strongly differentiated. The hypothesis that the Nganasan social structure developed within the framework of a Tungus system is considered unlikely. Affinities with the Nenets kinship pattern, also phonetic similarities in terminology, favor an autochthone Samoyedic origin. No traces of a Paleosiberian, supposedly proto-Yukaghir, ethnic substratum appear in Nganasan kinship terminology. (DSI.)

FAĬNBERG, L. A., *see also* Dolgikh, B.O., & L.A. Faĭnberg. Some parallel features . . . Samoyeds and Eskimos. 1959. No. 71062

71334. **FAĬNSHTEĬN, G. KH.**, *and* **M. M. ODINTSOVA.** Zakonomernosti razmeshcheniĭa rossypnykh mestorozhdeniĭ almazov v severnoĭ i tsentral'noĭ chastiakh Sibirskoĭ platformy. (Akademiĭa nauk SSSR. Komissiĭa po probleme zakonomernosti razmeshcheniĭa poleznykh iskopaemykh. Zakonomernosti razmeshcheniĭa poleznykh iskopaemykh, 1960. t.4, Rossypi, p.179-91, table.) 6 refs. Text in Russian. **Title tr.**: Distribution laws of diamond-placer deposits in the northern and central parts of the Siberian platform.

Reports a study with special attention to the Angara-Vilyuy trough and the Vilyuy syncline. The age of diamond placers is described; Carboniferous (Visean), Lower Permian, Triassic-Jurassic, Tertiary, and Quaternary placers are distinguished. Only Rhaetic-Lias and Cenozoic alluvial placers are considered of productive value. The formation of diamond placers is outlined noting its five stages. Mineralogic composition of diamond-bearing deposits is discussed. Rhaetic-Lias fluviolacustrine, Lias marine-lagoon, and Cenozoic alluvial deposits are found the most promising for diamond-placer search. (DLC.)

FAĬNSHTEĬN, G. Kh, *see also* Odintsova, M.M., & G.Kh. Faĭnshteĭn. O geologii i vozraste drevnikh almazonosnykh rossypeĭ . . . 1961. No. 74466

71335. FAIRBAIRN, CLARENCE. New nickel from the North. (C-I-L Oval, Feb. 1962. v.31, no.1, p.14-17.)

Describes the International Nickel Co. plant at Thompson, Manitoba, 400 air miles north of Winnipeg; it went into production in 1961 to provide 75 millions lbs./yr. Exploration by airborne ore detectors as well as ground surveys at $10 million cost led to discovery of the Thompson deposits. Development started in 1956; 30,000 tons of material were moved by tractor train during the 1956-57 winter, a 70-mi. round trip from Thicket Portage on the Hudson Bay Railway. In 1956 a 30 mi. rail link was built from Thompson to the railway. Mining is by horizontal cut and fill methods. The ore is refined at Thompson and shipped out as cathode nickel to world markets for use in electroplating and 3,000 alloys. A 187 mi. road between The Pas and Thompson is planned. A pulp and paper mill is forecast for the area. (CaOGB.)

71336. FAIRFIELD, D. H. Ionospheric current patterns in high latitudes. University Park, Pa., Oct. 15, 1962. 65 p. maps, diagrs., graphs, tables. (Pennsylvania State University. Ionosphere Research Laboratory. Contract AF 19(604)-4563, Scientific report no. 171, *also* U.S. Air Force, Cambridge Research Laboratories, AFCRL-62-1006.) 27 refs.

Magnetograms for the IGY period were obtained from 25 stations north of 60° north geomagnetic latitude. Detailed study was made of three international storm days, 15 international quiet days and parts of seven "very quiet intervals." Current vectors representing directions and approx. intensities of the perturbing currents in the ionosphere over the various stations were computed from observed perturbations in the horizontal magnetic field components. Plotted on polar maps, these vectors show the pattern of current flow. Besides the irregular disturbances recorded on magnetograms, a smooth diurnal variation caused by Sq (solar quiet) currents is also shown. Exceptions to idealized DS current systems were found, but closest agreement was achieved during the larger disturbances. Quiet period patterns were subject to greater distortion. Further study is recommended by periods of minimum solar activity. (DWB.)

71337. FAIRLEY, H. BARRIE. Metabolism in hypothermia. (British medical bulletin, Jan. 1961. v.17, no.1, p.52-55.) 70 refs.

Discusses O_2-consumption and requirement as indicated by arteriovenous O_2-differences, muscle activity, and oxygen carriage; O_2-requirements by brain, heart, liver or kidney; CO_2 and acid-base balance in hypothermia; effects of circulatory occlusion on hypothermia. (DNLM.)

71338. FAKTOROVICH, KSENIĬA ABRAMOVNA, 1929- . Zhirovoĭ obmen semgi v sviazi s osobennostiami biologii razmnozheniia; po dannym gistologicheskogo analiza pecheni. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khoziaĭstva. Izvestiia 1959. t.48, p.94-100, illus.) 7 refs. Text in Russian. Title tr.: Fat metabolism of salmon as related to the biology of reproduction, based on a histological analysis of the liver.

Reports a study based on material collected in the Varzuga River of Kola Peninsula at different seasons. The quantity of reserve fat in the liver varied much between the groups and depended on the preceding feeding conditions. Differences were also noted between fish wintering in the lower river and those from the sea. Changes before and during spawning and during downstream migration are also noted. (DLC.)

71339. FALCONER, GEORGE. Glaciers of northern Baffin and Bylot Islands, NWT. Ottawa, Queen's Printer, 1962. 31 p. & 27 p. of photos, fold. map. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Geographical paper no.33.) 18 refs.

Presents first in a planned series of regional inventories of Canadian glaciers, as part of the Geographical Branch terrain analysis and glaciological research programs. The 59 glaciers specifically dealt with are identified by number on the index map, at scale 1 in.: 7 mi. Evidence of possible glacial fluctuations is summarized for the Brodeur and Borden Peninsulas, Bylot and part of northeast Baffin Islands. Termini of a half dozen glaciers were visited and photographed in 1961. Marginal variations seem to have occurred only in certain small icefields and valley glaciers; the marked recession of the interior icefields of northern Baffin was probably underway prior to the earliest (1948) photographs; the larger valley glaciers, stable for 15 or more years, may be close to their most advanced positions in postglacial time. (DGS.)

71340. FALCONER, GEORGE. Patterned ground under ice fields. (Journal of glaciology, June 1962. v.4, no.32, p.238-40, illus.) 5 refs.

Reviews, in brief, patterned ground emerging from small receding ice fields as observed on aerial photographs made in 1949 and 1958 in northern Baffin Island. Large high-centered tundra polygons with diameters about 50 m. were identified. Similar polygons extend over much of the surrounding country and their size varies little with distance from the ice field. These polygons are actually melting out from under the glacier ice. (DLC.)

FARKAS, MARION *see* Mestyán, G., & *others*. Effect of local thalamic heating . . . 1960. No. 73954

FARNUM, J. F., *see* Nakamura, M., & *others*. Protective action glycerol . . . 1962. No. 74207

FARR, D. A., *see* Fuhrman, F.A., & *others*. . . . tissue respiration . . . 1961. No. 71524

71341. FARRAND, WILLIAM RICHARD. Frozen mammoths and modern geology. (Science, Mar. 17, 1961, v.133, no.3455, p.729-35, illus., tables, map.) 34 refs. Columbia University. Lamont Geological Observatory, Contribution no. 480.

Reviews information to date, mostly from European sources: taxonomy and evolution, habitat and ecology, and geographic distribution: north of 60° N. from the Yenisey in Siberia east to central Alaska. Diet, time (geological) of existence, modes of death and preservation are outlined. The problem of extinction of the species is not discussed. Remarks on modes of death, etc. sum-

marized in French in *Nature Science-Progrès*, Aug. 1961, p.350-51. (DLC.)

71342. FARRAND, WILLIAM RICHARD, *and* **R. T. GAJDA.** Isobases on the Wisconsin marine limit in Canada. (Geographical bulletin, May 1962. no. 17, p.5-22, graph, table, maps incl. 2 fold.) 52 refs.

Reports preliminary results of a field and literature study carried on since 1948, with an isobase map at scale 1 in.: 150 mi. revised from that presented to the International Quaternary Association Congress in Warsaw, 1961. Map and text deal with altitude of the maximum extent of postglacial marine submergence, i.e., the marine limit, throughout that part of North America covered by the Laurentide-Baffin-Ellesmere ice-sheet complex. The pattern of isobases drawn on the marine limit, supplemented by isobases on glacial lakes, includes a major dome centered on Hudson Bay and minor cells over late-glacial remnants such as the Keewatin ice divide and Baffin and Ellesmere Islands. Radiocarbon dates and uplift curves show this uplift to be truly glacio-isostatic: 7,000 to 10,000 yrs. B.P. (DGS.)

71343. FARRAND, WILLIAM RICHARD. Postglacial uplift in North America. (American journal of science, Mar. 1962. v.260, no.3, p.181-99, graphs, tables, map.) 36 refs. Columbia University. Lamont Geological Observatory, Contribution no. 526. Air Force Cambridge Research Laboratories Contract AF 19(604) 7442.

Presents and interprets uplift curves constructed from radiocarbon-dated marine features in the Great Lakes area and in northern Canada: James Bay, Keewatin ice divide, the Southampton, Somerset, Prince of Wales, Victoria, and Ellesmere Islands, also Coronation Gulf, and Melville Peninsula. The marine features are of late- or post-Wisconsin age and related to isostatic movements, the major parts of which occurred before complete disappearance of the ice. The curves presented show a strongly decreasing rate of uplift from deglaciation to the present, and a time-displacement seemingly correlated with the time of deglaciation in the area concerned. The uplift curves also indicate that northwestern Victoria and northern Ellesmere Islands had an ice cover of comparable thickness to that over the Great Lakes; this would place the Wisconsin ice border considerably to the north or northwest of the islands. (DGS.)

FARRAND, WILLIAM RICHARD, *see also*

Donn, W.L., & *others.* Pleistocene ice volumes, sea-level. 1962. No. 71076

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

71344. FARRELL, R. K., *and* **M. A. LLOYD.** The life cycle of the salmon poisoning fluke. *(In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.104-107.) 12 refs.

Outlines the life cycle of *Nanophyetus salmincola* from the definite host (dog, bear, raccoon) through feces to a mollusc, then to salmon and back to definite host; pathogenicity to fish; rate of infection; etc. (CaMAI.)

FARRELL, R. K., *see also* Alaskan Science Conference 1961. 1962. No. 69644

71345. FASTIE, WILLIAM G., *and others.* Far ultra-violet auroral spectra with a rocket Ebert spectrophotometer. (Annales de géophysique, Jan.-Mar. 1961. t.17, fasc. 1, p.109-115, diagrs., graphs.) 6 refs. *Other authors:* H.M. Crosswhite, *and* T.P. Markham.

Reports a scanning Ebert spectrophotometer flown into or just under an auroral cloud with an Aero-Bee Hi rocket from Fort Churchill, Man., on Feb., 27, 1960. Spectra from 1200 A. to 3500 A. were obtained. Bands of N_2 and a line of O were observed. Bands of NO were not found in the spectra, nor was the Lyman alpha line of H observed. Description of the instrument is given, and field observations are outlined.–From authors' summary. (DGS.)

FAULCONER, A., *Jr., see* Albin, M.S., & *others.* Hypothermia . . . spinal cord . . . 1961. No. 69667

FAVORITE, FELIX, *see*

Dodimead, A.J., & F. Favorite. Oceanographic atlas . . . 1961. No. 71052

Pacific Science Congress. 1961. No. 74619

FAVOUR, C. B., *see* Robertson, O.H., & *others.* Physiological changes . . . spawning. 1961. No. 75142

71346. FAWCETT, EDWIN B. Six years of operational numerical weather prediction. (Journal of applied meteorology, Sept. 1962, v.1, no.3, p.318-32, illus., maps, graphs, tables.) 20 refs.

Discusses significant developments in this method of forecasting (NWP) at the U.S. Weather Bureau's National Meteorological Center at Suitland, Md. since 1956. Equipment is described, including an IBM 7090 computer and an IBM 1401 printer, also a specially developed Curve Follower and an Automatic Data Communicator. The forecast area has included most of the Northern Hemisphere since 1957, and expansion southward to 6° N. commenced in 1962, centered on the North Pole. Processing and forecasting procedures are outlined; an example of a 500 mb. 36-hr. barotropic forecast for the North America-North Atlantic sector is noted and mapped. (DWB.)

71347. FAY, FRANCIS H. The distribution of waterfowl to St. Lawrence Island, Alaska. (Wildfowl Trust, 12th annual report, 1961, p.70-80, map, tables.) 9 refs.

Reports this distribution from previous accounts and own discontinuous observations during 24 months of 1952-1960. Of the 22 species represented on the island, 12 breed there and the rest occur irregularly or as migrants. Long-tailed ducks *(Clangula hyemalis)* and king eiders *(Somateria spectabilis)* have their major wintering area in adjacent waters; in summer the island is an important breeding and molting area for emperor geese *(Anser canagicus),* Pacific eiders *(Somateria mollissima v-nigra),* northern pintails *(Anas acuta acuta),* and long-tailed ducks. Seasonal occurrence and some features of natural history of the more common species are described. The avifauna of St. Lawrence Island is more closely affiliated with that of North America than Asia. A decrease in abundance of North American forms is indicated by a comparison of the Eskimo's waterfowl harvests of one-to-two thousand years ago with those of the present. (CaONA.)

71348. **FAY, FRANCIS H.** The Pacific walrus. (Alaska sportsman, Nov. 1960. v.26, no.11, p.13-15, illus.) Alaska wildlife library, no. 7

Describes the physical characteristics, family life, food habits, and economic value of *Odobenus rosmarus divergens*. It is present in tens of thousands off the Alaskan coast in the Bering and Chukchi Seas. The practice of killing for the ivory tusks and wasting flesh and hides, is criticized. Good photographs. (DI.)

FEDANOV, VLADIMIR PETROVICH, *see* Khokhlov, I.V., & *others*. Razrabotka ugol'nykh mestorozhdeniĭ . . . 1960. No. 72770

71349. **FEDCHENKO, K. K.** O napravlennoĭ anizotropii v mekhanizme padeniĭ intensivnosti kosmicheskikh luchei tipa Forbusha. (Geomagnetizm i aèronomiîa, 1961. t.1, no.3, p.346-53, tables, graphs.) 6 refs. Text in Russian. **Title tr.:** The directional anisotropy in the mechanism of intensity drop of Forbush type cosmic rays.

Studies 17 occurrences of the Forbush effect from the data of 53 stations including 12 in the Arctic, which had the records of neutron intensity of cosmic rays during the period July 1957 - Dec. 1958. The Forbush effect is found to be produced by the mechanism located asymmetrically with respect to sun-earth line, and has, therefore, a directed anisotropy as predicted by A.G. Fenton. (DLC.)

71350. **FEDCHENKO, K. K.** Sviaz' intensivnosti kosmicheskikh luchei s solnechnoĭ aktivnost'iu. (Akademiîa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniîu Mezhdunarodnogo geofizicheskogo goda, VII razdel programmy MGG: kosmicheskie luchi. Sbornik statei, 1960. no.2, p.137-41, graphs.) 9 refs. Text in Russian. Summary in English. **Title tr.:** The correlation between cosmic ray intensity and solar activity.

Investigates the geoactive effects of solar corpuscular streams from solar spots and calcium floculae. The daily mean values of intensities of the hard and the neutron components for the periods of maximum (1958) and minimum (1954-1955) solar activity were obtained at Bukhta Tikhaya (hard component 1954-1955), Ostrov Kheysa (hard and neutron components 1958), and at the Moscow station (hard and neutron components 1954-1955, 1958). The investigation shows that the effect of cosmic rays associated with the solar activity at its maximum depends mainly on spots but not floculae. An attempt is made to interpret the mechanism of the solar geoaction in this case. (DLC.)

71351. **FEDCHENKO, M. A.** O gruppovom sostave gumusa pochv lugovikovykh vyrubok Arkhangel'skoĭ oblasti. (Pochvovedenie, 1962, no.1, p.49-58, tables.) 14 refs. Text in Russian. Summary in English. **Title tr.:** Humus-group composition of the soils on hairgrass-meadow cuttings in Arkhangel'sk Province.

Reports a soil study in the Kvandozero lumbering concern's forest where the main plant in the cut-over areas is hairgrass *(Deschampsia flexuosa* Trin.). This ground cover varies from sparse on the 1-3 year-old cuttings to dense on the 6-8 year-old. From tests as to qualitative composition of the humus, organic matter, humic and fulvic acids, nitrogen, etc. are distinguished and reported. The organic matter mobility and the formation of fulvic acids increase substantially in the years immediately after cutting and are a result of the podsol-forming processes. In 4-8 years after cutting, humic acids increase. Other soil changes also are summarized. (DLC.)

FEDOR, EDWARD J., see

Fisher, B., & E.J. Fedor. Cardiac temperature gradients . . . 1961. No. 71424

Fisher, B., & *others*. Temperature gradients . . . 1961. No. 71425

71352. **FEDOROV, A. F.,** *and* **V. S. ZLOBIN.** Gamma-fon poberezh'îa i nekotorykh raĭonov Barentseva morîa. (Gigiena i sanitariîa, Apr. 1962. god 27, no.4, p.90-91, table.) Ref. Text in Russian. **Title tr.:** Gamma-ray background of the coast and some areas of the Barents Sea.

Reports on observations conducted at mid-day and midnight during Mar.-Sept. 1959. In the open sea the background both over the water and in the water was measured. Radiation dropped sharply with depth, but increased slightly near the bottom of the sea. (DLC.)

71353. **FEDOROV, EVGENIĬ KONSTANTINOVICH, 1910-** Aktivnoe vozdeĭstvie na meteorologicheskie protsessy. (Akademiîa nauk SSSR. Vestnik, Sept. 1962. god 32, no.9, p.78-85.) Text in Russian. **Title tr.:** Artificial influencing of meteorological processes.

Surveys various ways and attempts to modify and control natural processes affecting weather conditions, as carried out in foreign countries and in the Soviet Union. The scheme to construct a dam across Bering Strait and pump water from the Pacific into Arctic Basin or vice versa is mentioned (p. 84) with critical comment. (DLC.)

71354. **FEDOROV, EVGENIĬ KONSTANTINOVICH, 1910-** . Ob itogakh nauchnoĭ deîatel'nosti i vnedreniîa zakonchennykh nauchnykh rabot Akademii nauk SSSR za 1960 g. (Akademiîa nauk SSSR. Vestnik, Mar. 1961. god 31, no.3, p.12-26.) Text in Russian. **Title tr.:** The results of scientific activity and application of scientific achievements of the Academy of Sciences of the USSR in 1960.

Reviews general development of science and technology of the Soviet Union and role of the Academy as the leading scientific center. First regular annual arctic service by the atomic icebreaker *Lenin*, new methods of insect control, study of physical and chemical processes in frozen ground, forest regeneration in Karelia, geological and hydrological explorations of the Kola and Komi Branches of the Academy, are cited among other achievements. (DLC.)

71355. **FEDOROV, K. P.** K faune nazemnykh molliuskov Tsentral'noĭ Îakutii. (Akademiîa nauk SSSR. Sibirskoe otdelenie. Îakutskiĭ filial. Nauchnye soobshcheniîa, 1960. vyp. 3, p. 79-81.) 3 refs. Text in Russian. **Title tr.:** On the terrestrial mollusc fauna of central Yakutia.

Describes seven species of pulmonate gastropods found in the Megino-Kangalasskiy, Yakutsk and Gornyy regions of Yakutia. They belong to fam. Succineidae, Pupillidae, Valloniidae and Limacidae. Each species is described noting its distribution and life conditions. Several are immediate hosts of helminths which cause disease

in the hare *Lepus timidus*, and in other animals and birds. (DLC.)

71356. FEDOROV, S. S. O kolebaniiakh chislennosti atlanticheskо-skandinavskikh sel'dei. (Rybnoe khoziaistvo, 1962. god 38, no.7, p.10-16, illus.) Text in Russian. **Title tr.**: Fluctuation in the quantity of Atlanto-Scandinavian herring.

Discusses research on the causes of these fluctuations, recent Norwegian catches, water temperatures and size of year classes, effect of catches of immature fish and winter herring, class size and catches. (DLC.)

FEDOROV, S. S., *see also* Marti, IU. IU., & *others*. Prichiny umen'sheniia zapasov . . . sel'dei. 1961. No. 73847

71357. FEDOROVA, N. I. Fizika verkhnei atmosfery. (Akademiia nauk SSSR. Vestnik, July 1962. god 32, no.7, p.112-14.) Text in Russian. **Title tr.**: Physics of the upper atmosphere.

Reports an interdepartmental conference in Moscow, May 8-10, 1962, including notes on airglow observations at Yakutsk and the Loparskaya station in Kola Peninsula. (DLC.)

71358. FEDOROVA, N. I. K voprosu o nabliudenii v políarnykh siianiiakh nulevykh polos IPG N_2 λ 10420 Å i meinelovskoi otritsatel'noi sistemy N_2^+ λ 11109 Å. (Geomagnetizm i aeronomiia, 1961. t. 1, no. 5, p. 702-708, table, graphs.) 21 refs. Text in Russian. **Title tr.**: Observations of zero bands IPG N_2 λ 10420 Å and Meinel's negative system N_2^+ λ 11109 Å in auroras.

Reviews the discovery in 1950 and the subsequent investigations of these auroral spectral features; and reports on the observations made in 1959, in examination of the discoverer's and others' investigations. Weak emissions of the bands were observed in the spectral range of 9000-11500 Å, but their intensities were at variance with both the observed and calculated values given by previous investigations. (DLC.)

71359. FEDOROVA, N. I. Ob usilenii emissii λ 10830 Å v spektrakh políarnykh siianii. (Akademiia nauk SSSR. Mezhduvedomstvennyi komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: políarnye siianiia i svechenie nochnogo neba. Sbornik statei, 1961. no.5, p.42-46, tables, graphs.) 5 refs. Text in Russian. Summary in English. **Title tr.**: On enhancement of λ 10830 Å emission in auroral spectra.

Discusses the enhancement of the Q-branch of λ 10830 Å in the auroral spectrum at Zvenigorod on Feb. 10-11, 1958, and at Loparskaya on Mar. 31-Apr. 1, 1960. The recorded enhancement of the λ 10830 Å emission is considered in both cases to be correlated with auroras. The tentative explanation of the enhancement of λ 10830 Å emission by a superposition of Helium line 2^3P-2^3S (λ 10830 Å) has not been confirmed by the observations at Loparskaya. (CaMAI.)

71360. FEDOROVA, N. I. On emission λ 10830 Å aurorae. (Planetary and space science, Jan. 1961. v.5, no.1, p. 75.) 2 refs.

Reports two spectral observations of bright auroral forms at Loparskaya (68°38′ N. 33°22′ E.) during Mar. 31 - Apr. 2, 1960. Enhancement of λ 10830 Å was recorded as well as a very strong line ^2D - ^2P NI λ 10400 Å. The relations of the intensities of the *Q* and *R* branches of the band (5,2) OH were 3.5 and 3.2. (DLC.)

71361. FEDOROVA, N. IA. Nabliudeniia za deformatsiiami zdanii v usloviiakh vechnoi merzloty. (Akademiia nauk SSSR. Dal'nevostochnyi filial, *Vladivostok*. Sbornik rabot po inzhenernomu merzlotovedeniiu, 1959, p.25-29, table, graphs, diagrs.) Text in Russian. **Title tr.**: Observations on foundation deformation under permafrost conditions.

Reports on the structural condition of several eight-unit apartment houses built in 1952-1954 in Sotsgorodok, 52°N. 113°30′E. Geologic section of the sites is described, as are the foundations and their deformations, as studied in 1955-1956. Subsidence and heaving are discussed and a plan is presented for the construction of foundations in the active layer and prevention of deformation. A moisture-repellent material is recommended for placing around the foundation. (DLC.)

FEDOROVA, R. V. *see*

Korzhuev, S.S., & R.V. Fedorova. Chekurovskii mamont . . . 1962. No. 72997

Krenke, A.N., & R.V. Fedorova. Pyl'tsa . . . 1961. No. 73112

Puminov, A.P., & R.V. Fedorova. Torfianik . . . 1961. No. 74988

71362. FEDOROVA, S. G. Pis'mo na morzhovom klyke. (Moskva. Gos. istoricheskii muzei. Ezhegodnik, 1958 *pub.* 1960, p.147-61, illus., table.) 20 refs. Text in Russian. **Title tr.**: Letter on a a walrus tusk.

Cites and discusses a message carved on the longitudinal section of a 36 x 6.5 cm. tusk in the Museum collection. It is dated June 30 - July 15, 1791, and was written by the Chukchi Nikolai Daurkin, employed as interpreter by J. Billings. It records Daurkin and Ivan Kobelev's trip with 17 boats from Chukotskiy Nos to the Diomede Islands and North American coast, reached June 11th. A biographical sketch of Daurkin as cartographer and explorer and of the Cossack officer and explorer Kobelev are added, with note of their participation in Billing's expedition. (DLC.)

71363. FEDOSEEV, G. A. O sostoianii zapasov i raspredelenii tikhookeanskogo morzha. (Zoologicheskii zhurnal 1962. t.41, vyp.7, p.1083-89, map.) 7 refs. Text in Russian. Summary in English. **Title tr.**: Condition of stock and distribution of Pacific walrus.

Report based on air photography carried out in the fall of 1960 over the eastern East Siberian Sea and coastal waters of Magadanskaya Oblast'. The number of animals was estimated at 50,000, most of them concentrated in the Vrangel' and Geral'd Island area. Types of rookeries and distribution according to sex are also discussed. (DLC.)

71364. FEDOSEEVA, S. A. Nakhodki neolita na reke Amge. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskii filial. Nauchnye soobshcheniia,

1960. vyp.3, p.86-90, illus.) 3 refs. Text in Russian. **Title tr.:** Neolithic finds on the Amga River.

Describes the field work of an archeological party sent out in 1958 by the Institute of Language, Literature and History of the Academy of Sciences' Yakut Branch. It excavated a burial complex and studied cliff drawings discovered by Z.V. Gogolev in 1956 on the middle Amga. The four colored contour drawings of reindeer and so-called shaman masks are related to magic hunting rites. A survey of the burial complex yielded stone implements and fragments of thin-walled pottery vessels with traces of herringbone ornamentation. The pictographs as well as the burial compound are considered neolithic. (DLC.)

71365. FEDOSOV, M. V. Formirovanie khimicheskoĭ osnovy pervichnoĭ produktivnosti v severnykh moriakh. (Moskva. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Trudy 1962. t.46, p.13-18, tables.) 7 refs. Text in Russian. **Title tr.:** Formation of the chemical basis of primary production in the northern seas.

Discusses the place of plant (mainly phytoplankton) production and of continental runoff as biogenic sources of the sea; size of runoff and of photosynthesis in the Atlantic North and the Arctic; local factors in marine productivity, including snow and ice. (DLC.)

71366. FEDOSOV, M. V. *and* **V. ANDREEV.** Hydrochemical observations in the Davis Strait in Spring 1958. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions. 1961. v.149, Contributions to Special IGY Meeting 1959, p.93-96, illus., tables, map.)

Account of observations obtained on three sections, running from the west coast of Greenland to the middle of the strait. Temperature and salinity, diurnal O_2-maxima and minima, biochemical O_2-demand, and phosphates are reported. (DI.)

71367. FEDOSOV, M. V., *and* **I. A. ERMACHENKO.** Silica content of northern waters. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v.16, p.23-25, tables.) 2 refs.

Study of water samples from the Norwegian and Barents collected during 1958-59 from depths down to 1000 m. or more. The amount of silicon, both dissolved and undissolved, decreased toward east, and (in the Norwegian Sea) also toward autumn-winter. The role of Si in phytoplankton growth is noted. (DI.)

71368. FEDOSOV, M. V., *and* **I. A. ERMACHENKO.** Usloviia formirovaniia gidrokhimicheskogo rezhima i pervichnoĭ produktivnosti Norvezhskogo i Grenlandskogo morei. (Moskva. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Trudy 1962. t.46, p.18-38, illus., tables, maps.) 16 refs. Text in Russian. **Title tr.:** Conditions of formation of the hydrochemical regime and of primary production in the Norway and Greenland Seas.

A study of conditions in the photic, intermediate and bottom layers of the Norway-Greenland basin. In the photic (0-50 m.) layer, production of new organic matter was several times higher than in the intermediate. It was based largely on the runoff from the Scandinavian Peninsula and the materials of melting ice carried from the Arctic Basin and from island-glaciers. A considerable amount of biogenic matter of the photic layer is also contributed by the inflow of Atlantic water masses. (DLC.)

FEDOSOV, M. V., *see also* Zaĭtsev, G.N., *& others.* Components . . . Norwegian seas. 1961. No. 76624

71369. FEDOTOV, S. A. Opredeleniia oblastei vozniknoveniia voln tsunami pri Kamchatskom zemletriasenii 4 noiabria 1952 g. i Iturupskom zemletriasenii 6 noiabria 1958 g. (Akademiia nauk SSSR. Izvestiia, ser. geofizicheskaia, Oct. 1962, no.10, p.1333-39, maps, graph.) 16 refs. Text in Russian. **Title tr.:** Determination of regions of formation of tsunami waves during the Kamchatka earthquake of November 4, 1952, and Iturup earthquake of November 6, 1958.

Investigates the extent of disturbance zones of the ocean surface during tsunamigenic earthquakes of the Far East. Maps are presented of the region of tsunami formation during the 1952 and 1958 earthquakes specified. Having almost the maximum possible energy at the foci, both produced tsunami along a path parallel to the Kuril - Kamchatka arc, and had maximum aftershocks along that path. (DLC.)

FEĬGIN, IA. M., *see*

Atamanov, A.V., *& others.* Novye dannye po geologii . . . 1961. No. 69904

Gerasimovskiĭ, V.I., *& others.* Stroenie . . . massiva. 1961. No. 71651

FEJER, J. A., *see* Axford, W.I., *& others.* Model auroral & geomag. disturb. 1962. No. 69931

71370. FEL'DSHTEĬN, IA. I., *and others.* Investigations of auroral planetary distribution. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.1, p.249-54, graphs, tables, maps.) 9 refs. *Other authors:* O.V. Khorosheva *and* A.I. Lebedinskiĭ.

Reports a study to locate the maximum auroral occurrence zones, based on ascafilms of 35 Soviet stations and ascaplots of 55 Northern and 24 Southern Hemisphere stations obtained during the IGY. Results are discussed and presented in isoauroras of frequency, and latitudinal distribution of auroral occurrence frequency in the zenith. Daily-observation time is given for Uelen, Vrangel Island, Cape Shalaurova, Tiksi Bay, Olenek, Arkhangel'sk, and Murmansk; universal time dependence of auroral brightness and position in the sky is shown for Murmansk, Kazach'ye, and Vrangel Island, Jan. 23, 1958; position of auroral arcs in the eastern (120°-210°E.) sector of the Soviet Arctic is given, as is occurrence frequency of night-sky brightness at the magnetic zenith expressed in stilbs (10^{-4} units) for Vize Island, Tiksi Bay, Cape Shalaurova, and Vrangel Island. (DLC.)

71371. FEL'DSHTEĬN, IA. I. Magnetic disturbances and aurorae in the near-polar region of the Northern Hemisphere. *(In:* International Conference

on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962. v.1, p.225-26, table, maps.) 6 refs.

Analyzes the daily variations in frequency of auroral appearances in the zenith at high latitude stations: Arctic II, Resolute Bay, Baker Lake, Godhavn, Kap Tobin, Alert, and Nord. The observed frequencies are compared with those of daily variation of magnetic activity (Q index) according to IGY data. The auroral frequency variations statistically go in phase with magnetic activity variations only in the region of the main auroral zone. Within the polar cap, the morning aurora maximum outgoes the corresponding magnetic activity maximum, and at the night-maximum hours, the variations go counterphase. This investigation confirms the existence of the inner, near-polar auroral zone in the region of these stations. (DLC.)

71372. FEL'DSHTEĬN, ÎA. I. Magnitnaîa aktivnost' v vysokikh shirotakh severnogo polushariîa. (Geomagnetizm i aèronomiîa, 1961. t.1, no.5, p.786-94, table, graphs.) 23 refs. Text in Russian. **Title tr.**: Magnetic activity in high latitudes of the Northern Hemisphere.

Investigates spatial and temporal regularities of the Q-index of magnetic activity for all magnetically disturbed and quiet days during the IGY: winters 1957-1958. Data on Q-index of 27 magnetic observatories in Φ = 58°.4 – 88°.1 N. Λ 1°.1-322°.7, were analyzed. An important longitudinal effect consisting of reduced values of magnetic activity within the geomagnetic sector of 30°-140° was established. The zone of the maximum frequency of aurora occurrences was found to coincide with the maximum intensity of magnetic activity. (DLC.)

71373. FEL'DSHTEĬN, ÎA. I. Magnitno-ionosfernye vozmushcheniîa i polîarnye siîaniîa v okolopoliûsnoĭ oblasti. (Akademiîa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîarnye siîaniîa i svechenie nochnogo neba. Sbornik stateĭ, 1961. no.7, p. 43-50, tables, diagrs.) 19 refs. Text in Russian. Summary in English. **Title tr.**: Magneto-ionospheric disturbances and auroras near the Pole.

Analyzes the material on the relationship between occurrences of auroras and magneto-ionospheric disturbances deep inside the auroral zone. The investigations of Lassen (No. 73333) and of the author earlier on drifting station North Pole-7, work at Piramida, Godhavn, Murchison Bay, and Resolute Bay indicate that auroras occur more often during geomagnetically quiet days, and are probably caused by invasions of the upper atmosphere at the points of observations by corpuscular solar fluxes. The geomagnetic field at the station ~10° distant from the auroral zone toward the geomagnetic field is found to be more quiet during the periods of auroral display, and more disturbed in the absence of auroras. (CaMAI.)

71374. FEL'DSHTEĬN, ÎA. I., *and* **E. K. SOLOMATINA.** Nekotorye voprosy geograficheskogo raspredeleniîa polîarnykh siîaniĭ v severnom polusharii. (Akademiîa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîarnye siîaniîa i svechenie nochnogo neba. Sbornik stateĭ, 1961. no. 7, p.51-60, maps, table, graphs.) 10 refs. Text in Russian. Summary in English. **Title tr.**: Some problems of geographic distribution of auroras in the Northern Hemisphere.

Reports on an analysis of diurnal variations in occurrence frequency of the zenith forms of aurora, using data from about 40 stations in the Northern Hemisphere. Changes of the character of diurnal variations of auroras in relation to latitude are discussed. Diurnal variations of the Q-index of magnetic activity are compared with the occurrence frequency of the zenith auroras at different latitudes. This comparison discloses that both phenomena develop statistically in synphase in the regions of the main auroral zone only. Within the polar cap region, the morning auroral maximum slightly overtakes the corresponding maximum of geomagnetic activity. No correlation is found in the night maxima. The established correlation between the frequency of occurrence of aurora at high latitudes and the universal time may have two causes: *a,* simultaneous increase of auroral frequency of occurrence, their intensity, and the Q-index over the entire polar cap, attributed to the effect of variations of density and energy of corpuscular fluxes on the higher atmosphere; *b,* auroras and magnetic disturbances are apt to occur simultaneously and more frequently at certain moments of the universal time when the earth is so oriented with respect to the sun-earth line as to produce the most favorable conditions for the solar corpuscular fluxes to penetrate through the earth's magnetic barrier. Diagrams are given of characteristic diurnal changes in auroral occurrence frequency and magnetic activity; maps show isolines of the frequency of occurrence of the zenith auroras at the time of morning and night maxima, and for all hours of day and night. (CaMAI.)

71375. FEL'DSHTEĬN, ÎA. I. Polîarnye siîaniîa i anomal'noe pogloshchenie radiovoln III tipa. (Geomagnetizm i aèronomiîa, 1961. t.1, no.6, p.939-41, tables.) 10 refs. Text in Russian. **Title tr.**: Auroras and the anomalous absorption of radio waves type III.

Compares occurrences, frequencies, and time distribution of auroras, radio-wave absorption in the polar cap area, and geomagnetic storms at Φ_S= 74°.7 - 89°.1. (DLC.)

71376. FEL'DSHTEĬN, ÎA. I., *and* **N. F. SHEVNINA.** Sezonnye variatsii v chastote poîavleniîa siîaniĭ. (Geomagnetizm i aèronomiîa, 1961. t.1, no.6, p.936-38, tables, graphs.) 7 refs. Text in Russian. **Title tr.**: Seasonal variations in the frequency of auroral occurrence.

Investigates these variations during a two-hour period centered at the local midnight of every observation day of Oct. 1957-Apr. 1958 at six stations 62°.7-82°.9 N. lat., and of March-Oct. 1958 at five stations 65°.7-89°.9 S. lat. The equinoctial maxima of frequencies of aurora occurrences appear in the region adjacent to the auroral zone, but no maxima appear during the winter season near the poles. (DLC.)

FEL'DSHTEĬN, ÎÂ., I., *see also*
Isaev, S.I., & *others*. Sovmestnaîa sovetsko-frantsuzskaîa . . . 1962. No. 72417
Lopatina, G.B., & ÎÂ.I. Fel'dshteĭn. Geomagnitnye èffekty . . . 1961. No. 73589

71377. FENIAK, MICHAEL WALTER, 1914– . Special report: the geology of Dowdell Peninsula, Great Bear Lake, Northwest Territories. Ottawa, 1947. 29 p. fold. map. (Canada. Geological Survey.) 17 refs. Mimeo.

Discusses the geology of the Echo Bay district on the east shore of Great Bear Lake on the western edge of the Canadian Shield, studied in summer 1945, and 1946 by a five-man geological party headed by the author. Stratigraphy is tabulated and each of 11 subdivisions is discussed in detail (p.7-20.) Structure, metamorphism and economic geology are dealt with. Small silver workings operated in 1931-1936 and small quantities of pitchblende were found on Dowdell Peninsula. Physiography, climate, flora, and transportation in the area are described. (CaOG.)

FENNESSY, F.D., *see* Geer, M.R., & F.D. Fennessy. Washability of coals . . . 1962. No. 71620

71378. FERGUSON, FRANCES N. Eskimo personality in the light of nine Rorschachs from Great Whale River Eskimo. (North Carolina. University. Institute for Research in Social Sciences. Research previews, Dec. 1960. v.8, no.1, p.8-13.) 13 refs.

Psychological analysis of Eskimo covert behavior as revealed by tests of J.J. Honigmann in 1950 on four children and five adults, one a woman. Results suggest repressiveness, compulsiveness and perfectionism; thinking is stereotyped and concrete, perceptual ability good, range of interests narrow; there is no concern with causative factors of abstract nature, nor orientation toward the future. The contradictions between the affable exterior and the hidden characteristics of the Eskimo are discussed. Personality traits revealed in the Rorschach records are considered vital for survival in polar environment. (DSI.)

FERGUSON, FRANCES N., *see also* Honigmann, J.J. Social networks Gt. Whale. 1962. No. 72233

FERGUSON, J., *see* Bondam, J., & J. Ferguson. . . . villiaumite in Ilimaussaq intrusion. . . . 1962. No. 70315

71379. FERGUSON, J. D. The human ecology and social economic change in the community of Tuktoyaktuk N.W.T. Ottawa, Feb. 1961. 90 p. illus., maps, tables. (Canada. Dept. of Northern Affairs and National Resources. Northern Co-ordination and Research Centre 61-2.)

Reports a summer 1957 anthropological study in the Mackenzie Delta area between Herschel and Baillie Islands. The natural and cultural resources, the Eskimo population of 340, including Tuktuk, DEW line sites, reindeer camps, etc., their economic activities and resource use, are examined, as well as the transportation, housing, nutrition, family income and expenditures, etc. The social organization of Tuktoyaktuk is dealt with in the second part of the study. Livelihood derives mostly from fishing and whaling, with cash income: 60% from wage employment, 22% federal welfare programs, and 11% from trapping. Wage employment conflicts somewhat with trapping and hunting requirements. Fish and whale resources could be better utilized if icehouse facilities and improved boats, etc. were available. Tuktuk was settled mostly since 1939, and its residents are grouped by family, area of origin, occupation, age, and sex. The teen-age group and its acculturation is discussed in some detail, as is the role of the whites, the Hudson's Bay Co. store, school, churches, nursing station, RCMP and Northern Service Officer. There is no defined power structure among the Eskimo groups, and leadership within them is restricted and diffused. 33 photos amplify the text. (CaMAI.)

FERGUSON, RUSSELL J. *see* Fitzgerald, E.M. Army doctor's wife . . . 1962. No. 71432

71380. FERNALD, ARTHUR THOMAS, 1917- . Radiocarbon dates relating to a widespread volcanic ash deposit, eastern Alaska. (U.S. Geological Survey. Professional paper 1962. no.450 B, p.B29-B30.) 4 refs.

Close agreement is found between an age estimate of 1400 yrs. based on the rate of peat accumulation, and radiocarbon dates of 1520, 1750, and 2,000 B.P., obtained from peat samples collected in this eastern Alaska ash deposit. The age of the ash provides an important reference point in interpreting the upper Tanana valley surficial geology, especially that of the flood-plain deposits. (DGS.)

71381. FERRAR, A. M. Russian research in the Arctic Ocean. (Geography, July 1962. v.47, pt.3, p.295-99, map.) 3 refs.

Reviews the establishment (since 1950) of 11 drifting stations and their findings in ice circulation, oceanography, and submarine topography. Map shows ice drift and depth of the Arctic Ocean. (DGS.)

71382. FERRELL, ED. Down the gold-rush river. (Alaska sportsman, July 1962. v.28, no.7, p.22-25, illus.)

Presents 16 photos taken in summer 1961 down the Yukon River from Lake Bennett to Dawson, Yukon Territory. The 500-mi. trip, by canoe with outboard motor, was made in connection with the 1962 Gold Rush Festival at Dawson; descriptive captions accompany the photos. (DI.)

FERRIANS, OSCAR J., Jr., *see* Williams, J.R., & O.J. Ferrians. Late Wisconsin & Recent hist. Matanuska Glacier. 1961. No. 76565

71383. FESENKOV, VASILIĬ GRIGOR'EVICH, 1889– . Ne meteorit, a kometa. (Priroda, Aug. 1962. god 51, no.8, p.24-31, illus., table, map.) Text in Russian. **Title tr.:** Not a meteorite, but a comet.

Describes the Tungusskiy meteorite, which fell on June 30, 1908 at 60°55′ N. 101°57′ E. The orbit, direction and path of movement frequency, and other features are described as of a celestial body. It is considered to have been the head of a comet which fell. Dispersal of dust material in the atmosphere and luminescence in the heavens are described. Microscopic globules dis-

covered in the area of the fall are analyzed, and the mechanism of their formation is described. Energy factors of this fall are discussed. Studies made by the 1961 expedition are briefly reported; preliminary results support the view that the meteorite was of the nature of a comet. (DLC.)

71384. FESENKOV, VASILIĬ GRIGOR'EVICH, 1889– . O prirode Tungusskogo meteorita. (Meteoritika, 1961, vyp. 20, p.27-31.) 5 refs. Text in Russian. **Title tr.:** The nature of the Tungusskiy meteorite.

Considers this meteorite a cosmic body, and discusses the nature of meteorites and comets. Its reverse movement is noted. It is concluded to have been of comet type and the sole example of a comet colliding with the earth. (DLC.)

FERRIGAN, L., *see* Speicher, C.E., & *others*. Cold injury . . . cardiac. 1962. No. 75863

71385. FETISOV, T. Reka sotrudnichestva: SSSR - Norvegiia, SSSR - Finliandiia. (Sovetskiĭ soiuz, 1961, no.9 (139), p.21-23, illus., sketch map.) Text in Russian. **Title tr.:** River of cooperation: USSR - Norway, USSR - Finland.

Photosketch of Belomorskaya, the fourth power station on the Pasvik River, common boundary between Finland, Norway, and the USSR. A Norwegian firm is to construct this station on Soviet territory. The other three stations in operation and supplying power to Murmansk Province were built for the USSR by Finland. (DLC.)

71386. FEULNER, ALVIN J. Data on wells at Ladd Air Force Base, Alaska, 1960. Juneau, 1961. 41 l. map, tables. (Alaska. Dept. of Health and Welfare. Branch of Environmental Health. Water hydrological data no.13.) Refs.

Presents basic data on water resources at this base near Fairbanks; records of 104 wells drilled are tabulated giving depth, diameter, yield and depth of permafrost; 23 well logs are shown, indicating the thickness of each formation, its depth, and condition as thawed or frozen. Chemical (21) analyses of well waters and treated waters are reported; moderate to large amounts of iron are generally present, and are removed by treating with various chemicals. (DLC.)

71387. FICHTEL, C. E., *and* **D. E. GUSS.** Heavy nuclei in solar cosmic rays. (Physical review letters, May 1, 1961. v.6, no.9, p.495-97, graph.)

Reports observation of heavy nuclei in a solar cosmic-ray event during a rocket flight from Ft. Churchill, Manitoba, on Sept. 3, 1960. Charge distribution of the heavy rays, detected in a set of nuclear emulsions, is graphed and discussed. (DLC.)

FICHTEL, C. E., *see also* Davis, L.R., & *others*. Rocket observ. solar protons Sept. 3, 1960. 1961. No. 70903

FIELD, WILLIAM BROADHURST OSGOOD, 1904– , *see* Crary, A.P., & *others*. U.S. glaciol. researches . . . IGY. 1962. No. 70849

71388. FILATOV, S. S. Primenenie spektral'nogo analiza dliia raschleneniia i korreliatsii nizhnepaleozoiskikh otlozheniĭ iuzhnogo sklona Anabarskogo massiva. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp. 186, Geologicheskiĭ sbornik 6, p.406-431, tables, map, diagrs.) 13 refs. Text in Russian. **Title tr.:** Use of spectrum analysis in the separation and correlation of Lower Paleozoic deposits in the southern slope of the Anabar massif.

Reports spectrochemical analysis of 263 samples from Middle and Upper Cambrian and Lower Ordovician deposits in the area 66 - 68° N. 108 - 114° E. Distribution of strontium, barium, vanadium, chromium, and other elements was determined. The average content of these elements was diagrammed and the data used for stratigraphic separation. The results are considered of preliminary character. Spectrum analysis is found of value. (DLC.)

71389. FILATOV, V. V. Dreĭfy neodnorodnosteĭ v sloe *F2*. (Akademiia nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, V razdel programmy MGG: ionosfera. Sbornik statei, 1961. no.9, p.69-74, tables, graphs.) 6 refs. Text in Russian. Summary in English **Title tr.:** Drifts of inhomogeneities in the *F2* layer.

Reports observational results on drift of small-scale inhomogeneities in the *F* layer of the ionosphere, during Nov. 1958 - Dec. 1960 (summer months excluded) at the Loparskaya station. The apparatus used and the method of data processing are described; the results are presented in histograms. The average drift of the irregularities was found to be approx. 90 m./sec. and the directions of the drift 75° and 225°. (DLC.)

71390. FILATOVA, A. Poiski geroia; proizvedeniia pisateleĭ Arkhangel'ska i Murmanska, opublikovannye v 1960-1961 godakh. (Neva, 1962, no.7, p.178-82.) Text in Russian. **Title tr.:** In search of a protagonist; literary works of Arkhangel'sk and Murmansk writers, published in 1960-1961.

Discusses the choice of central characters and subject matter in prose and poetry, also style, use of localisms, etc. Works of individual authors are cited in excerpts and critically reviewed. (DLC.)

71391. FILATOVA, ZINAIDA ALEKSEEVNA, 1905– , *and* **R. IA. LEVENSHTEĬN.** Kolichestvennoe raspredelenie glubokovodnoĭ donnoĭ fauny v severo-vostochnoĭ chasti Tikhogo okeana. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.45, p.190-213, illus., tables, maps.) 22 refs. Text in Russian. Summary in English. **Title tr.:** Quantitative distribution of the deep-sea bottom fauna in northeast Pacific.

Reports study of collections made with a bottom sampler (49) and the Sigsbee-trawl (29). The quantitative distribution in the area showed a zonal character, the biomass decreasing in a southerly direction and towards the deep sea. Pogomophores were found along the eastern shores from Dixon Entrance to Baja, California. (DLC.)

71392. FILIMONOV, D. A. Deĭstvie mineral'nykh udobreniĭ na urozhaĭ i botanicheskiĭ sostav trav. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Mar. 1961. god 4, no.3, p.44-46, tables.) Text in Russian. **Title tr.:** Effect of mineral fertilizers on the

crop and botanical composition of grass.

Reports work of the Arkhangel'sk Agricultural Experiment Station in 1958-1960: each year's yield on forest plots treated with N, P, K, NK, PK, and NPK is given and compared with that from an untreated control plot. The greatest increase in yield and in Gramineae content was achieved by fertilizing with NP and NPK. (DLC.)

71393. **FILIPENIN, M.** V glub' Arktiki. (Grazhdanskaia aviatsiia, Apr. 1961. god 18, no.4, p.32.) Text in Russian. **Title tr.:** To the very depth of the Arctic.

Notes An-10 jets to join conventional planes and helicopters in relief and resupply of manned and automatic drifting stations; also to aid scientists in hydrological studies of the Central Polar Basin. (DLC.)

71394. **FILIPPOV, P.,** *and* **V. KHMELEVA.** Sidiat u moria, zhdut pogody. (Okhrana truda i sotsial'noe strakhovanie, Sept. 1962, god 5, no.9, p.33-34.) Text in Russian. **Title tr.:** They wait and let grass grow under their feet.

Criticizes the laissez-faire policy of health and sanitation services in the Murmansk fish and food industry. Red tape hampers medical examination procedures, clinics are remote from places of employment, coordination and cooperation are lacking between factory or ship health units and the local hospitals, physical fitness programs are poorly implemented and sanitation rules badly enforced, etc. Hence the sickness rate is rising among fishery and food plant workers. Administrative units of this industry are urged to initiate corrective measures. (DLC.)

71395. **FILIPPOVA, M. P.** Vsesoiuznoe soveshchanie po snizheniiu zapylennosti na predpriiatiiakh gornoi promyshlennosti. (Gornyi zhurnal, May 1961, no.5, p.74-75.) Text in Russian. **Title tr.:** All-Union Conference for reducing mine dust in mining industry installations.

Reports work of the Conference at Krivoy Rog, Jan. 27-31, 1961, attended by 619. Progress in dust control in the mines in Murmansk Province and Karelia, especially the Apatit and Severonikel' Combines, is noted, also the lack of such progress in Magadan Province. (DLC.)

71396. **FILIPPOVSKII, S. M.** Ispol'zovanie vozdukha s estestvennoi otritsatel'noi temperaturoi dlia zamorazhivaniia gruntov. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshchei i inzhenernoi geokriologii . . . p.59-65, table, grapns.) 4 refs. Text in Russian. **Title tr.:** Freezing of ground with air that has a natural negative temperature.

Presents formulas representing the formation of an ice and ground mass around two coaxial pipes containing a moving coolant, and the calculation of temperature change of the coolant during its heat exchange with the ambient ground mass. Experiments to test these formulas in natural tundra by the Northern Branch of the Permafrost Institute are reported: the theoretical and empirical agreed well. In the Vorkuta mining area, there are three engineering problems connected with the freezing of ground: the restoration and the retention of the frozen state, and temporary freezing. The thermal intertia of the ground requires the air coolant to be colder than 0° C., preferably close to -10° C., which limits the application of natural air. The air temperature records of the Vorkuta area are summarized and it is concluded that natural air can be used successfully as a coolant in this system during November-March.—From CRREL. (DLC.)

FIMIAN, W. J., *see*

Sullivan, B.J., & W.J. Fimian. Inositol & rewarming cold injury, 1. 1961. No. 75992

Sullivan, B.J., & W.J. Fimian. Inositol & rewarming cold injury, 2. 1961. No. 75993

FINDLAY, B., *see*

Gajda, R.T., & *others*. Fort Good Hope, terrain & site. 1962. No. 71548

Gajda, R.T., & *others*. Terrain and site . . . Fort McPherson. 1962. No. 71550

71397. **FINLAND. GEOLOGINEN TUTKIMUSLAITOS.** Kertomus geologisen tutkimuslaitoksen toiminnasta vuonna 1959-1961. Helsinki, 1960-1962, *in progress*. 3 v. Text in Finnish. Summary in English. **Title tr.:** Annual report on the activities of the Geological Survey for 1959-1961. In sequence to No. 57994.

Notes chromite investigations carried out in the Kemi area, with preliminary estimates showing 7.5 million tons of ore containing an average of more than 30% chromium oxide; mapping and glaciogeological activities in several north Finnish areas; a 1:1,000,000 scale map of surficial deposits of north Finland pub. in 1961. V. Marmo succeeded A.V. Laitakari as director in 1961. (DGS.)

71398. **FINLAND. HYDROLOGINEN TOIMISTO.** Hydrologinen vuosikirja 16, 1956-1960. Helsinki, Valtioneuvoston kirjapaino, 1962. 127 p. 2 fold. maps, 2 graphs, tables. Text in Finnish and Swedish; contents and symbols listed in English. **Title tr.:** Hydrological yearbook 16, 1956-1960. In sequence to No. 64518.

Includes data for northern Finland in sections on water-level gauges, means, extremes and duration, discharge and runoff, precipitation, water equivalent of snow cover, and such on main drainage areas, frozen soil in cm., freeze-up and break-up, ice cover in cm., temperature of open waters, evaporation, and water balance in min. per month. Water level is graphed for Kemi jarvi by months; maps show annual precipitation also water equivalent of snow cover on Mar. 15, and a 30 yr. 1931-1960 average. Data are included from the Kemi, Tornio, Teno, Pasvik, and Kem River basins. (DGS.)

71399. **FINLAND. HYDROLOGINEN TOIMISTO.** Vesimääränmittauksia vuosilta 1931-1960. Helsinki, 1961. 75 p. tables. *(Its:* Tiedonantoja: Communications, v.19.) Text in Finnish, preface in English. **Title tr.:** Stream flow measurements 1931-1960.

Includes such measurements carried out in natural river beds during this 30-yr. period, including data for the years 1931-1946 as previously pub. in v.11 of the series. Nearly all measure-

ments are from water systems exceeding 200 sq. km. Standard hydrological data, including area of water system and lake percentage are tabulated. About fifty of the thousand or so stations are in northern Finland. (DLC.)

71400. FINLAND. ILMATIETEELLINEN KESKUSLAITOS. Lämpötilapentadeja Suomen lentosääasemilta. Pentades of temperature at some airway weather stations in Finland. Helsinki, 1961. iv, 11 p. tables. (*Its:* Supplement no.1 to the Meteorological Yearbook of Finland, v.61, pt. 1a.) Compiled by A. Nurminen. Text in Finnish and English.

Contains these five-day temperature data for various periods from 13 stations, including Kemi (65°47′N. 24°35′E.) for 1953-1960, and Rovaniemi (66°34′N. 25°50′E.) for 1955-1960. The data are based on hourly observations. Five-year means of the five-day temperatures are also given. (DLC.)

71401. FINLAND. ILMATIETEELLINEN KESKUSLAITOS. Suomen meteorologinen vuosikirja: Meteorological yearbook of Finland; part 2, Precipitation and snow cover data, 1952-1956. Helsinki, 1961-1962, *in progress. (Its:* v.52-v.56, pt.2.) Edited by J.M. Angervo. Text in Finnish and English. In sequence to No. 64519.

Presents in approx. 65 pages with tables, and maps each year, precipitation observations from some six hundred stations, about 50 of them in the North. Tables of daily observations from a dozen northern stations of 120 total, and tabulated data by months and for the year are given. Stations are listed by drainage basins. Snow cover tables indicate the annual course of depth and density; also depth in cm. on Mar. 15, the usual maximum, and water equivalent in mm. Total precipitation for each month and for the year is mapped on small scale. Northern Finland receives from 300-400 mm. per year. Snow cover in forests Mar. 15, 1956 near the Arctic Circle ranged 74-80 cm. and on open fields 50-70 cm. (DLC.)

FINN, J. C., *Jr.*, *see* Hamner, K.C., *& others.* Biological clock . . . 1962. No. 71978

71402. *FINNMARKEN.* Lønnsomt å drive med minkfarm i Finnmark. (Norden, Nov. 1, 1960. årg. 64, nr.21, p.578.) Text in Norwegian. Reprinted from *Finnmarken.* **Title tr.:** Mink farming is profitable in Finnmark.

Describes a mink farm of 1,500 animals in Vardø started a few years ago with 12 breeders. Coastal areas of Finnmark are favorable for mink farming because of the fresh-fish feed available daily; it must be supplemented with corn, however. The farm keeps several breeds of mink and sells breeders as well as skins. (DA.)

71403. FINOGENOV, N. Perepis' losei. (Grazhdanskaia aviatsiia. July 1961. god 18, no.7, p.24.) Text in Russian. **Title tr.:** Elk census.

Notes current use of aircraft to facilitate count of the elk population in forested areas of Karelia. (DLC.)

71404. FINOGENOV, N. Posadochnye ploshchadki na l'du ozer. (Grazhdanskaia aviatsiia, Mar. 1961. god 18, no.3, p.17.) Text in Russian. **Title tr.:** Landing strips on lake ice.

Notes recently introduced passenger flights from Petrozavodsk to Ukhta, Komi ASSR, and others within Karelia. Landings on a frozen lake surface cut winter travel time to Karelian shore settlements from days to hours. (DLC.)

71405. FIRSOV, LEV VASIL'EVICH. O krestoobraznykh vrostkakh sfalerita v khal'kopirite. (Akademiia nauk SSSR. Doklady, Oct. 1, 1961. t.140, no.4, p.922-24, illus.) 3 refs. Text in Russian. **Title tr.:** On cross-shaped intergrowths of sphalerite in chalcopyrite.

Describes the arrangement and forms of these microscopic intergrowths in the tin-ore deposits of the Kandychan River (60°30′N. 150°31′E.) basin in Magadan province. Sphalerite occurs in small amounts and contains emulsified dissemination of chalcopyrite. Crystal structure, habits and the intergrowth process are reported. Heat tests applied to chalcopyrite are noted. (DLC.)

71406. FIRSOV, LEV VASIL'EVICH. O pozdnemezozoĭskikh magmaticheskikh fazakh Severo-Vostoka SSSR. (Akademiia nauk SSSR. Doklady, Feb. 21, 1962. t.142, no.6, p.1381-83, table.) Text in Russian. **Title tr.:** On the Late Mesozoic magmatic phases of northeastern USSR.

Reports on absolute age determinations of various igneous rocks in the Verkhoyansk-Chukotka folded zone, by the potassium-argon method, at the Magadan laboratory in 1958-1960. Nine phases, ranging from 155 to 35 million years, or geologically from the end of Middle Jurassic to Paleogene-Neogene are distinguished and characterized. Petrographic specialization and mineralization of ores in the phases distinguished are briefly noted. (DLC.)

71407. FIRSOV, LEV VASIL'EVICH. O verkhnepaleozoĭskom magmatizme Severo-Vostoka SSSR. (Akademiia nauk SSSR. Doklady, Feb. 1, 1962. t.142, no.4, p.913-15, table.) 7 refs. Text in Russian. **Title tr.:** On Upper Paleozoic magmatism in northeastern USSR.

Notes Hercynian magmatism in the area and reports absolute age determination of potassium feldspar from nepheline syenites of the Anmandykan basin, and muscovitized syenite of the Omolon basin, as 277 million years. Absolute age of granites of the Omolon massif varies from 255 to 332 million years. These data are discussed. (DLC.)

71408. FIRSOV, LEV VASIL'EVICH. Ob absoliūtnom vozraste metamorficheskikh porod Severo-Vostoka SSSR i profāvleniiākh povtornogo metamorfizma. (Akademiia nauk SSSR. Doklady, Mar. 1, 1962. t.143, no.1, p.204-206.) Text in Russian. **Title tr.:** On the absolute age of metamorphic rocks in northeastern USSR and the phenomenon of recurrent metamorphism.

Reports absolute age determination of gneisses, granite gneisses and crystalline schists in metamorphic rocks of the Aldan shield, the Taygonos, Omolon, and Kolyma basins, the Chukotka massif and the Sredinnyy Range of Kamchatka. A great discrepancy is found with the age obtained by geologic dating. The potassium-argon method cannot supply true data it is concluded, in cases where rocks had undergone repeated, e.g. thermal, metamorphism. (DLC.)

71409. FIRSOV, LEV VASIL'EVICH. Ob absoliūtnom vozraste nekotorykh olovorudnykh mestorozhdeniĭ Severo-Vostoka SSSR. (Akademiia nauk SSSR. Komissiia po opredeleniiū absoliūtnogo vozrasta

geologicheskikh formatsiĭ. Trudy sessii 10, 1961 *pub.* 1962, p.326-40, tables.) 17 refs. Text in Russian. **Title tr.:** On the absolute age of some tin-ore deposits of northeastern USSR.

Reports absolute age determinations as obtained by the potassium-argon method of some tin-ore deposits of the Yana-Kolyma and Chukotka folded zone, viz: the Argaynnakhkhayskiy (upper Yana), Verkhneorotukanskiy (Orotukan basin), Omsukchan (62°37′N. 155°55′E.), Iul'tin and Butugychag (61°19′N. 149°11′E.) deposits. Their average absolute age is 85-90 million years, middle of the Upper Cretaceous. (DLC.)

71410. FIRSOV, LEV VASIL'EVICH. Proiavleniia triasovogo magmatizma v Verkhoiano-Chukotskoĭ skladchatoĭ oblasti. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Aug. 1962. no.8, p.36-48, tables.) 22 refs. Text in Russian. **Title tr.:** Manifestation of Triassic magmatism in the Verkhoyansk-Chukotka folded province.

Reviews the stratigraphy of Triassic deposits of the Kolyma medial massif, Omolon massif, Anyuy folded zone, Gizhiginskaya zone, and other areas of this wide region. Early-Middle Triassic and Rhaetic-Lias phases of tectonic activity and magmatism are distinguished. Absolute age determination of igneous rocks of both phases was made by the potassium-argon method and results obtained are presented. The igneous rocks of the early Triassic phase have generally 210 million years and late Triassic 185 million years. The magmatism occurred not only in effusive, hypabyssal, middle-basic and basic facies, but also acid and subalkaline facies. (DLC.)

71411. FIRSOV, LEV VASIL'EVICH. Stroenie i proiskhozhdenie kvartsevykh zhelvakov iz nekotorykh rudnykh poleĭ IAno-Kolymskogo zolotonosnogo poiasa. (Geologiia rudnykh mestorozhdeniĭ, Jan.-Feb. 1962, no.1, p.78-86, illus.) 9 refs. Text in Russian. **Title tr.:** Structure and origin of quartz nodules from some ore fields of the Yana-Kolym gold-bearing belt.

Describes forms, composition, position o. quartz nodules abundantly distributed especially in the Upper Triassic-Lower Jurassic rocks of the In'yali-Debin syncline, Magadan province. Their connection with flat quartz veins and zones of clay shales is analyzed. Their internal structure is described, and distribution of wet gas microinclusions in the quartz is noted. The colloidal origin of quartz nodules is considered. (DLC.)

71412. FISCHER, ALFRED G. Latitudinal variations in organic diversity. (Evolution, Mar. 1960. v.14, no.1, p.64-81, maps, graphs, diagrs.) 24 refs. *Reprinted in:* American scientist, Mar. 1961. v.49, no.1, p.50-74.

Discusses the progressive decrease in biotic diversity from the Tropics poleward, and its causes. Examples of the diversity gradient in various organisms are given, including several of molluscs along the east and west coasts of the North American continent. Effects of climate on speciation and extinction are examined. Lack of seasonal changes, and less inclement weather in the Tropics permit greater physiologic variation; and lack of climatic change enables tropical biotas to attain maturity and resultant diversification. Climatic changes due to glaciation and possible polar wandering interrupt the evolution toward maturity of polar and temperate biotas. (DGS.)

71413. FISCHER, DORA. Medical services in the Soviet Arctic. (Current problems of Soviet medicine, 1961. no.3, p.49-72, tables.) 23 refs. English version of No. 58008.

Distinguishes four main fields of medical research and activity: effects of arctic climate, nutrition, etc., acclimatization of immigrants, changes in the native population due to improved living conditions, and medical care. To facilitate orientation in Soviet literature, sections on natural and political boundaries in the Soviet Arctic, population distribution, and movements research and training stations, and health services are described. (DNLM.)

71414. FISCHER, FRED, *Jr.* Construction in the Arctic. (Polarboken 1961-62, p.24-42, illus.)

Reviews problems connected with building foundations on frozen ground, mainly at the Thule air base in Greenland and DEW Line installations. Hangars at Thule are constructed on wood pile foundations, the piles on the periphery of the structure, and the floor independently supported on grade on a fill of non-frost-susceptible gravel. A ventilation system is provided beneath the full area of the floor, which is of reinforced concrete and insulated with foamglass. The foundations most commonly used for the smaller buildings are of two types; one is timber sill on a layer of gravel fill, the floor construction being supported approx. three feet above the ground on timber posts that bear on the sill; the other common type is wood pile similar in form to the sill except that the floor construction is supported above grade on top of the piles. General information on permafrost is included, and on measures required to prevent thawing under heated structures: floor insulation, under-floor ventilation and permafrost insulation. Details are given on piling practices where the piles, usually wood, placed in previously prepared (by steaming or drilling) holes or pits, are intended to freeze to the adjacent ground. Spread footing types of foundation also are dealt with. (SPRI.)

71415. FISCUS, CLIFFORD H. Growth in the Steller sea lion. (Journal of mammalogy, May 1961. v.42, no.2, p.218-23, tables.) 5 refs.

Reports a study of 49 skulls of *Eumetopias jubata,* aimed at determining rate of growth, by sex, of certain skull characters; body length and girth, etc. Growth rate appears to level off at about eight years in females, ten in males. Age was determined from growth lines in teeth, the maximum being 19 years in males, 22 in females. (DLC.)

71416. FISH, MARIE POLAND, 1902– , *and* W. H. MOWBRAY. Production of underwater sound by the white whale or beluga, *Delphinapterus leucas* (Pallas). (Journal of marine research, July 15, 1962. v.20, no.2, p.149-62, graphs.) 36 refs. *Also issued as:* Rhode Island. University. Narragansett Marine Laboratory, Contribution no.42, based on research conducted under Contract Nonr-396(02).

Reports a month-long study of three captive belugas, a year-old male and two larger females, taken Aug. 1961 in Bristol Bay, Alaska. Representative sounds obtained in a 47-minute under-water recording period are analyzed, and ten distinct

categories established. Vibragrams show such sounds as: clicks and creaks, whistles, yelps, blare, rasps, squawks and bangs, and trills. Two types, whistles and clicks-creaks are typical of many cetaceans; two others, blare and modulated whistle, seem peculiar to the beluga. This study confirms previous evidence of a wide repertoire of recognizably different sound types, which, used singly or in combination, have specific meaning. (DWB.)

71417. *FISH BOAT.* Fiberglass fishing boats. (Fish boat, Apr. 1960. v.5, no.5, p.26, +, illus., plans.)

Describes fiberglas gillnetters built in spring 1960, including three for the Alaskan Bristol Bay salmon run. The 32-ft. boats driven by single 177-hp. marine engines cost approx. 10% more than comparable wooden craft, but have six-eight times the strength of plywood and cheaper up-keep; they are easier to repair and clean, do not fatigue or lose strength in extreme cold, and carry a four thousand salmon catch; performance and durability in rough seas is yet to be tested. (DI.)

71418. *FISH BOAT.* Halibut Commission examines reports on effects of large-scale trawling. (Fish boat, Mar. 1962. v.7, no.3, p.22, +, illus., map.)

Notes the International Pacific Halibut Commission study in 1961-62 in respect to halibut stocks in the Gulf of Alaska between Unimak Pass and eastern Kodiak Island, with conclusion that this fishery would be seriously affected by the large-scale trawling operations under consideration by the Russians. (DI.)

71419. *FISH BOAT.* New steel salmon-crab vessels feature built-in versatility. (Fish boat, Aug. 1961. v.6, no.9, p.30, +, illus.)

Describes two 46-ft. all-steel combination vessels, built in spring 1961 for the Alaskan Kodiak fishery. The diesel-powered boats log up to 8.9 knots at 1900 rpm., and carry a six-man crew. For purse seining, they are equipped with mechanical-drive purse winches, aluminum purse blocks and davits, and hydraulically-driven Puretic power blocks. For crab fishing, they have 900 cu. ft. seawater tanks of 1800 king crab capacity. Winterizing preventatives, radio telephones, depth finders, and other features are noted. (DI.)

71420. *FISH BOAT.* Northwest gillnetter building boom tops 250 boats nearly $3,000,000. (Fish boat, Aug. 1961. v.6, no.9, p.25, +, illus.)

Describes wood, aluminum, and fiberglas boats built in spring 1961, mostly for the Bristol Bay red salmon run. New equipment and design features are the Puretic gillnet-type power blocks, two-station hydraulic steering, and flying bridges with duplicate controls atop the steering shelter. Improved accommodations for crew are noted, also finders, radio telephones, diesel engines, etc. (DI.)

71421. *FISH BOAT.* The vanishing salmon. (Fish boat, Jan. 1962. v.7, no.1, p.22, +, illus.)

Discusses especially the Bristol Bay red salmon, its depletion and possibilities for rehabilitation. Decline of this stock is attributed to salmon traps, illegal fishing in Alaskan creeks, and the intensive high-sea activity of foreign fishing fleets. Of a 30 million stock in 1961, 13 million were taken by Americans and 10 million by Japanese, and the latter could take the entire 1962 stock estimated at nine million. Government research and conservation measures are outlined; they are expected to restore this salmon stock, but only if it can be protected from unrestricted pelagic fishing. (DI.)

71422. *FISH BOAT.* Who gets the halibut? (Fish boat, Apr. 1961. v.6, no.4, p.25-27, map.)

Notes Russian plans for experimental fishing in the Gulf of Alaska; and possible effect of large-scale Russian and/or Japanese groundfish trawling (area mapped) on the Canadian-American halibut fishery, and industry with a 70 million lb. annual gross yield, developed from 44 million thirty years ago. (DI.)

71423. *FISH BOAT.* World fisheries review. (Fish boat, 1962 year book, v.7, no.4, p.28, +.)

Reviews 1960-61 production and activities of the leading fishing countries. Japanese and Russian operations in the Bering Sea are noted. The American catch, etc. of 1961 are indicated according to species. Alaskan production of red and pink salmon, halibut, and shrimp increased, herring decreased, and king crab reached a record high of 43 million lbs. For 1962, increased foreign competition, bypassing of fisheries legislation, and a poor, particulary on Bristol Bay, salmon season are indicated. (DI.)

FISH BOAT, see also Pacific fisherman. INPFC Conference. 1962. No. 74609

FISHBEIN, R., *see* Rush, B.F., & *others.* Effects of circulatory standstill . . . 1961. No. 75269

71424. **FISHER, BERNARD, 1918–** , *and* **E. J. FEDOR.** Cardiac temperature gradients during profound hypothermia with extracorporeal perfusion. (Society for Experimental Biology and Medicine. Proceedings 1961. v.106, no.2, p.275-77, illus.) 4 refs.

Reports study of dogs cooled to 10°C., which revealed in all cases temperature gradients throughout the heart. In some instances differences up to 10°C. were recorded both during cooling and rewarming. The effect of these conditions upon ventricular fibrillation, is discussed. (DLC.)

71425. **FISHER, BERNARD, 1918–** , *and others.* Temperature gradients associated with extracorporeal perfusion and profound hypothermia. (Surgery, Nov. 1961. v.50, no.5, p.758-64, illus., tables.) 23 refs. *Other authors:* E.J. Fedor *and* J.W. Smith.

Extracorporeal perfusion and heat exchange produced in dogs considerable temperature gradients during both cooling and rewarming. These differentials were evident even in individual organs: brain, heart, liver, etc. The relation of this condition to fibrillation and O_2-consumption, is discussed. (DLC.)

71426. **FISHER, HANS,** *and others.* Environmental temperature and composition of body fat. (Society for Experimental Biology and Medicine. Proceedings, Aug.-Sept. 1962. v.110, no.4, p. 832-33, table.) 5 refs. *Other authors:* K.G. Hollands *and* H.S. Weiss.

Fat from hens kept at 0°C. was significantly more unsaturated and contained more di- and hexaenoic acid than fat from hens kept at 21°

or 32°C. Since no temperature change in the fat tissue or deep in the body was noted during cold exposure, it is assumed that metabolic adjustments to cold, are responsible for the differences in fat composition. (DLC.)

FISHER, ROBERT LLOYD, 1925– , *See* Carsola, A.J., & *others*. Bathymetry . . . 1961. No. 70617

71427. **FISHMAN, M. V.** Stratigrafiia metamorficheskoĭ tolshchi iŭzhnoĭ chasti Pripolīarnogo Urala. *(In:* Akademiia nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.29-44, table, map, cross-sections.) 13 refs. Text in Russian. **Title tr.**: Stratigraphy of the metamorphic stratum in the southern part of the Subpolar Ural.

Attempt is made to divide stratigraphically the oldest deposits of a metamorphic complex as studied in five areas, from Shchugor and Podcherem in the south to Sablya in the north. Cross-sections of each area are described, noting the lithology and facies of the composing rocks. The Khobe-Yu (Lower Cambrian) and Man'ya (Lower and Middle Cambrian) series are described and correlated. (DLC.)

71428. *FISKEN OG HAVET;* rapporter og meldinger fra Fiskeridirektoratets Havforskningsinstitutt, Bergen. No.1, Dec. 1959– , *in progress.* Text in Norwegian. **Title tr.**: The fish and the sea; reports from the Fisheries Directorate's Oceanographic Research Institute, Bergen.

Published irregulary, one number in 1959, four in 1960, six in 1961; each number approx. 20-35 pages, contains one to a dozen papers mostly reprints of the Institute's contributions to *Fiskets gang,* and most dealing with research in arctic waters: Denmark Strait, Greenland and Barents Seas. (SPRI.)

71429. *FISKETS GANG.* Forsøksfiske etter ål på Helgelandskysten. (Fiskets gang, Sept. 28, 1961. årg.47, nr.39, p.667-68, table.) Text in Norwegian. **Title tr.**: Experimental eel-fishing in Helgeland waters.

Reports large eel concentrations in inner fjord areas and smaller concentrations near the populated outer areas. Eels feed on crabs and certain trash fish in southerly areas and on garbage, etc. in northern waters. The larvae borne by the Gulf Stream seek shore particularly in southern England whence imported for transplanting in Swedish rivers. Eel fishing, hitherto neglected in North Norway waters, could be profitable with inexpensive equipment or home-made bow nets. (DA.)

71430. **FITCH, FRANK JOHN,** *and others.* Glacier re-advance on Jan Mayen. *(In:* International Association of Scientific Hydrology. Pub. 58, Symposium of Obergurgl 1962, p.201-211, map, diagr., graphs, tables.) 22 refs. Summary in French. *Other authors:* D.J.J. Kinsman, J.W. Sheard, *and* D. Thomas.

Presents glaciological results of University of London Jan Mayen Expedition 1959 and its 1961 Beerenberg Expedition. Surface flow and ablation measurements were made by both parties on Sörbreen, one of the larger glaciers on Beerenberg volcano. Its 271-m. advance since 1949 is part of a general ice advance on the island, associated with increasing precipitation since 1922. Glacier fluctuations on Jan Mayen and in areas bordering the Greenland and Norwegian Seas are shown to be related to climatic changes affecting the North Atlantic. *–Authors' abstract.* (DGS.)

71431. **FITCH, FRANK JOHN.** The University of London 1961 Beerenberg Expedition. (Nature, May 19, 1962. v.194, no.4829, p.624-26, table.) 17 refs.

States the aims, members and procedure of a party under author's leadership to northern Jan Mayen. The geologic mapping program at 1:10,000 is described. A glaciological survey of the entire island and its glacier system is reported. An accident on June 25, in which five of the party lost their lives, is described. Extensive rock collections were made for petrographic and petrochemical study. Mountaineering and other activities are reviewed. This account was emended by D.J.J. Kinsman and others, q.v. (DLC.)

FITCH, FRANK JOHN, *see also*

Kinsman, D.J.J., & *others.* Glacial hist. Beerenberg. 1962. No. 72797

Polar record. Field work. 1961-62. No. 74848

71432. **FITZGERALD, EMILY (McCORKLE).** An Army doctor's wife on the frontier, letters from Alaska and the Far West, 1874-1878. Pittsburgh, University of Pittsburgh Press, 1962. 352 p. illus.

Letters from Sitka during Aug. 1874-Mar. 1876, describe daily life at the U.S. Army post, the landscape, climate, local Indians, etc. Edited by A. Laufe and R.J. Ferguson. (DLC.)

FITZGERALD, J. B., *see* Malette, W.G., & *others.* Hypercapnia . . . 1961. No. 73764

71433. *FIZKUL'TURA I SPORT.* Na zemle īakutskoĭ. (Fizkul'tura i sport, March 1962. god 41, no.3, p.31, illus.) Text in Russian. **Title tr.**: In Yakutia.

Photo sketch of sports club activities at Ėrilik Ėristin collective farm: skiing, light athletics, callisthenics, etc., also native sports of wrestling and jumping during the traditional summer festival, *ysyakh.* A stadium has been built at Dirin, the kolkhoz center. (DLC.)

71434. **FJELLSTRÖM, PHEBE.** Lapskt silver, studier över en föremålsgrupp och dess ställning inom lapskt kulturliv. Stockholm, Almqvist & Wiksell, 1962. 2 v. illus., 75 plates, maps, tables. (Landsmåls- och folkminnesarkivet i Uppsala. Skrifter serie C:3.) About 375 refs. Text in Swedish. Summary in English. **Title tr.**: Lapp silver, studies of a group of objects and of its position in Lapp cultural life.

Presents exhaustive accounts of objects made by silversmiths for Lapps, and preserved in private and museum collections in Scandinavia; v.1 the text, v.2 the catalog. The objects, custom-made to type and by traditional techniques, are ornaments, drinking vessels, and spoons. The earliest are of Norwegian origin, the oldest hallmarked object a spoon made by a Bergen silversmith active during 1631-1668; and Swedish work appears in objects of the late 17th-early 18th century to present day, the most recent a silver ladle made in Luleå 1955. The commercial and cultural contacts indicated by these silver utensils and ornaments are considered. Comparative stylistic analyses are made, origin and distribution of types discussed. The Lapps

probably made and maintained commercial contact with their northern neighbours in Torne Lappmark and the Troms area. The role of silver in magic and healing, and prior to it, that of tin and brass, also its use in festivities, as indicator of social standing, and as investment are dealt with. The economic and historical background is outlined: the Lapps' rising economy from late Middle Ages to the 16-17th centuries, trade across the mountains between Sweden and Norway, the importance of silver objects in barter, etc. Regional styles of ornamentation which derived from the Lappish bone carving are shown. Detailed descriptions and illus. of the various types of objects are given. (SPRI.)

71435. FLAAT, BERNHOF. Pløying av myr kan gi gode resultater. (Skogeieren, Dec. 1960. årg 47, nr.12, p.463-54, illus.) Text in Norwegian. **Title tr.:** Plowing of marsh land can give good results.

Reports on experiments in Namdalen (about 65°N.) since 1950: forest planting on marshland without extensive ditching. A special plow cut deep furrows, turned the bog; the land drained and the ground water level lowered. The plow was purchased by the Namdalen Forest Association for cooperative use. Ten-year old results are illus. (DA.)

FLAGG, ROY, *see* Solov'ev, S.L. Nekotorye rezul'taty . . . 1960. No. 75829

71436. FLAHERTY, FRANK. Man battles nature to chart the arctic seas. (Canadian business, Oct. 1960, v.33, no.10, p.126-28, +, illus.)

Describes the Polar Continental Shelf Project, initiated in summer 1960 by Canadian Dept. of Mines and Technical Surveys for study and charting of the waters north of the Canadian Arctic Islands. Depths, temperatures, currents, and ice conditions are to be determined, magnetic, gravity, and hydrographic data collected. The project is designed to obtain basic knowledge of the area and to fulfill responsibility of the sovereign state here. (CaOCU.)

71437. FLEISCHER, JØRGEN. I år er det 50 år siden, grønlaenderne rigtig fik noget at skulle have sagt. (Atuagagdliutit: Grønlandsposten, July 27, 1961. Ukiut 101-iat, nr.16, p.6-7, 12-13, ports.) Text in Danish and Eskimo. **Title tr.:** This year it is 50 years since the Greenlanders really started to have a say in matters.

Reviews development of the Greenland provincial councils set up in 1911, some of the questions dealt with, and amalgamation of the two councils in 1951. (CaMAI.)

71438 FLEMING, RICHARD HOWELL, 1909– . Notes concerning the halocline in the northeastern Pacific Ocean. (Journal of marine research, 1958, v.17, p.158-73, maps, graphs.) 12 refs. *Also issued as:* Washington. University. Dept. of Oceanography. Contribution no.226. *Its:* Technical report no. 74.

Discusses this persistent quasi-isothermal halocline between 160 and 200 m. depths, the area including the Gulf of Alaska and southern Aleutian waters. Temperature is relatively constant and salinity increases with depths to nearly 33.8‰ at its base. Two major premises are recognized, the region is one of net dilution, and surface winter temperatures are almost identical with year-round temperatures in the halocline. Progressive dilution over a several-year period, water motion parallel to the halocline isotherms, and winter mixing producing surface-layer temperature like that of the halocline as well as salinity lower than that near its base, are suggested as causal factors of the phenomenon. On the basis of temperature and salinity in the upper zone of 200 m., the circulation pattern, and this explanation for the halocline, several natural oceanic regions are designated; among them the Alaskan Coastal, the Mixing Area, and the Southern Intrusion touch the coasts of Alaska and the Aleutians. (DI.)

71439. FLEMING, RICHARD HOWELL, 1909– , *and others.* Physical and chemical data for the eastern Chukchi and northern Bering Seas, *Brown Bear* cruise 236 - 2 August to 1 September 1959; *Brown Bear* cruise 268 - 26 July to 28 August 1960. Seattle, Wash., Aug. 1961. 162 p. maps, tables. (Washington. University. Dept. of Oceanography, Technical report no.69.) 15 refs.

Cruise 236 covered the eastern Chukchi Sea from Bering Strait to Cape Lisburne, and from the Alaskan coast to approx. the International Date Line. Cruise 268 extended south into Bering Sea near the Yukon River mouth, and north to 70°50′N., where the ship encountered the arctic ice pack. On the earlier cruise, 178 stations were made, some for current measurements or geologic sampling only; on the later cruise, 148 stations were occupied, most of them for oceanographic casts and current observations. Data are tabulated, and station locations mapped. Types of observations, instruments and personnel of these cruises for Project Chariot are stated in introduction. (DWB.)

71440. FLEMING, RICHARD HOWELL, 1909– , *and* **D. HEGGARTY.** Recovery of drift bottles released in the southeastern Chukchi Sea and northern Bering Sea. Seattle, Wash., Feb. 1962. v, 18 p. illus., maps. (Washington. University. Dept. of Oceanography. Technical report no.70.) 13 refs.

Describes results of July-Aug. 1960 survey of northern Bering and southeastern Chukchi Seas on *Brown Bear* cruise 268, carried out as part of phase three of Project Chariot, Operation Plowshare. A total of 1653 drift bottles was released at 35 locations from the *Brown Bear,* and 200 from the *Northwind* in Oct.-Nov. 1960; recoveries: 129 to Dec. 1, 1960, 34 in 1961, a total of 9.8%. The general northward movement of water at 5 m. depth in the survey area is confirmed. Releases-and-recovery data are discussed, tabulated, charted. Currents at 5 m., observed speed and direction from the *Brown Bear* cruise 268 are charted. (DI.)

FLEMING, RICHARD HOWELL, 1909– , *see also* Alaskan Science Conference 1960. 1961. No. 69643

71441. FLEROV, B. L., *and others.* Osobennosti geologicheskogo polozheniia svintsovo-tsinkovogo orudeneniia v IUzhnom Verkhoian'e. (Geologiia rudnykh mestorozhdenii, Mar.-Apr. 1962, no.2, p.59-74, tables, maps.) 9 refs. Text in Russian. *Other authors:* D.S. Bulaevskiĭ *and* D.A. Dorofeev. **Title tr.:** Features of the geologic position of lead-zinc mineralization in the southern Verkhoyansk region.

Describes the geologic structure of the region and position of lead-zinc deposits in northeastern Yakutia. Four metallogenic zones are distinguished:

copper-bearing, gold-bearing, lead-zinc-bearing, and tungsten-tin. According to composition and depth of formation, two types of lead-zinc deposits are recognized: galenite-pyrrhotine-sphalerite and silver-bearing spharelite-galenite. Characteristics of both types are described. (DLC.)

FLEROV, B. L., *see also* Rozhkov, I.S., & *others*. K voprosu o perspektivakh . . . 1962. No. 75243

71442. FLETCHER, DAVID J. Ice-thickness report for the winter of 1960-1961. (*In:* McGill University. McGill Sub-arctic Research Lab. Field research . . . 1960-61, *pub.* 1962. p.53-64, illus., graphs.) 3 refs.

Describes ice conditions on Knob Lake and on Maryjo Lake about 1.25 mi. to the north (approx. 54°50′N. 66°47′W.) from measurements made at three sites on each. Ice, first noted on Oct. 15, was continuous from Oct. 26, and coverage was complete after Nov. 3. Ice growth was slower on the 27-38 ft. deep Maryjo than on Knob Lake, only 11-21 ft. Slush occurred first on Dec. 2 on Maryjo, Dec. 9 on Knob Lake, caused by lake water seeping through cracks in the ice and mixing with the snow. White ice, a product of the slush, was about nine in. thick from late Dec. to the beginning of thaw in Apr. Mean air temperature for Dec.-Feb. was about 7° below the 1955-59 average; total snowfall of 28 in. for the period was about 23 in. below the average; the max. ice thickness, 55 in., on Maryjo Lake, was the greatest ever recorded. Greatest growth takes place at the base of the black ice, while notable increases in thickness occur with slush freezing on the surface. A sea-ice-thickness prediction formula was used successfully for the 1959-60 winter, but yielded less than actual thicknesses for the 1960-61 winter. Use of SIPRE and Sandvik drills is noted, also the favorable location of the laboratory: close to many lakes and having satisfactory climatic records. (DWB.)

71443. FLIGEL', M. D. Geograficheskoe raspredelenie ionosfernogo pogloshcheniia. (Geomagnetizm i aëronomiia, 1962. v.2, no.6, p.1091-94, tables, graph.) 4 refs. Text in Russian. **Title tr.**: Geographic distribution of ionospheric absorption.

Proposes an empirical formula for calculating an absorption of radio waves of 2 Mhz frequency at 60-90 km. altitude, in terms of geographical coordinates. The data are analyzed on the absorption for the entire earth, high latitudes included, during the period of low magnetic activity of the summer season of 1957-1958. The total absorption, L, of a 150 m. radio wave can be expressed by the formula $L = L_W + L_g$, where L_W is absorption due to electromagnetic radiation of the sun, and L_g is that due to corpuscles in the ionosphere. L_g depends upon magnetic latitude. A satisfactory agreement is found between calculated and observed absorption on 2 million cycles per sec. (DLC.)

FLINT, GEORGE MARSH, *Jr.*, 1918– , *see* Warner, L.A., & *others*. Iron and copper deposits . . . 1961. No. 76489

71444. FLOCK, WARREN L. Environmental studies for radar operations in the auroral zone, part I. College, Alaska, Oct. 1962. iii, 61 l. 22 illus., maps, graphs, (Alaska. University. Geophysical Institute. Report UAG-R130, *also* Final report, Contract no. AF 04(647) 179 with Radio Corporation of America.) 45 refs. Part II is classified.

Considers the relations between VHF and UHF radio aurora and geomagnetic activity, as indicated by telluric current records. High correlation is found between VHF radio aurora observed over Barrow, Alaska by a 41 Mc/s radar at Kotzebue, and telluric current activity at Barrow. Some disturbances have abrupt onsets of intense activity. Correlation is highest for overhead and nearly overhead radio aurora. Incoherent scatter from the ionosphere has been recorded by the BMEWS UHF radar at Clear, Alaska by use of two different techniques: generally by recording radar return for a period of time in analog form on magnetic tape for subsequent processing by a digital computer; or by use of "DTO" reports accumulated over a period of time. Conventional ionospheric electron density profiles showing E, F1 and F2 layers, with the highest electron densities in the F2 layer, have been obtained at times. The technique is capable of providing profiles under conditions causing "blackout" of conventional ionosonde recorders. (DGS.)

FLORA EUROPAEA, *see* Meusel, H. . . . Flora Europaea. 1960. No. 73958

FLORA SPOROVYKH RASTENIĬ SSSR, t.4-6. In sequence to No. 42293. *See under:*

KUPREVICH, V.F., and V.G. TRANSHEL'.
KOSINSKAIA, E.K.
NIKOLAEVA, T.L.

71445. FLORENSKIĬ, K. P. Novoe v izuchenii Tungusskogo meteorita 1908 g. (Geokhimiia, 1962, no.2, p.187-89, map.) Text in Russian. **Title tr.**: New information on the Tungusskiy meteorite of 1908.

Reports preliminary results of his 1961 Tunguska meteorite expedition. Details were established for the map of the fall area and the leveling of forest. Estimates were made of the impact and energy of the fall. Some data are presented on the distribution and chemical composition of meteorite dusts; and on the concentration and spread from epicentrum of magnetite globules. Further studies are in progress. The Tunguska meteorite is considered to have been the head of a comet. (DLC.)

71446. FLORENSKIĬ, K. P., *and* I. T. ZOTKIN. Novye poiski, novye rezul'taty; ékspeditsiia 1961 goda. (Priroda, Aug. 1962. god 51, no.8, p.31-39, illus., maps, diagr.) 10 refs. Text in Russian. **Title tr.**: A new search, new results; the 1961 expedition.

Reports studies of the Academy of Sciences party at the site of the 1908 Tunguska meteorite fall. They indicate that this meteorite blew up in the air and made no crater. A map of the approx. 2,000 km² area where the forest was laid flat is presented and interpreted. The fire after the meteorite fall and the intensity of subsequent forest growth are discussed. The character of dispersed matter of the meteorite is analyzed; soil samples also are studied and a concentration of magnetite globules determined. All the field studies and astronomical calculations support the hypothesis that the Tunguska meteorite was of comet nature. (DLC.)

FLORENTIN, E., *see* Chassain, A., & E. Florentin. Étude du quotient respiratoire . . . 1961. No. 70676

FLOROV, V. I., *see* Aleksandrov, A.V., & V.I. Florov. Usloviia verkhnepaleozoiskogo osadkonakopleniia . . . 1962. No. 69677

71447. FLOVIK, KARL, *and* **J. TYSSØ.** Jordbruket i Nord-Norge. Tromsø, 1961. 16 p. illus. (Ottar, Sept. 1961. nr. 29; 1961: nr. 3.) Text in Norwegian. **Title tr.:** Agriculture in north Norway.

Reports 90% of the arable land is in meadow; on the other 10% potatoes are the most important crop; some barley and oats are also grown. About half the farm income comes from cattle; sheep and goats are kept in considerable numbers, pigs and poultry also, but less so. Agriculture has a major role in the economy of the region. Various ways are discussed for making the farms more profitable: increasing the arable, amalgamating small holdings, specializing in vegetables, berries, egg production, etc., as well as modernizing the subsidiary forest industry. Training institutions and advisory service are outlined, producer and consumer co-operatives mentioned. An introductory account of the topographic, soil and climatic conditions in the area is included. (DI.)

71448. FLOYD, CAL. The world's most northern airline. (Flying, Jan. 1961. v.68, no.1, p.58-59, 89-90, illus.)

Describes the routes flown by Widerøe's flyveselskap a/s in North Norway approx. 69°-71°N. from March- to mid-November. Single-engine, 12-seater de Havilland Otter seaplanes are used; during 1959 the company transported some 20,000 passengers, 60,000 pounds of cargo, and 300,000 pounds of mail. Ambulance flights are flown throughout the year, usually with Norseman aircraft; nearly 2,000 successful ambulance sorties have been made since 1954. (DLC.)

71449. FOFONOFF, N. P., *and* **C. K. ROSS.** Transport computations for the North Pacific Ocean 1959-1961. Ottawa, Queen's Printer, Feb. 7, Apr. 24, May 23, 1961. 3 v.: 181, approx. 90, approx. 100 p. maps, tables. (Canada. Fisheries Research Board. Manuscript report series, oceanographic and limnological, no.85, no.93, no.128.) Refs. In sequence to No. 64536.

The theory that total steady-state transport of the mass in the ocean depends primarily on the curl of the wind stress components acting on the water surface, was applied to compute the transports in the North Pacific 15°-65°N. 115°E.-100°W. Monthly means of sea-level atmospheric pressure at a regular set of grid points were read from U.S. Weather Bureau charts, and the resulting geostrophic winds computed. Surface stresses were then estimated from the geostrophic winds; the geostrophic velocity vector, then the stress vector computed; from these, the components of Ekman and total transport are computed. Areas shown on charts include the Okhotsk Sea, Bering Sea, Aleutian waters, and Gulf of Alaska. (DN-HO.)

FOFONOFF, N. P., *see also* Pacific Science Congress. 1961. No. 74619

71450. FOGEL', D. N., *and* **B. SHCHIGLOVSKIĬ.** Perebros stoka severnykh rek i zadachi lesnoĭ promyshlennosti. (Lesnaia promyshlennost', May 1961. god 39, no.5, p.1-4, table, map.) Text in Russian. **Title tr.:** Redirecting the flow of northern rivers and the tasks of the wood industry.

Reviews plans to redirect part of the Pechora and Vychegda discharge toward the Kama and Volga Rivers and Caspian Sea. Dams would bar the northward flow, and a reservoir would cover 1,550,000 hectares, of which some 1,375,000 ha. is now in forest and underbrush. This growth yielding approx. 80 million m³ of timber, must be clear-cut prior to flooding, hence local lumbering activity must be greatly increased. (DLC.)

71451. FOGEL', D. N., *and* **V. TSUGULIEV.** Perspektivy ėkspluatatsii lesov Vostochnoĭ Sibiri i Dal'nego Vostoka. (Lesnaia promyshlennost', June 1961. god 39, no.6, p.4-7, tables.) Text in Russian. **Title tr.:** The outlook for forest exploitation in eastern Siberia and the Far East.

Notes that the Soviet Union has 636.7 million hectares in forests with 69.8 billion m³ of timber; 314.7 million hectares with 33.6 billion m³ of timber in eastern Siberia and the Far East, including Yakutia, Magadan province and Kamchatka. Classification of forests in this area, prevailing species, density, lumbering costs, and planning for a wood industry with uninterrupted production are discussed. In the next 20 years, only 31% of the forested area with 49% of the timber resources in this part of the Soviet Union can be utilized, raising production to 110 million m³/yr. against 46 million m³ in 1960. (DLC.)

71452. FOHS, F. JULIUS. Petroliferous provinces of USSR, a revision. (American Association of Petroleum Geologists. Bulletin, Nov. 1962. v.46, no.11, p.1973-89, maps, tables.) 48 refs.

Summarizes oil and gas developments in the USSR since 1947 and enlarges the 1947-1948 reserves estimates from 150 billion to 210 billion bbls. for land areas, adding for offshore, chiefly inland sea areas, 39.7 billion bbls. At the end of 1961 the Soviet Union had extracted only 7% (13.8 billion bbls.) of its land reserve oil possibilities, and had developed comparably small amounts of proved oil reserves. A revised map 1 in. = approx. 400 mi., indicates the recently discovered Berezovo gas fields along the Ob River; another approx. 1 in: 125 mi., the Bashkiria-Pechora province west of the Urals. Promising oil and gas provinces and districts are classified by probabilities and areas are tabulated. (DGS.)

71453. FOKOS, DÁVID RAFAEL, 1884– . Eine charakteristische Ablativ-Konstruktion. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.41-52.) Refs. in text. Text in German. **Title tr.:** A characteristic ablative case construction.

Comparative morphological and syntactic analysis of several Ural-Altaic languages, including Tungus, Lamut, Zyryan, and Samoyed. (DSI.)

FOLINSBEE, ROBERT EDWARD, 1917– , *see* Baadsgaard, H., & *others*. Caledonian granites . . . Yukon. 1961. No. 69941

Baadsgaard, H., & *others*. Potassium-argon dates Cordilleran. 1961. No. 69942

FOLK, G. EDWARD, *Jr.*, *sc.* Timmerman, J.C., & *others*. Day-night differences . . . 1959. No. 76149

71454. FOMIN, V. G. O razvitii ėkonomicheskikh issledovaniĭ v Sibirskom otdelenii AN SSSR. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961, no.10, p.10-19.) Refs. Text in Russian. **Title tr.**: Development of economic studies in the Siberian Division of the Academy of Sciences of the USSR.

Includes comment on problems of the economy peculiar to the Siberian Far North and the Far Northeast. Activities of the Northeastern General Research Institute (Severo-Vostochnyĭ kompleksnyĭ n.-i. institut) are noted on gold and tin production in Magadan Province, on migration of population and fluidity of labor in these areas and on the system of transportation in and to the Northeast. (DLC.)

71455. FOMIN, V. G. Obshchee sobranie Sibirskogo otdeleniia AN SSSR. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961, no.4, p.116-17.) Text in Russian. **Title tr.**: Plenary meeting of the Siberian Division of the Academy of Sciences of the USSR.

Reports meeting at Novosibirsk, Jan. 13, 1961: development in 1960, plans, organization, component institutions, members, personnel, etc. of the Division. (DLC.)

71456. FOMIN, V. G. V ob"edinennom uchenom sovete po ėkonomicheskim naukam. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961, no.4, p.117-19.) Text in Russian. **Title tr.**: in the Joint Learned Council for the Economic Sciences.

Reports meeting of Jan. 10, 1961: man power, evaluation of natural resources, and distribution of productive forces in Siberia, economic situation in Krasnoyarsk Province and Yakutia included. (DLC.)

71457. FONAREV, G. A. Nekotorye dannye o telluricheskikh tokakh v Barentsevom more. (Geomagnetizm i aėronomiia, 1961. t.1, no.4, p.599-605, tables, graphs.) 8 refs. Text in Russian. **Title tr.**: Certain data on telluric currents in the Barents Sea.

Discusses variations of telluric fields in this area, as related to the horizontal component H of the earth's magnetic field. Data on telluric currents are presented, recorded by electromagnetic sea-stream meters (EMIT) towed in the Barents Sea during July 5-Sept. 12, 1955. These data contribute to an explanation of local electromagnetic disturbances in coastal regions, and introduce corrections into the values of sea-stream parameters recorded by EMIT. Magnetic variation data at Matochkin Shar, Bukhta Tikhaya, and Murmansk are compared to the measurements at sea. (DLC.)

71458. FONKIN, V. F. Novaia tekhnologicheskaia skhema lesozavodov Sibiri i Dal'nego Vostoka. (Lesnaia promyshlennost', Feb. 1961, god 39, no.2, p.23-26, figs., diagrs., table.) Ref. Text in Russian. **Title tr.**: The new technological plan for saw-mills in Siberia and the Far East.

Notes 40% of the commercial timber in these forests to be thick faulty logs unfit for normal frame-saw operations. Therefore, the saw-mills of these areas should have two production lines: one with a frame-saw for standard timber up to 50 cm. diam., the other with a vertical band-saw for the sub-standard logs. Technical details of the equipment and operations of the two lines are discussed, in part from the experience of the Krasnoyarsk saw-mill operating on the double production-line principle. (DLC.)

71459. FORBES, J. C., *and* G. M. DUNCAN. Effect of tryptophan-niacin deficient diet on the adrenal response of rats exposed to cold and alcohol intoxication. (Quarterly journal of studies on alcohol, June 1961. v.22, no.2, p.254-60, illus., tables.) 8 refs.

Rats kept at 2-5°C. on a deficient diet showed, in contrast to controls at room temperature, a marked drop in adrenal cholesterol. Alcohol administration to fully or deficiently fed rats caused a drop in adrenal cholesterol, both in cold and normal environment. Deficiency did not much affect mortality from cold, but when alcohol was superimposed, deficient rats showed 35% mortality against none in controls. Rate of alcohol utilization and of food consumption was greater in the cold. (DNLM.)

FORBES, ROBERT B., *see*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

71460. FORBIS, RICHARD G. Early point types from Acasta Lake, Northwest Territories, Canada. (American antiquity, July 1961. vol.27, no.1, p.112-13, illus.) 4 refs.

Describes stone artifacts: points, blades, scrapers, chopping tools, etc. discovered in 1960 in an esker ridge running through this lake 65°22′ N. 115°33′ W. Significant are several projectile points belonging to the Lerma and the Agate Basin or Yuma traditions. The presence of Lerma points and apparent lack of microblades suggest that the Acasta Lake finds are among the earliest in this area. (DSI.)

71461. FORD, P. M. A study of hydrometeorological relationships in Alaska. (Journal of geophysical research, June 1962. v.67, no.6, p.2411-16, table, diagrs., map.) 5 refs.

Describes an initial study of streamflow as a function of climatological factors. A relationship between runoff and indices of temperature and precipitation is demonstrated in which the effects of causal factors are interdependent. Formulas and curves are described for extending streamflow records and for forecasting seasonal runoff. Comparisons of estimates with recorded runoff indicate close relationships between climatological and streamflow events. The interaction of the climatological factors is a distinguishing feature of hydrometeorological relationships in this region. – From author's abstract. (DLC.)

71462. FORMOZOV, ALEKSANDR ALEKSANDROVICH. Obraz cheloveka v pamiatnikakh pervobytnogo iskusstva s territorii SSSR. (Vestnik istorii mirovoĭ kul'tury, Nov.-Dec. 1961, no.6, p.103-112.)

Refs. Text in Russian. Summary in French. **Title tr.**: Man in primitive art on the territory of the USSR.

Discusses the style, workmanship, size, and artistic quality of paleolithic and neolithic human representations. The paleolithic female sculptures of Mal'ta and Buret' are mentioned. A similarity is noted in the size and work technique of the flint implements and statuettes. All of them average 2 to 17 cm. in length and were made from the same kind of spalls or lamellae. (DLC.)

71463. FORRESTER, ALEXANDER C., *and* J. BROWN. Prediction of oesophageal temperature in hypothermia, preliminary communication. (Anaesthesia, Apr. 1961. v.16, no.2, p.129-34, illus., table.) 2 refs.

Describes a method which prevents "after drop" when surface cooling is stopped, and allows attainment of an accurate, predetermined esophageal temperature. The mean error in six patients was ±0.3°C. (DNLM.)

71464. FORSHELL, WILHELM PLYM. En riksomfattande återväxttaxering i enskilda skogar. (Skogs- och lantbruksakademien. Tidskrift, 1961. årg. 100, nr. 5-6, p.421-48, illus., table, graphs.) Text in Swedish. Summary in English. **Title tr.**: A nationwide regeneration survey of private forests.

The five-year survey, for large-scale planning, is to cover sample plots on 10,000 clearcut sites throughout Sweden. Preliminary results are presented for the Lappmark area of Västerbotten and a large part of Jämtland, Göteborg, and for other more southerly areas: 66% of all the plots carry satisfactory regeneration, in Jämtland 51%, Norrland as a whole 55%, southern Sweden 82%. Artificial and natural regeneration/hectare, and estimated number of stems/hectare after thinning are reported. (DA.)

71465. FORTIER, YVES OSCAR, 1914– Geology of Glacier Lake area, Great Bear Lake, Northwest Territories. Ottawa, 1948. 9 p. map. (Canada. Geological Survey. Special report.)

Describes the topography of this area north of Echo Bay on the east shore of Great Bear Lake a dissected, undulating plateau with maximum relief over 1000 ft. The geology is discussed with reference to 14 numbered units on the accompanying map at scale 1:4800. The area contains sedimentary strata, volcanic flows, and intrusives. Structurally there are many faults, few folds. Economic geology is discussed; radioactive and other minerals were observed. (CaOG.)

FORWARD, FRANK A., *see* National Northern Development Conference. 1961. No. 74224

71466. FOTIADI, ÈPAMINOND ÈPAMINONDOVICH, 1907– . Osnovnye cherty tektonicheskogo stroeniiā Sibiri i Dal'nego Vostoka v svete dannykh regional'nykh geologicheskikh i geofizicheskikh issledovanii. (Geologiiā i geofizika, 1961, no.10, p.28-41, maps incl. fold.) 66 refs. Text in Russian. Summary in English. **Title tr.**: Main features of the tectonic structure of Siberia and the Far East in the Light of data from regional geologic and geophysical investigations.

Presents a schematic map of Siberia and Far Eastern USSR based on recent geologic and magnetic and gravity investigations. The Russian, West Siberian, and Siberian platforms and folded areas of the Far East are characterized including the arctic regions. Surface structure of the folded Mesozoic basement is outlined for the West Siberian platform and that of the Precambrian basement for the Siberian platform. (DLC.)

71467. FOTIADI, ÈPAMINOND ÈPAMINONDOVICH, 1907– Sovremennoe sostoiānie, zadachi i perspektivy geofizicheskikh issledovanii v Sibiri i na Dal'nem Vostoke. (Geologiiā i geofizika, 1962, no.10, p.83-92, map.) 27 refs. Text in Russian. **Title tr.**: Present status, tasks and prospects of geophysical investigations in Siberia and the Far East.

Reports regional magnetic, seismic gravimetric, and other geophysical investigations conducted in this broad area including the West Siberian lowland, Yakutia, Magadan Province and Kamchatka. Further objectives, localities, and a program of geophysical studies are briefly outlined. (DLC.)

71468. FOTIEVA, N. N. Turneĭskie khonetidy Timano-Pechorskoĭ provintsii. (Paleontologicheskiĭ zhurnal, 1961, no.4, p.100-108, plate.) 9 refs. Text in Russian. **Title tr.**: Tournaisian *Chonetes* of the Timan-Pechora province.

Describes systematically Lower Carboniferous brachiopods from the southern slope of the Timan Ridge and the middle Pechora region. Special attention is given to gen. *Chonetes* and its subgen. *Rugosochonetes, Chonetes,* and *Plicochonetes*. Three species: *Chonetes (Rugosochonetes) demini, Ch. (R.) dzhebolicus,* and *Ch. (Plicochonetes) tichonovitshi* n. spp. are distinguished. (DLC.)

71469. FOURMENT, A., *and* J. SCHERRER. Réponses électrocorticales du lapin élevé dans l'obscurité. (Journal de physiologie, 1961. t.53, no.2, p.340-41.) 7 refs. Text in French. **Title tr.**: Electrocortical responses of rabbits raised in darkness.

Summary on cortical responses to flash in animals raised 6-12 months in darkness. Comparisons with controls did not indicate whether the deviations from normal are due to inhibited retinal potential or due to deep structural changes. (DNLM.)

71470. FOWLER, EVAN L. Development of the rigid frame Eskimo house. (Plywood world, 4th quarter 1961. v.1, no.4, p.14-15, illus., diagrs.)

Describes a light-weight, warm, portable simply built structure, strong enough to withstand 100 m.p.h. winds and a heavy snow. It has a 16′ x 16′ floor, 7′8″ height at peak, and four windows; the design is described. The cost in place is $650. Larger models are under development. This house is result of a joint effort of the Plywood Manufacturers Association of British Columbia, the National Research Council of Canada's Division of Building Research and the Canadian Dept. of Northern Affairs and National Resources and Lands Branch, Arctic Division. (CaONA.)

71471. FOWLER, GEORGE W., *Jr.* Traverse navigation in high latitudes. (Institute of En-

vironmental Sciences. Proceedings 1962. p.377-78, port.) Ref.

Describes the Fowler-Winn method of final refinement of position, noting methods of observation, computation, and determination of error in tenths of a second. Problems of course plotting and establishment, trail marking, distance, etc. are noted as they arise in areas (as the Ross Ice Shelf, Antarctic Plateau, Greenland Inland Ice) where celestial navigation depends on the sun, chronometers are unreliable, and rapid convergence of meridians make plotting of courses by rhumb lines subject to error. (DWB.)

FOX, D. F., *see* Ainsworth, J.E., & *others*. Upper-atmosphere structure . . . 1961. No. 69524

FOX, IRVING K., 1912– , *see* Alaskan Science Conference 1961. 1962. No. 69644

71472. FOX, R. H. Local cooling in man. (British medical bulletin, Jan. 1961. v.17, no.1, p.14-18, illus.) About 80 refs.

Deals with effects of general or local cooling on dexterity and work performance; cooling and blood flow; effects of local hypothermia on muscles, tendons and joints; response of nerves to cooling; local cold acclimatization. (DNLM.)

71473. FOX, R. H., *and others*. The use of a radio pill to measure deep body temperature. (Journal of physiology, Feb. 1962. v.160, no.2, p.22P-23P.) Ref. *Other authors:* R. Goldsmith *and* H.S. Wolff.

Describes an easily swallowed pill with a radio transmitter and a receiver system sensitive to 0.1°C. Tests, comparisons with other methods, advantages, and drawbacks, are noted. (DLC.)

FOY, G., *see* Hart, J.S., & *others*. Thermal & metab. responses . . . Eskimos cold. 1962. No. 72054

71474. FRADKIN, NAUM GRIGOR'EVICH. Ivan Ivanovich Lepekhin, 1740-1802. (*In:* Kuznetsov, I.V., *ed.* Liudi . . . 1962, p.373-81, map.) 15 refs. Text in Russian.

Describes life and travels of Lepekhin during 1768–1773: in the Tyumen region, Northern Ural, White Sea coastal areas, Arkhangel'sk region, Severnaya Dvina, Kanin Peninsula and other northern areas, as shown on map. Published accounts of these travels are evaluated. (DLC.)

71475. FRADKIN, NAUM GRIGOR'EVICH. Ocherki po istorii fiziko-geograficheskikh issledovanii territorii SSSR; 1917-1927 gg. Moskva, Izd-vo Akademii nauk SSSR, 1961. 248 p. maps. (Akademiia nauk SSSR. Institut geografii.) 132 refs. Text in Russian. **Title tr.:** Historical outline of the physical-geographic investigation of USSR territory during 1917-1927.

Detailed account of these investigations, with special chapters on Kola Peninsula, islands of the Barents Sea (Novaya Zemlya), the Pechora basin, the Ural and West Siberia, Eastern Siberia and the Far East. Geologic, geographic, mineralogic, soils and vegetation, and other studies are reviewed. Organized expeditions in this period such as the Northern 1922-1926, Khibiny 1920-1923, Imandra 1924, Bol'shezemel'skaya 1921, Indigirka 1926, and others are described in detail, noting their leaders, participating scientists, and type of studies. (DLC.)

FRANCIS, KARL E., *see*

Kumai, M., & K.E. Francis. Electron microscope studies . . . 1962. No. 73205

Kumai, M., & K.E. Francis. Nuclei, snow & ice crystals . . . 1962. No. 73206

Kumai, M., & K.E. Francis. Size distribution . . . fog. 1962. No. 73207

FRANK, L. A., *see* O'Brien, B.J., & *others*. Measurements . . . electrons . . . 1962. No. 74457

71476. FRANK-KAMENETSKIĬ, V.A., *and* **I. VESEL'SKIĬ.** Rentgenovskoe issledovanie izomorfizma v perovskitakh. (Geokhimiia, 1961, no.5, p.379-89, tables, graphs.) 8 refs. Text in Russian. Summary in English. **Title tr.:** X-ray investigation of isomorphism in perovskites.

Reports on perovskites from various deposits of Kola Peninsula: X-ray analyses with the powder method of Laue showed slight deviation of the cubic symmetry. The dependence of the form of perovskite crystals upon the content of isomorphous impurities has been observed. Relatively pure perovskites have crystals of octahedral habit, with increased impurities, it gradually changes into cubic habit. Some corrections were added in the same journal 1961, no.11, p.1035-36. (DLC.)

FRANKENHAUSER, DR., *see* Browning, L. Five years of medical observations . . . 1962. No. 70410

71477. FRANKENSTEIN, GUENTHER E. Strength data on lake ice, part II. Wilmette, Ill., Jan. 1961. iv, 18 p. illus., graphs, tables. 2 appendices. (U.S. Army. Corps of Engineers. Snow, Ice and Permafrost Research Establishment. Technical report 80.) 2 refs. In sequence to No. 58057.

Reports results of 245 supported beam tests and 56 in-place cantilever tests, conducted in 1957-58 on lake ice in Michigan. Tests were made on clear ice and on a combination of clear ice and snow-ice. The supported beams had a higher computed flexural strength than similar cantilever beams. Also, they had higher flexural strength with the bottom layer in tension. Cantilever tests again gave higher strength values when the bottom layer was put in tension, as in No. 58057. Bright sun and near-freezing temperatures for the air and ice decreases the ice strength as much as six times from morning to mid-afternoon. Photos show arrangement used in testing. (DGS.)

71478. FRANSSILA, MATTI. On the temperature conditions in a large *aapa* bog area in Finnish Lapland. Helsinki, 1962. 21 p. map, graphs, tables. (Finland. Ilmatieteellinen Keskuslaitos, Toimituksia no. 53.) 9 refs.

Reports on work carried out 1958-1960 on this 400 km.^{2} bog area of Posoaapa, approx. 68°N. 28°E., northeast of Sodankylä. Air temperatures were measured at 20 and 150 cm. height, soil temperatures at five or six depths in the one-meter-thick surface layer. The ground-water table virtually coincides with the soil surface in summer. Temperature conditions are more moderate on the bog than in the surrounding dry mineral soils, the mean temperature higher (0.10°C.) largely because of advection. Draining of the bog would lower the mean temperature though it would improve the heat budget, rather unfavorable because of high evaporation. Temperature conditions over such surfaces seem mainly dependent on the night-time heat budget. (DWB.)

71479. FRANSSILA, MATTI. Radiation shield for microclimatological measuring of temperature. (Geophysica, 1961. v.8, no.1, Meteorology, p.85-88, illus., tables.)

A network of stations was established in 1958 in the northern part of Sodankylä commune in Finnish Lapland, to study the microclimate of bogs and forests. Conventional thermometers provided with shield against solar and diffuse sky radiation were used to measure air temperatures; observations are compared with those obtained with the aspiration thermometer and one enclosed in an English screen to determine the effectiveness of the shields. Data are tabulated from field and laboratory studies showing that the shields give 2.5 times better protection against direct solar and diffuse sky radiation than against that reflected from the surface. Compared with the screen-encased thermometer, the shielded one gives 0.3° higher maximum and 0.2 - 0.3°C. lower minimum readings. (CaMAI.)

71480. FRANTSESSON, E. V. Sopostavlenie magnitnykh svoĭstv i khimicheskogo sostava il'menitov iz kimberlitovykh trubok IAkutii. (Geologiīa i geofizika, 1962, no.6, p.89-96, tables, diagrs.) 4 refs. Text in Russian. **Title tr.:** Correlation of the magnetic properties and chemical composition of ilmenites from kimberlite pipes of Yakutia.

Reports study of the magnetic susceptibility and chemical composition of ilmenites from 11 kimberlite pipes, the Mir, Zarnitsa, Udachnaya, Sputnik, and others. Each pipe has its own intervals of magnetic susceptibility and different composition of ilmenites. The variant composition apparently is due to varying conditions of differentiation. Ilmenites in southern Yakutia are more ferriferous; in the northern part, high-magnesian ilmenites are met. (DLC.)

71481. FRANTSESSON, E. V. Sostav i stroenie kimberlitovoĭ trubki "Mir." *(In:* Akademiīa nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Petrografiīa i mineralogiīa . . . almazov, 1962. Trudy, sbornik no.8, p.19-38, tables, diagrs.) 5 refs. Text in Russian. **Title tr.:** Composition and structure of the Mir kimberlite pipe.

Describes the geologic position and form of this pipe and analyzes the petrography of the kimberlite breccia; the inclusions and xenoliths are reported, noting the trap, serpentine and amphibole, sedimentary rock, etc. inclusions, and giving chemical composition of the xenoliths. Postmagmatic alteration in this kimberlite pipe is characterized. (DLC.)

71482. FRANTSESSON, E. V. Veshchestvennyĭ sostav i vozrastnye vzaimootnosheniīa kimberlitovoĭ trubki i zhily "Ėgiėntėĭ." (Akademiīa nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniīa 1962. vyp.7, geologiīa, p.99-106, illus., tables.) 4 refs. Text in Russian. **Title tr.:** Material composition and age relationship of the Egientey kimberlite pipe and vein.

Notes the existence of two groups of kimberlite veins in the Siberian platform: independent veins not linked with pipes, and veins connected with pipes. The Egientey pipe in the Olenek region, and a vein not linked with pipe are studied and their mineralogical, chemical and other features outlined and compared. The vein has 20% mica, which is absent in the pipe; content of iron, titanium oxide and manganese oxide also are different. Evidence shows that the kimberlite pipe was formed later than the vein. (DLC.)

71483. FRASER, D. B., *and* **J. W. PATTERSON.** Lead and zinc in Canada, 1960. Ottawa, Queen's Printer, 1962. vii, 82 p. illus., map, graphs,tables. (Canada. Dept. of Mines and Technical Surveys, Mineral Resources Division, Mineral information bulletin MR 53.) Refs.

Detailed report on primary production, trade and consumption of these two metals during 1960; Canada was the world's fourth largest producer of lead ore and the second largest producer of zinc ore that year. Opening of the Snow Lake, Man., mine marked first lead production from that province. The near-record zinc output came partly from Flin Flon and its satellite mines. Yukon Territory production came from five mines in the Mayo district mostly from the Calumet and Hector mines, 140,815 tons of ore. (DLC.)

71484. FRASER, D. B. Survey of the primary zinc industry in Canada, 1959. Ottawa, Queen's Printer, 1960. v, 84 p. map, graphs, tables. (Canada. Dept. of Mines and Technical Surveys. Mineral Resources Division, Mineral information bulletin MR 43.) Refs.

Reviews in some detail the status of and activity in this industry, including in the North: the Flin Flon, Man., refinery, its opening in 1930 and its 1959 output of 110,709 tons of zinc concentrate; the 500-ton mill at Elsa in the Yukon, and its output of 13,767 tons; etc. New ore-bearing structures were developed in the Calumet and Elsa mines in Mayo district, ore reserves at Sept. 30, 1959 totalled 549,565 tons containing 4.89% zinc. Development of the Pine Point deposit in Mackenzie District depends on construction of a railway from the present railheads at Waterways and Grimshaw, Alta. Development continued at Chisel Lake, Stall Lake, and Coronation mines near Flin Flon. Estimated total zone ore reserves of Canada in 1958 were 18.5 million tons, containing also 8.7 million tons of lead and 2.1 million tons of copper. Principal producers are listed; producers and prospective producing areas are mapped, two producers and six prospective areas in the area covered by this Bibliography. (DGS.)

FRASER, GEORGE DEWITT, 1920– . *see* Drewes, H., *& others.* Geology of Unalaska . . . shelf. 1961. No. 71108

FRASER, J. A., *see* Blackadar, R.G., & J.A. Fraser. Precambrian . . . 1961. No. 70242

71485. FREBOLD, HANS, 1899– . The Jurassic faunas of the Canadian Arctic: Lower Jurassic and lowermost Middle Jurassic ammonites. Ottawa, Queen's Printer, 1960. 33 p. 15 plates, maps, fold. table. (Canada. Geological Survey. Bulletin 59.) 42 refs.

Jurassic fossils in general from the Canadian Arctic having been summarized in No. 50975, these ammonites from six Arctic Islands and the Richardson Mts. are described, mainly from collections by Geological Survey personnel. The age and correlations of the beds concerned are outlined, and the paleogeographic conditions discussed. Some 15 index ammonites are described and illus.

The incomplete sequence lacks the Hettangian and most of the Pliensbachian stages; also parts of the Sinemurian and Toarcian; only six of the 17 ammonite zones in the northwest European standard section of the Lower Jurassic are found in the Canadian Arctic. Various transgressions by the Jurassic Arctic Ocean flooded parts of this border zone, most extensively during the Toarcian stage. Close faunal and stratigraphic relationships with the Barents Shelf and East Greenland are established. Most of these ammonites belong or are related to widely-distributed species, *Pseudolioceras, Dactylioceras,* etc. (DGS.)

71486. FREBOLD, HANS, 1899– The Jurassic faunas of the Canadian Arctic: Middle and Upper Jurassic ammonites. Ottawa, Queen's Printer, 1961. 43 p. 21 plates, maps, fold. table. (Canada. Geological Survey. Bulletin 74.) 63 refs.

Contains systematic descriptions of index ammonites of the Middle and Upper Jurassic, collected from 18 localities near the Richardson and British Mts., Yukon Territory and Mackenzie District, also from nine localities in the Canadian Arctic Islands. Middle and Upper Jurassic faunas are widely distributed in the Canadian Arctic; some index ammonites indicate the presence of eight or more stratigraphic stages; others have limited distribution. Close correlation is shown with other arctic faunas, particularly with East Greenland and the Khatanga region of Krasnoyarskiy Kray. Manifestation of the widespread boreal fauna realm took place in the Bajocian, i.e. Middle Jurassic. (DGS.)

71487. FREDSKILD, BENT. Floristic and ecological studies near Jakobshavn, West Greenland. København, 1961. 82 p. illus., diagrs., tables. (Meddelelser om Grønland, bd.163, nr.4.) 39 refs.

Reports summer 1957 collections, also analyses of vegetation and soils east of Disko Bay. Most of the 142 species and subspecies are low or central arctic, with few boreal or high arctic; 25 are western species, six eastern, a few oceanic. Vegetation types are outlined as observed under the various environmental and soil conditions of heaths, willow scrub, marsh and bog, snow-beds, beaches, temporary and permanent pools, ponds and lakes. Fourteen hydrophytes were found; their distribution and fruit production in Greenland are described. Plant fossils in soil samples from ponds indicate a formerly milder climate. Vegetation and soils in the Orpigsôq area of Disko Bay, at 68° 37′N.50°52′W. are noted from a visit there. (DGS.)

71488. FREDSKILD, BENT. Kødaedende planter på Grønland. (Grønland, June 1962, nr.6, p.231-38, illus.) Text in Danish. **Title tr.:** Insectivorous plants in Greenland.

Contains botanical descriptions of five: butterwort, the most common; three species of bladderwort, all rare and known only in a few places between Umanak Fjord and Julianehåb district; and sundew also very rare in Greenland and recorded only at Igaliko in the south, at Christianshåb and at Angmagssalik. (DLC.)

71489. FREEMAN, WALTER JACKSON, 1927– . A critique of the doctrine of "centers" in temperature regulation. *(In:* Symposia on arctic biology and medicine, 1960. Proceedings, 1; neural aspects of temperature regulation, *pub.* 1961. p.255-94, illus.) 7 refs.

Reviews some hundred years' history of the "center" concept for the brain, and his own inconclusive experiments involving recording, stimulation and ablation, also analysis of behavior. It is suggested "that during most reflex activities, virtually all parts of the brain are active," each part contributing "to the behavior as a whole." An outline for further studies on thermoregulation, based on these conclusions, is suggested. Discussion is appended, p.287-93. (CaMAI.)

71490. FREEMAN, WALTER JACKSON, 1927– , *and others.* Nervous control of shivering, 10; role of the fields of Forel in shivering. Fort Wainwright, Alaska, October 1961. 12 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-27.) 21 refs. *Other authors:* D.G. Stuart *and* A. Hemingway.

Report concerning bilateral lesions placed in the nucleus of Forel, or the central tegmental fasciculus of cats, both known to be active during shivering. Tests on maintaining rectal temperature, or on 0_2-consumption during cold stress indicated that the lesions did not impair the shivering response. (CaMAI.)

FREESE, J. W., *see* Lesage, A.M., *& others.* Study . . . hypothermic dog. 1960. No. 73436

71491. FREGLY, MELVIN JAMES, 1925– . Effect of changes of ambient temperature on spontaneous activity of hypothyroid rats. (Canadian journal of biochemistry and physiology, June 1961. v.39, no.6, p.1085-96, illus.) 21 refs.

Rats made hypothyroid, increased their activity on the first day of cold exposure, while controls showed increased activity during four days of experiment. Effect of restraint and acute cold exposure upon activity and colonic temperature in hypothyroid and normal rats is also reported. (DLC.)

71492. FREGLY, MELVIN JAMES, 1925– , *and others.* Effect of hypothyroidism on heat production and loss during acute exposure to cold. (Journal of applied physiology, Jan. 1961. v.16, no.1, p.127-32, illus., table.) 26 refs. *Other authors:* P.F. Iampietro *and* A.B. Otis.

Study of thyroidectomized and adrenalectomized rats exposed to 5 ± 1°C. Their heat exchange was estimated from oxygen consumption and from colonic and skin temperatures. The inability of the thyroidectomized group to tolerate cold was found to be almost entirely due to a rapid loss of body heat. (DLC.)

71493. FREGLY, MELVIN JAMES, 1925– , *and others.* Effect of propylthiouracil treatment and adrenalectomy on heat production and heat loss during acute exposure to cold. (U.S. Air Force. School of Aviation Medicine. Rept. 61-46, Apr. 1961, p.1-9, illus., table.) 26 refs. *Other authors:* P.F. Iampietro *and* A.B. Otis.

Propylthiouracil treatment (thyroidectomy) and adrenalectomy increased the rate of cooling in restrained and cold-exposed rats. At identical colonic temperature, both groups had higher skin temperatures than controls. At the same colonic temperature, thyroidectomized rats had the same heat production in the cold, as controls, but their heat loss was greater. (DNLM.)

71494. **FREHN, JOHN L.,** *and* **A. ANTHONY.** Respiration and phosphorylation of liver mitochondria from cold-exposed rats and chipmunks. (American journal of physiology, Nov. 1962. v.203, no.5, p.821-24, illus.) 22 refs.

P:O ratio was unchanged in mitochondria from cold-exposed rats, and chipmunks hibernating or not. No differences were found in the ratio of respiratory rate in the presence of excess substrate only (R8) or with adrenosine-diphosphate in cold-exposed rats or in chipmunks that failed to hibernate. R8 value in hibernating chipmunks was higher than in controls, due to increased substrate - ADP respiratory rate. The substrate rate remained unchanged. (DLC.)

71495. **FREIBERGER, ARNOLD,** *and* **H. LACKS.** Ice-phobic coatings for deicing naval vessels. (Navy Science Symposium, 5th, *Annapolis,* Apr. 1961. Proceedings, p.234-49, illus., tables, diagrs., graphs.) 18 refs.

Reviews icing and deicing problems on vessels in polar service, and describes efforts of the U.S. Naval Material Laboratory to develop ice-phobic coating systems with measured adhesion values below 5 p.s.i. Polysiloxanes have possibilities; various formulations are being tried. Successful service tests on the icebreaker USS *Staten Island* are reviewed. (SPRI.)

FRENCH, D. N., *see* Kingery, W.D. . . . Project Ice Way. 1962. No. 72796

71496. **FRENCH, DAVID.** Types of organization and change among North American Indians. (International Congress of Americanists, 34th, *Vienna,* 1960. Proceedings *pub.* 1962, p.153-60.) 33 refs.

Recognizes two major types of social organization: *bounded* with stable membership based on lineage, clan, the men's society, etc.; and *unbounded* with fluid membership on an ad hoc basis, e.g. for hunting, recreational activities. Some northern groups are included in the study: Eskimos and Athapaskans are classed as *unbounded* in type, while northern Algonkians may have been *bounded.* Both types of organization existed among the Northwest Coast Tlingits, Haidas, Tsimshians, and Kwakiutls. (DSI.)

71497. **FRENCH, ROBERT,** *and* **K. A. MOSHER.** Mid-winter gillnetting in mid-ocean. (Pacific fisherman, June 1962. v.60, no.7, p.16-18, illus., map.)

Describes a study of the winter distribution of salmon in the North Pacific, made during a Jan.-Apr. 1962 cruise of the U.S. Bureau of Commercial Fisheries charter vessel, *Bertha Ann.* Over a thousand, mostly red, salmon taken at stations along 155°W. in the Gulf of Alaska and 175°W. south of the Aleutians are analyzed to determine their continent and river system of origin. Presence of salmon near the Aleutians was of special interest, as they were presumed to be farther south during winter. Age composition was determined for the catches along 155°W. and comparison made with ages common among mainland-caught fish, to aid in forecasting runs to various localities. (DI.)

71498. **FRENZEL, BURKHARD.** Die Vegetations- und Landschaftszonen Nord-Eurasiens während der letzten Eiszeit und während der postglazialen Wärmezeit, II. Teil: Rekonstruktionsversuch der letzteiszeitlichen und wärmezeitlichen Vegetation Nord-Eurasiens. (Akademie der Wissenschaften und Literatur in Mainz. Abhandlungen der mathematisch-naturwissenschaftlichen Klasse, Jahrg. 1960, no.6, p.5-167, 36 illus., 2 fold. maps.) Approx. 400 refs. Text in German. Title tr.: The vegetation and landscape zones of northern Eurasia during the last glaciation and during the postglacial warm period, part 2: An attempt at reconstruction of northern Eurasian vegetation in the last glaciation and in the warm period. In sequence to No. 58086.

Reconstructs from paleogeographic and paleobotanical study, the vegetation- and landscape zones of Europe and the Caucasus, the Urals, West Siberian plain, middle and southern Siberia, northeastern Siberia, and Kamchatka and other adjacent areas. This reconstruction is made for two periods: the highest extent of the last glaciation, and the maximal warm rise during the postglacial period. The last glaciation substantially changed the climate of northern Eurasia, areas of permafrost increased and the zones of forest diminished. Distribution of frost-drift tundra, forest tundra, taiga and other vegetation zones is treated in detail and shown on map. Expansion of vegetation during the postglacial warm period is also demonstrated. (DLC.)

FREZE, V. I., *see*

Spasskiĭ, A.A., *& others.* Rabota . . . SGÉ v 1960 g. 1962. No. 75860

Trofimenko, V. ÍA. Materialy po gel'mintofaune . . . 1962. No. 76192

FRÍAZINOV, I. V., *see* Dolginov, Sh. Sh., *& others.* Nekotorye . . . postoíannogo magnitnogo poliá . . . 1962. No. 71066

71499. **FRICKER, P. E.,** *and* **H. P. TRETTIN.** Pre-Mississippian succession of northernmost Axel Heiberg Island, District of Franklin, part of sheet 560 D/SW. Ottawa, Queen's Printer, 1962. 24p. maps incl. fold. in pocket, table. Appendix. (Canada. Geological Survey. Paper 62-18.) 21 refs.

The Franklinian eugeosyncline includes a small part of Axel Heiberg Island from 80°50'N. to its northern extremity and is centered approx. at Rens Fjord. Exposed in this area is a succession of more than 35,000 ft. of partly metamorphosed sedimentary and volcanic rocks intruded by small granitic plutons and ranging in age from Lower Silurian to Lower or Middle Devonian. The unmetamorphosed rocks of the Sverdrup Basin rest with a marked angular unconformity on the rocks of the Franklinian eugeosyncline elsewhere on Axel Heiberg. The region north and east of Rens Fjord is described. Preliminary map at 1 in: 1 mi. scale shows the ten stratigraphic units, also structure and glacial features; appendix gives in tabular form three measured stratigraphic sections. The paper combines results from Operation Franklin 1955 and the Jacobsen-McGill expedition of 1959-1960. (DI.)

71500. **FRIÐRIKSSON, ARNI.** The Icelandic north coast herring in 1958. (International Council for the Exploration of the Sea. Annales biologiques 1958, 1959, *pub.* 1960, 1961. v.15, p.126-31; v.16, p.163-67; illus., tables, maps.)

Account of catches in recent years: size distribution and age composition in 1958, and comparisons with 1957; relative strength of tribes; age distribution and vertebral number in the tribes;

feeding conditions, tagging activities and returns. The 1959 report discusses landings (best since 1944) and biological features of the herring as reflected in the composition of the catches according to size, age and tribe. Numbers of vertebrae by tribes, amoung of *Calanus* in stomachs, tagging results, etc. are also considered (DI.)

71501. FRIEDMAN, IRVING, *and others.* The deuterium concentration in arctic sea ice. (Journal of geophysical research, June 1961. v.66, no.6, p.1861-64, table, graphs.) 3 refs. *Other authors:* B. Schoen *and* J. Harris.

Presents results of analyses of cores of ice taken near T-3 at 80°18′N. 113°W. and on Drifting Station A near 85°40′N. 127°W. and 83°N. 165°W. When plotted against depth, the deuterium concentration in the T-3 core exhibits three minima, which are ascribed to the formation in summer and freezing in early winter of a deuterium-poor surface layer of water. The ice floats on this layer which is formed by the mixture of sea water and melted precipitation. This theory is sustained by analyses of surface water samples collected by the submarine *Skate* at 86°44′N. 77°55′W. and 89°18′ 30″ N. 45°W., in 1958. No clear deuterium variation was observed in two cores from Station A, probably due to low precipitation during preceding years or to greater vertical mixing under this station. (DLC.)

71502. FRIEND, D. W., *and* **E. W. CRAMPTON.** The adverse effect of raw whale liver on the breeding performance of female mink. (Journal of nutrition, Mar. 1961. v.73, no.3, p.317-20, illus., table.) 13 refs.

Increasing the quantity of whale liver in a ration from 5% to 10% resulted in a greater number of unsuccessful pregnancies. It is postulated that this is due to a hipervitaminosis A produced by increased liver intake. (DLC.)

71503. FRIEND, P. F. The Devonian stratigraphy of North and Central Vestspitsbergen. (Yorkshire Geological Society. Proceedings, July 12, 1961. v.33, pt.1, no.5, p.77-118, fold. plate, maps, sections.) 75 refs.

Reports on sediments in Dickson Land, Andrée Land, the Woodfjorden and Raudfjorden areas, investigated during four Cambridge University expeditions since 1949. Rock series (five) and their component formations are described in a sequence of approx. 6000 metres of sediment of predominantly Old Red Sandstone facies. Correlations are attempted: the formations are thought to range from Upper Downtonian (Lower Gedinnian) to upper Middle Devonian (upper Givetian) or lowermost Upper Devonian (lowermost Frasnian). The environments of deposition probably include torrential alluvial fans, river floodplains, brackish lagoons, and inland lakes. Conglomerates at the top of the succession may indicate the beginning of the Upper Devonian "Svalbardian" phase of earth movement. Appended list of fossils mentioned by others includes some unpublished records from recent expeditions, as well as confirmations of several published records.—From author's abstract. (DGS.)

FRIEND, P. F., *see also Polar record.* Field work. 1961-62. No. 74848

71504. FRIETSCH, RUDYARD. En zon av kaolinlera och vittrad blodsten vid Svappavaara, Norrbotten. Stockholm, 1960. 45 p. illus., maps, sections, graph, tables. (Sweden. Geologiska undersökning. Avhandlingar och uppsatser, Ser. C, no.572.) 30 refs. Text in Swedish. Summary in English. **Title tr.:** A zone of kaolin clay and weathered hematite at Svappavaara, Norrbotten.

Discusses origin and characteristics of this relatively narrow zone of plastic kaolin clay, encountered during diamond-drilling of the iron ore lens on Gruvberget, formerly Svappavaara in northern Sweden, 1957. Petrology and mineralogy of the ore-body are described; detailed results of field observations, chemical analyses and microscopic examination of the alteration zone indicate that these two muddy constituents were formed by preglacial weathering of the adjacent leptite and hematite. The alteration processes are outlined, tracing the change from leptite to kaolin; also the removal of all minerals except the hematite. Comparisons are made with similar occurrences elsewhere in Scandinavia. Pre-glacial weathering of iron ores is known from several places in Sweden, but only one other instance of the solution of non-ore minerals alone is reported. The zone is shown on a map at scale 1 in.: 50 m., photos, and sections. (DLC.)

FRIIS, HERMAN RALPH, 1905– , *see* Pacific Science Congress. 1961. No. 74619

FRIOU, G. J., *see* Gowen, G.F., & G.J. Friou. Influence of hypothermia . . . 1961. No. 71810

FRISCHKNECHT, FRANK CONRAD, 1928– , *see*

International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

Plouff, D., & *others.* Geophysical studies . . . T-3, 1958 to 1959. 1961. No. 74831

71505. FRISTRUP, BØRGE. Climatological studies of some high arctic stations in North Greenland. *(In:* International Geographical Congress 1960. Physical geography . . . 1961. p.67-78, maps, graphs, tables.) 11 refs.

Summarizes meteorological observations from Jørgen Brønlunds Fjord, Nord, and Thule Air Base; comparison is made with Alert and Eureka on Ellesmere Island. Graphs of pressure, temperature, cloudiness, wind and precipitation are presented; continentality of climate in percent (Gorzcynski's formula) is shown for about 35 stations throughout Greenland and Ellesmere Island; desert-like features of the northern stations are noted. (DGS.)

71506. FRISTRUP, BØRGE. Dänische glaziologische Untersuchungen im Internationalen Geophysikalischen Jahr. (Polarforschung, Bd. 5, 1960 *pub.* Nov. 1961. Jahrg. 30, Heft 1-2, p.3-11, table, graphs, diagrs., map.) 18 refs. Text in German. **Title tr.:** Danish glaciological research during the IGY.

Reports meteorological, including ice temperature and ablation, observations on four valley glaciers in Greenland: Hurlbut (77°23′30″N. 67° 57′W.), Sermikavsak (71°11′N. 53°03′W.), Napassorssuak (60°18′N. 45°13′W.), and Mitdluagkat

(65°40′40″N. 37°54′W.). They are classified according to Ahlmann's system (No. 86) and their climatic and natural conditions are described. Considerable precipitation was recorded at the southern stations and very little at the northern ones. Very low ice temperatures in the northernmost glacier (Hurlbut) may account for its insensitivity to temperature changes; two of the others (Napassorssuak, Mitdluagkat) maintain temperatures near 0°C. to 15 m. depth. The Mitdluagkat has retreated 400-500 m. since 1933 and its height has been reduced by some 30 m. (CaMAI.)

71507. FRISTRUP, BØRGE. Flydende isøer. (Grønland, May 1961, nr.5, p.161-68, illus., map.) Text in Danish. **Title tr.:** Floating ice islands.

Summarizes American and Canadian research. (CaMAI.)

71508. FRISTRUP, BØRGE. The International Glaciological Expedition. (*In:* International Geographical Congress 1960. Physical geography . . . 1961. p.79-83, map.)

Outlines the organization including Austria, Denmark, France, Germany, and Switzerland, the program, field work in Greenland, and future plans of this glaciological, meteorological, and geophysical expedition 1957-1960. (DGS.)

71509. FRISTRUP, BØRGE. Overvintringsstationer på indlandsisen: 1, Ekspeditioner før anden verdenskrig; 2, Franske, britiske og amerikanske ekspeditioner 1947-1956; 3, Amerikanske permanente stationer m. v. (Grønland, July-Sept. 1962; nr.7, p.255-65; nr.8, p.298-304; nr.9, p.321-34, illus., map.) Text in Danish. Summary in English. **Title tr.:** Wintering stations on the inland ice: 1, Expeditions before the second world war; 2, French, British and American expeditions 1947-1956; 3, American permanent stations, etc.

Reviews the logistics for wintering parties from the 1912-13 Koch-Wegener expedition to Dronning Louise Land in East Greenland. Prior to the 1940's all stations were established by pony or dog-sledging, few winterings were made as most expeditions were undertaken in the summer only. Wegener's attempt to use propeller sledges in 1930-31 was unsuccessful. The post-war stations have been established by tractor or by air transport. Several principles for construction have been used and the most important types are characterized. The first stations were primitive and planned to last but one-two years. Modern stations are designed for longer periods and snow is used as building material. To solve problems of snow accumulation, stations are dug into the snow or built on columns above the drift. Installations of the Paul-Émile Victor expeditions from 1948 and the British North Greenland Expedition of 1951-1954 are discussed, as are the American stations in North Greenland: Tuto, Site 2, Camp Century, Dye 2 and 3. Over-snow travel, air-supply and rescue work are discussed. A chronology of the winter stations is included. (DLC.)

71510. FRISTRUP, BØRGE. Studies of four glaciers in Greenland. (*In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.265-71, map, graphs, tables.) 10 refs. Summary pub. in International Geographical Congress, 1960. Physical geography of Greenland, 1961, p.63. cf. No. 64586.

Summarizes results of Danish IGY studies of Hurlbut Gletscher 77°23′30″N. 67°57′W., Sermikavsak 71°11′N. 53°03′W., Napassorssuaq Gletscher 60°18′N. 45°13′W. and Mitdluagkat Gletscher 65°41′N. 37°54′W., all local glaciers outside the Greenland Inland Ice, of small or medium size, and believed to be more sensitive to minor changes in climate. Preliminary reports indicate that the cold glaciers of North Greenland tend to react slowly to temperature changes, but are sensitive to changes in precipitation. These cold-glacier temperatures may also explain the delayed retreat and smaller annual withdrawal of North Greenland glaciers as compared with those along the west and east coasts. (DWB.)

FRISTRUP, BØRGE, *see also*

Int. Geog. Congress 1960. Physical geography of Greenland . . . 1961. No. 72384

International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

71511. FRITZ, MADELEINE ALBERTA, 1896– . A new bryozoan genus from Lake Hazen, northeastern Ellesmere Island. (Geological Association of Canada. Proceedings 1961, *pub.* 1962. v.13, p.53-55, illus.) 4 refs.

Describes n. gen. and sp. *Arcticopora christiei,* on the basis of specimens collected in 1957 by R.L. Christie from beds exposed on the north shore of Lake Hazen. Christie believed the beds to be of Permo-Carboniferous age. Appended (p.55-56) is: *Additional* Arcticopora *from the Triassic of northwestern Ellesmere Island,* by T.E. Bolton, reporting similar fauna found in 1961 by E.T. Tozer in strata of definitely determined age, and by extrapolation assigning the type material of *Arcticopora christiei* from the Lake Hazen area, to the Triassic. (DGS.)

71512. FRITZ, MILO HERBERT, 1909– A clinic to Kodiak. (Alaska medicine, Sept. 1961. v.3, no.3, p.58-63, illus., tables.)

The author, an ophthalmologist and otolaryngologist, reports on the clinic which he has held once or twice a year for the past 11 years; its location, purpose, patients, equipment, instruments and drugs; cases and treatment during an 8-day clinic, fees, etc. (DNLM.)

FRITZ, MILO HERBERT, 1909– , *see also* McClain, K.M. Medical men . . . 1962. No. 73677

FRIZZELL, T. F., *see* Remick, J.H. Preliminary report . . . Abitibi. 1961. No. 75106

71513. FROBISHER BAY CONSULTANTS. Report for a proposed new town, Frobisher Bay, Northwest Territories, for the Dept. of Public Works. Ottawa, Dept. of Northern Affairs and National Resources, 1960. 40 p. illus., maps.

Presents plan for an administrative center of the Eastern Canadian Arctic, at this site selected by the Dept. of Northern Affairs and National Resources. Medical and educational facilities are established; but increasing population, deteriorating temporary buildings, and lack of plumbing facilities render a new town necessary. The planning proposal is for a town of a thousand people, capable of future expansion, and economical to construct, service, and maintain. Problems of living in the Arctic are discussed. Planning and construction requirements are listed. A 130-acre

site adjoining the existing settlement and airport was recommended by the Foundation Company of Canada and Engineering Corporation Ltd. Present land use is explained as considered a factor in the town planning. Proposed new facilities are listed. Parts (p.1-4, 19-40) of this report are classified for security purposes in connection with U.S. SAC base in the vicinity. (CaONA.)

FRÖDIN, JOHN OTTO HENRIK, 1879– , *see* Uppsala. Universitet. Geografiska studier . . . 1944. No. 76285

71514. FRÖMTER, EBERHARD. Die Wirkung von Narkose und Hypothermie auf den glomerogenen und zentrogenen Anteil der Atmung. (Zeitschrift für Biologie, May 1961. Bd. 112, Heft 5, p.331-65, illus., table.) 83 refs. Text in German. Summary in English. **Title tr.:** The influence of narcosis and hypothermia upon the glomerogenous and centrogenous part of respiration.

Reports study of vagotomized rabbits. A high correlation was noted between the effect of cold-blocking the sinus nerve, and the particular dose of Nembutal. With progressing hypothermia, the importance of the chemoreflex drive showed great variability, and at 16°C. blocking the sinus nerve still revealed centrogenic and reflexogenic activity. Hence cold does not appear to affect the interaction of the two receptor systems. The effects of two anesthetics with progressive cooling upon respiration, body temperature etc. are also evaluated. (DNLM.)

71515. FRØYSTAD, BJ. Leplanting på fastmark og på myr i verharde strøk. (Norske myrselskap. Meddelelser, June 1961. årg. 59, nr.3, p.78-92, illus., graph.) Text in Norwegian. **Title tr.:** Shelter plantings on solid ground and on marsh land.

Discusses crop damage by wind and snow drift and its prevention by shelter-belts. From experiments in different parts of Norway, directions are offered for planting and maintenance under various climatic conditions. Suitable conifers and deciduous species are listed, with for each, an outline for soil preparation, fertilizing and general care. (DA.)

71516. FROGNER, ERLING, 1905– . Vaeret i 1960. (Naturen, 1961. årg. 85, nr.5, p.259-73, 8 text maps.) Text in Norwegian. **Title tr.:** The weather in 1960.

Presents eight topical weather maps of the northeast Atlantic region and discusses the 1960 air temperature and precipitation in Norway. At Kirkenes and Pasvik in Finnmark province, the July averages of 18.3°C. and 19.3°C. were 6.2° and 6.3° above normal, probably the world's highest temperature anomalies. Strong and long-lasting variations in the jet stream pattern are responsible for the contemporary weather pattern. (DGS.)

71517. FROGNER, ERLING, 1905– . Vaeret i 1961, og litt om langtidsvarsling. (Naturen, 1962. årg. 86, nr.6, p.323-37, 10 text maps.) Text in Norwegian. **Title tr.:** The weather in 1961, and notes on long-range forecasting.

Reviews the major monthly aspects of weather in Norway including northern Norway, with some notes on Jan Mayen and Svalbard, and comments briefly on long-range forecasting. The air streams at the 500 or, less accurately, the 700 mb level are directly related to air temperature and precipitation. Wind conditions, mountain influence, marine and continental locations are also important factors in forecasting weather for a week or a month on a physical basis. On the average weather map for western Europe, the 500 mb level deviation from normal extended over northern Scandinavia but not so far as Svalbard. The prevailing wind in western Europe was from the southwest, and in eastern Europe from the northwest, the latter bringing above-normal temperatures to Russia. (DGS.)

71518. FROLOV, A. D., *and* A. A. SMIRNOV. Nekotorye rezul'taty izucheniia rasprostraneniia ul'trazvuka v obrazt̆sakh merzlykh gornykh porod. (Merzlotnye issledovaniia. Sbornik statei, 1961. vyp.1, p.236-54, illus., graphs.) 11 refs. Text in Russian. **Title tr.:** Some results of ultrasound propagation in frozen rock samples.

Reports on their work in the geocryology station of the Geology Dept. of Moscow State University in 1958-1959, on the physical and mechanical properties, and strength of frozen rock and on the qualities and thickness of ice and permafrost overburdens. The apparatus and the method of the research, and the results of laboratory investigations are given. (DLC.)

71519. FROLOV, A. D. Ob ispol'zovanii polei shirokoveshchatel'nykh radiostantsii pri kartirovanii kontaktov mnogoletnemerzlykh tolshch. (Merzlotnye issledovaniia. Sbornik statei, 1961. vyp.1, p.227-35, diagrs.) 10 refs. Text in Russian. **Title tr.:** On the utilization of radio broadcasting fields in mapping the contacts of permafrost strata.

Discusses the radio-wave method ("Radiokip") of geologic mapping of permafrost and thawed strata, using the measuring device PINP-1, designed in 1958 by the Geology Dept. of Moscow State University, developed and field-tested in 1959. The method based on the broadcasting field anomalies produced by the radio-wave induction currents at the geological inhomogeneities, was used in permafrost mapping in the Vorkuta (Khalmer-Yu sector) and Salekhard regions in 1959. The new apparatus, PINP-1, is recommended for localization of permafrost contacts with thawed deposits in taiga and tundra regions. (DLC.)

71520. FROMM, ERIK, *and others.* An interglacial peat at Ale near Luleå, northern Sweden. Stockholm, 1960. 14 p. map, tables. (Sweden. Geologiska undersökning, Avhandlingar och uppsatser, ser.C, no.574.) 42 refs. *Also issued as:* Sweden. Geologiska undersökning. Årsbok 54 (1960), no.5. *Other authors:* R.W. Kolbe *and* H. Persson.

Describes a thin peat layer found in Apr. 1957, during a well-digging in this village 65°37′N. 21°42′E. Radiocarbon age was determined as more than 24,000 B.P. The peat consists of *Tomentypnum nitens*, probably an alpine-arctic variety or modification, according to H. Persson. The pollen flora indicates a treeless arctic vegetation. The diatom flora consists of fresh-water species, indicating a fen or swamp, not a peat bog or lake, according to R.W. Kolbe. This terrestrial, probably arctic peat is a few meters above the present level of the Gulf of Bothnia. The locality may represent an interstadial period early in the last glacial, rather than a real interglacial stage. (DGS.)

71521. **FRUEHAN, ALICE E.** Accidental hypothermia. (Archives of internal medicine, Aug. 1960. v.106, no.2, p.218-19, tables.) 28 refs.

Reports on eight cases due to exposure, with an introductory section on the physiology of hypothermia. Selected case material, clinical and laboratory data, therapy and management, illustrative case reports (2), and autopsy findings, are presented. (DNLM.)

71522. **FUGZAN, M. D.**, *and others*. K voprosu o forme kuskov apatitovoĭ rudy razlichnoĭ krupnosti. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.43-49, diagrs., tables.) 3 refs. Text in Russian. *Other authors:* N.A. Voronkov *and* L.V. Shevelev. **Title tr.:** On the shape of various-sized pieces of apatite ore.

Reports results of an investigation carried out by the Mining Laboratory of the Academy of Sciences' Kola Branch in the Kirov apatite mine. Data are tabulated, diagrammed and discussed, on the number and volume of various cube- , pillar- , slab- , and extra-long slab-shaped pieces of ore blasted. (DLC.)

71523. **FUGZAN, M. D.**, *and others*. Modelirovanie lîukovykh ustroĭstv s fsepnymi zatvorami. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.24-34, illus., diagrs., tables.) 6 refs. Text in Russian. *Other authors:* N.A. Voronkov *and* V.P. Kopalin. **Title tr.:** Construction of hatches with chain trap doors.

The Kirov apatite mine in Kola Peninsula was the first in the Soviet Union to use hatches with chain trap doors for loading coal. Experiments carried out by the Mining Laboratory of the Academy of Sciences' Kola Branch to establish the best type of hatches for apatite ores, are described in detail. (DLC.)

FUGZAN, M. D., *see also*

Baron, L.I., *& others*. Issledovanie . . . 1961. No. 70038

Markenzon, È.I., *& others*. Vremennoe soprotivlenie . . . 1961. No. 73813

71524. **FUHRMAN, FREDERICK ALEXANDER, 1915– , *and others***. Relationship between tissue respiration and total metabolic rate in hypo- and normothermic rats. (American journal of physiology, Aug. 1961. v.201, no.2, p.231-34, illus., tables.) 26 refs. *Other authors:* G.J. Fuhrman, D.A. Farr, *and* J.H. Fail.

Mean metabolic rate of rats cooled by two methods to 18°C. was about 25% of that at 38°C. At 18°C., the sum of skeletal muscle, skin, liver, kidney and brain respiration, was 106% of the metabolic rate of the whole animal at that temperature, while in normothermia, the respiration of these organs was only 72.5% of that of the whole animal. The possible causes of difference are discussed. (DLC.)

FUHRMAN, GERALDINE J., *see* Fuhrman, F.A., *& others*. . . . tissue respiration . . . 1961. No. 71524

71525. **FUKUSHIMA, NAOSHI.** Morphology of magnetic storms. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961, Proceedings *pub.* 1962. v.1, p.70-78, graphs.) 17 refs.

Discusses the average morphology of geomagnetic disturbances which have their origin in the electric current in the ionospheric region caused by "solar wind" particles impinging into the auroral zone ionosphere. The main points considered are: the reversal of direction of the electric current across the polar cap in a short time during the sudden-commencement (SC.) magnetic storms; equatorial anomaly of the disturbance field during the early part of the storm; polar elementary storm or DP substorm as a fundamental element of the polar disturbance field, expressed by typical geomagnetic bays; occurrence tendency of small local disturbances of seasonal dependence in high latitudes; finally, the persistent and considerable magnetic agitation in the polar cap region, in the sunlit hemisphere especially, caused by "solar wind." (DLC.)

FUKUSHIMA, NAOSHI, *see also* Nagata, T., *& others*. Similarity . . . magnetic disturbance . . . 1962. No. 74206

FULLAM, ERNEST F., *see* Hemenway, C.L., *& others*. Nanometeorites. 1961. No. 72110

71526. **FULLER, O. T.** Bright lights under midnight dome, the story of Arizona Charley Meadows and the Palace Grand. (North, May-June 1962. v.9, no.3, p.35-41, illus.)

Contemporary photographs and a description of a theater built in 1899 in Dawson City, Yukon Territory. It is being restored by the Dept. of Northern Affairs. (CaMAI.)

71527. **FULLER, WILLIAM A.** The biology and management of the bison of Wood Buffalo National Park. Ottawa, 1962. 51p. illus., tables, graphs, map. (Canada. Dept. of Northern Affairs and National Resources. Wildlife management bulletin series 1, no.16.) 40 refs.

Reports 1950-1956 study of this herd of some four thousand hybrid *Bison b. bison* x *B.b. athabascae,* on a 17,300 sq. mi. range in the Mackenzie lowlands 58°10′-60°30′N. 111°30′-115° 30′W. Effects of tuberculosis on reproduction, mortality, and management were the main purpose of the study. TB control is considered desirable to protect other ungulates from the disease; this herd is judged not seriously affected. Multiple use of the herd for esthetic purposes, human food, and limited sports hunting is proposed. (CaOF.)

71528. **FULTON, B. J.**, *and* **L. E. PETRIE.** The analysis of transient modes of propagation across the auroral zone. (Journal of geophysical research, Aug. 1961. v.66, no.8, p.2321-27, diagrs., graphs.) 5 refs.

Analyzes sweep-frequency oblique-incidence sounding records obtained on a circuit Winnipeg-Resolute Bay. A model of propagation by scatter and ionospheric reflection is proposed to explain the transient modes of propagation. The parameters of the trace identified as a transient mode are used to calculate the position of the cloud of ionization that acts as the scattering source. (DLC.)

71529. **FURUNES, JON.** Sammenligning av nepe og potet i Nordland i årene 1954-58. (Forskning og forsøk i landbruket, 1961. bd. 12, hefte 5, p.447-66, illus., tables.) 2 refs. Text in Norwegian. Summary in English. **Title tr.:** Comparison of turnips and potatoes in Nordland in 1954-58.

Describes yield experiments conducted in Vesterålen (68°39′N.) and Vagønes (67°17′N.) with the Jøssing and Saga potato varieties and the turnip strains Yellow Tankard and Brunstad, using various amounts of a Norwegian-made chemical fertilizer in addition to 35 tons of manure/hectare. Potatoes have higher yield and storage capability than turnips and should be preferred as fodder. If storage facilities are available for the greens however, turnips can equal potatoes in crop value. Suitable amounts of fertilizer are indicated for both. The Brunstad strain of turnip is preferable to Yellow Tankard. The two potato varieties tested are equal in fodder unit yield, but the Saga is preferable in humus-rich soils. (DA.)

71530. FUSCO, M. M., *and others*. Interaction of central and peripheral factors in physiological temperature regulation. (American journal of physiology, Mar. 1961. v.200, no.3, p.572-80, illus., tables.) 21 refs. *Other authors:* J.D. Hardy *and* H.T. Hammel.

Study on the effects of heating the supraoptic and preoptic regions of the dog's hypothalamus at various ambient temperatures. At all temperatures, heating caused in imbalance of heat exchange and a lowered core temperature. In cool environment heating inhibited shivering; in warm, it produced panting and vasodilatation. (DLC.)

FYLES, J. G., *see* Craig, B.G., & J.G. Fyles. Pleistocene . . . 1961. No. 70844

71531. FYNBO, JENS. Tamrenerne i Grønland; en status over renavlsforsøget. (Grønland, July 1962, nr. 7, p.276-80, illus., table.) Text in Danish. **Title tr.:** The domesticated reindeer in Greenland; stock-taking of the reindeer-breeding experiment.

Reviews developments from 1952 when 263 animals were landed at Godthåb. After ten years, there was a population of about three thousand, including stock in private hands; 503 were slaughtered and 900 calves born in 1961. The first private reindeer-raising enterprise was set up winter 1960-61 by the Norwegian Johan Haetta; he has a herd of 600, and use of an area in the Godthåbfjord region. Range privileges for private herders is under consideration. (DLC.)

71532. GABOVICH, I. A. Zakonomernosti formirovaniĭa i rasprostraneniĭa podzemnykh vod na Severo-Vostoke Evropeĭskoĭ chasti SSSR. (Materialy po geologii i poleznym iskopaemym Severo-Vostoka Evropeĭskoĭ chasti SSSR. Sbornik statei, 1962. vyp.2, p.74-81, table, map.) 2 refs. Text in Russian. **Title tr.:** Laws of formation and distribution of ground water in the northeastern European part of the USSR.

Characterizes ground water in Komi ASSR and the Nenets National District of Arkhangel'sk Province. A hydrogeologic regionalization of the area is presented by distinguishing two folded zones: the Ural-Pay-Khoy and the Timan, and five artesian basins: the Pechora, Usa, Korotaikha, Severnaya Dvina, and Kara Sea. History of formation, hydrochemical properties, depths, genesis, mineralization and other ground-water features are described for each region. (DLC.)

71533. GABRIELSE, HUBERT, *and* J. O. WHEELER. Tectonic framework of southern Yukon and northwestern British Columbia. Ottawa, Queen's Printer, 1960. 37p. maps & sections incl. fold. in pocket. (Canada. Geological Survey. Paper 60-24.) 68 refs.

Summarizes information on the three northwesterly trending belts of the Cordillera, 56°-63°N. 126°-141°W., and proposes an interpretation of the main tectonic features, based largely on personal communications. Salient stratigraphic features are reviewed; paleozoic and mesozoic formations are correlated, and their distribution shown on map at scale 1 in.: 24 mi. Geologic events since the Mesozoic are noted, also the emplacement of ultramafic and granitic rocks. Structure is described for each of the three belts of unmetamorphosed stratified rocks, with attention to the main lineaments and faults, contrasting histories and characteristics. Other general conclusions and unsolved problems are suggested. (DGS.)

71534. GABRIELSON, IRA NOEL, 1889- . Albatrosses, shearwaters and petrels. (Alaska sportsman, Feb. 1962. v.28, no.2, p.26-28, illus.) Alaska wildlife library no.22.

Describes structure, plumage, flight distribution, and breeding habits of each species of tube-nosed swimmer that visits Alaska regularly. Included are the black-footed, Laysan, and short-tailed albatrosses; slender-billed and sooty shearwaters; Pacific fulmar; fork-tailed and Leach's petrels. (DLC.)

71535. GABRIELSON, IRA NOEL, 1889- . Auks, murres and puffins. (Alaska sportsman, Dec. 1961. v.27, no.12, p.20-22, illus.) Alaska wildlife library no.20.

Describes body size and structure, plumage, distribution and nesting habits for each of the Alaskan species of Alcidae. Included are: the common and thick-billed murres, the pigeon guillemot, the marbled, kittlitz, and ancient murrelets; the Cassin's, rhinoceros, parakeet, crested, least, and whiskered auklets; the tufted and horned puffins. (DLC.)

71536. GABRIELSON, IRA NOEL, 1889- . Gulls and terns. (Alaska sportsman, Jan. 1962. v.28, no.1, p.14-16, illus.) Alaska wildlife library, no.21.

Describes the appearance, nesting and food habits, and distribution of Alaskan Laridae. Several gulls are found regularly, the glaucous-winged, glaucous, herring, short-billed or mew, Bonaparte's, Sabine's, red-legged and black-legged kittiwakes, and Ross's. Fewer terns are found than in any other part of the U.S. coastline: only the arctic and Aleutian terns represented in any numbers. Good photos. (DI.)

71537. GABRIELSON, IRA NOEL, 1889- . Loons, grebes and cormorants. (Alaska sportsman, Mar. 1962. v.28, no.3, p.22-24, illus.) Alaska wildlife library, no. 23.

Describes the body structure of these water birds, their plumage, nesting habits, and distribution in Alaska; species found are the common, yellow-billed, arctic, and red-throated loon, the Holbell's, horned, wester, and pied-billed grebe, and the double-crested, pelagic, red-faced and Brandt's cormorant. (DI.)

71538. GAEVSKAĬA, M. S., *and* E. A. NOSOVA. Vliĭanie gipotermii na soderzhanie ammiaka i glŭ-

tamina v kore mozga sobak pri umiranii i posleduĭushchem ozhivlenii. (Ukraĭns'kyĭ biohkimichnyĭ zhurnal, 1961. t.33, no.3, p.407-419, illus.) 29 refs. Text in Russian. Summary in English. **Title tr.:** Effect of hypothermia on the ammonia and glutamine contents in the cerebral cortex of dogs during dying and subsequent resuscitation.

Account of experiments indicating that hypothermia does not prevent accumulation of ammonia in the cortex during death from blood loss, but promotes glutamine conservation. During revival, under both normo or hypothermic conditions, restoration of N-metabolism in the brain was slower than that of carbohydrate-phosphorous metabolism. (DNLM.)

71539. **GAFAROV, R. A.** Stroenie dokembriĭskogo fundamenta severa Russkoĭ platformy. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geologicheskaĭa, Jan. 1961, no.1, p.59-71, fold. maps.) 34 refs. Text in Russian. **Title tr.:** Structure of the Precambrian basement in the north of the Russian platform.

Outlines the structure of the Precambrian basement on the basis of recent studies, deep drillings and aerial magnetic survey, Kola Peninsula, Arkhangel'sk Province and Komi ASSR included. The tectonic structure of the Russian platform is analyzed from viewpoint of determining the inner structures, and the structure of the relief. The Baykal and Karelian folding systems are recognized. Structure of the Baltic shield, Timan and Pechora synclines is evaluated. (DLC.)

71540. **GAGARSKIĬ, P.** Podkormka pesŧsa. (Okhota i okhotnich'e khozĭaĭstvo, Mar. 1961. god7, no.3, p.5-6.) Text in Russian. **Title tr.:** Feeding up the arctic fox.

Reports a large-scale east-to-west migration in 1954/55, in the Yamal-Nenets and Nenets National Districts due to food scarcity. The migration was halted by supplying fish, seal, and bearded seal as food, and the local hunters' white fox catch rose. Methods of making the food accessible (in pits) are briefly described. (DLC.)

71541. **GAGEN-TORN, N. I.** Sudovye flĭugera "sorochki." (Akademiĭa nauk SSSR. Muzeĭ antropologii i ėtnografii. Sbornik, 1961. t.20, p.75-83, illus.) 6 refs. Text in Russian. **Title tr.:** Boat weather vanes called *sorochka.*

Describes a collection of about 25 Russian-carved, wooden, weather vanes of the 19th century or earlier, from the Ust'-Tsil'ma region, now in the Museum. Workmanship and ornamental motifs are dealt with. The decorated metal shaft support is likened to the Yeniseian (Ket) shaman's wand, which was used in the Yeniseian *soroska*-type vanes according to V.I. Anuchin. The etymology of *sorochka,* a lower Pechora idiom, the Yeniseian *soroska,* and their root *sor,* meaning upper or top, is discussed. (DLC.)

71542. **GAGNÉ, RAYMOND C.** Language culture. (*In:* Canada. Dept. of Northern Affairs and National Resources. Northern welfare. . .1962, p.44-46.)

Notes the Canadian government project to establish a new and standard Eskimo orthography to be taught, eventually, in all Eskimo elementary schools. The importance of writing for preserving the language and cultural identity is stressed. Advantages of Russian-Eskimo bilingualism enjoyed by Siberian Eskimos are cited as example for Canadian education. (CaMAI.)

71543. **GAHNE, BO,** *and* **J. RENDEL.** Blood and serum groups in reindeer compared with those in cattle. (Nature, Nov. 11, 1961. v.192, no.4802, p.529-30, illus., tables.) 9 refs.

Reports on investigation for cellular antigens, plasma protein and hemoglobin in 64 animals. The antigenic system was found very similar to the J system of cattle, and their genetics are apparently similar. Only one kind of hemoglobin was found in all animals, and six different types of plasma proteins. (DLC.)

71544. **GAĬGEROV, SEMEN SEMENOVICH.** Voprosy aėrologicheskogo stroeniĭa, ŧsirkuliĭaŧsii i klimata svobodnoĭ atmosfery TSentral'noĭ Arktiki i Antarktiki. Moskva, Izd-vo Akademii nauk SSSR. 1962. 320 p. tables, graphs, maps. (Akademiĭa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniĭu Mezhdunarodnogo geofizicheskogo goda, II razdel programmy MGG: meteorologiĭa. Sbornik statei, no.4.) 284 refs. Text in Russian. **Title tr.:** Problems of aerological structure, circulation and climate of the free atmosphere in the Central Arctic and Antarctic.

Presents results of upper air research carried out in the Arctic and the Antarctic during IGY. The meteorological data of the drifting station North Pole-4 in 1955–1956 are analyzed, and discussed in four chapters. After the introduction is a discussion and analysis of the atmospheric air circulation, and the vertical structure of the atmosphere in the Central Arctic. The third chapter is on the aerological studies in the Antarctic; and in the fourth, aerological structure and phenomena in the Arctic and the Antarctic are compared. The greatest difference in climate, and atmospheric structure and phenomena between the two polar regions was observed in the lower layers of troposphere and stratosphere. The synoptic maps and vertical cross-sections of the arctic and antarctic atmospheres were found to have many similar features. The effect of the configuration and orography of the coastal regions on the circulation and pressure is emphasized. (DLC.)

71545. **GAĬNANOV, A. G.,** *and* **L. P. SMIRNOV.** Stroenie zemnoĭ kory v oblasti perekhoda ot Aziatskogo kontinenta k Tikhomu okeanu. (Sovetskaĭa geologiĭa, Mar. 1962. no.3, p.108-118, map, profiles.) 28 refs. Text in Russian. **Title tr.:** Structure of the earth's crust in the transition area from the Asiatic continent to the Pacific Ocean.

Reports a study in the Okhotsk Sea, Kuril-Kamchatka Trench and adjacent areas of the Pacific. From seismic, aerial magnetic, and gravimetric investigations of 1957–58 in the IGY program, gravity anomalies and crustal thickness in various sections of the region are described. A schematic map of the Mohorovičić level relief is presented and interpreted. Gravity anomalies and thickness of the crust are compared with the occurrence of tectonic movements. (DLC.)

71546. **GAĬSENOK, A. A.,** *and* **M. K. GLOZMAN.** Stapel'naĭa sborka korpusa i spusk ledokola "Lenin." (Sudostroenie, 1961. god 27, no.8, p. 48-53, illus., diagrs., table.) Text in Russian. **Title tr.:** Assembly of the hull in the slip and the launching of the icebreaker *Lenin.*

The hull comprising 161 prefabricated sections, was welded following the pyramidal method of construction which is explained and illus. Dimensions and weight of sections are tabulated. The 11,000 ton vessel was launched Dec. 5, 1957; launching gear is described. (DLC.)

GAITONDE, B. B., *see* Samarth, S.S., & B.B. Gaitonde. Effect of hypothermia . . . 1961. No. 75359

71547. GAJDA, ROMAN T., *and* **P. L. HILL.** Fort Providence, N.W.T.; terrain and site analysis. Ottawa, 1962. 17 p. maps, tables, graphs, diagrs. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch.) 4 refs. Typescript.

Analyzes this settlement site on the east bank of the Mackenzie River 50 mi. downstream from Great Slave Lake in Mackenzie District. Geology, landforms, surface materials, drainage, permafrost, vegetation, harbor and shore conditions, and precipitation are discussed, as are the water supply, sewage and garbage disposal, aircraft landing facilities, location of buildings, and availability of local labor. A trading and administrative center with mission and school, Fort Providence had about 400 population in 1961, including 350 Indians. (CaONA.)

71548. GAJDA, ROMAN T., *and others*. Terrain and site analysis Fort Good Hope, N.W.T. Ottawa, 1962. 21 p. maps. (Canada. Dept of Mines and Technical Surveys. Geographical Branch). 4 refs. Typescript. *Other authors:* P.L. Hill *and* B. Findlay.

Characterizes this site on the east bank of the Mackenzie at the confluence of the Hare Indian River, on the basis of 1961 summer field work by Gajda and Findlay, and air-photo interpretation. Geology, landforms, surface materials, drainage, permafrost, weather, and vegetation are delineated. Shore and harbor conditions, aircraft landing facilities, water supply, sewage and garbage disposal, buildings and labor are briefly discussed. The population was 365 in 1961, 350 of it Indian. (CaONA.)

71549. GAJDA, ROMAN T., *and* **P. L. HILL.** Terrain and site analysis Fort Norman, N.W.T. Ottawa, 1962. 25 p. graphs, tables, maps incl. 1 fold. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch.) 4 refs. Typescript.

Analyzes this settlement site on the east bank of the Mackenzie immediately upstream from its confluence with the Great Bear River in Mackenzie District. Geology, landforms, surface materials, drainage, permafrost, vegetation, harbor and shore conditions, and weather are described as observed on the first author's summer 1961 field visit. Sewage and garbage disposal, sanitation, aircraft landing facilities, buildings, fire safety, and the local labor situation also are discussed. Fort Norman has a trading post, mission, school, health facility and a mixed population of approx. 250. (CaONA.)

71550. GAJDA, ROMAN T., *and others*. Terrain and site analysis of Fort McPherson, N.W.T. Ottawa, 1962. 19 p. maps incl. 1 fold. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch.) Typescript. *Other authors:* P.L. Hill, *and* B. Findlay.

Analyzes this settlement site on the east bank of the Peel River 25 mi. upstream from its confluence with the Mackenzie, from a summer 1961 field visit by Gajda and Findlay, aerial photographs and Geographical Branch file data. Geology, landforms, surface materials, drainage, permafrost, and weather conditions, are characterized, as are the water supply, sewage and garbage disposal, sanitation and aircraft landing facilities. Over 600 people live near or in this trading center; it has missions, schools, health facilities, etc. (CaONA.)

71551. GAJDA, ROMAN T. Terrain and site analysis of Gjoa Haven, N.W.T. Ottawa, 1962. 18 p. graphs, tables, maps incl. 1 fold. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch.) Typescript.

Analyzes this site at 68°38′N. 95°53′W. on the southeast coast of King William Island. The population in 1961 was 90; geology, landforms, surface materials, permafrost, vegetation, harbor and shore conditions, and weather of the region are reported. Gjoa Haven is a trading and mission center with a population of about ninety; its water supply, sewage and garbage disposal, aircraft landing facilities, locations of buildings and fire safety are discussed. (CaONA.)

71552. GAJDA, ROMAN T., *and* **P. L. HILL.** Terrain and site analysis Spence Bay, N.W.T. Ottawa, 1962. 17 p. graphs, tables, maps. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch.) Typescript.

Characterizes this settlement site 69°32′N. 93°31′W., at the Keewatin-Franklin District border, on the basis of field work by the senior author and Geographical Branch file data. The geology, landforms, surface materials, drainage, permafrost, vegetation, harbor and shore conditions, weather, water supply, sewage and garbage disposal, sanitation, and aircraft landing facilities are discussed briefly. The population in 1961 was 184. (CaONA.)

GAJDA, ROMAN T., *see also* Farrand, W.R., & R.T. Gajda. Isobases . . . Wisconsin marine limit Canada. 1962. No. 71342

71553. GAKKEL', ĪAKOV ĪAKOVLEVICH, 1901– . The exploration and development of polar lands. (*In:* Akademiīa nauk SSSR. Soviet geography . . . 1962, p.265-74, map.) 43 refs. Translation of No. 64610. (DGS.)

71554. GAKKEL', ĪAKOV ĪAKOVLEVICH, 1901– . Morfotektonicheskie cherty Arkticheskogo basseĭna. (Problemy Arktiki i Antarktiki. Sbornik stateĭ, 1962. vyp.11, p.25-29, maps incl. fold.) 13 refs. Text in Russian. **Title tr.:** Morphotectonic features of the Arctic Basin.

Characterizes the main tectonic deformations from analyses of bathymetric, seismic and other geophysical data. A branching system of submarine mountains north of Franz Joseph Land, separating the Sedova and Litke depressions is outlined. Special attention is given to the Mendeleyeva ridge, a radical-concentric system of deformation which is described and illus. on the map. The Nautilus uplift is interpreted, and considered to be part of the Mendeleyeva ridge. (DLC.)

71555. GAKKEL', ĪAKOV ĪAKOVLEVICH, 1901– , *and* **L. P. SAMSONIĪA.** Pervye drei-

fuĭūshchie radiobui. (Okeanologiĭā, 1961. t.1 vyp.4, p.691-700, illus., tables, chart.) 4 refs. Text in Russian. **Title tr.:** The first drifting radio buoys.

Describes in detail the design, construction, development, testing and performance of these buoys, used for investigation of sea currents and ice drift in the arctic seas. The idea for them originated in the Arctic Institute of the USSR in 1937, and the buoys were developed ten years later. Three types are described, and tests in the Kara and Laptev Seas by the icebreaker *Kapitan Belousov* are outlined. The construction and use of drifting automatic radio meteorological stations (DARMS) Alekseev type are also reported, some shortcomings noted. (DLC.)

71556. GAKKEL', ĬAKOV ĬAKOVLEVICH, 1901– , Tectonic deformations modeled naturally in sea ice. Translated by E.R. Hope. Ottawa, Feb. 1961. 12 p. illus., diagrs. (Canada. Defence Research Service. Translation T 328 R.)

English translation of No. 58131. (CaMAI.)

GALABALA, R. O., *see* Leonov, B.N., & *others*. Verkhnie galechniki . . . 1961. No. 73426

71557. GALAEV, N. Z., *and* **A. V. ISAEV.** Obrushenie treshchinovatykh porod pri razrabotke pologopadaĭūshchikh mestorozhdeniĭ. (Gornyĭ zhurnal, Dec. 1962. no.12, p.5-8, illus.) Text in Russian. **Title tr.:** Caving-in fractured rock for mining gently sloping deposits.

Reports experimental results and observations of collapsing the 200-250 m. thick layers of rock covering ore deposits of the Zapolyarnyy mine at Noril'sk. The lower part is composed of intrusive porphyrite and gabbro-diabase, and the upper part of effusive andesine diabase, both have cracks of various size running in various directions, making the rock unstable and unsafe. The caving-in and collapsing process is described; methods of mining under these conditions are discussed, and safety measures noted. (DLC.)

71558. GALAEV, N. Z., *and* **A. V. ISAEV.** Upravlenie gornym davleniem pri sistemakh s obrusheniem na Zapolĭārnom rudnike. (Gornyĭ zhurnal, Juneˊ 1962, no.6, p.25-27, illus., diagrs.) Ref. Text in Russian. **Title tr.:** Controlling rock pressure in the cave-in system of work at the Zapolyarnyy mine.

Describes in technical detail the methods used in 1959-60 to induce cave-in of the 200 m. thick overburden on the underground shafts in the Zapolyarnyy mine at Noril'sk. Data on the amount and distribution of pressure of the cover upon pillars and rock mass are given and discussed. (DLC.)

71559. GALAKHOV, ALEKSANDR VASIL'EVICH. Geologo-petrograficheskiĭ ocherk Khibinskogo shchelochnogo massiva i zadachi dal'neĭshikh nauchnykh issledovaniĭ. (*In:* Akademiĭā nauk SSSR. Kol'skiĭ filial. Voprosy geologii . . . 1961, p.5-21, table, diagrs.) 13 refs. Text in Russian. **Title tr.:** A geologic-petrographic outline of the Khibiny alkaline massif and the tasks of further scientific studies.

Summarizes investigations to date on this 1327 km.^{2} area in central Kola Peninsula. New data are presented on the geologic structure and petrography. Rock complexes from the periphery to the centrum of the massif are characterized, such as alkaline syenites, granitoid khibinites, rischorrites, their occurrences and genesis discussed. Various geologic, mineralogic and geochemical problems which require further studies are noted. (DLC.)

71560. GALAKHOV, ALEKSANDR VASIL'EVICH. O kontaktnom vozdeĭstvii apatito-nefelinovykh porod na vmeshchaĭūshchie poĭkilitovye nefelinovye sienity (rischorrity) v Khibinakh. (*In:* Akademiĭā nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniĭā . . . 1962, p.49-57, illus.) 3 refs. Text in Russian. **Title tr.:** On contact effects of apatite-nepheline rocks on enclosed poikilitic nepheline syenites (rischorrites) in the Khibiny.

Describes contact metamorphism which affected rischorrites, as studied between the Poachvumchorr and Petreliusa Mts., Koashvy and Iidichvumchorr Mts., all in the Khibiny region of the Kola Peninsula. Each site is described in turn. Recrystallization of rischorrites, changes in their structure and mineral composition are noted. Contact alteration varies from site to site and possibly depends on specific local conditions. (DLC.)

71561 GALAKTIONOVA, T. F. Luga zapadnoĭ chasti Kobĭāĭskogo raĭona. (Akademiĭā nauk SSSR. Sibirskoe otdelenie. ĬAkutskiĭ filial. Nauchnye soobshcheniĭā 1960. vyp.3, p.62-66.) 2 refs. Text in Russian. **Title tr.:** Meadows in the western part of the Kobyayskiy region.

Characterizes the meadow soils and vegetation of this region west of the Lena and north of the Vilyuy. Its main part lies in the Lena-Vilyuy depression not more than 220 m. above sea level. Meadows occupy about 10-15% of the area, and are of three groups: those of floodplains, of lake depressions, and of small valleys. Each group is characterized, noting its distribution, soils and prevailing plants. These meadows are of importance for cattle raising. (DLC.)

GALAKTIONOVA, T. F., *see also* Shcherbakov, I.P. Rastitel'nost' . . . Viliūiā. 1962. No. 75557

71562. GALANIN, N. F. Ul'trafioletovyĭ klimat severnykh raĭonov SSSR. (*In:* Lietuvos TSR Mokslų Akademija. Aktinometrijos . . . 1962, p.257-65, tables.) Text in Russian. Summary in Lithuanian and English. **Title tr.:** Ultraviolet climate in the northern regions of the USSR.

Discusses methods of measuring ultraviolet radiation in relation to medical requirements. Total, direct and dispersed ultraviolet radiation values are calculated for the solar altitude of Leningrad, Murmansk and Arkhangel'sk, and concluded to be 13-15 times greater in northern regions than a normal man's annual requirement. Erythema was reported by L.E. Ponomarev from his experiments at 80°N. on drifting stations North-Pole 4 and 5. (DLC.)

71563. GALANTSEV, V. P. Neneckie olenogonnye laĭki. (Okhota i okhotnich'e khozĭāĭstvo, July 1961. god 7, no.7, p.27-29, illus.) Text in Russian. **Title tr.:** Nenets reindeer dogs.

Describes a breed of Siberian husky, used by reindeer herders in the Kanin-Timan tundra of the Nenets National District. A short-haired and a long-haired variety are distinguished; their external features and utility in tending herds are noted.

The breed should be kept pure, and the shepherding capabilities developed. (DLC.)

71564. GALANTSEV, V. P. Nezamenimyĭ pomoshchnik olenevoda. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Jan. 1962, no.1, p.87.) Text in Russian. **Title tr.:** An indispensable helpmate of the reindeer herder.

Notes deterioration in breed of dog used for herding reindeer in the Kanin-Timan tundra. It is attributed to lack of interest on the part of collective farm administrators, and to the low percentage of bitches in the canine stock. A station for breeding herd dogs is needed. (DLC.)

71565. GALCHENKO, INNOKENTIĬ IVANOVICH. V razvedku za zolotom. (Sibirskie ogni, June 1961. god 40, no.6, p.127-48.) Text in Russian. **Title tr.:** Gold prospecting.

Describes the adventures of a six-man geological party searching for gold in the upper Indigirka basin. (DLC.)

GALE, C. C., *see*

Andersson, B., & *others*. Activation of the thyroid . . . 1962. No. 69768

Andersson, B., & *others*. Effects of central cooling . . . 1962. No. 69769

71566. GALEEV, V. Beregi sebia, geolog! (Okhrana truda i sotsial'noe strakhovanie, Oct. 1962. god 5, no.10, p.30-31, illus.) Text in Russian. **Title tr.:** Look out for yourself, geologist!

A geophysicist discusses importance of safety precautions for survival in the Arctic. Examples of near-fatal mishaps due to negligence are cited from geological field trips on Kola Peninsula, Indigirka basin, Laptev coast, etc. (DLC.)

GALERKINA, S. G., *see*

Chochia, N.G., & *others*. Muzhinskiĭ Ural . . . 1961. No. 70733

Mesezhnikov, M.S., & S.G. Galerkina. Materialy po stratigrafii . . . 1962. No. 73951

71567. GALIUK, V. A., *and* **B. M. SHMAKIN.** Shpineli flogopitovykh mestorozhdeniĭ IUzhnoĭ IAkutii. (Vsesoiuznoe mineralogicheskoe obshchestvo. Zapiski 1961, ser. 2, chast' 90, vyp.6, p.643-52, illus., tables, graph.) 19 refs. Text in Russian. **Title tr.:** Spinels from the phlogopite deposits of southern Yakutia.

Presents results of mineralogic investigations of spinel widely distributed in the Aldan phlogopite deposits. Four genetic types are distinguished in carbonate rocks of Archean metamorphic spinel-diopside rocks, and in calcite-phlogopite vein bodies. Each type is described, noting its physical properties, chemical composition and other features. (DLC.)

71568. GALKIN, IURIĬ IVANOVICH, 1923–

Eshche raz ob akklimatizatsii kamchatskogo kraba v Barentsevom more. (Akademiia nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp.4(8), p.252-53.) 3 refs. Text in Russian. **Title tr.:** Once more on acclimatization of the Kamchatka crab in the Barents Sea.

Points out in response to P.V. Ushakov (q.v.) that the development of this crab requires 10-15 years' time, which entails too much waiting and research before the results of reproduction are known. Additional evidence is offered in support of own view that acclimatization is not promising, at least economically. (DLC.)

71569. GALKINA, L. A. Osobennosti razmnozheniia i rannikh etapov razvitiia sel'di v severnykh raĭonakh Okhotskogo moria. (Problemy Severa, 1961, vyp.4, p.108-120, illus., tables, map.) 21 refs. Text in Russian. **Title tr.:** Features of the reproduction and early development of herring in northern regions of the Okhotsk Sea.

Reports on the spawning and hatching of the Pacific herring *Clupea harengus pallasi* Val., as studied in 1954-1957, chiefly around the Penzhinsk and Gizhiginsk Bays. The herring shoals approach shore in spring and spawning lasts from early May to mid June. The eggs are deposited on the algae or pebbles of the littoral zone flooded by tide chiefly in its lower part; the 25% of the eggs which survive, hatch from the 12-14th to 18-20th day after deposition, the temperature ranging from −1° to +20°C., the higher it is, the more rapid the hatching, though above 20°C. the eggs perish en masse. Quantitative data are given: deposition of 1-5 million eggs/m.², etc. The Okhotsk, Bering and North Pacific spawning grounds are shown on map. (DLC.)

71570. GALLUP, W. G. Geology of the Parry Islands, Queen Elizabeth group, Arctic Archipelago. (Oil in Canada, May 25, 1961. v.13, no.29, p.30-31, map.) Paper presented to joint meeting of the Canadian Institute of Mining and Metallurgy and the Society of Petroleum Engineers, Calgary, May 4-6, 1960.

Outlines stratigraphic and structural geology; estimates petroleum possibilities, particularly on Devon, Cornwallis, Bathurst and Parry Islands. Mapping done by the Geological Survey of Canada provides a good basis for detailed examination required for drilling. Useful techniques for northern mapping are suggested. Summer air supply is preferable to winter; field season is limited to the period June 20-Sept. 1. Main structural features are shown on small-scale map. (DGS.)

71571. GAL'PERIN, B. M. Nekotorye kharakteristiki insoliatsii v Sovetskoĭ Arktike; tezisy. (Mezhvedomstvennoe soveshchanie po aktinometrii i atmosfernoĭ optike. 2d, *Leningrad,* 1959, *pub.* 1961. Aktinometriia i atmosfernaia optika, p.79-80.) Text in Russian. **Title tr.:** Some characteristics of insolation in the Soviet Arctic; précis.

Summarizes pyranometric observations on three stationary and five drift stations and results obtained on total and dispersed radiation. Intensity of this radiation in arctic regions is analyzed. No data are given. (DLC.)

71572. GAL'PERIN, B. M. O summarnoĭ i rasseiannoĭ radiatsii v Arktike. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.229, Radiatsionnyĭ i teplovoĭ balans Arktiki, p.117-31, tables, graphs.) 17 refs. Text in Russian. **Title tr.:** The total and diffuse radiation in the Arctic.

Studies the relationship between total and dispersed radiation, using pyranometric data from Uyedineniya Island in 1947-1955, Cape Chelyuskin in 1950-1955, Cape Shmidta 1946-1957, and the drifting stations North Pole -4, -5, -6, -7 in 1954-55 and 1956-57, 1955-56, 1956-57, and in 1957-58 respectively. Solar radiation from clear and overcast sky was determined, and the total radiation

derived for clear and overcast sky. Diagrams of the possible daily sums of radiation are constructed in terms of geographic latitude and height of the sun above the horizon, to be used in the calculation of snow thawing, and of transformation of air masses over ice areas of the Arctic. (CaMAI.)

71573. GAL'PERIN, E. I. Izuchenie stroeniia zemnoĭ kory v oblasti perekhoda ot Aziatskogo kontinenta k Tikhomu okeanu. (Mezhdunarodnyĭ geofizicheskiĭ god. Informat͡sionnyĭ bi͡ulleten', 1958, no.5, p.68-73.) 5 refs. Text in Russian. **Title tr.**: Investigation of the structure of the earth's crust in the transition area between the Asiatic continent and the Pacific Ocean.

Reports work of the IGY Pacific geologic-geophysical expedition with author as leader during the 1957 summer season. It was organized to study depths and structure of the earth's crust in the Okhotsk Sea and coastal areas, the Sakhalin, Commander and Kuril Islands, Kamchatka and adjacent regions. Investigations were carried out during June - November. Participating organizations and main personnel are cited. Seismic, aerial magnetic, and geologic studies are briefly reviewed, plans for 1958 work noted. (DLC.)

GAL'PERIN, E. I., *see also*

Aver'ianov, A.G., & *others*. Deep seismic sounding . . . 1961. No. 69921

Veĭt͡sman, P.S., & *others*. On research of the earth's crust . . . 1961. No. 76367

71574. GAL'PERIN, MARK ISAEVICH. Mekhanicheskie sposoby razrusheniia merzlykh gruntov. Leningrad, 1961. 34 p. illus., graphs, diagrs. 26 refs. Text in Russian. **Title tr.**: Mechanical devices for working frozen ground.

Analyses of the efficiency of discs, chain saws, and percussion tools: energy consumption, speed of operation, durability under winter conditions. (DLC.)

71575. GAM, MIKAEL, 1901– . Alvorlige fremtids-udsigter for Grønlands skoler. (Atuagagdliutit: Grønlandsposten, Jan. 1, 1961. Ukiut 101-iat, nr.1, p.100, illus.) Text in Danish. **Title tr.**: Serious prospects for Greenland's schools.

Contains a brief survey of schools since 1845 when the training college at Godthåb was founded, compulsory schooling introduced in 1925, progress since 1950, and the intensified teaching of Danish. (CaMAI.)

71576. GAM, MIKAEL, 1901– . Een gang Grønland, altid Grønland. (Atuagagdliutit: Grønlandsposten, Feb. 4 - Apr. 7, 1960. Ukiut 100-at, nr. 2, p.1, +; nr.3, p.8-9, +; nr.4, p.4, +; nr.5, p.28; nr.6, p.11, +). Text in Danish and Eskimo. **Title tr.**: Greenland once, Greenland always.

Its former director of education reviews the period 1925-1940, when Greenland was still in colonial status and development purposely slow. The second article (nr. 3) covers the war years when Greenland was cut off from Denmark and supplied from North America. More independence and self-government followed, with legislation of 1950 as result of work of the Greenland Commission set up in 1948. In the last article (nrs. 4, 5, and 6) personal relationships between Danes and Greenlanders are discussed. (DLC.)

71577. GAM, MIKAEL, 1901– . Hvorfor et 8. skoleår i Grønland? (Grønland, Feb. 1961. nr.2, p.75-78.) Text in Danish. **Title tr.**: Why an eighth school year in Greenland?

Discusses proposed extension of compulsory schooling to eight years, considered desirable but handicapped by shortage of teachers and lack of accommodations. (CaMAI.)

71578. GAMBINO, J. J., *and others*. Effects of postirradiation chronic cold stress on irradiated rats. (U.S. Air Force. School of Aviation Medicine, Rept. 61-50. Feb. 1961, p.1-6, tables.) 17 refs. *Other authors:* M.S. Billings, B.G. Lamson *and* L.R. Bennet.

Study of animals, following whole-body or adrenal irradiation or no irradiation. There was no significant difference in longevity or appearance of neoplasms between the cold-exposed and the not-exposed groups. (DNLM.)

71579. GAMĬANIN, G. N. Nakhodki tillita v olovorudnykh i svint͡sovo-t͡sinkovykh mestorozhdeniiakh Severo-Vostoka ĬAASSR. (Akademiia nauk SSSR. Sibirskoe otdelenie. ĬAkutskiĭ filial. Nauchnye soobshcheniia 1962. vyp.7, geologiia, p.145-50, illus.) 5 refs. Text in Russian. **Title tr.**: Find of teallite in tin and lead-zinc deposits in northeastern Yakut ASSR.

Reports teallite in the Dzhaton lead-zinc deposits of the southern Verkhoyansk region and in the Burgavli tin deposits, Yana-Adycha region. Content and mode of occurrence are described. It appears in two forms: as replacement of cassiterite and as streak of intersecting sulfides. Both forms are characterized. (DLC.)

GAMĬANIN, G. N., *see also* Nekrasov, I. ĬA., & G.N. Gamĭanin. . . . kobal't . . . 1962. No. 74272

GANDAHL, RUNE, *see* International Conference on soil mechanics . . . 1961. No. 72383

71580. GANESHIN, G. S., *and others*. Karta chetvertichnykh otlozheniĭ SSSR. (Akademiia nauk SSSR. Izvestiia, ser. geograficheskaia, July-Aug. 1961, no.4, p.14-24, fold. map.) Text in Russian. *Other authors:* E.I. Kornutova, I.I. Krasnov, ĬU.F. Chemekov, S.V. Ėpshteĭn, *and* S.V. ĬAkovleva. **Title tr.**: Map of Quaternary deposits of the USSR.

Outlines the arrangement, materials, method, and content of the map at 1:5 million scale, published in 1960 under authors' editorship. Various genetic types of deposits are distinguished (in color): glacial, fluvioglacial, alluvial, lacustrine-alluvial, eolian, and others. Quaternary deposits are divided into four stages: Lower, Middle, Upper and Recent. Stratigraphic correlation of these deposits is outlined. Glaciations and their distribution are reported. (DLC.)

71581. GANESHIN, G. S., *and* **ĬU. F. CHEMEKOV.** Pervyĭ rasshirennyĭ plenum Mezhvedomstvennoĭ geomorfologicheskoĭ komissii pri OGGN AN SSSR. (Sovetskaia geologiia, Mar. 1961, no.3, p.120-26.) Text in Russian. **Title tr.**: First enlarged plenary meeting of the Interdepartmental Geomorphic Commission in the Geologic-geographic Sciences Division of the Academy of Sciences of the USSR.

Describes scope, program and decisions of this meeting in Moscow, Apr. 18-25, 1960 with more than three hundred participants, 32 papers presented at the plenary sessions and 67 to the sections. Geomorphic problems discussed included

the arctic seas. A morphologic map at 1:2,500,000 for the central Soviet Arctic and another at 1:1,500,000 of the Siberian platform were demonstrated. Further mapping plans are stated. (DLC.)

71582. GANESHIN, G. S., *and* IU. F. CHEMEKOV. S.V. Obruchev, k 70-letiiu so dnia rozhdeniia. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, July-Aug. 1961. t.93, vyp.4, p.341-44, port.) Text in Russian. **Title tr.:** S.V. Obruchev, on his 70th birthday.

Describes the life and scientific activity of Sergeĭ Vladimirovich Obruchev, geologist and geographer and explorer of Spitsbergen, Novaya Zemlya, the Indigirka-Kolyma basin, Chukotka, and other areas of the Soviet Arctic. Some of his scientific works are noted. (DLC.)

71583. GARAGULIA, L. S., *and* G. G. LAZUKOVA. Opyt primeneniia geobotanicheskikh issledovanii pri inzhenerno-geologicheskikh rabotakh v raione g. Syktyvkara. (Merzlotnye issledovaniia. Sbornik statei, 1961. vyp.2, p.214-21, map.) Ref. Text in Russian. **Title tr.:** Attempt to apply geobotanical investigations to engineering-geological work in the vicinity of Syktyvkar.

Reports a detailed investigation of the lithology of Quaternary deposits in this region of Komi ASSR and their mapping in 1958. According to genetic interrelation, the following are distinguished: lower and upper moraine deposits, fluvioglacial deposits, alluvial deposits of terraces, and present diluvial deposits. Geobotanical and geological mapping were carried simultaneously, and comparison of the two types shows significant correspondences between certain associations of plants and the lithologic properties of Quaternary deposits. (DLC.)

71584. GARAGULIA, L. S., *and* S. A. ZAMOLOTCHIKOVA. Sezonnoe promerzanie gruntov v raione g. Syktyvkara i prognoz ego izmeneniia posle osvoeniia territorii. (Merzlotnye issledovaniia. Sbornik statei, 1961. vyp.1, p.45-59, tables, diagrs.) 10 refs. Text in Russian. **Title tr.:** Seasonal freezing of ground in the Syktyvkar region and prognosis of its changes after assimilation of the territory.

Reports results of a 1958-1959 investigation by engineering-geology survey at 1:5,000 scale, according to the V.A. Kudriavtsev method and formula. Climatic conditions, lithologic composition and moisture of the ground are characterized. Average yearly temperature of the rocks ranges 2°.8 - 5°.5 C. Seasonal freezing varies from 0.8 to 1.6 m. in clayey ground, 0.8 - 1.8 m. in sandy soil, and 0.3 - 0.7 m. in peats. Vegetation and snow covers influence the depth of seasonal freezing; removal of covers and layers will alter these values. (DLC.)

71585. GARBOE, AXEL. En glemt grønlaenderven, laegen Chr. N. Rudolph 1811-1892 [i.e. 1882], (Grønland, Jan. 1962, nr.1, p.1-7, illus.) Text in Danish. **Title tr.:** A forgotten friend of the Greenlanders, the physician Chr. N. Rudolph, 1811-1882.

Sketches the life of this Danish doctor, who was active in northwest Greenland for most of the period 1839-74, and died in 1882. His two booklets pub. in Danish and Eskimo in 1852, for the benefit of the Greenlanders are noted, one on infant care, the other glimpses of life in Greenland. (DLC.)

71586. GARBOE, AXEL. Meteoriter fra Grønland, lidt om fund og hjemtransport. (Grønland, Feb. 1961, nr.2, p.41-48, illus., port.) Text in Danish. **Title tr.:** Meteorites from Greenland, note on find and transportation.

Recounts the discovery by Knud Rasmussen in 1913 of a meteorite long known to Greenlanders, about 60 km. northeast of Kap York, North Greenland. It weighs 3,400 kg. and the difficulties of transporting it to Denmark (in 1925) are described in detail, including the reconnaissance trip by Peter Freuchen in 1915. It is now in the Mineralogisk Museum, Copenhagen. (CaMAI.)

71587. GARBUTT, PETER D. The distribution of some small mammals and their associated fleas from central Labrador. (Ecology, July 1961. v.42, no.3, p.518-25, illus., tables.) 10 refs.

Account of conditions in the Knob Lake area (54°48′N. 66°48′W.), representing a mosaic of vegetation ranging from taiga to tundra. Four species: a lemming and three voles are recorded, with four kinds of fleas infesting them. Distribution of both, interrelationship, infestation, etc. are considered. (DLC.)

71588. GARDANOV, V. K., *and others*. Osnovnye napravleniia etnicheskikh protsessov u narodov SSSR. (Sovetskaia etnografiia, July-Aug. 1961, no.4, p.9-29.) Refs. Text in Russian. Summary in English. *Other authors:* B.O. Dolgikh *and* T.A. Zhdanko. **Title tr.:** Basic trends in ethnic processes among the peoples of the USSR.

Describes the current consolidation of ethnic groups and the effort to raise cultural and economic levels. Paleosiberian and northern Ural-Altaic peoples are cited among the examples. (DLC.)

GARDINER, THORNTON, GATHE & ASSOCIATES, Architects, *see* Garrett, R.M., & A. Rogatrick. Grand Palace Theatre. 1962. No. 71596

71589. GARDNER, FRANK J. Oil search carried to Hudson Bay. (Oil and gas journal, Sept. 24, 1962. v.60, no.39, p.249, map.)

Outlines exploration program under way between Cape Tatnam, Man. and the Ontario boundary: air photography, surface mapping, seismic studies, and initial slim-hole drilling. Three-fourths of the 2.5 million acres involved is offshore in water averaging 80 ft. deep. Provincial and federal government permits have been issued to Société Générale des Pétroles Ltd. (SOGEPET) and to F.R. Joubin of Toronto. Earlier mapping programs have identified Ordovician, Silurian, and Devonian outcrops along shores of Hudson and James Bays; a 1960 aeromagnetic survey revealed thick Paleozoic rocks off Cape Tatnam. Logistic problems are less serious than those in the arctic islands. Possibility of exploration on the 5-6 ft. ice cover of Hudson Bay is not yet determined. (DGS.)

71590. GARIFULIN, L. L. Kamennyĭ grib. (Priroda, Jan. 1962, no.1, p.115-16, illus.) Text in Russian. **Title tr.:** A stone mushroom.

Describes a glacial relic observed in the Voron'ya River basin of the Kola Peninsula: a rocky outcrop of knotted schist capped with dark amphibolite, the entire phenomenon having the appearance of a mushroom. The schist itself is 1.5 m. in height, and 0.7 m. wide. The cap is 1.5 by 2.3 by 0.3 m.; it was probably transported by glacier with other morainic material. (DLC.)

71591. **GARIFULIN, L. L.** O nakhodke diatomovykh otlozheniĭ v raĭone khrebta Magazin-Musĭur; severo-vostochnaĭa chast' Kol'skogo poluostrova. (*In:* Voprosy geomorfologii . . . Kol'skogo poluostrova, 1960, no.1, p.172-75, illus.) 2 refs. Text in Russian. **Title tr.:** On a find of diatom deposits in the Magazin-Musyur Range region, northeastern Kola Peninsula.

Reports find in the valley of the Nizhnyaya Pesochnaya tributary to the Sukhaya, approx. 67°N. 38°30′E. Section of these deposits is described. More than a hundred diatom species are present, with gen. *Fragilaria, Tabellaria, Tetracyclus* predominant. Chemical and microscopic features of the diatomites are described. (DLC.)

71592. **GARIN, N. A.** Kormovaĭa baza Kamchatskoĭ oblasti i puti ee uluchsheniĭa. (*In:* Akademiĭa nauk SSSR. Komissiĭa po problemam Severa. Syr'evye resursy . . . 1961, p.170-75, tables.) Text in Russian. **Title tr.:** Fodder resources of Kamchatka and ways for their improvement.

Considers meadow and pasture improvement the most important task for Kamchatka agriculture. The sowing of clover and timothy and rotation of crops are discussed. Efforts in the Yelizovo region are reported and evaluated. Potato, cabbage, etc. cultivation is also reported. Fodder problems are not yet solved and further efforts should be made. (DLC.)

71593. **GARIN, SEMEN.** Za Polĭarnym krugom. (Nash sovremennik, 1962, no.2, p.183-94.) Text in Russian. **Title tr.:** Beyond the Arctic Circle.

Description of the economic and industrial growth of Murmansk and the Kola Peninsula in the last decade: shipping, fishing, mineral resources of the Khibiny tundra, power plants, etc. The projected use of ocean tides as energy sources (PÉS i.e. tidal electric stations) is noted. (DLC.)

71594. **GARLAND, GEORGE DAVIS,** *and* **D. H. LENNOX.** Heat flow in western Canada. (Geophysical journal, Feb. 1962. v.6, no.2, p.245-62. tables, graphs, map.) 24 refs.

Determines heat flow values at three locations from temperature gradient measurements in abandoned oil wells and thermal conductivity determinations on core samples. The heat flux ranges from 1.46×10^{-6} cal. cm. $^{-2}$ sec. $^{-1}$ in central Alberta to 2×10^{-6} cal. cm. $^{-2}$ sec. $^{-1}$ at Norman Wells. Possible disturbances in the temperature gradients resulting from oil production and surface temperature inequalities are considered.–From authors' abstract. (DLC.)

GARLAND, GEORGE DAVIS, *see also* IUGG. Seismol. proceedings 1960. 1961. No. 72397

71595. **GARNER,** *Sir* **SAVILLE.** Impressions of the North. (North, May-Aug. 1961. v.8, no.3, p.1-6; no.4, p.5-10, illus., map.)

High Commissioner in Canada reports a tour of Mackenzie District in July 1960, visiting Port Radium, Inuvik, Tuktoyaktuk, Coppermine, Yellowknife, and Wood Buffalo National Park. In the second part, development prospects and problems are considered: mineral resources, transportation, employment for Eskimos, territorial administration. (DLC.)

71596. **GARRETT, R. MICHAEL,** *and* **A. ROGATRICK.** The Grand Palace Theatre. (Royal Architectural Institute of Canada. Journal, Apr. 1962. v.39, no.4, p.61-66, illus.)

Describes the reconstruction of this theater in Dawson, Yukon Territory for Dept. Northern Affairs and National Resources by architects Gardiner, Thornton, Gathe and Associates of Vancouver, for the Dawson Festival in 1962. The history of the building, built in 1899, and structural details are sketched. Archival research by National Historic Sites Division to achieve authentic reconstruction combined with modern safety and heating facilities is outlined. (CaOCU.)

71597. **GARRIDO, C. M.** Acción de distintas substancias en la resistencia al frío de ratas blancas suprarrenoprivas y normales. (Sociedad Argentina de Biología. Revista 1959. v.35, no.1-4, p.96-102, illus.) 22 refs. Text in Spanish. Summary in English. **Title tr.:** The action of certain substances upon cold resistance of adrenalectomized and normal white rats.

Survival of operated rats in cold was prolonged by cortisone, cortisol, prednisone, 2-methyl-9-chlorhydrocortisone and dexamethasone. Normal rats showed increased cold-resistance after ACTH, prednisone and ascorbic acid administration. Nine other substances tested had no effect. (DNLM.)

71598. **GARRY, ROBERT.** Réflexions sur l'évolution de la population Soviétique de 1939 à 1959. (Revue canadienne de géographie, 1962. v.16, no.1-4, p.3-12, maps.) Text in French. Summary in English. **Title tr.:** Reflections on Soviet population growth from 1939 to 1959.

Discusses from the 1959 census statistics, some population trends since 1939. Included are the distribution of urban and rural population, growth of towns, and distribution of nationalities in the Federated Republic. Proportional maps show cities of over 50,000 inhabitants in 1939 and in 1959 (six in northern USSR); those with a growth rate of over 200% in this period (two in the North); and distribution of urban and rural population on Jan. 15, 1959. Among the most urbanized regions are some, e.g. Murmansk and Magadan, in the North. (DGS.)

71599. **GARTLEIN, CARL WITZ, 1902– , *and* G. C. SPRAGUE.** Auroral absorption of radio signals. (Journal of geophysical research, Aug. 1962. v.67, no.9, p.3393-96, graphs, map.) 6 refs.

Studies auroral data and radio data in order to elucidate their interference and the location of the auroral zone. An aurora is likely to interfere with a radio signal that is reflected within 2° of latitude from an aurora, and will stop the signal that attempts to pass through an aurora. The mechanism of interference, is, presumably, the production of electrons below the *E* layer by incoming primary auroral particles. The increased collision frequency in these regions will cause the signal to be absorbed. (DLC.)

GARUSOV, I., *see* Pugachev, N.F. Chukotskie rasskazy. 1960. No. 74986

71600. **GASANOV, S. G.,** *and* **T. S. ĬAKUSHEVA.** Vliĭanie gipotermii na nekotorye pokazateli azotistogo i zhiro-uglevodnogo obmena u timektomirovannykh zhivotnykh. (Patologicheskaĭa fiziologiĭa i èksperimental'naĭa terapiĭa, 1962. t.6, no.2, p.54-58, tables.) 11 refs. Text in Russian. Summary in

English. **Title tr.**: The effect of hypothermia upon some indices of nitrogen and fat-carbohydrate metabolism in thymectomized animals.

Account of experiment on rats with body temperature reduced by 2-3°C. or 10-12°C. Nitrogen/protein-nitrogen ratios, and glycogen content of liver, muscle and heart were assayed as was protein content of muscle and kidney and liver fat and protein; methionine-S^{35} uptake was determined as well. The results indicate that in the absence of the thymus, there is a decrease in adaptive metabolic reaction in the hypothermic group. The effects of cortisone acetate were also studied. (DNLM.)

71601. GASNIKOV, A. N. Pomidory na Turukhanskom Severe. (Sel'skoe khozĭaĭstvo Sibiri, Feb. 1962. god 7, no.2, p.49-50.) Text in Russian. **Title tr.**: Tomatoes in the North at Turukhansk.

Reports on the cultivation of the best of 17 strains tested at the Turukhansk agricultural experiment station. In five years the annual yield averaged 294 cwt./hectare. Seed preparation, starting the seedlings in hot beds, transplanting to open ground, pruning, harvesting, etc. are briefly discussed. (DLC.)

GAUNOT, R., *see* Marion, P., & *others*. Données hémodynamiques . . . 1960. No. 73811

71602. GAVRIKOV, SERGEĬ IVANOVICH, *and* **E. P. DANILOGORSKIĬ.** Ėbir-Khainskiĭ intruziv i osobennosti svĭazannogo s nim orudeneniĭa. (Geologiĭa rudnykh mestorozhdeniĭ, July-Aug. 1961, no.4, p.71-78, map.) 17 refs. Text in Russian. **Title tr.**: The Ebir-Khaya intrusive and features connected with its mineralization.

Reports on the geologic structure, mineralization and distribution of this intrusive (64°35′N. 142°47′E.) in the upper Indigirka basin, as studied in 1960. Its situation and form are described. Two phases in mineralization are distinguished; the first formed binary granites (80% of its area), the second, leucocratic granites. Ore veins and their minerals are analyzed. Gold mineralization in its exocontact part and tin-tungsten mineralization in its apical part are outlined. (DLC.)

71603. GAVRIKOV, SERGEĬ IVANOVICH, *and* **L. N. POPOV.** K geologii i metallonosnosti vulkanogennykh porod Okhotsko-Indigirskogo vodorazdela. (Geologiĭa i geofizika, 1962, no.7, p.97-106, table, map, diagrs.) 14 refs. Text in Russian. **Title tr.**: On the geology and metal-bearing properties of volcanic rocks in the Okhotsk-Indigirka watershed.

Reviews the stratigraphy and tectonics of the Cretaceous volcanic stratum of this little studied area. Sub-volcanic and intrusive rocks are analyzed and their mineralogic and chemical composition reported. Relationship between mineral resources and magmatic rocks is discussed, and the mineralization of various metals is given, of which lead, zinc and tin show highest concentration. (DLC.)

71604. GAVRIKOV, SERGEĬ IVANOVICH. O poperechnoĭ zonal'nosti v In'ĭal'skom sinklinorii. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. ĬAkutskiĭ filial. Nauchnye soobshcheniĭa, 1959. vyp.2, p.29-34, illus.) 4 refs. Text in Russian. **Title tr.**: Cross zoning in the In'yali synclinorium.

Reports tectonic analyses of this synclinorium, over 500 km. long and 60-80 km. wide, belonging to the Yana-Kolyma folded province, Yakut ASSR. Four transversal anticlinal zones of the first order are distinguished and characterized, and synclinal zones are reorganized between them. Possibility of gold and other metal occurrences is considered. (DLC.)

71605. GAVRIKOV, SERGEĬ IVANOVICH. O zolotonosnosti osadochnykh porod, nesushchikh vkraplennost' sul'fidov, v basseĭne r. Ėl'gi. (Geologiĭa rudnykh mestorozhdeniĭ, Mar.-Apr. 1962, no.2, p.114-15.) 3 refs. Text in Russian. **Title tr.**: On gold-bearing sedimentary rocks, carrying sulfide impregnation, in the El'ga River basin.

Reports a cross-section of Triassic (Norian) deposits in the El'ga, Ol'chan, Tobychan and other basins, all in the upper Indigirka basin, Yakut ASSR. Schists and sandstones and other rocks were microscopically studied and the presence of sulfides and some gold indicated. Sulfide hydrothermal-metasomatic mineralization is noted; the possibility of finding gold placers considered. (DLC.)

71606. GAVRIKOV, SERGEĬ IVANOVICH. Stratigrafiĭa i tektonika Tas-Khaĭakhtakhskogo skladchato-glybovogo podniatiĭa. (Sovetskaĭa geologiĭa, May 1962, no.5, p.139-43, text map, profile.) 6 refs. Text in Russian. **Title tr.**: The stratigraphy and tectonics of Tas-Khayakhtakh block-folded uplift.

Reviews the stratigraphy of the Cambrian, Ordovician, Silurian, and Lower Devonian deposits in this uplift in the middle Indigirka basin. The Paleozoic rock complex about 5700 m. thick consists mainly of carbonate and terrigenous rocks. Paleozoic formations are covered with upper Triassic and Upper Jurassic rocks. A geologic-structural map of the area is presented and the tectonics interpreted. Tectonic fractures, the most characteristic: faults and thrusts, are discussed. (DLC.)

71607. GAVRILENKO, G. G., *and* **M. S. SIN'KEVICH.** Kak luchshe vosstanavlivat' lesa Karelii? (Lesnoe khozĭaĭstvo, Apr. 1961. god 14, no.4, p.12-16, illus., tables.) Text in Russian. **Title tr.**: The best methods of reforestation in Karelia.

Reports natural regeneration from seedlings left in clear-cut forest, the most economical and reliable way of regeneration. In Karelia selective cutting preceded clear cutting in many forests. Young growth is plentiful and likely to be damaged in logging operations. Their organization is discussed, skidding with the crowns leading is recommended. (DLC.)

71608. GAVRILENKO, N. I. Nakhodki arkticheskikh i boreal'nykh ptiĭs na Poltavshchine. (Ornitologiĭa, 1960. vyp.3, p.436-39.) 3 refs. Text in Russian. **Title tr.**: Occurrence of arctic and boreal birds in the Poltava area.

Records occasional finds of these birds in the central Ukraine, some 1200 miles south of the Arctic Circle. The list includes several gulls, wild ducks, the tundra swan (*Cygnus bewicki* Yarr.), the snowy owl (*N. nyctea* L.), etc. (DLC.)

71609. GAVRILĬUK, V. A. Formirovanie ĉsvetka u nekotorykh rasteniĭ ĭugo-vostoka Chukotki. (Akademiĭa nauk SSSR. Doklady 1961. t.137, no.2, p.448-50, illus.) 9 refs. Text in Russian. **Title tr.**: Flower formation in certain plants of southeastern Chukotka.

Reviews earlier work briefly and describes successive stages in the development of reproductive organs in 25 tundra plants. Ecological and phenological notes are included. (DLC.)

71610. GAVRILIŬK, V. A. Prodolzhitel'nost' perioda plodonosheniia i semennaia produktivnost' rastenii iugo-vostochnoĭ Chukotki. (Botanicheskii zhurnal, Jan. 1961. t.46, no.1, p.90-97, illus., tables.) Approx. 50 refs. Text in Russian. **Title tr.:** Length of fructification period and seed productivity in plants of southeastern Chukotka.

Discusses length of fruit-bearing in these plants (extremes 30 or less, to 75 days), maturation under the snow cover, factors affecting length of fructification period, degrees of fertility of common forms, and relation of seed formation to blooming. (DLC.)

71611. GAVRILIŬK, V. A. Vliianie snezhnogo pokrova i ékspozitsii sklonov na ritm razvitiia rastenii na vostoke Chukotki. *(In:* Akademiia nauk SSSR. Institut geografii. Rol' snezhnogo pokrova . . . 1961, p.231-42, graphs.) 22 refs. Text in Russian. **Title tr.:** Influence of snow cover and exposure of slopes on the rhythm of vegetation development in eastern Chukotka.

Reports phenologic investigations in 1957 and 1958 growing seasons around Provideniya. Changes in vegetation were registered at three-day intervals along a 2500 m. profile. On slopes with a northern exposure, four groups of plant associations were distinguished, and on southern slopes six groups. Thickness and duration of snow cover are the main factors determining the formation of vegetation associations and their distribution. Optimal conditions prevail when the snow is 0.75-2.5 m. deep. Thicker cover especially on northern slopes disturbs development of plants and their seeds. Best conditions are on southern slopes with a thick snow cover. The growing season is about 80-90 days and some rhythms in growth are observed. (DLC.)

GAVRILOV, E. IA., *see* Knorre, K.G., & *others.* Vozrast gornykh porod . . .1962. No. 72873

71612. GAVRILOVA, M. K. Radiatsionnyĭ balans Arktiki. (Leningrad. Glavnaia geofizicheskaia observatoriia. Trudy 1959. vyp.92, p.3-26, tables, charts, graphs.) 69 refs. Text in Russian. **Title tr.:** Radiation balance of the Arctic.

Attempt is made to compute charts of the radiation balance of the central basin and areas to 60°N.; based on drifting station North Pole-2 to -6 observations, and those of actinometric and other stations. Methods for calculating the absorbed and effective radiation are outlined. Monthly charts are presented for absorbed radiation and radiation balance for the summer months April to September, and for December. Annual charts based on factual data and calculated values are also included. The geographic distribution patterns of absorbed and effective radiation and radiation balance are analyzed. (DLC.)

71613. GAVRILOVA, M. K. Radiatsionnyĭ balans Arktiki; tezisy. (Mezhvedomstvennoe soveshchanie po aktinometrii i atmosfernoĭ optike. 2d, *Leningrad,* 1959, *pub.* 1961. Aktinometriia i atmosfernaia optika, p.80-81.) Text in Russian. **Title tr.:** Radiation balance of the Arctic; précis.

Reviews in brief, the total, absorbed and effective radiation and radiation balance of the Arctic Basin. Yearly sums of radiation balance in the continental part of the Arctic fluctuate from 3-5 to 10-15 Kcal./cm². In the Central Arctic, the fluctuation ranges from 0-2 Kcal./cm². (DLC.)

71614. GAVRILOVA, M. K. Radiatsionnyĭ i teplovoĭ balansy odnogo iz lednikov khr. Suntar-Khaĭata. (Issledovaniia lednikov i lednikovykh raĭonov, 1961. vyp.1, p.163-67, tables.) 3 refs. Text in Russian. Summary in English. **Title tr.:** Radiation and thermal balance of a glacier in the Suntar-Khayata Range.

Reports observations in June-Aug. 1958, on glacier No. 31 at 2257 m. above sea level. Monthly values of the various parameters are tabulated and discussed in comparison with data obtained at the Suntar-Khayata station at 2068 m. altitude. (CaMAI.)

71615. GAVRILOVA, M. K. Teplovoĭ balans vysokogornoĭ stantsii "Suntar-Khaĭata." (Issledovaniia lednikov i lednikovykh raĭonov, 1961. vyp.1, p.154-62, tables.) 5 refs. Text in Russian. Summary in English. **Title tr.:** Thermal balance of the Suntar-Khayata high-altitude station.

Reports observations during 1958 at this IGY station in the Suntar-Khayata Range, at 2068 m. altitude, in comparison with similar data obtained at the Oymyakon station, at 740 m. altitude. The intensity of solar radiation at the higher station exceeded by 10% that at Oymyakon on clear days, but the annual total was about the same. Diffuse radiation at Suntar-Khayata exceeded direct solar radiation by 25%, and was nearly 40% higher there than at Oymyakon. The persistent snow cover reflected 65% of the yearly total of solar energy at the mountain station, and the radiation balance was only 25% of that at Omyakon. Evaporation accounted for 14% of the balance at Suntar-Khayata in June and 60% in July; turbulent heat exchange 30-50% in July-Aug. (CaMAI.)

71616. GAVRILOVA, M. K. Teplovoĭ rezhim taĭaniia lednika v khrebte Suntar-Khaĭata v 1959 g. *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Severo-Vostochnoe otdelenie. Teplo- i massoobmen. . .1961, p.44-58, tables, graphs, diagrs.) 13 refs. Text in Russian. **Title tr.:** The thermal melting regime of a glacier in the Suntar-Khayata Range in 1959.

Reports study of heat balance of the No.31 glacier at 62°36′N. 140°51′E. in July-Aug. Daily actinometer readings were taken for direct, scattered, summary, and reflective radiation. About 75-80% of the heat involved in melting derives from direct solar radiation, 15% from turbulent heat transfer, and 5-10% is heat of condensation. Melting under clear skies is about as fast as during cloudy weather. Speed of melting is affected also by the cover of the glacier: when clean dry snow, the reflective capacity of the surface is 80-90%, when covered by melting snow, 60%, and when dirty, melting ice, 25-35%. In summer 1959, glacier thickness diminished 100 cm., almost three times as much as in 1958. (DLC.)

GAY, J. P., *see* Justin-Besançon, L., & *others.* . . .hypothermie accidentelle. . .1960. No. 72601

71617. GAY, PETER, *and* **I. D. MUIR.** Investigation of the feldspars of the Skaergaard Intrusion, Eastern Greenland. (Journal of geology, Sept.

1962. v.70, no.5, p.565-81, 4 photomicrographs, diagr., 5 tables.) 27 refs.

Presents detailed optical and single-crystal X-ray study of some 30, mostly plagioclase, feldspars, of the marginal facies, the layered series, and the late granophyres of this well-known complex. Data on structural states of the feldspars are used, together with information from pyroxenes, iron ore minerals, olivines, silica minerals, etc., to confirm and extend the current ideas on the cooling history of the Skaergaard. Present data on the dynamics of the inversion and unmixing processes are inadequate for any detailed estimate of the physico-chemical conditions prevailing at any stage of the crystallization. But the appreciable variations in the structural states of the feldspars within the layered series and at other points in the intrusion, can be correlated generally with changes in the exsolution and inversion textures of pyroxenes and other minerals. Much more data are needed on the nature of the processes involved and on the controlling factors at all points within the composition fields of the major mineral groups. (DGS.)

GAY, PETER, *see also* Bown, M.G., & P. Gay. X-ray study. . .Skaergaard pyroxenes. 1960. No. 70349

71618. GAZAWAY, H. P. Marketing of farm products in Alaska, our 49th state. (U.S. Dept. of Agriculture. Economic Research Service. Marketing and transportation situation, Apr. 1961. no.141, p.15-26, tables.) Refs. *Reprinted as:* U.S. Dept. of Agriculture. Economic Research Service ERS-3.

Deals with production, marketing, future growth. The Alaskan food market transportation facilities, marketing outlets, and prices, both retail and to farmers, are examined. Less than 10% of the food consumed is supplied from Alaskan farms. Most farmers sell through a cooperative or directly to local retailers and consumers; processors and middlemen are few. Retail food prices, as tabulated for five major cities in 1960, are higher than in other states due to shipping costs from outside. But production costs also are higher than outside, and farmers probably cannot increase their share of the local market appreciably during the 1960's, though some increases in beef and sheep are anticipated. (DA.)

71619. GAZAWAY, H. P., *and* **C. F. MARSH.** Some characteristics of Anchorage and Fairbanks households with special reference to retail food buying. Palmer, Alaska, June 1960. 15p. graphs. (Alaska. University. Agricultural Experiment Station. Circular 23.) 6 refs.

Reports survey of Anchorage in July 1958 and Fairbanks in June 1959: size, age, occupation, and income of households, time resident in Alaska, education of housewives, home and car ownership, household appliances, reading habits, and food-shopping habits. Families averaged 3.7 persons in Anchorage and 3.5 in Fairbanks. In both, families were younger and incomes higher than the United States average. (DA.)

GAZAWAY, H. P., *see also* Mick, A.H., & H.P. Gazaway. Alaska farm facts . . . 1961. No. 73972

71620. GEER, MAX RICHARD, 1912– , *and* F. D. FENNESSY. Washability of coals from the Matanuska valley and Beluga River Fields, Alaska. Washington, D.C., U.S. Dept. of the Interior, 1962. 33 p. tables. (U.S. Bureau of Mines. Report of investigations 6017.) Refs.

Summarizes data on the preparation of coals from a deposit northwest of Anchorage and four mines in the Matanuska valley. Specific gravity analyses (appended) were made to determine the impurity content of the raw coal for removal of the impurities by cleaning. Results varied. Some of the coals are of high quality (low ash content) when properly prepared. Others still retain a high impurity content, but are suitable for low-cost power at mine sites. (DGS.)

GEIGER, STEPHEN R., *see* Mohr, J.L., & *others*. Marine nature of Nuwuk Lake . . . 1961.No. 74076

71621. GEIS, HANS PETER. Strukturelle iakttagelser ved noen norske kisforekomster. (Norsk geologisk tidsskrift, 1961. bd. 41, hefte 2-4, p. 173-96, 6 diagrs., 2 text maps.) 46 refs. Text in Norwegian. Summary in English. **Title tr.:** Structural observations on some Norwegian sulfide deposits.

Describes deposits of sulfide ores in minor basins in the Caledonian geosyncline. These deposits are separated into cigar-shaped bodies arranged en echelon. The occurrence is believed to have resulted from submarine precipitation of hydrothermal solutions in the deepest of elongated basins, with additional filling from sedimentary and volcanic material. The lead-zinc bearing pyrite deposit at the Bleikvassli mine in northern Norway has typical en echelon arrangement of ore plates and location of the ore body. Other examples from arctic Norway are noted. (DLC.)

71622. GÉLINAS, LÉOPOLD. Preliminary report on Watts Lake area New Quebec. Quebec, 1962. 11 p. table, fold. map. (Quebec, Dept. of Natural Resources, P.R. no. 471.) 5 refs.

Reports the geology of this 426 sq. mi. area (61°45′ - 62°N. 73°30′ - 74°15′W.) in northern Ungava Peninsula as investigated in 1960 and 1961. It is a plateau, underlain by Precambrian rocks including a basement of quartz-feldspar gneisses in the north, and a complex, forming part of the Cape Smith basin, in the south. This consists of schists and gneisses overlain by volcanic rocks, intruded by sills of gabbro and ultramafic rocks; metamorphism increases northward in the complex. The structural pattern is different for the basement and basin parts of the area; the latter is more complexly folded and has a thrust fault and two transverse faults. It has an asbestos deposit, under development by the Murray Mining Corp. about six mi. east of Watts Lake. In the main ore body, 15,231,000 tons averaging 10.87% fiber are indicated; other asbestos indications are noted. (DGS.)

GÉLINAS, LÉOPOLD, *see also* Bergeron, R., & *others*. . . . Ungava stable area. 1962. No. 70154

GELLÉN, JÁNOS, *see* Takács, Ö., & *others*. Über die Permeabilität . . . No. 76070

71623. GEL'MAN, M. L. Novaĭa nakhodka zhedrita v SSSR. (Akademiĭa nauk SSSR. Doklady, Nov. 21, 1961. t.141, no.3, p.709-712, table, diagr.) 14 refs. Text in Russian. **Title tr.:** A new find of gedrite in the USSR.

Describes the mineralogy of the gedrite found in the contact zone of the Bystrinskiy granite mas-

sif, on the right bank of the Malyy Anyuy in northern Magadan Province. Garnet gedrite is a dark-gray banded rock, consisting of gedrite, almandite, biotite, cordierite, quartz, zirconium and other minerals. The chemical composition and optical properties of gedrite and its associated minerals are described. Its origin is discussed, and its association with cummingtonite is noted. (DLC.)

71624. **GEL'MAN, M. L.** Otrazhenie mikrogeterogennosti magmaticheskogo rasplava v teksture obogashchennogo titanom ochkovogo diorita. (Geokhimiia, 1962, no.2, p.147-53, illus., tables, diagrs.) 9 refs. Text in Russian. Summary in English. **Title tr.:** Reflection of the microheterogeneity of magmatic melt in the structure of augen-diorite enriched with titanium.

Describes the petrography of this rock found in the Pogynden River basin, tributary to the Malyy Anyuy in Magadan Province. It is associated with quartz-diorite, syenite-diorite and others, and is of Cretaceous age. Results of its microscopic investigations and chemical analyses are reported; its crystallization outlined. Augen-diorite proves the possibility of magma liquation in abyssal conditions. (DLC.)

71625. **GEL'MAN, M. L.** Verkhnetûrskiĭ vulkanizm severo-vostoka Azii. (Vsesoûznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.262-63.) Text in Russian. **Title tr.:** Upper Jurassic volcanism in northeast Asia.

Reports briefly characteristics of Upper Jurassic volcanism in the In'yali-Debin zone, Kolyma median massif, Arman'-Gizhiginskaya zone and Oloy downwarp. Products of volcanism, tectonic nature of the area, and chemical composition of effusive rocks are briefly noted. (DLC.)

71626. **GEMMILL, CHALMERS LAUGHLIN, 1901– , *and* K. M. BROWNING.** Effects of pentobarbital on temperature and heart rate of rats subjected to cold. (American journal of physiology, Oct. 1962. v.203, no.4, p.758-61, illus.) 7 refs.

Normal rats exposed to 5°C. for 46 hrs. showed in some cases increased ability to recover body temperature and heart rate from a standard dose of sodium pentobarbital. Thyroidectomized rats did not recover prior to or after cooling. In both groups, most rats given T-3, recovered from the barbiturate. (DLC.)

71627. **GENKIN, A. D.,** *and others.* Usloviia nakhozhdeniia apatita v medno-nikelevykh sul'fidnykh rudakh Noril'skogo mestorozhdeniia. (Geologiia rudnykh mestorozhdeniĭ, Mar.-Apr. 1961, no.2, p.100-108, illus., plates, tables, cross-section.) 4 refs. Text in Russian. *Other authors:* Z.V. Vasil'eva *and* T.A. Ĭakovlevskaia. **Title tr.:** Conditions of apatite occurrence in copper-nickel sulfide ores of the Noril'sk deposits.

Describes apatite occurrences in various types of deposits: in impregnation ores of gabbro diabases, in ore veins and lenses, and enclosing rocks. Tabular and drop-shaped inclusions of sulfides in the apatite crystals show that growth of the latter occurred when the sulfides were in a fluid stage. According to chemical analyses, this apatite belongs to the fluorapatite group. Association of apatite with sulfides indicates enrichment of volatiles in sulfide fluid. (DLC.)

71628. **GENKIN, A. D.,** *and* **O. E. ZVIAGINTSEV.** Vysotskit, novyĭ sul'fid palladiia i nikeliia. (Vsesoûznoe mineralogicheskoe obshchestvo. Zapiski 1962. ser.2, chast' 91, vyp.6, p.718-25, tables, plates.) 18 refs. Text in Russian. **Title tr.:** Vysotskite, a new palladium and nickel sulfide.

Describes a new mineral found in the Noril'sk copper-nickel deposits. Vysotskite (also vyssotskite, vysozkite) occurs with millerite, nickel pyrite, and chalcopyrite. Its chemical composition, X-ray analyses and other properties are reported. It is considered a palladium and nickel sulfide. (DLC.)

71629. **GENKINA, R. Z.** Mezozoĭskaia flora IUzhno-Ĭakutskogo, Aldanskogo, kamennougol'nogo basseĭna i ee stratigraficheskoe rasprostranenie. (Akademiia nauk SSSR. Doklady, May 21, 1961. t.138, no.3, p.635-38.) 5 refs. Text in Russian. **Title tr.:** Mesozoic flora of the southern Yakutia (Aldanian) carboniferous basin, and its stratigraphic distribution.

Reports this coal-bearing basin from the Olekma east to the Uchur consists of continental Jurassic and Lower Cretaceous deposits. They are divided into five local series, and the fossil flora of each is described in turn noting it complexes and distribution. (DLC.)

71630. *GEOGRAFIIA V SHKOLE.* Geograficheskie novosti. (Geografiia v shkole, Jan.-Dec. 1961 and 1962, god 24-25, nos.1-6.) Text in Russian. **Title tr.:** Geographical notes.

Contains useful summaries of feature articles in central and local newspapers, with occasional references to northern areas, e.g. the new settlements Mirnyy and Chernyshevskiy in Yakutia, and the creation of a wildlife preserve on Vrangel Island described in *1961,* no.2, p.77-78; acclimatization experiments with the Far East pink salmon, chum, and crabs in the Barents and White Seas, mentioned *ibid.* and also in no.3, p.73-74; socio-economic development since 1930 in the Chukchi, Koryak, Yamal-Nenets, and Khanty-Mansi National Districts sketched in no.2, p.84-85, their fur hunting, reindeer raising, health and educational services, rise of national literature, etc.; the 2-3 million km² ground-water basin of Western Siberia, up to 125°C. at 3,000 m. depth, is slowly moving northward: its potential use as heat and power source is discussed, including Tyumen Province (no.3, p.73; no.4, p.78); Polar Ural glaciers, their discovery, mapping, current studies (no.4, p.79). Projected construction of the first geothermal power station in the Pauzhetka valley of Kamchatka, is noted in an article on the industrial potential of thermal waters (*1962,* no.1, p.70-71); tidal electric power stations for the White Sea area are mentioned in no.3, p.74, as is a natural freezer in the permafrost layer at Novyy Port on Ob Bay, to have almost 2 km. tunnels, at 16 m. depth, at a constant -16°C.; tribute to Amundsen for his 90th anniversary (*ibid.,* p.86-87); map of the 17 economic regions of the USSR, the four covering the North delineated among others, no.4, p.71. Discovery of vermiculite in Murmansk Province, an experimental concentration plant built at Kovdor, a hydroelectric station projected for Ust'-Ilim, the

"komsomol youth" drift station North Pole-11 set up in the Arctic Basin, etc., *ibid.* p.71-74. Oil and natural gas strikes in the West Siberian plain are listed in no.5, p.79; three-layered lake Mogil'noye on Kil'din Island is discussed *ibid.*, p.80; as is Tyuleniy Island fauna, no.6, p.72. (DLC.)

71631. *GEOGRAFIĬA V SHKOLE.* Korotko. (Geografiĭa v shkole, Nov.-Dec. 1961. god 24, no.6, p.83.) Text in Russian. **Title tr.:** Brief notes.

Includes construction of one of the largest mines in the North, to be ready in 1963 for open mining of apatite and nepheline ores on Rasvumchorr plateau of Kola Peninsula; discovery of petroleum at Tebuk, 70 km. from Ukhta, in 1960; plans completed for construction of a lumber mill at Bratsk with a 4 million m^3/yr. capacity. (DLC.)

71632. *GEOGRAFIĬA V SHKOLE.* Korotko. (Geografiĭa v shkole, Jan.-Dec. 1962. god 25, nos. 1-6.) Refs. Text in Russian. **Title tr.:** News in brief.

Includes notes on Soviet activities in the Arctic and Far North: work of the atomic icebreaker *Lenin* in Oct.-Nov. 1961: establishing drifting station North Pole-10; setting up 15 drifting automatic radiometeorological stations (DARMS) and radio beacons; trip along the European and Siberian arctic coast, and back to Murmansk on Nov. 22, covering 8000 mi., 6000 under heavy ice conditions, (no.1, p.73) .

Six new islands, each about a sq. km. in area, were discovered in 1961 in Franz Joseph Land by Leningrad hydrographers, (*ibid.*).

Telephone lines established: Arkhangel'sk - Leshukonskoye - Nar'yan-Mar, Tyumen'-Salekhard, Tyumen' - Khanty-Mansiysk, (no.2, p.78).

Punginskoye natural gas deposits, the 13th discovered in northern Tyumen' Province, yield about a million $m.^3$ gas a day, (no.3, p.76).

Kandalaksha town and district in Kola Peninsula are under development: a hydroelectric station, Knyazhegubskiĭ lumber mill, a reinforced concrete plant, etc. (no.4, p.75).

Coal resources of 284 deposits known in Yakutia are estimated at 3,000 billion (10^{12}) tons, (no.2, p.73). (DLC.)

71633. GEOGRAFISKA SÄLLSKAPET I FINLAND. Atlas of Finland 1960, explanatory notes. Helsinki, Kustannusosakeyhtiö Otava, 1962. 122 p. Refs.

Sources of data are discussed for each map or group of maps in No. 64680 to amplify the map legend. Of special interest for the northern areas are the discussions of Prequaternary rocks p.13, minerogenic deposits p. 14-16, climate p. 17-23, fauna and flora p. 30-38, forests and peat lands p. 39-42, agriculture IV, i.e. the northern limits of cultivation p. 63-66. (DGS.)

71634. GEOLOGICAL ASSOCIATION OF CANADA. Reference fossils of Canada, part 2. Mississippian faunas of western Canada, by S.J. Nelson. Toronto (?) Sept. 1961. 39 p. illus. on 27 plates, map, diagr., graphs. (Geological Association of Canada. Special paper no.2.) 64 refs. In sequence to No. 64681.

Illustrates characteristic Mississippian fossils of an area including Mackenzie District and Yukon and describes their stratigraphic position. Field methods used to recognize horizons within the Permo-Carboniferous systems are outlined. Most of the illus. specimens were collected by the author and are preserved in the Univ. of Alberta Dept. of Geology. Several are from the Yukon. Brachiopods and corals are the most abundant elements of the fauna. An extensive bibliography is included. (DGS.)

GEOLOGICAL ASSOCIATION OF CANADA, *see also Canadian mining and metallurgical bulletin.* Abstracts papers . . . 1962. No. 70598

71635. GEOLOGICAL SOCIETY OF AMERICA. Abstracts for 1961, abstracts of papers submitted for six meetings with which the Society was associated. N.Y., 1962. 322 p. *Its:* Special paper 68, replacing part 2 of its December *Bulletin,* which formerly contained abstracts of papers presented at the Society's meetings.

Includes abstracts of papers on Alaska, Kamchatka, northern Canada, and Greenland presented at meetings in: *San Diego, California* Mar. 26-31, 1961.

Hopkins, D.M. Asymmetrical valleys in Central Alaska, p.33.

Millett, M.T. Patterns of glacial behavior in coastal Alaska, p.44.

Stauder, William. S waves of some Kamchatka earthquakes, p.57.

College Alaska, Aug. 30-Sept. 1, 1961.

Chapman, R.M. Semiquantitative spectrographic analyses of sediment samples from streams in Alaska, p.112-13.

Church, R.E. Geology of the Fossil Creek area, White Mountains, Alaska, p.113.

Dodd, A.V. Mesoclimatic temperature differences in the Fort Greely area, Alaska, p.114.

Eklund, C.R. U.S. Army cold weather research, p.114.

Everett, K.R. Quantitative analysis of slope movement in northwestern Alaska, p.115.

Hopkins, D.M. Pleistocene stratigraphy and structure of Baldwin Peninsula, Kotzebue Sound, Alaska, p.116.

Hopkins, D.M. Asymmetrical valleys in Central Alaska, p.116.

Kumai, M. Electron-microscope studies of snow and fog nuclei, p.117.

Lachenbuch, A.H., *and* M.C. Brewer. Geothermal evidence for recent climatic change near Barrow, Alaska, p.117.

Marsden, M. New technique for echo sounding through ice, p.117-18.

Ostenso, N.A., *and others.* Geophysical studies of the Arctic Ocean Basin, p.118.

Rutter, N.W. Foliation of Gulkana Glacier, central Alaska Range, Alaska, p.119-20.

Sellmann, P.V. Preliminary report on the ablation and flow, Gulkana Glacier, central Alaska Range, Alaska, p.120.

Stanley, K.W. Coastal geomorphology of Alaska: a review, p.120-21.

Stanley, K.W. Geology of the Ahtell Creek molybdenum deposit: a study of paragenesis and zonation, p.121.

Walker, H.J. Winter water sources in the American Arctic, p.121.

Walker, H.J., *and* H.M. Morgan. Morphology of a Colville River delta lake, Alaska; a preliminary report, p.122.

Waller, R.M. Winter hydrology of a small arctic stream, p.122-23.

Waller, R.M., *and others*. Ground-water movement in the Fort Greely area, Alaska, p.123.
Cincinnatti, Ohio, Nov. 2-4, 1961.

Farrand, W.R. Isobases of maximum postglacial submergence in glaciated North America, p.175-76.

Knowles, D.M., *and others*. Example of superposed folds in Labrador, p.212.

Moore, G.W., *and* J.L. Giddings. Record of 5000 years of arctic wind direction recorded by Alaskan beach ridges, p.232.

Washburn, A.L. Instrumental observations of mass wasting in a permafrost environment, p.292.

Weeks, W.F. Salinity distribution in young sea ice, p.293. (DGS.)

71636. *GEOLOGIÏA I GEOFIZIKA.* Tektonicheskiĭ kollokvium v Institute geologii i geofiziki SO AN SSSR. (Geologiïa i geofizika, 1961, no.1, p.121-22.) Text in Russian. **Title tr.:** Tectonic colloquium at the Institute of Geology and Geophysics of the Siberian Division of the Academy of Sciences of the USSR.

Reports the meeting of Dec. 12, 1960, with account of a paper on results of gravimetric and magnetic investigations in Yakutia. The Kolyma medial massif, Indigirka-Kolyma geosynclinal zone and other areas are briefly mentioned noting depths of the Precambrian basement and Mohorovičić discontinuity. (DLC.)

71637. *GEOLOGIÏA NEFTI I GAZA.* Perspektivy neftegazonosnosti Zapadno-Sibirskoĭ nizmennosti i osnovnye napravleniïa geologorazvedochnykh rabot na neft' i gaz. (Geologiïa nefti i gaza, Nov. 1961. god 5, no.11, p.1-8, map.) Text in Russian. **Title tr.:** Oil and gas prospects of the West Siberian plain and main trends of geologic prospecting for oil and gas.

Outlines the geologic prerequisites for prospecting and development of oil in this wide area. A map for forecasting of oil and gas is presented and interpreted. In the Berezovo district during 1953-1961, ten gas deposits were discovered with 50 billion m^3 reserves. The 1960 discovery of the Shaim oil deposits in the Konda basin and Megion oil deposits near the Ob are noted. Other prospective areas such as Ust'-Port are mentioned. (DLC.)

GEORGE, D. J., *see Polar record*. News notes. 1961-62. No. 74847

71638. GEORGI, JOHANNES, 1890– Die Absolutwerte der 1929/31 in Grönland ausgeführten Strahlungsmessungen. (Polarforschung, Bd.5, 1960 *pub.* Nov. 1961. Jahrg. 30, Heft 1-2, p.58-63, table, graph, diagr.) 11 refs. Text in German. **Title tr.:** Absolute values of radiation measurements made in Greenland during 1929-1931.

Determines absolute values of solar and atmospheric radiation records obtained at three icecap stations during A. Wegener's last expedition (No. 3920.) (CaMAI.)

71639. GEPTNER, A. R. O vozraste ėrmanovskikh i ėnemtenskikh otlozheniĭ Zapadnoĭ Kamchatki. (Akademiïa nauk SSSR. Doklady, Dec. 11, 1961. t.141, no.5, p.1171-74.) 7 refs. Text in Russian. **Title tr.:** On the age of the Ermanovka and Enemten deposits of western Kamchatka.

Reviews recent work and own studies on these two series distributed in Tigil' River basin and elsewhere. Spore-pollen analyses of the continental Ermanovka deposits are outlined and interpreted. Repeated climatic fluctuations, more extreme than presumed, are identified. The age of the deposits should be determined more closely by further studies. (DLC.)

71640. GEPTNER, VLADIMIR GEORGIEVICH, 1901– , *and others*. Mlekopitaïushchie Sovetskogo Soïuza; tom pervyĭ: Parnokopytnye i neparnokopytnye. Moskva, Gos. izd-vo "Vysshaïa shkola", 1961. 776 p. illus., tables, maps. About 1200 refs. Text in Russian. *Other authors:* A.A. Nasimovich and A.G. Bannikov. **Title tr.:** The mammals of the Soviet Union; v.1: Even-toed and uneven-toed ungulates.

Presents the first of three volumes planned as a comprehensive study covering the mammals. Introductory sections deal with the taxonomy of mammals, of Artiodactyla, Perissodactyla, down to species. Each species (incl. reindeer p.76-172) is treated as to synonyms, diagnosis and description, including body measures and weight, in both sexes and young; fur and its changes, etc.; taxonomic position; geographic distribution, present and past; also conservation measures, geographic races, biology, numbers, habitats, food, behavior, seasonal and diurnal; also migrations; reproduction, growth and development; molt; enemies, parasites and diseases; competitors, population dynamics; economic value. Numerous drawings and photographs of the common forms, some in color, illustrate the text. Indexes of Russian and Latin names are appended; a preliminary outline of this monograph and review of earlier studies are included. (DLC.)

71641. GERASIMOV, INNOKENTIĬ PETROVICH. Sovetskaïa geograficheskaïa nauka i problemy preobrazovaniïa prirody. (Akademiïa nauk SSSR. Vestnik, Oct. 1961. god 31, no.10, p.36-42.) Text in Russian. **Title tr.:** Soviet geographical science and problems of the reconstruction of nature. Same material pub. in *Geografiïa v shkole*, Nov.-Dec. 1962, no.6, p.2-7.

Discusses possibilities for human interference in natural processes of water and heat distribution and exchange, citing several Soviet plans: redirecting the flow of the upper Pechora, Vychegda and other northern rivers to the Volga and Caspian Sea; redirecting part of the Ob-Irtysh waters toward the south; redistributing the snow cover by large-scale application of known methods of controlling snow accumulation; artificial melting of the perennial ice cover in the Arctic Basin; etc. (DLC.)

71642. GERASIMOV, MIKHAIL MIKHAĬLOVICH, 1907– Krugloe zhilishche stoïanki Mal'ta. (Akademiïa nauk SSSR. Institut arkheologii. Kratkie soobshcheniïa, 1961. vyp.82, p.128-34, illus.) Text in Russian. **Title tr.:** Round dwelling of the Mal'ta camp site.

Describes the excavation and reconstruction on 1:10 scale of a circular winter house discovered in 1957 (cf. No. 51149), one of the least disturbed dwellings of this late paleolithic camp site destroyed by a flood of the Belaya River. The slightly depressed dirt floor, 4 m. in diameter, had an off-center fire pit. The original incline of the wall and the emplacement of supports for the asymmetrical conic roofing are indicated by the angle and position of stone slabs. U-shaped antler stumps along the wall held down the hide covering. The

smoke hole probably served also as entrance. (DLC.)

GERASIMOV, MIKHAIL MIKHAĬLOVICH, 1907– ,
see also Lisitsyna, N.K. Arkheologicheskie issledovaniia . . . 1962. No. 73527

71643. GERASIMOV, VASILIĬ VASIL'EVICH, 1925– . Dinamika imitatsionnykh uslovnykh refleksov u nekotorykh morskikh ryb: treska, saĭda, piksha. (Akademiia nauk SSSR. Doklady 1962. t.146, no.6, p.1456-59, graphs, table.) 13 refs. Text in Russian. **Title tr.**: Dynamics of imitative conditioned reflexes in certain marine fish: cod, coalfish, haddock.

Study of dynamic-defensive responses to a light stimulus. One-two-yr. old fish were tested in pairs, of which one was conditioned by past experience ("active"), the other an imitator of the first. The differences in their responses to the stimulus, mutual relation, and "learning" of the imitator are evaluated and discussed. (DLC.)

71644. GERASIMOV, VASILIĬ VASIL'EVICH, 1925– Pishchevoe povedenie murmanskoĭ sel'di v stae i vne stai v akvarial'nykh usloviiakh. (Akademiia nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp.4(8), p.254-59, table.) 6 refs. Text in Russian. **Title tr.**: Feeding behavior of Murman herring in shoals and singly as studied in the aquarium.

Immature fish from feeding shoals died shortly when placed isolated in aquaria. Shoals placed in aquaria soon commenced feeding, the consumption of food per head increasing with the size of the school. (DLC.)

GERASIMOV, VASILIĬ VASIL'EVICH, 1925– ,
see also
Mironova, N.V., *& others*. Raspredelenie . . . ryb . . . 1957 g. 1962. No. 74052
Mironova, N.V., *& others*. Raspredelenie . . . ryb . . . 1958 g. 1962. No. 74053

71645. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and* **M. E. KAZAKOVA.** Betalomonosovit. (Akademiia nauk SSSR. Doklady, Jan. 21, 1962. t.142, no.3, p.670-73, tables, graphs.) 2 refs. Text in Russian. **Title tr.**: Beta-lomonosovite.

Describes the physical, optical and chemical properties of a new mineral, found 1938 in the Lovozero massif of Kola Peninsula. According to chemical composition and powder film it is close to lomonosovite. Comparison is made with lomonosovite and murmanite. Mode of occurrence and genesis of this mineral are outlined. (DLC.)

71646. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and* **V. G. KHITROV.** K geokhimii bora v nefelinovykh sienitakh Lovozerskogo massiva. (Geokhimiia, 1961, no.6, p.535-37, table.) 3 refs. Text in Russian. Summary in English. **Title tr.**: On the geochemistry of boron in nepheline syenites of the Lovozero massif.

Reports this Kola Peninsula massif developed by three intrusive phases, to have average boron content of 0.0015%, exceeding the value (0.0003%) obtained by Goldschmidt and Peterson for nepheline syenites from other areas. The boron concentration is higher in rocks which formed in the third intrusive phase. (DLC.)

71647. GERASIMOVSKIĬ, VASILIĬ IVANOVICH. Keldyshit, novyĭ mineral. (Akademiia nauk SSSR. Doklady, Feb.1, 1962. t.142, no.4, p.916-18, illus., tables.) Ref. Text in Russian. **Title tr.**: Keldyshite, a new mineral.

Describes a mineral found in the Lovozero massif of Kola Peninsula in 1958, and named in honor of M.V. Keldysh, President of the Academy of Sciences of the USSR. Its formula is $(Na, H)_2 ZrSi_2O_7$. Physical, optical and chemical properties and conditions of occurrence are reported. (DLC.)

71648. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and* **V. S. RASSKAZOVA.** O rasprostranenii talliia v nefelinovykh sienitakh Lovozerskogo massiva, Kol'skiĭ poluostrov. (Geokhimiia, 1962, no.3, p.243-48, tables.) 5 refs. Text in Russian. Summary in English. **Title tr.**: Distribution of thallium in nepheline-syenites of the Lovozero massif, Kola Peninsula.

Reports chemical analyses for determination of the thallium concentration. The massif was built in four phases and about 5% of the rocks belong to the first, 77% to the second, 18 to the third and 0.01% to the fourth phase. The thallium content averages $.82 \cdot 10^{-4}$% for the entire massif, highest in the first phase and lowest in the third. The rubidium-thallium ratio increases from first to third phase. (DLC.)

71649. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and others*. O tsirkonievo-gafnievom otnoshenii v mineralakh i porodakh Lovozerskogo massiva. (Geokhimiia, 1962, no.6, p.501-507, tables.) 13 refs. Text in Russian. Summary in English. *Other authors:* A.M. Tuzova *and* I.D. Shevaleevskiĭ. **Title tr.**: On the zirconium-hafnium ratio in minerals and rocks of the Lovozero massif.

Reports the average value of this ratio for the entire massif as about 47. The Lovozero intrusion formed in three phases, and the value of the ZrO_2/HfO_2 ratio ranges 40-60 from the first to the third; the highest ratio is found in lovozerite, catapleiite and beliankinite minerals. (DLC.)

71650. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and* **A. I. POLIAKOV.** Sfen-amfibolovyĭ iiolit-mel'teigit iz Lovozerskogo massiva. (Akademiia nauk SSSR. Doklady, Apr. 11, 1962. v.143, no.5, p.1179-81, tables, plate.) 4 refs. Text in Russian. **Title tr.**: Sphene-amphibole ijolite-melteigite from the Lovozero massif.

Describes the chemical-mineralogic composition and conditions of occurrence of these igneous rocks widely distributed in the Lovozero alkaline massif of Kola Peninsula. They belong to the ijolite-melteigite group, rich in Mg, Ca, Ti, Fe" and P. They occurred through metasomatic alteration. (DLC.)

71651. GERASIMOVSKIĬ, VASILIĬ IVANOVICH, *and others*. Stroenie differentsirovannogo kompleksa porod luiavritov-foiiaitov-urtitov Lovozerskogo massiva. (Akademiia nauk SSSR. Doklady, Jan. 21, 1961. t.136, no.3, p.700-703, tables.) Text in Russian. *Other authors:* A.I. Poliakov *and* IA. M. Feigin. **Title tr.**: Structure of the differentiated rock complex: lujavrites-foyaites-urtites of the Lovozero massif.

The Lovozero alkaline massif, about 650 km² in area, was built by several intrusive phases; the second, and largest, consists of lujavrites, foyaites and urtites, which make up 80% of the enitre massif. Structurally this phase is divided verti-

cally into three zones, each of which is characterized, the percentage distribution of lujavrites, foyaites and urtites, thickness, and other features noted. (DLC.)

71652. GERBEEV, IU. O koordinatsii raboty v Institute natsional'nykh shkol. (Russkiĭ iazyk v natsional'noĭ shkole, 1962, no.4 p.86-88.) Text in Russian. **Title tr.:** Work coordination in the Institute of Nationalities Schools.

States aims and scope of Institute, coordination work among various pedagogical institutions, new instruction methods, etc. A branch of the Institute has been opened in Yakutsk. (DLC.)

71653. GERDEL, ROBERT WALLACE, 1901– . A climatological study of the Greenland Ice Sheet. *(In:* International Geographical Congress 1960. Physical geography . . . 1961. p.84-106, maps, graphs, tables.) 21 refs.

Summarizes meteorological observations and temperature profiles derived from stratigraphic studies on the Inland Ice, mainly SIPRE sources. Discussion of such features as melting of snow, warming trends in Greenland, annual accumulation, precipitation trends, etc. is given. Unique relationships are noted, including: revision of topographic contours indicated by wind rose patterns for several Inland Ice stations; periods of high and low precipitation within the past 30 years; occurrence of blowing snow, whiteout and fogs at Site 2 are each related to a definite shift in wind direction; the small net annual radiation balance contributes to the perpetuation of the Inland Ice. (DGS.)

71654. GERDEL, ROBERT WALLACE, 1901– , *and* **G. H. STROM.** Scale model simulation of a blowing snow environment. (Institute of Environmental Sciences. Proceedings 1961, p.53-63, illus., diagrs.) 11 refs.

Presents preliminary results of wind tunnel tests using borax with 1:10 scale models of the structures and layout at a DEW Line facility on the South Greenland icecap. Comparison is made with actual drift accumulation patterns at the site by diagrams and photographs. The pattern developed in the synthesized environment indicates that the accumulation in the field maintains the same general form as established naturally during the first ten months. Tests made for the Antarctic construction program at the Marie Byrd facility are also illustrated. (DWB.)

GERDEL, ROBERT WALLACE, 1901– , *see also* IUGG . . . Snow & Ice Comm. 1961. No. 72396

71655. GERKE, ALEKSEĬ ALEKSANDROVICH. Foraminifery permskikh, triasovykh i leĭasovykh otlozheniĭ neftenosnykh raĭonov severa TSentral'noĭ Sibiri. Leningrad, Gostoptekhizdat, 1961. 520 p. tables incl. fold., 122 plates. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy, t.120.) Approx. 250 refs. Text in Russian. **Title tr.:** Foraminifers of Permian, Triassic and Lias deposits in oil-bearing regions of north-central Siberia.

Presents an extensive study on the upper Paleozoic and lower Mesozoic foraminifers collected in the Anabar-Khatanga interfluve, Olenek region, Taymyr Peninsula, on the lower courses of the Yenisey and Lena, and elsewhere. The composition and distribution of Permian, Triassic and Lias foraminifers are treated and their complexes listed according to horizons. In the biostratigraphic part, 19 genera and over a hundred species and varieties are described; some 230 species and more than 30 varieties recorded in the atlas and paleontologic tables. Systematic description is given of *Saccammina, Hyperammina, Reophax, Ammodiscus, Cornuspira* and other genera. Many species are found new. (DLC.)

71656. GERKE, ALEKSEĬ ALEKSANDROVICH. Frondikuliarii iz permskikh, triasovykh i leĭasovykh otlozheniĭ severa TSentral'noĭ Sibiri. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.127, Paleontologiia i biostratigrafiia, vyp.3, p.97-175.) 55 refs. Text in Russian. **Title tr.:** Frondicularian foraminifers from Permian, Triassic and Lias deposits in north-central Siberia.

Presents systematic description of 42 species and 7 varieties collected in the Nordvik region, Anabar-Khatanga interfluve and other arctic areas of central Siberia. This paper is supplementary to that cited *supra,* where illus. for this paper appear. (DLC.)

71657. GERKE, ALEKSEĬ ALEKSANDROVICH. Rektoglanduliny iz permskikh i nizhnemezozoĭskikh otlozheniĭ severa TSentral'noĭ Sibiri. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik statei po paleontologii i biostratigrafii, 1961. vyp.23, p.5-34, plates, tables.) 36 refs. Text in Russian. **Title tr.:** Permian and Lower Mesozoic *Rectoglandulina* in north-central Siberia.

Presents taxonomic description from Permian, Triassic and Jurassic deposits of the Nordvik region, including *R. guttula, R. borealis, R. lubrica,* and *R. pseudovulgata* n. spp. (DLC.)

GERKE, ALEKSEĬ ALEKSANDROVICH. *see also* Shvedov, N.A., & *others.* Novaia stratigraficheskaia skhema . . . 1961. No. 75636

71658. GERLING, È. K., *and others.* Opredelenie vozrasta osnovnykh porod po K/Ar metodu. (Geokhimiia, 1962, no.11, p.931-38, table, diagrs.) 8 refs. Text in Russian. Summary in English. *Other authors:* IU.A. Shukoliukov, T.V. Kol'tsova, I.I. Matveeva, *and* S.Z. IAkovleva. **Title tr.:** Age determination of basic rocks by the potassium-argon method.

Reports results on 34 samples of basic and ultrabasic rocks of Transbaykal, Karelia and Kola Peninsula. For basic rocks of the latter two areas, age values from $1580 \cdot 10^6$ to $6500 \cdot 10^6$ yrs. were obtained. The most ancient-age figures, it is suggested, are related to xenoliths of the subcrustal matter of the earth. (DLC.)

GERLING, È. K., *see aslo* Polkanov, A.A., & È.K. Gerling. Geokhronologiia . . . 1961. No. 74857

GERLOFF, ROBERT K., *see*

Reinhard, K.R., & R.K. Gerloff. Immunity polio. Alaska 2: serol. survey. 1960. No. 75102

Reinhard, K.R., & *others.* Immunity polio Alaska 3: antibodies. 1960. No. 75103

71659. GERMAN, IU., *and* K. RUILIA. Vozrozhdennoe plemia. (Fizkul'tura i sport, Apr. 1961. god 31, no.4, p.8-9, illus.) Text in Russian. **Title tr.:** Tribe reborn.

Reports on a visit to Agza kolkhoz of Udegeets

in Ussuri Province: its agriculture, dairy and mink farming; its modern housing replacing old birch bark huts, its school, etc. (DLC.)

71660. GERNGARDT, N. Ė. Leĭkoksen v peschanikakh-kollektorakh neftīanykh mestorozhdeniĭ ĭŪzhnogo Timana. (Izvestiīa vysshikh uchebnykh zavedeniĭ. Geologiīa i razvedka, June 1962. god 5, no.6, p.50-55, illus., tables.) 3 refs. Text in Russian. **Title tr.:** Leucoxene in sandstone - reservoirs of the southern Timan oil deposits.

Describes accessory leucoxene from Eifelian (Devonian) deposits. Two varieties are distinguished according to color, form, grain size, physical properties, and chemical composition. The origin of leucoxene is discussed, there are considered to be two genetic types: metamorphic and allothogenic. (DLC.)

71661. GERSHANOVICH, D. E. Morskie geologicheskie issledovaniīa v rybopromyslovykh raĭonakh Beringova moriā. (Akademiīa nauk SSSR. Okeanograficheskaīa komissiīa. Biūlleten' 1961, no.8, p.46-48.) Text in Russian. **Title tr.:** A marine geologic investigation in the fisheries regions of the Bering Sea.

Reports a summer 1958 study of bottom relief and sediments in the shelf and continental slopes zones of the Bering Sea, on the expeditionary ship *Zhemchug* using an "Okean-50" bottom-grab. From Anadyr Bay to the Pribilofs and in some central parts of the sea, 231 oceanographic stations were completed, 172 grab samples and 62 cores collected. Relief and bottom sediments are outlined. (DLC.)

71662. GERSHANOVICH, D. E. Novye dannye o sovremennykh otlozheniīakh Beringova moriā. (Moskva. Vsesoīūznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziāĭstva i okeanografii. Trudy 1962. t.46, p.128-64, illus., tables, maps.) 36 refs. Text in Russian. **Title tr.:** New data on recent sediments on the Bering Sea.

Reports a survey made in 1958-1960 within the framework of the IGY and IGC, with an introductory review on earlier work. Some 500 bottom stations were made, mainly in the central, eastern and southern parts of the sea, some cores reaching 6 m. in length. Consecutive sections deal with the geological history and configuration of the bottom, hydrography, plankton, benthos, etc. Main types of sediments, their physical and chemical components are dealt with, as are their origin, granulometric characteristics, and distribution of main chemical components, including iron, manganese, authigenic SiO_2, calcium carbonate and organic carbon. (DLC.)

71663. GERSHANOVICH, D. E. Okeanologicheskiĭ reĭs sudna "Pervenets" v Beringovom more i zaliv Aliāska letom 1960 g. (Okeanologiīa, 1961. t.1, vyp.2, p.335-38, illus.) Text in Russian. **Title tr.:** Oceanological trip of the vessel *Pervenetš* to Bering Sea and Gulf of Alaska in summer 1960.

Reports the 13,774 mile cruise in June 25–Oct. 23, of the 330 t. trawler *Pervenetš*, a research vessel of the Pacific Research Institute of Fisheries and Oceanology (TINRO). Bathymetric investigations, bottom sediment, water chemistry, plankton, benthos, etc. studies were made in the southeastern part, Aleutian waters, and Gulf of Alaska. The results are briefly outlined; discovery of a canyon in the continental slope west of St. Paul Island is noted. The cruise headed by V.V. Natarov continued and extended investigations of 1958 and 1959. (DLC.)

71664. GERSHANOVICH, D. E. Rel'ef i sovremennye osadki beringovo morskogo shel'fa. (Moskva. Vsesoīūznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziāĭstva i okeanografii. Trudy 1962. t.46, p.164-85, illus., tables, maps.) 30 refs. Text in Russian. **Title tr.:** Relief and recent sediments of the Bering Sea shelf.

Reports a study made in 1958-1960. Consecutive sections deal with the nature of continental shelves; epicontinental and geosynclinal parts of the Bering Sea shelf; general data on its morphology, including areas of different depths and their genesis; relief of the epicontinental zone and its recent sediments; relief and sediments of the geosynclinal zone. Fishing potential of the area is discussed and considered promising for trawling. (DLC.)

71665. GERSHKOVICH, S. M., *and others.* Nekotorye kliniko-rentgenologicheskie nabliūdeniīa nad bol'nymi rakhitom det'mi v Zapoliār'e. (Pediatriīa, Mar. 1961. god 40, no.3, p.71-73.) 8 refs. Text in Russian. *Other authors:* V.IA. Belogorskiĭ *and* R.A. Moskaleva. **Title tr.:** Some clinical-roentgenological observations in the Arctic on children with rickets.

Reports a study of 335 infants, 1-12 months old, in Murmansk: the frequency of rickets, especially in its mild form, and its early appearance, viz at the age of 1-3 months. Prophylaxis, especially UV treatment of pregnant mothers and of infants, is urged. (DNLM.)

71666. GERSHTEĬN, IŪ. S. Opyt montazha glavnykh turbogeneratorov na ledokole "Lenin." (Sudostroenie, 1961. god 27, no.8, p.56-58, diagr.) Text in Russian. **Title tr.:** Installation of the main turbogenerators on the icebreaker *Lenin.*

Discusses the suggested and the actual sequence of hoisting and installation of various components of the turbogenerators. Problems of stabilizing machinery mounted on a deformed surface are also noted. (DLC.)

71667. GERSON, N. C. Radio wave and alternate communications in the Arctic. (Electrical engineering, May 1962. v.81, no.5, p.364-66, chart, tables.) Paper presented at a meeting of the American Institute of Electrical Engineers in New York, Jan. 28 - Feb. 2, 1962; reprinted in: *Arctic,* Sept. 1962, v.15, no.3, p.224-28.

Discusses communication circuits in this region: major recent North American Arctic networks; relative performance of six circuit types, problems, and possible future networks. Submarine cable and tropospheric scatter are the most effective methods of communication for the Arctic. A submarine cable linking North America and Europe via Thule, Greenland, is suggested. (DLC.)

GERSON, N. C., *see also* NATO. Radio wave absorption . . . 1962. No. 74396

71668. GERTSENSHTEĬN, R. S. Sokhraniāt' i sovershenstvovat' pechorskiĭ skot. (Sel'skoe khoziāĭstvo Severo-Zapadnoĭ zony, Oct. 1961. god 4, no.10, p.64-65.) Text in Russian. **Title tr.:** To maintain and improve the Pechora breed of cattle.

Discusses the qualities of Pechora and Kholmogory cattle under Komi ASSR conditions: the milk production and fat content are higher from the Pechora and the Pechora-Kholmogory hybrid than from the pure Kholmogory. Planned selection is required in cattle breeding in this republic. (DLC.)

71669. GESSAIN, ROBERT, 1907– . La dentition des Eskimo d'Angmassalik; genetique, croissance et pathologie. (Société d'Anthropologie de Paris. Bulletin 1959. t.10, ser. 10, no.4, p.364-96, illus., tables.) 29 refs. Text in French. **Title tr.:** The dentition of the Angmagssalik Eskimos; genetics, growth and pathology.

Reports a study made in 1934-1936 of the greater part of this East Greenland population of 850, with both milk teeth and permanent teeth considered. Congenital absence of incisors and of wisdom teeth, eruption of permanent teeth, age at eruption, order of eruption, and articulation are reported. Abrasion of front teeth and molars, caries in men and women, and its distribution in the population are described and discussed. Traits peculiar to Eskimos as to congenital absence of teeth of the Carabelli tubercle, age and order of eruption, and abrasion, are noted. (DLC.)

71670. GESSAIN, ROBERT, 1907– . Dermatoglyphes digitaux et palmaires des Eskimo d'Angmassalik. (Société d'Anthropologie de Paris. Bulletin 1959. t.10, ser.10, no.3, p.233-50, illus., tables.) 15 refs. Text in French. **Title tr.:** Digital and palmar dermatoglyphics of the Angmagssalik Eskimos.

Study of imprints taken in summer 1936 from 39 males and 28 females. Their heterogeneous nature is stressed: their digital papillary ridges show a high degree of Mongoloid traits whilst the palmar ridges are little different from those of the white man. (DLC.)

GESSAIN, ROBERT, *see also* Oschinsky, L., & R. Smithurst. Odontology . . . E. Can. Eskimos. 1962. No. 74549

71671. GESSE, V. N. Novye dannye po stratigrafii drevnikh tolshch Lemvinskoĭ strukturno-fatsial'noĭ zony. (Materialy po geologii i poleznym iskopaemym Severo-Vostoka Evropeĭskoĭ chasti SSSR. Sbornik statei 1962. vyp.2, p.3-6.) Text in Russian. **Title tr.:** New data on the stratigraphy of old strata of the Lemva structural-facies zone.

Reports a geologic study in the Polar Ural in 1957-1959. The Ordovician "phyllite" or Grubeinskaya series is analyzed and the sections are described. A new stratigraphic division of these Ordovician deposits is offered; finds of Ordovician brachiopods and other fauna are noted. (DLC.)

71672. GESSE, V. N. Predvaritel'nye rezul'taty geologo-s"emochnykh rabot v basseine r. Pagi; Pripolyarnyĭ Ural. *(In:* Materialy po geologii . . . Evropeĭskoĭ chasti SSSR, sbornik statei 1961, vyp.1, p.61-65.) 6 refs. Text in Russian. **Title tr.:** Preliminary results of geologic mapping in the Paga River basin; Subpolar Ural.

Reviews the work on the western slope of the Ural at approx. 66°15′N. between the Paga and the Kharuta. The stratigraphic division of Paleozoic deposits proposed by K.G. Voĭnovskiĭ-Kriger (No. 69122) is considered misleading and a new division is offered. In the Kok-Pela series occurrence of copper mineralization is noted and further studies are recommended. (DLC.)

71673. GIANT YELLOWKNIFE GOLD MINES LTD. Annual report, 20th, for the year ended Dec. 31, 1962. Toronto, 1962. 15 p. illus., map.

Contains financial statements, operations report and summary of operating statistics. Gross was $9,000,000, net $4,000,000 on 253,189 oz. of gold sold at $37.56/oz. Ore reserves are estimated at 2,565,000 tons in the Yellowknife area of Mackenzie District; a new property has been acquired at Contwoyto Lake. (CaONA.)

71674. GIBBON, MARY. Trapper's wife. (Beaver, spring 1962, outfit 292, p.38-42, illus.)

Describes the life of a Cree Indian woman at Moose Factory, northern Ontario. Her summer home a government-built frame house and her log cabin in the bush for the winter, epitomize the transition from primitive to modern life. She prefers life in the bush but prepares her children for future change. (DI.)

71675. GIBSON, A. H. Root temperature and symbiotic nitrogen fixation. (Nature, Sept. 9, 1961. v.191, no.4793, p.1080-81, illus., tables.) 5 refs.

Account of controlled experiments with two strains of clover and two strains of *Rhizobium trifolii.* The potential of the legume-rhizobia symbiosis was found to depend on the strains of the host and bacterium and on the root temperature. At low (5°C.) and high temperatures, total plant nitrogen was at a minimum. (DLC.)

GIBSON, HARRY V., *see* Reinhard, K.R., & H.V. Gibson. Immunity polio Alaska 1: incidence. 1960. No. 75101

71676. GIDDINGS, J. C., *and* **E. LaCHAPELLE.** Diffusion theory applied to radiant energy distribution and albedo of snow. (Journal of geophysical research, Jan. 1961. v.66, no.1, p.181-89, tables, graphs, diagr.) 5 refs.

The penetration of radiation into snow is assumed to follow Fick's second law of diffusion with a term for simultaneous absorption. From this, the distribution of radiant energy is deduced in a deep homogeneous snow cover, a laminated snow cover, and one with an absorbing surface beneath. An equation for albedo is derived. The penetration phenomenon is then analyzed in terms of the physical processes occurring and formulated as a random walk process. After a correction is made for nondiffuse radiation, more accurate equations are obtained for energy distribution and albedo. The results are applied to the theory of radiation measurements in snow; good agreement is obtained between theory and field data.–From authors' abstract. (DLC.)

71677. GIDDINGS, J.C., *and* **E. LaCHAPELLE.** The formation rate of depth hoar. (Journal of geophysical research, June 1962. v.67, no.6, p.2377-83, table, graph.) 8 refs.

Natural snow covers are recrystallized to depth hoar through sublimation. The internal water-vapor flux responsible for this recrystallization depends on temperature, temperature gradient, ambient atmospheric pressure, and snow structure. If a model for temperature distribution between ice framework and pore volume is assumed for low-density snow, this flux can be calculated in terms of the diffusion process and its relation to the

climatic variables quantitatively demonstrated. Observed depth-hoar-formation times agree with the calculated flux values and show that depth hoar forms as a consequence of internal mass translation resulting from the vapor flux.–From authors' abstract. (DLC.)

71678. GIDDINGS, JAMES LOUIS, 1909– , *and* **H. G. BANDI.** Archäologische Strandwalluntersuchungen auf Kap Krusenstern, Nordwest-Alaska. (International Congress of Americanists, 34th, *Vienna,* 1960. Proceedings *pub.* 1962. p. 292-93.) Text in German. **Title tr.:** Archeological investigation of beach ridges on Cape Krusenstern, northwest Alaska.

Presents some C-14 datings for several Eskimo dwellings on beach ridge formations, discovered by the senior author in 1958 and explored in 1959. They include houses of Old-Kotzebue, West Thule, Ipiutak, Norton, and Choris types; also one winter-house of unknown culture-type with a mean dating of 550 ± 120 B.C. The oldest occupation of this zone may correspond to the Denbigh Flint Complex, i.e. before 2,000 B.C. (DSI.)

71679. GIDDINGS, JAMES LOUIS, 1909– . Cultural continuities of Eskimos. (American antiquity, Oct. 1961. v.27, no.2, p.155-73, illus., table.) 69 refs. Presented in symposium *Cultural and biological continuities in Eskimos and Indians,* the Society for American Archeology meeting, Columbus, Ohio, 1961.

Nine culture horizons are recognized for the Bering Strait area, and two regional traditions, one: Palisades I, Palisades II to Old Whaling culture; the other: Denbigh Flint Complex, Battle Rock, Ipiutak to Birnirk. The latter parallels in its later period the Okvik to Birnirk sequences of Chukotka. The artifacts and material culture of the nine horizons are described and their comparative chronology discussed. (DSI.)

71680. GIDDINGS, JAMES LOUIS, 1909– . First traces of man in the Arctic. (Natural history, Nov. 1960. v.69, no.9, p.10-19, illus., diagrs., map.)

Discusses the advantages of "beach ridge dating," a method of determining arctic cultural sequences based on the natural seriation of ocean beach crests raised by high seas through the centuries. The excavations at Shesualek and other beach ridges on Kotzebue Sound in 1958-1959 revealed cultural sequences from Denbigh Flint Complex, approx. 2,500 B.C. to recent. House pits, hearths remains, and artifacts belonging to different culture periods are described. (DLC.)

71681. GIDDINGS, JAMES LOUIS, 1909– . Onion Portage and other flint sites of the Kobuk River. (Arctic anthropology, 1962. v.1, no.1, p.6-27, illus. on 6 plates, diagr., cross-sections, maps.) 19 refs.

Describes the lithic inventory (about 2,000 B.C. to recent) excavated in 1941 and 1961 at the naturally stratified *Patitakh* or Onion Portage site on the middle Kobuk River, approx. 67°N. 158°W. in northwestern Alaska. Fluctuations in degree of coastal influence are apparent when artifact forms in different culture horizons of this site are compared with coeval manifestations of Kiana Beach Remnants of the lower Kobuk, Little Noatak and other Kotzebue Sound sites. Several microblades and tongue-shaped cores discovered at this site in 1941 in an approx. 1,000 A.D. horizon may be displaced objects from an older local Denbigh-like culture. Onion Portage is considered ideal for testing correlations between dates obtained by radiocarbon analysis and measures of the hydration layer of obsidian. The possibility that Athapaskan culture preceded Eskimoan in the Arctic is suggested. (DSI.)

71682. GIDDINGS, JAMES LOUIS, 1909– . Seven discoveries of Bering Strait. (American Philosophical Society. Proceedings, Apr. 30, 1962. v.106, no.2, p.89-93.) Paper read before the Society on Nov. 10, 1960.

Outlines the various discoveries of this area since 1648, by Dezhnev, Cook, whalers, gold seekers, etc., and elaborates on the archeological discovery since 1939. Findings on the coast (described especially at Cape Krusenstern, north of Kotzebue Sound) and inland to Yukon Territory indicate continuous occupation of Alaska since the time of the Denbigh Flint Complex, five-six thousand years ago. It is suggested that the later peopling of the Americas came from this population rather than from successive migrations across the Strait from Asia. (DGS.)

GIDDINGS, JAMES LOUIS, 1909– . *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

GILBERT, J. W., *see* Ebert, P.A., & *others.* Physiologic changes . . . 1961. No. 71186

71683. GILENKO, A. P'at'sot p'atyĭ idet v Kuĭumbu. (Sibirskie ogni, Dec. 1962. god 41, no.12, p.94-109.) Text in Russian. **Title tr.:** No. 505 sails to Kuyumba.

Describes the successful trial run, in May 1962, of the 500 t. Finnish-built refrigerator ship *Refrizherator-505* from Yeniseysk down the Yenisey and up the Podkamennaya Tunguska River. The vessel called at Chernyy Ostrov (to resupply a fishing and hunting kolkhoz of Yeniseians) and at several points in the Evenki National District. On the return trip to Krasnoyarsk, fresh-frozen fish was taken aboard from depots along both rivers. Navigation hazards in the Tunguska narrows and ice-clogged channels, other freighters and tankers met with, supply problems due to the short navigation season, etc. are noted. Economic and cultural progress of the aboriginal Yeniseian and Tungus population is indicated. (DLC.)

71684. GILHOOLY, URSULA. Oranges and Eskimos. (Canadian geographical journal, Dec. 1962. v.65, no.6, p.210-215, illus.)

Describes the living arrangements and experiences of Robert Orange and family since fall 1961 at Frobisher Bay on Baffin Island. Housing, food, his duties as regional administrator for the Eastern Arctic, social life, town facilities, contacts with Eskimos, etc. are noted. (DGS.)

GILĬAROV, M. S., *see* Pacific Science Congress. 1961. No. 74619

71685. GILL, C. B. Manitoba's northland rediscovered. (Canadian geographical journal, Nov.

1961. v.63, no.5, p.148-57, illus., maps.)

Reviews the northern Manitoba fur trade since 1670; and discusses twentieth century developments and potentialities in metal mining, forestry, water power, etc. Difficulties of finding and extracting minerals in the glaciated Precambrian Shield precluded earlier exploitation, but this industry now has good prospects. The Hudson Bay Railway and port of Churchill, originally built for grain shipments, have furthered resource development of the region. (DGS.)

71686. GILL, EDWARD A. Some photogrammetric applications to geophysical surveying (Photogrammetric engineering, Mar. 1962. v.28, no.1, p.163-67, illus., maps.)

Describes the use of photogrammetry as an aid in on- and off-shore oil prospecting in Southeast Alaska. The Kelsh Plotter has been widely employed to locate the position of seismic shot points in air photographs, and to locate positions for shore-based radar beacons required in off-shore surveys. Procedures are explained. (DLC.)

71687. GILLBRICHT, MAX. The distribution of microplankton and organic matter in the northern North Atlantic during late winter and late summer 1958. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v.149, Contributions to Special IGY Meeting 1959, p.189-93, illus.) 4 refs.

Reports study of microplankton from the upper 500 m. and of oxidizable organic matter from all depths of the Irminger Sea and southward. A great difference between winter and summer was noted in the Irminger Sea, and high phytoplankton values near Kap Farvel in the summer. The plankton/organic matter relation is also analyzed. (DI.)

71688. GILLEN, IAN. Hi folks!, letters from a student-labourer in Wood Buffalo Park. (North, July-Aug. 1962. v.9, no.4, p.37-43, illus.)

Records experiences and observations, during summer 1961 in Mackenzie District: landscape, weather, wildlife, etc.; also work at the fish hatchery at Pine Lake. (CaMAI.)

GILLESPIE, B. W., *see* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

71689. GILLIAT, ROSEMARY. Eskimo children. (Geographical magazine, Dec. 1961. v.34, no.8, p.462-68, illus. incl. 5 col., map.)

Observations and photographs of Eskimo life at Cape Dorset of Baffin Island, in summer 1961, with comments on child-training methods and the close family ties. (DLC.)

71690. GILLIAT, ROSEMARY, *and* **W. A. LARMOUR.** The shaggy toys of Port Burwell. (Beaver, winter 1961. outfit 292, p.28-33, illus.)

Describes a cooperative handicraft project by Eskimo women in this Labrador community. Sealskins from local hunters, cured in southern Canada, are used for making rugs and stuffed toys representing seabirds, etc. Those made in 1960 were exhibited at the Design Centre in Ottawa and sold through the Canadian Handicrafts Guild. (DI.)

GILLSATER, SVEN, *see* Klineburger, C. Trophy walrus. 1962. No. 72853

71691. GIMMEL'FARB, BORIS MIKHAĬLOVICH. Agronomicheskie rudy i problemy ikh geologicheskogo izucheniĭa. (Akademiĭa nauk SSSR. Vestnik, Oct. 1962. god 32, no.10, p.46-54.) Text in Russian. **Title tr.:** Agrochemical ores and problems of their geological exploration.

Notes three kinds of chemical fertilizers, phosphatic, potassic and nitric, the first two derived from these ores. The main deposits, their exploration problems and prospects for finding more deposits are discussed. Khibiny apatite on Kola Peninsula is unique in importance, and production is to be accelerated. New apatite in northern Khibiny Tundra are mentioned. (DLC.)

71692. GIMPEL, CHARLES. Cape Dorset. (Beaver, spring 1962. outfit 292, p.28-31, illus.)

Contains six photographs taken in May 1961, with descriptive captions, depicting this Eskimo community on Baffin Island. (DI.)

GINSBURG, CARL, *see* Okun', S.B. Rossiĭsko-Amerikanskaĭa kompaniĭa. 1939, 1951. No. 74505

71693. GINZBURG, I. V. Gastingsit zony shchelochno-granitnogo metasomatoza i izomorfizm v monoklinnykh amfibolakh. (Akademiĭa nauk SSSR. Mineralogicheskiĭ muzeĭ. Trudy 1961. vyp.11, p.13-23, illus., tables.) 27 refs. Text in Russian. **Title tr.:** Hastingsite of the alkaline-granite metasomatic zone and isomorphism in monoclinic amphiboles.

Presents a mineralogic description of hastingsite, a typomorphic mineral of exocontact origin in the alkaline granites of Kola Peninsula. Optical and crystallochemical properties of two hastingsites comprising a group of amphiboles are analyzed; results of chemical analyses are tabulated. Isomorphous replacement in monoclinic amphiboles is discussed. (DLC.)

71694. GINZBURG, I. V., *and others.* Kolichestvenno-mineral'nyĭ sostav granitoidov i ego znachenie dliā voprosov petrologii i nomenklatury; na primerakh Kol'skogo poluostrova, Srednei Azii i Kazakhstana. (Sovetskaĭa geologiĭa, Mar. 1962, no.3, p.67-82, table, diagrs.) 29 refs. Text in Russian. *Other authors:* S.V. Efremova, I.M. Volovikova, *and* O.P. Eliseeva. **Title tr.:** Quantitative mineral composition of granitoids and its importance for problems of petrology and nomenclature, as exemplified by Kola Peninsula, Central Asia, and Kazakhstan.

Discusses the classification and nomenclature of various types of granitoids based on their quantitative mineralogic composition. 1211 thin-section calculations were made and the modal ratio of quartz, plagioclase and potassium feldspar determined and plotted on triangle diagrams. About 452 calculations of various granitic rocks are made for the Kola Peninsula. Patterns of alteration in granitoid composition are discussed. (DLC.)

71695. GINZBURG, I. V., *and* **A. I. GORSHKOV.** O grafite kianitovykh slantsev Keĭv; Kol'skiĭ poluostrov. (Akademiĭa nauk SSSR. Mineralogicheskiĭ muzeĭ. Trudy 1961. vyp.12, p.171-76, illus., table, diagr.) 12 refs. Text in Russian. **Title tr.:** On graphite in the Keyvy cyanite schists, Kola Peninsula.

Reports study of cyanites and their carbon-

bearing matter, with conclusion that carbon in cyanites is represented by graphite. Powder analyses and electron microscopic photos are presented, and the occurrence of graphite is described. In the cyanite schists of Keyvy, it is a chemically inert mineral and behaves in same manner as in crystalline schists of the Aldan and other regions. (DLC.)

GIOVANDO, L. F., *see* Dodimead, A.J., & *others*. Oceanographic data record . . . 1960. No. 71053

71696. GIPPENREĬTER, V. Reportazh s ognedyshashchego vulkana. (Sovetskiĭ soĭuz, 1962, no.2 (144), p.41-43, illus. incl. col.) Text in Russian. **Title tr.**: Reportage from an active volcano.

Photo-sketch of eruptive Klyuchevskaya, its ascent, camping on the crater edge, impressions of the trip. (DLC.)

71697. GIRDĬUK, G. V. Nekotorye rezul'taty nabliūdeniĭ za effektivnym izlucheniem i al'bedo v Norvezhskom more. (Mezhvedomstvennoe soveshchanie po aktinometrii i atmosfernoĭ optike. 2d, *Leningrad*, 1959, *pub.* 1961. Aktinometriīa i atmosfernaīa optika, p.94-101, tables, graphs.) 8 refs. Text in Russian. **Title tr.**: Some observation results on effective radiation and albedo in the Norwegian Sea.

Reports actinometric observations carried out by the expeditionary vessels *Sevastopol'* and *Poliārnik* at the end of 1957 and beginning of 1958 in the northern part of this sea. During the polar night, there were no daily changes in meteorological elements and effective radiation. The monthly heat loss from the sea amounts to 3.9 Kcal./cm². Comparisons are made with data derived from calculation. The role of cloudiness is taken into consideration. Albedo observations are also reported; values at the sea surface vary significantly; they depend on the angle of the solar rays. The albedo of the Norwegian Sea is compared with that of the White and Baltic Seas. (DLC.)

71698. GIRS, ALEKSANDR ALEKSANDROVICH, *and* N. F. POLYSALOVA. Osobennosti raspredeleniīa anomaliĭ davleniīa v Arktike v razlichnye tsirkuliātsionnye ėpokhi. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.240, Voprosy dolgosrochnykh prognozov pogody . . . p.147-52, maps, graphs.) 7 refs. Text in Russian. **Title tr.**: Characteristic features in distribution of pressure anomalies in the Arctic during different circulation epochs.

Studies the distribution of anomalous atmospheric pressure in this area in 57 periods of October during 1900-1957. Probability maps of anomalous positive pressures, maps of probable values of pressures, and of distribution of the mean monthly pressure during the investigated epochs, are presented. It is concluded that the anomalous pressure distribution in October depends on the overall pressure background in the Arctic during the epoch studied. This finding should be taken into account when a circulation homologue is selected and the weather forecast prepared for this month. (CaMAI.)

71699. GIRS, ALEKSANDR ALEKSANDROVICH. Prognoz anomal'nogo razvitiīa raznovidnosteĭ form atmosfernoĭ tsirkuliātsii severnogo polushariīa i sviāzannykh s nimi anomaliĭ davleniīa i temperatury v Arktike. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.240, Voprosy dolgosrochnykh prognozov pogody . . . p.24-32, maps, graphs.) 7 refs. Text in Russian. **Title tr.**: Prognosis of the anomalous development of the varieties of atmospheric circulation forms in the Northern Hemisphere, and the related anomalies of pressure and temperature in the Arctic.

Presents a method of long-range forecasting (more than 30 days) of anomalistic pressures and temperatures in the Arctic. It is based on peculiarities in distribution of anomalous pressures and temperatures due to processes of W, E, and C forms in the Northern Hemisphere, and a comparison of actual zonal, and/or meridional, indexes of intensity of macrosynoptic processes with the "normal" values of such indexes. An experimental application of the method to forecasting of macrosynoptic processes considerably in advance of their occurrence was carried out successfully during the navigation months of 1959. (CaMAI.)

GIRS, ALEKSANDR ALEKSANDROVICH, *see also* Leningrad. Arkticheskiĭ . . . institut. Voprosy dolgosrochnykh prognozov . . . 1961. No. 73411

GITERMAN, ROZA EVSEEVNA, *see*

Alekseev, M.N., & *others*. Chetvertichnye otlozheniīa . . . 1961. No. 69697

Khoreva, I.M., & R.E. Giterman. Novye dannye o raschlenenii tretichnykh otlozheniĭ . . . 1961. No. 72775

71700. GJELSVIK, TORE, 1916– . Norsk Polarinstitutts virksomhet i 1960, organisasjon og administrasjon. (Norway. Norsk Polarinstitutt. Årbok 1960 *pub.* 1962, p.113-32, illus.) Text in Norwegian. Summary in English. **Title tr.**: The activities of the Norsk Polarinstitutt in 1960, organization and administration.

Reports staff, finances, general work, library, etc.; and expeditions sent to Svalbard and Jan Mayen, their personnel, work in hydrography, geology, glaciology, ornithology, paleobotany, and botany; foreigners' expeditions also are noted. Material being worked up from previous expeditions is cited. Appended is a list of publications of the institute and of those by its members. (SPRI.)

GJELSVIK, TORE, 1916– , *see also* Padget, P., & *others*. Geochem. prospecting Norw. 1960. No. 74620

71701. GJESSING, GUTORM, 1906– . Kulturkontakt i Karasjok. (Norveg, tidsskrift for folkelivsgransking, 1953. v.3, p.197-211.) Text in Norwegian. **Title tr.**: Culture contact in Karasjok.

Explains ethnic elements in the economic and social structure of this northern Norwegian community, and evaluates the resulting harmony and tension. Agricultural practices are based on Finnish tradition; reindeer husbandry and fishing are chiefly Lappish in origin, as are the family heritage patterns, committee decisions at the local level, and language. Both nomadic and settled Lapps frequent Karasjok. Laestadianism remains the principal religious form. Educational, religious, political, and economic administration is closely related to that of the rest of Norway; it tends to result in social and economic stratification, tension and local problems. The change from a self-sufficient to a wage economy, role of present-day

youth, and prospects of the community are discussed. (DLC.)

71702. GJESSING, GUTORM, 1906– . Nordenfjelske ristninger og malinger av den arktiske gruppe. Oslo, 1936. 207 p. illus. and maps on 84 plates incl. fold. (Instituttet for sammenlignende kulturforskning. Publikationer, ser. B. Skrifter, bd. 30.) 113 refs. Text in Norwegian. Summary in German, p.184-203. **Title tr.:** Scandinavian rock carvings and paintings of the arctic group.

Describes the pictographs of the Trøndelag region, ranging from the neolithic through the bronze age. The elk motif predominates, though reindeer, seal, boat (mostly *umiak* type) motifs, geometric patterns, and, less frequently, the human figure occur. The hunting magic symbolism of this art is discussed, also the drawing and painting techniques, stylistic development from naturalism to schematic design. A comparative chronology is attempted. (CtY.)

71703. GJESSING, GUTORM, 1906– . Steinaldersamfunn i Nord-Norge. (Norske Videnskaps-akademi, *Oslo.* Årbok 1959 *pub.* 1960, p.20-21.) Text in Norwegian. **Title tr.:** Stone age society in northern Norway.

Reports lecture on studies of younger stone age settlement sites to determine features of social organization which derive from the natural milieu and the type of occupation. Semi-nomadic groups of 60 to 100-150 individuals are postulated for northern Norway. Kinship was traced through either or both sides of family. An average household consisted of parents and two-three children. Movement from one local group to another was easy. Marriage was exogamic. Prestige depended on a man's status as a hunter. The Traena and Varanger sites are cited. (DLC.)

71704. GLADENKOV, ÎU. B. Nefteproîavleniîa nizhnego techeniîa reki Khatyrki, Korîakskoe nagor'e. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Sept. 1962. no.9, p.101-106, tables, text maps.) 3 refs. Text in Russian. **Title tr.:** Oil evidences on the lower course of the Khatyrka River, Koryak highland.

Reports the 1957-1960 geologic survey and mapping done on the lower Khatyrka, and geologic structure of the area. Occurrence of hard bitumen in Paleogene-Neogene deposits is noted, and the chemical and luminescence properties are analyzed. Mineralization of water and other favorable signs of oil occurrence are evaluated. Geologic and structural-tectonic conditions are discussed. The Oligocene deposits are the most promising, and special studies are suggested. (DLC.)

71705. GLADKOV, N. A. Redkie ptitsy nasheĭ strany. (Okhota i okhotnich'e khozîaĭstvo, Oct. 1961. god 7, no.10, p.29-31.) Text in Russian. **Title tr.:** Out native rare birds.

Notes among others, the auk valued for its down and now a depleted stock because of nest destruction; *Branta bernicla* formerly numerous on the arctic coasts and now disappearing due to excessive hunting during migration; the snow goose *Chen hyperboreus,* occurring en masse on Vrangel Island and recently discovered as a small colony on the lower Indigirka; the wedge-tailed gull *Rodostethia rosea,* on the tundras of the lower Kolyma and Indigirka: the Asiatic white crane *Grus leucogeranus,* known on the lower Ob River and in Yakutia; two uncommon curlews: *Numenius borealis* in the Verkhoyansk Range and the exceedingly rare *N. tenuirostris* once seen in Western Siberia and of doubtful existence today. A cormorant, *Phalacrocorax perspicillatus,* discovered by Steller on Bering Island in 1741, and now considered extinct, is also mentioned. (DLC.)

71706. GLADKOVA, T. D. Dermatoglifika nekotorykh severo-vostochnykh narodnosteĭ SSSR; mansi i komi. (Voprosy antropologii, 1961. vyp.6, p.100-111, graphs, tables.) 15 refs. Text in Russian. **Title tr.:** Dermatoglyphics of some ethnic groups in northeastern USSR; the Voguls and Komi.

Comparative analysis of palm and finger prints of two Vogul and three Komi groups, including the Uda River Zyryans. Skin relief shows mainly similarities between the Voguls and Komi; affinities are found also with other racially related groups. (DLC.)

71707. GLASER, ERIC MICHAEL, *and* **R. J. SHEPHARD.** Simultaneous acclimatization to heat and cold in man. (Journal of physiology, Apr. 1961. v.156, no.1, p.8P-9P.) 3 refs.

Reports an experiment with 15 men who for 11 days spent mornings in hot environment and three hours every afternoon at about 3°C. Acclimatization to cold was indicated by increasing blood flow and temperature of hands in the cold room, diminished blood pressure and heart rate responses, etc. Corresponding changes in the hot room suggested simultaneous heat adaptation. (DLC.)

GLAUÈR, G. A., *see* Gutkin, A. ÎA., *& others.* Polovoe razvitie. . .1962. No. 71935

71708. GLAZOVSKAÎA, M. A. Biologicheskie faktory vyvetrivaniîa v vysokogor'îakh. (Priroda, Dec. 1952. god 41, no.12, p.106-110, illus.) Text in Russian. **Title tr.:** Biological factors of weathering in high mountains.

Describes desert varnish in the Tyan-Shan above 4200 m. on dry and wet rock; the vegetation on wet rocks: algae, bacteria, fungi, etc.; penetration of this microflora into depth; its weathering action as revealed in laboratory studies; chemical and synthetic action of the microflora; changes wrought on different minerals; cultivation experiments. (DLC.)

71709. GLEBOV, A. Valochno-povorotnaîa lapa. (Master lesa, Jan. 1962. god 6, no.1, p.2, illus.) Text in Russian. **Title tr.:** A felling-direction control lever.

Describes a manually operated device which controls the direction of the tree's fall in cutting operations. It was developed by the Northern Industrial Research Institute (Sev NIIP) and tested in the Verkhovskiy lumbering establishment in northern Arkhangel'sk Province. (DLC.)

71710. GLEESON, THOMAS ALEXANDER, 1920-

Computed probabilities of 500-mb heights predicted by graphical integrations of a barotropic model. (Journal of applied meteorology, Dec. 1962. v.1, no.4, p.497-507, maps, graphs, tables.) 11 refs.

Applies author's previously developed statistical theory to graphical predictions of the 500-mb surface, using a barotropic model. Forecast pro-

cedure is described; examples of probability forecasts and verifications are presented for North America and adjacent oceans, Nov. 18-19 and Mar. 11-12, 1961. Predictability of the graphical technique is examined quantitatively; greatest errors occurred in regions of lowest probabilities. (DWB.)

71711. GLEMBOTSKIĬ, È. B., *and* **G. G. MAĬLE.** Spusk lesa v shakhtu po skvazhinam na shakhtakh Vorkuty. (Ugol', Sept. 1961. god 36, no.9, p. 31-32, illus.) Text in Russian. **Title tr.:** Lowering mine timbers through pit-holes at the Vorkuta mines.

Describes a device from the Vorkuta Planning and Research Office by which mine-supports can be lowered down the 80-300 m. pits at the rate of 108/hr. without jamming the installation for lowering and hoisting miners and coal. Successful testing of the device in pit No. 27 is noted. (DLC.)

GLEN, JOHN WALLINGTON, 1927- , *see* IUGG . . . Snow & Ice Comm. 1961. No. 72396

GLOZMAN, M. K., *see* Gaĭsenok, A.A., & M.K. Glozman. Stapel'naîa sborka korpusa . . . 1961. No. 71546

GNESIN, B. ÎA., *see* Neganov, V.I., & B. ÎA. Gnesin. Atomnyĭ ledokol . . . 1961. No. 74248

71712. GNEVUSHEV, M. A., *and others.* Dannye o zakonomernostîakh raspredeleniîa almazov v kimberlitovykh trubkakh Zapadnoĭ ÎAkutii. (*In:* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Almazy ÎAkutii . . . 1961, p.106-22, tables, diagrs.) 8 refs. Text in Russian. *Other authors:* Z.V. Bartoshinskiĭ *and* A.P. Zinkov. **Title tr.:** Data on the distribution patterns of diamonds in the kimberlite pipes of western Yakutia.

Reports a statistical study in the Udachnaya, Mir, and Zarnitsa kimberlite pipes, of diamonds distribution according to form of crystals, size of crystals, and the extent of diamonds in the kimberlite. Most calculations were made at the Udachnaya pipe, and the data obtained are tabulated, diagrammed, evaluated, and comparisons made between the three pipes. Variations in the patterns are discussed, noting possible different processes of crystallization and differences in kimberlite magma. (DLC.)

71713. GNEVUSHEV, M. A., *and others.* Ob okraske îakutskikh almazov. (*In:* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Almazy ÎAkutii . . . 1961, p.87-96, illus., graphs.) 12 refs. Text in Russian. *Other authors:* L.M. Krasov, ÎU. V. Dubotovko, *and* N.I. D'îakov. **Title tr.:** On the color of Yakut diamonds.

Describes the yellow and violet diamonds of Malaya Botuobuya, Daldyn, and other regions of Yakutia, based on study of 530 samples. The yellow diamonds are of three types: cubic system, combination of cube, octahedra and rhombohedral, and characteristic octahedra. Crystal morphology, admixtures, and other optical properties are described. Diamonds of violet (amethyst) color are found only in the Mir kimberlite pipe and old placers. They are also described. Diamonds of other colors were not studied. (DLC.)

71714. GNEVUSHEV, M. A., *and* **È. S. NIKOLAEVA.** Tverdye vkliûcheniîa v almazakh mestorozhdeniĭ ÎAkutii. (*In:* Akademiîa nauk SSSR. ÎAkutskiĭ filial. Almazy ÎAkutii. . .1961, p.97-105, illus.) 8 refs. Text in Russian. **Title tr.:** Hard inclusions in diamonds of the Yakutia deposits.

Reports preliminary results on 120 samples studied, among them 50 from the Mir kimberlite pipe and five from the Udachnaya, and others from placers. Hard inclusions of olivine, pyrope, chrome-spinel, magnetite, graphite and diamond are distinguished, and each case is briefly described and illus. X-ray analysis was used. Directions for further studies are suggested. (DLC.)

71715. GO, FRANCISCO. Anchorage to have water treatment plant. (Alaska's health and welfare, Aug. 1961. v.18, p.5)

Notes on the cost of the plant, to be completed in 1962; its design, capacity, location, and treatment processes. (DLC.)

71716. GOBBETT, D. J. The Permian brachiopod genus *Horridonia* Chao. (Palaeontology, Apr. 1961. v.4, pt. 1, p.42-53, illus., map.) 47 refs.

Re-defines this genus of marine bivalve to include two variable species, *H. horrida* and *H. timanica.* Specimens of the former have been found in East Greenland, Ellesmere and Melville Islands; the latter, in Svalbard, Kanin Peninsula, and East Greenland; and possible specimens elsewhere in the Arctic. (DGS.)

71717. GODDARD, EARL G., 1917– . Sferics monitoring system. (IRE transactions on instrumentation, Dec. 1960. v.I-9, no.3, p.315-26, illus., diagrs.) Ref.

Describes system developed for use at three unidentified arctic sites to study sferic population, also diurnal, seasonal, and auroral effects on VLF propagation, and locations of sferic sources. The integrated assembly of electronic, photographic, and electro-mechanical equipment may be operated in different modes to gather data on the number of sferics occurring in four 20-db intensity levels in four six-hour time blocks, bearing and waveform of individual sferics, time-integrated bearing patterns, and noise level and signals in the 12-30 kc./s. range. (DLC.)

GODDARD, EDWIN NEWELL, 1914– , *see* Warner, L.A., & *others.* Iron and copper deposits . . .1961. No. 76489

71718. GODLEVSKIĬ, MIKHAIL NIKOLAEVICH, *and others.* Voprosy teploobmena intruziva i vmeshchaîûshchikh porod i kontaktovyĭ termometamorfizm ugleĭ vblizi trappovykh intruzivov. (Geologiîa i geofizika, 1962, no.2, p.6-24, tables, graphs.) 38 refs. Text in Russian. Summary in English. *Other authors:* G.S. Kravtsov *and* V.M. Slivko. **Title tr.:** Problems of heat exchange between an intrusive body and enclosing rocks and contact thermometamorphism of coal near trap intrusions.

Calculates the flow of heat from a trap intrusion into country rock and coal by means of the heat exchange equation worked out by J.B.J. Fourier (*Théorie analytique de la chaleur,* 1822) and formulas derived from this equation. The calculations and graphs were verified by comparison with phenomena of thermometamorphism of Norĭl'sk coal lying near trap intrusions. Some 20-30% of the calculated data coincide with data of geologic observations. Formation conditions for native coke, graphite and anthracite are briefly considered. (DLC.)

GODLUND, SVEN, *see* Sweden. Regionsjukvården . . .1958, 1961. No. 76047

71719. GODSON, WARREN LEHMAN. The representation and analysis of vertical distributions of ozone. (Royal Meteorological Society. Quarterly Journal, July 1962. v.88, no.377, p.220-32, graphs, table.) 13 refs.

Proposes a new diagram, called an ozonagram with basic coordinates of ozone partial pressure (μmb) and the logarithm of total pressure (mb). This diagram satisfied seven criteria devised to meet dynamical, analytical and graphical requirements. Convenient symbols and units are also proposed for some 22 ozone parameters. *Umkehr* data for Moosonee, Ont. and Edmonton, Alta. are represented and analyzed, using the ozonagram. Basic features of the seasonal variations are illustrated, especially the related roles of the lower and middle stratosphere, the latter largely responsible for the annual ozone maximum. No unique ozone pattern emerges from air mass changes; middle-stratosphere ozone concentrations appear to change irregularly even when middle-stratosphere temperatures do not change. Available Moosonee data permitted subdivision into four "ozone seasons," the period of annual minimum is autumn, maximum in late winter or early spring. Results of this study were also presented to the International Ozone Symposium in Arosa, Switzerland, Aug. 1961. (DWB.)

71720. GODSON, WARREN LEHMAN. A selection of lectures presented to the third Seminar in Arctic and Stratospheric Meteorology, July 27 to August 7, 1959, at Stanstead College, Stanstead, Quebec Province, Canada. Montreal, Jan. 1961. v, 62 p. graph. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 34.)

Contains six of his lectures, viz: Observations of total ozone; Vertical distribution of ozone; Ozone changes; General principles of infra red radiative transfer and the special case of isolated spectral lines; Atmospheric gases and radiative transfer; Radiation and energy balance in the stratosphere. (CaMAI.)

71721. GODT, PAUL. Co-operatives among Canadian Eskimos. (Canadian co-operative digest, spring 1961, v.4, no.1, p.41-46.)

Discusses the cooperatives at George River and elsewhere in the Eastern Arctic supervised by the author in the Industrial Division of the Dept. of Northern Affairs and National Resources. They are organized on the initiative of a community or, for a depressed region, on that of the Government. Five producer and three consumer cooperatives were active in 1961; lumber and food products were produced for mutual trade, handicrafts and arctic char for markets in southern Canada and the United States. Research and promotion efforts are required for successful marketing. (CaONA.)

71722. GOETZ, ROBERT H., *and others.* The effect of temperature changes on the pulmonary circulation. (Surgery, gynecology and obstetrics, May 1962. v.114, no.5, p.595-601, illus.) 8 refs. *Other authors:* M. Rohman, V.M. Goetz, R. Dee, *and* D. State.

Reports a study of conditions in dogs with separate perfusion of the systemic and the pulmonary vascular beds. Perfusion of the lungs with cold blood, produced increased pulmonary and decreased systemic blood pressure; warm perfusion had the opposite effect. Lowering the systemic temperature, failed to alter the systemic pressure response to pulmonary hypothermia. The pressure responses are assumed to be secondary to changes in vascular resistance. (DLC.)

GOETZ, ROBERT H., *see also* Dee, R., & *others.* Circulatory effects . . . 1961. No. 70935

GOETZ, V. M., *see*

Dee, R., & *others.* Circulatory effects . . . 1961. No. 70935

Goetz, R.H., & *others.* Temp. changes & pulmonary circ. 1962. No. 71722

GOGINA, N. I., *see* Leonov, B.N., & *others.* Verkhnie galechniki . . . 1961. No. 73426

71723. GOGOLEV, Z. V. Kolkhoznoe dvizhenie v IAkutii v 1930-1934 godakh. (Akademiia nauk SSSR. IAkutskiĭ filial. Institut iazyka, literatury i istorii. Sbornik statei po istorii IAkutii sovetskogo perioda, 1955. vyp. 1, p. 76-103.) Approx. 20 refs. Text in Russian. **Title tr.:** The collective farm movement in Yakutia 1930-1934.

The North and far North are dealt with, p. 93-100. Collectivization methods of 1930-1931 unsuited to the region were corrected in 1932 by an increased development of prime cooperative production units. In 1934 northern kolkhozes had 76 reindeer-raising brigades, 306 transportation, 689 hunting, 300 fishing, 413 agricultural and 99 subsidiary economic teams employing 91% of the entire male population, 55.5% of the women, and 50% of the teenagers. Kolkhoz incomes rose from less than four million in 1933 to over 12 million rubles in 1935. Improvement of trade and supply facilities through the development of the Northern Sea Route is described. The rapid growth of the fur industry is discussed and selective data are supplied. Educational and cultural work is also noted among northern Yakut minorities: the Evenki-Tungus, Eveny-Lamuts, and Chukchis. (DLC.)

71724. GOGOLEV, Z. V. Rabochie Aldana v bor'be za razvitie zolotoĭ promyshlennosti v pervoĭ piatiletke. (Akademiia nauk SSSR. IAkutskiĭ filial. Institut iazyka, literatury i istorii. Sbornik statei po istorii IAkutii sovetskogo perioda, 1955. vyp. 1 p. 56-75.) 6 refs. Text in Russian. **Title tr.:** The struggle of Aldan workers for development of the gold industry during the first five-year plan.

Discusses factors responsible for the slowdown in production from 94.1% of that expected in 1928 to 40.8% in 1931: difficult working and living conditions, absenteeism, insufficient mechanization, poor mine administration, etc. Drastic labor reforms in 1932 raised the Aldan output to 22% of all gold mined in the USSR. Success is attributed mainly to introduction of competitive team work, organization of shock groups by Yakut komsomol miners, growth of labor unions, technological improvements, educational and political training programs for the workers. Appended, p. 72-75, is "an open letter by Aldan miners" from *Aldanskiĭ rabochiĭ* Nov. 15, 1932: it urges Yakut collective and individual farmers to support the gold industry

by improving the transportation facilities and food supply in the Aldan region. (DLC.)

71725. GOGOLEV, Z. V. Razgrom antisovetskikh vosstaniĭ v 1924-1925 i 1927-1928 gg. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniĭa, 1961. vyp. 6, p. 23-32.) 7 refs. Text in Russian. **Title tr.:** Crushing of anti-Soviet uprisings in 1924-1925 and 1927-1928.

Describes the abortive nationalistic attempts of the Yakut Federalist party aided by white Russian forces to undermine the communist regime and overthrow local Soviets. Economic and military factors leading to the political events of the 1920's in Yakutia and the successful struggle of the Soviets to reestablish supremacy despite threats of foreign intervention and economic reprisals are discussed. The effects of counter-revolutionary propaganda on simple-minded Tungus and Yakut masses and the resulting fratricidal encounters are noted. (DLC.)

GOGOLEV, Z. V., *see also*
Fedoseeva, S.A. Nakhodki neolita . . . 1960. No. 71364
Pankov, I.P. Obzor preniĭ . . . 1961. No. 74634

GOGOLEVA, M. V., *see* Spiro, N.S., & M.V. Gogoleva. Opredelenie optimal'nykh uslovii . . . 1961. No. 75876

71726. GOKHMAN, I. I. Ugol poperechnogo izgiba lba i ego znachenie dlĭa rasovoĭ diagnostiki. (Sovetskaĭa antropologiia, 1961. vyp. 8, p. 88-99, tables, diagr.) 7 refs. Text in Russian. **Title tr.:** Angle of the transversal curvature of the forehead and its significance for race diagnostics.

The degree of face flatness is considered the basic differentiating criterion between the large Europoid and Mongoloid races. Naso-malar and zigo-maxillar angles are tabulated for, among others, the Ostyaks and Negidalets, a Tungus group. The Ostyaks are classified as mixed, the Negidalets as Mongoloids. (DLC.)

71727. GOLD, D. P. Preliminary report on Brisebois Lake area New Quebec. Quebec, 1962. 10 p. fold. map, table. (Quebec. Dept. of Natural Resources, P.R. no. 470.) 3 refs.

Reports the geology, mapped at 1:63,360 during summer 1959, of this 380 sq. mi. area in the Cape Smith - Wakeham Bay basin. Rocks of the Chukotat group, underlying 80% of the area, are separated by an angular unconformity from those of the Povungnituc group and are in faulted contact with paragneisses in the northeast. The Chukotat group consists mostly of extrusive and intrusive basic igneous rocks with minor sedimentaries, and the Povungnituc, of volcanic and sedimentary rocks and minor intrusive basic sills. The structural pattern is complex, with two possible interpretations, and differs in the northern and southern parts of the area. The former is characterized by east-west bands of strike faults and tilts, and the latter by cross folds. Occurrence of disseminated and nickeliferous pyrrhotite, chalcopyrite, pyrite, and asbestos are noted, also drilling in 1957 and 1958. (DGS.)

71728. GOLD, D. P. Preliminary report on Hopes Advance Bay area New Quebec. Quebec, 1962. 9 p. table, fold. col. map. (Quebec, Dept. of Natural Resources, P.R. no. 442.) 6 refs.

Reports on the geology, investigated during summer 1958, of this 640 sq. mi. area extending along the west coast of Ungava Bay 59° - 59°-38′ N. and inland to 69° 50′ W. Sedimentary, volcanic, and intrusive rocks of the Labrador geosyncline overlie, unconformably, basement gneisses in the west and abut siliceous paragneisses in the east. The geosyncline rocks were folded into large drag-folds in which the iron-bearing sequence, particularly, is generally thickened in the troughs and crests. A north-northwest-trending thrust fault, bringing the eastern paragneisses into contact with mica schists, is the dominant structural feature. Occurrences of iron ore, grading 35+% near Hopes Advance Bay, are noted, also disseminated sulfides, mostly pyrite, and mineralized zones of disseminated pyrite, pyrrhotite, chalcopyrite, and pentlandite. (DGS.)

71729. GOLD, LORNE W., *and others.* Bearing capacity of floating ice sheets. (American Society of Civil Engineers. Engineering Mechanics Division. Journal, Apr. 1961. v. 87, no. EM 2, p. 83-88, tables.) 11 refs. *Other authors:* R.H. Wood, N.C. Lind, *and* D.T. Wright.

Comments on No. 66700, criticizing the author, Meyerhof for not utilizing the data obtained from field work sponsored by the National Research Council of Canada (No. 64763.) It is unrealistic to take into account the load geometry in view of the lack of knowledge of ice properties and errors associated with estimating loads and measuring ice thicknesses. The opinion that wheel spacing has no influence on the collapse load is also questioned. Pertinent aspects of previous field experience are summarized. Wood mentions the problem of determining a satisfactory yield criterion, and questions the use of the Tresca criterion, rather than the more acceptable Johansen "square" criterion.—From CRREL. Meyerhof, q.v. answered this criticism. (DLC.)

71730. GOLD, LORNE W. Field study on the load bearing capacity of ice covers. (Woodlands review, pulp and paper magazine of Canada, May 1960. v. 61, no. 5, p. 11-15, graphs, tables.) 5 refs. *Reprinted as:* National Research Council of Canada. Division of Building Research, Technical paper no. 98.

Summarizes information supplied to the Council on pulp and paper companies' experience with ice covers during the 1958-59 and part of 1959-60 winter. Data on maximum loads carried on ice, with and without break through are tabulated. Effective ice thickness is calculated on the basis of two inches of white ice equivalent to one inch of good blue ice, using both observed and theoretical data for predicting the bearing capacity. If thickness only is considered, ice failures will probably occur with single vehicles of total load more than that defined by $P = 0.07\ h^2$, where P is the allowable load in tons, h is the effective ice thickness in inches, and 0.07 is a constant representing the quality of the ice, the geometry of the load, and a safety factor. (DLC.)

GOLD, LORNE W., *see also*
IUGG . . . Snow & Ice Comm. 1961. No. 72396
National Research Council Canada. . . . Symposium on Air Bubbling. 1961. No. 74231

71731. GOL'DBERG, I. S. O zakonomernostiakh rasprostraneniia bitumoproiavlenii v severnoi chasti Tungusskoi sineklizy. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy 1961. vyp. 186, Geologicheskii sbornik no. 6, p. 128-42, illus., tables, maps, diagrs.) 4 refs. Text in Russian. **Title tr.**: Distribution laws of bitumen occurrences in the northern part of the Tungusskiy syncline.

Analyzes bitumen occurrences in relation to trap formation and to development of postmagmatic mineralization to elucidate the migration and possible accumulation of oil. Special attention is given to the Nizhnyaya Tunguska River basin: the Allyun structure is described and bitumen analyses presented. Other areas are also treated. Structures in the central part of the Tungusskiy syncline are recommended for further prospecting, especially the Allyun uplift. (DLC.)

GOL'DBURT, T. L., *see* Leningrad. N.-i. Institut geologii Arktiki. Gulinskaia intruziia . . . 1961. No. 73413

71732. GOL'DFAĬL', L. G. Bud'te pionerami novykh kurortov. (Nauka i zhizn', July 1962. god 29, no. 7, p. 11-13, illus., map.) Text in Russian. **Title tr.**: Be pioneers of the new health resorts.

Includes notes on the Talaya (61° 23′ N. 152° 45′ E.) health resort in Magadan Province and the healing properties of Lake Abalakh in Yakutia. (DLC.)

71733. GOLDIN, B. A. Gornye porody basseina Malogo Patoka, zapadnyi sklon Pripoliarnogo Urala, i sul'fidnaia mineralizatsiia. (*In:* Akademiia nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.243-54, illus.) 19 refs. Text in Russian. **Title tr.**: Rocks of the Malyy Patok basin, western slope of the Subpolar Ural, and sulfide mineralization.

Describes the geologic and petrographic characteristics of a locality on the right bank of upper Malyy Patok, tributary to the Shchugor River, based on studies in 1956. Sulfide mineralization occurs in crystalline schists, gabbro-diabases, and quartz veins. All types of mineralization are described; the main minerals are pyrite, chalcopyrite, bornite, pyrrhotite, galenite, etc. (DLC.)

71734. GOLDIN, B. A. Osnovnye cherty stratigrafii drevnikh svit verkhovii rr. Vangyra i Bol'shogo Patoka; Pripolirnyi Ural. (Akademiia nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp. 2, Materialy po geologii Komi ASSR, p. 91-102, map, cross-sections.) 6 refs. Text in Russian. **Title tr.**: Main stratigraphic features of old series on the upper reaches of the Vangyr and Bol'shoy Patok Rivers, Subpolar Ural.

Pre-Ordovician-Riphean deposit are divided into six series. Each is described noting lithologic properties of rocks, distribution, thickness, mineralogic composition, and other features, as studied in 1957-1958, 1960. Ordovician deposits with brachiopod *Angarella* and nautiloid *Endoceras* are also described. Sedimentation conditions are reviewed. (DLC.)

GOLDING, M. R., *see* De Jong, P., & *others*. Sympathectomy cold injury. 1962. No. 70944

GOLDMAN, R. F., *see* Iampietro, P.F., & *others*. . . . weight loss . . . cold. 1961. No. 72301

GOLDRING, DAVID, *see* Noren, G., & *others*. Tolerance . . . atrial muscle hypothermia, anoxia. 1961. No. 74381

71735. GOLDSCHMIDT, VERNER. Retlig adfaerd, en analyse af retsmyndigheders adfaerd med eksempler saerlig fra den kriminelle retspleje i Grønland. København, 1957. 2 v.: 228, 203 p. maps, tables. (Meddelelser om Grønland, bd. 90, nr. 3-4.) 270 refs. Text in Danish. **Title tr.**: Conduct of law, an analysis of the proceedings of legal authority with examples especially from the practices of criminal law in Greenland.

Analyzes the basic tenets of the administration of law from the Western European background, and some actual cases from legal practice in Greenland, considered an example of a recently primitive society. Several theories of the meaning and purpose of law are considered, and the logic of each is examined as to presentation and nature of testimony, weighing the evidence, directives or pleading of cases, signs and symbols of authority. A variety of cases in police and court records from Thule to southwest Greenland is discussed in detail. Most are cases of assault, arson, rape, abortion, and cruelty to animals, and they are considered in context and action representative for Greenland. The purpose of the study is to establish a realistic base for the practice and administration of law in a non-European society. Vol. 2 presents 11 appendices to the analytical study in v. 1: the case reports, circumstances, explanatory and summary notes. Maps with place names and a tabulated list of the villages with court officials are included. (DGS.)

71736. GOLDSMITH, EDWARD I., *and* H. J. MAYER. Objective evaluation of myocardial blood supply in vivo through observation of acute changes in myocardial temperature. (Surgical forum, 1960. v. 11, p. 196-97.)

Description of apparatus and method, the latter including injection of labelled, ice-cold saline, at both low and high rates of flow. The amplitude and speed of myocardial temperature fall was found to be proportional to the blood supply of this muscle. (DNLM.)

71737. GOLDSMITH, RAINER, *and* H. E. LEWIS. Polar expeditions as human laboratories. (Journal of occupational medicine, Mar. 1960. v. 2, no. 3, p. 118-22, maps.) 14 refs.

Describes four major British expeditions of the previous decade, that of 1951-1954 to northeast Greenland and three to antarctic areas; their scientific and medical aspects, gains in polar human physiology, acclimatization, clothing, diet, body weight, sleep, etc. Lessons for the prospective industrial worker are drawn. (DNLM.)

71738. GOLDSMITH, RAINER. The vehicles that Fuchs used for his journey. (New scientist, Mar. 6, 1958. v. 3, no. 68, p. 11-13, illus.)

Describes performance of vehicles used on the 2,000-mi. Commonwealth Trans-Antarctic Expedition: Sno-cats, Weasels, Muskeg tractor. All were modified for low-temperature operation;

special fuels and greases were used. Only the Sno-cats completed the journey, the others were abandoned along the route upon completion of their particular services. (DLC.)

GOLDSMITH, RAINER, *see* Fox, R.H., *& others.*

Radio pill measure deep body temp. 1962. No. 71473

71739. GOLDTHWAIT, RICHARD PARKER, 1911- . Regimen of an ice cliff on land in northwest Greenland. (*In:* International Geographical Congress 1960. Physical geography . . . 1961. p. 107-115, illus., diagr.)

Summarizes results of detailed study of Red Rock Ice Cliff on Nunatarssuak peninsula 65 km. northeast of Thule Air Base, 1954-1957. The existence of an ice cliff on land is said to result from a pronounced zone of shearing near the glacier sole; its shape is explained as the balance between flow and differing kinds of ablation, notably dry calving. This cliff advanced very slowly: 0.5 m./yr.; on top of the glacier, the 5 m./yr. forward shove of the 14° slope, together with a 0.25 m. rise of the ice itself on ascending shear planes, lifted the surface 1.5 m./yr., which is close to the measured surface ablation of 1.4 m./yr. The 26-m. -high cliff face moved forward 4.6 m./yr. in irregular fashion, but it calved off in many parts about 1.4 m. every spring and ablated 2.7 m./yr., to yield a net advance of 0.5 m./yr. A toe-slope of dirt-banded ice at the base of the cliff moved more slowly than the cliff above, but this dark ice also ablated more than the ice above, which undermined the cliff. (DGS.)

71740. GOL'M, T. S. Vremennoĭ khod obshchego soderzhaniia atmosfernogo ozona nad o. Dikson i ego sviaz' s meteorologicheskimi ėlementami. (Konferentsiia po atmosfernomu ozonu, *Moskva,* 1959. Atmosfernyĭ ozon . . . doklady i rezoliutsii, *pub.* 1961. p. 42-54, tables, diagrs.) 13 refs. Text in Russian. Summary in English. **Title tr.:** Time variation of the total content of atmospheric ozone over Dikson Island, and its relationship to the meteorological elements.

Presents results of spectrophotometric measurements of ozone concentration over Dikson Island from July 1, 1957. The instrumentation, observation methods and errors are reported. The variation of ozone concentration with time is shown, the correlation between the variation of the total concentration of atmospheric ozone, and the variation of the basic meteorological elements in the upper troposphere, and lower stratosphere are discussed. (DLC.)

71741. GOLOVANOV, G. A., *and* **L. E. IVANOVA.** Opyt primeneniia dugovykh grokhotov na Olenegorskoĭ obogatitel'noĭ fabrike. (Gornyĭ zhurnal, Feb. 1962, no. 2, p. 63-64, tables.) Text in Russian. **Title tr.:** On the use of curved sifters at the Olenegorsk concentration plant.

Describes the curved sifting device developed by the Research Institute for Mechanical Concentration of Minerals (MEKhANOBR), and gives tabulated data on its results: an increase of iron content in the concentrate from 60 to 61%, and a rise from 74-75 to 80-82% iron extracted from the ore. (DLC.)

71742. GOLOVANOV, G. A. Poluchenie vysokosortnykh zheleznykh kontsentratov na Olenegorskoĭ obogatitel'noĭ fabrike. (Gornyĭ zhurnal, July 1962, no. 7, p. 67-68, tables.) 2 refs. **Title tr.:** Production of high-grade iron concentrates at the Olenegorsk ore-dressing plant.

Describes successful experiments in 1961 producing concentrates of up to 70% iron content by using curved sifters with subsequent flotation of ore. (DLC.)

71743. GOLOVANOV, G. A., *and others.* Rekonstruktsiia Olenegorskoĭ obogatitel'noĭ fabriki. (Gornyĭ zhurnal, Aug. 1962, no. 8, p. 55-57, diagrs., tables.) Text in Russian. *Other authors:* R.I. Berdichevskiĭ, IU. V. Ptitsyn, *and* V.A. Lavrent'ev. **Title tr.:** Reconstruction of the Olenegorsk concentration plant.

This plant used chiefly 128-SE belt separators and extracted only 74% iron; tests were made of 167-SE drum separators, which proved more effective, especially in separating particles under 0.2 mm. Some of the belt separators were replaced by drum separators, at a cost of one million rubles; but the increase in production covered the cost in a single year. (DLC.)

71744. GOLOVANOVA, I. M. Khantskie blīakhi v sobranii gosurdarstvennogo istoricheskogo muzeia. (Moskva. Gos. istoricheskiĭ muzeĭ. Ezhegodnik, 1960 *pub.* 1962, p. 132-41, illus.) Approx. 20 refs. Text in Russian. **Title tr.:** Ostyak plaquettes in the State Historical Museum collection.

Describes twelve copper pendants with relief or open-work representation of birds and animals. Popular among West Siberian peoples, these ornaments were probably made by Russians in the 17-18th century, and passed to the Ostyaks in trade. They were worn mainly by women as headdress decoration. (DLC.)

71745. GOLOVNIA, L. E. Na ptich'ikh bazarakh. (Okhota i okhotnich'e khoziaĭstvo, Apr. 1961. god 7, no. 4, p. 16-18, illus.) Text in Russian. **Title tr.:** In the bird colonies.

Describes auk and kittiwake colonies on islands in the Sem' Ostrovov group off northern Kola Peninsula. Nine on Kharlov Island are chiefly kittiwake, one on Kuvshin is occupied mainly by three species of auks. Nesting, egg-laying, feeding, relations with other species are noted. Two Aynovskiye islands, grass-covered in summer, have a colony of puffins *(Fratercula arctica).* All the islands off the Murman coast are now protected, all hunting and egg-collecting prohibited. (DLC.)

71746. GOLOVNIA, L. E. S kinokameroĭ na ptich'i bazary. (Priroda, Sept. 1961. god 50, no. 7, p. 84-89, illus.) Text in Russian. **Title tr.:** With a movie camera to a bird colony.

Notes, impressions and photographs from the Kandalaksha preserve. Guillemots and seagulls are considered in the main, including their habits and habitat; breeding nests, eggs and young; mutual relations, dependence on the sea; etc. (DLC.)

71747. GOLOVNYKH, V. Nazrevshie voprosy pushnogo zverovodstva. (Sel'skoe khoziaĭstvo Sibiri, Nov. 1961. god 6, no. 11, p. 74-75.) Text in Russian. **Title tr.:** The urgent problems of fur farming.

Notes a 279% increase since 1950 in skins from fur farms in the Baykit Rayon of the Evenki

National District in Krasnoyarsk Province, accompanied however, by rising costs. On many farms costs exceed income, chiefly because feed is short and reindeer meat is used. The stock kept in runs must be drastically reduced, several kinds of fur bearers on a single farm must be avoided, and the blue arctic fox and silver fox must be replaced by mink as far as feasible. (DLC.)

71748. GOLTSOV, V. Krylatye narty. (Grazhdanskaia aviatsiia, Aug. 1961. god 18, no. 8, p. 24-25, illus.) Text in Russian. **Title tr.:** Winged sledges.

Describes a Mi-1 helicopter flight from Murmansk to the center of the Kola Peninsula: rescue of a geological party without food supplies, observation of wolf and bear predation on elks, etc. Wider use of helicopters in bear control is suggested. (DLC.)

71749. GOLUBEV, A. V., *and* **A. V. PAVLOV.** Issledovanie teplovykh potokov v pochve dlia nekotorykh tipov delatel'noi poverkhnosti. *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Materialy k osnovam ucheniia o merzlykh zonakh zemnoi kory, 1961. vyp. 7, p. 66-118, tables, graph, diagrs.) 6 refs. Text in Russian. **Title tr.:** Investigation of heat fluxes in soil with different surface conditions.

Reports a study at the Permafrost Institute field station near Moscow, July 1957-Nov. 1958, as part of the IGY program. Measurements of actinometric characteristics, soil moisture and temperature, snow temperature and heat fluxes to a depth of 2 m. were made at sites having meadow cover, forest cover, and exposed soil. Tabulated results are presented, and the existing physical and meteorological conditions are described. The instrumentation consisted primarily of automatic electronic recording devices, also described. Emphasis was placed on analysis of the effect of surface and cover conditions on the heat exchange in the soil and the propagation of heat fluxes in the soil. Experimental data on the annual temperature amplitude and on heat fluxes in the soil are compared with calculated values.—From CRREL. (DLC.)

71750. GOLUBEVA, L.V. Paleofitologicheskoe obosnovanie stratigrafii chetvertichnykh otlozhenii severo-zapadnoi chasti Zapadno-Sibirskoi nizmennosti v raione nizhnego techeniia r. Obi; tezisy. *(In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t. 3, p. 58-59.) Text in Russian. **Title tr.:** Paleophytological substantiation of Quaternary deposit stratigraphy in the northwestern part of the West Siberian plain in the lower Ob River region; summary.

Reports a stratigraphic division of Quaternary deposits of this area, giving spore-pollen characteristics of each stratigraphic unit. Changes in vegetation and climate are briefly characterized. (DLC.)

GOLUBKOV, V. S., *see*

Dodin, D.A., & V.S. Golubkov. K probleme trappovogo magmatizma . . . 1962. No. 71055

Vilenskii, A.M., & V.S. Golubkov. Struktura . . . 1961. No. 76389

GOLUTVIN, V. A., *see* Novikov, M.I., & V.A. Golutvin. Primenenie . . . v Noril'ske. 1961. No. 74434

71751. GOLYSHKINA, R. A. Fauna rucheinikov, Trichoptera, reki Angary. (Zoologicheskii zhurnal, 1962. t. 41, vyp. 11, p. 1646-58, table.) 3 refs. Text in Russian. Summary in English. **Title tr.:** The caddis-flies, Trichoptera, of the Angara River.

Reports on his numerous collections of both aquatic forms and imagos: 46 species belonging to 12 families are included. Location in the river system, substrate and biotope, also distribution in other areas are noted and tabulated. No continuity of this fauna with the Baykal was noted, nor a mixing between the big tributaries and the small ones. (DLC.)

71752. GOMON, G. O., *and others.* Svechenie almazov iz trubki "Mir." (Geologiia i geofizika, 1962, no. 2, p. 116-18, tables.) 4 refs. Text in Russian. *Other authors:* P.S. Kinzhalov *and* N.M. Kulebiakin. **Title tr.:** Luminescence of diamonds from the Mir pipe.

Reports optical properties of diamonds collected in this kimberlite pipe in the Malaya Botuobuya basin in Yakutia. Octahedron, plate-form and formless crystals were tested under UV light for luminescence, which is classified into various color groups, and briefly described. Mir pipe diamonds are about 70% with blue-azure luminescence of various intensity; and 6% with green, yellow and orange. (DLC.)

71753. GONIK, A. A., *and* **I. G. APTEKMAN.** Splav ili sukhoputnye perevozki lesa? (Lesnaia promyshlennost', July 1961. god 39, no. 7, p. 29-30, diagrs., table.) Text in Russian. **Title tr.:** Floating or land transportation of timber?

Reports a comparative study of operational costs and capital investment for the two types of log transportation: it was carried out by the Central Research Institute of Timber Floating (TSNII Lesosplav) in Karelia (the Kem' River and Medvezh'yegorsk highway), and Arkhangel'sk and Tyumen Provinces, among other areas. Land transport was found cheaper if the route was half that by waterway; capital investment in a highway is worthwhile if the route is up to a third the length of the waterway. Methods and data of the estimates are included. (DLC.)

71754. GON'SHAKOVA, V. I. Trappovaia formatsiia iugo-vostochnoi chasti Sibirskoi platformy. *(In:* Akademiia nauk SSSR. Otdelenie geologo-geograficheskikh nauk. Petrografiia Vostochnoi Sibiri, t. 1, 1962, p. 118-207, illus., fold. map, tables & diagrs. incl. fold.) Approx. 150 refs. Text in Russian. **Title tr.:** Trap formation in the southeastern part of the Siberian platform.

Reviews previous investigations and the geologic-tectonic structure of the region, which includes the right side of the Vilyuy basin, the Angara-Lena folded zone, northern slope of the Aldan massif, and other areas. Trap volcanism was active there from the Upper Cambrian and through the Lower Jurassic. The geology and petrography of trap formation in the various geologic ages are treated in detail. Chemistry of traps and differentiation of trap magma are outlined. Magnetite mineralization connected with traps is reported, especially in the Angara-Ilim region. (DLC.)

71755. GOODHART, JAMES, *and others.* Goose-ringing in Vestspitsbergen 1954. (Wildfowl Trust. Annual report 1953-54. v. 7, p. 170-76, map, illus.,

table.) *Other authors:* R. Webbe *and* T. Wright.

Reports a five-man party under G.T. Wright in July 1954 ringing flightless geese in Reindalen and Sassendalen: 526 pinkfeet, 23 barnacles, and 74 light-bellied brents. Methods of capture are described and improvements suggested. Recoveries of 41 of the pinkfeet marked thus in 1954 or in Gipsdalen in 1952, are tabulated; ring number and age of bird, location and date of ringing, and of recovery (Germany, Denmark, Belgium, and Holland) are stated. (CaONA.)

71756. GOODHART, JAMES, *and* T. WRIGHT. North-east Greenland expedition, 1956. (Wildfowl Trust, Annual report 1956-57. v. 9, p. 180-192, map.)

Reports activities of a six-man expedition led by Dr. Wright in July 1956 to the Hold-with-Hope area (approx. 73° 30′ N. 21° W.) to investigate pink-footed *(Anser brachyrhynchus)* and barnacle geese *(Branta leucopsis).* The trip on the Norwegian expedition relief ship is outlined. Records of the two species are given by locality with number seen and number of young. It was a non-breeding year, hence ringing was impossible and counting almost so. The phenomenon of non-breeding in the Arctic is discussed, and the lack of snow-free ground for nesting by May 20 suggested as inhibiting breeding. Birds (19 species) other than geese are noted. Fox trapping in the area is described. The party's itinerary, rations consumed, etc. are reported. (CaONA.)

71757. GOR, ĬU. G. Ob usloviĭakh obrazovaniia uglenosnykh otlozheniĭ mezhdurech'ia Kuliumbe-Kureĭki. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t. 117, Geologiia . . . 1961, p. 126-31.) 13 refs. Text in Russian. **Title tr.:** Formation conditions of coal-bearing deposits in the Kulyumbe-Kureyka interfluve.

Describes basins for coal formation, their climate and vegetation in upper Paleozoic deposits in the Kureyka, Gorbiachin and Kulyumbe regions. Carboniferous and Permian deposits are briefly reported. Some coal seams and properties are also noted. (DLC.)

71758. GORBATOV, G. A., *and* L. N. INDOLEV. Opyt primeneniia statisticheskogo analiza termoèlektrodvizhushchikh sil galenita dlia rasshifrovki pervichnoĭ zonal'nosti rudoobrazovaniia; na primere Verkhne-Menkechenskogo mestorozhdeniia. (Akademiia nauk SSSR. Sibirskoe otdelenie. ĬAkutskiĭ filial. Nauchnye soobshcheniia 1962. vyp. 7, geologiia, p. 135-44, table, graphs, diagr.) 4 refs. Text in Russian. **Title tr.:** Attempt to use statistical analyses of the thermoelectric motive force of galena in the interpretation of primary zoning of ore formation, as exemplified in the Verkhne-Menkech deposits.

Reports study of thermoelectric power and electrical resistivity of galena in the Verkhne-Menkech silver-lead-zinc deposits, in southern Verkhoyansk region of Yakut ASSR. It is established that ore mineralization took place in four consecutive stages, which are characterized: arsenopyrite-pyrite-quartz, pyrite-pyrrhotite, galena-sphalerite-quartz, and sulfide-carbonate. Pulsative zoning as observed in these deposits is briefly interpreted. (DLC.)

71759. GORBUNOV, E. Z. Ob obrazovanii rossypeĭ zolota v usloviiakh merzloty. (Sovetskaia geologiia, June 1962, no. 6, p. 150-55, diagrs.) 13 refs. Text in Russian. **Title tr.:** The formation of gold placers under permafrost conditions.

Reviews the recent literature and discusses the loosening of useful components from primary deposits, formation and age of placers, transport of gold placers from their source, character of glaciations, and other related questions. Observations from the Kolyma and Indigirka basins of Siberia and Magadan province are reported, and N.A. Shilo's conclusions (No. 61591) are challenged: the gold placers of these regions are not of the Quaternary period, but are connected with the Upper Jurassic and Cretaceous tectonic magmatic cycle and gold mineralization. Prospects for finding gold placers in permafrost regions are much greater than usually believed. (DLC.)

71760. GORBUNOV, GRIGORIĬ IVANOVICH. Osobennosti formirovaniia struktury Pechengskogo rudnogo polia, Kol'skiĭ poluostrov. (Vsesoiuznaia ob"edinennaia sessiia po zakonomernostiam razmeshcheniia poleznykh iskopaemykh i prognoznym kartam, 2d, *Kiyev,* 1960. Doklady sessii, chast' 1, p. 168-77.) Text in Russian. **Title tr.:** Features of structural formation of the Pechenga ore field, Kola Peninsula.

Reviews this copper-nickel ore field where some fifty various original ore manifestations have been found, a dozen or more of productive capacity. The Pechenga, Monche, Alla-Akka-Yarvi and Lovozero nickel-bearing deposits are noted, and their connection with basic and ultra-basic rocks is stressed. Tectonic and magmatic processes, structural factors and the formation of the ore field are discussed. (DLC.)

GORBUNOV, GRIGORIĬ IVANOVICH, *see also* Eliseev, N.A., *& others.* Ul'traosnovnye i osnovnye intruzii Pechengi . . . 1961. No. 71238

71761. GORBUNOVA, G. S., *and* E. I. KORCHINSKAIA. Novoe beskhlornoe udobrenie, kaliĭammoniĭfosfat, na suglinistykh solonchakovatykh pochvakh TSentral'noĭ ĬAkutii. (Akademiia nauk SSSR. Sibirskoe otdelenie. ĬAkutskiĭ filial. Nauchnye soobshcheniia, 1960. vyp. 3, p.71-78, tables.) 2 refs. Text in Russian. **Title tr.:** A new chlorine-free fertilizer, potassium-ammoniumphosphate on the loamy solonchak soils of Central Yakutia.

Reports experiments with a new fertilizer (P_2O_5, 50.3%; K_2O, 17.6%; N, 5.3%) at the Chuchur-Muran biological station in 1954-1955. It was used with potatoes under field conditions and with wheat in the greenhouse. Procedures are described in detail and results are tabulated. It was found that these saline soils mostly need nitrogen fertilizers, phosphorus is required only in the light, sandy-loam soils. Potassium is present in abundance and even to excess in the Chuchur-Muran station area. Hence this new fertilizer, without nitrogen has only a negative effect on loamy solonchak soils. (DLC.)

71762 GORBUNOVA, G. S. Osobennosti usvoeniia sveta i fotosintez rasteniĭ v usloviiakh Severa. (Akademiia nauk SSSR. ĬAkutskiĭ filial. Nauchnye soobshcheniia 1961. vyp. 5, Biologiia, p. 33-42, illus., table.) 7 refs. Text in Russian. **Title tr.:**

Characteristics of light utilization and photosynthesis in plants under conditions of the North.

Reports a study of photosynthesis intensity along several points on the line Blagoveshchensk (50° 16′ N. 127° 32′ E.) - Yakutsk - Tiksi (71°-36′ N. 128° 48′ E.). Barley, potatoes, raddish, cabbage, birch and willow were used as test plants. It was found that towards the north, the intensity of phytosynthesis increases during the daylight hours as well as the diurnal production of dry matter. This is highly pronounced in the local wild plants. (DLC.)

71763. GORBUNOVA, Z. N. Glinistye i drugie vysokodispersnye mineraly v osadkakh Beringova moria. (Okeanologiia, 1962. t. 2, vyp. 6, p. 1024-34, illus., tables, charts, diagrs.) 13 refs. Text in Russian. **Title tr.:** Clayey and other highly dispersed minerals in the Bering Sea sediments.

Reports study of sediment fractions smaller than 0.001 mm. in bottom cores taken by the R/V *Vitiaz'* at various stations. Three groups of clayey minerals are distinguished: hydromicas, montmorilonites and chlorides. Some non-clayey minerals are found in small quantities: getite, gibbsite and highly dispersed quartz. The large quantity of hydrophilic matter and partly amorphous silica are characteristic. The quantitative relationship of the clayey minerals differs from station to station, depending on the intensity of mineral transport from land, transport in the water, and alteration of minerals by biochemical factors. The mineral composition of the core changes vertically, montmorilonite decreasing and chloride increasing with depth. (DLC.)

71764. GORBUSHINA, G. N. Geograficheskoe raspredelenie anomal'nogo pogloshcheniia v severnom polusharii. (Geomagnetizm i aëronomiia, 1962. t. 2, no. 2, p. 267-74, tables, maps, graphs.) 12 refs. Text in Russian. **Title tr.:** Geographic distribution of anomalous absorption in the Northern Hemisphere.

Analyzes radio-wave absorption in the ionosphere in respect to magnetic and auroral activity. The 1958 observations are used from 30 ionospheric stations, including Thule, Resolute Bay, drifting stations North Pole -6 and -7, Barrow, Tikhaya Bukhta, Murmansk, Tiksi and others in the Arctic. Geographic zones of maximal recurrence of anomalous absorption are distinguished and mapped. (DLC.)

71765. GORDEEV, V. P., *and* **G. G. LOMONOSOV.** Mnogoriadnoe korotkozamedlennoe vzryvanie na kar'ere Noril'skogo gorno-metallurgicheskogo kombinata. (Gornyi zhurnal, Jan. 1961. no. 1, p. 46-48, illus., tables.) Text in Russian. **Title tr.:** Multiple-row split-second delay blasting in the Noril'sk Mining and Metallurgical Combine pit.

Describes this method, initiated in 1957, of blasting olivine gabbro-diabase, gabbro-diorite and effusive diabase rock in the Yuzhnyy open-mining pit at Noril'sk. Since 1960 the explosive is placed in several rows of holes 8-11 m. apart, along the side wall of the pit and detonated row by row at 75-100-millisecond intervals. Technical details of drilling the holes and data, partly tabulated, on efficiency of the blasting are discussed; advantages of this method are noted. (DLC.)

71766. GORDIENKO, PAVEL AFANAS'EVICH. The Arctic Ocean. (Scientific American, May 1961. v. 204, no. 5, p. 88-102, illus., diagrs., maps.)

Reviews early and recent Russian exploration and research in arctic seas. Descriptions are given of weather, ocean currents and ice drift, bathymetry, waters, ice islands, also features of geomagnetism. Life on the Soviet drifting stations is sketched. Recent map revisions are noted. (DLC.)

71767. GORDIENKO, PAVEL AFANAS'EVICH. Nauchnye nabliudeniia i usloviia dreifa stantsii "Severnyi polius"; k 25-letiiu nachala dreifa stantsii "Severnyi polius-1." (Problemy Arktiki i Antartiki. Sbornik statei, 1962. vyp. 11, p. 9-23, tables, map.) 5 refs. Text in Russian. **Title tr.:** Scientific observations and drift conditions of the North Pole stations; on the 25th anniversary of drifting station North Pole-1.

Reviews the purpose, directions, main problems, geographic distribution, scope of work, etc. of the ten drifting stations set up during 1937-1962. For each are stated the activities of the station, the date and location (coordinates) of beginning and end of the drift, its actual and point-to-point length, its duration and speed. By Apr. 1962, these drifting stations had achieved 6224 days of work. The types of observations and most scientific personnel are reported for each. Various studies are outlined and progress in instrumentation is noted. The ice on which stations were set is discussed, its fractures, hummocks, etc (DLC.)

71768. GORDIENKO, PAVEL AFANAS'EVICH, *and* **V. V. PANOV.** V sektsii Severnogo Ledovitogo okeana. (Okeanologiia, 1961. t. 1, vyp. 4, p. 761-62.) Text in Russian. **Title tr.:** In the Arctic Ocean Section.

Reports a conference at the Oceanographic and Ichthyological Commissions of the Academy of Sciences, in Murmansk, Dec. 20-21, 1960; it was attended by 35 representatives of the Arctic Institute, Polar Institute of Fisheries and Oceanology, White Sea Biological Station, Murmansk Marine Biological Institute, Marine Observatory and Murmansk Administration of Hydrometeorological Stations. Work done during 1960 in the Arctic Basin, and the Barents, Norwegian, Greenland and White Seas and plans for 1961 were reported and discussed. Chairman of the section (N.A. Maslov) and members of its board were elected. (DLC.)

71769. GORDIENKO, PAVEL AFANAS'EVICH, *and* **M. P. KOZLOV.** Vysokoshirotnye vozdushnye ekspeditsii 1956-1962 gg. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962, vyp. 11, p. 105-107.) Text in Russian. **Title tr.:** High-latitude air expeditions 1956-1962.

Reviews the main investigations of these expeditions made in each of seven successive years. Their leaders and geographic coordinates of their operations are stated. The two most recent years' work is treated in greater detail. Oceanog-

raphic investigations, ice studies, resupply of drifting stations, etc. are outlined. (DLC.)

71770. **GORDON, A. H.** Seasonally induced meridional flux of momentum in the atmosphere. (Meteorological magazine, Sept. 1961. v. 90, no. 1070, p. 241-45, plate, graphs.) 6 refs.

Examines seasonal changes in atmospheric circulation, evidenced by changes in mean zonal geostrophic wind indices. Meridional velocities and divergence patterns are calculated by season for the 700-100 mb pressure levels over ten-degree belts of latitude from 90° N. to 60° S. The general Northern Hemisphere pattern of divergence and low pressure from Jan. to July, convergence and high pressure July - Jan., is reversed in the polar region. Also, an unexpected belt of convergence occurs at 60° N. in the Apr. - July period. (DLC.)

71771. **GORDON, DON.** Climbing McKinley. (Alaska sportsman, Nov. 1962, v. 28, no. 11, p. 25–29 +, illus.)

Recounts own experiences and reviews various parties' attempts over different routes 1903-1962. Author achieved the South Peak, July 14, 1961, the 101st individual and one of the 22nd party to do so. (DI.)

71772. **GORDON, JOHN.** Northern Indians, their economic future. (North, Sept. - Oct. 1962. v. 9, no. 5, p. 28-34, illus.)

Discusses problems of the Indians in northern Canada: the decline in fur prices and other factors which stimulated a trend in 1949-1959 from the traditional nomadic hunting, trapping and fishing economy to wage employment in the settlements. Limitations of local economic development hampered employment, however, and many Indians became dependent on government relief. Present policies and programs of the Indian Affairs Branch for Indians in the traditional and transitional economic groups are described. Trapping and handicrafts are to be encouraged. (CaMAI.)

71773. **GORDON, MALCOLM STEPHEN, 1933- , *and others*.** Freezing resistance in some northern fishes. (Biological bulletin, Feb. 1962. v. 122, no. 1, p. 52-62, illus., tables.) 23 refs. *Other authors:* B.H. Amdur *and* P.F. Scholander.

Reports investigation of arctic populations of sculpin and of fjord cod which revealed the presence of small degrees of supercooling and of an antifreeze in the blood. Though much supercooled, these fish were very resistant to freezing in contrast to closely related non-arctic forms. The nature of this resistance is discussed. (DLC.)

71774. **GORDON, PAUL.** Changes in blood serotonin during exposure to cold. (Nature, July 8, 1961. v. 191, no. 4784, p. 183-84, table.) 11 refs.

Reports on investigation of rats exposed for 15 sec. - 20 min. to a temperature of 36-38° F. An increase in blood serotonin was observed in the exposed animals, which varied depending on the technique applied. A participation of serotonin in cardiovascular and/or metabolic adjustment to cold is assumed. (DLC.)

GORDON, WAYNE C., *see* Lindman, E.L. Foundation for Alaska's public schools . . . 1961. No. 73512

71775. **GORELAĬA, V.** Zaochnikam zabotu i podderzhku. (Grazhdanskaĭa aviat͡siia, July 1961. god 18, no. 7, p. 14.) Text in Russian. **Title tr.:** Correspondence-course students should be aided and fostered.

Criticizes low enrollment from the Magadan aviation group's Far Eastern and Krasnoyarsk sections in the Irkutsk Aviation Technical School correspondence courses. The correspondence-course department (author, deputy chief) was set up in 1960, and has several mechanics from Noril'sk, Yakutsk, and Podkamennaya Tunguska among its students. (DLC.)

GORELIKOV, N. A., *see* Nesterenko, I.P., & N.A. Gorelikov. Vyĭavlenie merzlykh linz . . . 1960. No. 74303

71776. **GORĬACHEV, A.V.** Osnovnye zakonomernosti geotektonicheskogo rezhima Kurilo-Kamchatskoĭ skladchatoĭ zony. (Akademiia nauk SSSR. Doklady, Jan. 1, 1962. t. 142, no. 1, p. 152-55, diagrs.) 11 refs. Text in Russian. **Title tr.:** The main patterns of the tectonic regime of the Kuril-Kamchatka folding zone.

Summarizes recent tectonic movements in this zone as closely related to its volcanism, seismicity, gravity, and coastal structure. Areas of the most striking uplift and downwarping are identified and interpreted from Hokkaido Island north to the Aleutian arc. Manifestation of tectonic movements is compared with that of volcanism and seismicity and some similar patterns are recognized. The character of the jointing of Asian continental structures with Pacific oceanic structures is described. (DLC.)

GORĬACHEV, A. V. *see also* Pacific Science Congress. 1961. No. 74619

71777. **GORĬAEV, M.I.** Stratigrafiia tretichnykh otlozheniĭ t͡sentral'noĭ chasti Kamchatki. *(In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p. 193-97.) Text in Russian. **Title tr.:** Stratigraphy of Tertiary deposits in the central part of Kamchatka.

Distinguishes two geologic-structural zones, one of upheavals, the other volcanic, both in the Sredinnyy massif. Stratigraphy, distribution, thickness, flora remains, and age of the Tertiary deposits are described. (DLC.)

71778. **GORĬAINOV, I. N.** Gidrotermal'noe pirrotino-khal'kopiritovoe orudenenie v srednem techenii rr. Avam i Verkhniĭ Khugdīukant. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei . . . vyp. 16, 1961, *its:* Trudy t. 123, p. 166-78, illus.) 7 refs. Text in Russian. **Title tr.:** Hydrothermal pyrrhotite-chalcopyrite mineralization on the middle reaches of the Avam and Verkhniy Khugdyukant Rivers.

Reports this mineralization occurring in veins, sheet ore deposits, lenses and other forms. Structure and texture of pyrrhotite-chalcopyrite ores are characterized. Their composition is analyzed and ore minerals such as pyrrhotite, pyrite, chalcopyrite, magnetite and ilmenite, marcasite, and others are described. Chemical analyses (11) are reported; copper, cobalt and nickel are noted as

useful components, but their content is small. (DLC.)

71779. **GORĬUNOVA, L. N.** Klon odnodomnoĭ osiny *Populus tremula* L. na Kol'skom poluostrove. (Botanicheskiĭ zhurnal, May 1961. t. 46, no. 5, p. 705-707, illus., table.) 5 refs. Text in Russian. **Title tr.:** A clone of monoecious aspen, *Populus tremula* L. on the Kola Peninsula.

Reports earlier records of this kind and the finding of a clone of 53 aspen, 14 of them blooming. Length of catkins, number and kind of flowers, etc. are noted. (DLC.)

GORLOV, NIKOLAĬ VASIL'EVICH, *see* Shurkin, K.A., & *others*. Belomorskiĭ kompleks . . . 1962. No. 75625

71780. **GORODENSKIĬ, N. B.,** *and others*. Issledovanie na modeli vozdeĭstviĭ techeniĭ i volneniĭa na avtonomnuĭū stantsiiū nabliūdeniĭ za techeniĭami. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t. 120, Metodika okeanologicheskikh issledovaniĭ, sbornik stateĭ, vyp. 1, p. 13-22, graphs, table.) Ref. Text in Russian. *Other authors:* N.F. Kudriavtsev *and* V.G. Labeĭsh. **Title tr.:** Model-scale study of the effects of currents and waves on automatic stations for current observations.

Describes laboratory set-up for studying the Alekseev self-recorder under simulated conditions (scale 1:30). Visual as well as photographic observations were made of the change in depth of immersion as a function of current velocity (0.25-1.5 m./sec.), recorder depth, and length and diameter of the anchoring cable. Data are presented on amplitudes of oscillations in the recording elements caused by surface waves, as a function of wave height, length, and period, and depth of immersion. Methods are reviewed for computing the optimum scale of model-scale experiments. (CaMAI.)

GORODINSKIĬ, S. M., *see* Burnaziān, A.I., & *others*. Obespechenie radiatsionnoĭ bezopasnosti . . . 1961. No. 70464

GOROKHOVSKIĬ B. O., *see* Soboleva, V.I., & *others*. Vosstanovlenie . . . 1962. No. 75787

GORSHKOV, A. I., *see* Ginzburg, I.V., & A.I. Gorshkov. O grafite . . . 1961. No. 71695

71781. **GORSHKOV, G. S.** Determination of the explosion energy in some volcanoes according to barograms. (International Association of Volcanology. Bulletin volcanolgique, 1960. sér. 2, t. 23, p.141-44, graphs.) 5 refs. Paper read at the symposium.

Calculates, using a revised Taylor formula (E (ergs) = $1.25 \times 10^{20} \sin \Phi \Sigma \frac{A^2 t}{2}$) the explosion air wave energy produced by the eruptions of: Krakatao 1883, Bezymyannyy 1956, and Mont Pelée 1902, by substituting the alteration of amplitude in pressure (mb) as recorded on barograms for the original values. Results are respectively: 8.6×10^{23}, 6.4×10^{22}, and 4.7×10^{21} ergs; recommends supplying barographs and microbarographs to volcanological observatories. (DGS.)

71782. **GORSHKOV, G. S.,** *and* **K. K. ZELENOV.** Dolina geĭzerov. (Priroda, Nov. 1962. god 51, no. 11, p. 65-75, illus.) Ref. Text in Russian. **Title tr.:** Geyser Valley.

Describes from air and ground observations, a valley in Kamchatka, discovered in 1941 and studied since 1945. It has more than 20 geysers, of which the six largest erupt to a height of over 10 m. The Fontan, Velikan, Zhemchuzhnyy, Bol'shoy and Malyy are described in some detail, noting position, measurements, periodicity of eruption, water temperature, and other features. Volcanoes and streams of the geyser area are also characterized. (DLC.)

71783. **GORSHKOV, G. S.,** *and* **I. I. TOVAROVA.** Geochemical effect of the Bezymianny volcano eruption. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Proceedings *pub.* 1961. v. 12, geology and geophysics, p. 244, tables.)

Reports (as in No. 51300) determinations of the amount of dissolved material carried away by surface water passing through the ashes and agglomerate flow from this eruption. The Cl', SiO_2, Fe, Ca'', Mg'', Na, K, and SO_4'' contents are determined (methods described) for ashes falling during the initial eruption period, the main explosion, and for the agglomerate flow. The total quantity of dissolved material is calculated as 21.10^6 tons. (DI.)

71784. **GORSHKOV, G. S.** Izuchenie vulkanov Kamchatki. *(In:* Akademiia nauk SSSR. Komissiia po problemam Severa. Syr'evye resursy . . . 1961, p. 109-114.) Text in Russian. **Title tr.:** Study of Kamchatka volcanoes.

Reports the status of investigation of the 28 volcanoes, some active ones: Sheveluch, Klyuchevskiy, Tolbachik and others briefly characterized. Types, activity and other features of Kamchatka volcanoes are described. Tasks of volcanology and expansion of observations are noted. (DLC.)

71785. **GORSHKOV, G. S.** The Kamchatka Valley of Ten Thousand Smokes. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Proceedings *pub.* 1961. v. 12, geology and geophysics, p. 237-39, map.)

Reports (as in No. 51303) on the explosion of Bezymyannaya Sopka on Mar. 30, 1956, formation of an agglomerate flow in the valley of the Sukhaya Kapitsa River, its characteristics, related fumarolic activity, etc. This eruption and sequelae are similar to the Katmai eruption and formation of the Valley of Ten Thousand Smokes in Alaska in 1912; some misconceptions of the Alaskan occurrences are indicated. (DI.)

71786. **GORSHKOV, G. S.** O sviazi vulkanicheskikh i seismicheskikh iavleniĭ pri izverzhenii vulkana Bezymianny, 1955-1956 gg. (Akademiia nauk SSSR. Vulkanologicheskaia stantsiia. Biūlleten', 1961, no. 31, p. 32-37, diagr.) 10 refs. Text in Russian. **Title tr.:** The relation of volcanic and seismic phenomena in the eruption of Bezymyannyy Volcano in 1955-1956.

Distinguishes five periods: pre-eruptive from the first seismic shock to the first eruption Sept. 29 - Oct. 22, 1955; the eruptive ash ejection, Oct. 22 - Nov. 1955; moderate activity from the end of November to the end of March; the paroxysmal

explosion on Mar. 30, 1956; and the uninterrupted growth of a new cupola in the crater, April - July 1956. Over 30,000 seismic shocks and earthquakes were recorded by the station in Klyuchi. Their distribution over this period and log. of their energy in ergs (from 10^{16} to 10^{19}) are diagrammed and discussed, with conclusion that the amount of seismic energy does not exactly correspond to the number of shocks. Seismic observations are important for forecasting eruptions. (DLC.)

71787. GORSHKOV, G. S. On the relations between seismic and volcanic phenomena and the energy balance of the Bezymianny volcano eruption. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1956. Proceedings *pub.* 1961. v. 12, geology and geophysics, p. 181-84, graph.)

Five stages of the eruption are described, and the number and intensity (not coincident) of the accompanying earthquakes related to the volcanic activity. Tectonic (7×10^{23} ergs) and thermal (3.6×10^{25} ergs) energy of the eruption are compared, also the energy (4×10^{23} ergs) of the main explosion on Mar. 30, 1956. Magmatic energy is indicated as the primary factor of the eruption, with seismic effects secondary. (DI.)

71788. GORSHKOV, G. S. Some results of seismometric investigations at the Kamchatka Volcanological Station. (International Association of Volcanology. Bulletin volcanologique, 1960. sér. 2, t. 23, p. 121-28, graphs.) 7 refs. Discussion in French, p. 127-28. Paper read at the 1959 symposium.

Distinguishes peculiarities of earthquakes connected with the activity of Klyuchevskaya Sopka in 1951, and of Bezymyannaya Sopka, 43 km. distant, during its 1955-56 eruption, on the basis of seismograms obtained at this station. The possibility is suggested of predicting occurrence and severity of eruptions from seismological records. Need for examples of volcanic, volcano-tectonic and tectonic type seismograms is pointed out in the discussion. (DGS.)

71789. GORSHKOV, G. S., *and* **G. E. BOGOÏAVLENSKAÏA** Sopka Bezymiannaia v 1956-1958 gg. (Akademiia nauk SSSR. Vulkanologicheskaia stantsiia. Biulleten', 1961, no. 31, p. 17-22, illus.) Text in Russian. **Title tr.:** Bezymyannaya Sopka in 1956-1958.

Reports on the growth of the new cupola in the crater of Bezymyannyy Volcano, formed after the explosion of Mar. 30, 1956, and on its petrographic and chemical composition. Based on authors' field work including aerial observations. (DLC.)

71790. GORSHKOV, G. S. *and* **S. I. NABOKO.** Sovremennyĭ vulkanizm Kamchatsko-Kuril'skoĭ dugi. (Vsesoiuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p. 16-25, tables, diagrs.) Text in Russian. **Title tr.:** Present volcanism of the Kamchatka-Kuril arc.

Notes 67 active volcanoes of this region, their distribution, geologic position and types. For various volcanoes, the petrographic and chemical properties of magmas are analyzed and data presented. Pyroxene andesites predominate. (DLC.)

71791. GORSHKOV, G. S. Volcanic zone of the Kurile Islands. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957, Proceedings *pub.* 1961. v. 12, geology and geophysics, p. 185-90, map, tables.) 4 refs.

Reports, from investigations between 1946 and 1954, the locations (mapped) and characteristics of 89 active and extinct volcanoes on this island arc. Dates of the last eruption of active volcanoes are included, also some chemical analyses of recent lavas. Strato-volcanoes predominate. (DI.)

71792. GORSHKOV, G. S. Zametki ob izverzhenii Karymskogo vulkana v 1960 g. (Akademiia nauk SSSR. Vulkanologicheskaia stantsiia. Biulleten', 1962, no. 32, p. 24-32, illus.) 29 refs. Text in Russian. **Title tr.:** Notes on eruption of Karymskiy Volcano in 1960.

Reports own (Sept. 14 - Oct. 9) and others' ground and aerial observations of this volcano in southeast Kamchatka, its crater: 54° 02′.8 N. 159° 28′.5 E., altitude: 1486 m. Weak eruptions began in winter and spring 1960, increased in frequency and violence, and by October the vapor and ash rose to 1 km. at 15 minute intervals. Data are given on the mechanical properties and chemical composition of the ash. Previous eruptions and studies are reviewed. Karymskiy formerly called Sopka Berezovaya has been often confused with neighboring volcanoes, Bol'shoy and Malyy Semyachik, Kikhpinych. (DLC.)

GORSHKOV, G. S., *see also*

Pacific Science Congress. 1961. No. 74619

Vlodavets, V.I., *& others.* Zadachi . . . 1962. No. 76407

71793. GORSHKOV, S. P. Geologicheskiĭ vozrast i paleogeograficheskie osobennosti formirovaniia terras srednego techeniia Eniseia. (Akademiia nauk SSSR. Doklady, Apr. 11, 1961. t. 137, no. 5, p. 1181-84.) 18 refs. Text in Russian. **Title tr.:** Geologic age and paleogeographic features in the formation of terraces of the middle reaches of the Yenisey River.

Distinguishes nine terraces of the Yenisey in the vicinity of Krasnoyarsk: vii (130-140 m.), vi (100-120), v (70-80), iv (35-50), iii (25-35), ii (14-18), i (8-12), and one upper terrace and a flood plain. Each is described in turn, noting its composition, and age based on paleontologic data, especially of mammals. (DLC.)

71794. GORSHKOV, S. P. K izucheniiu periglîatsial'nykh iavleniĭ oblasti srednego techeniia Eniseia. (Moskva. Universitet. Vestnik ser. 4, geologiia, Mar. - Apr. 1962. no. 2, p. 51-59, illus., diagrs.) 12 refs. Text in Russian. **Title tr.:** On an investigation of periglacial phenomena in the middle Yenisey region.

Describes ground pseudomorphs developed in ice veins as studied in the terraces of the Yenisey and Angara (between 56° and 60° N.). The thawed ice veins and material filling them are outlined. Spore and pollen analyses show that the ice veins originated from the climate of the region and under conditions of permafrost. Stratigraphic

position of previous ice veins is interpreted. (DLC.)

71795. GORSHKOV, S. P. K voprosu o proiskhozhdenii i stratigraficheskom polozhenii "pokrovnykh" galechnikov basseĭna srednego techeniĭa r. Eniseĭa. (Moskva. Universitet. Vestnik ser. 4, geologiia, July - Aug. 1961, no. 4, p. 32-42, diagrs., map.) 8 refs. Text in Russian. **Title tr.:** On the origin and stratigraphic position of "cover" pebbles in the middle Yenisey River basin.

Reports a study of Quaternary deposits during 1957-1960 between Krasnoyarsk and Ust'-Pit. The so-called cover pebbles were deposited there in the course of the upper Paleogene and the Neogene. Genetically they are alluvial features of the old Yenisey River. (DLC.)

71796. GORSHKOV, S. P., *and* N. O. RYBAKOVA. O sostave i vozraste èopleĭstotsenovykh otlozheniĭ Krasnoĭarskogo raĭona. (Akademiia nauk SSSR. Doklady, Nov. 21, 1961. t. 141, no. 3, p. 683-86, diagrs.) 13 refs. Text in Russian. **Title tr.:** On the composition and age of Eopleistocene deposits of the Krasnoyarsk region.

Reports the mineralogical composition and spore-pollen analyses of deposits on the left bank of the Yenisey north of Krasnoyarsk. They are distributed on the 130-140 m. terrace, considered the seventh above the flood plain. Spore-pollen diagrams of two sites are presented and the prevailing fossil plants noted. The deposits are of Eopleistocene, i.e. end of Pliocene - beginning of lower Quaternary, time. (DLC.)

71797. GORSHKOVA, T. I., *and* I. V. SOLĬANKIN. The grounds, water masses, and regime of the Norwegian - Greenland Basin and adjacent areas. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v. 149, Contributions to Special IGY Meeting 1959, p. 44-45.)

Summarizes study of material collected by Soviet expeditions in 1933-34 and 1954-58. Origin of water masses; chemical character of the bottom deposits, and their relation to the bottom relief and the water masses, are considered. (DI.)

71798. GORSHKOVA, T. I. Organicheskoe veshchestvo v osadkakh Norvezhskogo moria i usloviia ego nakopleniia. (Moskva. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziĭaĭstva i okeanografii. Trudy 1962. t.46, p.38-57, illus., tables, maps.) 19 refs. Text in Russian. **Title tr.:** Organic matter in sediments of the Norwegian Sea and conditions of its accumulation.

Reports a study based on materials collected in 1954-1955 and 1957-1959, with an introductory part on the bottom configuration of this sea and the physical character of its sediments. The amount of organic matter found was low, 1.8% of C, as compared with 3.12% for a shelf sea like the Barents Sea. Considerable depth and distance from land are the main factors responsible for the low organic content. Its character is compared with that of contiguous seas. (DLC.)

71799. GORSHKOVA, T. I. Usloviia nakopleniia organicheskogo veshchestva v morskikh osadkakh. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy 1960. t.10, vyp.2, Khimiia moria, p.56-60, tables.) 5 refs. Text in Russian. **Title tr.:** Sedimentation conditions of organic matter in the marine deposits.

Reports on various seas of the USSR, including White and Barents Seas, discussing briefly the climate, bottom topography, currents, geologic factors, depths, distance from shore, and other conditions which affect organic matter content and distribution. (DLC.)

71800. GORSKIĬ, VASILIĬ PETROVICH. K voprosu o korreliatsii permskikh otlozheniĭ Kamskogo Priural'ia i Pechorskogo kamennougol'nogo basseĭna. (Leningrad. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy, nov. ser. 1961. t.67, Materialy po geologii Urala, sbornik stateĭ, p.59-80, table, geol. sections.) 27 refs. Text in Russian. **Title tr.:** On correlation of Permian deposits of the Kama Ural and the Pechora coal basin.

Presents a scheme for the Permian of the Kolva-Vishera region and the southern part of Pechora coal basin, using cycles of sedimentation as a basis for correlation. It is the first such attempt as paleontologic and mineralogic methods do not offer good possibilities for correlation. (DLC.)

71801. GORSKIĬ, VASILIĬ PETROVICH, *and* E. A. GRAMMATCHIKOVA. Znachenie izvestniakovykh brekchiĭ kamennougol'nogo vozrasta v vyiasnenii osobennosteĭ tektonicheskogo razvitiia Zapadno-Ural'skogo progiba. (Leningrad. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy, nov.ser. 1961. t.67. Materialy po geologii Urala, sbornik stateĭ, p.101-105.) 12 refs. Text in Russian. **Title tr.:** Carboniferous limestone breccias and the tectonic development of the West Ural downwarp.

Describes limestone breccias in the upper Pechora, Shchugor, and Vangyr basins, and in other areas of the Pechora Ural in Komi ASSR. A lack of agreement is noted on their origin. The view of A.I. Eliseev, q.v., proponent of a sedimentary origin, is rejected. Some evidence is presented indicating that these breccias are of tectonic origin. (DLC.)

71802. GORSTKA, V. N. O kontaktnykh vzaimootnosheniiakh Kuèl'porskogo apatito-nefelinovogo tela. *(In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy geologii. . . 1961, p.22-28, illus.) 2 refs. Text in Russian. **Title tr.:** On the contact interrelations of the Kuel'por apatite-nepheline body.

Describes contact interrelation of aegrine nepheline-syenites with the enclosing of ijolite-urtite rock complex in the northwestern part of the Khibiny massif, Kola Peninsula. Upper and lower contact zones are distinguished, the mode of contact metamorphism is described and variation in texture and grain size of the apatite-nepheline is noted. (DLC.)

71803. GORTSEVSKAIA, VALENTINA AVGUSTOVNA. Nekotorye osobennosti tokkinskogo govora èvenkiĭskogo iazyka. (Leningrad. Universitet. Nauchnyĭ biulleten', 1948. no.20, p.37-38.) Ref. Text in Russian. **Title tr.:** Some characteristic features of the Tokko speech of the Evenki language.

Discusses some morphological and syntactic

peculiarities of the dialect of an isolated Tungus group along the Tokko River in the Olekma basin, Yakut ASSR. (DLC.)

71804. GORTSEVSKIĬ, ALEKSANDR ANDREEVICH. Foneticheskie trudnosti pri obuchenii ėvenkov (tungusov) russkomu iazyku. Leningrad, Izd-vo Glavsevmorputi, 1939. 133 p. tables, graphs. Approx. 120 refs. Text in Russian. **Title tr.:** Phonetic difficulties in teaching Russian to Evenki-Tungus.

Comparative study of Evenki and Russian phonology. Advice is given on methods of teaching correct enunciation, vocabulary, and the spelling of Russian words alien to the Evenki phonetic system. (DSI.)

71805. GOSTILOVSKAIA, MARIIA GAVRILOVNA, 1911– . K faune mshanok Novoĭ Zemli; proliv Matochkin Shar i zaliv Mollera. (Akademiia nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962, vyp.4 (8), p.64-96, illus., tables, map.) 12 refs. Text in Russian. **Title tr.:** Bryozoan fauna of Novaya Zemlya; Matochkin Shar Strait and Mollera Bay.

Reports on material collected on expeditions since 1900, with an introduction on earlier work and the areas studied. Some 92 forms are described from the Strait and 23 from Mollera Bay. Depth of find(s), substrate, structure of colony, morphology, synonyms, earlier records, etc. are noted. Distribution is tabulated. (DLC.)

71806. GOTT, VINCENT L., *and others*. Myocardial energy substances in the dog heart during potassium and hypothermic arrest. (Journal of applied physiology, Sept. 1962. v.17, no.5, p.815-18, illus., table.) 11 refs. *Other authors:* M. Bartlett, D.M. Long, C.W. Lillehei *and* J.A. Johnson.

Study of biopsy material for AMP, ADP, ATP, phosphocreatine, inorganic phosphate, glycogen, lactic and pyruvic acids. Results and earlier data indicate "that selective hypothermic arrest is tolerated far better than potassium citrate arrest." (DLC.)

GOUNOT, J., *see* Marion, P., & *others*. Données hémodynamiques . . . 1960. No. 73811

71807. GOVOROV, P. M. Nekotorye osobennosti razvitiia gibridnykh form kukuruzy v IAkutii. (Akademiia nauk SSSR. IAkutskiĭ filial. Nauchnye soobshcheniia 1961. vyp.5, Biologiia, p.43-50, tables.) Text in Russian. **Title tr.:** Some characteristics in the development of hybrid corn in Yakutia.

Describes experiments in the Chuchur-Muran station, including soil, fertilizer and the (four) kinds of hybrid corn raised. Weather, and phenology of the plants, yields of green plants for fodder, etc. are reported. (DLC.)

71808. GOVOROV, P. M. O nekotorykh otkloneniiakh v razvitii sortsvetiĭ kukuruzy v usloviiakh tsentral'noĭ IAkutii. (Yakutsk. Universitet. Uchenye zapiski, 1959, vyp.6, seriia sel'skokhoziaĭstvennykh nauk, p.99-105, illus., table.) Text in Russian. **Title tr.:** Some anomalies in development of corn inflorescence under central Yakutia conditions.

Notes 100-120 warm days required for even the fast-ripening strains of corn to mature. The short growing season in central Yakutia, only 72-90 frost-free days, scarce precipitation and a permafrost substratum create anomalies in corn growth. Some of those observed at the Chuchur-Muran biological station, male inflorescence on the cob and female inflorescence on the tassel, etc. are described with illus. (DLC.)

71809. GOVOROV, P. M. Vliianie srokov poseva na rost i razvitie rastenii kukuruzy v usloviiakh tsentral'noĭ IAkutii. (Yakutsk. Universitet. Uchenye zapiski, 1959, vyp.6, seriia sel'skokhoziaĭstvennykh nauk, p.85-98, tables.) Text in Russian. **Title tr.:** The effect of sowing time on corn growth and development under central Yakutia conditions.

Reports on the experiments at the Chuchur-Muran experimental station, 7 km. from Yakutsk: air and soil temperatures in June 1954, June and July 1955, dates of sowing (May 20 - June 4), growth of various strains of corn. The best time to plant corn is found to be the same as that for planting other cereals. Maximum green mass for silage is harvested from the strains which have their greatest growth in the warm summer period prior to the onset of cold weather. (DLC.)

GOVORUKHA, L. S., *see* Mikhaĭlov, I.S., & L.S. Govorukha. Pochvy . . . 1962. No. 73983

71810. GOWEN, GEORGE F., *and* G. J. FRIOU. The influence of hypothermia on experimental bacteremia in dogs. (Surgery, Dec. 1961. v.50, no.6, p.919-21, illus.) 11 refs.

Dogs made hypothermic to around 30°C. showed a delay in removal of injected *E. coli* from the blood, as compared to normothermic controls. In the first group, mortality was 62% against none in the controls, further indicating the inability of cooled animals to cope with these bacteria. (DLC.)

71811. GOWEN, GEORGE F. A technique for temperature control in hypothermia. (Journal of applied physiology, Sept. 1961. v.16, no.5, p.937-38, illus.) 2 refs.

Description of equipment and method consisting of a tube with circulating water, surrounded by a rubber balloon. The latter is introduced into the tecto-sigmoid and the circulating water effects cooling (or warming) which is claimed to be better controllable than more conventional methods. (DLC.)

71812. GRACHEVA, O. S. Kharakter lokalizatsii ėndogennogo orudeneniia v srednem techenii Kolymy. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy 1961, n. ser. t.60, Materialy po geologii i mineralogii rudnykh mestorozhdeniĭ SSSR, p.63-72.) 5 refs. Text in Russian. **Title tr.:** Character of the localization of endogenic mineralization on the middle Kolyma.

Reviews the geology and useful ores of the basins of the Seymchan and Lyglykhtakh, Kolyma headwaters in Magadan Province. Paleozoic and Mesozoic deposits are described. The Upper Jurassic, Upper Jurassic-Lower Cretaceous and Upper Cretaceous magmatism, which left ore-bearing intrusions, is characterized. The Bol'shekan'onskiy, Deras-Yurega and Kapchagayskiy massifs are described, their composing rocks indicated. Iron, cobalt, tin, copper, and other ore occurrences are noted and the mode of occurrence is discussed. In the Deras-Yurega massif (63°14'N. 152°02'E.) three tin deposits are recorded. (DLC.)

71813. GRACHEVA, O. S., *and* V. D. AKSENOVA. Mineral'nye assotsiatsii i vertikal'naia zonal'nost'

Chapaevskogo redkometal'nogo mestorozhdeniia. (Leningrad. Vsesoiuznyi nauchno-issledovatel'skii geologicheskii institut. Trudy 1961, n. ser. t.60, Materialy po geologii i mineralogii rudnykh mestorozhdenii SSSR, p.73-80, map, diagr.) 4 refs. Text in Russian. **Title tr.:** Mineral associations and vertical zoning of the Chapayeva rare metal deposits.

Describes three groups of dislocations in these deposits in the Deras-Yurega Upper Cretaceous intrusion (cf. *supra*), already in tin production. Their main typomorphic minerals are: quartz, arsenopyrite, pyrite, cassiterite, sphalerite, pyrrhotite and calcite. Occurrence and distribution of these and others are characterized. Three stages of mineralization are noted. Reverse vertical zoning of the Chapayeva deposits is described. The tin ores are mostly associated with cassiterite. (DLC.)

GRAHAM, G. E., *see* Hammerschmid, L.J. Rearward communications BMEWS. 1961. No. 71977

71814. GRAINGER, EDWARD HENRY, 1926– . The copepods *Calanus glacialis* Jaschnov and *Calanus finmarchicus*, Gunnerus in Canadian arctic - subarctic waters. "Calanus" series no.21. (Canada. Fisheries Research Board. Journal, Sept. 1961. v.18, no.5, p.662-78, illus., table, map.) 34 refs.

Reports on study of material collected by the *Calanus* and other vessels: specimens from these waters "agree essentially" with *Calanus glacialis* recently claimed by Jaschnov to represent a distinct species; while those from subarctic and boreal seas are *C. finmarchichus*. (DI.)

71815. GRAMBERG, IGOR' SERGEEVICH, *and others.* K voprosu o dal'neishem napravlenii neftepoiskovykh rabot v osnovnykh perspektivnykh raionakh severa Sibiri. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei . . . vyp.16, 1961, *its:* Trudy t.123, p.95-101.) Text in Russian. *Other authors:* M.K. Kalinko, P.S. Puk, *and* D.S. Sorokov. **Title tr.:** On the further direction of oil prospecting in the main promising regions of the Siberian North.

Reviews results of oil prospecting during 1933-1953. The Anabar - Khatanga, Ust'-Yenisey and Lena-Olenek regions are characterized as the most promising and their oil- and gas-bearing properties noted. Since 1953 direct prospecting has ceased and indirect geologic investigations have been continued. In 1958, Minusinneftegazrazvedka began oil prospecting in the Ust'-Yenisey depression. The objectives for the 1961-1965 period are summarized. (DLC.)

71816. GRAMBERG, IGOR' SERGEEVICH, *and* **N. S. SPIRO.** Opyt ispol'zovaniia geokhimicheskikh dannykh dlia fatsial'nogo analiza triasovykh otlozhenii severa Sibiri. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei po geokhimii osadochnykh porod, 1961, vyp.2, p.5-22, diagrs.) 7 refs. Text in Russian. **Title tr.:** Attempt at using geochemical data for facies analysis of Triassic deposits in the Siberian North.

Outlines the lithologic-stratigraphic characteristics of sections of Triassic deposits in the eastern Taymyr, Nordvik and Olenek regions, and in the Verkhoyansk foredeep and folded area. Results of chemical studies are reported. Special attention was given to the adsorbed complex of clayey rocks, their potassium and sodium content and other geochemical features. On the basis of these data, the facies of Lower, Middle and Upper Triassic deposits are analyzed. Marine, lagoon and continental areas for development of these deposits are described. (DLC.)

GRAMBERG, IGOR' SERGEEVICH, *see also* Spiro, N.S., & I.S. Gramberg. Sostav adsorbirovannogo kompleksa glinistykh porod. . .1961. No. 75879

GRAMMATCHIKOVA, E. A., *see* Gorskii, V.P., & E.A. Grammatchikova. Znachenie. . .Zapadno-Ural'skogo progiba. 1961. No. 71801

71817. GRANIK, GRIGORII IL'ICH. Voprosy osvoeniia prirodnykh resursov Severo-Vostoka SSSR. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia, 1961, no.7, p.3-12.) Text in Russian. **Title tr.:** Resource development in the Soviet Northeast.

Outlines the present status and development prospects in diamond, salt, petroleum and natural gas production in Yakutia; and in gold and tin mining in Yakutia and Magadan Province. Transportation requirements for the industrial regions are discussed, including the 3,100 km. Bam-Chul'man - Aldan - Tommot - Yakutsk - Kadykchan - Magadan railroad. Diamond production by 1965 is planned to be 20-25 times that of 1958. (DLC.)

71818. GRANLUND, JOHN. En laxpata från Finnmarken. (Norveg; tidsskrift for folkelivsgransking, 1961. v.8, p.249-68, 8 illus., diagr.) 4 refs. Text in Swedish. Summary in English. **Title tr.** A salmon weir from Finnmark.

Describes principal features of salmon weirs found in northern Norway and Finland by the 1948 Finnmark expedition sponsored by the Nordic Museum, Stockholm. Their main parts are high, weighted tripod supports, the weir wall of closely placed vertical stakes, and the net trap or catching implement. Variants in Finnmark province of Norway, and Utsjoki province of Finland, are compared. A model in the Nordic Museum resembles weirs of the Tana River in Finnmark. (DLC.)

GRANT, C.L., *see* Brown, J., & *others.* Mineral composition . . . drainage waters . . . 1962. No. 70399

71819. GRANTZ, ARTHUR, 1927- , *and* **J. A. WOLFE.** Age of Arkose Ridge formation, south-central Alaska. (American Association of Petroleum Geologists. Bulletin, Oct. 1961. v.45, no.10, p.1762-65, map, table.) 8 refs.

Proposes an Albian or possible Cenomanian (Cretaceous) age for this "stratigraphic enigma" along the north side of the Castle Mountain fault, on the basis of new fossil plant collections from the vicinity of 61°45′N. 149°W. Correlation of the Arkose Ridge formation with mollusc-dated marine beds in the lower part of the Matanuska formation is also suggested. (DGS.)

71820. GRANTZ, ARTHUR, 1927- . Geologic map and cross sections of the Anchorage (D-2) quadrangle and northeasternmost part of the Anchorage (D-3) quadrangle, Alaska. Washington, D.C. 1961. Map sheet 35½x34 in. (U.S. Geological

Survey. Miscellaneous geologic investigations. Map I-342.) Ref.

Map at scale 1:48,000, contour interval 100ft., covers area northeast of Anchorage 61°45′-62°N. 147°22′30″–147°45′W., including parts of the Talkeetna Mts., the Matanuska River basin, and the Chugach Mts. Legend identifies Jurassic lavas, sandstones, siltstones and shales, Cretaceous sediments, Eocene felsic plugs and dikes, also conglomerate etc., Pleistocene deposits, as well as structural features. North-south and east-west sections show the Caribou fault, the extensive Matanuska formation (Upper Cretaceous), etc. Mapping was done in 1952, 1953, and 1957. (DGS.)

71821. GRANTZ, ARTHUR, 1927- . Geologic map of the north two-thirds of Anchorage (D-1) quadrangle, Alaska. Washington, D.C., 1961. Map sheet 31½x23½ in. (U.S. Geological Survey. Miscellaneous geologic investigations. Map I-343.) Ref.

Map at scale 1:48,000, contour interval 100 ft., shows geology of the area east of items above. Caribou Fault, the Matanuska formation and other features are shown in the upper Matanuska basin. Mapping carried out in 1955, 1957. (DGS.)

71822. GRANTZ, ARTHUR, 1927- , *and others.* Saline springs, Copper River lowland, Alaska. (American Association of Petroleum Geologists. Bulletin, Nov. 1962. v.46, no.11. p.1990-2002, maps, tables.) 22 refs. *Other authors:* D.E. White, H.C. Whitehead, *and* A.R. Tagg.

Saline water occurs in a large area in the southeastern part of this lowland, seeps from springs and mud cones, contributes to the ground water, and increases the salt content of the Copper River and some of its tributaries. General geologic map shows distribution of surface deposits and indicates limits of underlying rocks; also shown is chloride content of the Copper River and some of its tributaries. General geologic map shows distribution of surface deposits and indicates limits of underlying rocks; also shown is chloride content of streams and location of mud cones. A more detailed map, scale 1 in.: approx. .15 mi., shows types of water and associated gases of about 20 springs and wells. Composition of most spring waters is similar to one type of connate water found in marine sedimentary rocks and oil-field brines; accompanying gases are mostly methane and nitrogen. Analyses of waters and gases and comparison with some other waters as well as examination of fossils in mud cones, indicate an origin in Upper Cretaceous or older marine sedimentary rocks, with some waters resulting from mixing at depth with fluids of volcanic, metamorphic, or other origin. Chemical data favor a metamorphic origin. (DGS.)

71823. GRAVE, M. K. Rel'ef oblasti razvitiia dolednikovoĭ kory vyvetrivaniĭa k iūgu ot Khibin i priznaki drevnego karsta. (*In:* Voprosy geomorfologii . . . Kol'skogo poluostrova, 1960. no.1, p.160-71, table, maps, diagrs.) 4 refs. Text in Russian. **Title tr.:** Relief of a region with developed preglacial crustal weathering south of Khibiny, and signs of old karst.

Reports geologic-geomorphic study of a region between the upper Chernaya and right bank of the Umba Rivers, south of the Khibiny massif. According to geologic structure and relief forms, three areas are distinguished and characterized. Three types of occurrence of preglacial crustal weathering *in situ* are recognized. Sections and products of this weathering are described. Evidences are presented on the development of preglacial karst, and its extent is described. (DLC.)

71824. GRAVE, NIKOLAĬ ALEKSANDROVICH, *and* **I. N. NEKRASOV.** Nekotorye nabliūdeniĭa za termokarstom v raĭone poselka Anadyrĭa. (Problemy Severa, 1961. vyp.4, p.157-64, illus., tables, plans.) 7 refs. Text in Russian. **Title tr.:** Some observations on thermokarst near the town of Anadyr.

Reports on studies since 1935 at the Anadyr permafrost research station test site in the Melkiy Creek valley. The fossil ice melting process which created many thermokarst lakes in this area long ago is now going on only sporadically. It occurs in spots where surface conditions have been seriously disturbed by human activity such as removal of plant cover or by erosion from floods; it has no relation to the warming of the Arctic. (DLC.)

71825. GRAVE, NIKOLAĬ ALEKSANDROVICH. Teplovoĭ balans poverkhnostnogo sloĭa gornykh porod v raĭone sovremennogo oledeneniĭa i na nizmennosti Vostochnoĭ IAkutii. (Issledovaniĭa lednikov i lednikovykh raĭonov, 1962. vyp.2, p.161-75, tables, graphs.) 5 refs. Text in Russian. Summary in English. **Title tr.:** Heat balance of the surface layer of rocks in the region of present glaciation and in the lowlands of eastern Yakutia.

Reports heat balance measurements in the active layer of the surface (to a depth of 20 m.) made mainly in 1958 in the IGY program. Observation results are reported and evaluated for the high mountain station on Suntar-Khayata Ridge (2076 m. above sea level) and for the Tomtor meteorological station at 740 m. elevation and about 150 km. northeast of Suntar-Khayata. The heat regime of the active layer differs substantially in the mountain areas from that in the lowlands. In the former, the heat balance in 1958 was negative; in the lowlands it was equal to zero. The factors affecting heat balance such as precipitation, evaporation, radiation balance, etc. are analyzed. (DLC.)

71826. GRAVES, HELEN. Mental Health Division holds first professional staff group conference. (Alaska's health and welfare, June 1961. v.18, p.4.)

Notes agenda, financial and personnel aid for the conference; the Harborview Nursing Home at Valdez with 58 beds, the Alaska Psychiatric Institute in Anchorage with 225 beds and their effect, especially on hospital-community integration; public aid. (CaMAI.)

GRAY, G. C., *see* Edwards, A.M., & G.C. Gray. Observations on juvenile hypothyroidism. . .1961. No. 71191

71827. GRAYSTONE, PETER. The introduction of topographic and frictional effects in a baroclinic

model. (Royal Meteorological Society. Quarterly journal, July 1962. v.88, no.377, p.256-70, maps, graph, tables.) 9 refs.

Discusses effects of large-scale topography and surface friction on short-range (24-hr.) numerical forecasts, using a baroclinic two-parameter prediction model. Comparison with actual charts showed no overall improvement in accuracy from the introduction of topographic effects, but substantial differences in the forecast pattern were noted in the southern Greenland area. Introduction of surface friction into the predictive equations resulted in an overall decrease in the forecast gradients, with little change in the forecast pattern. (DWB.)

71828. *GRAZHDANSKAĬA AVIATSIIA.* Kraĭ novostroek, kraĭ aviatsii. (Grazhdanskaĭa aviatsiia, Sept. 1961. god 18, no.9, p.16-17, illus.) Text in Russian. **Title tr.:** Land of new development, land of aviation.

Two-page sketch map of air routes, in Krasnoyarskiy Kray with photo inserts and legends on industrial development, etc. The Krasnoyarsk-Yeniseysk-Turukhansk-Igarka-Dudinka and Igarka-Noril'sk routes are included. (DLC)

71829. *GRAZHDANSKAĬA AVIATSIIA.* Sibir' aviatsionnaĭa. (Grazhdanskaĭa aviatsiia, Apr. 1961. god 18, no.4, p.2-25, illus., maps.) Text in Russian. **Title tr.:** Air-minded Siberia.

Presents a score or more communications from fliers describing their exploits in East Siberia, aims, suggestions, etc. Map shows the 1958-1961 increases in air freight and passengers, also indicates flight routes, among others, from Kirensk-Yerbogachen, -Mirnyy, -Vitim, and - Nyurba. (DLC.)

71830. **GREAT BRITAIN.** *Hydrographic Dept.* Admiralty list of lights, fog signals and visual time signals; Arctic Ocean, arctic coast of the U.S.S.R. from Norwegian border to Bering Strait, corrected to 15th May, 1961. London, Hydrographic Dept., Admiralty 1961. xxiv, 123 p. map on back cover, diagr., graph, tables. (*Its:* vol. M, 1961, item no.85.) Supersedes No. 34988.

Lists these aids to navigating on the USSR arctic coasts and shelf seas. Special remarks deal with extinguishing of lights because of ice, etc. (CaMAI.)

71831. **GREAT BRITAIN.** *Ministry of Agriculture, Fisheries and Food. Fisheries Laboratory, Lowestoft.* East Greenland fishing. Sept. 1960. 5 l. maps. (*Its:* Laboratory leaflet no.25.)

Summarizes results obtained by the *Ernest Holt* in 1960, also some recent foreign studies. Trawling for cod in summer (Aug.-Sept.) gave poor yield on offshore banks; the cod evidently moves inshore where no suitable trawling grounds are known. Deep-water (over 130 fathoms) fishing on the banks may be worth while in late autumn and spring. Redfish are common. (SPRI.)

71832. **GREAT BRITAIN.** *Ministry of Agriculture, Fisheries and Food. Fisheries Laboratory, Lowestoft.* Hydrographical observations 1957. 1958? 357 p. tables. 7 refs.

Includes tabulated data of observations by the R/V *Ernest Holt* during six cruises in Barents Sea: oceanographic observations, p.1-171; bathythermograph, p.276-78; meteorological, p.280-95; sea ice reports, p.296. Charts (35) are appended showing temperature and salinity sections, and the distributions of surface and bottom temperatures and bottom salinity. The remainder of the observations (by other vessels) are mainly from the North Sea. (SPRI.)

71833. **GREAT BRITAIN.** *Ministry of Agriculture, Fisheries and Food. Fisheries Laboratory, Lowestoft.* North-East Barents Sea. Lowestoft, Nov. 1961. 7 l. diagrs., maps. (*Its:* Laboratory leaflet no. 28.)

Reports results of the R/V *Ernest Holt* cruise no. 6/1961 on topography, hydrography, fish and fishing possibilities. Conclusion: Goose Bank (approx. 71°30′N. 46°E.) is probably the only area worth fishing (Aug.-Oct.) (SPRI.)

71834. **GREBENNIKOV, G. A.** O mezo-kaĭnozoĭskikh obrazovaniiakh i istorii razvitiia severo-zapadnoĭ okrainy Kolymskogo sredinnogo massiva. (Materialy po geologii i poleznym iskopaemym IAkutskoĭ ASSR. IAkutskoe geologicheskoe upravlenie, 1961. vyp.5, p.3-11, map.) 18 refs. Text in Russian. **Title tr.:** On the Mesozoic-Cenozoic formations and development history of the northwestern margin of the Kolyma medial massif.

Describes the stratigraphy of Middle and Upper Jurassic, Lower Cretaceous, Neogene and Quaternary deposits of the Tas-Khayakhtakh, and and Selennyakh mountain ranges and other areas, from recent studies. Late Jurassic and early Cretaceous intrusive formations are characterized. Geologic history of the region is outlined noting manifestation of Hercynian foldings, volcanism, differentiated block movements, sedimentation, glaciations and other events. (DLC.)

71835. **GRECHISHCHEV, S. E.,** *and* **A. G. BRODSKAIA.** K voprosu o szhimaemosti merzlykh gruntov. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961, no.7, p.41-47, diagrs.) 6 refs. Text in Russian. **Title tr.:** On the compressibility of frozen ground.

Notes that recent engineering experience in permafrost shows that frozen ground can be compressed, contrary to earlier opinion. The compression process is explained in relation to the four components of frozen ground: solid particles, ice, liquid water and air. Under pressure, the balance of forces is disturbed, the fluid components, air and water, squeezed out and the volume contracted. A formula is derived to express this behavior. The theoretical and empirical data are in good agreement. (DLC.)

71836. **GREEN, LEWIS HOWARD,** *and* **J. A. RODDICK.** Dawson, Larsen Creek, and Nash Creek map-areas, Yukon Territory. Ottawa, Queen's Printer, 1962. 20 p. & 3 fold. maps. (Canada. Geological Survey. Paper 62-7, and maps 13-15, 1962.) 6 refs.

Contains preliminary results of geological mapping carried out in 1961 by a helicopter-supported, nine-man party on Operation Ogilvie. Tintina Trench, 64°15′N. 139°30′W., divides the project area into two geologic provinces, the southwest underlain by metamorphic rocks of unknown age, and the northeast underlain by relatively unmetamorphosed Precambrian to Cenozoic

rocks. Maps, scale 1 in.: 4 mi. Distribution of five types of metamorphic rocks southwest of Tintina Trench, 24 units of the unmetamorphosed formations to the northeast, also structural features and mineral occurrences are shown on the maps at 1 in.: 4 mi. scale, which cover the area 64° - 65°N. and 134° - 141°W., the Alaska border. The Pleistocene geology maps are in preparation by O.L. Hughes and P. Vernon. The Klondike and Sixtymile gold fields extend into the Dawson map-area. Some small placer deposits and asbestos showings are the best prospecting possibilities southwest of Tintina Trench, while to the northeast some massive quartzites are an extension of the silver-lead-bearing deposits of Keno and Galena Hills. (DGS.)

GREEN, LEWIS HOWARD, *see also* Roddick, J.A., & L.H. Green. Sheldon Lake, Tay River. 1961. No. 75158

71837. GREEN, R. J. Rehabilitation. *(In:* Canada. Dept. of Northern Affairs and National Resources. Northern welfare . . . 1962, p.31-34, illus.)

The acting district superintendent of welfare for the Mackenzie District describes various remunerative activities developed among Eskimos, Indians, and Metis as alternative to public assistance. The economic and educational aims and psychological advantages of some rehabilitation centers are discussed: the Inuvik home industries program (arts and crafts); the Mackenzie delta area logging project, produce processing and marketing, chicken raising, greenhouse and gardening projects at Inuvik, etc. The Eskimo-managed rehabilitation camp at Shingle Point harvests whale, seal, fish and caribou produce; a day-care center keeps the children of mothers working at the fur-garment factory in Aklavik, etc. Similar vocational programs are being introduced at Frobisher Bay. (CaMAI.)

GREENE, GORDON W., *see* Kachadoorian, R., & *others.* Geologic investigations . . . Project Charlot . . . 1961. No. 72604

71838. GREENFIELD, LAZAR J., *and others.* The effect of total cardiac denervation on the cardiovascular responses to hypothermia and acute hemorrhage. (Surgery, Mar. 1962. v.51, no.3, p.356-69, illus.) 6 refs. *Other authors:* P.A. Ebert, W.G. Austen, *and* A.G. Morrow.

Reports an investigation of dogs submitted to moderate hypothermia and acute hemorrhage with, and (controls) without cardiac denervation. No significant changes in myocardial contractile force or blood pressure were noted during hypothermia, but the drop in heart rate was much greater in the dogs with denervated hearts. (DLC.)

GREENFIELD, LAZAR J., *see also*

Ebert, P.A., & *others.* Physiologic changes . . . 1961. No. 71186

Ebert, P.A., & *others.* Relationship of blood pH . . . 1962. No. 71187

GREENHOUSE, JOHN P., *see* Apollonio, S., & *others.* Devon I. Exped. 1961. No. 69832

GREFFARD, CLAUDE, *see* Robitaille, B., & C. Greffard. Notes . . . glacier Thompson. 1962. No. 75153

71839. GREGG, MIMI. Alaska's bald eagles. (Alaska sportsman, June 1961. v.27, no.6, p.26-28, illus.) Alaska Wildlife Library, no. 14.

Describes the appearance, diet, and nesting habits of the northern bald eagle; its main nesting ground is Alaska; and it is decreasing in other areas. In the autumn, these birds gather at salmon rivers for the spawned-out fish. A concentration of 2500-3000 in the Chilkat valley of Southeast Alaska is noted. Good photos by B.W.R. Read and F.K. Truslow. (DI.)

71840. GREGORY, ALAN FRANK, 1926– , *and others.* Airborne geophysical reconnaissance in the Canadian Arctic Archipelago. (Geophysics, Dec. 1961. v.26, no.6, p.727-37, graphs, maps.) 14 refs. *Other authors:* L.W. Morley *and* M.E. Bower.

Reports on profiles of total magnetic intensity and gamma radioactivity obtained along a series of widely-spaced flight lines across the main tectonic regions of the archipelago. "Results of particular interest are the maximum depths-to-basement in the sedimentary basins (10,000 ft. or greater), the interpretation of the structure of the Precambrian arches, the extent of non-basement igneous activity, the apparent absence of disturbed ferromagnetic rocks on the Polar Continental Shelf except near the edge where a few deep basement-type anomalies were observed, and the occurrence of anomalous radioactivity in certain sedimentary rocks on Bathurst Island. Remarkable magnetic anomalies, which in profile show a central minimum with marginal maxima, are characteristic of known gypsum domes in the Sverdrup Basin."—Authors' abstract. (DLC.)

71841. GREGORY, ALAN FRANK, 1926– , *and others.* Geological interpretation of aerial magnetic and radiometric profiles, arctic archipelago, Northwest Territories. Ottawa, Queen's Printer, 1961. x, 148 p. illus., maps incl. col. fold. in pocket, profiles. (Canada. Geological Survey. Bulletin 73.) 37 refs. *Other authors:* M.E. Bower *and* L.W. Morley.

Presents profiles showing geophysical data obtained in conjunction with Operation Franklin 1955, also known surface geology, and geographic locations in the Canadian Arctic Islands covered by an airborne geophysical survey centered on Resolute. Interpretation of the geophysical data substantiates the recognized regional structures, confirms the general geological continuity between the islands, and provides some additional structural information. Noteworthy features include: the relatively simple overall structure of the Paleozoic basins, except for certain fault-block structures; a westerly-trending regional fault that may offset the north end of the Boothia Arch; the probable absence in the Paleozoic fold belts of ferromagnetic rocks, and the culmination of igneous activity and folding in the eastern part of the Sverdrup Basin. Great calculated thicknesses of the stratigraphic section except near the cratonic arches and edge of the Canadian Precambrian Shield, unique magnetic anomalies over known gypsum domes, and relatively high radioactivity of certain formations on Bathurst Island are also noted. Both types of aerial surveys are considered useful in the geological study of

this region; magnetic contrasts may indicate structures of economic and academic interest.–From authors' abstract. (DGS.)

71842. GREGORY, ALAN FRANK, 1926– , *and others.* Geological interpretation of aeromagnetic profiles from the Canadian Arctic Archipelago. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.427-37, maps, profiles.) 7 refs. *Other authors:* M.E. Bower *and* L.W. Morley. *Also issued as:* Canadian Geological Survey Bulletin 73, 1961.

Regional interpretation of 9000 mi. of aeromagnetic profiles flown in 1955 Operation Franklin substantiates the general geological structures recognized by field geologists and provides additional details. The Boothia Arch appears to be an imperfectly developed hoist extending at depth as far north as southeastern Bathurst Island. Several lower Paleozoic basins may occupy, in part, graben or fault block structures. A west-trending regional fault in Lancaster Sound seems parallel to the south coast of Devon Island and may offset the northern end of the Boothia Arch. The magnetic data suggest that igneous dike activity and extensive folding took place only in the eastern half of the Sverdrup Basin. A structural complex similar to the Parry Islands and the Central Ellesmere fold belt may bound the basin on its northwest side. Magnetic anomalies, which in profile show a central minimum with marginal maxima, are characteristic of known gypsum domes in the Sverdrup Basin. (DLC.)

GREGORY, ROBERT A., *see* Alaskan Science Conference 1960. 1961. No. 69643

GREKOV, BORIS DMITRIEVICH, 1882– *see* Okun', S.B. Rossiĭsko-Amerikanskaĭa kompaniĭa. 1939, 1951. No. 74505

71843. GRENIER, FERNAND. Un Centre d'études nordiques à l'Université Laval. (Cahiers de géographie de Québec, Oct. 1961-Mar. 1962, an. 6, no.11, p.124.) Text in French. **Title tr.:** A center for northern studies at Laval University.

Reports establishment in 1961, of a center for scientific research on northern Quebec; it is directed by L.E. Hamelin; sponsorship and directors are cited. A base for long-range projects is to be set up at Fort Chimo, under B. Robitaille. (DGS.)

GRENIER, R. L., *see* Remick, J.H. Preliminary report . . . Abitibi. 1961. No. 75106

71844. GRĬAZNOV, L. P. Stratigrafiĭa tretichnykh otlozheniĭ vostochnoĭ Kamchatki. *(In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p. 181-85.) Text in Russian. **Title tr.:** Stratigraphy of Tertiary deposits of eastern Kamchatka.

In the Kronotskiy Peninsula, the Bogachevka River basin and other areas, the Tertiary consists of marine, sedimentary and partly volcanic deposits more than 10 km. in thickness. They are divided into five series and each is briefly described. (DLC.)

71845. GRĬAZNUKHIN, A. N. Materialy po vosproizvodstvu zapasov vitimskogo sobolĭa v raĭone ĭugo-zapadnykh otrogov Verkhoĭanskogo khrebta. (Akademiĭa nauk SSSR. ĬAkutskiĭ filial. Nauchnye soobshcheniĭa, 1961. vyp.5, Biologiĭa, p.71-77, tables, map.) Text in Russian. **Title tr.:** Materials on the reproduction of the Vitim sable stock in the area of the southwestern spurs of the Verkhoyansk Mts.

Outlines the population growth of introduced sable, based on censuses and observations made during five trips in 1954-1959. Area and organization of study, size and density of population, and its age composition are considered, areas of preference and their floristic nature are discussed. (DLC.)

71846. GRIBANOV, B. V. K stratigrafii khrebta Sabli. *(In:* Materialy po geologii . . . Evropeĭskoĭ chasti SSSR, sbornik statei 1961, vyp.1, p.66-68, map.) 3 refs. Text in Russian. **Title tr.:** On the stratigraphy of the Sablya Ridge.

Reviews the geologic mapping of this ridge in the Subpolar Ural. Cambrian, Ordovician, and Devonian deposits are identified and briefly described; a volcanic stratum also is described and its stratigraphic position established. (DLC.)

71847. GRIBBON, P. W. F. Flora and fauna at Bagnall Fiord, central Baffin Island. Royal Military College, Kingston, Ontario, 1961. 24 p. maps, 4 plates. Mimeo. 4 refs.

Reports a two-week field study in July 1960, as one of a two-man Canadian Mountain Club party near Cape Dyer on the east coast of Baffin Island, a mountainous area with 5,500′ peaks and active glaciers. The 33 plant species collected from the fiord (now named Sunneshine Fiord) area are listed and described according to upland and fell-field, mountain, and lowland habitat; for most only the Latin names are given. An annotated list of fauna, five mammal, six bird and three insect species, also is given. The base camp was 29 mi. northwest of Cape Dyer beside a waterfall on the Shannagh River, just above its braided estuary. The glacier and river systems in the area are described. Information is given on transportation, etc. and on the exploration and mountaineering activities of the party. (CaOGB.)

71848. GRICE, GEORGE DANIEL, 1929– , Copepods collected by the nuclear submarine *Seadragon* on a cruise to and from the North Pole, with remarks on their geographic distribution. (Journal of marine research, Mar. 15, 1962. v.20, no.1, p. 97-109. map, diagr., graph, tables.) 47 refs.

Identifies, describes, and notes distribution of 18 species of copepods contained in 90 samples collected by the *Seadragon* during Aug.-Sept. 1960, the first quasi-synoptic series of horizontal plankton collections made in waters beneath the arctic ice. Most frequently and widely occurring were *Metridia longa, Calanus hyperboreus* and *C. glacialis. Pseudocalanus minutus,* found mainly in the Chukchi Sea, was the most abundant. Six species are cosmopolites widely distributed in both Northern and Southern Hemispheres; 12 are arctic or cold-water species, one of them endemic to the Arctic, and five not known from the Pacific. Latitudinal distribution of the 18 species is shown by graph. General data on the collections, also frequency of occurrence and abundance of the species

are tabulated. The specially designed sampler and the collecting methods are described in brief. (DGS.)

GRICHUK, M. P., *see* Markov, K.K., *& others*. Osnovnye zakonomernosti razvitiîa . . . 1961. No. 73833

71849. GRIERSON, JOHN, 1909– . Recent development of arctic air routes. (Polar record, Sept. 1962, v.11, no.72, p.261-64.)

Reviews developments since Nov. 1954 in commercial trans-polar air service. Aids to flying, e.g. the Bendix Polarpath gyro, periscopic sky compass, radar, etc. are described or noted, also the activities of the six operating companies: Scandinavian Airlines System, Canadian Pacific Airlines, Pan American, Air France, KLM Royal Dutch Airlines, and Japanese Airlines. For each, the date of inauguration of service, and routes are listed, also, except for Pan American and KLM, the number of passengers carried, by years. (DGS.)

71850. GRIFFIN, WARREN. Sanitation Aide Services are expanded. (Alaska's health and welfare, June 1962. v.19, p.8.)

Reports reorganization of these services by converting part-time village sanitation aides to full-time employees with 5-7 villages served by each. Additional training will be given to the aides, and more varied duties. (DLC.)

GRIFFITH, J. W., *see* Lang, A.H., *& others*. Canadian deposits uranium & thorium. 1962. No. 73293

GRIFFITH, R. G., *see* Hammerschmid, L.J. Rearward communications BMEWS. 1961. No. 71977

71851. GRIFFITHS, JOHN D., *and others*. The influence of thermal stress and changes in body temperature on the development of carcinosarcoma 256 Walker in rats after inoculation of cells. (Cancer, Jan.-Feb. 1961. . v.14, no.1, p.111-16, illus., tables.) 9 refs. *Other authors:* E. Hoppe *and* W.H. Cole.

In non-anesthetized rats, an increase of takes was noted in cold-stressed but not in heat-stressed groups. In the anesthetized normo-, hypo-, and hyperthermic groups, the percentage of takes was higher than in unanesthetized controls kept at room temperature. (DNLM.)

71852. GRIFFITHS, THOMAS MELVIN, 1910– . The landscapes of Alaska. (Natural history, Jan. 1960. v.69, no.1, p.6-23, illus., map.)

Well illustrated description of Alaska's four physiographic regions: the Pacific mountain system, Interior hills and river valleys, the Brooks Range, and the Arctic Coastal Plain. The volcanic nature and phenomena of the first region and its glaciers; the great rivers of the Interior, their nature, and role in human life are outlined. The Brooks Range and its position are discussed as a manifold carrier and dividing line. Finally the truly arctic coastal zone is delineated, with its permafrost, peculiar ice formation, etc. (DLC.)

71853. GRIFFITHS, THOMAS MELVIN, 1910– . Some glacial investigations in the Thule area, Greenland. *(In:* International Geographical Congress 1960. Physical geography . . . 1961, p.116-26, maps, diagrs., graphs, tables.)

Presents summary of the 1954–1957 summers investigations undertaken for the U.S. Army Engineers, SIPRE. Deals with: ablation and accumulation of the P-Mountain Glacier, a small, independent glacial remnant, and the Thule Lobe of the Inland Ice; surface movement of ice in the Thule Lobe and in a crevassed zone further inland; also some features of the ice margin in the vicinity of Thule Air Base. Tentative conclusions are given: consistent net losses on the P-Mountain Glacier indicate local excess ablation which does not operate on the Thule Ramp; presence of a lichen-free zone 15-20 m. deep around most ice bodies indicates a recent, rapid glacial retreat; also Thule Ramp moraines lie at the surface junction between moving ice and stagnant marginal ice, etc. (DGS.)

71854. GRIGORASH, Z. K., *and* **A. B. ZAKLINSKIĬ.** Modelirovanie tsunami vo Vtorom Kuril'skom prolive. (Akademiîa nauk SSSR. Izvestiîa, ser. geofizicheskaîa, May 1962, no.5, p.681-92, illus., sketch maps, tables.) 7 refs. Text in Russian. **Title tr.:** Modelling of tsunami in Vtoroy Kuril'skiy Strait.

Discusses experimental investigations of the propagation of tsunami-type waves, using a model of this strait, 50°43′N. 156°10′E. in the northern Kurils, with accurately reproduced shore lines and bottom topography. String pickups were used for a simultaneous recording of variations of water level at different points of the model. Data were obtained on the wave height, velocity and time of its propagation. The experimental data of relative elevations of the sea level at the capes of the strait are found similar to those observed during the tsunami catastrophe of Nov. 5, 1952, but higher than the elevations calculated according to Green's formula. The wave velocities obtained from the experimental data correspond, in general, to those calculated by the Legrange formula for undulations in both directions. (DLC.)

71855. GRIGORENKO, IU. N., *and* **L. Z. LIPKOV.** Osobennosti predvaritel'noĭ otsenki kollektorskikh svoĭstv terrigennykh otlozheniĭ tretichnogo kompleksa Zapadnoĭ Kamchatki. (Leningrad. Vsesoîuznyĭ neftîanoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp. 186, Geologicheskiĭ sbornik 6, p.342-53, table, fold. map, diagrs.) 5 refs. Text in Russian. **Title tr.:** Features of a preliminary appraisal of reservoir properties of the terrigenous deposits of a Tertiary complex in western Kamchatka.

Describes the geologic structure of the Tigil' River region and reports analyses of rocks of the Tigil' series. An intensive development of featuring is determined and described. Intergranular porosity and permeability are reported. (DLC.)

71856. GRIGOR'EV, A. U Kachkanar-gory. (Ogonëk, Sept. 1961. god 39, no.39, p.14-15, illus.) Text in Russian. **Title tr.:** By Mt. Kachkanar.

Describes a mining town at 58°47′N. 59°23′E. in the Northern Ural, started in Oct. 1957 in uninhabited taiga, now a settlement of 25,000. The iron ore resources exceed 8 billion t. The mining - concentrating combine is to be equipped with the most modern machinery and a dam on the Vyya

River is to provide a 100 million m³ reservoir. (DLC.)

71857. GRIGOR'EV, M. Kolkhozy Obskogo Severa. (Sel'skoe khozīaĭstvo Sibiri, May 1961. god 6, no.5, p.75-76.) Text in Russian. **Title tr.:** Collective farms in the northern Ob basin.

Outlines thirty-years' development of collectives in the Yamal Nenets National District, the status of fisheries, reindeer raising, hunting, fur farming, vegetable growing; the 60% rise in farm income in 1953-1959 is stressed; furs from hunters' collectives nearly doubled in value: from 1,097,567 to 2,109,400 rubles. (DLC.)

71858. GRIGOR'EV, N. S. O semantike nekotorykh ustoĭchevykh slovosochetaniĭ v īakutskom īazyke. (Yakutsk. Universitet. Uchenye zapiski, 1960. vyp. 7, Seriīa obshchestvennykh nauk, p.115-25.) Approx. 20 refs. Text in Russian. **Title tr.:** Semantics of some stable word combinations in Yakut.

Discusses the idiomatic use and origin of traditionally paired words. (DLC.)

71859. GRIGOR'EV, SERGEĬ VLADIMIROVICH. Vnutrennie vody Karelii i ikh khozīaĭstvennoe ispol'zovanie. Petrozavodsk, Gos. izd-vo Karel'skoĭ ASSR, 1961. 140 p. illus., tables, map, diagrs. (Akademiīa nauk SSSR. Karel'skiĭ filial.) Refs. Text in Russian. **Title tr.:** Interior waters of Karelia and their economic utilization.

Outlines the rivers and lakes, including those of northern Karelia. Drainage basins, flow characteristics and physical features are described for the larger streams. Navigation of the waterways and their use for electric power plants, water supply, the timber industry and transportation for fishing, melioration and other economic purposes are reported. Mineral waters of the area, iron ore of lakes, and pearl placers are also noted. The effects of human activity upon rivers and lakes are considered. (DLC.)

71860. GRIGOR'EV, V. A., *and* **M. A. SEMIKHATOV.** Osnovnye tipy osadochnykh formatsiĭ nizhnego Kembriīa iūgo-zapadnoĭ okrainy Sibirskoĭ platformy i ee obramleniīa. (Akademiīa nauk SSSR. Izvestiīa, ser. geologicheskaīa, Jan. 1961, no.1, p.30-45, map, diagrs.) 23 refs. Text in Russian. **Title tr.:** Main types of Lower Cambrian sedimentary formations of the southwestern margin of the Siberian platform and its framework.

Outlines the tectonic movements and stratigraphy of Lower Cambrian series of the Turukhansk region, Yenisey Ridge, also northwestern and northern Sayan. The main structures of this region are delineated. Several sedimentary formations are described, their deposition and columnar sections are analyzed and correlated. (DLC.)

71861. GRIGOR'EVA, V. G. Issledovaniīa tiksotropnykh i strukturno-mekhanicheskikh svoĭstv pylevatykh vorkutskikh suglinkov. *(In:* Materialy po laboratornym issledovaniīam merzlykh gruntov, 1961. sbornik 4, p.187-215, illus., tables, graphs.) 22 refs. Text in Russian. **Title tr.:** Investigation of the thixotropic, structural and mechanical properties of Vorkuta silt-loams.

Reports a physical and chemical study of silt-loams taken 0.5 m. from the surface of typical tundra in the primary bank of the Vorkuta River. Data on composition, physical properties such as moisture content, specific weight, porosity and granularity are given. Special attention is given to thixotropy: the mechanism of gel formation is discussed and thixotropic properties of loamy ground are outlined. Such structural-mechanical properties as strength and deformation are characterized. (DLC.)

71862. GRIMES, GEORGE S. World trade, and its impact on Alaska's timber industry. *(In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.119-24.)

Discusses possibilities and problems of selling Alaskan timber to Japan. Economic change since the 1930's in Japan, role of foreign trade, increasing demand for lumber, etc., are reviewed. Despite relative proximity, Alaskan trade with Japan hitherto has been hampered by Russian competition and by the 30% surcharge (removed in Aug. 1961) on shipping rates under the Trans-Pacific Freight Conference regulations. (CaMAI.)

GRIMLEY, SAMUEL S., *see* National Northern Development Conference. 1961. No. 74224.

GRINBERG, G. A., *see* Rozhkov, I.S., *& others.* Nekotorye osobennosti geologii . . . 1961. No. 75246

GRINBERG, G. P., *see* Ėpshteĭn, R. ĪA., & G.P. Grinberg. Spektrofotometricheskoe opredelenie . . . 1961. No. 71279

71863. GRINDROD, JOHN. Sweden prepares for increased iron ore deliveries to Europe. (Canadian mining journal, July 1961. v.82, no.7, p.63-65, illus.)

Describes plans of Swedish companies including the Luossavaara-Kiirunavaara (LKAB) at its Kiruna and Malmberget mines. This company expects to raise production from 13,000,000 tons/yr. in 1960 to 20-21,000,000 tons by 1965. Changeover from open pit to underground mining at Kiruna, modernization of operations, and expansion of facilities, etc. are noted. (DI.)

71864. GRIP, ERLAND, 1905– . Geology of the nickel deposit at Lainijaur in northern Sweden and a summary of other nickel deposits in Sweden. Stockholm, Kungl. Boktr., 1961. 79 p. illus., tables, map & sections incl. fold. (Sweden. Geologiska undersökning, afhandlingar och uppsatser, ser. C, no.577.) 61 refs. *Also issued as its:* Årsbok 55 (1961), no. 1.

Describes the general geology and petrology of this nickel deposit, at 65°14′N. 18°59′E., in the northwestern part of the Skellefte District; it was discovered in 1940 and worked by the Boliden Mining Co. until closed in 1945. Total output was 140,224 metric tons, from which 100,526 tons of ore averaging 2.20% nickel, 0.93% copper, and 0.1% cobalt, were recovered. Results of analyses of the three main ore types: pyrrhotite, arsenic, and disseminated, are given in detail; the three types represent three stages of mineralization, differing in appearance and composition. Remarks are provided on the structural details shown on fold. section; geological events in the area are summarized; for comparison, a brief outline of about 30 Swedish and foreign nickel deposits is given. Numerous

photographs, sections, and tables supplement the text. (DLC.)

71865. GRIPENBERG, STINA. Alkalinity and boric acid content of Barents Sea water. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.149, Contributions to Special IGY Meeting 1959, p.31-37, illus., tables, map.) 6 refs.

Reports on water samples, collected in July 1957 by the R/V *Aranda* in the Barents Sea, and west or north of Spitsbergen. Both surface and depth water were analyzed. Alk/Cl and B/Cl ratios and their distribution over the area and in the water bodies are determined; differences are tentatively explained. (DI.)

71866. GRISHIN, A. Samolet na sever derzhit put'. (Grazhdanskaia aviatsiia, Mar. 1961. god 18, no.3, p.16-17, illus. incl. col. on 4-page insert.) Text in Russian. **Title:** The airplane northward holds its course.

Photoreportage of the first regular-schedule flight by Il-18 jet from Moscow to Magadan via Arkhangel'sk and Nar'yan-Mar with a stopover in Tiksi: 6,500 km. in 11½ hrs. flight-time. Impressions en route, weather, arrival, etc. are sketched. (DLC.)

GRISHIN, GRIGORII LEONT'EVICH, *see* Vasil'ev, V.G., & G.L. Grishin. Osnovnye geologicheskie rezul'taty . . . 1962. No. 76343

GRISHIN, IU. S., *see* Krizhevskaia, L. IA., & *others*. Rabota sektorov Instituta arkheologii . . . 1962. No. 73149

71867. GRITSENKO, M. M., *and* **IU. L. DONETS.** Iz opyta stroitel'stva mostovykh opor v zimnikh usloviiakh. (Transportnoe stroitel'stvo, Mar. 1960. god 10, no.3, p.29-31, illus.) Text in Russian. **Title tr.:** Construction of bridge piers under winter conditions.

Reports on building of five piers for a 200 m. bridge over a river 2 m. deep in an area of -35° to -45°C. temperature in winter. The excavation for the pier was made in sections, and natural freezing utilized for the walls; when the concrete was poured it was protected by insulated cover. (DLC.)

71868. GROBOVIKOV, IU. A. Glubokovodnyi ekholot "Polius". (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.10, p.90-91.) Text in Russian. **Title tr.:** The Polius deep-water echo-sounder.

Depth measurement by conventional winch-and-cable method is difficult and time-consuming on drifting stations. The author and V.I. Sukhotskii, chief of Hydrographic Administration of the Main Administration of the Northern Sea Route, have been working since 1954 on an echo sounder for this purpose. The first one composed of eight parts and weighing 195 kg., was installed on North Pole-5 in Nov. 1955, and its measurements were found in good agreement, ±7 m., with those by conventional method for 3000-4500 m. depths. An improved model was tested by the North Pole-7, the device reconstructed, its weight reduced to 80 kg., and successful tests made in Nov. 1959 by North Pole-8. (DLC.)

71869. GROMOV, LEONID VASIL'EVICH. Khaltsedony evropeiskogo severa, Sibiri, Dal'nego Vostoka i perspektivy ikh ispol'zovaniia. (Problemy Severa, 1961, vyp.4, p.145-50.) 11 refs. Text in Russian. **Title tr.:** Chalcedonies of the European North, Siberia, the Far East and the prospects for utilizing them.

Notes the widespread occurrence of chalcedony, agate, carnelian, chrysoprase, heliotrope, etc. and of opal, used in industry and for jewelry. The main deposits in Karelia, the Pechora basin, the Ural, Evenki National District, Yakutia and in coastal areas of Okhotsk Sea are briefly sketched, and their lack of development attributed to the fact that these deposits have been little studied. (DLC.)

71870. GROMOV, LEONID VASIL'EVICH, *and* **I. N. LBOVA.** Krasnoiarskii krai, kratkii ocherk. (*In:* Krasnoiarskaia . . . ekspeditsiia. Prirodnye usloviia . . . 1961, p.5-23, illus., maps, diagrs.) 10 refs. Text in Russian. **Title tr.:** Krasnoyarsk province, a short outline.

Reviews the geographic position, relief, mineral resources, climate, natural zones, population and other features of the province, including its arctic areas, such as Severnaya Zemlya, Taymyr Peninsula, Yenisey basin, etc. Some notes are included on Igarka, Dudinka and Noril'sk. (DLC.)

71871. GROMOV, LEONID VASIL'EVICH. Ostrov Vrangelia; nauchno-populiarnyi ocherk. Magadan, Magadanskoe knizhnoe izd-vo, 1961. 95 p. illus. Refs. Text in Russian. **Title tr.:** Vrangelya Island; a popular scientific outline.

Describes the discovery of the island, mentioning only Russian expeditions and stressing the importance of Sarychev's explorations. The physiographical features are sketched with information on landforms and drainage, vegetation and wildlife. The Chukchis and Eskimos, introduced in 1926 represent the local population of the island. Travel routes and transportation are indicated. The third section of the book deals with the "assimilation" of the island: the expedition aboard the *Krasnyi oktiabr'* in 1926, the first wintering parties of 1926-1934, the organization of current meteorological and glaciological observations and exploration of the island. The improving economic conditions of the local population are pointed out. Five settlements are mentioned: at Rodzhersa Bay the administration center, at Somnitel'naya Bay, Gusinaya River mouth, on Marshrutnaya River and at Cape Blossom. (DLC.)

71872. GROMOV, LEONID VASIL'EVICH. Podelochnye kamni Krasnoiarskogo kraia. (*In:* Krasnoiarskaia . . . ekspeditsiia. Poleznye iskopaemye . . . 1962, p.136-56, tables, maps.) 39 refs. Text in Russian. **Title tr.:** Industrial precious stones of Krasnoyarsk Province.

Reviews the physical properties, possible industrial use and distribution of chalcedony, its varieties, and opal in this province. The Taymyr and Evenki National Districts and middle Yenisey deposits are described, chalcedony distribution mapped, and finds listed. These stones are mostly found among Siberian traps. Conditions are considered favorable for developing an industry and further exploration is planned. (DLC.)

71873. GROMOV, LEONID VASIL'EVICH. Rudnye raiony Krasnoiarskogo kraia. (*In:* Krasnoiarskaia . . . ekspeditsiia. Poleznye iskopaemye . . . 1962,

p.5-24, fold. map.) 20 refs. Text in Russian. **Title tr.**: Ore districts of Kranoyarsk Province.

Reviews some theoretical and practical problems connected with the ore-geologic divisions of this area: the Baykal folded system including Yenisey Ridge and Turukhansk folds, the Siberian platform and Anabar crystalline shield, the Taymyr depression and Taymyr folded zone and others. The prospective ore regions, southern, central and northern (Noril'sk and Igarka) and the lower Angara are characterized, their main mineral resources indicated. The Angara-Pit iron ore district, Tungusskiy coal basin, Noril'sk coppernickel district, the Ust'-Yenisey oil-bearing district, and others, are briefly characterized. (DLC.)

GRONEWALD, GAIL J., *see* Alaskan Science Conference 1960. 1961. No. 69643

71874. GROS, CHARLES MARIE, *and others.* Strahlenschutzwirkung der Kälte bei Fischen. (Strahlentherapie, 1959. Bd. 109, Heft 2-3, p.241-45, illus.) 26 refs. Text in German. Summary in English. *Other authors:* R. Keiling *and* J. Bloch. **Title tr.**: Irradiation protection with cold, in fishes.

Experiments with some 700 young *C. carassius* L. showed that lower environmental temperature increased the number of survivals, apparently through protection against irradiation effects. Experiments at 3°C. also indicate that irradiation gives protection against cold. (DNLM.)

GROSHEV, B. I., *see* Kozlovskiĭ, B.A., & B.I. Groshev. Za sovershenstvovanie . . . 1961. No. 73066

71875. GROSS, GORDON ARNOLD. Iron deposits near Ungava Bay, Quebec. Ottawa, Queen's Printer, 1962. x, 48 p. illus., sections, tables, maps incl. colored fold. (Canada. Geological Survey. Bulletin 82.) 42 refs.

Contains an outline of the general geology of this northern part of the Labrador geosyncline, also a description and evaluation of the potentially productive iron formations in the Leaf Lake-Finger Lake (58°30'N. 70°W.), Hopes Advance Bay - Ford Lake (59°15'N. 70°W.), and Payne Bay (60°N. 70°W.) areas. The iron deposits consist of selected zones of relatively coarse-grained metamorphosed specular hematite-magnetite-quartz and magnetite-quartz that can be beneficiated to give high-grade concentrates. South of Payne Bay more than one billion tons of crude ore containing 24% to 35% iron has been proven and another billion tons of possible ore indicated. Fold. map, scale 1 in.: 6 mi. shows seven types of Archean and Proterozoic rocks, including the various iron formations. Eight plates containing 15 photomicrographs show texture of selected minerals. (DI.)

71876. GROSS, GORDON ARNOLD. The iron ranges and current developments in New Quebec and Labrador, Canada. Ottawa, 1960. 17 p. maps. (Canada. Geological Survey. Reprint 10.) 15 refs. Reprinted from Univ. of Minnesota, School of Mines and Metallurgy, 21st Annual Mining Symposium, Jan. 12-13, 1960, p.B1-17.

Reviews recent iron developments in the Ungava geosyncline, 51°45'-61°N. between the Matonipi Lake and the northwest Ungava Bay areas, expected to produce 80% of the Canadian ore in the next 50 years. The three geological divisions of the geosyncline and their distinctive ore types are described. The central range has been in production at Schefferville since 1954, and the engineering achievements of that development are discussed. The northern range is not yet in production, but three developments in the southern range, Wabush Lake, Carol Lake and Lac Jeannine (Mt. Reed) are in or near production. Indicated ore reserves and ore potential are summarized. (CaOG.)

71877. GROSS, GORDON ARNOLD. The metamorphic rocks of the Mount Wright and Matonipi Lake areas of Quebec. Madison, Wisconsin, 1955. 84 p. illus., tables, 4 fold. maps, 34 refs. Typescript, Ph. D. thesis to Univ. of Wisconsin.

Presents study of this area from the Labrador boundary, 175 mi. north of Sept-Iles, Quebec, southwest to Pletipi Lake. Geological mapping at 1:7920 scale was done in summers 1952-1954, sponsored by the Oliver Iron Mining Division of U.S. Steel Corp. Laboratory work included thin section analysis, grain mounts, and X-ray examination of many of the iron formation minerals. The occurrence is described of ferruginous quartz rocks, of a mineralogical and textural type probably unique in North America. They are associated with metasedimentary rocks, and are considered to be derived from a sedimentary iron formation through high rank regional metamorphism. Regional geology and lithology, stratigraphic sequence, structure, and metamorphism of the iron formation and associated rocks are presented. The area is considered part of the Grenville Province of the Canadian Shield. These iron formations are expected to provide large tonnages of easily concentrated iron ore. (CaOG.)

71878. GROSS, GORDON ARNOLD. Metamorphism of iron-formations and its bearing on their beneficiation. (Canadian mining and metallurgical bulletin, Jan. 1961. v.54, no.585, p.30-37, photomicrographs.) 11 refs.

Outlines some prominent metamorphic features and shows their significance in evaluating the iron-formations as potential ore. Iron-formations from high-grade metamorphic zones are generally coarse-grained and relatively easy to concentrate, whereas zones of low-grade metamorphism contain iron-formations of fine-grained and cherty material. Textures of iron-formations from five areas in northern Quebec and Labrador are shown on photomicrographs. Recognition of the grade of metamorphism may indicate the size of grinding needed, as well as possible metallurgical problems involved. (DGS.)

71879. GROSVAL'D, M. G., *and* **A. N. KRENKE.** Issledovaniĭa sovremennogo oledeneniĭa Zemli Frant͡sa-Iosifa. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geograficheskaĭa, Mar.-Apr. 1961, no.2, p.26-36, graphs, diagrs.) 4 refs. Text in Russian. **Title tr.**: Investigation of the present glaciation in Franz Joseph Land.

Reports preliminary results of work of the Institute of Geography Glaciological Expedition in 1957-1959 in connection with the IGY. The main station was established on the Churlyanisa ice dome, with additional observations on the Sedova Glacier. Meteorological, actinometric, ice-structural, geomorphic, thermophysical, and geocryolog-

ical observations were carried out. Spatial distribution of glaciation, climatic conditions, zones of ice building, temperature of the glacier ice, the movement, structure and geologic activity of glaciers, their present regime and fluctuation are described. The Franz Joseph Land glaciers comprise an area of 14,330 km², 86.9% that of the archipelago. (DLC.)

71880. GROSVAL'D, M. G., *and others.* K istorii golotsena Zemli Frantsa-Iosifa. (Akademiia nauk SSSR. Doklady, Dec. 11, 1961. t.141, no.5, p.1175-78, diagr.) 9 refs. Text in Russian. *Other authors:* A.L. Devirts *and* E.I. Dobkina. **Title tr.:** On history of the Holocene in Franz Joseph Land.

Reports weaknesses of Holocene history as interpreted by V.N. Saks and V.D. Dibner (No. 57652, 71013). Land uplifts in Vestspitsbergen, Nordaustlandet and Scandinavia are compared and shown not in agreement with Franz Joseph Land. Absolute age determination of old wood, collected on Kheysa Island and Cape Dandi of Gukera Island, is established: data obtained disclose the land uplift in the Holocene at least 130-150 m., and not 30-35 m. as previously assumed. New dating of terraces is reported. A stratigraphic division of the Holocene for Franz Joseph Land is offered and compared with that of Spitsbergen. (DLC.)

71881. GROSVAL'D, M. G. Opyt opredeleniia vysoty linii ravnovesiia akkumuliatsii i ablatsii lednikovogo kupola "strukturnym" metodom. (Akademiia nauk SSSR. Institut geografii. Materialy glatsiologicheskikh issledovanii. Khronika obsuzhdenii, 1961. vyp.2, p.48-55, diagrs.) 8 refs. Text in Russian. **Title tr.:** Attempt to determine the height of the line of balance between accumulation and ablation of a glacier dome by the "structural" method.

Discusses methods for determining this line. The firn limit used in the glaciers of temperate zones is not applicable to polar glaciers, because of negative temperature. Principles of the so-called structural method worked out by the author, are outlined; it is based on tectonic structure of ice and laws of its dynamics. The method was tested in Franz Joseph Land during 1957-1959 and results obtained are found satisfactory. (DLC.)

71882. GROSVAL'D, M. G., *and* **A. N. KRENKE.** Recent changes and the mass balance of glaciers on Franz Josef Land. *(In:* International Association of Scientific Hydrology. Pub. 58, Symposium of Obergurgl 1962, p.194-200, tables.) 11 refs. Summary in French.

Reports different opinions on recent glaciation on this archipelago clarified by the Academy of Sciences' Institute of Geography expedition of 1957-1959. Sharp retreat, which began not later than the 1920's is indicated. Lower limit of the accumulation region lies at 300-320 m., much higher than hitherto thought. Direct indications of shrinkage and data concerning the rate of shrinkage were also obtained from the Sedov, Jackson, and Churlyanis Domes on Gukera Island. Similar shrinkage elsewhere, e.g. Novaya Zemlya, is noted, as caused by increase in the sum of positive air temperature and intensified summer melting. It is surmised that late-glacial shrinkage 11,000-12,000 yrs. ago ended in the complete disappearance of glaciers; glaciation reappeared in the archipelago at the time of the Fenno-Scandinavian (Salpausselkä) stage in Europe and the Sartan stage in Siberia about 10,500 yrs. ago, when the ice sheet was larger than at present. During the post-glacial climatic optimum, ice sheets were smaller than at present; the latest stage of Holocene glaciation began 2500 yrs. ago. Present-day shrinkage may be the beginning of disintegration of this latest Holocene stage. (DGS.)

71883. GROSVAL'D, M. G., *and* **T. V. PSAREVA.** Strukturnyi razrez lednikovogo kupola Churlianisa. *(In:* Akademiia nauk SSSR. Institut geografii . . . Materialy glatsiologicheskikh . . . 1961. vyp.2, p.37-44, illus., graph, profiles.) 2 refs. Text in Russian. **Title tr.:** Structural section of Churlyanisa ice dome.

Reports on the tectonic-structural and petrographic investigations made in 1957-1959, characterizing briefly the main tectonic features such as the asymmetric anticline, zone of deep fault, cleavage of glacial rocks, etc. The petrographic studies, briefly summarized, were on air bubbles, ice density, forms, sizes and optical properties of ice crystals, admixtures of morainic material in ice, etc. (DLC.)

71884. GROSVAL'D, M. G., *and* **A. N. KRENKE.** Voprosy glatsiologii Zemli Frantsa-Iosifa. *(In:* Akademiia nauk SSSR. Institut geografii . . . Materialy glatsiologicheskikh . . . 1961. vyp.2, p.21-27, illus., map, graph, diagrs.) Text in Russian. **Title tr.:** Problems of glaciology in Franz Joseph Land.

The archipelago has 14,330 km² of glaciers, which occupy 86.9% of the land area. Their spatial distribution and asymmetry are characterized. Climatic conditions for glacier development such as air temperature, precipitation, radiation regime are outlined. Zones of ice formation, ice temperature, glacier movement, structure and geologic activity are reviewed. Regression is evident in the glaciers throughout Franz Joseph Land. Its rate is calculated: the Churlyanisa ice dome decreases 20 cm. yearly; and its velocity is declining; the ice budget shows a large deficit. (DLC.)

GROSVAL'D, M. G., *see also*

Akademiia nauk SSSR. *Institut geografii.* Predvaritel'nye nauchnye rezul'taty . . . 1961. No. 69561

Akademiia nauk SSSR. . . . Zemlia Frantsa-Iosifa; struktura l'da. 1962. No. 69560

71885. GROZDILOVA, LIUDMILA PAVLOVNA, 1911– , *and* N. S. LEBEDEVA. Nizhnepermskie foraminifery Severnogo Timana. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy 1961. vyp.179, Mikrofauna SSSR, sbornik 13, p.161-329, tables incl. fold., map, plates.) 43 refs. Text in Russian. **Title tr.:** Lower Permian foraminifers of the Northern Timan.

Presents the systematic description and stratigraphic distribution of forams from the Volonga, Belaya, Indiga, etc. River sections of the Timan Ridge. Fusilinids are represented by four families: Ozawainellidae, Fusulinidae, Schubertellidae, and Schwagerinidae. Species of gen. *Waeringella* are described for first time from this region. Features of fusulinids development in early Permian times are evaluated. Correlation is made with the Lower Permian of other regions. (DLC.)

71886. **GRUENING, ERNEST, 1887– .** Let's end Alaska climythology. (American Meteorological Society, Bulletin, Oct. 1962. v.43, no.10, p.533-38.)

Traces origin and nefarious influence of misinformation and erroneous beliefs on the weather and climate of Alaska, as exemplified by such expressions as Icebergia, Seward's Polar Bear Garden, Seward's Icebox. From a climatic standpoint, living is less hazardous in Alaska than in any other state, with no loss of life from tornadoes, hurricanes, lightning, and volcanic eruptions in 46 years, and less than a dozen deaths (from seismic waves) caused by earthquakes off the coast. (DWB.)

71887. **GRUNOW, OSKAR.** The 34th International Congress of Americanists. (Current anthropology, June 1961. v.2, no.3, p.265-68.)

Lists titles of approx. 150 papers, films and symposia reports (about 10% arctic) presented at the Congress, July 17-25, 1960, in Vienna, Austria. (DLC.)

GRUPP, I., *see* Pichotka, J., & I. Grupp. Die Körpertemperatur . . . 1961. No. 74791

71888. **GRUSHEVOĬ, I. G.** Bor'ba so snezhnymi obvalami. (Put' i putevoe khozīaĭstvo, Apr. 1961. god 5, no.4, p.48, illus.) Text in Russian. **Title tr.:** Avalanche control.

Notes preventive, protective and combative measures used in foreign countries against avalanches on mountain roads; various types of fences, barricades, forest belts to prevent or retard snow accumulation or slides and blasting to disperse snow masses. (DLC.)

71889. **GRUSHIN, M. I.** Lesnye resursy Kamchatki. (*In:* Akademiīa nauk SSSR. Komissiīa po problemam Severa. Syr'evye resursy . . . 1961, p.164-69, tables.) Text in Russian. **Title tr.:** Forest resources of Kamchatka.

Reports estimates of 1954-1955 based on aerial survey: 81% of the Peninsula is designated forest land of which 34% is considered forest, the remainder tundra or areas without vegetation cover. Spruce and larch are the most valuable trees. Composition of the forests is briefly summarized. Timber reserves amount to one billion m^3. Utilization of the forests resources is discussed, noting that by the Minlesprom Trust which produces 78% of the commercial wood. Other wood industry plants, transportation and floating of timber are reviewed, with data given for the 1953-1957 period. Timber for industrial purposes is most concentrated in the Kamchatka River region. (DLC.)

71890. **GRUZINSKIĬ, P.** Za ratsional'nyĭ grafik neseniīa vakht. (Morskoĭ flot, Sept. 1962. god 22, no.9, p.22-23, illus.) 2 refs. Text in Russian. **Title tr.:** A more efficient watch shift should be introduced.

Captain of the *Dushanbe*, Murmansk steamship-line, criticizes the 7-hr. watch on vessels which have an 8-hr. shift for other duties. The shorter turn on watch disrupts the conventional division of duty and rest periods, lowers efficiency and quality of performance; it increases the actual work load of individual crew members. (DLC.)

71891. **GRUZOV, L. N.** O prichinakh nizkikh letnikh ulovov atlanticheskoĭ sel'di. (Rybnoe khozīaĭstvo, 1962. god 38, no.9, p.11-14, graphs, table.) Refs. Text in Russian. **Title tr.:** On the causes of low summer catches of Atlantic herring.

Quotes three different views on the causes of this shortage, and presents his own based on the behavior of herring in the Norwegian Sea. According to Gruzov, the fish move about less and are less active in the summer, therefore are less liable to be caught in drift nets and other stationary gear. (DLC.)

71892. **GRUZOV, L. N.,** *and* **E. A. PAVSHTIKS.** Soviet plankton investigations in the Norwegian Sea in 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v.16, p.69-71, table, maps.)

Account of study made from research vessels and from fishing reconnaissance ships, covering all the Norwegian Sea. Seasonal fluctuations and regional differences in phytoplankton and in the *Calanus* species, are outlined. Utilization of plankton by herring is also noted. (DI.)

GRUZOV, L. N., *see also*

Pavshtiks, E.A., & L.N. Gruzov. Distribution of plankton . . . 1961. No. 74683

Pavshtiks, E.A., & L.N. Gruzov. Ob osobennostīakh planktona . . . 1959. No. 74684

GRYC, GEORGE, 1919– , *see* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

GUBANOV, N. M., *see* Ryzhikov, K.M., & N.M. Gubanov. *Lateriporus mathevossianae* . . . 1962. No. 75303

71893. **GUBAREVA, O.** Pochetnaīa, obespechennaīa . . . (Sotsial'noe obespechenie, Apr. 1962. god 23, no.4, p.53.) Text in Russian. **Title tr.:** Honored, provided for . . .

Sketches the humanitarian work of social security and welfare agencies in the Chukchi National District: allotment of family allowances, old age pensions, sick benefits, etc. Individual cases are cited. (DLC.)

71894. **GUBLER, E. V.,** *and others.* O posledstviīakh glubokoĭ gipotermii. (Arkhiv patologii, 1960. t.22, no.12, p.29-36, illus., tables.) 14 refs. Text in Russian. Summary in English. *Other authors:* G.A. Akimov, N.V. Alishev, *and* V.N. Likhota. **Title tr.:** Sequelae of deep hypothermia.

Account of early and late sequels after hypothermia of 20°C. and less in cats. The sequels (described) are primarily determined by cardial crisis and the duration of cardiac arrest. Applying a direct current anode and preceding training for O_2-deficiency, increased the tolerance to deep hypothermia. (DNLM.)

71895. **GUDE, W. D.,** *and others.* Modification of radiation-induced intestinal injury in rats by chilling after irradiation. (International journal of radiation biology, July 1959. v.1, no.3, p.247-55, illus.) 13 refs. *Other authors:* A.C. Upton *and* T.T. Odell, Jr.

Cooling the small intestine to 18°C. or 5°C. immediately after X-irradiation postponed degeneration and lowering of mitotic count, with no difference between the degrees of cooling. The postponement of the effects of radiation injury was found to result from suppression of metabolism and cell division by cold. (DNLM.)

71896. **GUDINA, V. I.** Mikrofaunisticheskaīa kharakteristika verkhnemelovykh otlozheniĭ v bas-

seĭne r. Vakh. (Geologiĭa i geofizika, 1961, no.5, p.52-56, map.) 4 refs. Text in Russian. Summary in English. **Title tr.**: Characteristic of the microfauna of Upper Cretaceous deposits in the Vakh River basin.

Describes investigation of foraminifers of Upper Senonian partly Santonian-Campanian(?) deposits collected in core drills along the Vakh River from Lar'yak to Asses-Yegan. The more characteristic species are reported together with their vertical and horizontal distribution in columnar sections. (DLC.)

71897. GUDKOVICH, ZAL'MAN MARKOVICH. K voprosu o prirode Tikhookeanskogo techeniĭa v Beringovom prolive i prichinakh sezonnykh izmeneniĭ ego intensivnosti. (Okeanologiĭa, 1961. t.1, vyp.4, p.608-612, table, graphs.) 9 refs. Text in Russian. **Title tr.**: The nature of the Pacific Current in the Bering Strait and causes of its seasonal intensity.

Analyzes the water exchange between Arctic and Pacific Oceans, the causes of this current and its seasonal variation, noting various views. The water discharge during Aug.-Sept. is approx. three-four times greater than during Feb.-March. Factors affecting this variation are discussed, such as the seasonal fluctuation of the sea surface in arctic seas, atmospheric circulation over the Arctic Basin, temperature and salinity of the water, and others. The wind regime over the Arctic Basin, and the Greenland and Bering Seas is considered the single most important factor in explaining features of the Pacific Current. (DLC.)

71898. GUDKOVICH, ZAL'MAN MARKOVICH, *and* **L. L. BALAKSHIN.** Sud'ba dreĭfuĭushcheĭ stantsii. (Priroda, June 1962. god 51, no.6, p.66-69, illus., maps.) 5 refs. Text in Russian. **Title tr.**: The fate of the drifting stations.

Describes the movements of the Russian North Pole-6 and -7 and the American Alpha and Bravo; breakup of North Pole-7 in 1959, and discovery of the ice floe with remains of the station in the fall 1961 on the east coast of Baffin Land. Significance of this drift in relation to understanding the ice and especially water movements in the area. (DLC.)

71899. GUEMPLE, D. L. Inuit spouse-exchange. Chicago, Univ. of Chicago, Dept. of Anthropology. 1961. ix, 133 p., tables. 54 refs.

Discusses (p.1-56) both common and ritual spouse-exchange (as distinguished from adoptive and step-relationship) among Eskimos, on the basis of the literature and of language studies. Western, Central, Eastern and Greenland Eskimos are considered in turn. The network of non-consanguinal ascendant, descendent and collateral exchange-statuses arising from common spouse-exchange, and the sexual and economic reasons for reciprocal exchange-marriage are described. The distribution of festivals involving ritual spouse-exchange, its social function in promoting communal homogeneity and resulting exchange-relations statuses are discussed. An attempt is made to characterize the essential nature of Eskimo social organization and to show the catalytic function of common spouse-exchange in bridging the gap between kinship and non-kinship status, when desirable or advantageous. Appended (p.57-118) are terminological data, a discussion of Eskimo linguistics, notes on orthography, locations and native names for the various Eskimo groups. (DLC.)

GUIEU, J. D., *see* Chatonnet, J., *& others.* Action calorigénique de l'adrénaline . . . 1961. No. 70678

71900. GUILLIEN, YVES. Néoglaciaire et tardiglaciaire: géochimie, palynologie, préhistoire. (Annales de géographie, Jan.-Feb. 1962. année 31, no.383, p.1-35, map, diagr., graphs, tables.) Text in French. **Title tr.**: Upper glacial and late glacial: geochemistry, palynology, prehistory.

Presents a revised delineation of climatic change during the 15,000 years preceding the Holocene, based on geochemical, palynological, and archeological research since 1945. Tables show duration of the last glaciation at Anchorage, Alaska, also the C-14 and palynological dating of the beginning of the post-glacial in the Arctic: 10,000 yrs B.P. "Néoglaciaire" is tentatively defined as the period of "internal moraine" building of the Scandinavian glaciers; its upper limit is the lower limit of "Tardiglaciaire," as determined on the shore of the North Sea: about 15,500 B.P.; its lower limit is placed after 28,000 B.P. (DGS.)

71901. GUIMOND, ROGER. Labrador, a growing economic identity. (Precambrian-Mining in Canada, Sept. 1961. v.34, no.9, p.38+, illus., maps.)

Outlines developments in the Iron Ore Co. of Canada Carol Project, the Wabush Iron Co., Pickands Mather's Wabush Lake Project, and the British Newfoundland Corporation's Power project at Twin Falls on the Unknown River. Maps show location of projects and company concessions. (DGS.)

71902. GUIMOND, ROGER. Quebec Cartier Mining Company, the story of one of the world's largest mining developments. (Precambrian-Mining in Canada, Apr. 1961. v.34, no.4, p.6, +, illus., maps.)

Traces development of the Lac Jeannine, Mt. Reed and Mt. Wright iron ore deposits by the Quebec Cartier Mining Co. since 1957. Ores at the Lac Jeannine deposit is a coarse-grained specular hematite easily amenable to concentration. Capital, main features of the mine, the concentrator, the Hart-Jaune power project, the year-round railway for ore carriers, townsites, etc. are described and illus. (DGS.)

71903. GUIMOND, ROGER. The Quebec-Labrador iron trough. (Precambrian, Oct. 1958. v.31, no.10, p.15-56, illus., maps, graphs, tables.)

Reports, as regional editor, his three-month survey of the extensive development of low-grade iron ore properties in this area from Payne Bay on Ungava Bay southward across the Quebec-Labrador border and westward to Lake Mistassini. Despite competition from increased U.S. taconite production and from South America, an expected growth in the European, Canadian and U. S. steel markets has led American companies through their Canadian subsidiaries, Quebec Cartier, Ungava Iron Ores, and the Iron Ore Co. of Canada, to a $700 million development program during the next five years. A half-dozen smaller companies are also engaged in exploration in the area. Direct-reduction method of

treatment makes these low-grade ores competitives in price with the direct shipping grade; the friable, coarse-grained material, and the location with respect to the American and European markets are other favorable factors. Detailed reports follow on the Quebec Cartier Mining Co. operations in the Lac Jeannine area; Atlantic Iron Ores-International Iron Ores operations near Hopes Advance Bay; and Iron Ore Co. of Canada planning, development, and production in the Knob Lake and Wabush Lake areas. (DGS.)

GUIMOND, ROGER, *see also Precambrian.* Iron ore mining . . . 1959. No. 74947

71904. GUISO, G. F., *and* **G. LIGUORI.** Ricerche sul meccanismo dell'effetto aumentatore adrenalinico, 1; effetto adrenalinico ed attività fosforilasica nel cuore di *Bufo vulgaris* pulsante a 19° ed 0°C. (Società italiana di Biologia sperimentale. Bolletino, Aug. 15, 1960. v.36, no.15, p.762-65, illus., table.) 4 refs. Text in Italian. **Title tr.:** Research on the potentiating adrenalin effect, 1; effect of adrenalin upon phosphorylase activity of *Bufo vulgaris* hearts beating at 19° and 0°C.

Study of isolated frogs hearts suspended in Straub solution, and perfused with Ringer with or without adrenalin. The latter had practically no activating effect upon the phosphorylases at 0°C. in contrast to its pronounced action at 19°C. (DNLM.)

71905. GUK, P. D. Tekhnicheskie konferentsii v IAkutskom AGP. (Geodeziia i kartografiia, Oct. 1961, no.10, p.57-59.) Text in Russian. **Title tr.:** Technical conferences in the Yakut Aerogeodetic establishment.

Describes conferences each winter since 1953 concerned with geodetic problems and triangulation in Yakutia. Organization of field parties, construction of triangulation net, methods of measurement, etc. (DLC.)

71906. GUKASIAN, A. B., *and* **T. I. VORONKOV.** Novyĭ bakterial'nyĭ preparat dlia bor'by s sibirskim shelkopriadom. (Lesnoe khoziaĭstvo, Jan. 1961. god 14, no.1, p.44-45, table.) Text in Russian. **Title tr.:** The new bacterial preparation for controlling the Siberian egger.

Reports 95.6% of *Dendrolimus sibiricus* caterpillars and pupae killed on trees dusted with "dendrobacillin" *(Bc. dendrolimus* var. *sibirica),* in various areas of Siberia; 6.8% on trees not so treated. (DLC.)

71907. GUKASIAN, A. B. O vozbuditele "molochnoĭ bolezni" gusenitsy sibirskogo shelkopriada, *Dendrolimus sibiricus* Tschtv. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961, no.7, p.120-21, table.) 4 refs. Text in Russian. **Title tr.:** Agent of the "milky disease" of caterpillars of the Siberian egger, *Dendrolimus sibiricus* Tschtv.

Reports further investigation disclosing the rate of bacteria *Bc. dendrolimus* var. *sibirica* in this disease which, with hunger and DDT poisoning is a main cause of *D. sibiricus* dying out. (DLC.)

71908. GUKASIAN, A. B. Perspektivnyĭ sposob bor'by s sibirskim shelkopriadom. (Akademiia nauk SSSR. Vestnik, Jan. 1961. god 31, no,1, p.58-59, illus.) Text in Russian. **Title tr.:** A promising method for control of the Siberian egger.

Reports satisfactory results from dusting trees infested by *Dendrolimus sibiricus* with a bacterial solution, *Bc. dendrolimus* var. *sibirica,* fatal to 95% of *D. sibiricus* caterpillars. (DLC.)

GUKASIAN, A. B., *see also* Kolomiets, N.G. & A. B. Gukasian. Simpozium . . . sibirskogo shelkopriada. 1961. No. 72904

71909. GULBRANDSEN, ODD. Bondeskogsbruket och jordbrukets strukturomvandling. (Skogsägaren, Apr. 1960. årg. 36, nr. 4, p.104-105.) Text in Swedish. **Title tr.:** Farm forestry and structural changes in agriculture.

Discusses problems arising from the abandonment of farming on small properties in favor of lumbering or other better paid employment. Men who remain in the rural community are urged to continue farming for supplementary income and for the good of the national economy. Woodlots on abandoned farms, it is suggested, might be worked by the forest cooperatives which have been set up with state aid to serve owners of farm woodlots in northern localities. (DA.)

GULBRANSON, FREDRIK W., *see* Stockinger, C., & F.W. Gulbranson. Skipsfarten . . . 1958. No. 75940

GULIKOV, A. E., *see* Kudriavtsev, V.A., & *others.* Metodika rascheta . . . 1961. No. 73186

71910 GUNDOBIN, A. A. Ledokol "Sibir'" v Arktike. (Sudostroenie, 1962. god 28, no.4, p.81, illus.) Text in Russian. **Title tr.:** The icebreaker *Sibir'* in the Arctic.

Notes return of this 8326-ton, 13.9 knot vessel to duty in 1959 after extensive overhaul and reconditioning. She was converted from coal to oil and can now operate 52 days without refuelling. (DLC.)

71911. GUNSTON, DAVID. Mastering the iceberg. (Nautical magazine, Apr. 1961. v.185, no.4, p. 228-31.)

Describes types of bergs, their frequency in the North Atlantic, hazard to navigation; work of the International Ice Patrol. (DLC.)

71912. GUNTHER, ERNA, 1896– . Northwest Coast Indian art; an exhibit at the Seattle World's Fair Fine Arts Pavilion, Apr. 21-Oct. 21, 1962. Seattle, 1962. 101 p. illus. incl. col. plates, maps.

Catalog of the 334 exhibits representing the indigenous art of eight tribes, the three northernmost the Tlingits, Haidas, and Tsimshians. For each object, the provenience, collector, and measurements are given. The exhibit was assembled from 16 museums; 36 major or otherwise significant museum collections known to the author are listed, together with descriptive and explanatory notes. The ethnic history of the tribes is sketched and the material, workmanship, subject selection, stylistic development and practical use of the artifacts described in the introduction. (CaMAI.)

GUNTZ-ARNAL, M. C., *see* Chevillard, L., & *others.* Variations somatiques . . . 1962. No. 70724

71913. GURARI, FABIAN GRIGOR'EVICH. K paleogeografii Zapadno-Sibirskoĭ nizmennosti v

ĭurskо-neokomskoe vremīa. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'īa. Trudy, ser. neftīanaīa geologiīa, 1961. vyp.14, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.37-45, charts.) 12 refs. Text in Russian. **Title tr.:** On the paleogeography of the West Siberian plain in Jurassic-Neocomian time.

Analyzes Jurassic-Lower Cretaceous paleogeography on the basis of recent oil prospecting, including areas of the Nadym, Pur and Taz basins. The cores of various wells are reported and the unsolved problem is discussed whether in Jurassic-Neocomian time the northern part of West Siberian plain was land or marine basin. Evidences are presented that at least in Valanginian-Hauterivian time, this part was land, but detailed studies are needed to determine its extent and nature. (DLC.)

71914. GURARI, FABIAN GRIGOR'EVICH, *and others.* O stratifikatsii mezozoĭskikh i kaĭnozoĭskikh otlozheniĭ Zapadno-Sibirskoĭ nizmennosti. (Geologiīa i geofizika, 1962, no.3, p.3-10, diagrs.) 13 refs. Text in Russian. Summary in English. *Other authors:* I.I. Nesterov *and* M.IA. Rudkevich. **Title tr.:** On the stratification of Mesozoic and Cenozoic deposits of the West Siberian lowland.

There is considerable instability of age limit in some series of Mesozoic deposits distinguished according to lithology and facies of rocks. Biostratigraphic and tectonic methods should be used more for the stratification of these deposits. Local stratigraphic scales are suggested for the solution of specific geological problems. Uvat, Berezovo and other northern regions are mentioned. (DLC.)

71915. GURARI, FABIAN GRIGOR'EVICH. O vydelenii novoĭ lokosovskoĭ svity v ĭurskikh otlozheniīakh Srednego Priob'īa. (Akademiīa nauk SSSR. Doklady, Mar. 1, 1962. t.143, no.1, p.171-74, text map.) 5 refs. Text in Russian. **Title tr.:** On separation of the new Lokosovo series of the Jurassic deposits on the middle Ob.

Describes the Bajocian - lower Callovian series distributed in the middle Ob basin and north to Ust'-Port. It lies over the Tyumen series and is overlain by the Mar'yanova series. The lithologic properties, electrical logging and geochemical characteristics are outlined, and specific complex of foraminifer fauna reported which separates this series from those adjacent. (DLC.)

71916. GURARI, FABIAN GRIGOR'EVICH, *and others.* Zapadno-Sibirskaīa nizmennost', novaīa baza neftegazodobychi SSSR. (Geologiīa i geofizika, 1961, no.10, p.3-15, map, profile.) 7 refs. Text in Russian. *Other authors:* V.P. Kazarinov, M.V. Kas'īanov, IU. K. Mironov, I.I. Nesterov, N.N. Rostovtsev, L.I. Rovnin, M.IA. Rudkevich, A.A. Trofimuk, *and* IU. G. Erv'e. **Title tr.:** West Siberian lowland, a new base for oil and gas production in the USSR.

Outlines the geologic premises for possible discovery of large reserves of oil and gas in the area including the Severnaya Sos'va basin, Khanty-Mansiysk district, etc. Jurassic-Valanginian deposits are considered the most promising: geochemical and geothermic properties, oil traps, favorable structures, and other signs are summarized. Characteristics are given of recently discovered deposits: the Shaim (60°21′N. 64°04′E.) and Megion (61°03′N. 76°06′E.) gushers, their yield and properties. An oil and gas prognosis is included and some logistical problems in developing the reserves are noted. (DLC.)

GUR'EV, A. G., *see* Podgornaīa, N.S., & A.G. Gur'ev. O nekotorykh osobennostiīakh tolshchi konglomerato-brekchiĭ . . . 1960. No. 74836

GUREVICH, B. G., *see* Krasil'nikova, N.A., & *others.* Prognoznaīa otsenka fosforitonosnosti . . . 1961. No. 73081

71917. GUR'IANOVA, EVPRAKSIIA FEDOROVNA, 1902– . Comparative research of biology of the littoral in the Far Eastern seas. (Pacific Science Congress. 9th, *Bangkok,* Thailand, 1957. Proceedings, *pub.* 1961. v.19, Zoology, p.75-86, tables.) 47 refs.

Discusses some bionomic and biogeographical conclusions based on Russian research (cited in the references) during the past 30 yrs. along the northern and eastern coasts of the Soviet Union. Principles of vertical zonation of the littoral by tidal sea-levels (Vaillant) and by distribution of species and communities (Stephenson) were applied to the various coastal regions studied, and are illustrated by a few examples from northern areas, e.g. Commander Islands. The most specific feature of the Far Eastern seas is the existence of a horizon between the littoral and sublittoral that is exposed only during winter (Oct.-April) ebb tides. (DI.)

71918. GUR'IANOVA, EVPRAKSIIA FEDOROVNA, 1902– . Zonal'no-geograficheskie izmeneniīa na litorali tikhookeanskogo poberezh'īa Azii. (Akademiīa nauk SSSR. Doklady 1961. t.141, no.2, p.453-56, table.) 9 refs. Text in Russian. **Title tr.:** Geographic - zonal changes in the littoral of the Asiatic coast of the Pacific Ocean.

A series of general statements on the biological and ecological zones, based on own and others' investigations over the past thirty years. Considering the abundance of animal species, their number was found low in the Chukchi Sea, but double in the Bering and Okhotsk Seas and increasing further in the Japan Sea. (DLC.)

71919. GURINA, NINA NIKOLAEVNA. Drevniaīa istoriīa Severo-Zapada Evropeĭskoĭ chasti SSSR. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 588 p. illus., incl. col., diagrs., tables & maps incl. fold. (Akademiīa nauk SSSR. Institut arkheologii. Materialy i issledovaniīa po arkheologii SSSR, no.87.) Refs. Text in Russian. Summary in German. **Title tr.:** Ancient history of the northwestern part of the European USSR.

Exhaustive study of the mesolithic through the early iron ages of Karelia and the Leningrad Province, to prove the existence of an autochthonous bronze and iron age culture on the basis of materials collected in 1948-1959. Kola Peninsula and Arkhangel'sk Province are referred to only for occasional comparisons. The geology, climate, and ethnic history of the area are outlined. The sites, including about 80 in northern Karelia, and their inventory are described and illus. A relative

chronology of the culture phases, based mainly on pottery styles and ornamentation patterns, is given. The ethnic origin of each new culture-bearing migration group is discussed. Nomadic bands from Finland or the "Arctic stone age" culture area of northern Fennoscandia appeared during the preceramic late mesolithic era, 4th millennium B.C. A neolithic migration wave coming probably from the Urals or Siberia in the 3rd millennium B.C. introduced the Sperrings type pottery. The coincidence between the area with Sperrings pottery sites and the territory occupied by Finno-Ugric tribes is noted. Subsequent migrations, northward displacement of previous occupants, changes in pottery styles, etc. are dealt with. The asbestos pottery of the early iron age (first millennium A.D.) shows ancient local roots and is linked to proto-Lappish elements. Archeological maps, chemical analysis of metal artifacts and an index of sites are appended; also, p.535-78, a paper by G.N. Lisitsyna on the paleogeography of the Gulf of Finland region. (DLC.)

71920. **GURINOV, I. I.** Samolet vedet karavan sudov. (Grazhdanskaia aviatsiia, Oct. 1961. god 18, no.10, p.18, illus.) Text in Russian. **Title tr.:** Aircraft guides a ship convoy.

Pilot-instructor aboard the icebreaker *Moskva* reports on his ice-scouting by helicopter: air survey and mapping of Kara sea ice conditions also are noted. (DLC.)

71921. **GUROVA, TAMARA IVANOVNA.** Glaukonitovye formatsii ėotsenovykh otlozhenii zapadnoi chasti Zapadno-Sibirskoi nizmennosti. (Sibirskii nauchno-issledovatel'skii institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaia geologiia, 1960. vyp.10. Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoi Sibiri, p.117-19.) 4 refs. Text in Russian. **Title tr.:** Glauconite formations of Eocene deposits in the western part of the West Siberian plain.

Reports a study of cores from drillings in the Malyy Atlym, Leushi, Uvat and other localities, mostly of Tyumen Province. Content and type of glauconite occurrence is analyzed; three types are distinguished and characterized. Two zones of glauconite are indicated. Conditions of its origin and facies are summarized. (DLC.)

71922. **GUROVA, TAMARA IVANOVNA.** K voprosu izucheniia otsortirovannosti terrigennykh porod mezozoia i kainozoia Zapadno-Sibirskoi nizmennosti. (Sibirskii nauchno-issledovatel'skii institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaia geologiia, 1961. vyp.17, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoi Sibiri, p.137-42, tables, graphs, diagr.) 2 refs. Text in Russian. **Title tr.:** On investigation of the sorting of terrigenous Mesozoic and Cenozoic rocks in the West Siberian plain.

Reports a study on sorting of material and size range of various rocks collected from the Turukhansk, Yeloguy, Khanty-Mansiysk and other bore holes. Coefficient of sorting is determined for various rocks and graphed. The degree of sorting shows up clearly in clayey deposits and poorly in aleurites. This type of study is of importance for determining source of dispersal material and for compilation of maps for lithofacies. (DLC.)

71923. **GUROVA, TAMARA IVANOVNA,** *and* **V. P. KAZARINOV.** Litologiia i paleogeografiia Zapadno-Sibirskoi nizmennosti v sviazi s neftegazonosnost'iu. Moskva, Gostoptekhizdat, 1962. 300 p. tables, maps, diagrs. incl. fold. plates. Approx. 200 refs. Text in Russian. **Title tr.:** Lithology and paleogeography of the West Siberian plain in relation to its oil-gas bearing properties.

Outlines the lithology and mineralogy of Mesozoic and Paleogene deposits. Lower Triassic, Jurassic, Cretaceous and Paleogene and Neogene deposits are analyzed. History of sedimentation is treated in detail. Reservoir properties of rocks are analyzed. Occurrence of oil and gas and useful minerals is discussed. The Berezovo gas deposits are noted. Possibilities for detection of oil in the lower Yenisey region are outlined. Arctic areas between the Ob and the Yenisey come under review in the course of this study. (DLC.)

71924. **GUROVA, TAMARA IVANOVNA.** Ob oolitovykh porodakh tiumenskoi svity Zapadno-Sibirskoi nizmennosti. (Akademiia nauk SSSR. Doklady, Mar. 11, 1962. t.143, no.2, p.398-401, illus., text map.) Text in Russian. **Title tr.:** On the oolitic rocks of the Tyumen series in the West Siberian plain.

Describes the oolitic layer in this Jurassic series, as studied in drill cores, including such at Surgut and the Nizhne-Mysovskaya in Tyumen Province. Carbonate oolites are reported with special attention to oolitic siderites. (DLC.)

71925. **GURVICH, IL'IA SAMOĬLOVICH.** K voprosu ob ėtnicheskoi prinadlezhnosti korennogo naseleniia Bulunskogo raiona. (Akademiia nauk SSSR. Institut ėtnografii. Kratkie soobshcheniia, 1962. vyp.36, p.55-59.) 7 refs. Text in Russian. **Title tr.:** Ethnic composition of the aboriginal population of the Bulun District.

Discusses assimiliatory trends in northern Yakutia as shown by the mixed Evenki (Tungus) and Yakut population of the lower Lena basin. In the early 18th century, two Evenki clans, the Kiuptsy and Ėzheny, migrated from the Aldan and Maya Rivers to the Bulun region. With similarities in economy, material culture, and way of life and intermarriage, the Evenki had adopted the Yakut language, clothing, etc. by the end of the 19th century. Soviet administrative measures, based on territorial rather than ethnic criteria, accelerated the process of assimilation. The absorption of family-controlled primary production units by the collective farm system and the subsequent consolidation of kolkhozes in 1949-1951 have virtually completed the fusion of the Evenki and Yakut groups. Vestiges of aboriginal Evenki traditions and customs can still be discerned, however, in certain hunting rites, totemistic beliefs, and folklore. (DLC.)

71926. **GURVICH, IL'IA SAMOĬLOVICH.** Koriakskie promyslovye prazdniki. (*In:* Akademiia nauk SSSR. Institut ėtnografii. Trudy t.78, Sibirskii . . . 1962, p.238-57, illus.) 20 refs. Text in Russian. **Title tr.:** Koryak occupational festivals.

Traditional sea-mammal hunting and fishing feasts of the coastal Koryaks and the seasonal holiday cycle of the reindeer Koryaks are dealt with in turn, connected ceremonies and rituals observed to the 1930's described. Comparisons are drawn with similar practices found among Chukchis, Asiatic and American Eskimos, Yukaghirs, Kamchadals, and the northern Tungus and Yakuts. All such festivals are traced to Siberian aboriginal religious beliefs in magic resuscitation of the slain animal assuring the continuance of the species. The study is based on data collected in 1956-1957 by the Koryak National District party of the Northern Ethnographic Expedition. (DSI.)

71927. **GURVICH, IL'IA SAMOĬLOVICH.** O putiakh dal'neĭshego pereustroĭstva ėkonomiki i kul'tury narodov Severa. (Sovetskaia ėtnografiia, July-Aug. 1961, no.3, p.45-57.) 17 refs. Text in Russian. Summary in English. **Title tr.:** Ways of reconstructing the economy and culture of the peoples of the North.

Describes the radical amelioration of living conditions with social changes and technological aid. The mechanization of fishing, hunting, and transportation in kolkhozes, measures to develop the existing economy, and introduce new occupations, improvement of housing, etc. are discussed. Acclimatization of fur-bearers, proved successful, especially muskrat and sable in Yakutia, the Chukchi and Koryak National Districts, and Amur region. Emergency feeding in fall and spring reduced mortality of litters, e.g. among polar foxes. Zootechnical, veterinary and pest-control measures aided increase in the reindeer herds; new portable shelters (cf. No. 64460) are used by Lamut and Yakut herders. Use of helicopters and tractors is noted, also retention of reindeer and dog transportation in less accessible areas. The acculturative value of collective and state farm settlements is exemplified from Chukchi, Koryak and Lamut kolkhozes. Still needed reforms are sketched; most urgent is bringing nomad reindeer herders to settled life; a pilot project among Samoyeds of the Malozemel'skaya Tundra is outlined. (DLC.)

GURVICH, IL'IA SAMOĬLOVICH, *see also*

Michael, H.N. Studies . . . ethnogenesis. 1962. No. 73967

Mozeson, D.L., & I.S. Gurvich. Izuchenie Kamchatki. 1961. No. 74136

GUSAROV, M. I., *see* Petukhov, P.Z., & *others*. Vliianie vzryvov . . . 1961. No. 74765

71928. **GUSEV, A. I.** Stratigrafiia chetvertichnykh otlozheniĭ primorskoĭ ravniny. (*In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.119-27, diagr.) 7 refs. Text in Russian. **Title tr.:** Stratigraphy of the Quaternary deposits of the maritime plain.

Presents a stratigraphic description of the Lower, Middle, Upper and Recent Quaternary deposits in the Lena-Indigirka coastal plains and adjacent areas. Composition of these deposits, flora and fauna, thickness, distribution and other features are outlined. The paleogeography of the marine plain dissected during the Quaternary by Khatanga, Anabar, Omoloy, Yana, Indigirka and other rivers is characterized. (DLC.)

71929. **GUSHCHENKO, I. I.** Osobennosti stratigrafii i litologii chetvertichnykh i sovremennykh vulkanicheskikh otlozheniĭ Severnoĭ Kamchatki. (Vsesoiuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.68-71,) Text in Russian. **Title tr.:** Stratigraphic and lithologic features of Quaternary and present volcanic deposits of northern Kamchatka.

Summarizes conditions and mode of deposition of sedimentary material in the vicinity of the Klyuchevskaya, Kharchinskiy-Zarechenskiy group and of Sheveluch Volcano. Friable clastic material and volcanic ash are the main sources of continental deposits, and their rate of formation is in direct relation to the activity of nearby volcanoes. The erupted materials are estimated quantitatively, and their composition characterized. Glacial deposits from two glaciations are discussed also, and the horizons of ash considered important for their correlation and stratigraphy. (DLC.)

71930. **GUSHCHENKOV, E. M.** Nekotorye dannye ob atlanticheskikh vodakh v Chukotskom more. (Okeanologiia, 1962. t.2, vyp.2, p.226-32, table, maps.) 3 refs. Text in Russian. **Title tr.:** Some data about Atlantic waters in the Chukchi Sea.

Reviews the distribution of hydrologic stations in this sea. Temperature and thickness of the Atlantic layer and its heat content are reported from station observations and work of the *Lomonosov* in 1959. Heat exchange between the Atlantic and Chukchi Sea waters is calculated for some regions. (DLC.)

71931. **GUSLITSER, B. I.** Dochetvertichnye otlozheniia vysokikh terras i peshcher basseĭna Verkhneĭ Pechory. (Moskovskoe obshchestvo ispytateleĭ prirody. Biulleten', nov. ser. t.67, otdel geologicheskiĭ, July-Aug. 1962. t.37, vyp.4, p.52-60, table, diagrs.) 10 refs. Text in Russian. Summary in English. **Title tr.:** Pre-Quaternary deposits in the high river terraces and caves of the upper Pechora basin.

Reports a study in the Un'ya and Pechora River basins. Pre-Quaternary alluvium is found on the surface of the Un'ya X (70 m.) terrace. Sections of the deposits here and elsewhere are described; their mechanical and mineral composition analyzed. The Tertiary and possibly Mesozoic alluvium deposition is considered the residue of old river terraces. Studies are suggested. (DLC.)

71932. **GUSLITSER, B. I.** Karst basseĭna r. Un'i. (*In:* Akademiia nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.191-219, illus., maps, diagrs.) 25 refs. Text in Russian. **Title tr.:** The karst of the Un'ya River basin.

Reports the geologic, petrographic, climatic and vegetation conditions for development of karst in the basin of the Un'ya, a tributary to the Pechora, where karstic rocks are distributed. Various forms are distinguished and described such as bedding caves, solution springs, caves, grottos, niches, corries, etc. Intermittent rivers, caves and sink holes are treated in detail, their origin and distribution patterns are characterized. Some single caves are also described. This basin has several sections where hydroelectric stations could be built. (DLC.)

71933. **GUSLITSER, B. I.,** *and* **V. I. KANIVETS.** Pervaia paleoliticheskaia stoianka na Pechorskom Urale. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda. Biulleten' 1962. no.27, p.21-27, illus., cross-sections.) 8 refs. Text in Russian. **Title tr.:** The first paleolithic site in the Pechora Ural.

Describes the geological structure, faunal and cultural debris of the Medvezh'ya (i.e. Bear) cave on the right bank of the Pechora near its confluence with the Bol'shoy Shezhim River, a little north of 62°N. Excavations in 1960 by a geological (under Gusliter) and an archeological (Kanivets) party of the Academy's Komi Branch are reported. The uppermost (third) horizon contained flint flakes and lamellar blades of late paleolithic aspect, also charcoal and split animal bones. The third and second horizons yielded over 25,000 bones, mainly of upper Pleistocene mammals: *Rangifer tarandus* L., *Ursus spelaeus* Rossm., *Vulpes lagopus* L., *Elephas primigenius* Blum., *Equus caballus* L., etc. The lowest horizon was virtually sterile. Stratigraphic considerations and faunal material indicates a pre-Magdalenian i.e. upper (late) paleolithic occupancy. (DLC.)

GUSS, D. E., *see*
Davis, L.R., & *others.* Rocket observ. solar protons Sept. 3, 1960. 1961. No. 70903
Fichtel, C.E., & D.E. Guss. Heavy nuclei solar cosmic rays. 1961. No. 71387

71934. **GUSTAFSON, P. F.,** *and others.* Fission-product radioactivity in the North-Polar stratosphere. (Science, Oct. 1962. v.138, no.3538, p.433-34, illus.) 4 refs. *Other authors:* R.B. Keener, G.A. McGinnis, *and* R.A. Soller.

Reports on five balloon flights made during April 1962 from Thule, Greenland. Gamma-ray detection apparatus aboard indicated high radioactivity above 70,000 ft. and the source of much of this activity to be Soviet nuclear tests of late 1961. (DLC.)

GUSTAFSSON, KJELL, *see* Rapp, A., & *others.* Iskilar i Padjelanta? 1962. No. 75041

71935. **GUTKIN, A. IA.,** *and others.* Polovoe razvitie shkol'nikov Zapoliar'ia. (Gigiena i sanitariia, Feb. 1962. god 27, no.2, p.104-108, tables.) 5 refs. Text in Russian. *Other authors:* G.A. Glauer, A.N. Nikolaev, N.P. Preobrazhenskaia, *and* A.P. Rodina. **Title tr.:** Sexual development of school children in the Arctic.

Reports a study of over two thousand boys and girls, aged 10 years and more in Kirovsk, Kola Peninsula. Sexual development began in boys at the age of 13-14 years, in girls at 11-12 and in two-thirds of cases menstruation began at 14. The Kirovsk boys and girls were behind those in Moscow and Leningrad. (DLC.)

71936. **GUTKIN, E. S.** Gibbsit v devonskikh boksitakh Severnogo Urala. (Vsesoiuznoe mineralogicheskoe obshchestvo. Zapiski 1961. ser.2, chast' 90, vyp.6, p.748-49, tables, graph.) Text in Russian. **Title tr.:** Gibbsite in the Devonian bauxites of the Northern Ural.

Describes chemical composition, X-ray analyses, and heat tests of gibbsite studied in the Cheremukhovskoye deposits of the Northern Ural. It is a secondary mineral here formed by the weathering of bauxites. (DLC.)

GUY, HAROLD PAUL, 1922– , *see* Rainwater, F.H., & H.P. Guy. . . . hydrochemistry and sedimentation . . . 1961. No. 75030

71937. **H., H.** Rationalisering på ett revir; från ett besök på Brännbergs revir. (Skogen, Nov. 24, 1961. årg. 48, nr. 23, p.420-21, illus.) Text in Swedish. **Title tr.:** Rationalization in a forest district; a visit to the Brännberg Forest District.

Reports marked increase in output per man-hour in logging and transport operations in this district in lower Norrbotten. It is achieved by planning and cooperation: labor organized in teams working independently with own equipment, year-round employment, selective use of tractors and horses, scheduling work to suit season and weather, etc. (DA.)

71938. **H., H.** Röde djävulen. (Skogen, July 21, 1961. årg. 48, nr. 15, p. 269.) Test in Swedish. **Title tr.:** The red devil.

Discusses forest regeneration at high elevations, in particular plantings at about 500 m., which started well and died at about five yrs. Oversize plots, seed of unsuitable provenance, dehydration because of wind and frozen ground, saw-fly infestation, the red devil *Crumenula,* a fungus which thrives in snow, are suggested as responsible. Pine is recommended for southern slopes, spruce for northern, the seed of provenance with climatic conditions similar to the planting area. Forest planting at higher elevations however is considered a calculated risk. (DA.)

71939. **H., H.** Skog i Nord-Norge. (Skogen, Aug. 18 1961. årg. 48, nr. 16, p.290, 296, illus.) Text in Swedish. **Title tr.:** Forests in North Norway.

Reviews conditions in forests 68.5°-70°N. spruce under 40 yrs. old with an annual yield of 7m³sk, naturally regenerated pine forests, a provincial nursery with five million plants, and successful plantings to 300 m. below the timber line. The area is mostly undeveloped, and covered with poor quality birch. The problem is to sell birch at a profit to plant spruce. New industries are needed to provide employment. A 75% subsidy is given for private forest planting, but no financing is provided for state-owned forest land. (DA.)

HAAB, P., *see* MacHattie, L., & *others.* Eskimo metabolism measured . . . 1961. No. 73697

HABICHT, H. L., *see* Ambach, W., & H.L. Habicht. Thermoelektrischer Strahlungsbilanzmesser . . . 1961. No. 69737

71940. **HACHEY, HENRY BENEDICT, 1901-** . Oceanography and Canadian Atlantic waters. Ottawa, Queen's Printer, 1961. 6, 120 p. illus., tables, maps. (Canada. Fisheries Research Board. Bulletin no. 134.) About 400 refs.

Reviews developments over the years in the study of the area north of 40°N. and west of 40°W. including the Eastern Canadian Arctic. Introductory outline of the submarine topography is followed by a review of oceanographic research, basic principles, circulation (in the western North

Atlantic) of the Labrador Current, etc.; atmospheric circulation, interaction between the sea and the atmosphere, ice and ice problems, particularly icebergs off Labrador and in the Grand Banks area. Oceanography of the different areas is outlined, as are Canadian problems and organization for research. Need for a comprehensive work on the arctic and North Pacific waters also is stressed. The extensive bibliography includes a special section of selected references. (DLC.)

HADFIELD, REX G., *see* Serebreny, S.M., *& others* . . . jet stream complex . . . 1962. No. 75487

71941. HADLEIGH-WEST, FREDERICK. Anthropology in the Arctic National Wildlife Range. (*In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.51-53.)

Notes importance, to the archeologist, of this hitherto unstudied area in northeastern Alaska. Its location on a migration route from the Bering Strait area across the north slope of the Brooks Range to the Mackenzie River is stressed. (CaMAI.)

HADLEIGH-WEST, FREDERICK, *see also* Alaskan Science Conference 1960. 1961. No. 69643

71942. HAEFELI, ROBERT, 1898- . The ablation gradient and the retreat of a glacier tongue. (*In:* International Association of Scientific Hydrology. Pub. no.58, Symposium of Obergurgl 1962, p.49-59, map, graphs, tables.) 14 refs. Summary in French.

Defines the term "ablation gradient" as the change of ablation per unit of altitude, expressed in m. of water per 100 m. of difference in height, as in $a = \tan \alpha = \frac{A}{\Delta H}$; a and α being constants, A = annual ablation and ΔH is the difference in elevation between the firn line and the point under observation on the glacier surface. Use of this function in determining climatic influence on glaciers as well as in mass-balance studies is proposed. Relations between the ablation gradient and the retreat of a glacier tongue are discussed and illus. by two alpine glaciers and by the Greenland Inland ice 70°N., and White Glacier on Axel Heiberg Island. (DGS.)

71943. HAEFELI, ROBERT, 1898- . Contribution to the movement and the form of ice sheets in the Arctic and Antarctic. (Journal of glaciology, Oct. 1961. v.3, no.30, p.1133-50, diagrs., graphs, tables.) 34 refs. Final text of paper read for the author by M. de Quervain at the Symposium on the Physical Geography of Greenland (SD2) held in Copenhagen, July-Aug. 1960, in connection with the 19th International Geographical Congress, Norden.

Attempts to formulate approximately the horizontal velocity component and the surface configuration for a strip-shaped ice sheet in a stationary state of balance, utilizing Glen's flow law for ice and a series of assumptions based in part on observations in Greenland and in the Jungfraujoch. Extensive agreement was found between the theoretically calculated surface profile and the east-west profile measured through "Station Centrale" by Expéditions Polaires Françaises. As a first application of the theoretical profile of a circular ice sheet, an attempt is made to calculate the average rate of accumulation in Antarctica from the flow-law parameters derived from the Greenland Inland Ice. The theory is also applied in an approximate calculation of the age of the Greenland Inland Ice. A general expression for the surface profile of an ice sheet with constant accumulation is set up and compared with two profiles through Antarctica, 30°W.-150°E. and 90°W.-90°E. (DGS.)

HAEFELI, ROBERT, 1898- , *see also* IUGG . . . Snow & Ice Comm. 1961. No. 72396

HÄGERSTRAND, TORSTEN, *see* Hannerberg, D., *& others*. Migration in Sweden . . . 1957. No. 71987

71944. HAEKEL, JOSEF, 1907- . Bestattungsgebräuche und Totenerinnerungsmale bei den Indianern Nordwestamerikas.. (Wiener völkerkundliche Mitteilungen, 1955. Jahrg. 3, Nr.1, p.22-30.) 25 refs. Text in German. Summary in English. **Title tr.**: Mortuary rites and memorial feasts of the northwest American Indians.

Discusses the burial rites of, among others, the Tlingits, Haidas, Tsimshians, and Kwakiutls: special treatment of chieftains and shamans, dramatic dance performances with animal masks at burial potlatches, totem poles. Connections are seen between the masked dances and myths of origin. Analogies between mortuary customs and memorial poles in northwest America and southeast Asia indicate probable trans-Pacific contacts. (CtY.)

71945. HÄRME, MAUNU. On the fault lines in Finland. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finlande, 1961. no.196, p.437-44, maps, diagr.) 31 refs.

Compares trends of major Finnish fault lines with those of eskers as shown on maps, scale approx. 1 in.: 120 mi. Most fault lines occur *en échelon*. Such a series is often crossed by a similar series, with river valley alignment lying between them. Most fault lines are of Precambrian age; are radially arranged around the northern Gulf of Bothnia. Eskers generally follow the fault line trend, where these are prominently oriented; otherwise eskers are absent or poorly oriented, as in the northeast, and southeast of Kemi. Recent topographic maps and aerial photography provide material for additional, more detailed studies. (DLC.)

71946. HAGAN, WILLIAM K., 1924- . Communication by polar-orbit satellite relay. (IRE transactions on communications systems, Dec. 1960. v.CS-8, no.4, p.250-54, illus., table, diagrs., graphs.) 2 refs.

Notes the lack of noise-free reliable communications in aircraft on transpolar flights, and proposes a method of UHF communications by means of polar-orbiting satellites with active, wide-band repeaters. A system is discussed for a 5000-mi. altitude satellite orbit and a 3500-mi. ground distance separation. Complete system parameters are described. The satellite receiver, noise figure, transmitter output, and solar power generation system are discussed. The system is termed feasible and practical. (DLC.)

71947. HAGENAH, DALE J. Spore studies in the genus *Cystopteris*, I; the distribution of *Cystopteris* with non-spiny spores in North America. (Rhodora, July, 1961. v.63, no.751, p.181-93, illus., table, map.) 13 refs.

Reports the mapping of distribution of the rugose-verrucose type of spore, a survey made from the Gray Herbarium, Cambridge, Mass., North American collections of *Cystopteris*. The spores and the process of preparing slides for examination are described. The genus in North America includes *C. bulbifera, C. montana,* and the *C. fragilis* complex, in which non-spiny spores were found in 26% of the 538 collections. Map shows occurrence of this fern in Alaska, Greenland, Ellesmere, Baffin Island, Labrador and Northern Quebec, as well as other more southerly places. Exact locations of specimens are given. (CaONM.)

71948. HAGENLUND, GUNNAR. Norges lengste planteskole. (Skogeieren, Dec. 1961. årg 48, nr.12, p.13, illus.) Text in Norwegian. **Title tr.**: Norway's longest nursery.

Describes two adjoining and well tended spruce nurseries, the Vefsn and Alstahaug, in the Mosjøen area (about 66°N.); they are owned and operated by the Helgeland Forest Association. Together their beds are 100 km. long and they deliver 9.5 million plants annually. They have joint facilities: refrigerated store rooms with modern equipment, machine and vehicle park, office building, living quarters, kitchen and mess facilities for a staff of 120. (DA.)

71949. HAJDÚ, PÉTER, 1923- . Etymologische Bemerkungen. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.53-57.) Refs. in text. Text in German. **Title tr.**: Etymological notes.

Comparative analysis of the origin, phonetic and semantic changes, etc. of several words common to Nenets, Sel'kup and Nganasan (Samoyed) dialects, also other Finno-Ugric languages, including Zyryan, Vogul, and Ostyak. (DSI.)

71950. HAJDÚ, PÉTER, 1923- . The form of the object in Forest Yurak. (Acta linguistica, 1960. t.10, fasc. 1-2, p.95-115, tables.) Refs. in text. Summary in Russian.

Grammatical and phonetic analysis proving false the assumption that no true accusative exists in the Forest Nenets-Samoyed dialects. Six means of denoting the object in the singular are identified and discussed. (CtY.)

HAKURA, YUKIO, *see*

Alaskan Science Conference 1961. 1962. No. 69644

Obayashi, T., & Y. Hakura. Polar ionospheric disturbances . . . 1961. No. 74451

HALE, A. R., *see* Burch, G.E., & A.R. Hale. Relation . . . thermal regulation. 1962. No. 70454

71951. HALE, HENRY B., *and* **R. B. MEFFERD, *Jr.*** Metabolic effects of somatotropin in rats acclimated to adverse environments. (Journal of applied physiology, Mar. 1961. v.16, no.2, p.243-46, illus., tables.) 18 refs.

In rats acclimated to a series of stresses, STH and cold had antagonistic effects on urea, uric acid and the uric acid/creatinine ratio. Synergism was evident in the sodium/potassium ratio. (DLC.)

71952. HALE, JOHN D. How to operate and what to expect in the Canadian Arctic Islands. (Canadian oil and gas industries, Dec. 4, 1962. v.15, no.13, p.11.)

Editor's report on talk at Alberta Society of Petroleum Geologists' meeting, by J.C. Sproule: emphasizes importance of operational problems as well as recognition of oil or gas prospects in this area. Main access points are Inuvik, Resolute, and Churchill; access by submarine should be possible in some waters; in shallow channels pipelines would be feasible. Geological relationship appears to exist between the Western Canada basin and the Arctic Islands; sedimentary rock sequence covers about 1100 x 450 mi.; comprises about 60,000 ft. of stratigraphic footage. Geological provinces are: southern Arctic Lowlands, Parry Islands fold belt, Sverdrup basin, Boothia-Ringnes unit, and the Polar platform unit. Down-drop faults are indicated on each side of the narrow Polar platform province. Cross-trending appears to be a cause for possible oil and gas accumulations; favorable reef units are noted. (DGS.)

71953. HALE, JOHN D. Interest in ancient Arctica. (Canadian oil and gas industries, Sept. 1961. v.14, no.9, p.50-51, port.)

Reports E.J. Baltrusaitis' discussion of a drilling project undertaken by Dome Petroleum Ltd., at Winter Harbour, Melville Island. The well is to be drilled to about 10,000 ft. by Peter Bawden Drilling Ltd. Full operations began in Aug. 1961 on the arrival of the *Thora Dan* at Winter Harbour, with 3000 tons of equipment and supplies. (DGS.)

71954. HALE, JOHN D. Operation Porcupine 1962. (Canadian oil and gas industries, Oct. 16, 1962. v.15, no.10, p.15, port.)

Editor's notes on talk given to Alberta Society of Petroleum Geologists by D.K. Norris: outlines a Canadian Geological Survey field mapping project covering the main sedimentary portion of the Yukon and Northwest Territories north of 65°N. and west of 132°W., including the Peel Plateau, Richardson and Ogilvie Mts., and the northwest tip of the Mackenzie Delta, some 80,000 sq. mi. Supported by two helicopters and a Beaver plane, the 30 workers spent 106 days in the field from May 20; 150 stratigraphic sections were measured, in addition to the prime objective: to map surface and bedrock geology at scales of 1 in.: 4 mi. and 1 in.: 8 mi. (DGS.)

71955. HALE, JOHN D. Winter drilling is possible in the Arctic. (Canadian oil and gas industries, Mar. 1962. v.15, no.3, p.35-37.)

Reports Peter Bawden's talk and film presented to the Canadian Oilfield Technical Society branches in Calgary, Jan. 1962, and Edmonton on "Arctic Island Wildcat." Experience of drilling of the Dome et al. Winter Harbour no.1 well on Melville Island was discussed; comment on Nodwell track vehicles, Eskimo crew members, DC-3 and DC-4 aircraft, radio communication with Edmonton, etc.; permafrost to 1200-1500 ft. but no unusual drilling problems were encountered. (DGS.)

71956. HALKIER, ERIK. Spitsbergen, en højarktisk fugleverden indenfor raekkevidde. (Naturens verden, Oct. 1962. v.46, no.10, p.297-312, 16 illus., some col.) Text in Danish. **Title tr.:** Spitsbergen, a high arctic bird world within range.

Presents an account of birds sighted on Bjørnøya and Vestspitsbergen in 1961. Their abundant numbers are attributed to the plankton-rich sea, and the few species to climatic conditions north of the 5°C. isotherm for July. About twenty species are noted (by common name only); of some, both the northern and more southerly varieties were seen. Some follow the pack ice northward in summer, as does the polar bear. Nesting sites are typically the cliff colony and the solitary tundra nest. Predators are few: the gray gull chiefly, some polar fox on the island, mice and rats near settlements; no lemmings. (DLC.)

71957. HALKKA, OLLI. Polymorphism in populations of *Philaenus spumarius* close to equilibrium. Helsinki, 1962. 22 p. illus., 8 tables, graph. (Suomalainen Tiedeakatemia. Toimituksia, ser. A, IV, Biologica 59.) 22 refs.

Describes 11 female and eight male color varieties of the Finnish meadow spittlebug, *Philaenus spumarius* L., called *P. leucophthalmus* by American entomologists, one of the commonest field insects in many parts of the Palaeoarctic and Nearctic regions, and a serious pest on feed crops. Three of the color varieties occur exclusively in the females and the eight other varieties about equally in males and females. Comparisons are made with relative frequencies in North America. *Philaenus* is evidently the subtype of balanced polymorphism, which may depend on a small number of genes. A hypothesis is advanced to explain certain features of the variation. (DLC.)

HALL, D. P., *see* Ellison, R.G., & *others.* Further studies . . . hypothermia. 1960. No. 71247

71958. HALL, FRANK GREGORY, 1896- , and J. SALZANO. Effect of hypothermia on responses to imposed trachea obstruction. (Journal of applied physiology, Nov. 1961. v.16, no.6, p.1019-22, illus. tables.) 7 refs.

Account of respiratory and circulatory responses to three levels of tracheal obstruction in normothermic and hypothermic (28°C.) dogs. Respiratory rate, tidal volume, and arterial oxygen, as well as cardiac output and systemic pressure are recorded and discussed. (DLC.)

HALL, FRANK GREGORY, 1896- . *see also*

Salzano, J., & F.G. Hall. Effect of hypothermia . . . 1961. No. 75357

Salzano, J., & F.G. Hall. Influence of vagal blockade . . . 1962. No. 75358

71959. HALLADAY, E. John Davis and the North-West Passage. (Geographical magazine, Jan. 1962. v.34, no.9, p.524-35, illus., maps.)

Recounts this English explorer's three voyages of 1585-1587, in search of a passage in the Davis Strait and Cumberland Sound areas. His contributions to northern navigation and geography are cited. (DLC.)

71960. HALLER, JOHN, 1927- , and J. L. KULP. Absolute age determinations in East Greenland. København, C.A. Reitzel, 1962. 77 p. illus., maps incl. fold., sections, tables. (Meddelelser om Grønland, bd. 171, nr.1.) 94 refs. *Also issued as:* Columbia Univ., Lamont Geological Observatory, Contrib. no. 581.

Presents a preliminary study on the rocks collected for petrographic purposes by the Danish East Greenland Expeditions led by L. Koch, 1947-1958. Potassium-argon method was used on 11 samples, obtained from Paul Stern Land, 70°20′N. 29°47′W., northward to Lambert Land, 79°20′N. 19°40′W. Petrographic description and analytical data are given for each sample, as an explanation of the method. Results are discussed according to the five periods of structural evolution of North and East Greenland, viz: the formation of a Precambrian "Greenland Shield," the building of a Late Precambrian mountain chain "Carolinides," the emplacement of Paleozoic fold belts in North and northeast Greenland, the post-Caledonian block faulting along the east coast, and the Cenozoic disturbances. Principal structural provinces are shown on generalized map. Isotopic ages are discussed in the relevant structural period, with Paleozoic ages rounded off to the nearest 5 m.y. and the old basement age to the nearest 50 m.y. A single date for the apparently unaltered Precambrian basement complexes is set at a minimum of about 1900 m.y.; three samples from the Pre-Paleozoic supracrustal rocks range from about 375 to 425 m.y.; Caledonian infracrustal rocks 395-410 m.y.; late orogenic intrusives are dated at about 395 m.y. A tentative geologic time scale for the Paleozoic orogenic cycle in East Greenland, sets the Caledonian main orogeny (Silurian) at 420-400 m.y., late Caledonian spasms (Devonian) 400-350 m.y., and minor succeeding episodes (Carboniferous) at 350-270 m.y. Omission of the term Variscan is suggested, in connection with the East Greenland Caledonian fold belt, of which three photographs and a structure map, scale 1 in:32 mi., are appended. (DGS.)

71961. HALLER, JOHN, 1927- . Account of Caledonian orogeny in Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961, v.1, p.170-87, table, fold. map in vol.3.) 46 refs.

Describes main events of mountain-building phases during the late Silurian and the Devonian(?) in North Greenland; also, in considerable detail, the three-phase Caledonian orogeny in East Greenland. The main (Silurian) orogeny affected a segment 1400 km. long and 300 km. broad, producing varied structural patterns. Late Caledonian spasms (Devonian) were limited to areas south of 76°N., were characterized by extensive folding and faulting. An extensive graben-like basin (72°-74°N.) was filled, faulted and then folded. Minor succeeding episodes took place as shallow disturbances within this basin, in the Lower Carboniferous and in the Lower Permian. (DLC.)

71962. HALLER, JOHN, 1927- . The Carolinides: an orogenic belt of Late Precambrian age in Northeast Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961, v.1, p.155-59.) 13 refs.

Describes the setting, origin, and main fea-

tures of this Late Precambrian fold. belt, 800 km. long, named for the Prinsesse Caroline Mathildes Alper, in Kronprins Christians Land (80°40'N. 21°W.). A long process of denudation was followed by a new major cycle of Precambrian sedimentation. Late Precambrian and lower Paleozoic sediments overlie the denuded belt. (DLC.)

71963. HALLER, JOHN, 1927- . Structural control of regional metamorphism in the East Greenland Caledonides. (Geological Society of London. Proceedings, 1962. no.1594, p.21-25, 28-33, cross-section.) 5 refs. Presented at a Symposium on Depth and Tectonics as Factors in Regional Metamorphism, London, Nov. 22, 1961.

Discusses the three distinct periods of tectonic activity which resulted in development of the East Greenland fold-belt; especially the main Caledonian orogeny during the Silurian. Most spectacular sections across the main Caledonian structures are in central East Greenland, where intense crumpling and rock transformation took place. Regional upwellings of large migmatite bodies, and smaller upwellings of migmatite were generally conformable to the tectonics of the so-called *infrastructure*, while metamorphism increased laterally and vertically in the sedimentary mantle, called the *superstructure*. Four stages of progressive metamorphism are well illustrated at the head of Kejser Franz Josephs Fjord (section). In discussion appended, the depth of formation of the migmatites and associated metamorphic rocks is estimated as 7-9 km. (DGS.)

71964. HALLGRÍMSSON, INGVAR. Icelandic zooplankton investigations. (International Council for the Exploration of the Sea. Annales biologiques 1958, *pub.* 1960. v.15, p.53-55, maps.)

Reports zooplankton densities of the uppermost 50 meters in the spring of 1951 and 1956-58; all but the south-eastern waters are included, and dominant forms noted. Earlier investigations are noted as introduction. (DI.)

71965. HALLGRÍMSSON, INGVAR. Joint Danish, Icelandic, and Norwegian plankton research in the North-East Atlantic in June 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v.16, p.71-72, map.)

Reports on density of the zooplankton in the upper 50 meters of the Norwegian Sea. Primary production, standing stock, etc. are also considered. (DI.)

71966. HAMBLIN, F. D. The combustion of gasoline during engine starting at low temperature. (Engineering journal, Sept. 1961. v.44, no.9, p.76-84, diagrs., graphs.) 14 refs.

Reports results of study on the combustion process during the initial explosion at +32° to -30°F. Cylinder pressure-time diagrams were obtained on a single-cylinder engine, using six gasolines with different volatility characteristics. The results of the study differ little from such obtained 20-30 years ago, and show that commercially available winter gasolines are suitable for the temperature range considered. The air:vapor ratio at the time of the spark is the important mixture strength in low temperature starting, but combustion is not necessarily improved by the use of a highly volatile fuel. The delay period is the result of a chemical orientation process in which molecules of oxygen and fuel, in the form of vapor, react to form intermediate compounds; the orientation continues throughout the combustion process and the rate at which the combustion proceeds is governed by the rate of orientation. (DLC.)

71967. HAMELIN, LOUIS EDMOND. Fonctions du Centre d'Études Nordiques de l'Université Laval. (Royal Society of Canada. Transactions, June 1961. ser. 3, v.55, section 2, p.13-19.) Text in French. Also reported in *Revue de l'Université Laval,* Apr. 1962, p.736-40.

Describes the scope and objectives of this research center established at this university in Quebec City in April 1961. Studies in all fields pertinent to northern and central parts of the province are to be carried on, and two or three permanent field stations are planned. Publications, in French with English summaries, are to include a journal and a series of monographs, with the unpublished reports available on request. The Centre is to have a small library, and to offer bibliographic and public information services. (DLC.)

71968. HAMELIN, LOUIS EDMOND. Notes sur le périglaciaire du Spitzberg. (Canadian geographer, spring 1962. v.6, no.1, p.1-11, illus., map, table.) 21 refs. Text in French. Summary in English. **Title tr.**: Notes on the periglacial phenomena of Spitsbergen.

Patterned ground has been stressed in research into periglacial morphology. Both climatic and locational factors are related to periglacial forms: the gelival (frost) cycle, fluvioperiglacial phenomena, floating ice, the semi-arid regime, a wide seasonal range of temperature, etc. are among the climatic factors; the numerous shoreline terraces include terrain favorable for deposition of certain sediments and surface forms, moraines, etc. Periglacial phenomena are classified under seven groups: permanently and seasonally frozen ground (perigelisol and mollisol), patterned ground, gelifraction and slides, gelifluction, floating ice conditions, glacial tectonics, others. Periglacial forms in Spitsbergen give evidence of various climatic fluctuations; slopes and patterned ground especially show the effects of renewed glacial climate. A glossary of some thirty terms includes suggested English equivalents. (DGS.)

71969. HAMELIN, LOUIS EDMOND. Périglaciaire du Canada: idées nouvelles et perspectives globales. (Cahiers de géographie de Québec, Apr.-Sept. 1961. année 5, no.10, p.141-203, illus., maps, table.) 138 refs. Text in French. Summary in English. **Title tr.**: Periglacial conditions of Canada: new ideas and global perspectives. Paper prepared for the Canadian Committee of the International Commission on Periglacial Morphology.

Reviews Canadian research in this field as limited in scope, practical in purpose, and largely by government agencies. Though the literature runs to a hundred or so reports, even an inventory of periglacial phenomena is quite incomplete. A series of new analytical concepts is suggested, new fields for research outlined, and three major

aspects of studies discussed: processes, dating methods, and regions. A proposed chronological sequence of periglacial phenomena includes: Lower and Middle Wisconsin, Pleniwisconsin, Finiwisconsin, Late Glacial, Recent. The 11 periglacial "provinces" of Canada are suggested as types or regimes throughout the cold regions of the world. Four of these provinces: Elizabeth, Victoria, Keewatin, and Innuit, are closely associated with continuous permafrost. Three: Hudson, Labrador, and Mackenzie, are in the subarctic zone. Yukon "province" lies within the western Cordillera, and the other three are more southerly. A glossary of some forty new terms is appended. (DGS.)

71970. HAMELIN, LOUIS EDMOND, *and* **P. B. CLIBBON.** Vocabulaire périglaciaire bilingue, français et anglais. (Cahiers de géographie de Québec. Apr.-Sept. 1962. année 6, no.12, p.201-226.) 17 refs. **Title tr.:** Bilingual periglacial vocabulary, French and English.

Attempts a correlation of some nine hundred terms as used by French- and English-speaking geomorphologists, with discussion of the difference in connotation of periglacial and périglaciaire, the former involving permanently frozen ground, patterned ground and frost shattering; the latter *cold* processes, except those associated with glacier ice, and their resultant phenomena, e.g., effect of sea, lake, river, and ground ice, wind and snow action, also chemical erosion by melt water. This broad interpretation is represented in the terms arranged alphabetically in both French and English, including gélisolation: ice lenses, gélifluction: solifluction, nivalisation: avalanches, géliturbation: patterned ground, gélifraction: felsenmeer, glaciellisation?: action of floating ice, des actions chimiques: thermokarst, etc. (DGS.)

71971. HAMILTON, ALVIN G., 1912- . Canada's northern territories. (Business quarterly, fall 1957. v.2, no.3, p.259-67.)

Appraises the Yukon and Northwest Territories in terms of potential contribution to the industrial growth of Canada. Natural resources, mining, trapping and fishing, are described; factors conditioning their development, mainly the export market, are assessed. Mineral prospects, development costs, problems of transportation and climate, and government contributions toward expansion are briefly discussed. (CaOCU.)

71972. HAMILTON, T. H. The adaptive significances of intraspecific trends of variation in wing length and body size among bird species. (Evolution, June 1961. v.15, no.2, p.180-95, graphs, tables.) 70 refs.

Ecogeographical variations in size among birds of the same species are described, and considered as adaptations to temperature, length of foraging day, migration, etc. Increased body size as a mechanism for conserving heat is discussed in relation to Bergmann's rule (criticized by Scholander, No. 42332) that size increases inversely with environmental temperature. Other heat conservation mechanisms, believed basically the same in birds as in mammals, are noted. Body size is influenced by various adaptive responses to a variety of environmental factors. (DI.)

HAMILTON, W.L., *see* Weeks, W.F., & W.L. Hamilton. Petrographic characteristics of young sea ice . . . 1962. No. 76510

71973. HAMMARSKJÖLD, DAG, 1905-1961. Från Sarek till Haväng. Stockholm, Svenska Turistföreningen, 1961. 115 p. illus. Text in Swedish. **Title tr.:** From Sarek to Haväng.

Presents 15 of his articles selected by Hammarskjöld for republication by the Swedish Tourist Union. Six are geographic sketches of mountain and upland localities in northern Sweden, titles translated: Summer Lapland, Between four bivouacs, North of Sulitjelma (No. 45415), To fly in Sarek, Our last large wilderness, and Lapland. (DLC.)

71974. HAMMARSTRÖM, UNO. Vad Norrlands skogsägare hoppas av sina nya förädlingsindustrier. (Skogsägaren, Nov. 1961. årg. 37, nr.11, p.352-53, illus.) Text in Swedish. **Title tr.:** What Norrland forest owners hope to achieve from their new pulp industries.

The chief objective in the formation of the Norrland Forest Owners' Pulp Co. and its purchase of two large plants was to break the price-fixing power of the forest product companies, which set lower prices for Norrland timber than that from South Sweden. Quality and delivery regulations may be improved also. The new and modern Hörnefors plant is equipped to process birch, and this may raise the price for Norrland birch previously sold at cost or less. Poorer quality coniferous timber may be more marketable. (DA.)

71975. HAMMEL, HAROLD THEODORE, 1921- , *and others.* Thermal and metabolic measurements on a reindeer at rest and in exercise. Fort Wainwright, Alaska, June 1962. 34 p. illus., tables, (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 61-54.) 9 refs. *Other authors:* T.R. Houpt, K.L. Andersen *and* S. Skjenneberg.

Study of adaptations to cold stress when at rest, and of the large heat-dissipating capacity when in motion or at work. O_2-consumption, evaporative heat loss, temperature of expired air, heat production of the rumen ingesta, and surface temperatures of various parts of the body are investigated and their extremes recorded. (CaMAI.)

HAMMEL, HAROLD THEODORE, 1921- , *see also*

Fusco, M.M., & *others.* Interaction central & peripheral factors temp. reg. 1961. No. 71530

Hart, J.S., & *others.* Thermal & metab. responses . . . Eskimos cold. 1962. No. 72054

71976. HAMMER, JOHANNES. Ishusa ved Røsvatn har holdt mjølka i 1. klasse. (Norden, Sept. 16, 1960. årg. 64, nr. 18, p.488.) Text in Norwegian. **Title tr.:** Ice houses in the Røsvatn area kept milk in first-class condition.

Notes several farmers in this area in Vefsn (65°40'N. 13°20'E.) have built small, insulated huts which they stock with ice cut from the lake in March; and there they keep the milk in pails placed in tubs filled with ice water. (DA.)

71977. HAMMERSCHMID, LEO J. Rearward communications for BMEWS. (Engineering journal,

July 1961. v.44, no.7, p.51-58, illus., diagrs., maps.)

Describes transmission routes and systems between detection sites at Clear, Alaska, and Thule, Greenland, and the central display facility at Colorado Springs. For improved reliability, two geographically separate routes having different types of transmission facilities in comparable sections are used, backed up by operational control and standby circuits. Major items designed especially for this system include a novel high-speed data transmission system, a circuit status reporting system, and new tropospheric scatter radio equipment. The data transmission system is described in some detail, including the transmitting and receiving terminals, the data repeater/monitor, and the triple interleaved parity scheme used for error detection. Comments are offered together with additional information in the next issue of the *Engineering journal* (Aug. 1961, v.44, no.8, p.67-70, +.) in discussions by D.S. Edwards, G.E. Graham, W.A. Logan, R.G. Griffith, and C.G. Webster. (DLC.)

71978. HAMNER, K. C., *and others.* The biological clock at the South Pole. (Nature, Aug. 4, 1962. v.195, no.4840, p.476-80, illus.) 6 refs. *Other authors:* J.C. Finn, Jr., G.S. Sirohi, T. Hoshizaki, *and* B.H. Carpenter.

Study of circadian rhythms in running activity of hamsters, rhythmic activity of the cockroach, growth of *Neurospora,* eclosion of *Drosophila* and leaf movements of bean plants. The experiments were conducted at the Pole in order to eliminate diurnal fluctuations in air pressure and gravity associated with the earth's rotation, and claimed to affect the biological clock. No support for such a claim was found in the experiments. (DLC.)

HAMRIN, H., *see* Pousette, I., & H. Hamrin. Raising practice Boliden. 1960. No. 74934

71979. HAN, PAUL W., *and* J. R. BROBECK. Deficits of temperature regulation in rats with hypothalamic lesions. (American journal of physiology, Apr. 1961. v.200, no.4, p.707-710, illus., tables.) 6 refs.

Reports on temperature responses to forced exercise, and to heat or cold stress. Lesions to the preoptic, or the lateral hypothalamic areas, caused no disturbance of regulation against cold, though the first mentioned lesion caused impairment of heat-loss mechanisms. (DLC.)

71980. HAN, PAUL W., *and* J. R. BROBECK. Temperature regulation of rats with hypothalamic hyperphagia. (American journal of physiology, Apr. 1961. v.200, no.4, p.703-706, illus., tables.) 9 refs.

Rats with ventromedial lesions of the hypothalamus showed no primary impairment of temperature regulation when exposed to heat, cold, or exercise. Higher body temperature noted in the latter case were secondary to hyperphagia and weight gain caused by the hypothalamic lesions. (DLC.)

71981. HANAFUSA, NAOFAMI. Denaturation of myosin-B due to freezing and thawing. (Teion kagaku, 1962. ser. B, v.20, p.81-94, illus., tables.) 13 refs. Text in Japanese.

Viscosity of myosin-B in 0.6M KCl solution and ATPase activity were reduced by freeze-thawing. The lower the final temperature and the slower the freezing, the more the denaturation of myosin-B became evident. The denaturation was similar to that caused by urea. Other aspects of of this cold-denaturation are also described. (DLC.)

71982. HANBURGER, CHRISTIAN. Hydroelectric power for Alaska. (Military engineer, Nov.-Dec. 1961. v.53, no.356, p.448-51, illus., map.)

Describes plans for a dam at Rampart Canyon (approx. 65°30'N. 151°W.) to create a reservoir capable of completely controlling the Yukon River mean annual runoff of 85 million acre-feet. Investigations since 1959 show that the project may warrant a power installation of 4,760,000 kw., to be distributed to heavy electroprocessing industries at Alaskan tidewater points about 350 mi. away. The site is suitable for either a concrete or rock-fill dam, measuring 1,400 ft. at the base, 2,900 ft. at the crest, and 500 ft. high. Potential effects on the Alaskan economy are discussed. (DLC.)

71983. HAND, CADET, *and* **L. B. KAN.** The medusae of the Chukchi and Beaufort Seas of the Arctic Ocean including the description of a new species of *Eucodonium,* Hydrozoa: Anthomedusae. Montreal, June 1961. 23 p. maps, diagr., tables. (Arctic Institute of North America. Technical paper no. 6.) 9 refs.

Discusses these jellyfish, separated from the plankton samples studied by M.W. Johnson (No. 45813) which were collected on two oceanographic surveys 1950 and 1951 by the USS *Burton Island.* Plankton station positions are shown on charts, as are distributions of the 11 species identified; also sea surface temperatures off Point Barrow in Aug. Depth intervals sampled, mostly less than 100 m., are tabulated for each species, and the latter described briefly. *Eucodonium arctica* n. sp. was identified from six specimens from the Chukchi Sea. General current pattern postulated by Johnson and others is also indicated by the distribution of medusae. Differences between the 1950 and 1951 temperatures and *Aglantha* concentrations off Point Barrow may be related, and may indicate attempt of *A.* to remain close to the surface in an area of convergence and down welling. Only holoplanktonic medusae collected are *Aglantha* and *Aeginopsis;* meroplanktonic medusae, virtually absent from the eastern Beaufort Sea, are found mainly in waters less than 200 m. deep. (DI.)

71984. HANDEGORD, G. O. P., *and* **N. B. HUTCHEON.** The use of test buildings in building research. Ottawa, Sept. 1960. 6 p. illus., graph. (National Research Council of Canada. Division of Building Research, Technical paper no.104.) 4 refs. Presented at the Engineering Institute of Canada meeting, May 1960.

Discusses scientists' preference for controlled experiment, and discusses the use of test buildings on the basis of ten years' research. Particular reference is made to small test huts used by the Division of Building Research, one of them at Fort Churchill. The experimental building is found not always useful: most problems can be handled at some stage best in the laboratory. (DLC.)

HANE, S., *see* Robertson, O.H., & *others.* Physiological changes . . . spawning. 1961. No. 75142

71985. HANEY, ROBERT L. Behavior of the principal harmonics of selected 5-day mean 500-mb charts. (U.S. Weather Bureau. Monthly weather review, Oct. 1961. v.89, no.10, p.391-96, graphs.) 3 refs.

Reports investigations during Dec. 1959 - May 1960, of the movements and intensities of the long waves of the atmosphere at the 500-mb level. Height values and 5-day means were obtained for the three longest waves (harmonics) at each 10° of latitude to 80°N.; and their phase angles and amplitudes were computed at 30°, 50° and 70°N., and plotted as a function of time. Retrogression of the waves was found at high and low latitudes, with relatively stationary conditions prevailing in the middle.–From author's abstract. (DGS.)

HANLON, CYRIL ROLLINS, 1915- , *see* Willman, V.L., *& others*. Ventricular function ... 1961. No. 76570

71986. HANNAH, G.J. RAYMOND. The new North: land of today. North Rankin Nickel Mines Limited. (Precambrian - mining in Canada, Dec. 1960. - Jan. 1961. v.34, no.1, p.6, +, illus., maps, section.)

Describes this northerly base metal property, 62°49'N. 92°5'W., on the west shore of Hudson Bay, the reserves estimated as 363,000 tons, grading 0.92% copper, and 3.14% nickel; mining methods, milling, concentrating use of Eskimo labor, the town, etc. (DGS.)

71987. HANNERBERG, DAVID, *and others, Editors*. Migration in Sweden, a symposium. Lund, Sweden, Gleerup, 1957. 336 p. maps (incl. fold.), tables, graphs. (Lund, University. Studies in geography, ser. B, Human geography, no.13.) Refs. *Other editors:* T. Hägerstrand *and* B. Odeving.

Reports studies of internal migration, discussed at Lund on Mar. 22-23, 1954. Northern localities are referred to throughout, and three of the papers, noted below, include northern areas:

Regional aspects of internal migration and mobility in Sweden, 1946-1950, p.7-26, fold. maps, tables, graphs, 41 refs., by Bertil Wendel, who discusses and maps by parishes and towns some regional variations in population density, net and absolute migration gains and losses, and degree of spatial mobility, i.e. migrations into and out of a parish.

Mutual relations between migration fields: a circulation analysis, by Esse Lövgren, p.159-69, map, tables, diagrs. Migrations in 1951 and 1952 between the various parts of Sweden, divided into seven areas, are used to illustrate a circulation model for migrations.

New aspects of geographic and social patterns of net migration rate, a pilot study based on Finnish statistics for the year 1951, p.170-83, map, graphs, table. Reino Ajo uses statistics of net migration rate to determine, with aid of logarithms, geographic and social patterns of region formation, e.g. the area from which migrants are attracted to a given urban center. This study was continued and expanded by Ajo, q.v. (DLC.)

71988. HANNON, JOHN PATRICK, 1927- , *and* **D. A. VAUGHAN.** Effect of exposure duration on selected enzyme indexes of cold acclimatization. (American journal of physiology, Jan. 1961. v.200, no.1, p.94-98, tables.) 19 refs.

Metabolic processes in the liver of rats exposed to 4° ± 1°C. for 2, 30, and 150 days, showed three consecutive and overlapping stages of acclimatization. These were: increased capacity of blood sugar formation, and of heat formation, and increased liver mass, with regression of some elevated liver activities. (DLC.)

71989. HANNON, JOHN PATRICK, 1927- , *and others*. The endogenous tissue respiration of the arctic ground squirrel as affected by hibernation and season. (Journal of cellular and comparative physiology, Feb. 1961. v.57, no.1, p.5-10, tables.) 7 refs. *Other authors:* D.A. Vaughan *and* R.J. Hock.

Reports on the effects of autumn versus spring, short and long hibernation, and arousal upon the endogenous respiration of cerebral, myocardial, hepatic and skeletal-muscle tissue homogenates. For comparison, material from laboratory rats was also investigated. (DNLM.)

71990. HANNON, JOHN PATRICK, 1927- , *and others*. The endogenous tissue respiration of the arctic ground squirrel as affected by hibernation and season. Fort Wainwright, Alaska, May 1961. 10 p. tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-44.) 7 refs. *Other authors:* D. A. Vaughan *and* R. J. Hock.

In this animal, all tissues except liver showed higher rates of endogenous respiration in the fall than in the spring. Liver respiration was unaffected by season. All tissues showed reduced endogenous respiration during hibernation. Experiments suggest that the hibernation-induced changes are attributable to alterations in catalytic capacity of the tissue. (CaMAI.)

71991. HANNON, JOHN PATRICK, 1927- , *and* **A. M. LARSON.** Fatty acid metabolism during norepinephrine induced thermogenesis in the cold acclimatized rat. Fort Wainwright, Alaska, May 1962. 15 p. illus., table. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 61-48.) 18 refs.

Biochemical study into the mechanisms of norepinephrine-induced thermogenesis and the relationship of this hormone to non-shivering thermogenesis. The results indicate that norepinephrine is not the sole mediator of non-shivering thermogenesis. It apparently acts, through stimulation of nonesterified fatty acid metabolism, to increase heat production during the acute stage of cold exposure or during severe cold stress. (CaMAI.)

71992. HANNON, JOHN PATRICK, 1927- , *and* **A. M. LARSON.** Fatty acid metabolism during norepinephrine-induced thermogenesis in the cold-acclimatized rat. (American journal of physiology, Dec. 1962. v.203, no.6, p.1055-61, illus., tables.) 19 refs.

Account of varied experiments indicating that: norepinephrine-induced calorigenesis is mainly sustained by oxidation of nonesterified fatty acids (NEFA); the greater response of cold-acclimated rats to norepinephrine is due to increased capacity to form and oxidize NEFA; and, norepinephrine is not the sole mediator of non-shiver thermogenesis. (DLC.)

71993. HANNON, JOHN PATRICK, 1927- , *and* **D. A. VAUGHAN.** Initial stages of intermediary glucose catabolism in the hibernator and non-hibernator. (American journal of physiology, Aug.

1961. v.201, no.2, p.217-23, table.) 24 refs.

Reports a comparative study of glycogen content, glycolytic enzymes, etc. in the blood myocardium, skeletal muscle and liver of the arctic ground squirrel and the rat. In the former conditions both during hibernation and when awake were investigated. This is part of a study aimed at elucidating the basic differences in the intermediate energy metabolism between a hibernator and nonhibernator. (DLC.)

HANNON, JOHN PATRICK, 1927- , *see also* Alaskan Science Conference 1960. 1961. No. 69643.

Durrer, J.L., & J.P. Hannon. Glucose tolerance cold dog. 1961. No. 71157

Durrer, J.L., & J.P. Hannon. Seasonal variations caloric intake dogs . . . 1961, 1962. No. 71158

Symposia on Arctic Biology and Medicine. No. 76055 & No. 76056

Vaughan, D.A., & *others*. Interrelationships of diet . . . 1961. No. 76355

HANSEN, BERNARD LYLE, 1916- , *see* Alaskan Science Conference 1961. 1962. No. 69644

71994. HANSEN, H. J. Greenland builds. (American-Scandinavian review, Sept. 1961. v.49, no.3, p.279-88, illus.)

Reviews progress in the construction of housing, hospitals, schools, electric power installations, utilities, roads, communication stations, warehouses and shops, fish processing plants. (DLC.)

HANSEN, H. J., *see also* Denmark. Byggeriet . . . 1959. No. 70968

71995. HANSEN, HENRY A. Alaska's waterfowl nesting habitat, geese, and ducks. (Alaska sportsman, June-Aug. 1962. v.28, no.6, p.20-22; no.7, p.28-30; no.8, p.20-22; illus.) Alaska wildlife library, no.26-28.

Describes physical appearance, range in Alaska, and migration pattern of several species, from banding (of 54,000 since 1948) and other studies. About 35 species nest regularly on some 150,000 sq. mi. of wetland environment, approx. half of it prime nesting habitat, and specific areas indicated. The annual nesting population is estimated at two million. Black brant, white-fronted, Canada (four races), and emperor geese are described, also the snow goose which migrates through Alaska from Siberia. Ducks discussed are the mallard, greater and lesser scaups, canvasback, baldpate (American widgeon) and pintail. (DI.)

71996. HANSEN, HENRY A. Changed status of several species of waterfowl in Alaska. (Condor, 1960. v.62, no.2, p.136-37.)

Notes an exceptional northward distribution during summers of 1957-59, apparently due to severe drought in the Canadian prairie. Five species of duck are considered. (DLC.)

HANSEN, JAMES M., *see* Ameigh, G.C., & Y.M. Chaffin. Alaska's Kodiak Island . . . 1962. No. 69738

71997. HANSEN, KAREN BILLE. Bryozoa. København, Reitzel, 1962. 74 p. map, tables. (Meddelelser om Grønland, bd. 81, nr.6) 90 refs.

Contains a systematic account and compares the distribution and faunal relations of bryozoans and one entoproct (*Barentsia major* Hincks) collected in Baffin Bay and Davis Strait during the *Godthaab* Expedition in 1928. The collections were made at 22 stations in deep sea and East and West Greenland coastal waters from 55°-78°N. Of the 96 species and subspecies found, four are new to these waters, viz: *Notoplites normani, Dendrobeania elongata, Rhamphostomella cellata,* and *Schismopora nodulosa.* All known Bryozoa from the West Greenland sublittoral zone are listed, and their relations with those of other northern seas indicated. Possible ways of immigration of the W. Greenland species are considered.–From author's abstract. (DGS.)

71998. HANSEN, KJELD. Macrolichens from central West Greenland collected on the botanical expedition in 1958. København, Reitzel, 1962. 64 p. illus., plates, map. (Meddelelser om Grønland, bd. 163, nr. 6.) 75 refs.

Reports collections and studies of lichens at 44 localities in five floristic districts between Sukkertoppen and northern Disko Bugt. The 108 species are listed systematically, with localities where collected and with altitudes if over 200 m., also previously known distribution in Greenland, and, where pertinent, the presence of apothecia. Only one species, *Parmelia bitteriana,* is new to Greenland, but several changes in known West Greenland distribution are recorded. For some localities, characteristic features of the lichen vegetation are described. Species with oceanic or continental, northern or southern distribution are indicated. (DGS.)

71999. HANSEN, PAUL MARINUS, 1901– . Cod fishing in Greenland waters. (*In:* Scandinavian fishing year book, 1960-61, p.48-52, illus.)

Describes the West Greenland fishing banks; types of equipment used: lines and trawls; fishing seasons and locations; development of foreign fisheries in the area; halibut and redfish exploitation. The effects of building the port of Faeringerhavn south of Godthåb are noted. Overfishing is discussed, also the problem of Danish fishing in this area. (DI.)

72000. HANSEN, PAUL MARINUS, 1901– . Cod fry and small cod in coastal waters and offshore banks of West Greenland, 1958, 1959. (International Council for the Exploration of the Sea. Annales biologiques 1958, 1959, *pub.* 1960, 1961. v.15, p.84-86; v.16, p.113-15; illus., tables, maps.)

Describes and maps occurrence of eggs, larvae and the age groups I-III. Size distribution is illus. for the last groups. Frequence of occurrence is used for predicting prospects of catches. The 1959 report discusses catches of cod eggs, larvae and small cod (age groups I-III); distribution of the last over the area and the dominant age group. Data are compared with those from 1958. (DI.)

72001. HANSEN, PAUL MARINUS, 1901– .Cod, Greenland stock. (International Council for the Exploration of the Sea. Annales biologiques 1958, *pub.* 1960. v.15, p.86-95, illus., tables, maps.)

Covers age and size composition of catches from offshore and coastal waters of West Green-

land; age at first maturity of these fish; age and length distribution of East Greenland cod; tagging activities on both coasts; together with tabulated data on recapture. (DI.)

72002. HANSEN, PAUL MARINUS, 1901– . Fiskeriundersøgelser i grønlandske farvande i 1959. (Grønland, June 1961, nr. 6, p.201-210, illus., map.) Text in Danish. **Title tr.**: Fisheries investigations in Greenland waters in 1959.

Summarizes research as presented in reports to the International Commission for the Northwest Atlantic Fisheries, q.v., at its Bergen 1960 meeting. (CaMAI.)

72003. HANSEN, PAUL MARINUS, 1901– . Halibut: Danish investigations in East Greenland. (International Council for the Exploration of the Sea. Annales biologiques 1958, *pub.* 1960. v.15, p.68, illus.)

Notes on fish caught off Angmagssalik during Aug. 22-Sept. 8. Length frequency in males and females is illus. (DI.)

72004. HANSEN, PAUL MARINUS, 1901– Redfish: Danish catches in West Greenland fjords. (International Council for the Exploration of the Sea. Annales biologiques 1958, 1959. *pub.* 1960, 1961. v.15, p.68-69; v.16, p.90; tables.)

Reports on experimental fishing for young fish in Julianehåb waters, in spring, summer, and fall. Length frequencies are tabulated. The 1959 report summarizes fishing for small redfish in Godthåb Fjord during March, June, October-December. Size is tabulated for comparison with otolith records (age). (DI.)

72005. HANSEN, PAUL MARINUS, 1901– . Rødfisken. (Grønland, July 1962, nr. 7, p.241-54, illus., diagrs., map.) 7 refs. Text in Danish. **Title tr.**: The redfish.

Summarizes recent research on *Sebastes* in the North Atlantic with special reference to Greenland, where the northern limit is Umanakfjorden. They are common in Disko Bay, Davis Strait and in many deep fjords. Off East Greenland they occur as far north as Angmagssalik district. The fry in Greenland waters are only found in the southern part of Davis Strait. Redfish are of slow growth as evident from tagging at Qorqut in Godthåbsfjorden 1956-1960, and the commercial fisheries are based on quite mature individuals. Mass mortality occurs in Greenland waters, possibly because of a fall in the water temperature. Greenland took about 241 tons in 1960, 266 in 1961; the total catch in Greenland waters for all nations (mostly Germany and Iceland) 32,477 tons in 1959, 44,130 in 1960. (DLC.)

72006. HANSEN, PAUL MARINUS, 1901– . De senere års fiskeri ved Vestgrønland. (Grønland, Oct. 1961, nr. 10, p.361-70, maps, table, diagrs.) Text in Danish. **Title tr.**: Fisheries off West Greenland during the last few years.

Summarizes activities with particular reference to the year 1959, from reports by the International Commission for the Northwest Atlantic Fisheries. (DLC.)

72007. HANSEN, PAUL MARINUS, 1901– . Studies on the growth of the redfish *Sebastes marinus* in Godthåb Fjord, Greenland. (International Council for the Exploration of the Sea. Rapports et procès - verbaux des réunions 1961. v.150, ICES/ICNAF Redfish Symposium, p.258-61, illus., tables.) 10 refs.

Based on material collected from 1946 to 1959 with shrimp trawls at depths of 220-250 m. Length distribution for each year and growth rate are determined, and taggings of mature fish reported. (DI.)

72008. HANSEN, VAGN K. Danish investigations on the primary production and the distribution of chlorophyll *a* at the surface of the North Atlantic during summer. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.149, Contributions to Special IGY Meeting 1959, p.160-66, illus., maps.) 14 refs.

Account based on material collected since 1954 from three sections, two of them including East Greenland waters. Rate of primary production was generally high in coastal waters, over submarine ridges and between two current systems. Decrease of chlorophyll *a* and of productivity in the region of the thermocline is noted, as well as the good agreement between primary production and stock of zooplankton. (DI.)

72009. HANSEN, VAGN K., *and* K. P. ANDERSEN. Recent Danish investigations on the distribution of larvae of *Sebastes marinus* in the North Atlantic. (International Council for the Exploration of the Sea. Rapports et procès - verbaux des réunions 1961. v.150, ICES/ICNAF Redfish Symposium, p.201-215, illus., tables, maps.) 9 refs.

Reports on material collected since 1947 with plankton nets down to 200 m. depth, including the waters off East and West Greenland. Distribution over areas and sections, with length composition, and percentage of *Sebastes* in the total of fish larvae are dealt with. Year-to-year differences in abundance, size differences between areas and sections are considered. Vertical and oceanic distribution is presented, also distribution of *S. viviparus* and other *Sebastes* fry. (DI.)

HANSEN, VAGN K., *see also* Nielsen, E.S., & V.K. Hansen. Primary production . . . 1961. No. 74324

HANSEN, WALTER, *see* Ivanov, V.F., & E.G. Nikiforov. Opyt vychesleniia . . . 1961. No. 72469

72010. HANSON, ARNE, *and* B. W. JOHANSSON. Myocardial lactate concentration in guinea-pigs, normothermic and hypothermic, and hedgehogs, in a hibernating and non-hibernating state. (Acta physiologica scandinavica, Oct. 1961. v.53, fasc. 2, p.137-41, illus.) 8 refs.

No significant changes in lactate content of hearts were noted in the various experiments reported. Hence it is concluded that the electrocardiographic ST-T changes of hypothermic non-hibernators are not the result of anoxia. (DNLM.)

72011. HANSON, HAROLD CARSTEN, 1917– . The dynamics of condition factors in Canada geese and their relation to seasonal stresses. Montreal, Dec. 1962. 68 p., illus. diagrs., graphs, tables. (Arctic Institute of North America. Technical paper

no.12.) 118 refs. Part of a Ph.D. thesis to the Univ. of Illinois.

A study of weight of the whole body, of the sternal and tibio-tarsal muscles, of fat depots and liver, at periods of vital physiological conditions, age and season. Wintering, migration, breeding, molt and growth of feathers, and periods preceding and following them are considered and compared, with sexual differences noted, when present. Ecological and evolution factors as well as hormonal or physiological changes apt to alter weight and weight relations are also discussed. The "purpose" of certain changes like fat-deposition is taken into account and the selective value of others implied. The study derives from work in James Bay on Akimiski Island in northern Ontario and at the Horseshoe Lake Game Refuge in Illinois. (CaMAI.)

72012. HANSON, KIRBY J. The albedo of sea-ice and ice islands in the Arctic Ocean basin. (Arctic, Sept. 1961. v.14, no.3, p.188-96, illus., graphs, tables.) 13 refs.

In spring, when sea-ice is mostly snow-covered, the albedo of the surface is 80-90%, that of melting sea-ice in summer 65-46%, according to the proportion of puddles. Excluding puddles, the albedo of melting shelf-ice is about 77% and that of melting sea-ice about 65%; hence under similar conditions ablation of sea ice is 1.5 times greater than that of shelf ice. Based on airborne and surface measurements, on Ptarmigan flights, T-3, etc. (DGS.)

72013. HANSON, KIRBY J. Some aspects of the thermal energy exchange on the south polar snow field and arctic ice pack. (U.S. Weather Bureau. Monthly weather review, May 1961. v.89, no.5, p.173-77, graphs, tables.) 17 refs.

Presents solar and terrestrial radiation measurements, obtained during the IGY and later in the Antarctic, and on drifting station Bravo in 1958. Differences between the heat budgets of the two areas are noted: during 1958, the south polar atmosphere transmitted about 73% of the annual extraterrestrial radiation; at Bravo the arctic atmosphere transmitted about 56%. The albedo of melting sea ice is considered. Measurements on Bravo at 79.5°N. 118°W. during July 1958 indicate the net radiation positive on both clear and overcast days but greatest on the latter. Refreezing of the surface with clear skies, as reported by Untersteiner and Badgley in No. 55664 is discussed.—From author's abstract. (DGS.)

HANSON, PERCY D., *see* Alaskan Science Conference 1961. 1962. No. 69644

72014. HANSSON, GÖRAN, *and* **L. WALLIN.** Invasionen av sidensvans *Bombycilla garrulus,* 1956-1957. (Vår fågelvärld, 1958. årg. 17, nr. 3, p.206-41, 4 illus., 11 text maps.) 31 refs. Text in Swedish. Summary in English. **Title tr.:** The irruption of waxwings, *Bombycilla garrulus,* 1956-1957.

Presents detailed information on the large numbers of waxwings in northwestern Europe during the 1956-1957 winter. Unusually strong breeding in this species during the previous summer and the abundance of rowan berries *Sorbus aucuparia,* its main winter food in this region are noted, as is the scarcity of *B. garrulus* in most parts of the Soviet Union. When berry supply was exhausted in northern Sweden the birds left, but in southern Sweden they turned to other food. Maps show the routes of migration. (DLC.)

72015. HANZAWA, MASAO. Studies of the interrelationship between the sea and the atmosphere. (Oceanographical magazine, *Tokyo,* Dec. 1958. v.10, no.2, p.215-26, maps, graph, tables.) 18 refs.

Computes the transport of surface water due to winds over the North Pacific, 25°-55°N. 130°E.-120°W., and calculates average transport based on mean meteorological conditions, and the anomalies for 1955. Sea surface temperatures were below average in the Aleutian-Alaska section. Positive anomalies of surface water transport were observed in the Gulf of Alaska and in the southeast Pacific. The low sea surface temperatures off the Aleutians-Alaska resulted from abundant cold water supplied by the above-normal transport. Anomalies of surface water transport are plotted at 10° intervals for each month and for the year. (DN-HO.)

72016. HARA, MASAUKI, *and others.* Citric acid metabolism in the hypothermic dog. (Surgery, June 1961. v.49, no.6, p.734-42, illus., tables.) 28 refs. *Other authors:* J.E. Doherty *and* G.D. Williams.

Dogs made hypothermic to 32°-28°C. withstood intravenous infusion of citrated blood which raised the plasma citric acid level to 120 mg. per cent, and despite temporary caval inflow occlusion. During hypothermia, citric acid metabolism dropped by nearly 40%. Increased plasma citrate produced a characteristic ECG pattern, not previously described. (DLC.)

HARA, MASAUKI, *see also* Doherty, J.E., & M. Hara. . . . Citrate infusion & ECG hypothermic dog. 1961. No. 71057

72017. HARANG, LEIV M., 1902– . Drift of the E-layer during geomagnetic storms. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962. v.1, p.152-56, illus.) 3 refs.

Reports on the drift measurements of *E* and *Es* layers, and of auroral echo of 40 Mc/s frequency, carried out at Kjeller (60°N.) and Tromsø (70°N.) in Norway. Two different effects are apparent: a smooth semi-diurnal variation in the drift of the normal *E*-layer in day time, and a westerly drift of the *Es*-layer connected with some geomagnetic disturbance. An E-W drift of auroral echoes was observed, and measurements carried out at the same stations. In the *E*-layer drift measurement, two effects were present: a westward movement before midnight, and eastward after midnight; the drift speed may attain several hundred meters per second, or 150 m/s median; the ellipse of correlation stretched E-W. The drift of auroral echoes measured on 40 Mc/s was found to be 1-3 km./sec. (DLC.)

72018. HARANG, LEIV M., 1902– , *and* **J. TRØIM.** Studies of auroral echoes, I. (Planetary and space science, Jan. 1961. v.5, no.1, p.33-45, illus., table, diagrs., graphs.) 15 refs.

Reports observations on 40 Mc./s. at Kjeller

and Tromsø, Norway, of the east-west drift of auroral ionization. Mean diurnal curves of the motion are shown. The drift is irregular at Tromsø (69°40′N. 18°57′E.); the prevailing direction is westerly during 1700-2400 hrs. MET, and easterly between 2400 and 0500 hrs. The angle of arrival of auroral echoes (6°-20°) exhibits equal dependence on range at the two stations. The height of the ionization is determined. The angle of arrival of E_S-propagated ground scatter is about twice that of auroral echoes. (DLC.)

72019. HARDWICK, R. G. Two cases of accidental hypothermia. (British medical journal, Jan. 20, 1962. no.5272, p.147-49, illus.) 5 refs.

Case history of a woman aged 72 with hypothermia due to lack of heating, and that of a woman long-distance swimmer after 7 hours 33 min. in water of 13.9°-12.8°C. The latter case is discussed in detail due to its significance for water sports and shipwrecks. (DNLM.)

72020. HARDWICK, WALTER G. Changing corridors to Alaska. (Journal of geography, Feb. 1962. v.61, no.2, p.49-57, illus., maps, table.) Refs.

Describes transportation from the contiguous United States to Alaska by water, highway, and air. Shipping routes are mapped, and the number of sailings per month indicated. The number of carriers has declined due to lack of southbound cargoes: only the Alaska Steamship Co. remains on the route. A probable highway and possible railway through British Columbia are mapped and discussed, also a ferry to link Southeast Alaskan cities with the highway system at Haines and that at Prince Rupert, B.C. (DGS.)

HARDY, JAMES DANIEL, 1904– , *see* Fusco, M.M., & *others*. Interaction central & peripheral factors temp. reg. 1961. No. 71530

HARDY, ROBERT MacDONALD, 1906– , *see* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

Royal Society of Canada. Soils . . . 1961. No. 75236

72021. HARE, FREDERICK KENNETH, 1919– . The circulation of the stratosphere. Montreal, Mar. 1961. iii, 25 p. maps, graphs, table. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no.43.) 20 refs. Canadian Defence Research Board contract DDP GC 69-000104 (1959–).

Summarizes research since 1958 in one of the first projects to investigate events up to 30 km. or 10 mb., from the standpoint of the dynamics of the circulation. Three applications to military problems are evident: analytical techniques and stratospheric knowledge to serve aircraft at these high levels; reentry problems for missiles, notably short-term variations in density; stratospheric mixing of contaminants, water vapor and ozone, with possible toxic effects on personnel. The problems being investigated are described in their general scientific context; results obtained so far are summarized. (DWB.)

72022. HARE, FREDERICK KENNETH, 1919– The polar-night westerlies. (Weather, London, Aug. 1962. v.17, no.8, p.256-63, maps, graphs.) 17 refs.

Summarizes results of research by members of the Arctic Meteorology Research Group of McGill University. Most interesting new discoveries are the twin polar vortices of strong west winds that blow in high latitudes in the stratosphere and mesosphere of the winter hemisphere. Maps and cross-sections illustrate the growth, extent, and collapse of these jet-stream-like winds. Differences between arctic and antarctic vortices are noted; the latter blow symmetrically round the South Pole; the former contain occasional disturbances, especially dramatic warmings. (DWB.)

72023. HARE, FREDERICK KENNETH, 1919– The stratosphere. (Geographical review, Oct. 1962. v.52, no.4, p.525-47, maps, graphs, tables.) 23 refs.

Summarizes knowledge of this atmospheric belt or layer, from work of the Arctic Meteorology Research Group of McGill University and other cited sources. Changes in concept of the stratosphere are traced from its discovery about 1900, to the present view that it is part of a four-layer atmosphere: the traditional troposphere and stratosphere, beyond these the mesosphere (55-85 km.) and the thermosphere (>85 km.). Characteristics of the arctic stratosphere are described and graphed, e.g., the arctic tropopause, the polar stratospheric circulation in summer and winter, also the passage of polar-night disturbances, warmings, or waves, similar to the cyclones and anticyclones of the troposphere. Further research and data are needed to explain effects of stratospheric conditions on surface climate. (DLC.)

72024. HARE, FREDERICK KENNETH, 1919– , *and* **B. W. BOVILLE.** Studies in arctic and stratospheric meteorology. Montreal, Apr. 1961. x, 35 p. maps, graphs, tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 42. Contract AF 19(604)-3865, final report.) 59 refs.

Contains a summary of research 1958-1961, particularly with regard to the structure and energetics of the polar-night westerlies. Cross sections at 80°W. to the 35 km. level and hemispheric charts to the 25-mb level reveal a circumpolar stratospheric system which is eccentric and bi-polar, characteristics related to tropospheric activity. Energies and transports computed by geostrophic Fourier techniques are presented. Perturbations involving conversions usually associated with baroclinic wave activity have been identified. Ozone concentrations are shown to be influenced by this wave activity.–From authors' abstract. (CaMAI.)

HARE, FREDERICK KENNETH, 1919– , *see also*

Boville, B.W., & *others*. Baroclinic waves . . . 1961. No. 70344

Boville, B.W., & F.K. Hare. Total ozone . . . 1961. No. 70346

72025. HARINGTON, C. RICHARD, *and others*. The Barren Ground grizzly bear in northern Canada. (Arctic, Dec. 1962. v.15, no.4, p.294-98, table,

graph.) 31 refs. *Other authors:* A.H. MacPherson *and* J.P. Kelsall.

Discusses distribution of the bears, and takes exception to certain statements of A.W.F. Banfield (No. 56712). His thesis of a recent eastward range extension as a continuation of the species' post-glacial dispersal from Beringia is rejected. The range of the species is considered to have changed many times since the end of the Wisconsin glaciation; recent increase of bears in the east is probably a minor range fluctuation. Occurrence of grizzlies in northern Quebec - Labrador is not to be discounted, as Banfield does: several records of bears seen near the eastern end of the range since 1948 are cited. (DI.)

72026. HARINGTON, C. RICHARD. A bear fable? (Beaver, Winter 1962. outfit 293, p.4-7, illus.)

Describes and evaluates Eskimos' accounts of polar bears throwing chunks of ice at walruses in the Canadian Eastern Arctic. Bears are physically and mentally capable of such actions; and these attacks may occur, though rarely. (DI.)

72027. HARINGTON, C. RICHARD. History, distribution and ecology of the muskoxen. Montreal, 1961. 489 p. drawings, maps incl. 2 fold., table. Refs. Typescript, M. Sc. thesis to McGill University.

Reviews the major characteristics of the genera in tribe Ovibovini, fossil and living, with a tentative phylogenetic chart, and a map of world distribution which elucidates the ecological pattern and adaptations among muskoxen. *Ovibos moschatus* is treated in detail as to ecology, behavior, economic value and conservation; previous work and taxonomy are also discussed. The account is based upon observational data collected about 1957-1958 at Lake Hazen and Alert on Ellesmere, and on Devon Island, as well as upon an extensive literature (cited p. 396-434). Differentiation of the Ovibovini probably took place during Late Miocene; initial radiation occurred near Tsaidam, China during Early Pliocene, and second radiation in mid-Pliocene; final dispersal was from north-central Asia to North America; most of the genera became extinct following the Wisconsin glaciation. Adequate winter range is critical for survival; and conservation of this mammal is important for man on the circumpolar area. Appended is a catalog of muskox fossils; an early report of muskoxen; and vernacular names of *Ovibos moschatus* in several languages. (CaMM.)

72028. HARINGTON, C. RICHARD. Some data on the polar bear and its utilization in the Canadian Arctic. Ottawa, Canadian Wildlife Service, 1961. 33 p. tables, graphs, map. 24 refs.

Presents an economic analysis of this mammal as a resource based upon the fur-take and game-take records of the Dept. of Northern Affairs and National Resources and upon Canadian Wildlife Service questionnaire data assembled with cooperation of the RCMP and the Hudson's Bay Co. Polar bear is hunted mainly by local Eskimos and up to 26 coastal settlements on the mainland and islands of Northwest Territories are represented in the survey. Fur production value, (max. 1958 $33,075), number pelts exported (min. 18 in 1934, max. 525 in 1958), and national economic trend of 1921-1959 are shown graphically. Comparitive kill chronology is depicted for 1953-54 and 1956-57, with max. season: Mar.-May. Fur prices averaged $20-30 during 1944-1957. Sex and age composition of the kill is tabulated. A map at scale 1 in.:300 mi. shows relative harvest for 1956-1960; greatest numbers were taken at Southampton Island, Resolute Bay, Pangnirtung, and Clyde River. Trends as analyzed, depend on the national economy generally, the weather and ecological conditions, and the price of fur. Conservation is needed to maintain the polar bear at a sustained yield level. The Eskimos keep 20% of the skins for own use; the meat is consumed 55% by humans, 45% by dogs. (CaOGB.)

72029. HARKER, PETER, 1920– . Summary account of Carboniferous and Permian formations, southwestern District of Mackenzie. Ottawa, Queen's Printer, 1961. 9 p. table. (Canada. Geological Survey. Paper 61-1.) 5 refs.

Proposes five new formation names: Yohin, Clausen, Flett (fossils listed), which form part of a single, continuous succession on the west side of Yohin Ridge approx. 61°66′N. 123°55′W., of which Patton's Mattson formation (No. 53883) was also part. The other two, Etanda and Fantasque formations, have type localities on the west flank of Kotaneelee Range near Fort Liard, and southwest of Mt. Merrill near the Beaver River, respectively. (DGS.)

72030. HARKER, PETER, 1920– *and* **S. E. JENNESS.** Summary of research: office and laboratory, 1961. Ottawa, Queen's Printer, 1962. 23 p. (Canada. Geological Survey. Paper 62-30.) Refs.

Supplements the junior author's report on results of 1961 field work, q.v. Projects dealing with northern materials or areas include four in stratigraphy and paleontology, two each in geochemistry and mineralogy-petrology, and one in fuels. (DI.)

72031. HARLAND, WALTER BRIAN, 1917– , *and* **D. MASSON-SMITH.** Cambridge survey of central Vestspitsbergen. (Geographical journal, Mar. 1962. v.128, pt. 1, p.58-70, map plate, table.) 30 refs.

Summarizes topographical work during preparation of a map (1:125,000) published by the Royal Geographical Society, q.v. The surveying carried out since 1949 by geological expeditions from Cambridge University, covered areas in Ny Friesland, Bünsow Land, and Olav V Land. Triangulation and photogrammetric survey methods are described by Masson-Smith, and the secondary triangulation by artillery director (a simple theodolite for rapid use) and choice of place names, by Harland. Appended are lists of published maps overlapping the area, the participating Cambridge expeditions, and papers (28) resulting from the expeditions. (DGS.)

72032. HARLAND, WALTER BRIAN, 1917– An outline structural history of Spitsbergen. (*In:* International Symposium on Arctic Geology. Pro-

ceedings 1961, v.1, p.68-132, maps, graphs, tables.) Approx. 155 refs.

Outlines chronologically the earth movements in this main part of Svalbard, with special reference to the evidence of sedimentary activity, deformation structures, and paleontological correlation. Some ideas on its structural position in relation to other parts of Svalbard, Zemlya Frantsa Iosifa, Novaya Zemlya, etc., are reviewed with reference to the evidence by which these ideas may be tested. Representative modern sources are cited in the extensive bibliography. (DLC.)

HARLAND, WALTER BRIAN, 1917– , *see also* Bidgood, D.E.T., & W.B. Harland. Palaeomagnetic studies . . . 1961. No. 70202

Bidgood, D.E.T., & W.B. Harland. Paleomagnetism . . . 1961. No. 70203

Royal Geog. Soc. Spitsbergen . . . 1962. No. 75233

72033. HARLEY, W. S. Temperature and pressure tendencies, etc. at selected Canadian meteorological stations. Toronto, June 22, 1962. 5p. 68 graphs. (Canada. Meteorological Branch, Circular CIR-3690, TEC-419.) 2 refs.

Mean air temperatures and station pressures for each synoptic hour were compiled for a series of 20 stations, together with extremes and standard deviations, and with three-hourly temperatures and pressure tendencies which are graphically represented. Four northern stations are included: Frobisher, Whitehorse, Churchill, and Goose Bay. Data and graphs for an additional 25-30 stations in preparation and consolidated publication planned for 1963. (DWB.)

HARMANN, F., *see* Alekseev, A.P., & *others*. International investigations . . . 1961. No. 69692

72034. HARMON, LEWIS D. The plight of the bison. (Alaska sportsman, Nov. 1961. v.27, no.11, p. 19-21,+, illus.)

Notes American bison in the Delta-Clearwater area, southeast of Fairbanks, damaging farm crops and U.S. Army property at Fort Greely. The animals are starving because their grazing areas are depleted by human encroachments. The bison were imported from Montana in 1928, and now number about 350. (DLC.)

72035. HARP, ELMER, 1913– . The archaeology of the lower and middle Thelon, Northwest Territories. Montreal, Dec. 1961. 74 p. illus., tables, cross-sections, sketch maps. (Arctic Institute of North America. Technical paper no.8.) 70 refs. Summary in Russian.

Describes, correlates, and interprets the author's archeological finds of 1958 (No. 58547): 734 implements, mostly of chipped quartzite, recovered from the 42 new and four previously known sites. Five cultural phases are recognized: initial occupancy, approx. 3000 B.C., by northward-moving Indian bison hunters associated with a taiga-oriented Plains Archaic culture stage; a pre-Dorset Eskimo culture, starting about 1,000 B.C., affinal to pre-Dorset phases in the Igloolik area of northern Hudson Bay; an Indian caribou-hunting tradition of the later Archaic stage (no dating attempted); the last two phases are Eskimos displaying a Thule culture, dated from about 1200-1400 A.D. and recent Caribou Eskimos, descendants of Thule people. The central Barren Grounds are considered a marginal culture area, occupied sporadically in the summer by caribou-hunting bands. Slight evidence of cultural contact and diffusion is found between prehistoric Indian phases and the pre-Dorset Eskimo stage. (CaMAI.)

HARP, R. A., *see* Lim, R., & *others*. Circulatory arrest . . . 1961. No. 73501

72036. HARPER, FRANCIS, 1886– . Birds of the Ungava Peninsula. Lawrence, Kansas, Oct. 1958. 171 p. illus., maps, tables. (Kansas. University. Museum of Natural History, Miscellaneous publication no.17.) 194 refs.

Presents an introductory account of previous work in central Quebec - Labrador, and own studies during May-Oct. 1953 along the St. Lawrence River and in the interior from Ashuanipi Lake 53°N. 66°15′W. north to Lac Aulneau 57°01′N. 68°38′W. Physiography and vegetation of the area are outlined. General faunal distribution and northward extension of species, with climatic change are described. The systematic account covers 84 land and fresh-water species that breed in the region, with extensive field observations and previous records. French and Montagnais names are supplied as feasible. Distribution of 24 selected species is shown on small-scale maps. The main (70) localities studied are cited with geographic location, etc. Collections made are deposited in the National Museums of Canada and the United States. "Ungava Peninsula" connotes the area east of Hudson-James Bays, and north from approx. 52°N. to Hudson Strait - Ungava Bay - Labrador Sea. (DI.)

72037. HARPER, FRANCIS, 1886– . Changes in climate, faunal distribution, and life zones in the Ungava Peninsula. (Polar notes, Nov. 1961. no.3, p.20-41, maps.) 56 refs.

Considers Merriam's theory of temperature controlled life-zones in the light of climatic and biogeographic events in northern Quebec and Labrador during the past 40 yrs. The northward advance of birds and some mammals presumably as a result of the climatic amelioration, corroborates this theory. The flora, probably because of its lack of mobility, is advancing more slowly. Merriam's delimitation of the Hudsonian life zone is compared with one based on summer temperature isotherms during the last 30 yrs. The latter shows a considerable northward extension of the southern (Canadian zone) boundary which encompasses the lower Hamilton basin, also southward extensions of the Arctic zone in the northeast and northwest. (CaMAI.)

72038. HARPER, FRANCIS, 1886– . Land and fresh-water mammals of the Ungava Peninsula. Lawrence, Kansas, Aug. 1961. 178 p. illus., maps, tables. (Kansas. University. Museum of Natural History. Miscellaneous publication no.27.) 252 refs.

Reports results of summer 1953 studies in the area noted in item above, and cites localities of the mammal records. Faunal distribution and extent of the Canadian, Hudsonian, and Arctic life zones are discussed in the light of recent amelioration of

climate. Some 49 mammalian species and 29 subspecies are presented, with field observations, previous records, etc. French and Montagnais Indian names given as feasible. For 43 species distributional maps are compiled. The caribou is treated *in extenso*. Also listed are 26 mites, sucking lice, and fleas, with host records. (DI.)

HARRIES, HU., *see* National Northern Development Conference. 1961. No. 74224

72039. HARRINGTON, LYN. Old Crow, Yukon's arctic village. (Beaver, winter 1961. outfit 292, p.4-10, illus.)

Describes, with photographs by R. Harrington, a visit to this Loucheux Indian village of approx. 200. The community is comparatively well organized; its good health record, contacts with whites, etc. are discussed. (DI.)

72040. HARRINGTON, LYN. Yukon's wilderness roads. (Canadian geographical journal, Aug. 1962. v.65, no.2, p.60-69, illus., map.)

Describes the access roads to the 600 mi. section of the Alaska Highway in Yukon Territory. Scenery, communities, tourist attractions, resource developments, etc. are noted along these side roads which total some 1500 miles. Abandoned roads, e.g. the Canol, are also noted as are others under construction, e.g. that from Watson Lake to Ross River (and possibly Carmacks) with a branch east to Tungsten, and one northeast from Flat Creek. Photographs are by R. Harrington. (DGS.)

HARRINGTON, RICHARD, *see*
Harrington, L. Old Crow . . . 1961. No. 72039
Harrington, L. Yukon roads. 1962. No. 72040

HARRIS, A. S., *see* Alaskan Science Conference 1960. 1961. No. 69643

72041. HARRIS, CHAUNCY DENNISON, 1914– . Geographers and geographic institutions in the Soviet Union visited by a delegation of American geographers Aug. 17-Sept. 13, 1961. Chicago. Univ. of Chicago. Dept. of Geography. 40 l. Mimeo.

Reports observations recorded, including those at the Arctic and Antarctic Research Institute Leningrad. Geography departments of the Leningrad and Moscow State Universities and the Academy of Sciences' Institute of Geography. Individuals met, main projects and programs are noted. (DGS.)

HARRIS, CHAUNCY DENNISON, 1914– , *see also* Akademiīa nauk SSSR. Soviet geog . . . 1962. No. 69535

72042. HARRIS, DENIS R. Wanted: clean and good water, by all communities throughout Alaska. (Alaska's health and welfare, Apr. 1961. v.18, p.3.)

Discusses sources of water in Alaska, ground water, its merits and difficulties in finding it, authorities aid in location and exploration of water sources; water pollution. (DLC.)

HARRIS, JOSEPH, *see* Friedman, I., & *others*. Deuterium . . . sea ice. 1961. No. 71501

72043. HARRIS, ROY H. D. Growth and reproduction of the longnose sucker *Catostomus catostomus* (Forster), in Great Slave Lake. (Canada. Fisheries Research Board. Journal, Jan. 1962. v.19, no.1, p.113-26, illus., tables, map.) 12 refs.

Study of material caught by gill nets and seines of specified mesh-size. Horizontal and vertical distribution, size and age, fish from spawning runs, rate of growth in males and females, age composition of catches, reproduction, etc. are recorded and discussed. (DI.)

72044. HARRIS, THOMAS MAXWELL, 1903– . The Rhaeto-Liassic flora of Scoresby Sound, central East Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.269-73.) 16 refs.

Describes briefly the many fossiliferous horizons in the plant-bearing strata of this region; each contains a random selection from one of two large floras, the older correlates with Rhaetic, the younger with Liassic. Similarity is shown to fossil flora from south Sweden, and other parts of Europe. Many Greenland species occur elsewhere, but correlation with so brief a period is not advised. New work is needed on the distribution of pollen. (DLC.)

HARRIS, WILLIAM D., *see* Taylor, C.B., & W.D. Harris. Measurement of tidal currents . . . 1961. No. 76088

72045. HARRISON, A. E. Muldrow Glaciers' mysterious surges. (Alaska sportsman, July 1962. v.28, no.7, p.8-11, +, illus., map.)

Describes this phenomenon: one cu. mi. of ice transported an average 15 mi. down this glacier system in the Mt. McKinley area of Alaska during May 1956-Aug. 1957. The ice was lowered 50-200 ft. in the middle part, and piled up to 500 ft. downstream. The ice movement and its effects are reconstructed from photographs and eye-witness accounts. Velocity of the surge is estimated as approx. 1000 ft./day maximum and of the ice-mass as 250 ft. Similar surges in other Alaskan glaciers and previous ones in the Muldrow are noted, cause unknown. (DI.)

72046. HARRISON, PHYLLIS. Eskimos in transition. (North, Sept.-Oct. 1962. v.9, no.5, p.14-16, illus.)

Radio-broadcast describing experiences of a family at Frobisher Bay, Baffin Island to illustrate the transition from traditional ways to present-day living. Problems, sickness, child care, employment, housing, learning new techniques and customs. (CaMAI.)

72047. HARRISON, PHYLLIS. Social work goes north. (Canadian welfare, May, 1959. v.35, no.3, p.110-15, illus.)

Describes field trips from the Northern Welfare Service base at Frobisher Bay, on Baffin Island. A week's sojourn at Coral Harbour on Southampton Island, in June (1958?) is reported, the settlement and inhabitants briefly described. A trip by dogsled to an Eskimo campsite near Frobisher Bay, May 12-21, is outlined, the guide, the encamped family and their daily life are depicted. The welfare worker comments incidentally on Eskimo character traits, housing, diet, employment possibilities, schooling, family allowances, etc. (CaOCU.)

HARRISON, PHYLLIS, *see also* Canada. Northern welfare '62. 1962. No. 70539

72048. **HÁRSING, LÁSZLÓ,** *and others.* Hypothermia hatása a kicserélhetö Na-mennyiségére. (Kísérletes orvostudomány, 1961. v.13, no.4, p.373-80, tables.) 10 refs. Text in Hungarian. Summary in Russian and German. *Other authors:* E. Dubecz, G. Kövér, *and* J. Nagy. **Title tr.:** The effect of hypothermia upon the amount of exchangeable Na.

Study of exchange of Na for Na^{24} in individual organs and in the whole body. During hypothermia Na-exchange amounted to 73% against 59% in normothermia. The increase in cold is assumed to be due to a quicker exchange between plasma and bones than between plasma and the interstitial fluid. (DNLM.)

72049. **HÁRSING, LÁSZLÓ,** *and others.* Hypothermia hatása a Na transzkapilláris kicserélödésére. (Kísérletes orvostudomány, 1961. v.13, no.4, p.385-91, illus., tables.) 26 refs. Text in Hungarian. Summary in Russian and German. *Other authors:* J. Nagy, G. Kövér, *and* E. Dubecz. **Title tr.:** The effect of hypothermia upon transcapillary Na-exchange.

Hypothermia of 21-23°C. in dogs caused a reduction of plasma-Na exchange from a normal of 59.8% to 27.3%, and a reduction of total Na-exchange from 11.9% to 5.7%. The curve of inulin disappearance was identical in hypo- and normothermia. (DNLM.)

72050. **HÁRSING, LÁSZLÓ,** *and others.* Hypothermia hatása az inulin-térre. (Kísérletes orvostudomány, 1961. v.13, no.4, p.381-84, tables.) 9 refs. Text in Hungarian. Summary in Russian and German. *Other authors:* G. Kövér, E. Dubecz, *and* G. Nemes. **Title tr.:** Effect of hypothermia upon inulin space.

Reports a 20% reduction of inulin space of the skin and skeletal muscle noted during hypothermia. This is not considered to represent a reduction of the total extracellular space, but only of its functioning portion. (DNLM.)

72051. **HART, JACKSON SANFORD, 1916–** . Physiological effects of continued cold on animals and man. (British medical bulletin, Jan. 1961. v.17, no.1, p.19-24, illus.) About 100 refs.

Reports a study of temperature-induced responses ("acclimation") and such induced by climate ("acclimatization") and of "climatic adaptation", with particular consideration of energetics and related fields. Conditions in birds and small mammals, in large mammals including man, and in homeotherms and poikilotherms are discussed and summarized. (DNLM.)

72052. **HART, JACKSON SANFORD, 1916–** Seasonal acclimatization in four species of small wild birds. (Physiological zoology, July 1962. v. 35, no.3, p.224-36, illus., tables.) 20 refs.

Reports study of food- and O_2-consumption, cloacol temperatures and calorigenic response, shivering and survival in sparrows, starlings, pigeons and grosbeaks exposed to seasonal weather conditions in Ottawa. Results indicate that "a metabolic type of acclimatization to winter conditions" occurred in the birds studied. (DLC.)

72053. **HART, JACKSON SANFORD, 1916–** . Temperature regulation and adaptation to cold climates. (*In:* Symposia on arctic biology and medicine. Proceedings 1962, p.201-242, illus.) 39 refs. Also pub. as: National Research Council of Canada, NRC 6580.

Reports a study indicating that temperature regulation and adaptation, as defined by the author, follows different patterns in large and small mammals; in furred, bare-skinned, and aquatic mammals. Physical (fur, fat), physiological, and behavioral-ecological means in overcoming the stress of cold are considered, and their interrelationship in the different groups elucidated. (CaMAI.)

72054. **HART, JACKSON SANFORD, 1916–** , *and others.* Thermal and metabolic responses of coastal Eskimos during a cold night. (Journal of applied physiology, Nov. 1962. v.17, no.6, p.953-60, illus., tables.) 22 refs. *Other authors:* H.B. Sabean, J.A. Hildes, F. Depocas, H.T. Hammel, K.L. Andersen, L. Irving *and* G. Foy.

Account of metabolic and thermal studies conducted at night on ten Eskimo hunters from Baffin Island, with three whites as controls. Except for higher peripheral temperatures, no marked physiological differences were found between Eskimos and whites. It is therefore concluded "that the principal adaptation of these Eskimos to their climate is technological." (DLC.)

HART, JACKSON SANFORD, 1916– , *see also* Hildes, J.A., *& others.* Estimation of heat flow . . . 1961. No. 72146

72055. **HARTH, O.,** *and others.* Der Einfluss der Bluttemperatur auf das Phänomen der renalen Autoregulation. (Pflügers Archiv für die gesamte Physiologie, 1960. Bd. 272, Heft 1, p.17.) Text in German. *Other authors:* J. Lutz *and* W. Kreienberg. **Title tr.:** The effect of blood temperature upon the phenomenon of renal self-regulation.

Studies *in situ* and on isolated dog kidneys showed that cooling the pre-renal blood to 18°-21°C. had no effect upon self-regulation of renal circulation, while temperatures of 9°-11°C. abolished it. Circulatory conditions at the lower temperatures indicate their direct effect upon the vascular musculature. (DLC.)

HARTLEY, W. G., *see* Swain, A., *& others.* Long-distance migration of salmon. 1962. No. 76041

72056. **HARTSHORN, JOSEPH H.,** *and others.* Investigations of ice-free sites for aircraft landings in East Greenland, 1959. Bedford, Mass., Sept. 1961. viii, 146 p. illus., graphs, maps & tables incl. fold. in pocket. (U.S. Air Force. Cambridge Research Laboratories. Air Force surveys in geophysics no.127.) Refs. *Other authors:* G.E. Stoertz, A.N. Kover, *and* S.N. Davis.

Contains results of field studies July-Sept. 1959 under Operation Groundhog III by six geologists, along the coast from Scoresby Sund to Germania Land, to locate potential natural emergency landing strips for heavy cargo planes. Of 33 sites examined, eight are considered suitable for heavy and about five others for light cargo planes in summer. Several sites were studied for the Royal Greenland Trade Department in the Scoresby Sund - Kap Tobin area: a 1550-ft. airstrip located on a gravel terrace in the Jaettedal (70°31′N. 22°05′W.)

eight mi. northwest of Kap Tobin, and a 700 ft. strip requiring some construction work near Kap Tobin. An 11,500-ft. airstrip was tentatively laid out on a gravel terrace at Storelv, approx. 73°39′N. 22°02′W., near the head of Loch Fyne. Abundant energy sources of fresh water of good to excellent chemical quality are available. Use of several of the sites investigated can add a significant safety factor to commercial or military aircraft operations in East Greenland. Topographic maps at about 1 in. = 100 ft., of three sites, a geologic map of one, and an index-summary table of all 33 sites are appended. (DWB.)

72057. HARTWIG, WERNER. Kleidung fremder Völker; eine Ausstellung des Staatlichen Museums für Völkerkunde, Dresden. (Leipzig. Museum für Völkerkunde. Jahrbuch 1962. Bd. 19, p.203-206, diagr.) Text in German. **Title tr.:** Clothing of foreign peoples; an exhibit at the State Museum for Ethnology, Dresden.

Critical review of the arrangement of displays, descriptive legends, etc. Exhibited objects include work- , festive- and shaman-dress of Yakuts, also some Pacific Northwest Indian and Lappish specimens. (DSI.)

72058. HARTZ, T. R., *and* E. L. VOGAN. A synopsis of riometer observations on the polar cap events of November 1960. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.2, p.289-93, graphs.) 3 refs.

Reports on outstanding disturbances of the earth's upper atmosphere attributed to the arrival of energetic, charged particles from major flares on the sun. These disturbances were studied with riometers at stations along a north-south line across the auroral zones, from Resolute Bay to Ottawa, Canada. Ionospheric absorption data are presented for Nov. 12-17, with emphasis on the polar cap absorption events of Nov. 12 and 15. The ratio of absorption at 30 Mc/s to that at 60 Mc/s was evaluated for certain periods. These data are discussed and interpreted in terms of height of the absorbing region.–From authors' abstract. (DLC.)

HARTZ, T. R., *see also*

Brown, R.R., & *others*. Large-scale electron bombardment . . . 1961. No. 70405

Ortner, J., & *others*. SCNA & geomag. storm. 1962. No. 74545

Vogan, E.L., & T.R. Hartz. Ionospheric absorption 11/12/60. 1961. No. 76409

72059. HARVEY, J.G. Overflow of cold deep water across the Iceland-Greenland Ridge. (Nature, *London,* Mar. 18, 1961. v. 189, no. 4768, p. 911-13, diagrs., map.) 2 refs.

Reports observations by the R/V *Ernest Holt* on two occasions. On Aug. 15-16, 1960 the minimum temperature recorded below 450 m. depth along this Ridge near 66°N. was 2.5°C.; new measurements 20 hours later at nearly the same location showed a bottom (550 m.) temperature of 0.1° C. Further temperature, current, and salinity measurements were made in the vicinity and the advancing front of the cold bottom waters was identified. The rate of advance was within 0.55 - 1.4 kts. and the direction, about 255° true. This overflow of cold Norwegian Sea deep water appears to be intermittent in the form of a series of discrete boluses. (DLC.)

72060. HARWOOD, TREVOR A. Logistic problems in the Canadian Arctic. (Polar record, Jan. 1961. v. 10, no. 67, p. 365-71, tables.) 24 refs.

Discusses principles for safe and economical transportation and planning during large operations north of the mainland. Rules are outlined for organizing ship convoys with icebreaker escort, unloading cargo on open beaches, use of tractor trains, and aircraft operations on ice runways. In the last, aircraft speed is stressed as a factor in breakthrough as well as ice strength. Critical velocities are tabulated for various ice thicknesses and water depths. Supply requirements increase progressively northward, from four tons/man/yr. in the south, to 16 tons on the Arctic Islands. A suggested 12-mo. planning sequence is included. (DI.)

72061. HARWOOD, TREVOR A., *and* J.R. LOTZ. The McGill Ice Research Project, 1955-60. (Polar record, Jan. 1962. v. 11, no. 70, p. 13-23.) 13 refs.

Reviews a program of instrumentation, laboratory, and field studies under E. Pounder for the Canadian Defence Research Board. Various instruments and procedures for determining properties of sea ice were developed, including an airborne seismic method for measuring ice thickness. Laboratory and cold-room studies were made of: crystal orientation and single crystal freezing, additives and de-icing compounds, sea ice, and freezing of water drops. Field studies of sea ice were made in arctic waters from the HMCS *Labrador* in 1956; at Shippegan, New Brunswick in 1956-1959; at the Defence Research Northern Laboratory, Churchill, Manitoba since 1958; and in Barrow Strait in 1959. The project continues and future plans are noted. (DGS.)

72062. HARWOOD, TREVOR A. Modern methods of exploration in the Canadian Arctic Islands with special respect to logistic problems. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.1102-1111.) 23 refs.

Discusses the establishment of the joint weather stations in 1946-1952, as making complex exploration possible in this area, and discusses some rules on *modus operandi*. Elements of sea-lift, loading and unloading, airlift and landings; man, his clothing and food requirements; sea-ice conditions, weather and permafrost as factors in transport, site selection, etc. are dealt with. Planning is discussed and exemplified from Canadian government operations. Some 12-18 months for the logistics phase and 16 tons/man/year support are required for a large field party in the Arctic Islands. Earlier exploration is reviewed, and further research to be undertaken, noted. (DGS.)

HARWOOD, TREVOR A., *see also* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

72063. HASHIMOTO, T. Preliminary report on Village Lakes area Mistassini Territory and New Quebec. Quebec, 1962. 9 p. table, fold. map. (Quebec, Dept. of Natural Resources, P.R. no. 473.) Ref.

Reports on the geology of this 250 sq. mi. area, 52° - 52° 15′ N. 75° 10′ - 75° 30′ W., athwart the Eastmain River, as investigated during summer 1961. The rocks, of Precambrian age, are complexly folded and faulted. Lavas, with lens-like bodies of gabbro, and quartz-feldspar-biotite sedimentaries are intruded by granitic, mostly gneissic, rocks of more than one orogenic period. These intrusives are cut by diabase and feldspar porphyry dikes and pegmatites. A major strike-slip fault extends for 18 mi. within the area. Prospecting in 1961 indicated zones which are mineralized with disseminated pyrite or pyrrhotite; additional copper showings, also gold discoveries, are possible. Distribution of rock types, structural features, and mineralized zones are mapped at scale 1:63, 360. (DGS.)

72064. HASTINGS, ANDREW D., 1924- . Atlas of the arctic environment. Natick, Mass., Mar. 1961. viii, 22 p. maps (2 col.). (U.S. Quartermaster Research and Engineering Center. Environmental Protection Research Division. Research study report RER-33.) 18 refs.

Contains 22 maps on polar stereographic projection which show the distribution of various climatic and terrain features possibly affecting the selection on unprepared landing sites for wheeled aircraft in regions north of 65° N. Accompanying text briefly states sources and appraises reliability of the maps, such factors as physiographic features, vegetation zones, location of 350 stations from some nine hundred used, temperatures, freeze-thaw cycles, freeze-up and breakup, snow depth, precipitation and strong winds. (DWB.)

HASTINGS, ANDREW D., 1924- , *see*

Levenshtein, R. IA. Kolichestvennoe raspredelenie . . . polychaeta . . . 1961. No. 73457

Levin, A., *& others*. Systems research . . . 1961. No. 73459

72065. HATTERSLEY-SMITH, GEOFFREY F., *and others*. The ablation season on Gilman Glacier, northern Ellesmere Island. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no. 54, *pub.* 1961. p.152-68, illus., maps, graphs, tables.) 6 refs. *Other authors:* J.R. Lotz *and* R.B. Sagar. Summary in French.

Describes part of glaciological and glacial-meteorological program on Operation Hazen, 1957-1959. Significant differences in the glacial-meteorological conditions were observed in the three years of record; they were reflected in the ablation measured on the lower part of the glacier, approx. 82° N. 70° W. The regime appears to be negative at present; the terminus of the glacier is probably thinning in its lower reaches. Evidence is given of limited recession, probably caused by longer ablation seasons and higher summer temperatures. (DWB.)

72066. HATTERSLEY-SMITH, GEOFFREY F. Ice conditions off the north coast of Ellesmere Island. Ottawa, Jan. 1962. 21 p. illus., fold. map. (Canada. Defence Research Board. Directorate of Physical Research. Geophysics, report no. misc. G-8.) 22 refs.

Surveys sea ice conditions for six subregions along this coast, with reference to earlier descriptions, and to airphotos of 1950-1954. The margin of land ice or the ice shelf is shown on map, approx. scale 1 in. = 20 mi. Five main types of ice are defined. Little change is noted from conditions of 50-80 yrs. ago, except for the large portion which broke away near Cape Columbia in 1946. (DWB.)

72067. HATTERSLEY-SMITH, GEOFFREY F. The ice cover of northern Ellesmere Island. (New York Academy of Sciences. Annals, Oct. 5, 1961. v. 95, p.282-89, map.) 25 refs. Presented at its Conference on Solar Variations, Climatic Changes, and Related Geophysical Problems, Jan. 1961.

Describes present ice-covered as well as ice-free portions of northern Ellesmere; and considers evidence of former glacier centers in northern and southern parts of the island, and the predominantly north-south ice movement. The recent drainage pattern shows the effects of glaciation, complicated however by coastal emergence and late glacial movement. The north coast fjords also indicate the passage of thick glacier ice. Gilman Glacier had a considerable deficit in 1957-58, though less than in 1956-57, and was nearly in a state of balance in 1958-59. It has not receded in recent decades, but gives evidence of being in a limited recession. (DLC.)

72068. HATTERSLEY-SMITH, GEOFFREY F. Northern Ellesmere, the Canadian IGY expedition to Lake Hazen. (Beaver, winter 1961. outfit 292, p. 42-47, illus., map.)

Outlines the Defence Research Board's Operation Hazen in 1957-1958. The region, earlier explorations, and logistics are described; the meteorological, glaciological, and geophysical work indicated. Winter temperatures at the Lake were 25° lower than at Alert on the coast, but windchill was less severe. Ablation on Gilman Glacier exceeded accumulation (approx. five in. of water in the last 20 yrs.) by about 60%. Ice thickness measured up to 2500 ft. on the glacier and 2600 ft. on the icecap. Geological, biological, and archeological studies are noted. (DI.)

72069. HATTERSLEY-SMITH, GEOFFREY F. Operation Hazen: glaciological studies on Gilman Glacier: progress report 1960. Ottawa, May 1961. iii, 13 p. illus., map, graphs, tables. (Canada. Defence Research Board, Directorate of Physical Research, D Phys. R(G) Hazen 18.) 3 refs. Mimeo.

Presents summary of the limited program of glaciological, meteorological, and soil research carried out May 20 - June 12, 1960; the meteorological studies are reported *in extenso* by J.R. Lotz, and the soil samples by R. Yong, q.q.v. Mean snow cover on Lake Hazen was 36 cm. on May 21, 1960; the 1959-60 winter snow had accumulated on old lake ice over most of the area observed. Glaciological work on the accumulation and ablation areas of Gilman Glacier is outlined and comparison is made with 1958 and 1959 results. Accumulation figures indicate an elevation of about 1200 m. for the equilibrium line. Ablation was in progress by June 1, 1960, ten days earlier than in the previous three years. Thin sections in cores showed all structural gradations between iced firn, superimposed ice, and typical glacier ice. (DLC.)

72070. HATTERSLEY-SMITH, GEOFFREY F. Peary's North Pole journey. (Beaver, summer 1961. outfit 292, p.36-39, illus.)

Discusses the probabilities of Peary's attainment of the North Pole in 1909: the accuracy of his astronomical observations, the long marches averaging 35 mi./day for 600 mi. over the pack ice, etc. (DI.)

72071. HATTERSLEY-SMITH, GEOFFREY F. Some glaciological studies in the Lake Hazen region of northern Ellesmere Island. *(In:* International Symposium on Arctic Geology. Proceedings 1961, v.2, p.791-808, illus., map, profiles, graph, tables.) 19 refs.

Discusses main results of these studies, a leading objective of Operation Hazen, during the IGY. Climatic conditions of 1957-1959 are summarized, in particular as they affected Gilman Glacier and Lake Hazen. Studies of accumulation, ablation, and their contribution to an estimate of the 1957-58 budget deficit of Gilman Glacier as well as an assessment of the regimen of the main north Ellesmere icecap are reviewed. Principal outlet glaciers are thinning slightly in their lower reaches, but are not receding. Small, local ice masses to the south are both thinning and receding; some evidence is noted of these conditions on Gilman Glacier. (DGS.)

72072. HATTERSLEY-SMITH, GEOFFREY F., *and* **J.R. LOTZ.** Transport, equipment, and stores used during Operation Hazen, 1957-59. (Polar record, Jan. 1961. v.10, no.1, p.372-81.) 4 refs.

Describes and evaluates items used in transportation, clothing, shelter, and food supplies during the IGY expedition to northern Ellesmere Island. Weight was an important factor as the expedition was primarily airborne. Light vehicles and dogs were used (successfully) for transport; Eliason motor toboggans proved useful on glaciers, except on bare-ice surfaces. Food rations are listed; experimental use of dehydrated meats was successful. (DI.)

HATTERSLEY-SMITH, GEOFFREY F., *see also Polar record.* Field work. 1961-62. No. 74848

72073. HAUG, ARNE, *and* **S. MYKLESTAD.** Aktuelle problemer i norsk tang- og tareforskning. (Teknisk ukeblad, Sept. 29, 1960. årg. 107, nr. 35, p.781-90, illus., tables, graphs, diagrs., map.) 19 refs. Text in Norwegian. Summary in English. Title tr.: Current problems in Norwegian seaweed research.

Reports results of a quantitative study of seaweed resources on the coast of Norway. The total area covered by marine algae nearly equals that of cultivated land. Only a small part (about 50,000 t./yr.) of the resources is being utilized. The chemistry of alginic acid and its variation from species to species is being investigated. The problem of eliminating water is dealt with and results are reported of experiments in mechanical methods (pressing, freezing). A new type of dryer under development is described. (DLC.)

HAUPT, G. J., *see* Pierucci, L., *& others.* Profound hypothermia. 1960. No. 74795

72074. HAURWITZ, BERNHARD, 1905- . Frictional effects and the meridional circulation in the mesosphere. (Journal of geophysical research, Aug. 1961. v.66, no.8, p.2381-91, table, diagrs.) 12 refs.

The observed warm winter temperatures in the upper mesosphere at high latitudes, where no direct heating by solar radiation takes place, require vertical descent of air from the lower ionosphere into the upper mesosphere. Such descent leads to adiabatic heating and to stronger heating because of the recombination of oxygen atoms into oxygen molecules. It is shown that the curvature of the vertical profile of the mean zonal wind component results in frictional meridional components of motion of the right direction and of a reasonable order of magnitude to produce the divergence required for such a descent of air into the high mesosphere over subpolar regions during winter. Computation of the frictional meridional wind components gives meridional circulation systems similar also to those required for explaining the maximum of the total ozone content at high latitudes in late winter or early spring.—From author's abstract. (DLC.)

HAURWITZ, MARION WOOD, *see* Warwick, C.S., & M.W. Haurwitz. Solar activity: PCA. 1962. No. 76492

HAUSSER, RENÉ, *see* Pariset, E., & R. Hausser. Formation and evolution of ice . . . 1961. No. 74651

72075. HAVENS, JAMES M. Summer weather observations on a Canadian arctic ice cap. (Weather, June 1962. v.17, no.6, p.197-209, illus., map, diagr., graphs, tables.) 25 refs.

Outlines meteorological and related glaciological programs carried out in 1960 on the Jacobsen-McGill Arctic Research Expedition to Axel Heiberg Island. Two main stations were operated; three-months' observations showed above-normal temperatures and precipitation compared to the 13-yr. Eureka record. Glaciological work of the meteorologists at the upper station on Akaioa Ice Cap (79° 36′ N. 90° 12′ W. 1700 m. altitude) is compared with the main glaciological research on the White Glacier ablation zone, also with work on other Canadian arctic glaciers. Relationships between meteorology and glaciology, resulting in a glacier's mass balance, are diagrammed; relative height of snow surface at the Akaioa Ice Cap station June-Aug. 1960 is graphed. (DWB.)

72076. HAWTHORN, HARRY BERTRAM, 1910- . Problems of cultural adjustment in relation to northern resources development. *(In:* Resources for Tomorrow Conference . . . 1961. v.1, p.597-606.) 11 refs.

Discusses problems of change from a hunting to a wage-earning economy among the aborigines in northern Canada. The retention of desirable personal qualities through the transition may be aided by education and by adjustment of the community to consolidated settlements. Non-aborigines also are considered, and their adjustment to the life of transients in isolated stations or company towns is discussed. (CaONA.)

HAYES, HENRY E., *see* Alaskan Science Conference 1960. 1961. No. 69643

HAYES, MURRAY L., *see* Alaskan Science Conference 1960. 1961. No. 69643

72077. HAYMAN, S.G. Alaska steamship story. (Alaska sportsman, Dec. 1960. v.26, no.12, p. 10-15, +, illus.)

Recounts the history of the Alaska Steamship Co. since 1893; it provides service between Seattle

and Alaska, and its shipping problems, e.g. empty holds southbound, are discussed. Passenger service was discontinued in 1954; 14 freighters comprise the present fleet. Photographs of several older vessels are included. (DI.)

72078. HAZZARD, JOHN C., *and others.* The search for oil in Alaska: an analysis of a successful exploration cycle. (U.S. Contribution to Economic Commission for Asia and the Far East, Second Petroleum Symposium, *Teheran,* Iran, Sept. 1962. no.6, vi, 33 p. 2 maps, 3 diagrs.) 14 refs. *Other authors:* W.R. Moran, H.M. Lian, *and* R.R. Simonson.

Surveys the sequence of oil exploration cycles in Alaska: a period, 1898-1910, of exploration near the coast and near seepages but small production; another in 1920-1941 was retarded by the depression, and ended with land withdrawal upon U.S. entrance into World War II. The third period of activity initiated in 1947 has better mapping, improved methods, and $282 million invested. The Swanson River oil field was discovered in 1957, and the Kenai gas field in 1959. Oil and gas have also been found in the Arctic Slope area. Factors now favorable to the opening of new exploration cycles are noted and exemplified in Argentina and Australia. Structure contour diagrams of the Swanson River and Kenai fields are included. (DGS.)

72079. HEACOCK, HALLIE C. Those wonderful Klondike days. (Alaska sportsman, Sept. 1962. v.28, no.9, p.30-38, illus.)

Recounts experience, mostly in 1902-1903, working on various gold mining claims near Dawson, Yukon Territory; with pen-and-ink sketches (3) and photos of ivory carvings. (DI.)

HEACOCK, R.R., *see* Hessler, V.P., & R.R. Heacock. Earth currents . . . 1962. No. 72136

72080. HEAD, IVAN L. Canadian claims to territorial sovereignty in the arctic regions. Cambridge, Mass., 1960. 153 p. Refs. Typescript. LL.M. thesis to Harvard University Law School.

Discusses Canada's boundaries in the islands and waters of the Arctic. The historically evolved principles of international law as regards territory, and modern views of territorial sovereignty are reviewed. The controversial sector theory is examined, and the fact noted that Canada has made no legal-sector claim. Canadian government views on claims through the years, especially during and after World War II, are reviewed. Problems of the nature of water bodies (territorial waters or high seas), whether ice is land or water, rights to airspace, and navigation under ice are discussed, and some solutions offered. By international law, Canadian claims in the Arctic are substantiated by discovery and exploration, acquisition through purchase and treaty, effective occupation, exercise of jurisdiction, and exclusion of foreign states. No dispute seems likely over territory in the so-called Canadian Arctic. (CaONA.)

72081. HEAD, RICHARD B. Steroids as ice nucleators. (Nature, Sept. 9, 1961. v.191, no.4793, p. 1058-59, illus.) 3 refs.

Seven out of 30 steroids examined were found to effectively nucleate ice. The symmetry of these steroids is mainly monoclinic or orthorhombic. The discovery of ice nucleation by these compounds is novel. (DLC.)

HEALEY, W. V., *see* Wangensteen, S.L., & *others.* Physiologic effects of gastric hypothermia, 1 . . . 1961. No. 76483

72082. HEBERLING, EARL J., *and* **T. ADAMS.** Relation of changing levels of physical fitness to human cold acclimatization. (Journal of applied physiology, Mar. 1961. v.16, no.2, p.226-30, illus., tables.) 21 refs.

Reports on five Caucasians exposed nude for 1 hr. to 10° ± 1° C. after normal activity, after physical training, or after a six-week winter bivouac in Alaska. Data on body temperatures recorded confirm an earlier suggestion that accepted indices of acclimatization may also result from increased physical activity. Also, the value of bivouac or field exercises as "cold exposure" is questioned. (DLC.)

HEBERLING, EARL J., *see also* Adams, T., & *others.* . . . Glycine & human response cold. 1961. No. 69484

72083. HECKMAN, EDWARD. I was a Yukon steamboat man. (Alaska sportsman, Nov. 1960 - Apr. 1961. v.26, no.11 - v.27, no.4, illus.)

Recounts experiences during 1906-1910, as pilot and first mate on vessels of the North American Transportation and Trading Co., on the Yukon River between St. Michael on the coast and Dawson, Yukon Territory. Details of steamboat construction, operation, navigation, etc. are noted; and an overland foot journey from Fairbanks to Valdez in 1906 is described. Contemporary photographs, several of steamships, illustrate the six articles. (DI.)

72084. HEDBLOM, E. E. The medical problems encountered in Antarctica. (Military medicine, Nov. 1961. v.126, no.11, p.818-24, illus., tables.)

Reviews the number and causes of deaths south of the Antarctic Circle since the discovery of the continent. This is followed by an analysis of deaths since 1946, and of diseases during the period 1956-60, suffered by the U.S. Navy personnel in the Antarctic. Injuries and respiratory diseases head the list of incapacitating factors. (DLC.)

72085. HEDBLOM, E. E. Polar manual. U.S. Naval Medical School. Dept. of Cold Weather Medicine. National Naval Medical Center. Bethesda, Md. 1962. 6, 124 p. illus., tables, 304 refs. Third edition of *Antarctic manual* 1959, "amended and in large part rewritten in order to give it wider application."

Comprehensive and concise guide for health and survival of expeditionary personnel, with emphasis on prevention. Natural conditions, phenomena and resources of both polar regions are discussed as pertinent to men living and working there; as are types of shelter and means of heating it. Personnel selection: motivation, physical and psychological factors in polar candidates, is outlined. Physiology and acclimatization, hygiene, psychological adjustment, clothing (including sleeping bags), nutrition and sanitation are dealt with as are animal-borne disease, and sled dogs, their types, behavior, feeding, handling, etc. Cold injuries and visual disabilities are treated in detail. The first-aid

kit and basic medical supplies are enumerated, dental care is outlined. In two extensive chapters, safety and survival are treated: specifically camp, alpine, travel, land and sea ice, boat and aviation safety; types of emergency shelter, heat, and food (game, etc.); survival or sledging rations, group and individual gear, and signalling. Specific admonitions are included in several chapters, and closing the manual are 55 general polar do's and don't's; followed by a useful bibliography. (CaMAI.)

72086. HEDLIN, RALPH. Reindeer for the North. (Beaver, spring 1961. outfit 291, p.48-54, illus.)

Describes an abortive attempt during 1911-1916 to establish a 50-head herd of Newfoundland reindeer at Fort Smith in Mackenzie District. The $62,000 expended could have been applied more productively to conservation of Barren Ground caribou. Other reindeer-raising ventures in northern Canada are noted, the only one with even initial success that of 1935 in the Mackenzie Delta. (DI.)

72087. HEDLUND, GUNNAR. Många miljoner måste bli fler. (Skogsägaren, Feb. 1960. årg. 36, nr.2, p.35, port.) Text in Swedish. **Title tr.:** Many millions must become more millions.

Notes that farm woodlot owners operate several pulp mills through their forest-owner associations. The mills were set up to break the monopoly of large lumbering companies and to gain insight into the industrial economy. A similar facility is needed in Norrland, though conditions differ from those in southern Sweden; and Norrland forest-owner associations are urged to buy stock in the projected Norrland Forest Owner's Pulp Co. Success of this drive and election of a board of directors was reported in the Nov. 1960 issue (p. 326) of *Skogsägaren*. Other short articles appeared *ibid.* Jan. 1960, p.7. (DA.)

72088. HEDLUND, HANS, *and* **O. TAMM.** Your guide to Swedish forestry. Stockholm, Swedish Forestry Association, 1958. 32 p. illus., tables.

Reviews the forests, silviculture, lumbering, and pertinent legislation. Climatic conditions and forest soils in North and South Sweden are described. Present forest resources and annual increment are outlined. Ownership is analyzed as distributed between the Crown, the Church, lumbering companies and private individuals. Forestry methods, the lumbering and wood-product industry and its role in the national economy are discussed. Directory is appended of officials, administrative agencies, research, educational, industrial labor, etc. organizations, also museums and periodicals in this field. (DA.)

72089. HEEZEN, BRUCE CHARLES, *and* **M. EWING.** The Mid-Oceanic Ridge and its extension through the Arctic Basin. *(In:* International Symposium on Arctic Geology, Proceedings 1961. v. 1, p.622-42, maps incl. 3 fold. in vol. 3; profiles.) 56 refs. *Also issued as:* Columbia University. Lamont Geological Observatory, Contribution no. 494.

Summarizes the characteristics of the Mid-Atlantic Ridge and presents evidence, based on scattered data, for its extension through the Arctic Basin, following the seismic belt north between Spitsbergen and Greenland, then parallel and 250 mi. distant from the Lomonosov Ridge, approximately bisecting the Basin between the Lomonosov and the Barents Shelf continental slope. New interpretation of soundings largely from the *Fram* and the *Sedov* reveals a rifted ridge along the mid-oceanic seismic belt, with broad submarine canyons crossing the belt towards the Barents Shelf. The Lomonosov Ridge is not considered part of the mid-oceanic ridge. Recent Soviet exploration has disclosed a deep water trough 50 km. wide completely piercing Nansen Rise, and apparently forming part of the north-south seismic belt. Authors believe that the Arctic Basin between the Lomonosov and the Barents Shelf is currently growing wider and that the mid-oceanic ridge is developing along the parting marked by the seismic belt. (DLC.)

HEFLER, J. N., *see* Canada. Northern welfare '62 1962. No. 70539

HEGGARTY, DIANE, *see* Fleming, R.H., & D. Heggarty. Recovery drift bottles . . . 1962. No. 71440

72090. HEIBERG, SEV. Mount McKinley's Pioneer Ridge. (American alpine journal, 1962. v.13, no. 1, p.38-42, illus.)

Reports first ascent of Pioneer Ridge to the North Peak of Mt. McKinley, 19,470 ft., July 23, 1961, by a five-man party from the Alpine Club of Canada. Air-drop assistance, heavy snow at the summit camp at 17,000 ft., and minor cases of frostbite are noted in the 23-day climb. Route is shown on photo. (DGS.)

72091. HEIER, KNUT S. Layered gabbro, hornblendite, carbonatite and nepheline syenite on Stjernøy, North Norway. (Norsk geologisk tidsskrift, 1961. bd. 41, hefte 2-4, p.109-155, 13 illus., graph, 3 text maps, tables.) 25 refs.

Discusses geology of a small area on this island southwest of Hammerfest, where a study was made of the carbonatite and nepheline syenite and their relation to the surrounding rocks, believed to be part of the Caledonides. Structural relationships, petrography, and chemical analyses are reported. Two periods of metamorphic activity are identified. Mining of the nepheline syenite as a raw material for the ceramics industry has begun. The carbonatite offers possibilities as fertilizer. Soil from it supports vegetation for a summer reindeer range on the island. (DLC.)

72092. HEIKKILA, W. J., *and* **S. R. PENSTONE.** Rocket measurements of auroral radio absorption. (Canadian journal of physics, Dec. 1961, v.39, no.12, p.1875-81, graphs.) 7 refs.

Presents data obtained during one of three rocket flights from Ft. Churchill, Manitoba, during Oct. 1960. Measurements at 22 Mc./s. indicate that most of the absorption occurred at 65-90 km. height and was most intense at 70-75 km. This conforms with the observation of increasing numbers of electrons with energies greater than 30 kev. above about 74 km., both during ascent and descent. The measurement of 11.5 db. total absorption at 22 Mc./s. along an oblique path at 60° from the zenith

agrees closely with the 30 Mc./s. zenith riometer observation of 3.3 db. (DLC.)

HEIKKILA, W. J., *see also* Adey, A.W., & W.J. Heikkila. Rocket electron density measurements . . . 1961. No. 69485

HEIM, ROBERT C., *see* National Northern Development Conference. 1961. No. 74224

72093. HEINONEN, LEO. Studies on the microfossils in the tills of the north European glaciation. Helsinki, 1957. 92 p. maps, tables, diagr. (Suomalainen Tiedeakatemia. Toimituksia: Annales Academiae scientiarum Fennicae, ser. A. III, Geologica-Geographica, no. 52.) 57 refs.

Reports extensive study of pollen and spores in the tills collected on the coast of central Ostrobothnia, other sites in Finland such as Tervola and Haukipudas above 65° N., the Karelian Isthmus, Sweden, and elsewhere. A comparison is made of the pollen and spore flora from different regions, also with some interglacial deposits and with glacial clays. Study of the microfossils is concluded to be of use in solving the mechanics of ice movements, stages of glaciations, etc. (DLC.)

72094. HEINRICH, EBERHARDT WILLIAM, 1918- , *and* R. W. DEANE. An occurrence of barylite near Seal Lake, Labrador. (American mineralogist, May-June 1962. v. 47, nos. 5 and 6, p. 758-63, table.) 14 refs. *Also issued as:* Michigan. University. Dept. of Geology and Mineralogy. Mineralogical Laboratory, Contribution no. 241.

Offers results of analysis of this beryllium mineral and remarks on its paragenesis, part of the Michigan Memorial Phoenix Project 204 on rare-element mineral deposits. Specimens from Rio Tinto Canadian Exploration Ltd. in 1959 contained unusual concentrations of beryllium, but identification of the specific mineral presented difficulty. Other occurrences of the Ba-Al silicate are noted; geology of the deposit (two bodies of alkali syenite) is outlined; a partly purified sample of vein barylite was estimated to consist of nearly 50% barylite, the remainder being mainly quartz and a trace of albite. The Seal Lake deposit (54°20′ N. 62°W.) is a product of alkali metasomatism in fenitized amphibole gneisses; an unusually efficient process of Be fractionation and concentration is indicated. Additional data reported by E.H. Nickel and D.J. Charette, q.v. (DGS.)

72095. HEINTZ, ANATOL, 1898- . Problemene omkring klimaet på Svalbard gjennom tidene, dyre-fossilenes vitnesbyrd. (Norske Videnskaps-akademi, *Oslo.* Årbok 1960 *pub.* 1961, p. 21.) Text in Norwegian. Title tr.: Problems of Svalbard climate through the ages, the testimony of animal fossils.

Reports that fossil fauna from Cambrian to Tertiary indicate the Svalbard climate to have been either the equivalent of the present temperate zones or warmer from Cambrian to Mesozoic, after which the forms, more restricted, indicate cooler climate. Flora alone does not provide a clear picture of climatic conditions. (DLC.)

72096. HEINTZ, NATASCHA. The Downtonian and Devonian vertebrates of Spitsbergen, XI; *Gigantaspis,* a new genus of fam. Pteraspidae from Spitsbergen; a preliminary note. (Norway, Norsk Polarinstitutt. Årbok 1960 *pub.* 1962, p. 22-27, illus., plate.) 12 refs.

Describes this genus of heterostracan fish. Absence of cornual plates and certain other characters indicate a closer relationship to gen. *Protaspis* than to other pteraspids. Two species *G. isachseni* and *G. bocki,* are preliminarily described, their mutual relationship discussed. (DLC.)

72097. HEINTZ, NATASCHA. Geological excursion to Svalbard in connection with the XXI International Geological Congress in Norden 1960. (Norway. Norsk Polarinstitutt. Årbok 1960 *pub.* 1962, p. 98-106, illus., map.)

Describes the July 29 - Aug. 14 trip led by Anatol Heintz, Thore S. Winsnes and the author, with details on participants, itinerary, and main objects of study. (CaMAI.)

72098. HEINTZ, NATASCHA. The Nansen Ridge has become the Nansen Trough, a review of some recent Soviet-Russian papers on oceanographic conditions in the Greenland Sea. (Norway. Norsk Polarinstitutt. Årbok 1960 *pub.* 1962, p.66-74, maps, chart.) 14 refs.

Reviews investigations reported in No. 59554, 66090, 61472, 18805, etc.: soundings from the R/V *Ob'* in 1956 and *Lena* in 1958 disclosing existence of a trough connecting the north polar basin and the Greenland Sea, which cuts the Nansen Rise along the meridian of 1°W. The trough has a north-south axis and depth of 3,100 - 3,900 m. Results of other investigations of bottom topography, sediments, hydrological and hydrochemical conditions, the continental shelves, currents, water exchange, transport, sediment deposition, etc. are noted. Earlier work of Nansen and the *Sadko* is drawn upon. (CaMAI.)

72099. HELA, ILMO, 1915- , *and* T. LAEVASTU. Fisheries hydrography; how oceanography and meteorology can and do serve fisheries. London, Fishing News (Books), 1961. 137 p. illus., tables, maps. About 300 refs.

Presents a comprehensive and concise, semi-popular text, covering the results of research in the present century; abundantly and well illus. Following an explanation of fisheries hydrography, the influence of environmental factors on fish behavior, is dealt with, including temperature, light, chemistry, food, weather, etc. Application of hydrography in fisheries data analyses, in fish location and conduct of fishing is outlined, and maritime meteorology discussed as aid to fisheries. Coastal fisheries are considered also, as they are affected by weather and hydrography. Appendices contain explanations of technical terms; description of simple device for measuring bottom currents; notes on meteorological service for fishermen (by C.E.N. Frankcom), and several indexes. Arctic fishes, fisheries and areas are considered throughout. (DLC.)

72100. HELA, ILMO, 1915- . Hydrographic results of the "Aranda" expedition to the Barents Sea in July 1957. (International Council for the Exploration of the Sea. Rapports et procès-verbaux

des réunions 1961. v.149, Contributions to Special IGY Meeting 1959, p.17-24, illus., maps.) 14 refs.

Account of intensive studies made during June - Aug. 1957, with emphasis on more or less perpendicular sections across "all currents and their branches flowing between Spitsbergen and Finnmark." Temperature, salinity, and also pH-0_2 were considered, and water masses, their character and changes defined from these data. The Polar Front is also noted. (DI.)

72101. HELIMÄKI, U. ILMARI. On the accuracy of wind measurements made with the radiotheodolite used during the Swedish-Finnish-Swiss IGY Expedition to Spitzbergen. (Geophysica, 1961. v.8, no. 1, Meteorology, p.71-84, illus., tables, graphs, diagr.) 3 refs.

A total of 874 soundings were made with Väisälä radiosondes and equipment by this expedition at Murchison Bay (80° 03.5′ N. 18° 15′ E.) on Nordaustlandet; those tracked on 24 Mc./s. (about 82%) are analyzed here for mean and random errors. Random error of the azimuth angle in individual soundings is less than 0.2° except by very light winds, and mean deviation of the elevation angle, less than 0.25° at all elevation angles. Photos. and diagr. of the station are included. (CaMAI.)

72102. HELK, JØRGEN V., 1905- . The mapping of Greenland by the Danish Geodetic Institute. *(In:* International Geographical Congress 1960. Physical geography . . . 1961. p.128-30.)

Reviews the course of this work and describes its current state with aerial photography. Most of the west coast and much of the east coast is mapped at 1:250,000. All of ice-free Greenland is covered by oblique aerial photography; vertical photos are to be taken over the areas not yet mapped. (DGS.)

72103. HELK, JØRGEN V., 1905- . Some questions on the ice-topography on the Greenland-maps made by the Danish Geodetic Institute. *(In:* International Geographical Congress 1960. Physical geography . . . 1961. p.131-32.)

Notes the difficulties encountered by the cartographer in establishing by aerial photography alone, the exact position of the border of the ice-cap, moraines, dead ice, etc. In ensuing discussion, examples, are cited of U.S. mapping practices for glaciological purposes. (DGS.)

72104. HELLABY, HILDA ALICE. The Indian in social adjustment. (North, Sept.-Oct. 1961. v.8, no.5, p.22-23.)

Describes the legal status of Indians in Yukon Territory, and discusses their economic, educational, and social problems. Their living standards in four types of communities are outlined. Their acceptance in the larger communities is poor because of their limited schooling and low employability. (DLC.)

HELLER, CHRISTINE A., *see* Durham, W.F., & *others*. Insecticide content of diet . . . 1961. No. 71155

72105. HELLING, ARVE. Stormsvaler hekker på Røst. (Stavanger, Norway. Museet. Sterna, May, 1962. bd. 5, hefte 2, p.41-44.) Text in Norwegian. Summary in English. **Title tr.:** Storm swallow nests on Røst.

Reports observations in Aug. 1961 of the storm swallow *Oceanodroma leucorhoa,* and the sea swallow *Hydrobates pelagicus,* on one of the small islands of the Røst group, 67° 26′ N. 11° 54′ E., in southernmost Lofoten. Measurements of specimens collected for the Zoological Museum in Oslo are tabulated. Conditions under which the birds were studied indicate that they were nesting, although no nests were observed. (DLC.)

72106. HELLQVIST, HELGE. Några resultat av försök med bekämpning av kålflugelarver i norra Sverige. (Nordisk jordbrugsforskning, Supp. 1, 1960, p.312-14, table.) Text in Swedish. **Title tr.:** Results of experiments in cabbage-fly larvae control in northern Sweden.

Reports work of the Northern Section of the Swedish Plant Protection Institute on *Hylemyia floralis,* a pest of rape, etc. important for forage plant rotation. Pelleting of seed makes use of insecticides in powder form possible and proved successful with turnip and rape in five northern Norrland localities. The method is described. (DA.)

72107. HELLSTRÖM, B., *and* **A. NERGÅRDH.** The influence of hypothermia on oxygen-induced changes of the mouse eye. (Acta morphologica neerlando-scandinavica, 1960, v.3, no.2, p.123-30, illus., table.) 11 refs.

Low environmental temperature during 0_2-exposure and during subsequent stay in air reduces both incidence and severity of eye lesions produced in the newborn mouse by oxygen. The effect was most pronounced at temperatures below 12° C. (DNLM.)

72108. HELM, JUNE, *and* **N. O. LURIE.** The subsistence economy of the Dogrib Indians of Lac la Martre in the Mackenzie District of the Northwest Territories. Ottawa, Mar. 1961. 119 p. illus., diagrs., tables. (Canada. Dept. of Northern Affairs and National Resources. Northern Co-ordination and Research Centre, 61-3.) 18 refs.

Study of the changing ecological and economic conditions of this northern Athabaskan community of 110, based on 1959 field work at the Lac la Martre village. The household composition, kinship pattern, and social activities are discussed, also the standard of living and sources of cash income: wage labor, public assistance. Traditional clothing is described and the subsistence economy outlined: technology and methods of fishing and hunting, consumption and processing of fish, birds, game animals and their by-products, exploitation and utilization of flora, etc. Decline of the caribou population has shifted the traditional economy to fishing, and has increased a reliance on wage labor and trade goods which fosters settlement near their source. The village population has doubled in the last five years as a result of migration from other lake communities. The presence of a day school, and improved medical facilities, as well as the greater possibility of obtaining wage work, have furthered growth of the village. Some new sources for additional cash income are sug-

gested by development of a local cottage industry, tourism, and commercial fishing. *See also* under J. H. MacNeish, No. 73724. (CaMAI.)

72109. HELMENDACH, ROGERS H., *and* J. P. MEEHAN. Thermoregulatory responses of dogs after alteration of peripheral sensitivity. (American journal of physiology, June 1962. v.202, no.6, p.1237-40, illus., table.) 17 refs.

Topical application of agents depressing or enhancing skin sensitivity, produced shifts in specific skin temperature at which panting or shivering occurred. These shifts indicate peripheral mediation of thermoregulation. Responses to cooling were more pronounced than to heating, which may be due to a greater effect of the peripheral cold fibers. (DLC.)

HELVEY, W. M., *see*

Benjamin, F.B., & *others*. Effect of stress . . . brain. 1961. No. 70132

Benjamin, F.B., & *others*. Effect of stress . . . brain. 1961. No. 70133

72110. HEMENWAY, CURTIS L., *and others*. Nanometeorites. (Nature, *London*, June 3, 1961. v.190, no.4779, p.897-98, illus., table.) *Other authors:* E.F. Fullam *and* L. Phillips.

Presents results of preliminary analysis of a particle collection obtained on Nov. 15, 1960, at 60,000 ft. altitude along the 144 ° W. meridian at 71° - 73.° N. The particle collector was exposed from a U-2 aircraft for 366 min. Examination of the exposed samples revealed "enormous numbers" of ultra-small (75 Å), high-density particles in addition to the solid and fluffy particles larger than 0.2 μ normally observed in similar collections at lower latitudes. The particles are named nanometeorites to distinguish them from the approx. 1000-times larger micrometeorites; a lunar-dust origin is favored. (DLC.)

72111. HEMINGWAY, ALLAN, 1902- . The neural control of the physiological response to cold; historical review. *(In:* Symposia on arctic biology and medicine 1960. Proceedings, 1; neural aspects of temperature regulation, *pub.* 1961, p. 1-36, illus.) 37 refs.

Reviews research over some 50 years with emphasis on recent work. Apparatus and methods are discussed and illus.; the afferent system, center, efferent system and feedback are dealt with, experiments in transsections and lesions of the central nervous system; its electro-physiological activity and its reaction to electric stimulation are considered in turn. Discussion is appended, p. 28-32. (CaMAI.)

HEMINGWAY, ALLAN, 1902- , *see also* Freeman, W.J., & *others*. Nervous control shivering, 10 . . . 1961. No. 71490

HEMMINGSEN, EDVARD, *see* Scholander, P.F., & *others*. Radio-carbon & O^{18} . . . icebergs. 1962. No. 75421

72112. HEMSTOCK, RUSSELL A. Engineering aspects of permafrost in the petroleum industry. (Oil in Canada, Aug. 1, 1960. v.12, no.40, p.50, +, illus., port.) Presented to Sixth Annual Muskeg Research Conference, Calgary, Apr. 1960.

Discusses principal properties: ice content, thermal sensitivity, and imperviousness to water, and their relation to muskeg formation; problems of transportation and construction in relation to oil exploration. Suggestions are included for drilling in permafrost areas, for insulated pipe lines on the surface to get oil to market, etc. The general economic problem is noted: high cost of operations in the North, need for government help. (DGS.)

72113. HEMSTOCK, RUSSELL A. Transportation in the Canadian North. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.1135-40, illus.) 5 refs.

Surveys transport facilities and requirements in relation to resource development and establishment of industry in the area. Air, river, water craft, their uses, limitations, and costs per ton mile are cited. Road building and cross-country vehicles are similarly discussed, and illus. included of Imperial Musk-Ox tractor. Each type of transport has its use in the North, their coordination is required. (DGS.)

HEMSTOCK, RUSSELL A., *see also* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

72114. HENDERSON, J. T. Electronic aids in Canadian mapping. (Engineering journal, Aug. 1961. v.44, no.8, p.58-65, diagrs., maps.) 36 refs.

Describes and evaluates modern devices for the measurement of distances (positions): the airborne profile recorder, Shoran, tellurometer, geodimeter, two range Decca, and the microwave position fixing system. Photogrammetric and other applications are discussed and some auxiliary aids are noted. Results of recent Canadian mapping projects are mapped. (DLC.)

HENDERSON, JAMES FENWICK, 1905- , *see* Buck, W.K., & J.F. Henderson. Mineral develop. & colonization Can. 1962. No. 70428

72115. HENDINGER, HELMTRAUT. Sfruttamento razionale delle foreste svedesi. (Vie del mondo, May 1961. anno 23, no.5, p.475-88, illus.) Text in Italian. **Title tr.:** Rational exploitation of Swedish forests.

Discusses the forest reserves, natural reforestation, and development of the lumber industry in Sweden, including Norrland. References are made to Lapland, where most of the forests are government-owned, and the exploitation uneconomic. Swampy and otherwise unproductive soil hampers annual forest increase: 1.9 $m.^3$/hectare as compared with 8.2 $m.^3$/ha. in the south. Umeå, Piteå, and Luleå are mentioned among the main woodworking centers of Norrland. (DLC.)

72116. HENDRICKS, E. L., *and* S. K. LOVE. Quantity and quality of surface waters of Alaska, 1960. Washington, D.C., U.S. Govt. Print. Office, 1962. vi, 122 p. tables. (U.S. Geological Survey. Water-supply paper 1720.) Refs.

Contains results of measurements of the flow and the chemical and physical quality of streams during the water year ending Sept. 30, 1960; 75 gaging stations are represented. Discharge measurements made at many other points during the year

are added. More detailed information is on file in the district offices. Explanatory remarks on Alaskan data, their accuracy, etc. are given, earlier reports cited. (DGS.)

72117. HENNINGSMOEN, GUNNAR. Cambro-Silurian fossils in Finnmark, northern Norway. (Norway. Geologiske undersøkelse, Årbok 1960, *pub.* 1961. nr. 213, p. 93-95.) 4 refs. Summary in Norwegian.

Presents preliminary report on recent finds of Paleozoic fossils in two small areas of Finnmark. On Digermul Peninsula in the Tana district there are lower, middle, and upper Cambrian and lower Ordovician specimens of trilobites, brachiopods, graptolites, hyolithids and problematica. Trails of the *Cruziana* type are found in middle Cambrian strata. Silurian crinoid stems, chain and horn corals, pentamerids, and monograptids have been collected on the southeast coast of Magerøy. (DGS.)

72118. HENOCH, W. E. S. Fort McPherson, N. W. T. (Geographical bulletin, Nov. 1961. no. 16, p. 86-103, illus., maps, tables.) 10 refs. *Also issued as:* Geographical reprints GR 22-61.

Surveys the economic and geographic factors of site, climate, settlement pattern, resources, population, food, income, transport, etc. contributing to the current transition from a self-sufficient hunting-trapping economy. Extensive mineral exploration, and planned road construction to Flat Creek near Dawson, are expected to increase the growth of this settlement of 453 people, mostly Indians, on the Peel River in the Mackenzie delta. (DGS.)

72119. HENOCH, W. E. S. Geographical survey of the lower Mackenzie and Arctic Red River area, 1960. (Arctic circular, 1961 *pub.* Apr. 1962. v. 14, no. 3, p. 52-58, map.)

Describes field studies, mostly of glacial geomorphology, in Mackenzie District by a two-man Canadian Geographical Branch party. Terraces (measured), eskers, glacial channels, etc. were observed along Arctic Red River and its tributaries south to Cranswick River, and along the Mackenzie between the Arctic Red and Travaillant Rivers. Evidence indicates that the terraces are of preglacial or interglacial origin. Mass movements on the slopes of Arctic Red River were investigated, also the natural cause (an underwater spring in a lake) of a local Indian legend, and sources of sand and gravel for Fort McPherson. Three distinct levels of the Peel Plateau were recognized during a reconnaissance flight. (CaMAI.)

HENRY, KENNETH A., *see* Alaskan Science Conference 1960. 1961. No. 69643

72120. HENSEL, HERBERT, 1920- . Recent advances in thermoreceptor physiology. *(In:* Symposia on arctic biology and medicine 1960. Proceedings, 1; neural aspects of temperature regulation, *pub.* 1961. p. 37-77, illus.) 5 refs.

Reported studies indicate that in the cat's skin, no specific cold or warm fibers exist in the group of myelinated A fibers, but only non-specific receptors responding to cold and pressure. However, numerous specific cold and warm receptors have been found with non-myelinated C fibers; the quantitative sensitivity of these receptors corresponds with the threshold for temperature sensation in man. In the latter, so far only one specific cold fiber has been found in the A group, but several A fibers responded both to pressure and cooling. Discussion which followed the paper is appended, p.59-77. (CaMAI.)

72121. HENSEL, RICHARD J., *and* **T. P. O'FARRELL.** The snowshoe hare. (Alaska sportsman, Sept. 1961. v. 27, no. 9, p. 16-18, illus.) Alaska wildlife library, no. 17.

Describes the physical characteristics, breeding and food habits of *Lepus americanus,* found in Alaska mostly between the Alaska and Brooks Ranges. The protective coloration also conserves body heat in winter. The color change is influenced by change in length of daylight. The cyclic population fluctuations are not yet explained. Good photographs. (DI.)

HENSLEY, G. T., *see* Black-Schaffer, G., & *others.* Protection . . . against 1800 G acceleration . . . 1961. No. 70236

HERLINVEAUX, R. H., *see* Dodimead, A.J., & *others.* Oceanographic data record . . . 1960. No. 71053

72122. HERMAN, JOHN R. Polar-cap and auroral-zone absorption effects on 2.5 - and 5.0-megacycles per second atmospheric radio noise. (Journal of geophysical research, June 1962. v. 67, no. 6, p. 2299-2308, tables, graphs, map.) 17 refs.

Analyzes data obtained at Enköping, 59° 30′ N. in Sweden, and Thule in northwest Greenland, during ten absorption events, 1958-1960. The results show that the measured noise power is radically depressed during such events. At Enköping the maximum decrease was 10-36 db. below normal on 2.5 Mc./s., 6-38 db. on 5 Mc./s.; at Thule, 5-24 and 6-14 db. Noise amplitude distribution curves are similar in shape for both quiet and disturbed periods; on the average the disturbed-period envelope is about 7 db. below normal.—From author's abstract. (DLC.)

72123. HERMANN, FREDE. Danish hydrographic observations under the Polar Front Programme. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v. 149, Contributions to Special IGY Meeting 1959, p. 118-21, illus., maps.)

Reports on two trans-Atlantic sections including East Greenland waters and six sections in the Labrador Sea and Davis Strait. Temperature and salinity are worked up and water masses and movement therefrom appraised. (DI.)

72124. HERMANN, FREDE. Hydrographic conditions in the Davis Strait in 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959 *pub.* 1961. v. 16, p. 16-18, illus., map.)

Reports temperature and salinity distribution and currents, with a series of sections down to 1600 m. Changes from conditions in the preceding year are noted. (DI.)

72125. HERMANN, FREDE. Hydrographic condi-

tions in the eastern part of Labrador Sea and Davis Strait in 1958. (International Council for the Exploration of the Sea. Annales biologiques 1958 *pub.* 1960. v. 15, p. 22-24, illus., map.)

Presents and discusses six sections on temperature and salinity during July - August, and temperature distribution at the 50 m. level. Currents, and temperature fluctuation during Jan. 1958-Mar. 1959 at the entrance to Godthab Fjord are also described. (DI.)

72126. HERMANN, FREDE. Sections from the Faroes to East Greenland and Cape Farewell to Ireland. (International Council for the Exploration of the Sea. Annales biologiques 1958, 1959, *pub.* 1960, 1961. v. 15, p. 19-21; v. 16, p. 20-21; map.)

Reports two trans-Atlantic sections made in July-Aug. 1958; temperature and salinity down to 4500 m. are represented and water masses and movements reconstructed. The 1959 report analyzes two sections made in midsummer; changes in water masses and currents, especially in the Irminger Current, are considered. (DI.)

72127. HERMANN, HENRI, *and* **J. F. CIER.** L'hémodynamique périphérique de l'organisme soumis au froid. (France. Centre national de la Recherche scientifique. Colloques nationaux 1955. p. C127-C139.) 70 refs. Text in French. **Title tr.:** Peripheral hemodynamics of the organism submitted to cold.

Reviews the problem going back over a hundred years, but deals mainly with developments in the postwar era. Following notes on surface circulation, responses to cold stress are summarized, specifically: vasoconstriction and shunt, their nervous control, local and central; response of distant vessels; effects of cold upon the blood. (DLC.)

HERMANSEN, L., *see*

Andersen, K.L., *& others.* Physical fitness . . . Lapps. 1962. No. 69758

Elsner, R.W., *& others.* Thermal and metabolic responses . . . cold . . . 1961. No. 71256

72128. HERNES, IVAR, 1923- . Hvor gammelt er Norge? Litt om nyere radioaktive absolutte alderbestammelser av norske bergarter, tidsskalaer over jordens geologiske historie og Norges geologi. (Naturen, 1962. årg. 86, nr. 2, p. 90-105, 2 tables.) Text in Norwegian. **Title tr.:** How old is Norway? Notes on recent radio-active absolute age determinations of Norwegian bedrock varieties, time scales of the earth's geologic history and Norway's geology.

Reviews the uranium-lead, potassium-argon, rubidium-strontium, and rhenium-osmium methods of determining age of bedrock, and presents J.L. Kulp's geologic time scale for post-Cambrian and pre-Cambrian time. Ages are given in millions of years for the Rapakivi granite of Finland, the Svecofenno-Karelian mountain chain, the old Lofoten Island rocks, and for those of the Kola Peninsula. The age determination methods of A.A. Polkanov at the Laboratory of Precambrian Geology in Leningrad and of A. Holmes at the University of Edinburgh are also noted. (DGS.)

72129. HÉROUX, OLIVIER, 1922- , *and* **J. S. CAMPBELL.** A study of the pathology and life span of 6° C. - and 30° C.-acclimated rats. (Laboratory investigation, 1960. v. 9, no. 2, p. 305-315, illus., tables.) 12 refs.

Reports a study of 23 rats living from the age of 50 days at either of the two temperatures. Incidence of testicular hypoplasia, glomerulonephritis, myocardial fibrosis and periarteritis nodosa was higher in the cold adapted group. Pulmonary inflammation was rare and neoplasms not recorded. No significant difference in life span between the two groups was noted. (DNLM.)

HERREID, GORDON, *see*

Alaskan Science Conference 1960. 1961. No. 69643

Malone, K. Mercury Alaska. 1962. No. 73772

HERRICK, J. F., *see* Afonso, S., *& others.* Temperature variations . . . 1962. No. 69500

HERRON, THOMAS, *see* Hunkins, K.L., *& others.* Geophys. studies Chukchi cap. 1962. No. 72267

72130. HERSOUG, IVER. I år satser vi på potetensilering (Norden, Sept. 16, 1960. årg. 64, nr. 18, p.484-86.) Text in Norwegian. **Title tr.:** This year we aim to silage potatoes.

Notes the 1960 potato crop good in Nordland with unusually warm summer, but dry and stem rot prevalent, and in some localities the foliage showed sign of virus. Diseased potatoes are no good for seed, but most can be steam-boiled and stored in silos to feed livestock. Dairies usually have facilities for steam boiling, and farmers without access to dairies should use portable apparatus cooperatively. Steam boiling and ensilage methods are described. (DA.)

72131. HERSOUG, IVER. Ny tilskottskvote til siloer i Nordland. (Norden, Dec. 1, 1960. årg. 64, nr.23, p.659.) Text in Norwegian. **Title tr.:** New subsidy for silos in Nordland.

Notes funds again available to subsidize grass silo building, the subsidies offered for 1958-1961 having been exhausted early by the numerous applicants. (DA.)

72132. HERSOUG, IVER. Tørråten i Nord-Norge i år. (Norden, Nov. 15, 1960. årg.64, nr.22, p.629.) Text in Norwegian. **Title tr.:** Dry rot in North Norway this year.

Notes rot in potato, formerly sporadic in North Norway, was widespread in the unusually warm summer of 1960. To control it, the ability of potato strains to resist the fungus must be known; fresh seed potatoes reduce contagion and spraying prevents but cannot cure the disease. The way the fungus attacks and spreads is described. (DA.)

72133. HERTTING, W. Tornedalsproblem förr och nu; ett och annat om jord, skog och fiske i gränsbygden. (Norrbotten, 1962, p.17-24.) Text in Swedish. **Title tr.:** Tornedal problems in earlier times and now; a few facts on land, forest and fishery in the border area.

Reviews the economic life, mainly salmon fisheries and agriculture, of this valley region of northern Sweden, approx. 65° 45′ - 69° N. Colonization started about the 14th century and pioneer

settling has continued till about 1950. The valley farming units almost doubled in number between 1927 and 1951 as compared with a 20% increase for Norrbotten county as a whole. The increase in arable land during the same period was 150 and 50% respectively. (SPRI.)

72134. **HESSELBERG, THEODOR, 1885-** . Climatological deviation maps. (Norske Videnskaps-akademi i Oslo. Geofysiske publikasjoner, Geophysica norvegica, 1962. v.24, no.1, p.39-66, maps, graphs, tables.) Ref. In memory of Vilhelm Bjerknes on the 100th anniversary of his birth, 1862-1951.

Discusses a statistical study of variations in Norwegian climate, based on 1901-1930 data, including representative records from the two northern provinces of Nord-Norge and Finnmark. Deviation maps for the pressure, temperature, precipitation, and gradient winds are shown for the winter of 1918, also for several other seasons, to illustrate the effect of additional or persistent winds upon mean temperature and precipitation. Maximum precipitation deviation for Finnmark, about 20%, is found with north winds; for Nordland, about 25%, with northwest winds. Maximum temperature deviations, about 1° C., for these two provinces occur with south and southwest winds. The maps also show the influence of the mountain chains, increasing precipitation on the windward side and deflecting the winds both horizontally and vertically. Such studies have practical value in hydroelectric power planning for different parts of the country. (DGS.)

HESSELBJERG, ERIK, *see* Schlüter, B., & *others.* Redegørelse om politiet . . . 1962. No. 75416

72135. **HESSLER, VICTOR PETER, 1903-** . Characteristics of telluric current at land and sea based stations. *(In:* International Conference on Cosmic Rays and the Earth Storm, 1961. Proceedings *pub.* 1962. v.1, p.32-34.)

Reports on observations in Alaska. Hodograms of the disturbance activity in the Tanana valley showed to be completely filled in ellipses with axes ratios 5 or 10 to 1. At stations near the coast the principal direction of the current tended to be perpendicular to the shore line. Correlation of telluric current and magnetic amplitude activity was great on both land and sea. Penetration of the telluric current into the sea was measured to a maximum depth of 4,500 ft., and showed no measurable attenuation in fluctuation of 2 to 5 minute period. One-third to one-half of the magnetic variation was calculated to be contributed by the telluric current in the sea. Most of these observations by drifting station Charlie, during Oct. - Dec. 1959, about 500 m. northwest of Point Barrow, were substantiated by Arlis I in Jan. - Mar. 1961. Active overhead auroral arcs with rapid motion of structure along the arc were observed visually on several occasions to correlate with parallel telluric currents in the sea. The conductivity of surface sea water was measured to be 28 ohm cm.; the range of telluric current variations was 1,200 mV/km. as measured at College, and 100-200 mV/km. on the drifting Station. (DLC.)

72136. **HESSLER, VICTOR PETER, 1903-** , *and* **R. R. HEACOCK.** Earth currents at the auroral zone. College, Alaska, Dec. 1962. 39 l.illus., maps, diagrs., graphs, tables. (Alaska. University. Geophysical Institute. Geophysical research report UAG-R133. 74 refs.

Summarizes the research program, and describes instrumentation and operating procedures in some detail. Continuous records of earth currents have been made since Jan. 1956; correlation with magnetic amplitude activity is high; major axis orientation is about 35° W. of geographic north at College, but topography and geology cause considerable deviation; peak of fluctuation activity generally follows the amplitude peak by about six hours; diurnal variation graphs of occurrence of the aurorally associated type micropulsations made for five widely spaced stations in Alaska and northwestern Canada suggest the existence of spiral or elliptical zones of occurrence of these micropulsations. Main features of the future research program are outlined. The literature on earth current measurements is reviewed including those at College, and those at Chesterfield Inlet during the Second Polar Year. (DGS.)

72137. **HETZEL, THEODORE B.** Indian rights and wrongs in Alaska. Philadelphia, Indian Rights Assoc., Oct. 1961. 8 p. illus. (Indian truth, v. 38, no. 2.)

Discusses the ineffectiveness of federal protection offered to the Indian and Eskimo minorities. Increased immigration has reduced the aboriginal: white ratio from 1:1 in 1930, to 1:6 in 1960. Loss of land titles to industrial and military interests is detrimental to the subsistence economy and cash income of native communities. The education program is not geared to local conditions. Antiquated bird (especially duck) protection laws are criticized. (DSI.)

72138. **HETZEL, THEODORE B.** The meek do not inherit Alaska. Philadelphia, Indian Rights Assoc. 1962. 8 p. illus. (Indian truth, v.39, no. 3-4.)

Discusses the Alaskan natives as in a semi-acculturated society with education and administrative systems geared to the white man's world. Land reforms, etc. demanded at the Tanana conference, June 1962, and local conditions as observed by author are discussed: advantages and disadvantages of reservations, fish and game laws favoring sportsmen and commercial interests, discrimination in employment, dependence on welfare, housing problems, need for native leadership, school and vocational training, etc. Some recent improvement in employment opportunities is noted. (DSI.)

72139. **HEUSSER, CALVIN JOHN, 1924-** . Some comparisons between climatic changes in northwestern North America and Patagonia. (New York Academy of Sciences. Annals, Oct. 1961. v. 95, art. 1, p. 642-57, graphs.) 66 refs. Paper resulting from a conference on solar variations, climatic change, and related geophysical problems, New York, Jan. 24-28, 1961.

Discusses some recent work undertaken in

Chile with reference to chronological data from other Southern Hemisphere areas and from Alaska. No conclusions are reached regarding relationships between the polar hemispheres for the late-glacial and postglacial periods; evidence from northwestern North America and from Patagonia, particularly in glacier variations, are in general agreement. A broad parallelism of pollen zones is also seen between the two regions, as well as overall agreement in eustatic sea-level fluctuations. Further data are needed before correlations can be successfully carried out. (DLC.)

72140. HEYNER, SUSAN. Growth of embryonic mammalian cartilage after freezing. (Nature, Mar. 25, 1961. v. 189, no. 4769, p. 1027-28, table.) 10 refs.

Bones from 17-18 day rat embryos were frozen to -79° C. in saline or plasma containing 15% glycerol, and rapidly thawed. The frozen bones showed no subsequent elongation *in vitro;* of the non-frozen controls only those which were exposed less than 30 min. to the glycerol mixtures elongated normally. Further experiments and cultures showed no significant injurious effect of freezing. (DLC.)

72141. HEYWOOD, WILLIAM WALTER. Geological notes, northern District of Keewatin; parts of 56, 57, 66 and 67. Ottawa, Queen's Printer, 1961. 9 p. map no. 28-1961 fold. in pocket. (Canada. Geological Survey. Paper 61-18.) 5 refs.

Outlines results of a five-man reconnaissance from two helicopters, which mapped 65,000 sq. mi., 66° - 70°N. 90° -102°W. during 61 of the 81 days spent in the area in 1960: Operation Back River. Nine Precambrian and one Ordovician/Silurian rock types were mapped. Diverse metamorphic rocks of sedimentary or volcanic origin, also numerous granite bodies, are widely distributed. Detailed search for mineral deposits was not possible; little prospecting has been done in this remote area; transportation is a major problem of exploration. Potassium-argon age determinations on mica samples give a strikingly short range of 1640 to 1880 m.y. Correlation with previous age determinations to the west, south, and east indicates the presence in these regions of extensive granitic and metamorphic rocks that were developed about the same time. Map on scale of 1 in.: 8 mi. shows rock types, structural features, mineral occurrences, etc. Age determination samples are also located. (DGS.)

72142. HIBBERD, F. H. An analysis of the positions of the earth's magnetic pole in the geological past. (Geophysical journal, Feb. 1962. v.6, no.2, p.221-44, tables, diagrs.) 18 refs.

Analyzes 129 determinations from all seven continents of the positions, inferred from paleomagnetic observations. The pole positions for each geological age fall into two well-defined groups concentrated along opposite longitudes. Secondary magnetization produces characteristic displacements of the latitudes of the inferred poles. The positions of most of the inferred poles which exhibit a single polarity are consistent with the hypothesis that secondary magnetization is present in some of the paleomagnetic specimens. It appears that the paleomagnetic observations could be accounted for by a slow northward and westward spiral movement of the actual pole together with secondary magnetization.—From author's abstract. (DLC.)

HICKS, C. NORMAN, *see* Alaskan Science Conference 1960. 1961. No. 69643

72143. HICKS, J. R., *and* **S. J. BOLSENGA.** The design and installation of fences for control of snow drifting. (Eastern Snow Conference. Proceedings of the 1961 and 1962 annual meeting, 1962. v.7, p.163-73, illus., graph.) 3 refs.

Presents results of field tests of portable, five-slat metal snow fences, conducted near Houghton, Mich. and in July 1961 at Camp Century, Greenland. Three trenches 50′ x 18′ x 8′ were cut in the snow at Camp Century; one was left unprotected; another was protected by a V-shaped vertical solid wall fence set immediately to windward, as well as by two rows of the five-slat metal fence installed further upwind; the third had a solid, V-shaped fence plus short sections of the five-slat metal fence on each side. Measurement of volume and distribution of snow was made by a grid of bamboo poles. During a minor two-day storm, the unprotected trench became 45% filled, while the most protected trench collected less than 0.5% of the total available volume of snow. By Sept. the unprotected trench was 100% filled, the most protected only 28% filled. Considerable snow, approx. 7500 gal./day, was collected by the slat fences and was available for domestic water supply. (DGS.)

HIGASHI, AKIRA, *see* Corte, A.E., & A. Higashi. Experimental research . . . soil. 1960. No. 70830

72144. HIGHMAN, BENJAMIN, *and* **P. D. ALTLAND.** Effects of exposure and acclimatization to cold on susceptibility of rats to bacterial endocarditis. (Society for Experimental Biology and Medicine. Proceedings, Aug. - Sept. 1962. v. 110, no. 4, p. 663-67, table.) 17 refs.

Reports on experiments with rats given one or four injections of *Streptococcus mitis* JH26. Incidence of endocarditis and mortality were highest in animals kept in the cold 1-36 days before, and 7 days after inoculation; they were lowest in animals kept at room temperature all the time or after inoculation. (DLC.)

72145. HIGHMAN, BENJAMIN, *and* **P. D. ALTLAND.** Serum enzyme and histopathologic changes in rats after cold exposures. (Society for Experimental Biology and Medicine. Proceedings, Mar. 1962. v.109, no.3, p.523-26, illus., tables.) 11 refs.

Reports exposure of two groups of dry rats and one wet group to specified cold-stress: it produced, after certain periods, increased levels of serum glutamic oxalacetic transaminase, serum aldolase and blood urea nitrogen. The rise in serum enzymes coincided with a drop in hematocrit, in liver and muscle glycogen, etc. (DLC.)

HIGUCHI, KEIJI, *see*

Kusunoki, K., & *others.* Oceanographic observations . . . 1962. No. 73239

Nakaya, U., & *others*. Glaciol. studies . . . T-3. 1962. No. 74212

72146. HILDES, J. A., *and others*. Estimation of heat flow from hands of Eskimos by calorimetry. (Journal of applied physiology, July 1961. v. 16, no. 4, p. 617-23, illus., tables.) 8 refs. *Other authors:* L. Irving *and* J.S. Hart.

Reports a study of heat flow from hands immersed in cold water, of nine Eskimos and four whites. Higher values were found jn Eskimos but when calculated per volume of hand no differences could be discerned between the two groups. It is suggested that differences reported in the literature are due to differences in hand size. (DLC.)

72147. HILDES, J. A. Report on rabies at Mould Bay, North West Territories, May 1961. (Canadian Medical Association. Journal, July 21, 1962. v. 87, no.3, p.133-35, table.) 3 refs.

Reports a case at this weather station on Prince Patrick Island: a man, bitten by a dog with signs of rabies and subsequent death. The dog was bitten earlier by a fox, apparently sick with sylvatic rabies. The difficulty of case in a remote spot (76° N. 119° W.) is noted. (DNLM.)

HILDES, J. A., *see also*

Hart, J.S., & *others*. Thermal & metab. responses . . . Eskimos cold. 1962. No. 72054

Lewis, M., & *others*. Blood groups . . . 1961. No. 73474

Wilt, J.C., & *others*. Sendai virus antibodies. 1961. No. 76584

72148. HILL, D. E., *and* **J. C. F. TEDROW**. Weathering and soil formation in the arctic environment. (American journal of science, Feb. 1961. v. 259, no.2, p.84-101, illus., tables, diagrs.) 28 refs.

Reports physical, chemical, and mineralogical studies of four arctic brown soil profiles from northern Alaska, 68° 29′ N. - 69° 23′ N. Chemical weathering of low magnitude is indicated, also oxidation of iron-bearing minerals and a weak podsolic process. Clay-size minerals consist mainly of hydrous mica, kaolinite; chlorite, quartz, goethite, and feldspar. A concentration of fines was present in the surface horizon of all the profiles; whether this material forms *in situ* or results from aeolian deposition is not known.—From authors' abstract. (DGS.)

72149. HILL, G. E. Effects of corpuscular emissions on the polar ionosphere following solar flares. (Journal of geophysical research, Aug. 1961. v.66, no.8, p.2329-35, table, graphs, charts.) 15 refs.

Discusses the morphology of two polar absorption events (July 24-25 and Sept. 18-22, 1957) representing different types of ionospheric disturbances. In both events the absorption was more intense in the sunlit than in the darkened portion of the polar cap. Strong auroral zone absorption occurred, a geomagnetic storm developed, and the F_2 layer critical frequency decreased markedly following the Sept. event, while none of these additional disturbances appeared following the July event. (DLC.)

72150. HILL, G. E. Polar cap and auroral zone absorption events during the first six months of the IGY. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.1, p.97-102, tables, maps.)

Presents the results of synoptic analysis of high latitude absorption events in the ionosphere, using Northern Hemisphere synoptic charts of f_{min} (the lowest frequency observed in ionograms) for the six-month period at intervals of three hours. From data of these charts, are established the PCA (polar cap absorption) and the AZA (auroral zone absorption), as well as the SID(synoptic ionosonde data) types of absorption event. Analysis of f_{min} data on a hemispheric scale shows occurrence of PCA events not found by other techniques. Also PCA events are seen to be by several Mc/s more tense in the sunlit portion than in the dark side. Most PCA events are followed by AZA and geomagnetic disturbances; they follow solar flares accompanied by solar radio noise of long duration, usually in the frequency range 100-10,000 Mc/s, and are caused mostly by the flares with a double maximum. AZA events are closely associated with geomagnetic disturbances. (DLC.)

HILL, G. E., *see also* Penndorf, R., & G.E. Hill. The absorption effect . . . 1962. No. 74709

72151. HILL, JUNE R. Reaction of the new-born animal to environmental temperature. (British medical bulletin, May 1961. v.17, no.2, p.164-67, illus.) 16 refs.

Deals with the heat balance in mammals as related to ambient temperature; the lower limit of adaptation to cold and factors determining it; effect of hypoxia; special handicaps in the newborn: immaturity, thermal conductance, metabolism. (DNLM.)

72152. HILL, MIKE. Snow an abundant resource. (Alaska sportsman, Sept. 1962. v.28, no.9, p.24-25, illus.)

Describes Alaskan snow surveys by the U.S. Soil Conservation Service since 1954; 17 survey courses including 13 in the Tanana valley were established in cooperation with the Bureau of Reclamation, and seven on the Chena River watershed, the latter to aid the Corps of Engineers Fairbanks Flood Control Projects. Snow measurements are taken monthly, Mar. - May, on the Tanana and twice-monthly on the Chena. (DI.)

HILL, PETER LESLIE, *see*

Gajda, R.T., & *others*. Fort Good Hope, terrain & site. 1962. No. 71548

Gajda, R.T., & P.L. Hill. Fort Norman, terrain & sites. 1962. No. 71549

Gajda, R.T., & P.L. Hill. Fort Providence . . . 1962. No. 71547

Gajda, R.T., & P.L. Hill. Spence Bay, terrain & site. 1962. No. 71552

Gajda, R.T., & *others*. Terrain and site . . . Fort McPherson. 1962. No. 71550

72153. HILLARY, *Sir* EDMUND, *and* **J. G. BATES**. Ferguson tractors; report on tractor operation; technical tractor report. Wellington, N.Z., Govt.

Printer, 1958. 14 l. diagrs. (Trans-Antarctic Expedition, 1955-1958, Ross Sea Committee, Report no. 1.)

Evaluates performance, with data on loads, fuel consumption, braking, etc. Dependability, ruggedness, and ease of maintenance are favorable features, but ineffectiveness in soft snow might be a disadvantage on long polar journeys. Bates' technical report evaluates the performance of the various parts and accessories. Brakes and loose chains gave most mechanical trouble; electrical gear failed or burned out too frequently during the 700 hrs. of use. (DLC.)

HILLIARD, DOUGLAS K., *see*
Alaskan Science Conference 1961. 1962. No. 69644

Asmund, B., & D.K. Hilliard. Studies on Chrysophyceae . . . 1961. No. 69897

72154. HILLS, G. A. The ecological basis for land-use planning. Toronto, Dec. 1961. vi, 204 p. tables, maps incl. 7 col. (Ontario. Dept. of Lands and Forests. Technical ser., Research report no. 46.) 51 refs.

Discusses the principles of land-use planning and applies them to a reference area in southeastern Ontario. Site regions, the land areas within which the response of vegetation to landform features show a consistent pattern, are delineated on a small scale map of the Province. Three such site regions called Hudson Bay, James Bay, and Big Trout Lake, are in Northern Ontario; their climatic: forest characteristics are tabulated. (DLC.)

72155. HILLS, G. A. The soils of the Canadian Shield. (Agricultural institute review, Mar. - Apr. 1960. v. 15, no. 2, p. 41-43, illus., map, table.)

Outlines the complex development, distribution and productive capacity of the soils of this largest major physiographic region of Canada. Coarse and medium sands derived from widely distributed granites and gneisses predominate in most areas. Most common soil-forming processes on the better drained materials of the shield produce horizons characteristic of the podsol and grey-wooded soils; most common processes on the poorly drained materials produce mineral horizons known as "gleys" which are periodically or permanently waterlogged, and peat horizons of accumulated raw organic matter. The pattern of soil profiles, also characteristic materials, are tabulated. Northern parts of the Shield include potential pulpwood-producing areas; those parts near the permafrost region have only semi-tundra woodlands. (DA.)

HILLS, G. A. *see also* Baldwin, W.K.W., & *others*. Report on botanical excursion . . . 1962. No. 69980

HIMMELSTRUP, OLAV, *see* Denmark. Byggeriet . . . 1959. No. 70968

72156. HINDS, MEL. Manitoba. (Canadian mining journal, Feb. 1961. v.82, no.2, p.107-108, illus.)

Reviews 1960 mining activities, noting preliminary production of nickel at the International Nickel Co. Thompson development. Progress there is described, including reports of larger nickel deposits immediately west. Activities at the Sherritt Gorden nickel-copper mine at Lynn Lake are noted, also mineral explorations, by several companies, in northern Manitoba. (DGS.)

72157. HINDS, MEL. Northwest Territories. (Canadian mining journal, Feb. 1961. v.82, no.2, p.103, illus.)

Reviews mining activities during 1960. Mineral production, $23,633,000, declined from 1959, but exploration was intensified. Gold production increased, nickel decreased. Uranium production ended in Sept. with closing of the Port Radium mine due to shortage of ore; but major uranium explorations are under way east, north and south of Great Bear Lake. Development of a tungsten deposit (approx. 2.5 million tons of 2.5% WO_3) near Flat Lake is noted. (DGS.)

72158. HINES, C. O. Ionospheric disturbances at auroral latitudes. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings, *pub.* 1962. v.1, p.308-313.)

Presents a theoretical and simplified study of interrelation between the magnetic storm-time electric fields and the high-latitude currents, and emphasizes a connection between this field and the phenomenon of particle precipitation into the ionosphere. Through theoretical inferences, the observations are correlated to theoretical facts and implications, leading to explanation of hitherto unexplained phenomena in ionospheric disturbances, and to prediction of new ones. (DLC.)

HINES, C. O., *see also*
Axford, W.I., & *others*. Model auroral & geomag. disturb. 1962. No. 69931

Axford, W.I., & C.O. Hines. Unifying theory . . . geophys. phenomena. 1961. No. 69933

HINKSON, CHARLES E., *see* Alaskan Science Conference 1961. 1962. No. 69644

HIRANO, TOSHIYUKI, *see* Pacific Science Congress. 1961. No. 74619

72159. HIRSJÄRVI, A. Kemijärven korusuksen ajoitus. (Suomen Muinaismuistoyhdistys. Suomen museo, 1961. v.68, p.76-78, illus.) 4 refs. Text in Finnish. Summary in German. **Title tr.:** Dating of the Kemijärvi ski.

Describes an ornamented ski discovered in Finnish Lapland in 1934 and now in the National Museum. Comparisons are made with a similar ski found in Lycksele which bears a carved date of 1541, and analogous dating is suggested for the Kemijärvi ski, also for others beside the Lycksele from north Sweden. The dating of these skis to the 10th century, based on pollen analysis of a ski from Byske, is considered erroneous. (DLC.)

72160. HISDAL, VIDAR. The weather in Svalbard in 1960. (Norway. Norsk Polarinstitutt. Årbok 1960, *pub.* 1962, p.107, table.)

Presents a month-by-month review, noting the unusually long period of fine weather in July-August during a stable anticyclone. Preliminary monthly temperature means are tabulated for Isfjord Radio station (78°N. 13°30'E.) also deviations from the 1949-1958 mean. (DLC.)

72161. HISEY, DIX. Town on floats. (Alaska sportsman, Oct. 1962. v.28, no.10, p.25-29, illus.)

Describes the community of Gildersleeve in Southeast Alaska: it is built on 17 log rafts, towed by tug and anchored at logging locations; it has several dwellings, a school, gymnasium, storage buildings, and some forty residents; their daily life is described. (DI.)

72162. HITCHCOCK, KAY. Natives' land rights in the state of Alaska. (*In:* Alaskan Science Conference 1960. Proceedings, *pub.* 1961, p.195-207.)

Discusses problems of land occupancy and ownership by Indians, Eskimos, and Aleuts, complicated by selection of 103 million acres of land for state use. The natives have not been compensated for loss of aboriginal lands, a federal government matter. They hold land by occupancy without title, by restricted and non-taxable ownership under supervision of the Bureau of Indian Affairs, and by tribal ownership of reservations. They may obtain unrestricted ownership if judged competent by the Bureau of Indian Affairs; but taxation, aboriginal land rights, and other factors hold them back. Status of state-owned land occupied by natives without title should remain as is, pro tem; state government should further settlement of aboriginal land claims by federal government; data should be assembled to aid solution of problems now within state jurisdiction. (CaMAI.)

72163. HJELMSTRÖM, LARS, *and* **C. E. JANLÖV.** Redogörelse för skogsvägskommitténs verksamhet under år 1960. (Skogs- och lantbruksakademien. Tidskrift, 1961. årg. 100, nr. 5-6, p.407-420.) Text in Swedish. Summary in English. **Title tr.:** Report for 1960 of the Forest-Road Research Committee.

The committee was appointed by the Academy of Forestry and Agriculture in 1959 as coordinating agency for various organizations interested in roads and other aspects of land transportation in lumbering. Its primary concern is with forest roads, including compilation of data, building calculations and technique, building on marsh land, maintenance, landings. The committee functions are stated in terms of need and promotion of research, direction of effort, application of findings. (DA.)

72164. HJORTH, ANNA KAROLINA, 1881-1959. Fattigbarn. (Norrbotten 1962, p.71-108, port.) Text in Swedish. **Title tr.:** Poor man's child.

Contains reminiscences by a well-known resident of Kiruna, north Sweden. Born in 1881, and graduated from the teachers' training college in Haparanda in 1901, she went the next year to Kiruna where mining had just begun. Her reminiscences throw light on conditions among the poor of the Torne valley area at the end of the 19th century. (DLC.)

72165. HJULSTRÖM, FILIP. The economic geography of electricity, an outline. Uppsala, Appelberg, 1942. 233 p. maps, tables. (Geographica, nr. 12.) 300 refs. A summary in Swedish, *Några drag ur elektricitetens geografi,* pub. in Svensk geografisk årsbok, 1943, årg. 19, p.96-138; reprinted as: Uppsala. Universitet. Geografiska institutionen. Meddelanden, ser. A, no. 40.

Examines world wide distribution and consumption of energy resources, mostly coal and water power, and energy problems of various countries. Correlations are found between glaciated regime and water power, and between latitude and energy consumption. Scandinavia and Canada (the heaviest per capita consumers of electric energy) have abundant water power, but supply is lowest in winter when the demand is greatest. High water-power potentials in northern USSR, Labrador, and Alaska are noted. (DLC.)

HLADY, WALTER M., *see also* Canada. Settlement handbook. 1962. No. 70545

72166. HOARE, JOSEPH McCORMICK, 1918– , *and* **W. L. COONRAD.** Geologic map of the Goodnews quadrangle, Alaska. Washington, D.C., 1961. Map sheet with text 38 x 47 in. (U.S. Geological Survey. Miscellaneous geologic investigations. Map I-339.) 7 refs.

Map at scale 1:250,000 of the area, 59°-60°N. 159°-162°W., immediately north of that *infra;* based on field work of 1950-1953, including boat and foot traverses, and facilitated by aerial photography. Bedded rocks ranging in age from Precambrian to Late Cenozoic, and associated intrusive rocks of Tertiary age crop out in this area. Unconsolidated surficial deposits, largely glacial, cover extensive coastal and valley areas. Siltstone, chert, and mafic volcanic rocks of the Gemuk group (Carboniferous to Cretaceous) are widely distributed; interbedded graywacke and siltstone of the Kuskokwim group (Cretaceous) crop out in the north and southeast portions. Major structural features trend northeastward; the Togiak - Tikchik fault may have been active in Quaternary time, although most of the faults are related to Late Cretaceous or early Tertiary folding. Placer gold has been mined in this quadrangle over the past 50 years, but not now. Other minerals reported or found include platinum, cinnabar, sphalerite, and coal. Suggestions to prospectors are given. Fossil localities are shown; their numbers and age are tabulated. (DGS.)

72167. HOARE, JOSEPH McCORMICK, 1918– , *and* **W. L. COONRAD.** Geologic map of the Hagemeister Island quadrangle, Alaska. Washington, D.C., 1961. Map sheet with text 35 x 42 in. (U.S. Geological Survey. Miscellaneous geologic investigations. Map I-321.) Refs.

Map at scale 1:250,000, shows in color, and text describes briefly, results of reconnaissance studies of 1946-1953 in this southwest Alaska area. Five stratigraphic units are identified; volcanic and sedimentary rocks of the Gemuk group, Paleozoic - Mesozoic, are most widely distributed. Bedrock is generally concealed by unconsolidated surficial deposits of Quaternary age and by the waters of Kuskokwim and Bristol Bays. The angular shape and straight sides of Hagemeister Island suggest the presence of faults on the west, east, and north. The mine on Salmon River approx. 58°55′N. 161°40′W., operated by the Goodnews Bay Mining Co., is the only producer of the platinum group metals in Alaska. Gold is recovered with the platinum, and coal is reported in several places. Suggestions for prospecting are given. (DGS.)

72168. HOARE, JOSEPH McCORMICK, 1918– . Geology and tectonic setting of lower Kuskokwim-Bristol Bay region, Alaska. (American Association

of Petroleum Geologists. Bulletin, May 1961. v.45, no.5, p.594-611, maps, table.) 16 refs.

Describes the stratigraphy and structure of this 25,000 sq. mi. area in southwest Alaska. The region has been repeatedly subjected to strong compressive forces; strata of Late Cretaceous age or older are severely deformed. Rocks ranging from Precambrian to Quaternary were mainly deposited under geosynclinal conditions. Eight rock types and general geologic features, also structural features, are mapped. Generalized stratigraphic sequence is given. Rocks of the mountain part of the region have little petroleum potential, but the possibilities of the sedimentary rocks beneath the Bethel lowlands are undetermined. (DGS.)

72169. HOBBIE, JOHN E. Aquatic ecology in the Arctic National Wildlife Range. (*In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.31-36.)

Discusses potentialities for limnological studies in this area of northeastern Alaska, comprising aquatic habitats of the subarctic, arctic mountains, foothills, and coastal plain. Two of its lakes, Peters and Schrader, have already been studied intensively. Surveys of aquatic flora and fauna, dissolved salts, lake and pond depth, and stream flow data over the entire area are suggested, and of primary productivity, population, bottom corings, physics, and chemistry in typical habitats. A concentration of over 20 people could endanger the adjacent ecology. (CaMAI.)

72170. HOBBIE, JOHN E., *and* **T. J. CADE.** Observations on the breeding of golden eagles at Lake Peters in Northern Alaska. (Condor, May-June 1962. v.64, no.3, p.235-37.)

Discusses earlier records on breeding in the Arctic; location of Lake Peters (69°N. 145° W.); records of reproduction, eggs and nests since 1958; food. (DLC.)

HOBBS, H. A. Jr., *see* Kingery, W.D. . . . Project Ice Way. 1962. No. 72796

HOBSON, BURTON J., *see*

Koblents, IA. P. Destruction Semenovskiy I. 1961. No. 72878

Vorontsov, P.A., & V.I. Selitskaia. Vertical structure fog Dikson I. 1961. No. 76434

Voskresenskiĭ, A.I., & K.I. Chukanin. Meteorol. conditions icing clouds. 1961. No. 76436

72171. HOBSON, GEORGE D. Seismic exploration in the Canadian Arctic Islands. (Geophysics, Apr. 1962. v.27, no.2, p.253-73, illus., tables, diagrs., maps.) 32 refs.

Discusses seismic studies on Borden, Ellef Ringnes, and Meighen Islands, undertaken in 1960 as part of the Polar Continental Shelf Project. Refraction and reflection techniques were used. An introductory outline is given of the topography and weather of the area, and modes of transportation used are discussed. The seismic crew operated from motor toboggans during the May-Aug. survey but helicopters would probably have been more efficient. The use of aircraft and boats is also discussed. Drilling operations and explosives are dealt with; clothing, shelter, rations, also navigation system (Decca) and various auxiliary equipment are described. Blizzards, low temperatures, white-outs, wind, and rain hampered the operations. Ice noise was appreciable but presented no great problem to standard recording techniques. Several air shots were recorded for direct comparison with surface shots: the gain in energy level was found not sufficient to warrant use of the method. The seismic velocities of pack-ice were relatively low, those of water and sediment fairly uniform, and those of permafrost changed with the surface geological conditions. A section across Sverdrup Basin from southern Banks Island to Canyon Fiord on Ellesmere illustrates the results of the 1960 program. (DLC.)

HOCH, F. L., *see* Chaffee, R.R.J., & *others.* Mitochondrial oxidative enzymes . . . 1961. No. 70638

72172. HOCHSTEIN, MANFRED. Magnetische Messungen auf dem Grönländischen Inlandeis. (*In:* International Geographical Congress, 1960. Physical geography . . . 1961, p.133-34, graphs.) Text in German. Summary in English. **Title tr.:** Magnetic measurements on the Greenland Inland Ice.

Describes measurements of vertical intensity of the magnetic field carried out on the International Glaciological Expedition to Greenland 1959, particularly a 575 km. west-east profile from Camp VI at 69°44′N. 48°4′W., to Station Jarl-Joset at 71°21′N. 33°28′W., and a 185 km. south-north profile from Carrefour at 69°49′N. 47°25′W. to Point Nord, 71°25′N. 48°26′W. Two regional anomalies were noted on the west-east profile; one on the south-north profile. (DGS.)

72173. HOCK, RAYMOND JAMES, 1918– . The flying squirrel. (Alaska sportsman, Sept. 1962. v.28, no.9, p.16-18, illus.) Alaska wildlife library no.29.

Describes physical characteristics, distribution, food, breeding, and predators of *Glaucomys sabrinus.* It has a parachute-like fold of skin between fore and hind leg on each side which stretches tight and enables long leaps resembling flying from tree to tree. This rodent is found to the northern tree limit in Alaska. (DI.)

72174. HOCK, RAYMOND JAMES, 1918– . The hoary marmot. (Alaska sportsman, Oct. 1961. v.27, no.10, p.20-22, illus.) Alaskan wildlife library, no.18.

Notes the appearance, habitat, and predators of *Marmota marmota,* and describes its hibernation including the arousal process as observed. The marmot is distributed in Alaska from the Brooks Range south through mountainous areas to the Portland canal. Its relative the woodchuck, *M. monax,* occurs in small numbers along the Alaska and Richardson Highways. (DLC.)

HOCK, RAYMOND JAMES, 1918– , *see also*

Hannon, J.P., & *others.* Endogenous tissue respiration . . . 1961. No. 71989

Hannon, J.P., & *others.* Tissue respiration . . . 1961. No. 71990

HODDER, V. M., *see* Int. Comm. NW. Atlantic Fisheries. Report . . . fishery assessment, regulation problems. 1962. No. 72378

72175. HODGSON, JOHN HUMPHREY, 1913– . *and others.* Direction of faulting in some of the larger earthquakes of 1956–1957. Ottawa, Queen's

Printer, 1962. p.229-269, diagrs., tables. (Canada. Dominion Observatory Publications v.26, no.4.) 2 refs. *Other authors:* A.E. Stevens, *and* M.E. Metzger.

Fault-plane solutions are presented in text and tables for 28 earthquakes which occurred between July 1956 and Dec. 1957. Solutions are proposed for six aftershocks of the large Aleutian earthquake of 14:22:27, Mar. 9, 1957; results are summarized in table. (DLC.)

72176. HØEG, OVE ARBO, 1898– . Problemene omkring klimaet på Svalbard gjennom tidene, plantefossilenes vitnesbyrd. (Norske Videnskaps-akademi, *Oslo.* Årbok 1960 *pub.* 1961, p.20-21.) Text in Norwegian. **Title tr.:** Problems of the climate of Svalbard through the ages, the evidence of plant fossils.

Reviews briefly Svalbard plant fossil data from Devonian time to the present and discusses the discrepancy between their evidence of mild climate and theories of migration of the poles and continental drift. On the New Siberian Islands, in Alaska, arctic Canada, Greenland, and Iceland also, the flora of Tertiary time indicates a similar climate surrounding present location of the pole. Continental drift is said to be not in agreement with the known spread and distribution of plants. It is concluded that the plants which formerly grew in the Arctic can be accounted for most readily by a generally higher temperature in the polar region. (DLC.)

72177. HÖHN, EMIL OTTO, 1919– . The names of economically important or conspicuous mammals and birds in the Indian languages of the District of Mackenzie, N.W.T. and in Sarcee. (Arctic, Dec. 1962, v.15, no.4, p.299-308, tables.) 10 refs.

Lists 33 mammals' and 62 birds' names in English, Latin, Loucheux, Hare, Slavey, Dogrib, Chipewyan, and Sarcee; also the numerals one to ten, 100, and 1000. The names were recorded mostly in 1949, from Ft. McPherson, Aklavik, Ft. Good Hope, Ft. Norman, Ft. Rae, and Ft. Resolution. Sarcee, spoken in southern Alberta, was included to determine its kinship with the northern languages. Pronunciation is indicated. *See also* No. 72200. (DI.)

72178. HÖHNK, WILLY. A further contribution to the oceanic mycology. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v.149. Contributions to Special IGY Meeting 1959, p.202-208, illus., tables, map.) 5 refs. In sequence to No. 65172.

Describes changes in composition of fungal communities ("fungus spectra") with salinity: methods of collecting soil samples, and cultivation; results of these investigations, which include samples from 25 stations of the Greenland shelf; species composition of water and soil samples; effect of depth and nutrients; chemical composition of soil samples. (DI.)

72179. HØILAND, EINAR, 1907– . Problemene omkring klimaet på Svalbard gjennom tidene, klimaendringer som fysikalsk problem. (Norske Videnskaps-akademi, *Oslo.* Arbok 1960 *pub.* 1961, p.21-22.) Text in Norwegian. **Title tr.:** Problems of the climate of Svalbard through the ages, climatic changes as a physical problem.

More accurate measurements of paleoclimatic changes and knowledge of the physical mechanism producing the climate pattern are required. Urey's paleothermometer is explained as based on the principle that the oxygen-isotope in carbonate deposits is dependent on temperature of water in which the deposition occurred. Such measurements show that the hitherto established reckoning of Glacial time must be altered. Recent investigations support Milanković's theory that the Glacial period was caused by a change in the position of the earth's axis with reference to the ecliptic. Polar wandering and atmospheric humidity also may have been influential. (DLC.)

72180. HOEL, ADOLF, 1879– , *and* **W. WERENSKIOLD, 1883–1961.** Glaciers and snowfields in Norway. Oslo, Oslo University Press, 1962. 291 p. illus., diagrs., maps (3 folded), graphs, tables, 8 fold. maps in separate folder. (Norway. Norsk Polarinstitutt. Skrifter, nr. 114.) About 200 refs.

Deals mainly with three glacier regions: Jotunheimen (61°20′ - 61°50′N. 7°40′ - 9°E.) in central Norway, investigated by authors during 1927–1948, and two areas in North Norway, Okstindan glacier at 66°N. 14°16′E. in the Okstindan mountains and glaciers between Tysfjorden and Ofotfjorden (67°46′-68°18′N.) where Hoel started research in 1906–1908. Glacier investigations in these regions are reviewed, the place names noted; the areas (total 1954 km²) of the 792 glaciers in northern Norway, as compiled by Olav Liestøl, are given. Area of land surface and glaciers in Svalbard are 61383 km² and 35124 km² and Jan Mayen: 375 km² and 125 km² respectively. Valid reports on glacial variations are available only since the early 1700's, though earlier fluctuations can be deduced from archeological finds. The general glacial advance during the late 17–early 18th centuries was accompanied by widespread crop failure and famine; but recession has been common since 1750. Some glaciers in northern Norway, e.g. Svartisen, have had fluctuations corresponding to those in southern Norway; others, e.g. those around Øksfjordjøkulen, have reacted differently. Svalbard glaciers have also receded unevenly; some have even advanced at times. Norway's extensive hydroelectric power system benefits from the smoothing influence of glaciers upon stream flow. Detailed descriptions are given of glaciers of the Okstindan mountains, approx. 66°N. 14°E.; those between Ofotfjorden and Tysfjorden, 67°46′-68°18′N., notably Frostisen and Mereftasbreen. For new glacier names, it is proposed to append the term *bre* to the name of the locality. Lists of administrative districts, research institutions, glaciological terms in Norwegian and English, and Lappish glacier (6) and place names (54) are appended. (DLC.)

72181. HOEL, ADOLF, 1879– , *and* **J. NORVIK.** Glaciological bibliography of Norway. Oslo, 1962. 242 p. (Norway. Norsk Polarinstitutt. Skrifter, nr. 126.)

Lists works of scientific importance concerning glaciers in Norway proper and arctic regions under Norwegian sovereignty. The listings are in two sequences, chronological and regional. An index of authors and anonymous papers is added. The Scandinavian titles are given also

in English. Avalanches are not covered but there is an appendix listing chronologically 77 works on ice-dammed lakes. (DGS.)

72182. HOEM, VEBJØRN. Utilization of aircraft meteorological reports. Oslo, 1962. 19 p. tables, fold. maps & graphs. (Norway. Meteorologiske Institutt. Scientific report no.9) 2 refs. Offset.

Defines the term *Airep* (internationally exchanged aircraft observation), and outlines the geographical and vertical distribution of *Aireps* over the North Atlantic area. Those received daily at the Norwegian Meteorological Institute include such from Anchorage, Bodø, Andenes, Isfjord and Nord, about 80% of the 96 studied arrive within two hrs; transmission delays are small. Diurnal distribution showed maxima in early morning and, because of jet traffic, in afternoon-evening. A plotting model for *Aireps* and other aircraft weather observations is given, use of charts and cross-sections based thereon is considered. *Aireps* may supplement radiosonde data in analysis of pressure contour charts; special consideration is given to *Aireps* showing large deviation from standard pressure surfaces. Examples are given of synoptic charts including Greenland Sea and adjacent arctic areas. (DWB.)

72183. HÖRSTADIUS, SVEN, 1898– . Torneträsk-projekted. (Sweden. Statens naturvetenskapliga forskningsråd. Årsbok 1961. årg. 14, p.190-200, illus., maps.) Text in Swedish. Summary in English. **Title tr.:** The Torneträsk Project.

Discusses proposal for large-scale inter-Scandinavian development of hydroelectric power in northern Sweden and Finland. The proposal has three alternatives, one of which would involve diversion of seven rivers towards this lake, and the construction of a huge reservoir there. From Torneträsk, flow would be directed through a 30-mi.-long tunnel to a 5-7 billion kw-h power station on Rombaksfjorden in Norway. This plan is opposed in view of its effect on future scientific research in the area, and damage to nature, fishing (in particular salmon), tourist industry, etc. Similar opinions of other Swedish and foreign scientists are cited. Atomic power should be considered in lieu of this plan. (DLC.)

72184. HØYRUP, FRITS. Et kulturcenter ved polarcirklen. (Grønland, May 1961, nr. 5, p.193-98, illus.) Text in Danish. **Title tr.:** A cultural center at the Arctic Circle.

Contains account of a visit to Samernas Folkhögskola, the folk high school for Lapps at Jokkmokk, north Sweden. It was started in 1942 and the Swedish missionary society is in charge of it. The facilities and teaching program are outlined, noting the interest in latest developments in reindeer husbandry and the high standard maintained in the teaching of Lapp handicrafts. (CaMAI.)

72185. HOFF, ERIK. Seks danskere oppe på den højeste top i Hamborgerland. (Atuagagdliutit: Grønlandsposten, Sept. 1, 1960. Ukiut 100-at, nr. 17, p.9, +.) Text in Danish and Eskimo. **Title tr.:** Six Danes climb the highest peak in Hamborgerland.

Recounts a first ascent of a 1,031 m. summit at approx. 65°37'N. 53°W. in West Greenland, by author and five companions in summer 1960. (DLC.)

72186. HOFF, ERIK. Turisme i Grønland. (Grønland, Feb. 1961, nr. 2, p.49-55, illus.) Text in Danish. **Title tr.:** Tourism in Greenland.

Discusses Greenland conditions from the viewpoint of developing a tourist industry: the lack of accommodations and of local transport, the extraordinary possibilities for mountaineering, walking, fishing, hunting, boating, etc. Camping is recommended. (CaMAI.)

72187. HOFF, HEBBEL EDWARD, 1907– , *and others.* Potassium distribution and toxicity in hypothermia. (Journal of applied physiology, Mar. 1961. v.16, no.2, p.250-52, table.) 7 refs. *Other authors:* S. Deavers *and* R.A. Huggins.

Comparative study of K-tolerance in normothermic, and in dogs cooled to 27.9°C. mean rectal temperature. "Hypothermia lowered the lethal concentration of potassium in the serum to 8.9 m Eq/1." (DLC.)

72188. HOFF, OVE. Danmarks mineraler. (Ingeniørens ugeblad, Sept. 16, 1961. årg. 5, nr. 37, p.20-21, illus.) Text in Danish. **Title tr.:** Denmark's minerals.

Includes discussion of resources in Greenland: cryolite, lead, uranium, coal. (DLC.)

72189. HOFFMANN, BRUNO. Blood pressure and subarctic climate in the Soviet Union. Berlin, Max Brandt, 1959. 86 p. tables. (Berlin. Freie Universität. Osteuropa-Institut. Reports, no.38, medical series no.16.) 191 refs. Translated from German by Dr. E.A. White of Fordham University.

Presents a review based largely on Soviet literature, and a study of German World War II prisoners, both dealing with the effects of climatic factors on hypertension. The review covers blood pressure as affected by meteorological conditions in general; behavior of blood pressure in southern, and in subarctic–arctic areas. The study of over 1200 prisoners, "delayed repatriates," deals with their characteristics; climatology and geography of the arctic areas where the prisoners were kept; primary blood pressure of the climate; permanent effects of the arctic climate on the prisoners; significance of other etiological factors in the permanent effects. (DNLM.)

HOFFMANN, EDWARD J., *see* Alaskan Science Conference 1961. 1962. No. 69644

72190. HOFFMANN, HANS. Culture change and personality modification among the James Bay Cree. (Alaska. University. Anthropological papers, May 1961. v.9, no.2, p.81-91, tables.) 10 refs.

Discusses the relationship between environmental cultural processes and the behavior pattern of individuals. Data were collected in 1954 among the Cree Indians and the Eskimos of Great Whale River and the Cree of Attawapiskat. With forty of the latter, in both sexes and different age groups, Thematic Appreciation Tests (TAT) were conducted. Subjects with wider cultural experience (longer mission schooling, closer contacts with whites) exhibited more idiosyncratic traits than those confined to the enclave of their nuclear family. (DLC.)

72191. HOFMANN, JOACHIM. Zum präkambrischen Kristallin Kareliens und der Halbinsel Kola. (Geologie, *Berlin,* May 1962. Jahrg. 11, Heft 4, p.397-415, illus., tables, maps.) 25 refs.

Text in German. Summary in English and Russian. **Title tr.**: On the Precambrian crystalline of Karelia and the Kola Peninsula.

Outlines the division of Precambrian based on own study and on evaluation of recent literature. The Precambrian crystalline and adjacent areas to the west are formed by para- and orthorocks belonging to the Archean Marealbide orogene (1,900 – 2,140 million yrs.), or to the Lower and Middle Proterozoic Karelide orogene (1,640 – 1,800 million yrs.). In the area of the Marealbide orogene, relicts of old structural steps are found. Towards the end of the Middle Proterozoic, the orogenetic evolution of the Baltic shield was completed. (DLC.)

72192. HOFMANN, WALTHER, 1920– . Tellurometer measurements on the Greenland Ice Cap during the International Glaciological Greenland Expedition, EGIG, summer 1959. (*In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.469-73, graph, table.) 4 refs. Summary in French. *Also pub.* in International Geographical Congress 1960. Physical geography of Greenland, *pub.* 1961.

Summarizes results of distance measurements by tellurometer. Physical and climatic conditions were especially favorable; low surface relief and high humidity were favorable factors, while sharp, limited inversions at times resulted in great unreliability. Accuracy of measured distances in the north-south and east-west profiles was ±4 cm. Glaciological results can be derived from these measurements only after repetition, planned in 4 to 10 years. (DWB.)

72193. HOFSTEN, ERLAND von, *and others* . Fem nya inlägg om statsbidragen. (Skogs-Norrland, Sept. 1961, nr. 4, p.10-13, 24-26.) Text in Swedish. *Other authors:* E. Magni, K.E. Björkhem, S.M-n *and* S. Svensson. **Title tr.**: Five new contributions to the subsidy debate.

Discusses purpose in granting of subsidies and role of the state in private forestry. Only long-term and costly projects should be subsidized such as road building, forest restoration in upper Norrland Lappmark, and conversion of unproductive farm land in that area to forest. (DA.)

72194. HOFSTEN, ERLAND von. Hur man samarbetar i Finland. (Skogs-Norrland, Dec. 1961. nr. 6, p.13-15, 24-25, illus.) Text in Swedish. **Title tr.**: Cooperation in Finland.

Two-thirds of the forest area of Finland is in farm wood lots. Their development and productivity, the single most important factor in the national economy, is controlled through a decentralized system of forest associations, under the Forest Association Law passed in 1950. Economic base (fees paid by all forest owners) and functions of the associations are outlined: forest development, educational work and assistance (at a low fee) in logging operations and marketing, etc. Policy is determined by regional federations. Training is conducted by independent forest services. The system of forest associations has solved most problems except that of effective marketing. A sales cooperative has recently been set up. (DA.)

72195. HOGBEN, JACK. The Alaskan bison. (Alaska sportsman, May 1961. v.27, no.5, p.30-32, illus., map.) Alaska wildlife library no.13.

Describes appearance and habits of these Plains bison, introduced into the Big Delta area in 1928. The approx. 250 herd ranges over a 2,300 sq. mi. territory. Transplants to the Copper River and to Yukon Territory in 1950–1951 have proved successful. The Alaskan bison and those in Wood Buffalo Park, Canada are the only remaining wild, unfenced herds. (DI.)

72196. HOGNESTAD, PER T. Akkar. (Ottar, Mar. 1960. nr. 23, p.23-25, illus.) Text in Norwegian. **Title tr.**: Squid.

Notes occurrence of squid 50–100 cm. long off North Norway, found periodically in large shoals following the herring. When caught they are used as bait, mainly for cod. The gear used is modelled on an old type. (SPRI.)

72197. HOGNESTAD, PER T. Rapport over småsildundersøkelser i Nord-Norge med F/F "Asterias" høsten 1960. (Fiskets gang, Apr. 20, 1961. årg. 47, nr. 16, p.329-33, table, graphs, sketch maps.) 3 refs. Text in Norwegian. **Title tr.**: Report of young herring investigations in North Norway waters by the R/V *Asterias* during the fall of 1960.

Reports occurrence and distribution of young herring from October through December in fjords from Harstad to Porsangerfjord, 68°50′N. 16° 30′E. to 70°-71°N. 26°-27°E., with emphasis on the latter and on Ullsfjord 69°30′-70°N. Herring distribution and density are mapped for October and November. Length and size determinations, temperature measurements and plankton studies were also made. (DA.)

72198. HOGNESTAD, PER T. Småsildundersøkelser i Nord-Norge med F/F "Asterias" høsten 1959. (Fiskets gang, Jan. 28, 1960. årg. 46, nr. 4, p.53-59, graphs, sketch map.) 2 refs. Text in Norwegian. **Title tr.**: The R/V *Asterias* investigation of young herring in North Norway in the fall of 1959.

Reports on studies of fjords from Harstad to Porsanger during September through December, with emphasis on Ullsfjord. Fjord herring are present in small numbers in the Harstad-Troms area and there is a large influx of ocean herring during October in the Troms-Porsanger area. In Ullsfjord, the herring retreat from the inner to the deeper and warmer waters in the outer fjord in November, following the plankton or possibly because of sensitivity to the climatic change. The ocean herring are larger and have a greater fat content than those which stay in the fjords. Temperatures in Ullsfjord to 200 m. depth in October, November and December are graphed in relation to occurrence of herring. (DA.)

HOGNESTAD, PER, *see also*

Dragesund, O., & P. Hognestad. Småsildundersøkelser . . . 1961. No. 71102

Dragesund, O., & P. Hognestad. Småsild . . . 1962. No. 71101

72199. HOHLE, PER, 1918– . Skiløperen Fridtjof Nansen. (Snø og ski, årbok 1961. årg. 67, p.8-16, illus.) Text in Norwegian. **Title tr.**: Fridtjof Nansen as a skier.

Sketches Nansen's participation in skiing competitions and some long trips in his youth in

Norway, stressing his influence as a pioneer and enthusiast of this sport. (SPRI.)

72200. HOHN, EMIL OTTO, 1919– . Lemmings, hares, and hormones. (Beaver, winter 1961. outfit 292, p.50-54, illus., graphs.)

Describes cyclical fluctuations in numbers of these northern animals, and attributes them to effects of stress on the adrenal and sex glands. The stress may be explained as from overcrowding due to environmental and ecological factors (noted) in the Arctic and sub-arctic. Secondary cycles in the predators of hares and lemmings may be caused by stimulation of the sex glands through the mid-brain from frequent perception of prey. *See also* No. 72177. (DI.)

72201. HOLAKER, T. Støvrensning av gass fra elektroråjernovner ved A/S Norsk Jernverk i Mo. (Tidsskrift for kjemi, bergvesen og metallurgi, June 30, 1961. bd. 21, nr. 6, p.137-38, 2 tables.) Text in Norwegian. Summary in English. **Title tr.**: Removal of dust from gas in the electric pig-iron furnace of the Norsk Jernverk A/S plant at Mo.

Surveys briefly the gas-cleaning equipment in this iron works at Mo-i-Rana, northern Norway. Analyses of the furnace gas and gas dust are given, together with data on the effects of gas-cleaning. Possible icing of the gas main is mentioned, and solution to the problem offered. (DLC.)

HOLDEN, RICHARD M., *see* Nikandrov, V.IA. Water content fog. 1961. No. 74331

72202. HOLDGATE, M. W. The purpose of photography on scientific expeditions. (Photographic journal, Dec. 1961, p.345-53.) 27 refs.

Discusses organizational and administrative problems of photography on expeditions, including polar expeditions. Photography for scientific purposes, illustration, and general information is considered, together with the implications of each type for general planning. As a rule on expeditions the photography should be done by the scientist, but when commercial marketing is contemplated a professional photographer is required. In any case, prior agreement on ownership, copyright, and use of the film should be established. The merits of color vs. black-and-white photography are evaluated; the latter type is often more versatile. (SPRI.)

72203. HOLGERSEN, HOLGER, 1914– . Høgfinnet havbrasme, en sjelden nordhavfisk. (Stavanger,Norway. Museet. Arbok, 1960, *pub.* 1961, p.124-32, text map, 3 illus.) 20 refs. Text in Norwegian. Summary in English. **Title tr.**: The high-finned sea bream, an infrequent North Atlantic fish.

Discusses recent finds of *Taractes raschii* Esm., which was first found in 1860 in Vargefjord, northern Norway, 70°20′N. 23°30′E. and described by Esmark as *Brama raschii*. In the literature, it has been confused with *Taractes longipinnis*, and thought to be an immature of that species. Descriptions of the two forms are reviewed. As *T. raschii* is a deep-water fish, only a few specimens have been reported. (DLC.)

72204. HOLGERSEN, HOLGER, 1914– . Norske lomviers vandringer. (Stavanger, Norway. Museet. Sterna, May 1961. bd.4, hefte 6, p.229-40, illus., 3 text maps.) 6 refs. Text in Norwegian. Summary in English. **Title tr.**: On the movements of the Norwegian guillemot, *Uria aalge* (Pont.)

Reports on recoveries of the banded birds. Most of the colonies are in northern Norway, and in late summer the birds move from the outer coasts to inner islands and fjord regions and they regularly winter along the entire arctic coast of Norway and the Murman; some young birds from southern Norway also move north to winter. Many are caught in fishermen's nets at depths to 85 fathoms; some nine hundred were netted in Tjongsfjord, Nordland, on Jan. 12, 1960 at 70 fm. (DLC.)

72205. HOLGERSEN, HOLGER, 1914– . Ringmerkingsoversikt 1959, 1960. (Stavanger, Norway. Museet. Sterna, Feb., Nov. 1961. bd. 4, hefte 5, p.177-220, 3 illus., tables; hefte 8, p.297-334, tables.) Text in Norwegian. Summaries in English. **Title tr.**: Bird banding 1959, 1960. In sequence to No. 58699.

Reports current banding activity in Norway, foreign recoveries of previously banded birds and those important to migration studies; band numbers, date and location of banding and recovery are given, as well as species identification; over 60 in 1960. Recoveries and banding sites include localities of the Newfoundland-Labrador region, arctic Norway, Vestspitsbergen, Bjørnøya, Kola Peninsula, West and North Greenland. (DLC.)

72206. HOLGERSEN, HOLGER, 1914– . Ringmerkingsoversikt 1961. (Stavanger, Norway. Museet. Sterna, Sept. 1962. bd. 5, hefte 3, p.89-123, text map.) Text in Norwegian. Summary in English. **Title tr.**: Bird banding 1961.

Presents the twelfth annual report on the program in Norway, in all over 400,000 birds in 150 identified species ringed, including two added in 1961: *Aythya ferina* and *Picus canus*. Banding and recovery data are tabulated as in reports *supra*. (DLC.)

72207. HOLGERSEN, HOLGER, 1914– . Trekkfuglforskning i Norge, resultater og problemer. (Norske Videnskaps-akademi, *Oslo*. Årbok 1957 *pub.* 1958, p.15-16.) Text in Norwegian. **Title tr.**: Investigation of migratory birds in Norway, results and problems.

Reports such research as mainly in determining flyway patterns and intermediate stopping points. Some species remain in Norway but migrate from one part to another; some make long spring and fall stops in passage; others from arctic regions farther north and east, winter in Norway. Flyways are usually broad zones, influenced by topography and the sea. Migration is assisted by anticyclonic conditions, hindered by headwinds, and interrupted by strong wind and poor flying weather. Westerly winds account for the Greenland flyway over southern Norway in the fall. East winds related to fall and winter low pressure systems, with highs over northern Scandinavia and Russia, bring in birds from Russia and Siberia that normally would fly southward. (DLC.)

HOLLAND, GEORGE P., *see* Pacific Science Congress. 1961. No. 74619

72208. HOLLAND, MICHAEL FRANK WILLIAM, 1928–1957. The geology of certain parts of eastern Spitsbergen. Oslo, Oslo University Press, 1961. 44 p. tables, diagrs., plate, maps, incl. 3 fold.

(Norway. Norsk Polarinstitutt. Skrifter, nr. 122.) 39 refs. Preface and notes by K. S. Sandford.

Hecla Hoek (pre-Devonian) rocks were found in northern Sabine Land in Vestspitsbergen, as were three sections of Permo-Carboniferous limestones and cherts. Author sledged up the Von Postbreen, up the Potpeschniggbreen, crossed a high col, and continued down so-called Edmondbreen to the Negribreen. Description of Triassic rocks examined on this journey has been revised on the basis of subsequent fossil identification. Author's map, scale 1 in:1.6 mi., adjusts geologic boundaries and shows numerous faults and folds. The first complete Upper Carboniferous to Lower Permian succession found in Nordaustlandet was measured in 1951; three sections were examined, an extensive fauna found, and correlation made. New conclusions are reached on the structure beneath Vegafonna and Sørfonna, shown on map, scale about 1 in. : 4 km.; Vibehøgdene rocks form a gentle anticline pitching to the southeast. Brief visits to the Islands and shores of Hinlopenstretet resulted in discovery of dolerite on Wahlbergøya hitherto unknown on this island. This report covers part of field investigations of the Oxford University expeditions to Nordaustlandet in 1951 and to Vestspitsbergen in 1953. About 75 place-names used are listed and referred to a map source. (DLC.)

72209. **HOLLAND, MONTE G.**, *and others*. Ocular distensibility as a function of temperature. (American journal of ophthalmology, May 1961. v.51, no.5, pt.2, p.1024-27, illus., table.) 8 refs. *Other authors:* B. Tishler *and* J. Bellestri.

Reports on a study of isolated cats' eyes. If temperature is maintained at 37°C., a slight drop in rigidity occurs within 90 min. after enucleation; at 7°C. there is no significant change. With lowered temperature, rigidity increases, amounting to about 18% for a 30° drop. (DNLM.)

HOLLANDS, K.G., *see* Fisher, H., *& others*. Environ. temp. & comp. body fat. 1962. No. 71426

HOLLICK, CHARLES ARTHUR, 1857–1933, *see* Krishtofovich, A.N., Novye dannye o melovoĭ flore Severnoĭ Ameriki . . . 1962. No. 73126

HOLLISTER, H. J., *see*

Dodimead, A.J., *& others*. Oceanographic data record . . . 1960. No. 71053

Dodimead, A.J., *& others*. Oceanographic data record . . . 1961. No. 71054

72210. **HOLM, ÅKE, 1909–** . Notes on arctic spiders. (Arkiv för zoologi, 1961. ser. 2, bd. 12, no.32, p.511-14, illus.) 13 refs.

Deals with ten species, eight of them from arctic Norway. Location of finds, habitat, occurrence and distribution, etc. are noted. (DLC.)

72211. **HOLM, ARTHUR.** Småtrålernes lønnsomhet i 1958. (Fiskets gang, Apr. 28, 1960. årg. 46, nr. 17, p.244-50, tables.) Text in Norwegian. **Title tr.:** Small trawler profits 1958.

Presents detailed data from cod-fishing by vessels under 300 gross tons in Finnmark, Spitsbergen and Bjørnøya waters and off the Møre coast. Profits were poor but variable. Only the smaller vessels in the Finnmark spring fisheries broke even for the owners and provided fair shares for the crew; all other categories operated at a loss. Gross income, costs, owners' net profits, share/fisherman, fishing period, and size of vessel, etc. are tabulated for the three fishing grounds 1956-1958. (DA.)

72212. **HOLM, ARTHUR.** Småtrålernes lønnsomhet 1959. (Fiskets gang, Mar. 16, 1961. årg. 47, nr. 11, p.242-47, tables.) Text in Norwegian. **Title tr.:** Small trawler profits, 1959.

Reports returns from spring cod caught by vessels under 300 gross tons in the Finnmark waters, on the Møre banks, and in the Bjørnøya area. The Finnmark fisheries, the most important and better than in previous years, had a good catch, favorable marketing conditions and higher prices. The Møre and Bjørnøya fisheries showed no profit. (DA.)

72213. **HOLM JOENSEN, ANDERS,** *and* **N. O. PREUSS.** Ornithologiske iagttagelser i Sarekfjeldene i august 1960. (Fauna och flora, 1962, hft. 1-2, p.61-65.) Ref. Text in Danish. Summary in English. **Title tr.:** Ornithological observations in the Sarek Mts. in August 1960.

Reports on 33 species, four of them *Podiceps auritus, Dendrocopus major, D. leucotos* and *Riapria riapria* first records, and *Falco peregrinus* the second, for this north Swedish region. Birds of prey were present in great numbers probably because of the lemming abundance; *Falco columbarius* most numerous, and *Buteo lagopus* observed only once, though mentioned by Curry-Lindahl (cf. No. 50405) as the commonest bird of prey in Sarek. (DA.)

72214. **HOLM, PAUL.** Skibe på frimaerker. (Søens verden, 1959-1960. årg. 1, p.114-17, illus.) Text in Danish. **Title tr.:** Ships on stamps.

Describes a series of 15 stamps from the Falkland Islands Dependencies; they were issued in 1954, and depict ships which have participated in polar exploration. (AIKøbenhavn.)

72215. **HOLM-HANSEN, BJØRN.** Undervisningssystemet for de innfødte i Alaska. (Norsk pedagogisk tidsskrift, 1961. årg. 45, hefte 6, p.248-53.) Text in Norwegian. **Title tr.:** The educational system for natives in Alaska.

Outlines various features of the education provided for some 35,000 Eskimos, Indians, and Aleuts. In the public schools instruction is exclusively in English, none of it is in the native languages. The local grade and high schools, special boarding schools such as that at Mt. Edgecumbe, and assisting institutions such as the Chemava School in Oregon and Haskell Institute in Kansas, are described, and the few religious schools are noted. In most schools, training is academic and is directed toward the student's earning his living in commercial life; there is little emphasis on the student's future as a leader in his own rural community. Many social and recreational programs are carried on as extracurricular activities. Teacher training and tenure are explained. The role of the Bureau of Indian Affairs in the direction of education is clarified. Opportunities for training in various trades, in public health subjects, and in college are considered. (DLC.)

72216. **HOLMBERG, AKE.,** *and* **B. BECKER.** The effect of hypothermia on aqueous humor dyna-

mics, 2; ultrastructural changes in the rabbit ciliary epithelium. (American journal of ophthalmology, May 1960. v.49, no.5, pt. 2, p.1134-40, illus., tables.) 5 refs.

Reports a light- and electron-microscopic study of the ciliary epithelium from rabbits made hypothermic to 20°C. Increased size of mitochondria and accumulation of cytoplasmic vesicles were noted in the nonpigmented epithelium; size reduction of the cells, thickening of mitochondria and increased vesiculation of the cytoplasm were found in the pigmented layer. These changes are associated with decreased secretion of aqueous humor. (DNLM.)

72217. HOLMES, GEORGE WILLIAM, 1922– . *and* **C. R. LEWIS.** Glacial geology of the Mount Chamberlin area, Brooks Range, Alaska. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.848-64, illus., fold. maps, tables.) 16 refs.

Summarizes investigations conducted during 1958 and 1959 as part of the U.S. Geological Survey's Mt. Chamberlin-Barter Island project. (No. 62289). Four major Pleistocene advances, and two minor Recent fluctuations of glaciers originating in the Franklin Mts., have left their record in the Mt. Chamberlin area. Deposits of the Weller, the Chamberlin, the Schrader, and the Peters glaciations are described and compared; the Weller appears to be pre-Wisconsin; the extensive Chamberlin is much younger; the smaller Schrader followed a shorter interval than that preceding the Chamberlin; the Peters seems to be the least extensive and briefest of all. Small, fresh moraines in front of the mountain glaciers represent minor Recent readvances of the alpine ice. General topography of the Brooks Range has apparently remained unchanged throughout the glacial period, in contrast to the alteration and uplift of the Rocky Mts. of the United States and the Alaska Range. A tentative correlation is offered with glaciations in the Alaska Range and the north-central Brooks Range. A general area map and a sketch map of the vicinity are folded in v.3. (DGS.)

HOLMES, GEORGE WILLIAM, 1922– , *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

U.S. Geol. Survey research. 1962. No. 76268

HOLMES, RICHARD T., *see* Alaskan Science Conference 1961. 1962. No. 69644

72218. HOLMGREN, ANDERS. Vindens betydelse för skogens avverkning och föryngring särskilt i de norrländska höjdlägena. (Norrlands skogsvårdsforening. Tidskrift 1961. nr. 1, p.41-74, illus., graphs, tables.) 27 refs. Text in Swedish. **Title tr.:** The importance of the wind to forest yield and regeneration, especially at elevations of Norrland.

Attributes loss of young plantings near the timberline to dehydration caused by the strong cold day winter wind of northern Sweden. Leaves and shoots exposed above the snow cover, are desiccated by wind and temperature-climate conditions, the ambient humidity low because the ground frozen. Outer areas of mountain forest in exposed localities should be left untouched to provide shelter. Cutting in adjacent areas should be done in narrow strips to admit sunshine and air for growth and regeneration. Cutting areas should be small. Sites for new plantings should be in areas sheltered from wind. Discussed also F.H. Ebeling, q.v. (DA.)

HOLMGREN, ANDERS, *see also* Ebeling, F.H. Vindens . . . 1961. No. 71184

HOLMSEN, PER, 1911– , *see* Padget, P., *& others.* Geochem. prospecting Norw. 1960. No. 74620

72219. HOŁOBUT, W., *and* **W. STĄŻKA.** Mise en évidence de certains effets hémodynamiques dans l'hypothermie d'après l'analyse de la vitesse sanguine. (Acta medica polonica 1960. v.1, fasc. 1-2, p.55-63, illus.) 6 refs. Text in French. **Title tr.:** Demonstration of certain hemodynamic effects in hypothermia after analysis of the speed of blood.

Reports on experiments with dogs cooled to 25°C. and the speed of circulation determined with the aid of the photohemotachograph of Cybulski-Klisiecki. Arterial and venous blood speed fell gradually and simultaneously with the progressive drop of arterial and venous blood pressure. (DNLM.)

HOLT, G., *see* Connaughton, P.J. *& others.* Prolonged hypothermia . . . survival. 1961. No. 70805

72220. HOLT, OLAV, *and others.* Analysis of riometer observations obtained during polar radio blackouts. (*In:* NATO. Radio wave absorption . . . *pub.* in Journal of atmospheric and terrestrial physics, Dec. 1961, *pub.* 1962. v.23, p.229-43, illus., table, graphs, maps.) 2 refs. *Other authors:* B. Landmark *and* F. Lied.

Presents partial analysis of data obtained during 1958–1959 on two five-station networks, one extending from southern Norway over Skibotn and Bjørnøya to Longyearbyen in Spitsbergen, the other confined to North Norway: Harstad, Kautokeino, Skibotn, Alta, Hammerfest. Temporal and latitudinal variations in absorption are determined; relationships to geomagnetic and auroral activity are discussed as well as the typical structure and size of the absorbing clouds. The frequency of occurrence of polar blackouts was highest at Skibotn (approx. 69°20′N. 20°15′E.) but also high 500 km. further south. Good agreement was established between absorption and auroral conditions determined from all-sky camera observations. (DLC.)

72221. HOLT, OLAV, *and* **A. OMHOLT.** Auroral luminosity and absorption of cosmic radio noise. (Journal of atmospheric and terrestrial physics, June 1962. v.24, no.6, p.467-74, graphs, diagrs.) 4 refs.

Compares simultaneous measurements at Alta (69°41′N. 22°13′E.), Norway, of 27.6 Mc./s. absorption and aurora intensity in zenith. Reasonably good correlation is found between the two sets of observations. There appears to be a time delay, usually of a few minutes, between outbursts of aurora and increase in absorption. Occasional delays of less than one min. appear to be associated with short bursts of strong aurora. –From authors' abstract. (DLC.)

72222. HOLT, OLAV, *and others.* Observations

of electron density and collision frequency during polar radio blackout conditions. (*In:* NATO. Radio wave absorption . . . *pub.* in Journal of atmospheric and terrestrial physics, Dec. 1961, *pub.* 1962. v.23, p.318-29, illus., tables, diagrs., graphs.) 4 refs. *Other authors:* B. Landmark *and* F. Lied.

Presents results of cross-modulation measurements and observations of partial reflections from the lower ionosphere, made at Tromsø (69°40′N. 18°58′E.), North Norway, during 1958–1959. Sample recordings are shown together with cross modulation and electron density profiles and assumed collision frequency curve. Both methods applied are unreliable below 55 km. and above 75 km. altitude. Reliable results were obtained in a number of cases when the strength of the echoes observed on 2.7 Mc/s. was more than 60 db. below the normal signal level, and when no echoes were observed on the vertical incidence recorder. (DLC.)

HOLT, OLAV, *see also* Ortner, J., *& others.* SCNA & geomag. storm. 1962. No. 74545

72223. HOLTEDAHL, HANS. Fridtjof Nansen som geolog, kontinentalhylle- og strandflatearbeidene. (Naturen, 1961. v.85, nr. 7-8, p.476-86, 2 illus.) Text in Norwegian. **Title tr.:** Fridtjof Nansen as a geologist, continental shelf and strandflat studies.

Reviews geologic problems in which Nansen was actively interested: erosional and depositional forms of continental shelves; the strandflats off Greenland and northern Europe and America; frost weathering; changes in sea level, especially in pre-Glacial and Glacial times; pre-Pleistocene uplift; Glacial depression of northern areas; fjords and submarine channels; isostatic adjustments; and the nature of deep-sea sediments. Most of Nansen's studies were made along the Norwegian coast and in the North Atlantic, Arctic Basin, Barents, Kara, and Siberian seas. (DGS.)

72224. HOLTEDAHL, HANS. Sur la géologie et la morphologie des plateaux continentaux glaciaires. (France. Centre national de la Recherche scientifique. Colloques internationaux, 83, May 5-12, 1958: *La topographie et la géologie des profondeurs océaniques,* pub. 1959, p.245-63, maps.) 22 refs. Text in French. **Title tr.:** The geology and morphology of glaciated continental shelves.

Discusses such shelf areas off Norway, northeastern and northwestern North America, Ellesmere Island, and Vestspitsbergen. Certain characteristic morphological features are distinguished: submarine fiords or depressions which are extensions of inland fiords and straits; submarine channels terminating in bays; submarine marginal channels and slopes; and transverse troughs and depressions. The origins and characteristics of these features are explained. (CaOG.)

HOLTEDAHL, HANS, *see also* Evers, W. Problem of coastal genesis . . . 1962. No. 71314

72225. HOLTEDAHL, OLAF, 1885– . La sparagmite formation (Kjerulf) et l'Éocambrien (Brögger) de la Péninsule Scandinave. (France. Centre national de la Recherche scientifique. Colloques internationaux, 76, 1957: *Les relations entre Précambrien et Cambrien, Problèmes des séries intermédiaires,* pub. 1958, p.33-38.) Text in French. **Title tr.:** The Sparagmite formation (Kjerulf) and the Eocambrian (Brögger) of the Scandinavian Peninsula.

Describes stratigraphic features of this sedimentary series, termed Sparagmite formation by Kjerulf, as it appears in Finnmark and elsewhere in Norway and in Sweden. Its division into two units (in Finnmark separated by a sharp unconformity) is suggested. The term Eocambrian, involving an understanding of the sedimentary complex between the Jotnian and the fossil-bearing Lower Cambrian, is discussed and retention of "Sparagmitian" and "Sparagmite Group" for this sedimentary complex is recommended. (DLC.)

72226 HOLTVED, ERIK, 1899- . Er eskimoisk et primitivt sprog? (Grønland, Aug. 1962, nr. 8, p.281-97, illus.) Text in Danish. **Title tr.:** Is Eskimo a primitive language?

Reviews characteristic features of the Eskimo language, particularly as regards parts of speech and phonetic conditions. It can form new words with the help of substantival and verbal affixes. The core of the language is simple, perhaps primitive but its structure has shown great adaptability and in this, Eskimo may be regarded as advanced. (DLC.)

72227. HONDA, NISHIO, *and others.* Effects of adrenaline and noradrenaline on ear vessels in cold- and warm-adapted rabbits. (Journal of applied physiology, Sept. 1962. v.17, no.5, p.754-58, illus.) 16 refs. *Other authors:* W.V. Judy *and* L.D. Carlson.

Infusion of these catecholamines into cold-adapted rabbits produced less change in heart rate, in drop of ear temperature, in peripheral resistance and compliance, during the infusion. Following infusion, a quicker normalization of heart rate, of ear temperature, a slight rise in colonic temperature were noted. (DLC.)

72228. HONDA, NISHIO, *and others.* Influence of prior cold exposure on peripheral vascular reaction on rabbit ear induced by abrupt cold exposure. Fort Wainwright, Alaska, May 1962. 9 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 61-50.) *Other authors:* W.V. Judy *and* L.D. Carlson.

Study of rabbits kept in the cold (5°C.), outdoors (max. 21°, min. -7°C.), and at 23° or 27°C. After one-hour exposure to 5°C., the outdoor and 5° groups had a low blood flow to the ear and no drop in rectal temperature, with opposites in the other two groups. After 12-18 hrs. exposure to 5°C., rectal temperature became normal in the 27° group but increased in the cold and outdoor rabbits. (CaMAI.)

HONG, D. S., *see* Rennie, D.W., *& others.* Phys. insulation Korean diving women. 1962. No. 75107

72229. HONIGMANN, JOHN JOSEPH, 1914– , Foodways in a muskeg community. Ottawa, July 1961. 216p. graph, tables, map. (Canada. Dept. of Northern Affairs and National Resources. Northern Co-ordination and Research Centre, 62-1.) 27 refs.

Report written in 1948 on the food and economy of the Attawapiskat (Swampy Cree) Indians on the west coast of James Bay as observed in 1947-1948. The sources of income are the traditional subsistence economy of hunting, trapping, fishing, gathering, gardening, also fur marketing,

wage labor, government relief. The seasonal nutrition pattern, food preparation, average consumption, and the cooking utensils are described. The Indians' approach to matters of food, their use of imported staples, etc. are discussed. The life cycle, major diseases, family and kinship patterns, are dealt with in turn and vital statistics tabulated for 1925-1948. The physical environment, history, organization of the Indian and white communities, administrative and cultural contacts, etc. are depicted. The major problems are high infant mortality (212 per 1000), anxiety and sickness rate, economic hardship and insufficient relief. Diet is poor due to decline of natural food resources and nutritional substitutes inadequate; educational facilities geared to Indian needs are lacking; there is intolerance of the Indian way of life among traders, missionaries, and Indian agents. Some recommendations are offered to alleviate these conditions. Notes on the Attawapiskat dialect are appended. (DLC.)

72230. HONIGMANN, JOHN JOSEPH, 1914– North America. (*In:* Psychological anthropology . . . edited by F.L.K. Hsu, Homewood, Ill., 1961. p.93-134.) Refs.

Includes, p.119-21, a comparative psychological study of Nunivak Island Eskimo mythology and real personality. The goal-oriented yet passive (non-aggressive) behavior of mythological characters and their reliance on supernatural aid are also typical for contemporary Eskimos: submissiveness, repression, fear of retaliation, etc. are coupled with a sense of responsibility and persistence in overcoming obstacles. Rorschach tests and observations of child rearing by Dr. Lantis (No. 66112) corroborate the similarities between myth and true-life behavior patterns. (DLC.)

72231. HONIGMANN, JOHN JOSEPH, 1914– People of the muskeg: a multivalence ethnographic study. (North Carolina. University. Institute for Research in Social Sciences. Research previews, Feb. 1956. v.4, no.1, p.11-19, map.) 13 refs.

Multilateral ethnographic study of cultural changes in the Attawapiskat Indian society of James Bay, based on observation, interviews, and psychological tests in the 1947-1955 period (cf. No. 45597). The motivation and functional relationship between the group's anxiety patterns is discussed: pessimistic orientation toward the past and future, preoccupation with working for the white man, distrust of government wardship, etc. (DSI.)

72232. HONIGMANN, JOHN JOSEPH, 1914– The pre-radar period of the Great Whale River Eskimo. (International Congress of Americanists, 34th, *Vienna,* 1960. Proceedings *pub.* 1962, p. 499-503.) Ref.

Describes from 1949-1950 field work, the acculturative processes in this small group (200 individuals) "overwhelmingly dependent upon a larger, Canadian, social system." Adaptation, adjustment, dislocation of their traditional culture, their dependence on trade goods and social aid, role of the post (Hudson's Bay Co. store), changes in aboriginal family pattern, lack of formal Eskimo leadership, etc. are discussed. Despite problems, acculturation has not been traumatic; the Eskimos are gradually integrating into the new social system. (DSI.)

72233. HONIGMANN, JOHN JOSEPH, 1914– Social networks in Great Whale River; notes on an Eskimo, Montagnais-Naskapi, and Euro-Canadian community. Ottawa, 1962. 110 p. plates, tables, sketch maps. (Canada. National Museum. Bulletin no. 178, Anthropological series no. 54.) 46 refs.

Sociological study of inter- and intra-ethnic relations based on the author's field work in 1949-1950. The Eskimo and Indian social organization, recreation and dances, religious beliefs and concepts of nature are described in turn. Distinctive features in community structure and cultural diffusion between the two indigenous groups are discussed, noting also infiltration of such Euro-Canadian traits as leadership, mode and standard of living, family role, kinship pattern, etc. Kinship terminology and other kinds of vocabulary are exemplified: about 35 Eskimo words for local birds and plants, ten Eskimo and Indian place and band names, a score of terms for natural phenomena, seasons, human life cycle stages, colors, etc. Results of Rorschach tests administered by J.J. Honigmann to four adults, one adolescent, and four children in 1950 are described and tabulated by Mrs. F.N. Ferguson, p.80-99: *Great Whale River Eskimo personality as revealed by Rorschach protocols.* Common features are noted as repression of emotions, poise, tolerance, low imaginal and good organizational abilities, concrete way of thinking, adherence to traditional pattern of control and stereotypy, etc. (DLC.)

HONIGMANN, JOHN JOSEPH, 1914– , *see also* Ferguson, F. Eskimo personality, Rorschach tests. 1960. No. 71378

72234. HOOK, JERRY L. Some observations of ionospheric absorption at geomagnetic conjugate stations in the auroral zone. (Journal of geophysical research, Jan. 1962. v.67, no.1, p.115-22, diagrs., graphs, map.) 12 refs.

Shows that strong ionospheric absorption often occurs simultaneously at the nearly magnetically conjugate stations Farewell, Alaska, and Campbell Island in the Antarctic Ocean. The absorption is attributed to polar-cap and aurorally associated absorption events. During polar-cap absorption events, the boundary of the absorption regions appears to occur at the same effective magnetic latitude in both hemispheres. Absorption associated with aurora generally occurs simultaneously at Farewell and Campbell Island, but approximately 3° north and south absorption often occurs in an independent pattern. –From author's abstract. (DLC.)

HOOK, JERRY L., *see also* Alaskan Science Conference 1961. 1962. No. 69644

HOOK, R., *see* Blair, E., & *others.* Serum glutamic oxalacetic transaminase hypothermia. 1961. No. 70246

72235. HOPE, EARL R. Low-latitude and high-latitude geomagnetic agitation. (Journal of geophysical research, Mar. 1961. v.66, no.3, p.747-76, table, graphs, diagrs.) 104 refs.

The distribution and seasonal behavior of high-latitude morning, afternoon, and night maxima

of geomagnetic agitation can be explained only in terms of patterned corpuscular bombardment. Of the noon, afternoon, and night maxima at subequatorial latitudes, only the latter two are related to the corresponding high-latitutde maxima. Since the afternoon and night maxima are traceable continuously from auroral to low latitudes, and since their respective seasonal variations are everywhere the same, they may be explained as agitation transported from high to low latitudes by an ionospheric current system resembling (and probably identical with) the SD circulation. If so, this circulation is a physical reality; the SD currents must flow at their own level, independently of the Dst and Sq circulations. Besides the SD and Sq components of current-transported agitation, there is also a Dst component which, as far as identified, represents pulsative compressions of the geomagnetic field. Sudden commencements have SD, Sq, and Dst components largely analogous to those of agitation. –From author's abstract. (DLC.)

HOPE, EARL R., *see also*

Antrushin, N.S. Dlīā bor'by s navodneniem. 1961. No. 69826

Gakkel', ĪA. ÎA. Tectonic deformations modeled ice. 1961. No. 71556

Timofeev, V.T. Formation bottom waters . . . 1961. No. 76150

Volkov, P.D. Novye issledovaniīā . . . v Grenlandskom more. 1961. No. 76420

HOPKINS, DAVID MOODY, 1921– , *see*

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

MacNeil, F.S., *& others*. Correlation Tertiary . . . 1961. No. 73722

72236. HOPKINS, H. G. Bearing capacity of floating ice sheets. (American Society of Civil Engineers. Engineering Mechanics Division. Journal, Feb. 1961. v.87, no EM1, p.185.) Ref.

Comments on G.G. Meyerhof's paper (No. 66700) and questions the degree of realism in approximating the mechanical behavior of ice by that of a rigid, perfectly plastic material. Experimental studies of the yield strength of ice sheets under combined loading conditions are recommended to determine the yield function as expressed in terms of principal bending moments. If shown to be realistic, the yield criterion of K.W. Johansen could be substituted advantageously for that chosen by Myerhof, i.e. Tresca's. Meyerhof, q.v. answered this criticism. (DLC.)

HOPLA, CLUFF E., *see* Alaskan Science Conference 1961. 1962. No. 69644

HOPPE, E., *see* Griffiths, J.D., *& others*. The influence of thermal stress . . . 1961. No. 71851

72237. HOPPE, GUNNAR, 1914– . Den äldsta fasta bosättningen i Norrbottens läns lappmarker. (Geographica, 1944. nr. 15, p.77-91, text map.) 68 refs. Text in Swedish. **Title tr.**: The oldest permanent settlement in Norrbotten Lapland.

Reviews early types of Swedish and Finnish settlements in northern Sweden, and early colonization in valleys of Norrbotten. The earliest permanent settlements were probably in the Muonio valley in the early 1670's. Pioneering was encouraged by tax concessions and other inducements. From coastal settlements, the northeastern river valleys were relatively easily penetrated into the Lapp country. (DLC.)

72238. HOPPE, GUNNAR, 1914– . Naturgeografisk fältstation i Kebnekajse. (Svensk geografisk årsbok, 1961. årg. 37, p.224-26, illus.) Text in Swedish. **Title tr.**: Geographical field station in Kebnekaise.

Describes the research station in Tarfala valley, approx. 67°53′N. 18°33′E., belonging to the Geographical Institute of Stockholm University (Stockholms Universitets naturgeografiska fältstation i Tarfala). Glaciological studies have been carried out since the mid-1940's, a hut was built in 1950, and in 1961 the station was expanded to accommodate 38 persons; the director is S. Valter Schytt. (DLC.)

72239. HOPPER, H. R. Kelsey: power for northern Manitoba. (Canadian geographical journal, Nov. 1961. v.63, no.5, p.170-81, illus., map, diagr.)

Describes construction, 1957-1960, of the Kelsey Generating Station on the Nelson River. Difficulties arose from large-scale excavation of permafrost, a fire in the powerhouse, low temperatures that froze the clay during filling and construction of two dikes (approx. 2,000 ft. long, 20 ft. high) on permafrost. The dikes problem was solved by constructing them of sand directly on the permafrost. The station, with 210,000 hp. capacity, is remote-controlled from Thompson, about 60 mi. distant. (DGS.)

72240. HOROWITZ, SAMUEL, *and* **L. HUMPHREY.** Satellite sounder and telemeter chart ionosphere electron density. (Electronics, June 23, 1961. v.34, no.25, p.50-53, illus., graphs, diagrs.)

Describes a polar-orbiting ionosounder designed to obtain a complete latitude-time-dependent electron-density profile. Measurement and telemetry problems are discussed; details are provided on HF transmitter's power amplifiers. (DLC.)

72241. HORSTED, SVEND AAGE. Betragtninger over rejeproduktionen i Diskobugten. (Grønland, May 1962, nr.5, p.169-79, illus., diagr., map, table.) 6 refs. Text in Danish. **Title tr.**: Comments on the prawn production in Disko Bay.

Discusses the prospects of this *(Pandalus borealis)* fishery. It is expanding continuously. The fishing-grounds off Christianshåb are most utilized; promising grounds exist off Godhavn and Jakobshavn; the entire Bay and Vaigat seem to have good and stable stocks; there is no risk of overfishing. (DLC.)

HORTON, C. O. *see* Kingery, W.D. . . . Project Ice Way. 1962. No. 72796

HORVATH, STEVEN MICHAEL, 1911– , *see*

Rodahl, K., *& others*. Effects of dietary protein . . . work capacity . . . cold. 1962. No. 75156

Timmerman, J.C., *& others*. Day-night differences . . . 1959. No. 76149

Willard, P.W., & S.M. Horvath. Blood distribution . . . 1961. No. 76559

HOSHIZAKI, T., *see* Hamner, K.C., *& others*. Biological clock . . . 1962. No. 71978

72242. HOSLEY, EDWARD H. The McGrath Ingalik. (Alaska. University. Anthropological papers. May 1961. v.9, no.2, p.93-113, maps.) 3 refs.

Ethnographic study of this northern Athabaskan group conducted in 1960 at Medfra, Nicolai and Telida villages on the upper Kuskokwim River, central Alaska. Their past and present material and spiritual cultures are described: fishing and hunting, seasonal migration cycle, housing, technology, transportation, arts and crafts, religion (Russian Orthodox), schooling, folklore. The McGrath Ingalik adhere to a money economy, deriving their income mainly from fur trapping, summer jobs in McGrath and the Forest Service fire crews, and from state (old-age and dependent-children) allowances. Their governing body is a tribal council of all adult males with an elected chief. Status and rank depend on age, wealth, generosity, and such of ancestors. Vestiges of old religious beliefs persist in certain minor rites and taboos. Linguistic and cultural similarities link the McGrath Ingalik to groups in the north, Tanana and upper Yukon Rivers. They probably infiltrated the upper Kuskokwim area in the early 19th century, expanding south from the lower Yukon and driving out the original Tanana population. (DLC.)

HOUPT, T. R., *see* Hammel, H.T., & *others.* Thermal & metab. measurements reindeer . . . 1962. No. 71975

72243. HOUSTON, JAMES ARCHIBALD, 1921– . Eskimo artists. (Geographical magazine, Mar. 1962. v.34, no.11, p.639-50, illus., incl. 5 col., map.)

Discusses the production of stone-block prints and sealskin stencils by Eskimos at Cape Dorset, Baffin Island. This art form is a medium for expression of conceptions of the tangible and spirit worlds revealed. Techniques used in making the prints are described, and six are reproduced. (DLC.)

72244. HOUSTON, JAMES ARCHIBALD, 1921– . Eskimo carvings. (Craft horizons, Mar. - Apr. 1954. v.14, no.2, p.10-15, 16 illus.)

Describes work of the Eskimos of the Hudson Bay area and Baffin Island, and the primitive methods used to carve in steatite, amphibolite, and soft serpentine. The simple tools force the carver to utilize the natural shape and texture of the material to best advantage. Some introduced implements are used, but change of method and increased production of carvings for the market are deprecated as destructive of the Eskimos' natural creative ability. (DLC.)

HOUSTON, JAMES ARCHIBALD, 1921– . *see also* Carpenter, E.S. Artists . . . 1962. No. 70615

72245. HOVI, VÄINÖ, *and* **A. AURELA.** On the north-south asymmetry of cosmic rays near sea level at great zenith angles in high latitudes. Helsinki, 1960. 6 p. tables. (Suomalainen Tiedeakatemia. Toimituksia: Annales Academiae scientiarum Fennicae, ser. A VI, Physica, no.46.) 8 refs.

Discusses the problem of the north-south asymmetry A_{ns}, of the ionizing component of cosmic rays, and describes the experiments carried out Nov. 16 - Dec. 23, 1959 at Turku, Finland, 58.3°N. at 49 m. above sea level, at the zenith angle of 80°. The result obtained $A_{ns} = 0.107$ supports D.W.P. Burbury's view (q.v.) that the north-south asymmetry of secondary cosmic rays on the sea level is caused only by the atmospheric absorption effect. (DLC.)

HOWARD, HECTOR S., *see* Willman, V.L., & *others.* Ventricular function . . . 1961. No. 76570

HOWE, HENRY HERBERT, 1905– , *see* U.S. Mag. poles & compass. 1962. No. 76253

HOWELL, B. J., *see also* Rennie, D.W., & *others.* Physical insulation Korean diving women. 1962. No. 75107

HOWICK, EDWARD E., *see* Alaskan Science Conference 1961. 1962. No. 69644

72246. HOYE, W. N. Runway ice removal. (Canadian aeronautical journal, Apr. 1961. v.7, no.4, p.189, illus.)

Describes method used at an unidentified Royal Canadian Air Force station to remove a 0.5 in. layer of ice during -20°F. temperatures. Jet fuel was spread over the runway and ignited; as the heat melted the ice, the water flowing down towards the edge of the tarmac bore the burning fuel away on its surface. As the flames subsided, the runway was sanded. (DLC.)

72247. HSIEH, ARNOLD C. L. The role of the thyroid in rats exposed to cold. (Journal of physiology, Apr. 1962. v.161, no.1, p.175-88, illus., tables.) 26 refs.

Reports a study on the effects of basal diet, previous cold exposure, degree of thyroid hormone depletion and replacement on the survival time of rats fed a propylthiouracil-containing diet and living at 4°C. The results "do not support the contention that the thyroid gland stimulates, via its hormone secretion, the metabolic rate of cold-exposed animals." (DLC.)

HUBERT, P. L. *see* Campbell, W.S., & P.L. Hubert. Ionospheric disturb. No. 12 & 16, '60. 1961. No. 70510

72248. HUBERT, WILLIAM E. Rocket observations of high level meridional flow over North America during 1960 and 1961. (U.S. Weather Bureau. Monthly weather review, July 1962. v.90 no.7, p.259-62, graphs.) 7 refs.

Reports meteorological rocket sounding from Fort Greely in Alaska, Fort Churchill in northern Manitoba, and from four other localities in the U.S. In the last, soundings indicate the meridional wind flow at 55 km. to be predominantly northward. Those in Alaska and Manitoba also show a tendency to weak poleward flow at 55 km., but reveal stronger equatorward flow centered near 35 km. Available 1959, 1960, and 1961 data indicate that the mean meridional flow did not reverse direction from summer to winter with the observed reversal of mean zonal flow at high levels. -From author's abstract. (DGS.)

HUBLEY, RICHARD CARLETON, 1926–1957, *see* Arctic Institute of N. Am. McCall Glacier . . . meteorol. observ. 1961. No. 69856

72249. HUDSON, JACK W. Temperature regulation in desert birds and mammals. (*In:* Symposia on arctic biology and medicine. Proceedings 1962, p.421-55, illus., tables.) 22 refs.

Discusses morphological, physiological and behavioral patterns and their great variety in these animals. The advantage of this variety in minimizing competition and finding a "niche" in areas of limited food resources is stressed. New mechanisms for combatting high and low temperature by desert dwellers are reported from author's studies. Hibernation and estivation are also discussed. (CaMAI.)

HUFMAN, L. L., *see* Pruitt, W.O., *& others.* Small mammal bioclimate . . . 1961. No. 74982

HUG, G., *see* Bernhard, W.F., *& others.* Alterations in myocardial metabolism . . . 1961. No. 70168

HUGGINS, R. A., *see* Hoff, H.E., *& others.* Potassium distribution . . . 1961. No. 72187

72250. HUGGINS, S. E. Blood volume parameters of a poikilothermal animal in hypo- and hyperthermia. (Society for Experimental Biology and Medicine. Proceedings, Oct. 1961. v.108, no.1, p.231-34, tables.) 4 refs.

Rapid cooling of alligators to 5°C. produced a lowered venous hematocrit and an increased cell volume in the spleen. No change in circulatory hematocrit was noted, and increase in visceral cell volume was not significant. (DLC.)

72251. HUGHES, N. F., *and* **G. PLAYFORD.** Palynological reconnaissance of the Lower Carboniferous of Spitsbergen. (Micropaleontology, Jan. 1961. v.7, no.1, p.27-44, illus., diagrs., tables.) 29 refs.

Presents a systematic description of microspores from three representative rock samples from the Billefjorden sandstones of the Lower Carboniferous of the Isfjorden region; based on data from Cambridge University Spitsbergen expeditions of 1949–1958. Age of the series is considered to range from Tournaisian to at least Visean and perhaps Namurian. One new genus, *Velosporites,* and 13 new species, are identified. Several species resemble previously described Russian, Canadian, and Scottish types. Specimens are illus. by 66 photomicrographs. (DGS.)

72252. HUGHES, SAMUEL R. The Hovercraft for muskeg transport. (Canadian oil and gas industries, Dec. 1961. v.14, no.12, p.26-27, illus.).

Outlines research program underway at Vickers-Armstrongs Ltd. on flexible members for this low-level jet-powered aircraft's operation over muskeg country. Design of a low-speed craft planned for overland operation is given, with table of particulars and diagram. Need for flexible members is greater over land than over water. (DGS.)

HUGHES, SAMUEL R., *see also* National Northern Development Conference. 1961. No. 74224

72253. HULSEMANN, KUNIGUNDE, *and* **J. D. SOULE.** Bryozoa from the arctic Alaskan coast. (Arctic, Sept. 1962. v.15, no.3, p.228-30, tables.) 8 refs.

Lists 11, mostly common species of bryozoans collected in Aug. 1953 between 145°14′ and 155°48′W.; manner of occurrence and general distribution are noted. Location of each of the 12 stations, depth and sediment type from which material was collected, also presence of kelp are indicated. (DGS.)

72254. HULTBLAD, FILIP. Några drag ur skogslapparnas äldre kulturgeografi. (Geographica, 1944. nr. 15, p.102-118, maps, table.) 40 refs. Text in Swedish. **Title tr.:** Some features of the earlier cultural geography of the forest Lapps.

As modern settlement advances, the culture of the forest Lapps is dying out, they are being assimilated into the general community, and earlier cultural features are difficult to recognize. The traditional occupations of fishing, hunting, and reindeer-husbandry were generally combined; individuals moved seasonally within the forest; some practiced a fishing nomadism. The cultural aspects of their life were thus related to the various types of streams and lakes, to altitude, temperature, dates of ice freeze-up and breakup on the water bodies, and to vegetation. Hunters of wild reindeer comprised a second type of nomad; and keepers of reindeer herds, a third. For them, vegetation, insect pests, climate, and even glacial geology were the critical geographic factors. Cultural changes are traced from the early 17th century, and their acceleration noted as influence of government and settlement increased. Modern reindeer husbandry tends to be "extensive" i.e. the herds left untended after calving, and the reindeer raisers to have another occupation as well. (DLC.)

72255. HULTÉN, ELSIE. Vår skiftande fjällvärld. (Till fjälls 1960-61. årg. 32-33, p.6-19, illus.) Text in Swedish. **Title tr.:** Our varied mountain world.

North Swedish mountains, walking routes, equipment, landscape, fauna, flora, Lapp life, etc. (SPRI.)

72256. HULTÉN, ERIC, 1894– . The circumpolar plants, 1; vascular cryptogams, conifers, monocotyledons. Stockholm, Almqvist & Wiksell, 1962. 275 p. 228 col. maps. (Svenska vetenskapsakademien. Handlingar, ser. 4, bd. 8, nr.5.) Refs. In continuation of No. 58765.

Presents a brief systematic description and distribution maps of 228 plant species commonly referred to as circumpolar. Discontinuous distribution may be caused by either marine or continental barriers, by climate or by certain other areal characteristics. Arctic species must be closely compared with those of outpost areas, such as mid-latitude mountain habitats, to avoid duplicating identification and, in some cases, to complete knowledge of the distribution. The outposts are believed to be due to forced migration during the Ice Age. Index of species is appended, also extensive references to the literature and to maps. (DLC.)

72257. HULTÉN, ERIC, 1894– . Studies in the genus *Dryas.* (Svensk botanisk tidskrift, 1959. bd. 53, häfte 4, p.507-542, illus. maps.) 18 refs.

Study of the genus consisting of at least three species: *D. octopetala,* circumpolar and high mountain in distribution, *D. integrifolia* of arctic and subarctic America and Greenland, and *D. drummondi* of northwestern America including Alaska. A fourth form *D. grandis* very similar to *octopetala* and of dubious taxonomic position is briefly noted. Earlier records, synonyms, morphology and taxonomy, variations, crosses, etc. are described in detail. (DLC.)

HULTÉN, ERIC, 1894– , *see also* Pacific Science Congress. 1961. No. 74619

72258. **HULTKRANTZ, ÅKE.** Bachofen and the mother goddess; an appraisal after one hundred years. (Ethnos, 1961. v.26, no.1-2, p.75-85.) Approx. 30 refs.

Re-evaluation of J.J. Bachofen's research on comparative religion and his theory of female divinity cults antecedent to male deities. Mother goddesses of fecundity and childbirth are known from paleolithic hunting cultures. A relic may survive in the birth-goddesses of the Lapps, Ob-Ugrians, Yakuts and other north Eurasian and North American hunting peoples; and in a later role as agrarian goddesses of sprouting, also protectresses of wildlife. Though archeological finds indicate the mother goddess the oldest deity, Hultkrantz considers ethnological and ecological factors to support the precedence of a male god. (DLC.)

72259. **HULTKRANTZ, ÅKE.** The owner of the animals in the religion of the North American Indians; some general remarks. (*In:* Nordic Symposium on the religious conceptions . . . 1961, p.53-64.) Approx. 35 refs.

Discusses primitive hunting religions and the socio-cultural elements reflected in the belief in guardians or owners of animals. Developmental stages of the animal guardian concept are traced: animal counterpart of the hunting community's head hunter; leader or guardian of the herd; guardian soul of an animal collective; supreme owner and ruler over animals. North American guardian spirits of individual animals, species, and entire animal world are described and compared to Eurasian types. Totemism, shamanism, fusion of animal and human guardian spirits, are dealt with, as is mythology, including the culture-hero figure. (DLC.)

72260. **HULTLAND, GUNNAR.** Virkestransporterna i Kalix älvdal 1951-1960. Uppsala, AB Lundequistska bokhandeln, 1962. 247 p. illus., maps, tables, diagrs., 12 fold. maps. (Geographica, nr. 27.) About 250 refs. Text in Swedish. Summary in English. **Title tr.:** Timber transport in the Kalix River basin 1951-1960.

Reports results of a comparative study of trucking and floating from cutting area to the coast or local sawmill in this north Swedish lumbering region. The forest and transportation routes are described. Influence of climate is discussed in relation to felling and transport operations. At the beginning of the period studied, most of the trucking was in the area immediately adjacent to the coast, average distance: 39 km. Motor transport developed however, and the mean distance for trucked timber increased to about 85 km. Of great importance has been the extension of the network of forest motor roads. In 1951/52, 35% of the timber cut was transported all or part way by truck; in 1959/60, 62%. Trucking costs are much higher than floating, but losses by sinking, cost of stripping and the longer storage periods, etc., offset the lower cost of floating *per se*. Four zones are distinguished: in the lowest part of the valley, truck transport predominates; it is in the zone immediately north, with the coast farther away that floating is most common, and it is cheaper, but trucking to the coast is used to a large extent, and this zone has grown during the investigation period. The third zone is so remote from the coast that floating is more economic, this zone has decreased in size. In the fourth zone of the outermost branches of the waterway network, floating is being superseded: timber is trucked partway down the valley to the more economic floating-ways or all the way to the coast; this zone has expanded. (SPRI.)

72261. **HULTON, P. H.** John White's drawings of Eskimos. (Beaver, summer 1961. outfit 292, p.16-20, illus.)

Describes and reproduces two portraits in the British Museum of a south Baffin Island Eskimo man and woman, captured during Frobisher's second expedition in 1577. A drawing of a skirmish between Eskimos and Englishmen is known only from an early copy; it is believed to depict an incident during the same expedition, which the artist apparently accompanied. Other drawings with Eskimo themes known only through copies are also noted. (DI.)

72262. **HULTQVIST, BENGT, 1927–** . On auroral isochasms and the orientation of auroral arcs. (*In:* International Conference on Cosmic Rays and the Earth Storm, 1961. Proceedings *pub.* 1962. v.1, p.78-91, maps.) 35 refs.

Reviews published observational data concerning the configuration and location of the northern and southern auroral zones as related to the circles projected from the geomagnetic equatorial plane outside the earth, on to the earth's surface along the geomagnetic field lines. Author believes the northern and southern auroral zones to be geomagnetically conjugate curves corresponding to projections of circles in the geomagnetic equatorial plane on to the earth's surface along the real geomagnetic field lines. Comparing the average direction of auroral arcs and bands at Kiruna, and the diurnal variation of quiet arcs there, he finds that near the auroral zones, the diurnal variation curve is similar to the theoretical curve of Alfvén. The azimuth change of quiet auroral arcs that occurred at Kiruna in the morning was so rapid as to resemble a discontinuity which had the same amplitude as that of the theoretical curve but is displaced about 1½ hours in the positive time direction. (DLC.)

72263. **HULTQVIST, BENGT, 1927–** . On the orientation of auroral arcs. (Journal of atmospheric and terrestrial physics, Jan. 1962. v.24, no.1, p.17-30, table, diagrs., maps.) 25 refs.

Presents results of a study of the diurnal variation in the direction of arcs at Kiruna, Sweden, and reviews results of similar (mostly IGY) studies by other investigators. Near the auroral zone the diurnal variation curve resembles that predicted theoretically by Alfvén. A morning discontinuity is present at Kiruna. The auroral geometric pattern over the central polar cap is similar to the SD current pattern of Chapman and Vestine. In or near the auroral zones, the average arc direction at a given time appears to be determined by the projections of circles in the geomagnetic equatorial plane on the earth's surface along the geomagnetic field lines. (DLC.)

HULTQVIST, BENGT, 1927– , *see also*

Egeland, A., & *others*. . . . VHF oblique auroral reflections. 1962. No. 71201

Ortner, J., & *others*. New sporadic layer . . . 1960. No. 74544

Ortner, J., & *others*. SCNA & geomag. storm. 1962. No. 74545

Pfotzer, G., & *others*. . . . X-ray bursts in the auroral zone. 1962. No. 74771

72264. HUMMEL, CHARLES L. Preliminary geologic map of the Nome C-1 quadrangle, Seward Peninsula, Alaska. Washington, D.C., 1962. map sheet 31 x 24 in. (U.S. Geological Survey. Mineral investigations field studies map MF-247). Refs.

Maps at scale 1 in.: 1 mi. the stratigraphic, structural, and economic geology of this area 64°30′ - 64°45′N. 165° - 165°30′W. including Nome village, based on 1953-54 and 1956-57, field work. A dozen units are shown, ranging from Lower - Middle Paleozoic schists to unconsolidated deposits of Pleistocene and Recent age. Numerous folds and faults are indicated. Thirty mines or prospects are shown, many for gold, lead or antimony. (DGS.)

72265. HUMMEL, CHARLES L. Preliminary geologic map of the Nome D-1 quadrangle, Seward Peninsula, Alaska. Washington, D.C., 1962. Map sheet 32 x 18 in. (U.S. Geological Survey. Mineral investigations, field studies map MF-248.) 2 refs.

Map at scale 1:63,360, contour interval 50 ft., of general stratigraphy and rock types, and structural features, also mines or prospects, in the area 64°45′ - 65°N. 165° - 165°30′W. Most of the metasedimentary strata, Lower to Middle Paleozoic, are included in the Nome group. The 20 mines or prospects represent gold, copper, iron sulfides, lead, antimony, and scheelite. (DGS.)

HUMPHREY, LEONARD, *see* Horowitz, S., & L. Humphrey. Satellite sounder . . . 1961. No. 72240

HUMPHREYS, P. C., *Jr.*, *see* Hyman, C., & *others*. Distensibility of digital blood vessels . . . 1961. No. 72286

HUMPHREYS, WILLIAM JACKSON, 1862–1949, *see* Bentley, W.A., & W.J. Humphreys. Snow crystals. 1962. No. 70141

72266. HUMPHRYS, E. W. Possibilities of light and heat from atomic energy and other sources. (*In:* Royal Society of Canada. Canadian population . . . symposium, 1962, p.118-24.)

Discusses potentialities for using atomic energy at sites in northern Canada. The small size and long duration of the fuel charge for a nuclear plant afford advantages over oil and hydroelectric power. The as yet incomplete development of atomic energy for such purposes is noted. Costs are discussed, and considered competitive with those of conventional energy sources. Possibilities are also mentioned of using thermionic energy converters and fuel cells to supply small amounts of energy. (DLC.)

HUMPHRYS, E. W., *see also* Bogdan, K. Nuclear plants . . . 1961. No. 70283

72267. HUNKINS, KENNETH LELAND, 1928– , *and others*. Geophysical studies of the Chukchi cap, Arctic Ocean. (Journal of geophysical research, Jan. 1962. v.67, no.1, p.235-47, diagrs., maps.) 16 refs. *Other authors:* T. Herron, H. Kutschale, *and* G. Peter.

Reports echo-sounding, seismic-reflection, and magnetic measurements made across the cap from drifting station Charlie in 1959. The cap is 130 km. wide at the line of crossing and its minimum depth is 246 m. A 5-30 m. microrelief on the top is attributed to gouging by icebergs. Seismic reflection results indicate that the top is thinly covered with unconsolidated sediment but that small basins at the foot of the western margin may be filled to 1 km. depth. A magnetic anomaly with a maximum peak-to-trough amplitude of 1600 gammas, associated with the western margin, is attributed to a large ridge in a basement rock of high susceptibility. Magnetic diurnal variations show a characteristic morning maximum at 1800 GMT. It is concluded that the cap is a dissociated section of continental shelf.–From author's abstract. (DLC.)

72268. HUNKINS, KENNETH LELAND, 1928– . Waves on the Arctic Ocean. (Journal of geophysical research, June 1962. v.67, no.6, p.2477-89, tables, graphs, map.) 12 refs.

Discusses a continuous vertical oscillation of the ice observed at four American drifting stations. Oscillations in the 15-60 sec. period range were detected with seismometers and gravity meters; displacement amplitudes were about 0.5 mm. at 30 sec. Amplitudes increase roughly as the square of the period. The oscillations are generated by wind action at least in part; in one case they were identified as propagating waves. Theoretical dispersion curves for propagating flexural-gravity waves are presented. Oscillations in the 10-100 min. period range were detected with a tide recorder at station T-3, grounded on the continental shelf 130 km. northwest of Pt. Barrow. Displacement amplitudes were about one cm. at a period of 30 min. and rough proportional to period. The Arctic Ocean wave spectrum is in contrast with that of other oceans: the spectral peak due to sea and swell is absent; a monotonic increase in displacement amplitude is indicated by present data, as the periods range from about 0.1 to 60 sec. in deep water or 0.1 sec. to 100 min. on the continental shelf.–From author's abstract. (DLC.)

HUNKINS, KENNETH LELAND, *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

HUNSUCKER, ROBERT D., *see* Alaskan Science Conference 1960. 1961. No. 69643

HUNT, A. DIGBY, *see* Palmer, J.C., & A.D. Hunt. Promise . . . Arctic I. 1961. No. 74629

72269. HUNT, *Sir* JOHN, *and* J. C. G. SUGDEN. An expedition to the Staunings Alper, Scoresby Land. (Geographical journal, Mar. 1962. v.128, pt.1, p.39-48, plate, map.)

Contains a narrative account of the Greenland Expedition 1960 by its leader, and a report of strandline investigations by Sugden. The 38-man party studied glaciology and ornithology in East Greenland, made several first ascents of mountains and glaciers, and explored hitherto unvisited areas in the South Staunings. Strandlines were studied in the Dammen region of Alpefjord in the Central Staunings. The highest to approx. 192 ft., were formed during recent centuries when glaciers cut off part of the fjord from the sea. Lower strandlines were formed by glacial advance within the last 60-70 years. (DGS.)

72270. HUNTER, C. F. Engineers build a bridge in the Yukon. (Canadian army journal, spring 1962. v.16, no.2, p.120-30, 136, illus., map.)

Describes in detail the construction of a 290

ft. broken-span Bailey bridge across the Frances River, 75 miles north of Watson Lake, to connect two sections of northern development road. The bridge was built by a Royal Canadian Engineers Field Squadron for the Depts. of Public Works and of Northern Affairs and National Resources. Site reconnaissance, preparation of 180 wooden piles, and assembly of materials were carried out in July-Aug., and actual construction in Nov.-Dec. 1961. Problems of permafrost are discussed briefly. (CaOGB.)

72271. HUNTER, HUGH EDWARDS, 1915– . A study of the Tow Lake gabbro, Granville Lake Mining Division, Manitoba. Winnipeg, 1958. 47 p. fold. map, tables, diagrs. (Manitoba. Dept. of Mines and Natural Resources. Mines Branch. Publication 53-5.) 13 refs.

Reports geological mapping and petrologic examination in 1953, to determine the possibility of finding nickel deposits in this basic intrusive body, 35 miles east of Lynn Lake. The rock units and structural geology of the area are described and mapped at scale 1 in.: 1000 ft., The gabbro, probably of post-Sickle age, was emplaced horizontally between Wasekwan rocks in the interval between two episodes of regional metamorphism. From reconstruction of its pre-metamorphic mineralogy and structure, the original composition and probable cooling history of the magma are deduced. These indicate that no appreciable amount of sulfide phase separated at any stage during the crystallization, hence no nickel sulfides of economic value will be found. (DGS.)

HUNTER, S. J., *see Western miner.* Can. Tungsten Corp. 1962. No. 76533

72272. HUNTER, W. B. Water transportation, Mackenzie River watershed. (Canadian mining and metallurgical bulletin, Oct. 1961. v.54, no.594, p.740-42.) Paper presented at the Canadian Institute of Mining and Metallurgy meeting, Quebec, Mar., 1961.

Describes unique features of tugs and barges operated by the Northern Transportation Co. Ltd. on the Mackenzie system. Problems of shallow water, the variable navigation season, and coastal operations in the Canadian Western Arctic are discussed. Trans-shipping, discharge of cargo, etc. are dealt with. (DGS.)

HUNTLEY, B., *see* Philip, R.N., *& others.* Serologic and skin test . . . tularemia . . . 1962. No. 74775

HURD, RICHARD M., *see* Alaskan Science Conference.1961. 1962. No. 69644

72273. HURLBERT, JANICE. Age as a factor in the social organization of the Hare Indian of Fort Good Hope, N.W.T. Ottawa, Sept. 1962. 80 p. graphs, tables, maps. (Canada. Dept of Northern Affairs and Natural Resources. Northern Co-ordination and Research Centre, 62-5.) 25 refs.

Study of social behavior by age phase, based on 1961 field work of Miss Hiroko Sue and the author in this lower Mackenzie valley area. Pre- and post-contact history of the Hare bands, ecology and population (1827–1961) of the area, the settlement pattern, and housing are sketched. Household composition, kinship ties, and the year-round economic cycle are described; the living pattern and activities are delineated for each of the five age grades: infancy, childhood, adolescence i.e. 12 years old to marriage, middle-age through the 40's, and old age. Livelihood by subsistence economy, full and partial wage employment, and public relief is discussed, as are the traditional and formal education, leadership, religious and social activities, medical care, etc. The heightened status of oldsters with their independent incomes through the federal old-age pension, is noted. The adolescent group is the most dependent on wage economy and the best equipped, by vocational training, to hold jobs; but when wage labor is unavailable, this is the group most likely to be in trouble, as the teen-agers have no knowledge of the traditional economic skills familiar to the older generation. (DLC.)

HURWITZ, H. I., *see* Angelakos, E.T., & H.I. Hurwitz. . . . hypothermia on digitalis toxicity. 1961. No. 69802

HURWITZ, LOUIS, *see* Nelson, J.H., *& others.* Magnetism earth. 1962. No. 74288

HUSEBYE, HARALD STEIN, *see* Laerum, O.D., & G.S. Pedersen. Svalbardveg 1959 . . . 1962. No. 73273

72274. HUSSEY, KEITH M., *and* **R. W. FAAS.** Foraminiferal paleoecology of the Gubik (Pleistocene) formation of the Barrow area, Northern Alaska. Ames, Iowa, 1961. 11 l. graphs, tables. 11 refs.

Examination of samples taken from various units of this formation in a drill hole about 1.5 mi. south of Barrow village was made to determine their foraminiferal content. Application of recent knowledge indicates the possible response of such fossil assemblages to depth changes. Correlation of these assemblages with particle-size distribution reveals a condition of relatively shallow water, under near-shore conditions. Temperatures appeared to grow colder during the period under consideration. No pelagic genera or arenaceous forms were found. (CaMAI.)

72275. HUSSEY, KEITH M., *and* **R. W. MICHELSON.** Tundra relief features near Point Barrow, Alaska. Ames, Iowa, June 1961. 34 l. illus., maps incl. 2 fold., diagr., tables. 28 refs.

Describes some minor relief features of a 150-sq. mi. area, their topographic setting, also their relationship to surface geomorphic processes and to subsurface conditions in the permafrost. Evolution of present topography is dealt with, also aerial photointerpretation of terrain features. Field work was carried on from the Arctic Research Laboratory at Barrow, Aug.-Nov. 1958 and June-Aug. 1959; detailed study was made of the variety of surficial features shown on a map on scale of 1 in.: 1.4 mi. Topography in this area, as in other permafrost regions, results from the interaction of erosion and mass wasting as well as such local processes as: fracture and movement of material because of thermal contraction and expansion; aggradation caused by the accumulation of ground-ice; and degradation from thawing of ground-ice. Aerial photography proved of aid in locating positions, also in picking out minor surface details difficult to spot in the field. (DLC.)

HUSSEY, KEITH M., *see also*

Carson, C.E., & K.M. Hussey. Hydrodynamics . . . arctic lakes. 1960. No. 70618

Carson, C.E., & K.M. Hussey. Oriented lakes . . . 1962. No. 70620

72276. HUSTICH, ILMARI, 1911– , *Editor.* Symposium on man's influence on nature in Finland. Helsinki, 1960 *pub.* 1961. 128 p. maps. (Fennia 85.) Refs.

Contains papers and discussions (in Finnish) on man's influence in a subarctic environment, presented at meetings in Nov.-Dec. 1959. Papers dealing with northern Finland are abstracted in this Bibliography under their authors' names, viz:

KALLIOLA, R. Man's influence on nature in Finland.

OKKO, V. Man as the shaper of the earth's surface in Finland (paper in German).

JALAS, J. Cases on introgression in the flora of Finland, due to man's activities (in German). (DLC.)

72277. HUSTON, RENE. Journey north. (North, May-June, 1961. v.8, no.3, p.36-37, illus.)

Describes growth since 1949 of Grimshaw Trucking & Distributing Ltd. which hauls freight between Edmonton and Yellowknife, Mackenzie District. The firm pioneered a winter-road route, partly across the ice of Great Slave Lake, to Yellowknife in 1956. (DLC.)

HUTCHEON, N. B., *see* Handegord, G.O.P., & N.B. Hutcheon. The use of test buildings . . . 1960. No. 71984

72278. HUTCHINS, PHILIP F. Authigenic minerals in Carboniferous sediments from central Vestspitsbergen. (Geological magazine, Jan.-Feb. 1962. v.99, no.1, p.63-68, plate, diagr.) 7 refs.

Describes postdepositional low-temperature mineralogical changes shown by detrital sedimentary rocks collected from the Carboniferous Formation of Billefjorden during the Cambridge Spitsbergen Expeditions of 1949–53. The changes include the crystallization of apatite, quartz, and feldspar, and the replacement of feldspar and quartz by calcite and dolomite. Minerals of the chalcedonite-lutécime-quartzine group also occur. –From author's abstract. (DGS.)

72279. HUTCHINSON, RALPH. Mount McKinley, South peak. (Canadian alpine journal, May 1962. v.45, p.89-101, illus., diagr.)

Describes the ascent of the four-man Canadian party in May 1961. (DGS.)

72280. HVARFNER, HARALD. En stad blir till. (Norrbotten, 1962, p.169-76, illus.) Text in Swedish. **Title tr.:** A town comes into being.

Photographs from various sources and brief text on the early years of Kiruna, north Sweden, where systematic mining for iron was started in 1902. (SPRI.)

HVARFNER, HARALD, *see also* Bergström, L., & H. Hvarfner. Nya tag . . . 1962. No. 70164

72281. HYLBOM, RICHARD. Polarharen, *Lepus arcticus* Leach. (Svensk faunistisk revy, 1954. årg. 16, nr.2, p.45-46, illus.) Text in Swedish. **Title tr.:** The article hare, *Lepus arcticus* Leach.

Presents notes from a 1950 visit to northeast Greenland on the summer and winter food and pelage (white with black ear tips) of this hare; its claws are harder than those of other varieties, and it differs in summer pelage from the related forms *L. a. bangsi* Rhds. in Newfoundland, and *L. labradorius* Mill. in Labrador. (DLC.)

72282. HYLBOM, RICHARD. En resa till Östgrönland sommaren 1950. (Svensk faunistisk revy, 1951. årg. 13, nr.1, p.9-13, illus.) Text in Swedish. **Title tr.:** A journey to East Greenland in the summer of 1950.

Describes features of natural history as observed while with the Lauge Koch expedition: passage through the pack ice, life especially off the Liverpool coast, and near the base in the Franz-Josef Fjord region, vegetation, etc. A second site in Greenland for *Potentilla stipularis* was found. Insects, mammals, rodents, and sea animals are briefly noted. (DLC.)

72283. HYLEN, ARVID, *and* **G. S. SAETERSDAL.** Beskatningen av fiskebestandene i våre nordlige farvann; Norsk og internasjonalt arbeid for å motvirke overfiske. (Fiskets gang, Feb. 16, 1961. årg. 47, nr.7, p.151-57, tables, graphs.) 4 refs. Text in Norwegian. **Title tr.:** Taxing of fish populations in our northern waters; Norwegian and international efforts to counteract overfishing.

Reports analysis of catch by England, Norway, USSR, and West Germany since 1930 in the Barents Sea, the Bjørnøya-Svalbard banks, and the Norwegian coastal waters: sharp increase of immature cod from the first two areas and decrease of mature cod from North Norway waters; also a 65% decrease generally of cod over six years of age, mainly due to overfishing. Increase of mesh size from 100 to 130 mm. diam. to prevent catch of young cod and discourage fishing where immatures predominate, is considered. Despite immediate loss, the increase in yield after 2-3 yrs. is estimated at 10% or 95,000 - 100,000 tons. Haddock in arctic waters is decreasing in the same degree as cod. International regulation of these fisheries, the need and difficulties of its establishment and enforcement are discussed. (DA.)

72284. HYLEN, ARVID. Om beskyttelse av fiskebestander. (Fiskets gang, Feb. 9, 1961. årg. 47, nr. 6, p.127-35, tables, graphs.) 6 refs. Text in Norwegian. **Title tr.:** Protection of fish populations.

Reviews the factors, natural and human, which influence the yield of such fish as the arctic cod which matures in 4-14 yrs. and migrates from the Barents Sea to Norwegian waters for spawning, and the smaller fjord cod which matures in 4-9 yrs. and remains in Norwegian waters. Distribution, migration, growth and maturity, and natural mortality rate are considered; spawning success is influenced by wind, current and temperature effects on eggs and larvae, as well as by predators and nutrient supply. North Sea trawling for various species and Barents Sea by Russians for young arctic cod have so adversely affected fish populations, as to threaten the entire industry. International regulations for management of propagation and age group distribution are under study. Increase of mesh size is recommended from Norwegian research, to protect young cod and discourage fishing in areas where young fish predominate. Economic aspects are considered. It is also recommended that mesh

size for the North Sea be regulated by areas where certain species predominate rather than by species. (DA.)

72285. HYLEN, ARVID, *and others.* Torskeundersøkelsene i Lofoten og i Barentshavet 1960. (Fiskets gang, Feb. 2, 1961. årg. 47, nr. 5, p.101-114, tables, graphs, sketch maps.) Text in Norwegian. *Other authors:* L. Midttun *and* G.S. Saetersdal. **Title tr.:** Cod investigations in the Lofoten waters and Barents Sea, 1960.

The Lofoten area examined Jan. 22-Mar. 25, 1960, indicated that the cod stock available to long line and gill net fisheries in 1961 would be 25-30% less than 1960 and dominated by large, mature fish. Tagging recoveries indicated that 3-4% migrate to areas south of Lofoten. Barents Sea investigations of Mar. 23-Apr. 20 indicated that long-line catches of spring cod in Finnmark waters in April-July 1961 would be dominated by 5-7 year-old fish 40-90 cm. in length. Cod and herring distribution in the Barents Sea was investigated in relation to temperature at 150 m. depth. In the fall, the fish are in waters above 2°C. along an arctic current and in an eastward tongue of warm water. In spring, the fish migrate southward towards the Finnmark-Murman coasts. There is a long-term east-west fluctuation in fish distribution. On a short-term basis, warm years result in an easterly distribution and low yield; cold years, in a westerly distribution and high yield. (DA.)

HYLEN, ARVID, *see also* Saetersdal, G.S., & A. Hylen. Skreiundersøkelsene . . . 1959. No. 75323

72286. HYMAN, CHESTER, *and others.* Distensibility of digital blood vessels in cold environment. (Journal of applied physiology, Mar. 1961. v.16, no.2, p.257-60, illus., tables.) 17 refs. *Other authors:* J.D. Arthur, A.D. Trotter, *Jr.,* P.C. Humphreys, *Jr., and* T. Winsor.

Presents an explanation of the principle, and the method applied and reports results in subjects exposed to cold air. Distensibility of the finger-tip vessels decreased during exposure, with evidence that both high- and low-pressure vessels are involved. (DLC.)

72287. ÍÂBLOKOV, ALEKSEĬ VLADIMIROVICH, 1933– . Funktsional'naĭa morfologiĭa organov dykhaniĭa zubatykh kitoobraznykh. (Akademiĭa nauk SSSR. Ikhtiologicheskaĭa komissiĭa. Trudy soveshchaniĭ, 1961. vyp.12, p.79-86, illus.) 30 refs. Text in Russian. **Title tr.:** Functional morphology of the respiratory organs of toothed whales.

Reviews earlier work and describes the anatomy of these whales, with emphasis on peculiarities linked to aquatic life, and specifically diving. The problem of isolation against hydrostatic pressure is explained on anatomical grounds. (DLC.)

72288. ÍÂBLOKOV, ALEKSEĬ VLADIMIROVICH, 1933– .Nekotorye osobennosti mochepolovoĭ sistemy kitoobraznykh. (Moskovskoe obshchestvo ispytateleĭ prirody, otdel biologicheskiĭ. Biŭlleten' 1961. t.66, vyp.2, p.33-38, illus., table.) 10 refs. Text in Russian. Summary in English. **Title tr.:** Some features of the urogenital system of cetaceans.

Describes changes in location of reproductive organs in male and female, due to loss of hind extremities, and shift of locomotion to the tail, changes in pelvic bones; form and function of kidneys, variability of uterus rudiments. (DLC.)

72289. ÍÂBLOKOV, ALEKSEĬ VLADIMIROVICH, 1933– . O znachenii stepeni razvitiĭa muzhskoĭ matki kak taksonomicheskogo priznaka u kitoobraznykh. (Moskovskoe obshchestvo ispytateleĭ prirody, otdel biologicheskiĭ. Biŭlleten' 1961. t.66, vyp.6, p.149-50, illus.) 10 refs. Text in Russian. **Title tr.:** The degree of development of the male womb and its significance as a taxonomic character in whales.

Having studied several dozens of the beluga *Delphinapterus leucas,* author describes variation in this rudimentary organ, up to its complete absence. (DLC.)

72290. ÍÂBLOKOV, ALEKSEĬ VLADIMIROVICH, 1933– . Ob "obonĭanii" morskikh mlekopitaiŭshchikh. (Akademiĭa nauk SSSR. Ikhtiologicheskaĭa komissiĭa. Trudy soveshchaniĭ, 1961. vyp. 12, p.87-93, illus., table.) 14 refs. Text in Russian. **Title tr.:** "Smelling" in marine mammals.

Describes pits at the base of the tongue, showing microscopically glandular structure and secretion. Author believes that this secretion is instrumental in smelling, though he acknowledges that the existence of a sense of smell in cetaceans is almost universally denied. (DLC.)

72291. ÍÂBLOKOV, ALEKSEĬ VLADIMIROVICH, 1933– . Sud'ba grenlandskogo tiŭleniĭa.(Priroda, Feb. 1962, god 51, no.2, p.66-72, illus., map.) Text in Russian. **Title tr.:** The fate of the Greenland seal.

Deals with its geographic distribution and ecology, Russian exploitation in the White Sea, reproduction, nursing and development of the young, seasonal life cycle, present day hunting and utilization in the Soviet Union, protection and management. (DLC.)

ÍÂBLOKOV, ALEKSEĬ VLADIMIROVICH, 1933– *see also*

Bel'kovich, V.M., & A.V. ÍÂblokov. Sredi morzheĭ. 1961. No. 70103

Nazarenko, ÍŬ. I., & A.V. ÍÂblokov. Otsenka metoda . . . tiŭleniĭa. 1962. No. 74240

72292. ÍÂBLOKOV, K. V., *and* **I. ÍÂ. NEKRASOV.** O geologicheskom stroenii khrebta Ulakhan-Sis. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geologicheskaĭa, May 1961, no.5, p.58-65, map.) 7 refs. Text in Russian. **Title tr.:** On the geologic structure of the Ulakhan-Sis Range.

Reports these mountains (70°N. 151°E.) between the lower Indigirka in the west and Alazeya in the east, built of Paleozoic and Mesozoic formations dissected by intrusive and effusive rocks. A stratigraphic column is briefly described. The magmatic rocks consist of three complexes different in age. Tectonic movements are interpreted. The Ulakhan-Sis is considered a great intraformational intrusive body. (DLC.)

ÍÂBLOKOV, K. V., *see also* Nekrasov, I.ÍÂ., &

K.V. ÎAblokov. Osnovnye cherty metallogenii . . . 1961. No. 74274

72293. ÎABLONSKAÎA, V. P. Issledovanie perenosa tepla v promerzaîūshchikh gruntakh metodom mgnovennogo istochnika. (*In:* Materialy po laboratornym issledovaniîām merzlykh gruntov, 1961. sbornik 4, p.104-110, tables, graph, diagr.) 3 refs. Text in Russian. **Title tr.:** Study of heat transfer in freezing soils by means of the momentary source method.

Describes instrument for measuring heat transfer in soil samples using an electrical filament to create a short heat impulse and a thermocouple to record the temperature change at three mm. distance. Results are presented and discussed of measurements of the heat conductivity coefficients of frozen sand and loam samples as a function of their moisture contents. The coefficient of sand is highest (2.5-2.8 Cal./m. hour degree) in samples having 10-11% moisture content; in loams it reaches its maximum (2-2.1) at 23-25% moisture. The value of the coefficient drops sharply when the moisture content is increased beyond the level. (DLC.)

ÎABLONSKIĬ, O. A., *see* Akademiîa nauk SSSR. Institut geografii. . . . Novaîa Zemlîa, snezhnyĭ pokrov. 1962. No. 69551

72294. ÎAKOVENKO, M. ÎA. Metodika opredeleniîa vozrasta belomorskogo lysuna v sviāzi s opredeleniem norm ego promysla. (Akademiîa nauk SSSR. Ikhtiologicheskaîa komissiîa. Trudy soveshchaniĭ, 1961. vyp.12, p.192-98, illus.) 24 refs. Text in Russian. **Title tr.:** Method of determining the age of the White Sea harp seal in connection with fixing norms of its capture.

Account of Russian exploitation of *Phoca groenlandica* in the White Sea; earlier and recent stock estimates; age determination from teeth and its application by author; age and maturity determination of White Sea and Jan Mayen catches. (DLC.)

72295. ÎAKOVENKO, M. ÎA. Nablīūdeniîa za vozrostno-polovym sostavom belomorskogo lysuna v 1959 g. (Murmansk. Polîārnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozîaĭstva i okeanografii. Nauchno-tekhnicheskiĭ bīūlleten', 1960, no.3 (13), p.30-33, illus., table.) Text in Russian. **Title tr.:** Observations on the age-sex composition of White Sea harp seal in 1959.

Describes sealing in the area, in general and during 1959; reproduction on the rookeries; kill and its composition during the different phases of the hunting season; effect of kill on the size of the herd, which is part of the Greenland seal population. (DLC.)

ÎAKOVENKO, M. ÎA., *see also* Surkov, S.S., & M. ÎA. ÎAkovenko. O rezul'tatakh zveroboĭnogo promysla . . . 1959. No. 76008

72296. ÎAKOVLEV, GURIĬ NIKOLAEVICH. Ledoissledovatel'skie raboty v TSentral'noĭ Arktike. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.11, p.47-57, illus., graphs, diagrs.) 26 refs. Text in Russian. **Title tr.:** Ice research in the Central Arctic.

Summarizes studies by the North Pole drifting stations on growth and melting, morphology and relief formation, hummocks and other features of drift ice. Its thermal regime, temperature variation, turbulent heat exchange, and heat balance are reported, as are its physical and mechanical properties. The value of drifting stations for this kind of ice studies is stressed. (DLC.)

72297. ÎAKOVLEV, GURIĬ NIKOLAEVICH. O tipizatsii raspredeleniîa temperatur v tolshche ledîanogo pokrova. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.10, p.77-80, tables, graphs.) 3 refs. Text in Russian. **Title tr.:** On the types of temperature distribution in the stratum of ice cover.

Discusses distribution of temperature in the ice cover of the arctic seas and its variation throughout the year. Four characteristic periods are distinguished: a winter of November through April, spring in May-June, summer July-August, and autumn September-October. For each of these periods, the ice temperature variation is represented by a typical curve and is characterized. Yearly temperature fluctuation on the surface of the ice, and at 1, 2, 2.5 m. depths also is demonstrated. (DLC.)

ÎAKOVLEV, SEMEN STEPANOVICH. *see* Eristin, Erilik, 1892-1943.

72298. ÎAKOVLEV, V. M. Opornoe davlenie pri podrabotke plastov, opasnykh po vnezapnym vybrosam uglîa i gaza. (Ugol', July 1962. god 37, no.7, p.47-50, illus.) 7 refs. Text in Russian. **Title tr.:** Counter pressure during the working of coal and gas seams where coal and gas explosions are a hazard.

Describes the sudden ejections of coal and gas which occurred in the Kapital'naya pit of the Vorkuta coal mines in Aug. 1961, when a seam at 450-460 m. depth was being worked; there were in all 16 outbursts ejecting 1.2 to 37 tons of coal and 150 to 1960 m^3 of methane. The causes are analyzed and safety measures discussed. (DLC.)

72299. ÎAKOVLEV, V. N. Rasprostranenie presnovodnykh ryb neogena Golarktiki i zoogeograficheskoe raîonirovanie. (Voprosy ikhtiologii, 1961. t.1, vyp.2 (19), p.209-220, table.) 33 refs. Text in Russian. **Title tr.:** Distribution of fresh-water fishes in the Neogene Holarctic and their zoogeographic division.

Deals with the distribution of main families and genera, and includes circumpolar areas. The analysis suggests that no unique fresh-water ichthyofauna existed in the Neogene, the present zoogeographic division of these fish being in existence since the Miocene. Relations with other areas are also considered. (DLC.)

ÎAKOVLEVA, E., *see* Krīūkova, I.A., & E. ÎAkovleva. Na vystavke îākutskogo iskusstva. 1958. No. 73143

ÎAKOVLEVA, S. V., *see* Ganeshin, G.S., & *others*. Karta . . . 1961. No. 71580

ÎAKOVLEVA, S. Z., *see* Gerling, E.K., & *others*. Opredelenie vozrasta . . . 1962. No. 71658

ÎAKOVLEVSKAÎA, T. A., *see* Genkin, A.D., &

others. Usloviia nakhozhdeniia apatita . . . 1961. No. 71627

IAKUSHEVA, T. S., *see* Gasanov, S.G., & T.S. IAkusheva. Vliianie gipotermii . . . 1962. No. 71600

IAKUTSKAIA RESPUBLIKANSKAIA BIBLIOTEKA IM. A.S. PUSHKINA, *see* Bibliografiia IAkutskoĭ ASSR, 1931-1959, tom 2 . . . 1962. No. 70201

IAKUTSKIĬ, N., *pseud. See* Zolotarev, Nikolaĭ Gavriilovich.

72300. IALYNSKAIA, NADEZHDA STEPANOVNA, 1922– . Issledovanie zooplanktona i bentosa ozer i prudov Zapoliar'ia. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khoziaĭstva. Izvestiia 1959. t.48, p.33-43, tables.) 17 refs. Text in Russian. **Title tr.:** Study of the zooplankton and benthos of arctic lakes and ponds.

Reports conditions in Little and Great Pulozero and ponds of the Kola River valley, with lists of species recorded. The plankton was found to be rich both qualitatively and quantitatively, especially over the central areas. The benthos was rich in forms but quantitatively poor, with Chironomidae predominant. (DLC.)

72301. IAMPIETRO, PATSY F., 1925– , *and others.* Composition and caloric density of weight loss during caloric restriction to cold. (Journal of applied physiology, July 1961. v.16, no.4, p.624-26, illus., tables.) 8 refs. *Other authors:* R.F. Goldman, H. Mager, *and* D.E. Bass.

Reports a study of two groups of men living in shorts, for 14 days in an environment of 60°F., one of them semistarved (600 kcal/day), the other completely starved. Mean weight loss was 5.66 kg. for the first group and 8.56 kg. for the second. Composition and caloric density of weight loss was nearly identical in the two groups. (DLC.)

72302. IAMPIETRO, PATSY F., 1925– , *and* **D. E. BASS.** Heat exchanges of men during caloric restriction in the cold. (Journal of applied physiology, Nov. 1962. v.17, no.6, p.947-49, illus.) 7 refs.

Study of response to cold in men with caloric intakes ranging from 0 to 2800 kcal/day. An impaired ability was noted with 600 and 0 kcal intake the latter showing the lowest heat production of all groups towards the end of the experiment. (DLC.)

72303. IAMPIETRO, PATSY F., 1925– . Prediction of skin temperature of men in cold. (Journal of applied physiology, May 1961. v.16, no.3, p. 405-408, illus.) 6 refs.

Account of experiments with results used to develop a formula "for the estimation of mean weighted skin temperature as a function of duration of exposure (up to 180 min.), air temperature (90 to -20°F.), and windspeed (0-40 mph)." A chart for rapid estimation of skin temperature is also presented. (DLC.)

IAMPIETRO, PATSY F., 1925– , *see also* Fregly, M.J., & *others.* Effect of propylthiouracil treatment . . . 1961. No. 71493

Fregly, M.J., & *others.* Hypothyroidism, heat production & loss, cold. 1961. No. 71492

IANCHENKO, M. T., *see* Shilin, L.L., & M.T. IAnchenko. O knopite . . . 1962. No. 75586

72304. IANES, A. V. Taianie snega i l'da v Tsentral'noĭ Arktike. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.11, p.59-64, graphs.) 3 refs. Text in Russian. **Title tr.:** Thawing of snow and ice in the Central Arctic.

Analyzes observations made by the North Pole drifting stations and estimates on thawing in the Arctic Basin. Onset of intense snow thaw varies according to latitude and ranges from the first half of June in the lower latitudes (78°N.) to the end of June in the North Pole area. Ice thawing occurs later and varies with latitude and thickness of the snow cover. Melting of young and old ice is estimated and is demonstrated graphically. The melting of young ice progresses more rapidly than that of old ice. (DLC.)

72305. IANOVSKIĬ, NIKOLAĬ NIKOLAEVICH. Literatura narodov Sibiri; sbornik statei. Novosibirsk, Novosibirskoe knizhnoe izd-vo, 1956. 184 p. Text in Russian. **Title tr.:** Literature of the peoples of Siberia; a collection of articles.

Contains seven papers, three on northern peoples, abstracted under their authors' names, viz (titles tr.):

KANAEV, N.P. Literature of Soviet Yakutia.

SERGEEV, M.A. Literature of the peoples of the North.

SERGEEV, M.A. Literature of the peoples of Siberia; bibliographic materials. (DLC.)

72306. IANSHIN, ALEKSANDR LEONIDOVICH, 1911– . Perspektivy otkrytiia mestorozhdenii kaliinykh solei na territorii Sibiri. (Geologiia i geofizika, 1962. no.10, p.3-22, diagrs., maps, table.) 62 refs. Text in Russian. Summary in English. **Title tr.:** Prospects for potassium salt deposit discovery in the territory of Siberia.

Examines geologic, geophysical and geochemical evidences on presence of such deposits in the Lower Cambrian salt-bearing beds of the southern margin of the Siberian platform. The Kansk-Taseyeva depression is considered in particular, and drillings in anticlines to find oil found of little use for discovery of potassium salt. Synclines and anticline limbs should be examined, and an area north of Kansk is indicated where the drillings should start. (DLC.)

IANSHIN, ALEKSANDR LEONIDOVICH, 1911– , *see also* Kazarinov, V.P., & A.L. IAnshin. Perspektivy poiskov fosforitov . . . 1961. No. 72704

72307. IANULOV, K. P. Mochekamennaia bolezn' u morskikh okuneĭ *Sebastes marinus* L. i *Sebastes montella* Travin. (Akademiia nauk SSSR. Doklady 1962. t.144, no.5, p.1196-99, illus., tables.) 15 refs. Text in Russian. **Title tr.:** Kidney stones in the redfish *Sebastes marinus* L. and *S. mentella* Travin.

Describes 12 cases of kidney stones in these fish from waters off Labrador and Newfoundland. Photographs, including such of cross sections, chemical and X-ray analyses are included. (DLC.)

72308. IANYGIN, I. R. Zimov'e na Bystroĭ. (Okhota i okhotnich'e khoziaĭstvo, Mar. 1962. god 8, no.3,

p.44-46, illus.) Text in Russian. **Title tr.:** Winter hut on the Bystraya River.

Sketches the living conditions and work of hunters in the Lenskiy District in Yakutia: trapping sable, shooting squirrel, winter quarters, etc. (DLC.)

72309. ÎÀRIN, V. I. Ėmissiîà [NI] λ 5200 Å po nablîûdeniîàm v ÎÀkutske. (Akademiîà nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniîû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîàrnye siîàniîà i svechenie nochnogo neba. Sbornik stateĭ, 1962. no.9, p.53-54, graphs.) 4 refs. Text in Russian. Summary in English. **Title tr.:** The [NI] λ 5200 Å emission as observed at Yakutsk.

Informs of observations of the [NI] λ 5200 Å emission of auroras and airglow at Yakutsk in January 1960 during magnetically quiet days. Diurnal variations of the intensity of this emission are given but no correlation between it and the geomagnetic field activity is established. (DLC.)

72310. ÎÀRIN, V. I. Ėmissiîà OH po nablîûdeniîàm v ÎÀkutske. (Akademiîà nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniîû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîàrnye siîàniîà i svechenie nochnogo neba. Sbornik stateĭ, 1961. no.5, p.10-17, tables, graphs.) 16 refs. Text in Russian. Summary in English. **Title tr.:** Observations of OH emission at Yakutsk.

Reports some results of spectroscopic OH studies made at the Yakutsk station during the IGY. The dependence of OH emission intensity on rotational temperature T is established when $T \geq 250°K$. Such a dependence was not observed for lower T. Assuming that hydroxyl emission with $T > 250°K$ originates by ozone-hydrogen reaction, its activation energy is evaluated as 2.7 ± 0.5 kcal mol^{-1}. The relative population of the 9th vibrational level was found to increase with rotational temperature. Seasonal variation of OH temperature and intensity was observed. Considerable variations of temperature were often observed during one night. H_α line intensity in airglow spectrum tends to rise with OH intensity. (CaMAI.)

72311. ÎÀRIN, V. I. Nekotorye osobennosti kontinuuma v sumerkakh. (Akademiîà nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniîû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîàrnye siîàniîà i svechenie nochnogo neba. Sbornik stateĭ, 1962. no.9, p.61-62, table, graph.) 4 refs. Text in Russian. Summary in English. **Title tr.:** Certain features of the twilight continuum.

Gives some preliminary results of study of twilight sky emission according to the spectra obtained at Yakutsk in 1960. The spectrograms are interpreted in terms of different dip of the sun under the horizon. (DLC.)

72312. ÎÀRIN, V. I. Nepreryvnyĭ spektr i polosy Gerîsberga molekuly O_2 v izluchenii nochnogo neba. (Akademiîà nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniîû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîàrnye siîàniîà i svechenie nochnogo neba. Sbornik stateĭ, 1961. no.5, p.35-38, tables, graphs.) 11 refs. Text in Russian. Summary in English. **Title tr.:** The continuous spectrum and Herzberg O_2 bands in night airglow.

Analyzes the records of an unusually strong enhancement of the Herzberg O_2 band intensity observed in the airglow spectrum region of λ 4200-5600 Å, simultaneously with enhanced continuous emission. Intensity distribution in the range λ 5500-6700 Å of the continuous airglow spectrum is determined. A substantial part of the continuous airglow emission within the spectrum range of λ 4200-5600 Å emission should be of terrestrial origin. (CaMAI.)

72313. ÎÀRIN, V. I. O zavisimosti intensivnosti polos OH ot vrashchatel'noĭ temperatury. (Akademiîà nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniîû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîàrnye siîàniîà i svechenie nochnogo neba. Sbornik stateĭ, 1962. no.8, p.9-10, graphs.) 4 refs. Text in Russian. Summary in English. **Title tr.:** On the relationship of the OH band intensity and the rotational temperature.

Presents the results of reduction of the visual and infrared OH band spectrograms obtained at Yakutsk during 1960-1961. The earlier detected relationship between the intensity of the OH band (9.3) and the rotational temperature is maintained. The OH bands (5.0) and (3.0) exhibit this dependence in a weaker form. (DLC.)

72314. ÎÀRIN, V. I. Ob ėmissiîàkh molekuliîàrnogo kisloroda v ÎÀkutske. (Akademiîà nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniîû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîàrnye siîàniîà i svechenie nochnogo neba. Sbornik stateĭ, 1962. no.9, p.34-43, tables, graphs.) 52 refs. Text in Russian. Summary in English. **Title tr.:** On the emissions of molecular oxygen at Yakutsk.

Reports on the results of processed spectra O_2 in the airglow obtained in Jan., Nov., and Dec. 1960 with the aid of SP-48 and SP-49 spectrographs at Yakutsk (cf. No. 72310, 72312.) Tables of absolute intensities and rotational temperatures of the Herzberg bands, and the atmospheric band (0.1) of O_2 molecules are given. The intensities of Herzberg bands are compared with the intensities of OH, Na, and [OI] λ 6364 Å emissions. (DLC.)

72315. ÎÀRIN, V. I. Opredelenie vrashchatel'noĭ temperatury po polose (0,0) 1NG N_2^+ v polîàrnykh siîàniîàkh. (Akademiîà nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniîû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîàrnye siîàniîà i svechenie nochnogo neba. Sbornik stateĭ, 1961. no.5, p.53-55, table, graph.) 8 refs. Text in Russian. Summary in English. **Title tr.:** Determination of rotational temperature from the band (0.0) 1NG N_2^+ in auroras.

Presents data on ordinary and sunlit auroras from the spectrograms of R branch of the band (0.0) 1NG N_2^+ λ 3914 Å taken at Yakutsk during Feb.-Apr. 1960; and determines rotational temperatures of 350°K and 500°K for ordinary, and 1400°K and 2300°K for sunlit auroras. (CaMAI.)

72316. ÍÂRIN, V. I. Sutochnye i sezonnye variat͡sii radiootrazheniĭ ot polĭārnykh siĭāniĭ. (Akademiĭā nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniĭū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polĭārnye siĭāniĭā i svechenie nochnogo neba. Sbornik stateĭ, 1961. no.5, p.56-59, graphs.) 6 refs. Text in Russian. Summary in English. **Title tr.**: Diurnal and seasonal variations of radar reflections from auroras.

Presents some results of observations at Yakutsk (Φ = 51°, Λ = 193°8) during May 1958 through April 1960. Diurnal variations in the frequency of appearance of reflections show two maxima: at 17-22 and at 1-4 o'clock local time. Seasonal variations have four maxima: two at the equinoxes, and two at the solstices. Variations in the appearance frequency of radar reflections from auroras are described as related to their various types and forms. (CaMAI.)

72317. ÍÂRIN, V. I. Svĭāz' mezhdu nekotorymi ėmissiĭāmi nochnogo neba. (Akademiĭā nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniĭū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polĭārnye siĭāniĭā i svechenie nochnogo neba. Sbornik stateĭ, 1961. no.5, p.33-34, graphs.) 5 refs. Text in Russian. Summary in English. **Title tr.**: The correlation between certain emissions of night sky airglow.

Presents data on comparative intensities of airglow emissions from OH (9.3) band and Na λ 5890 Å observed at Yakutsk. A correlation between intensities of OH (9.3) and [01] λ 6364 Å was found to be similar to that observed at Zvenigorod by V.S. Prokudina for rotational temperatures of 200°-260°, but not above these temperatures. Supplement pub. by V.S. Prokudina, q.v. (CaMAI.)

72318. ÍÂRIN, V. I. Variat͡sii naselennosteĭ kolebatel'nykh urovneĭ molekul gidroksila. (Akademiĭā nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniĭū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polĭārnye siĭāniĭā i svechenie nochnogo neba. Sbornik stateĭ, 1962. no.9, p.10-18, tables, graphs.) 30 refs. Text in Russian. Summary in English. **Title tr.**: Variation in vibrational population rates of hydroxyl molecules.

Evaluates the possible variations of actual distribution of OH molecules according to their vibration rates, obtained from selected spectra recorded at Yakutsk in 1960-1961. The absolute intensities of OH bands were determined from these data, then the corresponding population rates of different vibration levels of hydroxyl molecules were determined. A tendency was noticed for the vibrational temperature to increase when the rotational temperature of the OH band increased. (DLC.)

ÍÂRIN, V. I., *see also*

Krasovskiĭ, V.I., & *others*. OH airglow. 1961. No. 73088

Kuz'min, A.I., & *others*. Iĭul' 1959 g. . . . 1962. No. 73250

Shefov, N.N., & V.I. ÍÂrin. O zavisimosti vrashchatel'noĭ temperatury OH . . . 1961. No. 75567

Shefov, N.N., & V.I. ÍÂrin. Shirotnye . . . ėmissii. 1962. No. 75570

72319. ÍÂRMOLIÍUK, V. A. Poleznye iskopaemye Kamchatki i puti ikh promyshlennogo ispol'zovaniĭā. (*In:* Akademiĭā nauk SSSR. Komissiĭā po problemam Severa. Syr'evye resursy . . . 1961, p.27-34.) Text in Russian. **Title tr.**: Useful minerals of Kamchatka and their development prospects.

Reviews the possibilities for oil, the distribution and reserves of coal; occurrence of sulfur, copper, mercury, gold, and other minerals; sources of mineral waters and construction materials. Intensified prospecting, organization of transport, utilization of coal, forests and other means of establishing industry in Kamchatka are discussed. (DLC.)

72320. ÍÂROGOV, B. A. Formirovanie Vostochno-islandskogo techeniĭā. (Akademiĭā nauk SSSR. Okeanograficheskaĭā komissiĭā. Trudy 1960. t.10, vyp.1, p.96-99, map.) 3 refs. Text in Russian. **Title tr.**: Formation of the East Iceland Current.

Reports Russian observations for the past 9-10 years in the area north of Iceland. Si content, plankton quantity, and drift bottles are utilized for reconstruction of the origin of this current, and its relation to other currents. (DLC.)

ÍÂROSHEVSKAÍÂ, G. A., *see* Davydova, N.I., & *others*. Volnovaĭā kartina . . . 1962. No. 70916

72321. ÍÂROSLAVT͡SEV, G. M. K voprosu o metodike izucheniĭā paleogeograficheskikh uslovĭ ugleobrazovaniĭā. (Materialy po geologii i poleznym iskopaemym Severo-Vostoka Evropeĭskoĭ chasti SSSR. Sbornik stateĭ, 1962. vyp.2, p.67-73, maps, cross-section.) 2 refs. Text in Russian. **Title tr.**: On the method for studying the paleogeographic conditions of coal formation.

Reports investigation of the Troynoy seam in the southern part of the Vorkuta coal deposits. It is separating into three smaller seams. Sections of 82 drill holes are analyzed; thickness of seams, distribution, and formation conditions are characterized. The mapping of single coal cycles and layers is considered of value for determining paleogeographic coal formation conditions. (DLC.)

ÍÂROSLAVT͡SEV, G. M., *see also* Afanas'ev, B.L., & *others*. Ob usloviiākh obrazovaniĭā uglenosnykh otlozheniĭ . . . 1961. No. 69495

72322. **IARROBINO, ANTHONY V.** Placing piles by vibrations. (Military engineer, Jan.-Feb. 1962. v.54, no.357, p.7-8, illus.) Ref.

Describes the Bodine Sonic Pile Driver, which is built on the principle that devices powered by sonic waves expand and contract in relation to the vibration frequency. The 400 hp. driver working at up to 140 impulses/sec. sets up vibration waves traveling at the speed of sound in the pile, the frequency being such as to place the pile in resonance frequency in order to transfer energy with high efficiency from the drain to the base of the pile. This power coupled with the expansion and contraction of the pile plus dead weight resting on the driver, forces the pile smoothly into the earth. It is suggested that the method may have particular

significance and applicability to placing piles in permafrost. (DLC.)

72323. ÎÂSHNOV, VLADIMIR ANDREEVICH, 1892– . Vodnye massy i plankton; 1, vidy *Calanus finmarchicus* s.l. kak indikatory opredelennykh vodnykh mass. (Zoologicheskiĭ zhurnal, Sept. 1961. t.40, vyp.9, p.1314-34, illus., maps.) 24 refs. Text in Russian. Summary in English. **Title tr.:** Water masses and plankton; 1, species of *Calanus finmarchicus* s.l. as indicators of definite water masses.

Deals with distribution of three *Calanus* species and its relation to water masses. The boreal *C. finmarchicus* s. str. is distributed in the northwestern North Atlantic and in the Norwegian and Greenland Seas, where it forms a stable population due to cyclonic water movements; part of it is carried by streams into the high Arctic. The arctic *C. glacialis* penetrates with cold currents into the Atlantic as far south as 40°N. A third species is confined to warm waters. All three species are indicators of water masses and their origin. (DLC.)

72324. ÎÂTSKOVSKIĬ, ALEKSEĬ IOSIFOVICH. Geograficheskie nazvaniĭa v raĭone Ichinskogo vulkana na Kamchatke. (Voprosy geografii, 1962. Sbornik 58, Geograficheskie nazvaniĭa, p. 165-66.) Text in Russian. **Title tr.:** Geographic names in the Ichinskiy Volcano region, Kamchatka.

Leader of a 1956 mountaineering party explains seven toponymics of Eveny (Lamut-Tungus) and Koryak origin: Alney, local name for Ichinskiy Volcano, means white or iced head; name of the town Esso is from the Koryak Isag meaning larch, etc. (DLC.)

ÎÂTSUK, V. I., *see* Afanas'ev., B.L., & *others*. Ob usloviĭakh obrazovaniĭa uglenosnykh otlozheniĭ . . . 1961. No. 69495

72325. ÎÂZAN, ÎU. P. Novyĭ sposob promysla loseĭ. (Okhota i okhotnich'e khoziĭaĭstvo, Feb. 1962. god 8, no. 2, p. 15-17, illus.) Text in Russian. **Title tr.:** A new mode of elk hunting.

Notes the rapid increase of the elk population in the Soviet Union, to 100 head/1000 hectares of pasture, too high for the available food resources. Control of the population by selective shooting in corrals built along the seasonal migration route was tried in the Pechora-Ilych Preserve with success, and the method was approved by a special conference on this problem held in Moscow Oct. 30, 1960. Various types of corrals are described; the cost of construction is estimated at 2000 rubles, easily recovered from the kill, said to be worth over 20,000 r./yr. (DLC.)

72326. ÎÂZAN, ÎU. P. O morfologii i ėkologii kunitsy, soboliĭa i kidasa Pechorskoĭ taĭgi. (Zoologicheskiĭ zhurnal, 1962. t. 41, vyp. 8, p. 1241-46, illus., tables.) 11 refs. Text in Russian. Summary in English. **Title tr.:** Morphology and ecology of the marten, sable and their hybrids (kidas) in the Pechora taiga.

Reports a study of over 400 specimens, which revealed the martens of the area to be smallest of their kind, smaller than the Pechora sables, and much smaller than the hybrids. Food differs with age and even sex, martens being the most adaptive. (DLC.)

72327. ÎÂZAN, ÎU. P. Unichtozhaet li kunitsa belku? (Okhota i okhotnich'e khoziĭaĭstvo, Oct. 1962. god 8, no. 10, p. 24-25, illus.) Text in Russian. **Title tr.:** Does marten deplete the stock of squirrel?

Reports a study based on eight-year records and analysis of the content of 497 marten stomachs and 172 excrements in the Pechora-Ilych Preserve. Squirrel was found to comprise 19.7% of the winter diet and 3.8% of the summer. Some 7-10 squirrels/marten/year is the extent of this predation, hence it cannot be considered responsible for the noticeable decrease in the squirrel population. (DLC.)

72328. ICHETOVKIN, N. V. K petrografii Verkhne-Allakhskogo montsonit-porfirovogo subvulkana; iuzhnoe Verkhoĭan'e. (*In:* Akademiia nauk SSSR. ÎÂkutskiĭ filial . . . Trudy, 1962. ser. geologicheskaiâ, sbornik no. 11, p. 16-29, illus., table, graphs, diagrs.) 27 refs. Text in Russian. **Title tr.:** On the petrography of the Verkhne-Allakhskiy monzonite-porphyry subvolcano, southern Verkhoyansk region.

Describes the geology of this massif on the upper Allakh-Yun' (60° 36′ N. 134° 56′ E.) and Yudoma Rivers, Yakut ASSR. Two varieties of quartzite monzonite-porphyry are distinguished and their petrographic composition is analyzed. The chemical composition of these rocks is described and data are tabulated. Crystallization of minerals in monzonite-porphyry is outlined. (DLC.)

72329. IDLIS, G. M., *and* Z. V. KARÎÂGINA. O kometnoĭ prirode Tungusskogo meteorita. (Meteoritika, 1961, vyp. 21, p. 32-43.) 34 refs. Text in Russian. **Title tr.:** On the comet-like nature of the Tungusskiy meteorite.

Evaluates the speed, mass, atmospheric and magnetic disturbances, optical phenomena, nucleus, tail, and other features of this meteorite, which fell in the Podkamennaya Tunguska basin June 30, 1908. Evidence indicates that it was a nucleus of a small comet, which developed a tail before it hit Earth. (DLC.)

IGARKA. Siberia. Igarskaiâ merzlotnaiâ stantsiiâ, *See under* Akademiia nauk SSSR. Institut merzlotovedeniiâ. Igarskaiâ . . . stantsiiâ.

72330. IGGO, A. Cutaneous heat and cold receptors with slowly conducting (C) afferent fibres. (Quarterly journal of experimental physiology, Oct. 1959. v. 44, no. 4, p. 362-70, illus., table.) 23 refs.

Describes responses from cats' receptors sensitive to heating or cooling the skin by 10 + °C. These receptors, claimed to represent two new types, responded slowly to thermal, and very slowly to mechanical stimuli. Conduction velocities in the afferent fibers were in the range of 0.5 to 1.2 m./sec. (DNLM.)

72331. IGLAUER, EDITH. A reporter at large, Mr. Snowden among The People. (New Yorker, Apr. 21, 1962. p. 105-154, illus.)

Reports impressions of the third (?) annual meeting of the George River Cooperative, estab-

lished in 1958, for Eskimos in northern Quebec. Cooperative projects: fishing for arctic char, logging, handicrafts, housing, etc. were discussed, through an interpreter, by the Eskimos and officials of the Canadian Dept. of Northern Affairs' Industrial Division, headed by Donald Snowden. (DLC.)

72332. IGNATCHENKO, NIKOLAĬ ALEKSANDROVICH. Geologicheskoe stroenie i formirovanie ĬAkutsko-Kangalasskogo raĭona; Lenskiĭ ugol'nyĭ bassein. Moskva, Izd-vo Akademii nauk SSSR, 1961. 144 p. tables, graphs, maps, diagrs., incl. fold. (Akademiīa nauk SSSR. ĬAkutskiĭ filial. Institut geologii.) About 70 refs. Text in Russian. **Title tr.:** Geologic structure and formation of the Yakutsk-Kangalassy region; Lena coal basin.

Reports results of his investigation of Mesozoic deposits and coal of this region in 1950-1958. Lithofacies method was used for determining conditions of sedimentation and coal formation. Eight genetic types of deposits are distinguished and characterized. Cyclic recurrence in Jurassic and Cretaceous deposits is examined. Nine phases in coal formation of the region are described. Petrography, types, and qualitative characteristics of of Mesozoic coal are analyzed. (DLC.)

IGNATIUS, HEIKKI, *see* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

72333. IGNATOV, V. S., *and others.* Rezul'taty geofizicheskikh issledovaniĭ v TSentral'noĭ Arktike. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. no. 11, p. 65-74.) 29 refs. Text in Russian. *Other authors:* N.A. Miliīaev *and* A.P. Nikol'skiĭ. **Title tr.:** Results of geophysical investigations in the Central Arctic.

Surveys investigations in geomagnetism from those of the icebreaker *Sedov* 1937-1940, the drifting station North Pole-1 of 1937-1938, through those of North Pole 2-7 during 1948-1958. Secular variations of the earth's magnetic field at high latitudes were determined, and magnetic maps of the entire arctic region prepared. Studies of geomagnetic field disturbances resulted in the discovery of the second auroral zone and confirmed Störmer's theory of solar corpuscle precipitation along his theoretically derived spirals. Ionospheric studies in the Arctic began during the Second Polar Year 1931-1932, and from 1938 to 1954 were carried out systematically on the ionospheric stations at Bukhta Tikhaya, Bukhta Tiksi, Murmansk, Ostrov Dikson, and Mys Shmidta. These studies were greatly enhanced by the continuous records made on the drifting stations North Pole -6, -7, and -8 in 1957-1959. The observations conducted during the period surveyed have provided data on the geographical distribution of the earth's permanent magnetic field, on the geographical distribution of magnetic disturbances, and on the state of the ionosphere over the entire arctic region. (DLC.)

72334. IGNATOVA, M. D. Kirgiteĭskoe mestorozhdenie tal'ka. (*In:* Krasnoīarskaīa . . . ėkspeditsiīa. Poleznye iskopaemye . . . 1962, p. 172-77, map, diagr.) 14 refs. Text in Russian. **Title tr.:** Kirgitey talc deposits.

Outlines the occurrence, composition, physical properties and origin of talc deposits in the Kirgitey (58° 16′ N. 94° 45′ E.) River basin. They are found of good enough quality to be used without enrichment. Possibilities for a talc industry are considered. (DLC.)

72335. IGNATOVA, M. D. Mestorozhdeniīa karbonatnykh flīūsov. (*In:* Krasnoīarskaīa . . . ėkspeditsiīa. Poleznye iskopaemye . . . 1962, p. 157-71, tables, maps.) 5 refs. Text in Russian. **Title tr.:** Carbonate flux deposits.

Reviews flux limestone deposits (substances promoting fusing of mineral or metals) in the Yenisey Ridge, Kuznetskiy Alatau, western and eastern Sayan. The Upper Tatarka, Magdagay, Kirgitey, and lower Angara deposits are described, noting their chemical composition, texture, and other properties. In but five deposits investigated in 1958, there were 591.18 million tons of flux limestones available. (DLC.)

72336. IGNATOVA, M. D. Mestorozhdeniīa marshalita. (*In:* Krasnoīarskaīa . . . ėkspeditsiīa. Poleznye iskopaemye . . . 1962, p. 202-206, text maps, diagrs.) 2 refs. Text in Russian. **Title tr.:** Marshalite deposits.

Describes the Razdolinsk and Kirgitey deposits in the Angara basin. Marshalites, containing 96.2 - 98.2% SiO_2 are fine-grained, dust-like, monomineralic, quartzitic rocks mainly used as powder in the foundry industry. The Kirgitey and Razdolinsk reserves are estimated at 6119.1 thousand tons. Exploitation conditions are favorable. (DLC.)

IGON'KINA, G. S., *see* Arkhipova, A.P., *& others.* Dorozhnye emul'sii . . . 1962. No. 69860

72337. IGOSHINA, KAPITOLINA NIKOLAEVNA, 1894- . Opyt botaniko-geograficheskogo raĭonirovaniīa Urala na osnove zonal'nykh floristicheskikh grupp; 1. (Botanicheskiĭ zhurnal, Feb. 1961. t. 46, no. 2, p. 183-200, table, map.) 9 refs. Text in Russian. Summary in English. **Title tr.:** Tentative phytogeographical division of the Urals based on zonal floristic groups; 1.

Discusses the methods and principles of such studies, and divides the area into districts (oblast') subdistricts, zones, belts, etc. The arctic district is divided into two subdistricts, barren tundra and tundra plain, the latter into zones, subzones and belts, with their common plants indicated. Similarly, a subarctic belt with its characteristic plants, is described. (DLC.)

72338. IGUMNOV, B. Plamennyĭ patriot Rossii. (Morskoĭ flot, Aug. 1962. god 22, no. 8, p. 42, port.) Ref. Text in Russian. **Title tr.:** A fiery patriot of Russia.

Notes the achievements of Stepan Petrovich Krasheninnikov, explorer of Kamchatka. (DLC.)

IKORSKIĬ, S. V., *see* Petersil'e, I.A., *& others.* Opyt primeneniīa gazovogo karottazha . . . 1961. No. 74750

72339. IL'IN, A. V. Geomorfologiīa materikovoĭ otmeli severnoĭ chasti Atlanticheskogo okeana. (Akademiīa nauk SSSR. Institut okeanologii. Trudy 1962. t. 56, p. 3-14, fold. map.) 24 refs. Text in Russian. Summary in English. **Title tr.:** Geomor-

phology of the continental shelf of the North Atlantic.

Discusses the concept, extent, and nature of the continental shelf in general. A detailed description is given of the relief and sediments of the American and Euro-African shelf of the North Atlantic. Its northern (Greenland-Cape Cod) and sub-arctic zone are found to consist mainly of glacial forms, while the more southerly zone has a predominance of bioherms. (DLC.)

72340. IL'IN, A. V. Rel'ef dna Kamchatskogo zaliva. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t. 50. Morskie geologicheskie issledovaniia, p. 21-28, charts, diagrs.) 12 refs. Text in Russian. **Title tr.:** The bottom relief of Kamchatka Bay.

Reports on the bathymetry and bottom topography of this bay, based on investigations by the R/V *Vitiaz'* in 1950-1955 and *Akademik Shuleĭkin* in 1956. A precise bathymetric map is compiled and main features of relief of the continental shelf and continental slope zones are described. The Kamchatka Range on the bottom of the bay beginning near Cape Kamchatka and running southward is described, and some large submarine valleys are indicated. The tectonic movements and deep faults which shaped the bottom are briefly characterized. (DLC.)

72341. IL'INA, A. P. Molliuski "tufogennogo gorizonta" mysa Utkholok na zapadnom poberezh'e Kamchatki. (Leningrad. Vsesoiuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1962. vyp. 196, Paleontologicheskiĭ sbornik 3, p. 337-59, plates.) 39 refs. Text in Russian. **Title tr.:** Molluscs of the tuffaceous horizon of Cape Utkholokskiy on the west coast of Kamchatka.

Notes this horizon's stratigraphic position is considered debatable, varying between Eocene and Oligocene. About 30 species of molluscs from it are treated, citing collected material, measurements and features of the shells, their comparison and distribution. Some of the species are found new. (DLC.)

72342. IL'INA, A. P. Nekotorye novye vidy molliuskov iz miotsena Kamchatki. (Leningrad. Vsesoiuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1962. vyp. 196, Paleontologicheskiĭ sbornik 3, p. 361-81, plates.) 34 refs. Text in Russian. **Title tr.:** Some new species of molluscs from the Miocene of Kamchatka.

Presents systematic description of 16 new species of pelecypods and gastropods from the Voyampolka series on the west coast of Kamchatka. For each, the collected material, measurements and main features of the shell, and comparison are given as well as location of find, age, and illus. (DLC.)

72343. IL'INA, A. P. Paleontologicheskoe obosnovanie stratigrafii neogena vostochnogo poberezh'ia Kamchatki; Kronotskiĭ raĭon. *(In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p. 190-92.) Text in Russian. **Title tr.:** Paleontologic substantiation of Neogene stratigraphy on the east coast of Kamchatka, Kronotskiy region.

Distinguishes three series of Neogene deposits, identifies and characterizes the Bogachevka, Tyushevka, and Goryachiy Klyuch faunal complexes. (DLC.)

IL'INA, A. P., *see also* Krishtofovich, L.V., & A.P. Il'ina. Biostratigrafiia . . . 1961. No. 73131

72344. IL'INA, E. V., *and others.* Podzemnye vody i gazy Sibirskoĭ platformy. Leningrad, Gostoptekhizdat, 1962, 292 p. tables, maps, diagrs. (Leningrad. Vsesoiuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy vyp. 189.) Approx. 100 refs. Text in Russian. *Other authors:* B.N. Liubomirov *and* N. IA. Tychino. **Title tr.:** Ground waters and gases of the Siberian platform.

Reports studies during 1954-1959 in the area 51° - 74° N. 84° - 132° E., including Krasnoyarsk and Irkutsk Provinces, Taymyr National District and western Yakutia. Physical geographic conditions, tectonic structure and hydrogeologic investigations of the Siberian platform are reviewed. The Angara-Lena, Yakutsk, Tungusskiy, Olenek, Khatanga and other artesian basins are distinguished and their waters, gases and oil occurrences are outlined. The possibilities of oil and gas accumulation are reported on the basis of hydrogeologic and hydrochemical criteria. (DLC.)

IL'INA, N. L., *see* Zaĭtsev, G.N., & *others.* Components . . . Norwegian seas. 1961. No. 76624

72345. IL'INSKAIA, I. A., *and* **G. P. PNËVA.** Novye dannye o flore Mamontovoĭ gory. (Botanicheskiĭ zhurnal, Feb. 1962. t. 47, no. 2, p. 161-75, illus., table.) 18 refs. Text in Russian. Summary in English. **Title tr.:** New data on the flora of Mamontovaya Gora.

Study based on leaf-impressions, collected stratigraphically in this mountain locality 63° 30′ N. by the Aldan River in central Yakutia. Fifteen forms of dicotyledons are recorded, four of them new. Most of the forms are of temperate climate, four are subtropical. Relations to present and fossil forms indicate an Oligocene origin of these fossils. (DLC.)

IL'INSKIĬ, G. A., *see* Volotovskaia, N.A., & G.A. Il'inskiĭ. O stat'e . . . 1961. No. 76428

72346. IL'INSKIĬ, O. K. Okhotskiĭ antitsiklon. (Vladivostok. Dal'nevostochnyĭ nauchno-issledovatel'skiĭ gidrometeorologicheskiĭ institut. Trudy 1959. vyp. 7, p. 10-32, tables, charts, graphs.) 31 refs. Text in Russian. **Title tr.:** The Okhotsk anticyclone.

Outlines the regime of anticyclonic circulation over the Okhotsk Sea in the warm part of the year (April-September), based on analyses of synoptic charts for the 1948-1957 period. Structure of the pressure field, typical trajectories of anticyclones and causes of the Okhotsk anticyclone are discussed. The high air pressure over the Sea of Okhotsk in the warm period of the year is caused by polar anticyclone intrusion and formation of new anticyclones in this region. (DLC.)

72347. IL'INSKIĬ, O. K., *and* **M. V. EGOROVA.** Tsiklonicheskaia deiatel'nost' nad Okhotskim morem v kholodnoe polugodie. (Vladivostok. Dal'-

nevostochnyĭ nauchno-issledovatel'skiĭ gidrometeorologicheskiĭ institut. Trudy 1962, vyp. 14, p. 34-83, tables, charts.) 28 refs. Text in Russian. **Title tr.:** Cyclonic activity over the Okhotsk Sea in the cold half of the year.

Outlines the characteristics of the cyclonic regime in the October-March period for six years 1953-1959 according to synoptic data. The origin, main trajectories, vertical structure and evolution of cyclones over the Sea are described in detail. Cyclonic activity is reported for each month, October-March. Causes and conditions for local cyclogenesis over the Okhotsk are evaluated. Pressure topography in Eastern Asia is analyzed in relation to the appearance and withdrawal of cyclones in the region of this Sea. (DLC.)

72348. IL'IUKHINA, N. P. Sredne-verkhnepaleozoĭskie otlozheniĭa srednego techeniĭa r. Angary. (Leningrad. Vsesoiūznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyĭ sbornik 1960. no. 40, Geologiĭa i poleznye iskopaemye Vostochnoĭ Sibiri, p. 47-63, tables, map, diagrs.) 13 refs. Text in Russian. **Title tr.:** Middle-Upper Paleozoic deposits on the middle reaches of the Angara River.

Analyzes the stratigraphy of sedimentary and acid pyroclastic rocks of the southern part of the Tungusskiy basin. Three series are distinguished and divided into smaller stratigraphic units. Source of dispersal material is analyzed. (DLC.)

ILLARIONOVA, T. M., *see* Maramzin, A. V., & *others*. K voprosu o temperaturnom rezhime . . . 1961. No. 73797

72349. ILLESH, VL. Kop'ĭa i samolety. (Sovetskiĭ soiūz, 1961, no. 4 (134), p. 36-37, illus. incl. col.) Text in Russian. **Title tr.:** Spears and airplanes.

Sketches the use of aircraft by the Okhotsk fur-hunting collective based on Krasnyy Yar. These Tungus, Gold, and Yakut hunters are only one generation from primitive spear hunters. (DLC.)

72350. ILLINGWORTH, FRANK, 1908- . The polar fleets; a survey of icebreakers and polar supply vessels. (Shipping world, Jan. 10, 1962. v. 146, no.3570, p.31-34, 37, illus., tables.)

Surveys vessels of the USSR, United States, Canada, Finland, and the Scandinavian countries. Some are described briefly, including those in the planning stage. (DLC.)

72351. ILUPIN, I. P., *and others*. K voprosu o genezise mineralov-sputnikov almaza v kimberlitakh IÂkutii. (Vsesoiūznoe mineralogicheskoe obshchestvo. Zapiski 1961. ser. 2, chast' 90, vyp. 4, p. 488-92.) 5 refs. Text in Russian. *Other authors:* I.T. Kozlov *and* A.A. Pankratov. **Title tr.:** On the genesis of satellite-minerals of diamonds in the kimberlites of Yakutia.

Discusses critical comment of N.N. Sarsadskikh and V.S. Rovsha (No. 67983), and own studies in the Daldyn-Alakit, Malaya Botuobuya, Muna, and Olenek regions. Genesis of pyrope, olivine and other minerals in kimberlite bodies is summarized. (DLC.)

72352. ILUPIN, I. P. K voprosu o genezise mineralov strontsiia v kimberlitovykh trubkakh zapadnoĭ IÂkutii. (Akademiĭa nauk SSSR. Mineralogicheskiĭ muzeĭ. Trudy 1961, vyp. 12; p. 212-17, illus.) 5 refs. Text in Russian. **Title tr.:** Genesis of strontium minerals in kimberlite pipes of western Yakutia.

Reports a study in the Daldyn and Alakit regions in respect to strontium-mineral distribution and mode of occurrence. Strontianite and celestine were investigated in the Mir, Zarnitsa, Yakutskaya, Zapolyarnaya and other kimberlite pipes, and their distribution patterns determined. Celestine in kimberlites is formed by hydrothermal processes. Its replacement by strontianite and strontium mineral distribution are summarized. (DLC.)

72353. ILUPIN, I. P. Rasprostranenie i genezis nekotorykh gidrotermal'nykh i gipergennykh mineralov v kimberlitakh IÂkutii. (Sovetskaĭa geologiĭa, Mar. 1962, no. 3, p. 152-56, tables, diagr.) 9 refs. Text in Russian. **Title tr.:** Distribution and origin of some hydrothermal and supergene minerals in the Yakutia kimberlites.

Reports distribution of aragonite, pyrite, barite, celestine, gypsum, and other secondary minerals found in kimberlite bodies in the Malaya Botuobuya, Olenek and other diamond-bearing regions of Yakutia. Spectrum analyses are given. These minerals derive from the enclosing sedimentary rocks; the mode of the transfer and conditions of occurrence are discussed. (DLC.)

72354. IMLAY, RALPH WILLARD, 1908- Characteristic Lower Cretaceous megafossils from northern Alaska. Washington, D.C., U.S. Govt. Print. Office, 1961. iv, 74 p. 20 illus. plates, maps & tables incl. fold. in pocket. (U.S. Geological Survey. Professional paper 335.) 92 refs.

Presents detailed systematic descriptions of these fossils, and analyses of their stratigraphic relationships, establishing nine faunal zones. Three stratigraphic stages are represented: the Berriasian, Valanginian, and Albian. Abrupt termination of these megafossil species at the top of the Albian strata indicates occurrence of some major geologic event, in either Alaska or some arctic region. The pelecypod *Aucella* is common to the Berriasian-Valanginian Okpikruak formation; many genera and species of marine megafossils are found in middle Albian beds. General composition of the megafossil assemblage of the Albian sea in northern Alaska resembles assemblages now living in shallow sea bottoms of temperate latitudes. Based on collections by U.S. Geological Survey parties, mainly since 1945; the 176 localities are shown on fold. map; index map shows test wells of U.S. Naval Petroleum Reserve No. 4, source of most of the fossils described. Echinoderms and brachiopods are to be described elsewhere. (DGS.)

72355. IMLAY, RALPH WILLARD, 1908- . Jurassic (Bathonian or early Callovian) ammonites from Alaska and Montana. Washington, D.C., U.S. Govt. Print. Office, 1962. p. C1 - C32, illus., maps, graph, tables. (U.S. Geological Survey, Professional paper 374-C, Shorter contributions to general geology.) 52 refs.

Reports study of 84 specimens from Alaska

collected in the Cook Inlet region 1913-1958, and 46 from Montana, to determine whether the middle Jurassic stage is represented by sedimentary rocks in Alaska and in western interior United States. *Cranocephalites,* a subgenus of *Arctocephalites,* is characteristic. Correlation with the late Bathonian rather than the Callovian is indicated; if valid, the Bathonian ammonites occupied two distinct realms, one included arctic North America, Eurasia, and part of the North Pacific Ocean. Systematic descriptions are given of 10 genera and 18 species. (DLC.)

72356. IMLAY, RALPH WILLARD, 1908- . Late Bajocian ammonites from the Cook Inlet region, Alaska; Jurassic ammonites from Southern Alaska. Washington, D.C., U.S. Govt. Print. Office, 1962. 15 p. illus., maps, tables. (U.S. Geological Survey. Professional paper 418A.) 26 refs.

Contains systematic descriptions of about a dozen species of these ammonites, which occur in two areas near Cook Inlet, and in the southeastern part of the Talkeetna Mts. Dominant genera are *Liroxyites* a subgenus of *Oppelia, Megasphaeroceras,* and *Dettermanites;* they have not been recorded outside this region. Dominance of these three genera in the upper Bajocian of Alaska contrasts with their absence in the Tethyan region, where similarly, upper Bajocian rocks have furnished many ammonite genera not yet found in Alaska. These differences indicate rather different faunal developments in the two regions during that time. Localities where megafossils were collected are tabulated and shown on maps; the 56 specimens are illus. (DLC.)

IMLAY, RALPH WILLARD, 1908- , *see also* MacKevett, E.M., & R.W. Imlay. Jurassic . . . 1962. No. 73712

72357. IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY. *Exploration Board.* Imperial College Spitsbergen Expedition 1960; final report. London, Nov. 1960. 44 l. tables incl. 1 fold., fold. maps.

Outlines the set-up and results of a four-man expedition (leader P. Smith) to establish a second order transportation system in Dickson Land (78° 30′ - 78° 45′ N. 15° 30′ - 16° 30′ E.). Transport to the area, equipment, food, and cost are described; diary excerpts and general notes are included. Maps are presented of the work performed. (SPRI.)

72358. *IMPERIAL OILWAYS.* Arctic wildcat. (Imperial oilways, Dec. 1961, v. 20, no. 6, p. 12.)

Notes the Peter Bawden Drilling Ltd., attempt, initiated in Sept. 1961, to drill sedimentary rock near Winter Harbour on Melville Island to 10,000 ft. depth. Details on logistics, drilling equipment and procedures are given; the prefab huts for the crew are described. The derrick of the rig was assembled from tubular steel sections, resistant to cold-induced brittle fracture. (CaOGB.)

72359. INCE, SIMON. Recent experimental observations on the use of air bubbling systems. *(In:* National Research Council of Canada . . . Symposium on Air Bubbling, 1961. p. 23-40, illus., diagr., graphs.) 2 refs. *Its:* Technical memorandum no. 70.

Compares the efficiency of four bubbler systems tried at the Council's maneuvering basin in Ottawa Jan.-Mar. 1961. Equipment and methods are described and illus.; testing was carried out Jan. 24-27 and Feb. 6-9, at which time the effective limit of one hole had been reached. Results indicate a unit with 15-cu. in. bubbler, called a "burper", to be the most efficient. (DN-HO.)

72360. *INCO.* The town that nickel built. (Inco, summer 1961. v. 28, no. 2, p. 8-10, illus., part col.)

Describes Thompson, northern Manitoba; planning, power, utilities, hospital, recreation facilities, etc. International Nickel Co. allocated $8,500,000 for development of this townsite. Its dedication ceremonies Mar. 25, 1961, are reported in the same issue (p. 2-6) of the same journal. (DI.)

72361. INDERMUHLE, VERNON C. Preliminary report on the waterpower resources of Snow River, Nellie Juan Lake and Lost Lake, Kenai Peninsula, Alaska. Washington, D.C., Feb. 1961. v, 55 l. illus., maps incl. 4 col. fold. in pocket, tables. (U.S. Geological Survey. Reports, open file series, no. 612.) Refs. in text.

Estimates resources of these three basins in eastern Kenai within 30 mi. of Seward, from detailed topographic surveys, geologic reconnaissance during 1955-1959, and quadrangle maps on a scale of 1:63, 360. Runoff was estimated by comparison with nearby streams. Topography, climate, and other conditions affecting the power development are discussed, noting possible effects of sedimentation, floods, and ice. General plans of development are presented for each basin. Storage would be required for substantial use of the runoff to provide dependable power: at the Snow River site, a 328 ft.-high dam and auxiliary dams for generation of 32,000 kw. all the time; at the Nellie Juan Lake site, a 95 ft. dam and an auxiliary structure for 7,300 kw., and Lost Lake a 68 ft. dam for 2,900 kw. Maps at scale 1:24,000, profiles, etc. show locations, gradients and hydrological data. (DGS.)

72362. INDIAN-ESKIMO ASSOCIATION OF CANADA. Annual report. Toronto, 1960-1962, *in progress.*

Pub. in approx 10 pages. The first report, issued in Ottawa, covered July 31, 1959-July 31, 1960, and reviewed organization of the association from a standing committee of the Canadian Association for Adult Education known as the National Commission on the Canadian Indian. Its main activities in research, and liaison for service, education, welfare, legal status, etc. of Indians and Eskimos are stated in each year's report, which includes also list of officers. (CaONA.)

72363. *INDIAN TRUTH.* Alaskan native fishing regulations proposed. (Indian truth, Jan.-Apr. 1960. v. 37, no. 1, p. 6-7.)

Notes new Federal regulations to protect the commercial fishing rights of Alaskan Indians, Eskimos, and Aleuts proposed by the Secretary of the Interior, Fred A. Seaton. The regulations sup-

port the Supreme Court decision enjoining the State of Alaska from interfering with native fish traps and provide the number in 1960 to be the same (11) as that in 1959. (DSI.)

72364. *INDIAN TRUTH.* Alaskan natives' land claims should be settled. (Indian truth, May 1962. v. 39, no. 1, p. 6-8.)

Discusses problems arising from the lack of clear definition of Alaskan Indian, Eskimo and Aleut land titles. An early enactment of protective legislation is urged to compensate natives for land lost to government and industrial groups, also to forestall future claim suits. (DSI.)

72365. *INDIAN TRUTH.* Barrow Eskimos to have natural gas. (Indian truth, Sept. 1962. v. 39, no. 2, p. 8, illus.)

Notes a bill recently passed by Congress authorizing the Dept. of the Navy to sell gas for domestic use to Eskimos of the village of Barrow, Alaska. (DSI.)

72366. **INDOLEV, L. N.** Pervaia nakhodka diaforita v SSSR. (Akademiia nauk SSSR. Doklady, Feb. 21, 1962. t.142, no.6, p.1387-90, illus., tables.) 8 refs. Text in Russian. **Title tr.:** First find of diaphorite in the USSR.

Reports the find in the Verkhne-Menkechensk silver-lead-zinc deposits in the southern Verkhoyansk Range. Physical and optical properties of the mineral are described and chemical composition analyzed; X-ray and spectrum analyses are also given. Diaphorite, together with pyrargyrite, is considered the main bearer of silver. (DLC.)

INDOLEV, L. N., *see also* Gorbatov, G.A., & L.N. Indolev. Opyt primeneniia . . . sil galenita . . . 1962. No. 71758

72367. *INDUSTRIAL CANADA.* Thompson nickel development dedicated. (Industrial Canada, Apr. 1961. v.61, no.12, p.64, illus.)

Notes dedication of International Nickel Co. of Canada Ltd. plant at Thompson, Manitoba, Mar. 25, 1961, the second largest nickel-producing project in the world: 75 million pounds of refined nickel is the planned output of this $185 million development; 1800 are employed in the plant. The town is named after Dr. John F. Thompson, Honorary Chairman of the Board of INCO. (CaOCU.)

72368. **INGALL, L. N.,** *and* **R. J. COPELAND.** Operational report on a gravity meter survey conducted on the arctic coastal plain. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.1149-52.)

Describes equipment, operations, etc. on this British American Oil Co. survey of an area near Inuvik, Mackenzie District, June-July 1959, by an 11-man party using a Bell 47G-1 helicopter for transportation and a float-equipped Beaver aircraft for support. Four "runs" were made on a typical operational day; a 600 sq.-mi. area was covered by the survey network. This network control was supplemented by several long aerial traverses to obtain regional gravity information. Mobility and speed of operation were achieved by coordinated air transport and support. (DGS.)

INGEMANN, BERNHARD SEVERIN, 1789–1862, *see* Kleivan, I. Digteren B.S. Ingemann . . . 1961. No. 72842

72369. **INGSTAD, HELGE MARCUS, 1899–** . Litt om Svalbard. (Polarboken, 1961-62, p.102-107.) Text in Norwegian. **Title tr.:** Note on Svalbard.

Advocates compulsory advance notification of travel in Svalbard, to facilitate rescue operations, enforcement of game laws. Shooting of polar bear in summer and of cubs should be prohibited in the area. (SPRI.)

INGSTAD, HELGE MARCUS, 1899– , *see also* Meldgaard, J. Om de gamle nordboer . . . 1961. No. 73914

Omberg, A. Omkring . . . ekspedisjoner. 1962. No. 74521

72370. **INIUTKINA, A. I.** Nauchnye dreifuiushchie stantsii SShA v Arkticheskom basseine. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.11, p.109-113, map.) 49 refs. Text in Russian. **Title tr.:** Scientific drifting stations of USA in the Arctic Basin.

Reviews drifts of Bravo Mar. 7, 1957– , Alpha Apr. 1957– , Charlie April 1959– , Arlis-I Sept. 1960– , Arlis-II May 1961– . Coordinates, course, and dates of drift, leaders and scientific studies are stated. Oceanographic, hydrobiologic, meteorologic, geophysical, glaciologic, seismic, geologic, actinometric and some other studies are noted; published results are listed. (DLC.)

72371. **INMAN, D. R.,** *and* **P. PERUZZI.** The effects of temperature on the responses of Pacinian corpuscles. (Journal of physiology, Feb. 1961. v.155, no.2, p.280-301, illus., table.) 34 refs.

Reports study of isolated cat corpuscles and their axons at 8-37°C. Amplitude, rates of rise and fall of nerve impulse decreased on cooling and disappeared at 15 to 16.7°C. Amplitude and rate of rise of the receptor potential also decreased on cooling but was not abolished at 8°C. and its total duration did not change. (DLC.)

72372. **INNIS, DONALD QUALE.** Field trip report, Spitzbergen Excursion, economic geography. (Cahiers de géographie de Québec, Oct. 1960 - Mar. 1961. année 5, no.9, p.86-88.) Excursion of the International Geographical Congress, 1960.

Notes results of intensive exploitation of marine resources, wildlife, the dependence of mining on world economic conditions. The Norwegian coal mines are much more mechanized than are the Russian. (DLC.)

72373. **INTERNATIONAL ASSOCIATION FOR QUATERNARY RESEARCH.** Neotektonika SSSR; k VI kongressu mezhdunarodnoi assotsiatsii po izucheniiu chetvertichnogo perioda, INQVA. Riga, Izd-vo Akademii nauk Latviiskoi SSR, 1961. 336 p. illus., tables, maps, profiles, diagrs. Refs. Text in Russian. Contents table and summary of the text in English and Latvian. **Title tr.:** Recent tectonics of the USSR; presented to the 6th Congress of the International Association for Quaternary Research, INQUA.

Contains thirty-odd papers of which seven pertinent to arctic regions are abstracted in this Bibliography under their authors' names, viz (titles tr.):

PANASENKO, G.D. Structure of the earth's crust on the Kola Peninsula according to seismic data.

NIKOLAEV, V.A., *and* L. ÎA. PROVODNIKOV. Recent tectonics of the West Siberian plain.

KIRÎUSHINA, M.G., *and others*. Recent tectonics of the Soviet Arctic and features of their manifestation.

LUNGERSGAUZEN, G.F. Some features of the manifestation of recent tectonics in the east of the Siberian platform.

SPRINGIS, K. ÎA. Some traces of the manifestation of recent tectonic movements in the Verkhoyansk-Kolyma folding region.

CHEMEKOV, ÎU.F. Recent tectonics of the USSR Far East.

KROPOTKIN, P.N. Main recent tectonic features of Kamchatka, the Koryak Ridge, Kuril Islands and adjacent areas of the Pacific Ocean and the Sea of Okhotsk. (DLC.)

72374. INTERNATIONAL ASSOCIATION OF SCIENTIFIC HYDROLOGY. Selected bibliography of hydrology to the end of 1958. Canada. Ottawa, National Research Council of Canada and Dept. of Northern Affairs and National Resources, 1959. vii, 94p. Prepared by P.M. Baker, G.P. Williams, and W.V. Morris.

First comprehensive bibliography of Canadian literature in this field. The 624 references are grouped in the standard order for this series (cf. No. 76046). Approx. 120 references are pertinent to the Canadian Arctic, sub-Arctic. (DGS.)

72375. INTERNATIONAL ASSOCIATION OF SCIENTIFIC HYDROLOGY. *Commission of Snow and Ice.* Symposium of Obergurgl, Sept. 10-18, 1962. Variations of the regime of existing glaciers. Gentbrugge, Belgium, 1962. 312 p. illus., maps, diagrs., graphs, tables. (*Its:* Publication no.58.) Refs. Summaries in French.

Contains text (in English) of 30 of the 35 papers presented at eight of the nine sessions of this symposium held in the eastern Alps; also the resolutions adopted by the Commission of Snow and Ice at Helsinki in 1960. The papers which dealt with the Arctic or sub-Arctic, are abstracted in this Bibliography under their authors' names, viz:

WEERTMAN, J. Catastrophic glacier advances.

HAEFELI, R. The ablation gradient and the retreat of the glacier tongue.

MEIER, M.F., *and* A.S. POST. Recent variations in mass net budgets . . .

BENGTSON, K.B. Recent history of the Brady Glacier, Glacier Bay National Monument, Alaska.

LYONS, J.B., *and* R.H. RAGLE. Thermal history and growth of the Ward Hunt Shelf.

LANGWAY, C.C. Some physical and chemical investigations of a 411 m. deep Greenland ice core and their relationship to accumulation.

DAVIES, W.E., *and* D.B. KRINSLEY. The recent regimen of the ice cap margin in North Greenland.

MÜLLER, F. Glacier mass-budget studies on Axel Heiberg Island, Canadian Arctic Archipelago.

CHIZHOV, O.P., *and* V.S. KORÎAKIN. Recent changes in the regimen of the Novaya Zemlya ice sheet.

GROSVAL'D, M.G., *and* A.N. KRENKE. Recent changes and the mass balance of the glaciers on Franz Josef Land.

FITCH, F.J., *and others*. Glacier re-advance on Jan Mayen.

THOMPSON, W.F. Preliminary notes on the nature and distribution of rock glaciers relative to true glaciers and other effects of the climate on the ground in North America.

Papers listed by title only include: On the theory of glacier fluctuations, by P.A. Shumskiĭ; Fluctuations of the Crillon Glacier system S.E. Alaska, by R.P. Goldthwait *and others*. (DGS.)

INTERNATIONAL BOTANICAL CONGRESS, 9th, *Montreal,* 1959, *see*

Baldwin, W.K.W., & *others*. Botanical excursion . . . 1959. No. 69979

Baldwin, W.K.W., & *others*. Report on botanical excursion . . . 1962. No. 69980

72376. INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES. Annual proceedings v.11 for the year 1960-61. Halifax, N.S., The Commission, Forrest Building, 1961. 113 p. illus. tables, maps. Refs. In sequence to No. 65317.

Contains the administrative report by E.M. Poulsen, for the year ending 30 June 1961, and the report on the 11th annual meeting, 5-10 June 1961 by G.R. Clark (p.10-23), both similar in scope to previous years. Summaries of 1960 research are presented by countries (p.23-100) and by subareas (p.100-103).

Canadian research is covered by W. Tempelman and W.R. Martin and deals with cod, haddock, redfish, etc.; hydrography, plankton, gear, etc.

Danish research, by P.M. Hansen and F. Hermann, deals with cod biology and fisheries, redfish, halibut, hydrography, all of West Greenland.

French activities are noted by J. Ancellin.

German research report, by A. Meyer, covers cod in West, South and East Greenland waters, and hydrography and ice conditions in these areas, with minor notes by other authors.

Icelandic research is summarized by J. Jónsson, and that of Italy by G. Cannone. On Norwegian work, E. Bratberg deals with the hydrography of West Greenland waters, cod and halibut size and age composition. Portugal's report by M. Ruivo and G. Quartin and that of Spain by O.R. Martin cover, more extensively, the West Greenland and Labrador area.

Report of the USSR, by V. Travin and others, deals exclusively with redfish in the different subareas of the northwest Atlantic and M.M. Adrov covers West Greenland hydrography. United Kingdom research is summarized by C.E. Lukas and R.J.H. Beverton. (U.S. Research was in more southerly waters.)

These reports are summarized by subareas by E.M. Poulsen, covering hydrography, cod and redfish.

Pt.4 is a paper presented at the 1960 annual meeting by G.T.D. Henderson: Continuous plankton records, the distribution of young *Sebastes marinus* L. A list of scientists and laboratories engaged in the Commission's work, concludes the report. (CaMAI.)

72377. INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES. Annual proceedings. v.12 for the year 1961-62. Halifax, N.S., the Commission, Forrest Building, 1962. 34p. tables. Issued in a new form, the summaries of research by countries and selected papers, for-

merly included, are omitted and pub. in the Commission's 1962 *Redbook*.

Contains, in an administrative report for the year preceding June 30, 1962, which includes an announcement of Poland's membership in the Commission: list of officers and panel memberships, staff changes, publications, external cooperation, research, etc., and financial statements. Pt.2 (p.10-19), report on the twelfth annual meeting, 4-8 June, 1962, by G.R. Clark, including list of participants, agenda, publicity, panel membership, budget, future activities, etc. Pt.3 is a summary of research in subareas, by E.M. Poulsen. Each subarea is reported according to the countries carrying out research, and the subject(s) of this research, cod and redfish predominating in the arctic and subarctic areas. (CaMAI.)

72378. INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES. Report of working group of scientists on fishery assessment in relation to regulation problems. Edited by R.J.H. Beverton *and* V.M. Hodder. Supplement to Annual Proceedings, v.11. Halifax, N.S., The Commission. Forrest Building, 1962. 81p. illus., tables, maps. 43 refs.

Presents a brief statement of meetings, participants, and objectives: to obtain the best estimates of the immediate and long-term effects of enforcing minimum meshes and to evaluate the influence of fishing on the stocks. General comments on methods and interpretation are followed by mesh assessments for the successive subareas, which, in the arctic-subarctic waters concern cod, haddock and redfish. Effects on the quantity of future catches under unchanged as well as changed fishing activity are estimated (p.71-75) and additional conservation methods discussed. Recommendations for future studies (p.77-80) conclude the report. (CaMAI.)

72379. INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES. Statistical bulletin. v.9 for the year 1959. Halifax, N.S., the Commission, Forrest Building, 1961. 70p. tables, map. Prepared by Frank R. Thomas.

Contains (in pt.1, p.7-10) a review of the fishery in the Convention area during 1959 and a list of species caught. Pt.2 comprises fisheries statistics of the member countries, also of Belgium, East Germany and Poland, all in standard form. Landings are presented in metric tons, of round fresh fish. (DI.)

72380. INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES. Statistical bulletin v.10 for the year 1960. Halifax, N.S., the Commission, Forrest Building, 1962. 75 p. tables, map. Prepared by B.F. Calvin De Baie.

Contains summary statistics of landings in 1960 (and earlier), and (p.11-74) detailed tables of landings from the Convention Area for the same year. The latter are presented according to species, fishing effort, month gear, and country. A revised list of conversion factors, and additional species are included. (CaMAI.)

72381. INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS. Provisional programme, International Years of the Quiet Sun 1964-1965. IQSY. Nov. 1962. 18 p. (*Its:* IQSY 2:62.)

Sketches the general scientific objectives of this enterprise, to repeat at solar minimum activity the significant observations conducted during the IGY. Plans are outlined in those disciplines concerned with solar activity, viz: meteorology, geomagnetism, aurora, airglow, ionosphere, solar activity, cosmic rays, and aeronomy. Topics involving the Arctic include: vertical distribution of ozone by ozone-sonde measurements; more sensitive instruments at high latitude magnetic stations; coordination between groups observing the aurora in northern and southern polar regions, also meridional chains of stations in Alaska, Canada, Scandinavia, and the USSR; mapping the airglow radiations by polar-orbiting satellites; ground observations in the polar regions to study smaller solar events than could be identified during IGY. World Days, World Geophysical Intervals, Alerts, etc. are planned as in IGY. (DWB.)

72382. INTERNATIONAL CONFERENCE ON COSMIC RAYS AND THE EARTH STORM. *Kyoto,* **1961.** Proceedings. Tokyo, 1962. 3 v.: 339, 628, 557 p. illus., tables, diagrs. (Journal of the Physical Society of Japan, v.17, suppl. A1-3.)

Contains some 350 papers presented to the various sections; those pertinent to arctic areas are abstracted in this Bibliography under their authors' names, viz:

Vol. 1, Earth storm. 1, *Morphology of magnetic storms:* V.P. Hessler, T. Nagata and others, H. Maeda and others, E.H. Vestine, N. Fukushima, B. Hultqvist; 2, *Disturbances in polar regions:* R.R. Brown, V. Agy, G.E. Hill, J. Ortner and others, W.H. Campbell, D.H. Jelly, J.S. Belrose and D.B. Ross, G.C. Reid, R.S. Leonard, E.I. Dolgova, R.A. Zevakina, N.P. Ben'kova and L.A. IUdovich, A.S. Besprozvannaĭa, L. Harang, T. Nagata; 3, *Theories of magnetic storms and aurorae:* J.W. Kern, S.I. Akasofu and S. Chapman, W.I. Axford and others, A.P. Nikol'skiĭ, T. Obayashi; 4, *Aurora and airglow including auroral X-rays:* R. Montalbetti and D.J. McEwen, IA.I. Fel'dshteĭn, K.A. Anderson, J.W. Chamberlain, IA.I. Fel'dshteĭn and others; 5, *Ionospheric disturbances:* P. Rothwell, K.D. Cole, C.O. Hines; 6, *Summary of the disturbances in the ionospheric regions:* S. Chapman.

Vol. 2, Joint sessions. 1, *Hydromagnetics, geomagnetic rapid variation, whistler and VLF emission:* J.W. Dungey, A.I. Ol'; 2, *Solar radiation:* V.A. Sharabhai and G.L. Pai, T.R. Hartz and L. Vogan, H. Carmichael and J.F. Steljes, S.A. Korff, A.N. Charakhch'iān and others: 3, *Modulation, interplanetary plasma, synthetic theory of the earth storm.*

Vol. 3, Cosmic rays. (DLC.)

INTERNATIONAL CONFERENCE ON FOREST TREE GROWTH, *Tucson, Arizona,* **Apr. 10-14, 1960,** *see* Kozlowski, T.T. Tree growth. 1962. No. 73067

72383. INTERNATIONAL CONFERENCE ON SOIL MECHANICS AND FOUNDATION ENGINEERING, 5th, *Paris,* **July 17-22, 1961.** Proceedings. Paris, Dunod, 1961. 3 v.: 879, 871, 406 p. illus., maps, diagrs., graphs, tables. Refs.

Vol. 1 contains papers dealing with soils properties, techniques of field measurement and sampling, and foundations. Included are three dealing with arctic conditions, viz:

Dalmatov, B.I., *and* G.M. Shakhuniants. Frost heaving of soil and its influence on foundations and railway formations, p.55-59. Research on the nature of soil surface movement carried out near Cherepovets and Igarka revealed that the frozen soil near a foundation is distorted initially, but when freezing exceeds 0.3 m. in depth, a continuous slide develops. Laboratory tests confirmed the field research. Uniform heaving presents few problems in railway construction unless it leads to soil dilution during thawing; complications arise from uneven heaving. Design for an anti-heave cushion is considered.

Keinonen, L.S. Moisture movement in soil under frost action, p.189-90. Ice crystal growth, when soils freeze, develops a force that lifts the upper layer of ground. Cavities form between the ice piers, because ice crystal growth occurs only in some areas, and air cannot fill the space around the crystals. Instead, water flows from below into the cavities. This new mechanism, known as the "jack effect," has been verified on a large scale by freezing tests.

Mikheev, V.V., *and others.* Foundation design in the USSR, p.753-57. Describes approved soil classifications, with values of physical and mechanical properties. Tabular data can be used for designing foundations; information is given on permissible deflection; methods of estimating soil thawing near foundations, and probable settlement during soil moistening. Methods of foundation design described in 1957 are compared with that used since 1900; latest Soviet standards and experience are also noted.

Vol. 2 contains papers dealing with pile foundations, road, runways and railways, earth pressure on structures and tunnels, earth dams, slopes and open excavations, etc. Among them:

Rengmark, F., *and* R. Gandahl. Frost cracks in roads, p.303-307. Swedish roads, particularly in the North have recently been subject to longitudinal frost cracks forming in late Dec.-Jan. They are due to frost heave, not to overloading, since the frost penetrates deeper under the bare pavement than under the snow-covered shoulder. In a test road at Öjebyn, north Sweden, maximum frost depth at the center was 23 cm. greater than at the sides during the 1957-58 winter, but the reverse conditions prevailed in 1958-59. Sub-base conditions are considered a factor as well as air temperature.

Vol. 3 contains the conference proceedings proper, discussions, etc. (DGS.)

INTERNATIONAL CONGRESS OF AMERICANISTS, 34th, *Vienna,* **1960,** *see* Grunow, O. Congress Americanists. 1961. No. 71887

INTERNATIONAL CONGRESS OF SEDIMENTOLOGY, 5th, *Geneva and Lausanne,* Switzerland, **JUNE 2-7, 1958,** *see* Kossovskaia, A.G., & V.D. Shutov. Zonality terrigene deposits. 1959. No. 73017

72384. INTERNATIONAL GEOGRAPHICAL CONGRESS. 19th, *Norden,* **1960.** Physical geography of Greenland; symposium SD2, arranged at Geographical Institute, University of Copenhagen, under the direction of Børge Fristrup. København, C.A. Reitzel, 1961. 234 p. illus., maps, diagrs., graphs incl. 2 fold., tables. (Folia geographica danica, t.9.) Refs.

Contains text or summary of 33 papers, also discussion by 38 participants in this symposium, held July 31 - Aug. 3, 1960. The papers are abstracted in this* or earlier volumes of this Bibliography, under their authors' names, q.v.:

Ambach, W. Investigations of the heat balance in the area of ablation on the Greenland Ice Cap. Summary and discussion, p.11-12, cf. No. 63025.

Benson, C.S. Stratigraphic studies in the snow and firn of the Greenland Ice Sheet. p.13-35. 25 refs. Discussion p.35-37. (cf. No. 56852, 71038).

Bondam, J. Studies in recent geology. p.38. 6 refs. Summary of studies by Geological Survey of Greenland personnel (cf. No. 14835, 29359, 38919, 62615, 62616, 60345) followed by discussion of C^{14} datings.

*DANSGAARD, W. The origins and velocities of icebergs determined by O^{18} and C^{14} analysis.

*DAVIES, W.E. Surface features of permafrost in arid areas.

*FABRICIUS, J.S. Danish ice reconnaissance in Greenland.

Fristrup, B. Recent investigations of the Greenland Ice Cap. Abstract, p.62, of No. 58099.

*FRISTRUP, B. Studies of four glaciers in Greenland. Summary, p.63, cf. No. 64586, and 71510. Discussion p.64-66.

*FRISTRUP, B. Climatological studies of some high arctic stations in North Greenland.

*FRISTRUP, B. The International Glaciological Expedition.

*GERDEL, R.W. A climatological study of the Greenland Ice Sheet.

*GOLDTHWAIT, R.P. Regimen of an ice cliff on land in northwest Greenland.

*GRIFFITHS, T.M. Some glacial investigations in the Thule area, Greenland.

*HAEFELI, R. Contributions to the movement of ice sheets in Arctic and Antarctica. Abstract, p.127, of No. 71943.

*HELK, J.V. The mapping of Greenland by the Danish Geodetic Institute.

*HELK, J.V. Some questions on the ice-topography on the Greenland maps made by the Danish Geodetic Institute.

*HOCHSTEIN, M. Magnetische Messungen auf dem Grönländischen Inlandeis.

*HOFFMANN, W. Tellurometer measurements on the Greenland Ice Cap during the International Glaciological Greenland-Expedition (EGIG), summer 1959. p.135-39. 4 refs.

*JACKSON, C.I. Summer precipitation in the Queen Elizabeth Islands.

*JENSEN, K.M. Methods of forecasting of stream lines in the Greenland region.

Kuhlman, H. Weather and ablation observations at Sermikavsak in Umanak District. Summary, p.156-57, of No. 59469.

Larsen, H.V. Runoff studies from a glacier in SE-Greenland 1958. Summary and discussion, p.158-60, of No. 59599.

*LASSEN, K. Geophysical activity in Greenland of the Danish Meteorological Institute.

*LISTER, H. Accumulation and firnification in North Greenland.

Malaurie, J. Gélifraction, éboulis et ruis-

sellement sur la côte nord-ouest du Groenland. Summary, p.175-76, of No. 66522: Frost action, talus, flooding, on the northwest coast of Greenland.

MARSHALL, E.W. Structure and stratigraphy of Ice Island T-3 and the Ellesmere Ice Shelf. Summary, p.177-78, of No. 73843.

MÄLZER, H. Levelling during the Expédition Glaciologique Internationale au Groenland, EGIG, 1959. (cf. Mälzer, H., *and* D. Möller, Das Nivellement . . . *pub.* 1961. p.474-84, in this Bibliography, q.v.)

Møller, J.T. A West Greenland glacier front: a survey of Sermikavsak near Umanak in 1957. Summary, p.183, of No. 60270.

Møller, J.T. Glaciers in Upernivik Ø, with special reference to periglacial phenomena. Summary and discussion, p.184-87, of No. 60269.

*NOBLES, L.H. Structure of the ice cap margin, northwestern Greenland.

*NUTT, D.C., *and* P.F. SCHOLANDER. Gases in Greenland icebergs.

*de QUERVAIN, M.R. On the work carried out by the group "Glaciology Inlandsis" of the International Glaciological Greenland Expedition 1959–60, EGIG.

*SMITH, D.I. The glaciation of northern Ellesmere Island.

Graphs (2) of the Benson and Larsen papers are folded next to back cover. (DGS.)

72385. INTERNATIONAL GEOLOGICAL CONGRESS, 20th, *Mexico City,* Sept. 1956. Trabajos, Symposia, etc. Mexico, 1956–1960. 27 v. Text in Spanish, English, French, German, or Russian.

Includes a few papers dealing with the Arctic or sub-Arctic scattered throughout the sessions, and abstracted in this Bibliography under the authors' names, viz:

MUNCK, S., *and* A. NOE-NYGAARD. Age determination of the various stages of the Tertiary volcanism in the West Greenland basalt province, No. 66884.

VLASOV, G.M. Istoriîa kaĭnozoĭskogo vulkanizma Tikhookeanskikh okrain SSSR.

SHATSKIĬ, N.S., *and* A.A. BOGDANOV. La carte tectonique de l'URSS.

WILCOX, R.E. Igneous rocks of the Near Islands, Aleutian Islands, Alaska.

ALBERTA SOCIETY OF PETROLEUM GEOLOGISTS. Geographical and geological distribution of oil and gas in Canada.

POULSEN, A.O. The occurrence of manganese ores in Norway.

BOYLE, R.W. Geochemical prospecting in permafrost regions of Yukon, Canada.

PADGET, P., *and others.* Geochemical prospecting by the Geological Survey of Norway, 1954-1955. (DGS.)

72386. INTERNATIONAL GEOPHYSICAL YEAR, 1957–1958. *Japanese National Committee.* Japanese contribution to the International Geophysical Year 1957/8, v.1-2, and the International Geophysical Cooperation 1959, v.3. Tokyo, Science Council of Japan, Mar. 1958, Mar. 1960, Jan. 1961. 3v.: 178, 222, 195 p. illus., maps, graphs, tables. Refs.

Notes participation in the Polar Front Survey Aug. 1958, by the *Oshoro Maru, Ryofu Maru,* and *Soyo Maru,* in Bering Sea and the western North Pacific, v.1, p.84-86; summarizes work of these three ships, v.2, p.137-41; summarizes oceanographic surveys by *Oshoro Maru* cruise 44 to Bering Sea, June-July 1959, and by *Hakusei Maru* cruise 6 to Okhotsk Sea and North Pacific, June-July 1959, v.3, p.110-12. Photos of ships are shown; tracks and stations are mapped. (DWB.)

72387. INTERNATIONAL GEOPHYSICAL YEAR 1957–1958. *United States National Committee.* Arctic Basin coordination book. Washington, D.C., Mar. 26, 1957. var. pagings, looseleaf booklet.

Provides general information on IGY preparations to facilitate field operations in the Arctic; plans, programs, procedures, and background material supplied by the U.S. Air Force and the U.S. National Committe; included are translations of Russian reports on drifting station North Pole-2, and a list of translations of Russian technical articles. (DGS.)

72388. INTERNATIONAL MINERALOGICAL CONGRESS, 3d, *Washington, D.C.,* 1962. Abstracts of papers. (American mineralogist, Jan.-Feb. 1962. v.47, no.1/2, p.185-210.)

Includes several dealing with the Arctic, viz:

Emeleus, C.H. Structural and petrographic observations on layered granites from S.W. Greenland, p.188-89.

Ferguson, J., *and* T.C.R. Pulvertaft. Contrasted styles of igneous layering in the Gardar Province of S. Greenland. p.189.

Irvine, T.N. Mineralogy and petrology of the ultramafic complex at Duke Island, S.E. Alaska. p.193.

Smith, C.H., *and* H.E. Kapp. The Muskox Intrusion, a newly discovered layered intrusion in the Coppermine River area, N.W. Territories, Canada. p.202-203.

Wager, L.R. The mechanism of deposition and solidification of the Skaergaard layered series, East Greenland. p.206-207. (DGS.)

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION, *see Pacific fisherman.* INPFC Conference. 1962. No. 74609

72389. INTERNATIONAL OIL SCOUTS ASSOCIATION. International oil and gas development, review 1961, part I, exploration. Austin, Texas, Sept. 1962. 592p. ports., maps, diagrs., tables. *(Its:* v.32, pt. 1.) Refs.

Surveys developments in Alaska, p.13-17; in Yukon and Northwest Territories on p.474-79. Completions in Alaska totaled 51; of these 28 were oil producers, 5 produced gas, 18 were dry. Eighteen geological field mapping parties worked the Arctic Slope, Cook Inlet, Gulf of Alaska, and four other basins. Most prospecting and drilling was carried out in the Cook Inlet basin and on the Kenai Peninsula. Formation diagrams are given for the Shainin Lake Paleozoic, Alaska Peninsula Mesozoic, Anchorage Tertiary, and Gulf of Alaska Tertiary. Northwest Territories and Yukon completions (16) included one exploratory gas and 15 dry wells. Surface geological prospecting (256 party weeks) was carried out on Banks, Victoria, Prince Patrick, Melville, Bathurst, Cornwallis, Swan Islands in the Arctic Islands. Geophysical and core drill prospecting, chiefly seismological (232 crew weeks) was also carried out in Northwest Territories and Yukon. Permit sales for 1,755,

606 acres, costing $829,057 were recorded in the Territories, about half of acreage purchased in 1960. (DGS.)

72390. INTERNATIONAL PACIFIC HALIBUT COMMISSION. Regulation and investigation of the Pacific halibut fishery in 1960. Seattle, Washington, 1961. 24p. tables, map. *(Its:* Report, no. 30.)

Account of the protection and recovery of this fishery; activities and regulations of the Commission in 1960. Landing statistics and analysis, changes in fishing seasons, catch per unit of fishing effort, and catch composition are presented. Studies of growth and young migrations, etc. are outlined. (DI.)

72391. INTERNATIONAL SYMPOSIUM ON ARCTIC GEOLOGY, 1st *Calgary,* **1960.** Geological map of the Arctic. Calgary, Alberta, 1960. Folded sheet 46½x40 in. 22 refs. Sponsored by Alberta Society of Petroleum Geologists.

Map (1:7,500,000) covers the area north of 60° on azimuthal equidistant polar projection. Stratigraphic units are shown by 31 color shadings appropriately lettered. Intrusive and extrusive rocks are also indicated by color and letter. Geological boundaries; ice-covered areas, sea depths in meters, thickness of Greenland Inland ice in meters, also approx. limit of pack ice are given. Small-scale inset maps show generalized tectonic features: tread lines, shield areas, platform areas and coastal plains, and submarine depressions; also variation of the magnetic compass for 1955. Sources of information, mostly pub. since 1950, represent all countries with arctic territory. (DLC.)

72392. INTERNATIONAL SYMPOSIUM ON ARCTIC GEOLOGY, 1st, *Calgary,* **1960.** Geology of the Arctic; proceedings, held in Calgary, Alberta, January 11-13, 1960 under the auspices of the Alberta, Society of Petroleum Geologists. Toronto, University of Toronto Press, 1961. 3v.: 1196p. illus., maps, diagrs., graphs, tables, & 34 fold. maps, etc. in v.3. Refs.

Contains over a hundred papers, those on regional geology in v.1; v.2 is devoted to glaciology, permafrost, climatology, geomorphology, and to logistics and exploration; v.3 is a portfolio containing figures too large for the text page. Most of the papers* are described under their authors' names in this volume of the *Arctic Bibliography*; some pub. elsewhere and described earlier are indicated by number; a few pub. in abstract form only are so noted.

Vol. 1

*ATLASOV, I.P., *and* V.N. SOKOLOV. Main features of the tectonic development of the central Soviet Arctic.

*RABKIN, M.I., *and* M.G. RAVICH. The Precambrian of the Soviet Arctic.

*MARKOV, F.G., *and* B.V. TKACHENKO. The Paleozoic of the Soviet Arctic.

*SAKS, V.N., *and* S.A. STRELKOV. Mesozoic and Cenozoic of the Soviet and foreign Arctic.

*HARLAND, W.B. An outline structural history of Spitsbergen.

*BLAKE, W.B. Radiocarbon dating of raised beaches in Nordaustlandet, Spitsbergen.

Editorial forward: a summary of the geology of North and East Greenland, p.147.

*KOCH, L. Precambrian and Early Paleozoic structural elements and sedimentation: North and East Greenland.

*HALLER, J. The Carolinides: an orogenic belt of Late Precambrian age in Northeast Greenland.

*COWIE, J.W. The Lower Palaeozoic geology of Greenland.

*HALLER, J. Account of Caledonian orogeny in Greenland.

*BÜTLER, H. Devonian deposits of central East Greenland.

*JARVIK, E. Devonian vertebrates.

*BÜTLER, H. Continental Carboniferous and Lower Permian in central East Greenland.

*MAYNC, W. The Permian of Greenland.

*DUNBAR, C.O. Permian invertebrate faunas of central East Greenland.

*STENSIÖ, E. Permian vertebrates.

*TRÜMPY, R. Triassic of East Greenland.

*NIELSEN, E. On the Eotriassic fish faunas of central East Greenland.

*CALLOMON, J.H. The Jurassic system in East Greenland.

*HARRIS, T.M. The Rhaeto-Liassic flora of Scoresby Sund, central East Greenland.

*DONOVAN, D.T. Cretaceous of East Greenland.

*WENK, E. Tertiary of Greenland.

*BIDGOOD, D.E.T., *and* W.B. HARLAND. Palaeomagnetic studies of some Greenland rocks.

*KOCH, L. Journeys and expeditions to Greenland in the years 1913-59: a summary.

*KATZ, H.R. Late Precambrian to Cambrian stratigraphy in East Greenland.

*BERTHELSEN, A. On the chronology of the Precambrian of Western Greenland.

*THORSTEINSSON, R., *and* E.T. TOZER. Structural history of the Canadian Arctic Archipelago since Precambrian time.

*BLACKADAR, R.G., *and* J.A. FRASER. Precambrian geology of arctic Canada: a summary account.

Thorsteinsson, R. Lower Palaeozoic stratigraphy of the Canadian Arctic Archipelago, p.380. Abstract.

*TOZER, E.T. Summary account of Mesozoic and Tertiary stratigraphy, Canadian Arctic Archipelago.

*CRAIG, B.G., *and* J.G. FYLES, Pleistocene geology of arctic Canada.

*McNAIR, A.H. Relations of the Parry Islands fold belt and the Cornwallis folds, eastern Bathurst Island, Canadian archipelago.

*GREGORY, A.F., *and others.* Geological interpretation of aeromagnetic profiles from the Canadian Arctic Archipelago.

*KRANCK, E.H. Gypsum tectonics on Axel Heiberg Island, Northwest Territories, Canada.

*MARTIN, L.J. Tectonic framework of northern Canada.

*BAADSGAARD, H., *and others.* Caledonian or Acadian granites of the northern Yukon Territory.

*RAASCH, G.O., *and others.* The Silurian *Aulacopleura socialis* in the Yukon Territory.

*BASSETT, H.G. Devonian stratigraphy central Mackenzie River region, Northwest Territories, Canada.

Storey, T.P. Devonian stratigraphy, Norman Wells region, p.499. Abstract.

*LENZ, A.C. Devonian rugose corals of the lower Mackenzie valley, Northwest Territories.

*McGILL, P.C., *and* D.M. LORANGER. Micropalaeontological (Foraminifera) zonation of the Sans Sault group, lower Mackenzie River area.

*JELETZKY, J.A. Eastern slope, Richardson Mountains: Cretaceous and Tertiary structural history and regional significance.

*KENT, P.E., *and* W.A.C. RUSSELL. Evaporite piercement structures in the northern Richardson Mountains.

Gryc, G. Progress report: a study of tectonics of Alaska, p.596. Abstract.

Dutro, J.T. Correlation of Palaeozoic rocks in Alaska, p.597. Abstract.

Benninghoff, W.S., G.W. Holmes, and D.M. Hopkins. Newly recovered upper Tertiary nonmarine sediments in Alaska and northwestern Canada, p.598, Abstract. A corrected abstract is substituted in some copies: Upper Tertiary sediments in Alaska and northwestern Canada, by D.M. Hopkins and W.S. Benninghoff.

Benninghoff, W.S., *and* G.W. Holmes. Preliminary report on Upper Cenozoic carbonaceous deposits in the Johnson River area, Alaska Range, p.599. Abstract.

*SWAIN, F.M. Ostracoda from the Pleistocene Gubik formation, Arctic Coastal Plain, Alaska.

*EARDLEY, A.J. History of geologic thought on the origin of the Arctic Basin.

*HEEZEN, B.C., *and* M. EWING. The Mid-Oceanic Ridge and its extension through the Arctic Basin.

Wilson, J.T. Former mountain connections in the Arctic, p.643. Abstract.

Dietz, R.S., *and* G. Shumway. Arctic Basin geomorphology, p.644. Abstract.

Hunkins, K.L. Seismic studies of the Arctic Ocean floor, p.645-65. No. 65255.

Schwarzacher, W., *and* K.L. Hunkins. Dredged gravels from the central Arctic Ocean, p.666-77. No. 68038.

*CARSOLA, A.J., *and others*. Bathymetry of the Beaufort Sea.

*CHROMIE, W.J. Preliminary results of investigations on arctic drift station Charlie.

*PLOUFF, D., *and others*. Geophysical studies on IGY drifting station Bravo, T-3, 1958 to 1959.

Ignatius, H. Marine geological observations from the Barents Sea, p.717. Abstract.

Scholl, D.W., *and* C.L. Sainsbury. Marine geology and bathymetry of the Chukchi shelf off the Ogotoruk Creek area, northwest Alaska, p. 718-32. Condensed from No. 68036.

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Fristrup, B., Danish glaciological investigations in Greenland, p.735-46. Revision of No. 58097 and 64586.

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Dunbar, Moira. Thrust fracture pattern in young sea ice, p.1091. Abstract of No. 64302.

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*HARWOOD, T.A. Modern methods of exploration in the Canadian Arctic Islands with special respect to logistic problems.

*MARKHAM, W.E. Forecasting sea ice conditions.

*MACKAY, J.R. Freeze-up and break-up of the lower Mackenzie River, Northwest Territories.

*HEMSTOCK, R.A. Transportation in the Canadian North.

*SPROULE, J.C. Regional geology and petroleum prospects; lower Mackenzie basin and arctic coastal area, Northwest Territories.

*INGALL, L.N., *and* R.J. COPELAND. Operational report on a gravity meter survey conducted on the arctic coastal plain.

Meador, J.G. Marine seismograph and Sparker survey in the Mackenzie River, Northwest Territories, p.1153-56. Condensed from No. 60646.

*REECE, A., *and* A.L. MATHER. Geochemical prospecting for base metals in Schuchert Dal, northeast Greenland.

*WINSNES, T.S. Activities of Norsk Polarinstitutt (Norwegian Polar Institute) in Svalbard.

*ELLITSGAARD–RASMUSSEN, K. Geological investigation of Greenland: past and present.

*JACOBSEN, G. Jacobsen-McGill University Expedition Axel Heiberg Island, 1959–61.

*BELCHER, A.T. The Arctic Institute of North America. (DLC., DGS.)

INTERNATIONAL SYMPOSIUM ON ARCTIC GEOLOGY, 1960, *see also*

Dietz, R.S., & G.A. Shumway. Arctic Basin geomorph. 1961. No. 71031

Thorsteinsson, R., & E.T. Tozer. Summary account . . . 1960. No. 76132

72393. INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS. International Year of the Quiet Sun. (*Its:* IUGG Chronicle, Feb. 1962. no.42, p.49-95.) Text in English or French.

Contains preliminary programs for the IQSY 1964–1965 as drawn up at the fourth meeting of the Comité International de Géophysique in Paris, Jan. 1961. Of special arctic interest are the programs on: aurora and airglow, ionosphere, and meteorology, p.52-67. National programs of Finland p.71, and the United States p.79-82, include arctic projects. Recommendations of the International Council of Scientific Unions General Assembly Sept. 1961, state the need for a set of measurements at solar minimum activity, to complement the findings of the IGY, a sunspot maximum period. (DGS.)

72394. INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS. *Association of Meteorology and Atmospheric Physics.* Twelfth general assembly, Helsinki, July–August 1960. Report of proceedings, *pub.* London, Dec. 1960. 150 p. graphs, tables. (*Its:* Publication IAMAP no.12/b.) Refs.

Contains abstracts of the scientific papers presented, several dealing with the Arctic, viz:

Godson, W.L. A comparison of the winter-summer transitions in the arctic and antarctic stratospheres, p.95.

Defant, F. Investigations on the structure of the atmosphere in Northern Hemisphere midsummer, p.101-104.

Ramanathan, K.R. Ozone and water vapour in the atmosphere and stratospheric circulation, p.108-110.

Scholander, P.F., *and others.* Application of C^{14} dating and O^{18}/O^{16} measurements for the determination of the age and sites of formation of Greenland icebergs, p.126.

Belmont, A.D. The stratospheric wind reversal pattern, p.137.

Stroud, W.G., & W. Nordberg. Seasonal, latitudinal and diurnal variations in the upper atmosphere measured with the rocket-grenade experiment, p.137-38.

Teweles, S. Time section and hodograph analysis of Churchill rocket and radiosonde winds and temperatures, p.138-39.

Kellogg, W.W. The dynamics of the polar mesosphere in winter, p.141.

Macdonald, N.J., & W.O. Roberts. Links between ionospheric levels and the weather, p. 143-45. (DWB.)

72395. INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS. *Association of Physical Oceanography.* Catalogue of published mean sea level data, 1807-1958, Paris, 1961. vi, 64 p. tables, fold. map. (IUGG Monograph no.13; IAPO Pubcation scientifique no.23.) Refs.

Lists the data available from about 800, including 33 arctic, stations, as pub. in e.g. No. 51948. Ports for which monthly and annual mean values have been pub. and those with only annual means available are indicated. Data coverage is indicated by an alphabetic code showing the earliest and latest decade of record. (DWB.)

72396. INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS. *Association of Scientific Hydrology.* General assembly of Helsinki 25/7-6/8, 1960. Snow and ice commission. Report of proceedings. Gentbrugge, Belgium, 1961. 588 p. illus., graphs, tables, maps & diagrs. incl fold. (*Its:* Publication no.54.) Refs.

Of the papers presented, the following are of arctic interest, 19 of them* are abstracted in this Bibliography under the authors' names.

Palosuo, E. Crystal structure of brackish and fresh-water ice. p.9-14. Orientation of crystal axes in freezing process in Baltic Sea.

Sala, I. Experimental studies on the stress concentration index of sea-ice. p.15-19. Studies in Finland give this index for sea-ice an approx. value of 0.

Simojoki, H.J. Climatic change and long series of ice observations at Lake Kallavesi, p.20-24. Dates of freeze-up and breakup, 1834–1957, on this lake 62°52′N. 27°45′E.

*POUNDER, E.R., *and* P. STALINSKI. General properties of arctic sea ice.

*POUNDER, E.R., *and* P. STALINSKI. Elastic properties of arctic sea ice.

*POUNDER, E.R. Heat flow in ice sheets and ice cylinders.

*UNTERSTEINER, N. On the mass and heat budget of arctic sea ice.

Rikhter, G.D. Development of snow studies in the U.S.S.R. p.69-73. Survey of research, with suggestion that *snow course* be a special branch of science.

Shoda, M. New laboratory at the Snow Experiment Station of the Railway Technical Institute. p.74-79. Plans and photographs of this Japanese laboratory built Dec. 1958.

Gerdel, R.W., *and* G.H. Strom. Wind tunnel studies with scale model simulated snow. p.80-88. U.S. Army SIPRE program in New York University: wind tunnels, using borax.

Price, W.I.J. The effect of the characteristics of snow fences on the quantity and shape of the deposited snow. p.89-98. Results of British experiments in Scotland.

Richter, G.D. Role of the snow cover in nature. p.107. Influence on soil temperature, geomorphic processes, freezing and thawing, plants and animals, etc.

*BAUER, A. Précision des mesures d'ablation.

*HATTERSLEY-SMITH, G.F., *and others*. The ablation season on Gilman Glacier northern Ellesmere Island.

*AVSIUK, G.A. Investigations glaciologiques executées sur le territoire d'U.R.S.S. sous le programme de l'année géophysique internationale (AGI) en 1957–1959.

*BÜDEL, J. Glaziologische Arbeiten der Deutschen Spitzbergen-Expedition 1959.

*KRENKE, A.N. Glacier domes with firn alimentation on the Franz-Joseph Land.

*FRISTRUP, B. Studies of four glaciers in Greenland.

Gold, L.W., *and* G.P. Williams. Energy balance during the snow melt period at an Ottawa site. p.288-94. Net radiation and convection estimated to contribute 2305 cal./cm.^{2} and 785 cal./cm.^{2} respectively, during a two-week period in 1959; of this heat 2290 cal./cm.^{2} were used for evaporation and 800 cal./cm.^{2} for melting. Water equivalent of snow lost was 13.4 cm.; of this, 3.4 cm. evaporated.

*AMBACH, W. The energy balance during a 10-day ablation period on the Greenland Ice Cap.

*DOLGUSHIN, L.D. Main features of the modern glaciation of the Urals.

*CASE, J.B. Glacier-mapping activities in the United States.

Mercanton, P.L. Rapport sur les variations de longueurs des glaciers européens, en 1956/57, 1957/58, 1958/59, p.366-78. In French. Includes Norwegian and Swedish glaciers, half dozen in the far North.

*SVATKOV, N.M. Changes in the accumulation regime on the ice cap in the Russkaya Gavan' area on Novaya Zemlya.

Nye, J.F. The influence of climatic variations of glaciers. p.397-404. A recent theory on the response of glaciers to changes in rate of accumulation and ablation, cf. No. 60600.

Shnitnikov, A.V. The present phase of intrasecular variability of mountain glaciation in Northern Hemisphere. p.449-65. Current transgressive phase most fully shown in glaciers of Alaska.

*HOFMANN, W. Tellurometer measurements on the Greenland Ice Cap during the International Glaciological Greenland Expedition (EGIG), summer 1959.

*MÄLZER H., *and* D. MÖLLER. Das Nivellement bei der Expédition Glaciologique Internationale au Groenland (EGIG), Sommer-Kampagne 1959.

*BLACHUT, T.J. The use of aerial photogrammetry in the study of mountain glaciers.

*WEBER, J.R., *and others*. Geophysical surveys on Gilman Glacier, northern Ellesmere Island.

Haefeli, R. Zur Rheologie von Eisschildern der Arktis & Antarktis. (On the flow of ice sheets in the Arctic and Antarctic.) In German with French and English summaries. p.547-61. Presents theory of the steady-state motion of ice sheets within the firn region, supported by several simplifying assumptions.

Glen, J.W. Measurements of the strain of a glacier snout, Cambridge Austerdalsbre Expedition. p.562-67. This glacier, studied in 1958-59, is undergoing compressional strain even in the last 20 m. of its length.

*BAUER, A. Influence de la dynamique des fleuves de glace sur celle de l'Inlandsis du Groenland. (DWB.)

72397. INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS. *Association of Seismology and the Physics of the Earth's Interior.* Comptes rendus des séances de la douzième conférence réunie à Helsinki du 25 Juillet au 6 Août 1960. Strasbourg, Müh-le Roux, 1961. 264 p. map, graphs, tables. (*Its:* Comptes rendus, no.13.) Refs. Text in French, English, or Spanish. Title tr.: Proceedings of the sessions of the 12th general assembly at Helsinki from the 25 July to 6 Aug. 1960.

Includes summaries of papers presented, five on arctic seismology, viz:

IGY - microseisms at the station Nord (in French) by H. Jensen, p.94-95.

Some aspects of seismicity of the USSR by S.L. Solov'ev, p.127-28.

Studies of tsunami in the USSR by E.F. Savarenskiĭ *and* S.L. Solov'ev, p.145-46.

On some peculiarities of the latest tectonic motions of the Verkhoyansk-Kolyma folded region by B.A. Petrushevskiĭ *and* I.A. Rezanov, p.187-88. (No. 67422.)

Geothermal heat flow in western Canada by G.D. Garland *and* D.H. Lennox, p.230-31.

The national reports for Norway, Canada, Denmark, Finland, and Sweden, p.251-52 and appendix 2, refer also to northern areas e.g., near earthquakes at Isfjorden, changes in the Dominion Observatory seismological network, also gravity mapping in northern Quebec and Ellesmere Island; station Nord in North Greenland; earlier pendulum-type replaced by a quartz clock at Kiruna, seismic studies in Svalbard and Swedish Lapland. (DGS.)

72398. INTERNATIONAL VOLCANOLOGICAL ASSOCIATION. Catalogue of the active volcanoes of the world including solfatara fields; part 8, Kamchatka and continental areas of Asia, by V.I.

Vlodavetš and B.I. Piip. Naples, Italy, International Volcanological Association, 1959. xi, 110 p. illus., maps, tables. Refs.

Summarizes data available Jan. 1, 1957, on 28 active volcanoes in Kamchatka, on the Indigirka, approx. 67°N. 142°E. near the great bend of the river, and the Anyuyskiy Vulkan in the South Anyuyskiy Range east of the Kolyma. Twenty Kamchatka volcanoes have erupted in historical time, eight are dormant. Bezymyannaya became active Oct. 22, 1955, and four others recently show evidence of activity. Each is numbered according to the world list of volcanoes and the Russian classification. (DGS.)

72399. *INTER-NORD, bulletin of economic and cultural information for the northern regions.* Paris, École Pratique des Hautes Études. Centre des Études Arctiques et Antarctiques, no.1-5, Apr.? 1961-Dec. 1962, *in progress.* Refs. Mimeographed bulletin to be pub. quarterly in English and French in approx. 100-230 pages each issue.

Presents brief reviews, comment and dated news notes, etc. on current affairs; 14 countries of northern Europe, Asia and America are to be covered, though not all in every issue, the information from own correspondents, and such local (cited) sources as newspapers, newsletters, trade journals, also company, institution and government reports. Its broad scope includes industry, scientific research, natural resources development, economic and social problems, transportation, etc. Emphasis, but not exclusive concern, is on arctic and subarctic areas of Norway, Sweden, Finland, Greenland, Canada, Alaska. Each issue has subject, geographic, and corporate- and personal-name indexes. (CaONA.)

72400. INTRONA, SOTIR. Montagne di ferro al 68° parallelo. (Universo, May-June 1961. anno 41, no.3, p.433-52, illus. incl. col., map.) Text in Italian. **Title tr.:** Iron mountains at 68° latitude.

Describes the ore deposits, iron mines, and working conditions at Kiruna and Malmberget, also the ports of Narvik and Luleå. Projected improvements in the Narvik-Kiruna, Kiruna-Malmberget and Malmberget-Luleå railroad lines, and in port installations at Narvik (ice-free) and Luleå (ice bound 5 months/year) are discussed. Data are given on the 1959 and expected 1965 volume of production and export. The local Lappish reindeer economy and increasing acculturation are sketched. (DLC.)

72401. IOGANZEN, BODO GERMANOVICH, 1911– . Vydaiushchiisiā botanik Sibiri; iubilei V.V. Reverdatto. (Sel'skoe khoziāistvo Sibiri, Nov. 1961. god 6, no.11, p.77-79, port.) Text in Russian. **Title tr.:** An outstanding botanist of Siberia; jubilee of V.V. Reverdatto.

Sketches the life and scientific activities of Viktor Vladimirovich Reverdatto, on the occasion of his 70th birthday and his fifty years of scientific work; he has published 75 books and 70 papers relating to the flora of Siberia, including the northern areas, and the principal ones are cited with annotations. (DLC.)

72402. IOKHIMOVICH, DAVID ISAEVICH, *Editor.* Moiā Sibir'; stikhi, ocherki, stat'i o semiletnem plane. Novosibirsk, 1960. 335 p. illus. Text in Russian. **Title tr.:** My Siberia; poems, sketches, articles on the seven-year plan.

Includes six papers on northern Siberia, abstracted in this bibliography under their authors' names, viz (titles translated):

LUCHINETSKII, E. Treading in the prospectors' tracks.

BABLIUK, B.T. The seven-year plan in the diamond industry.

LYKOV, M. Along blue roads.

POSPELOV, G.L. Large-scale science in Siberia.

KOZHEVNIKOV, S. The man from Zolotaya valley.

SHCHEGLOV, S.L. The tundra shall retreat. (DLC.)

72403. IONIN, A. S., *and others.* Karta sovremennykh vertikal'nykh dvizhenii beregov morei SSSR i geologo-geomorfologicheskie metody ikh izucheniiā. (Akademiiā nauk SSSR. Geomorfologicheskaiā komissiiā. Sovremennye tektonicheskie dvizheniiā zemnoi kory i metody ikh izucheniiā, 1961, p.150-58, text map.) 16 refs. Text in Russian. Summary in English. *Other authors:* P.A. Kaplin *and* V.S. Medvedev. **Title tr.:** Map of contemporary vertical movements of the seacoast of the USSR and geologic-geomorphic methods of investigating them.

Map indicates the relatively stable rising and sinking shore lines. In the Arctic, the Laptev and East Siberian seacoasts are sinking, the Barents and Chukchi seacoasts rising, and the White and Bering Seas have relatively stable coastlines. Methods used in coastal relief studies are briefly discussed: instrumental surface levelling, investigation of shelf areas and bottom sediments. Such studies are far from complete, and by no means universal. (DLC.)

72404. IONIN, A. S. Otmiraiushchie beregovye akkumuliātivnye formy Beringova moriā. (Akademiiā nauk SSSR. Okeanograficheskaiā komissiiā. Trudy 1961. t.8, p.85-97, illus., maps.) 17 refs. Text in Russian. **Title tr.:** Degradation of coastal accumulative forms of the Bering Sea.

Presents a geormorphic description of such forms as studied at Cape Chaplina, on the southeastern coast of Chukotka. Two shore drifts are described in detail and illus. Their forms, composition and dynamics are outlined. Degradation of these forms is discussed; rise of the sea level, source of drift, glacial accumulation, development of land in Quaternary period are commented upon as possible causes of their formation and present degradation. (DLC.)

IONIN, A. S., *see also*

Budanov, V.I., *& others.* O priznakakh . . . morei. 1961. No. 70431

Budanov, V.I., *& others.* Present-day vertical movements . . . 1961. No. 70432

72405. IPAT'EVA, I. S. Analiz raspredeleniiā aktsessornykh i postmagmaticheskikh mineralov v granitakh Omchikandinskogo massiva i rudnykh zhilakh. (Akademiiā nauk SSSR. Sibirskoe otdelenie.

ÎAkutskiĭ filial. Nauchnye soobshcheniîa, 1962. vyp.7, geologiîa, p.151-54, diagr.) 2 refs. Text in Russian. Title tr.: Analysis of the distribution of accessory and postmagmatic minerals in granites of the Omchikandinskiy massif and ore veins.

This 160 km.² massif, is in the central part of the Polousnyy Range. Its granites are divided into two phases according to structure and petrographic composition: early phorphyraceous, and later leucocratic granites. Accessory (magmatic) minerals are zircon, apatite, orthite, and others; postmagmatic minerals: cassiterite, wolframite, arsenopyrite, topaz, galena, sphalerite and molybdenite. (DLC.)

IPAT'EVA, I. S., *see also* Nekrasov, I. ÎA., & I.S. Ipat'eva. Mineralogo-geokhimicheskie osobennosti . . . 1961. No. 74269

72406. IRON ORE COMPANY OF CANADA. Mining operations at Carol Project, Iron Ore Company of Canada. (Canada mining and metallurgical bulletin, Aug. 1962. v.55, no.604, p.538-45, illus., maps, diagrs., graphs.) 5 refs. Prepared by the engineering staff and presented by R.W. Kenway at the Canadian Institute of Mining and Metallurgy meeting, Ottawa, Apr. 1962.

Outlines this project to mine by open-pit methods, 17,200,000 long tons/yr. of crude ore grading 37% iron. The ore is to be beneficiated to produce 7,000,000 long tons of concentrate, grading 66% iron, of which 5,500,000 long tons are to be pelletized. Production is scheduled to begin in summer of 1962. Located on the west side of Wabush Lake in westernmost Labrador, 52°57′N. 66°54′W., the two deposits consist of a fine- to medium-grained mixture of quartz, specular hematite and magnetite; reserves are estimated at over a billion tons. Mining is to commence on the Smallwood mine, although the Carol deposit is the larger. Jet-piercing drills of a new model are to be used for 50-ft. blast holes of various sizes; at full production, a normal blast may yield from 750,000 to 1,000,000 long tons. The crude ore is to be loaded by four large electric shovels on 100-ton trailer-trucks, hauled to two surge bins for railway transport 5.5 mi. to the crusher. Future plans are noted for a tunnel under the two deposits, with vertical ore-passes from the tunnel to the surface. (DGS.)

72407. IRVING, LAURENCE, 1895– The heterothermous condition of the tissues of warm-blooded animals. (*In:* Symposia on arctic biology and medicine. Proceedings 1962, p.133-74, illus., table.) 12 refs.

Discusses arctic climate and the stable physiology of those, human and animal, native to arctic areas. Heat economy, and insulation variability in animals, effect of temperature on the activity of poikilotherms and homeotherms are described. Cooling of hands and feet in acclimatized subjects, and in Eskimos, heterothermous character of surface tissues, nervous integration of these tissues; sensitivity thresholds and ambient temperature are reported. Extensive discussion follows, dealing also with paper of Dr. Kjell Jøhansen, q.v. (CaMAI.)

72408. IRVING, LAURENCE, 1895– . The migration of Lapland longspurs to Alaska. (Auk, July 1961. v.78, no.3, p.327-42, table, map.) 45 refs.

Comprehensive account of breeding migrations over Western Canada, Alaska, and the Aleutians, of *Calcarius lapponicus alascensis* Ridgeway, claimed to be the commonest nesting bird in the Alaskan arctic tundra. Records indicating migration from Asia are also discussed. The bird is said to winter in the interior western United States and as far north as British Columbia. (DA.)

72409. IRVING, LAURENCE, 1895– , *and others.* Regulation of temperature in fur seals. (Physiological zoology, Oct. 1962. v.35, no.4, p.275-84, illus., tables.) 16 refs. *Other authors:* L.J. Peyton, C.H. Bahn, *and* R.S. Peterson.

Reports observations and experiments conducted on St. Paul Island in the Pribilofs. The fur of young pups not being water-repellent causes them to become wet and cold in the water. But they were found to tolerate a certain degree of hypothermia. The fur of adults is unwettable and keeps their skin nearly homoiothermous. The different conditions in the flippers and their role in heat regulation through circulatory changes are also discussed. (DLC.)

72410. IRVING, LAURENCE, 1895– . Stability in Eskimo naming of birds on Cumberland Sound, Baffin Island. (Alaska. University. Anthropological papers, Dec. 1961. v.10, no.1, p.1-12, tables.) 9 refs.

Compares ornithological nomenclature as he found it at Pangnirtung in 1960, and in Alaska 1953, with that recorded by others on Baffin Island, 1879-1929. In the Cumberland Sound area, over 90% of the species names (tabulated) have been retained. Only 59% correspond to the names used in Alaska, and the discrepancy is attributed to cultural changes. The accuracy and stability of this unwritten nomenclature indicate the Eskimos' powers of observation and concern for nature. (DSI.)

IRVING, LAURENCE, 1895– , *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Hart, J.S., & *others.* Thermal & metab. responses . . . Eskimos cold. 1962. No. 72054

Hildes, J.A., & *others.* Estimation of heat flow . . . 1961. No. 72146

Miller, L.K., & L. Irving. Local reactions cooling, Eskimo. 1962. No. 74027

72411. IRVING, WILLIAM NATHANIEL, 1927– . 1961 field work in the Western Brooks Range, Alaska, preliminary report. (Arctic anthropology, 1962. v.1, no.1, p.76-83.) 7 refs.

Summarizes and evaluates archeological finds made at several sites in the Itivlik-Desperation Lakes area of west-central Brooks Range. Camp and house sites reconnoitered in 1954 and excavated in 1961 yielded several thousand artifacts, now at the University of Wisconsin. The most important site on Itivlik Lake shows at least two

stages of the Arctic Small Tool tradition closely related to the Denbigh Flint complex, two occupations characterized by small implements, an Ipiutak-time house, and a winter village frequented after 1500 A.D. Similar finds were made at several surveyed sites along nearby river systems. Particularly noted are archeological remains at Desperation Lake: concentrations of tent rings including a camp with Arctic Small Tool tradition objects and another with large biface Ipiutak-type implements, also a village founded in late prehistoric times and occupied to the end of the 19th century. An outstanding feature of this village is a massive, 35-feet long, oval-shaped men's house with petroglyphs on several walls. (DSI.)

ISAACSON, L. C., *see* Terblanche, J., & *others*. Renal function . . . hypothermia. 1961. No. 76103

72412. ISAAKIĀN, L. A., *and others*. O vliīanii temperaturnykh vozdeĭstviĭ na gazovyĭ obmen i bioėlektricheskuīū aktivnost' mozga i myshīs u cheloveka pri myshechnoĭ rabote. (Akademiīa nauk SSSR. Doklady 1962. t.146, no.3, p.728-30, illus.) 3 refs. Text in Russian. *Other authors:* R.P. Ol'nīānskaīa *and* G.A. Trubiīsyna. **Title tr.:** The effect of temperature upon the gaseous metabolism and bioelectric activity of brain and muscle in man during muscular activity.

Reports on the effects of warming, or cooling the hand with ice bags. Conditions both at rest and after work performances, also at normothermia, are recorded and compared. (DLC.)

72413. ISAEV, A. I. Akklimatizaīsiīa tikhookeanskikh lososeĭ v Barenīsevom i Belom moriīakh. (Voprosy ikhtiologii, 1961. t.1, vyp.1 (18), p. 46-51, illus., tables, map.) 8 refs. Text in Russian. **Title tr.:** Acclimatization of Pacific salmon in the Barents and White Seas.

Discusses scope of fish acclimatization in Russia and its effects upon catches; non-Russian attempts at salmon transplantation; Russian activities in introduction of Pacific salmon into rivers entering the Barents and White Seas; results. (DLC.)

ISAEV, A. V., *see*

Bogoliūbov, B.P., & *others*. Opyt . . . Zapoliīarnogo rudnika. 1962. No. 70299

Galaev, N.Z., & A.V. Isaev. Obrushenie treshchinovatykh porod. . . 1962. No. 71557

Galaev, N.Z., & A.V. Isaev. Upravlenie gornym davleniem . . . 1962. No. 71558

72414. ISAEV, SERGEĬ IVANOVICH. Geograficheskoe raspredelenie poliīarnykh siīaniĭ i radiaīsionnye poīasa Zemli. (Geomagnetizm i aėronomiīa, 1962. v.2, no.4, p.663-68, graphs, maps.) 13 refs. Text in Russian. **Title tr.:** Geographic distribution of auroras and the earth's radiation belt.

Reviews own dissertation of 1954 on geographic distribution of auroras and their relation to geomagnetic and ionospheric disturbances, and exemplifies it with the data of visual observations recorded at 450 meteorological stations of the USSR and at special Glavsevmorput' stations during one and a half solar cycles of 1932-1948. Two zones of more than average frequency of auroras were discovered: zone S of the middle latitudes ($\Phi = 52° - 58°$), and the zone V of high latitudes ($\Phi = 64° - 68°$), adjacent to the well established Fritz's zone of maximum frequency ($\Phi = 68°$). The S zone exists during strong magnetic storms only and is more active during the years of maximum solar activity. The V zone appears during medium magnetic disturbances, remains active during strong storms, and is weakly expressed during the years of the lowest solar activity. A relationship is suggested between S zone and the second (from Earth) radiation belt, and between the V zone and the third radiation belt. (DLC.)

72415. ISAEV, SERGEĬ IVANOVICH. Nekotorye itogi nauchno-issledovatel'skikh rabot, vypolnennykh v Poliīarnom geofizicheskom institute Kol'skogo filiala AN SSSR v 1961 g. (Geomagnetizm i aėronomiīa, 1962. v.2, no.3, p.575-76.) Text in Russian. **Title tr.:** Some results of research at the Polar Geophysical Institute of the Academy of Sciences' Kola branch in 1961.

Chronicles geophysical investigations of electromagnetic phenomena: L.S. Evlashin showed that the probability of appearance of red auroras, type A diminishes north and south from the zenith, and interprets this as a latitudinal distribution of electron energies, which produce the red auroras. S.I. Isaev showed that the average position of the southern boundary of auroras has a stable maximum at $\Phi = 52° - 56°$, and considers this an indication of a connection between this zone and the outer radiation belt. A.E. Veller investigated the spectrum systems of molecular nitrogen, and concludes that electrons represent the main component of the solar corpuscular flux. His interferometric investigations of the green (5577Å) spectral line showed that kinetic temperatures of some weak forms of auroras is between 315° and 415° while L.S. Evlashin obtained several thousand degrees for oscillation and rotation temperatures during an exceptionally intensive aurora of Feb. 11, 1958. M.I. Pudovkin and A.B. Korotin investigated geomagnetic phenomena, and determined the effective coefficient of recombination of the *E* layer of the atmosphere. Study of the ionosphere was carried out by E.V. Sukhorukova, Z.TS. Rapoport, and N.V. Shul'gina who established a connection of ionospheric variations with the cycle of solar activity. K.K. Fedchenko investigated a drop in cosmic rays intensity during magnetic storms. (DLC.)

72416. ISAEV, SERGEĬ IVANOVICH. O sushchestvovanii oblasti povyshennoĭ aktivnosti poliīarnykh siīaniĭ v srednikh shirotakh. (Geomagnetizm i aėronomiīa, 1962. v.2, no.5, p.861-64, graphs.) 8 refs. Text in Russian. **Title tr.:** On the existence of an increased auroral activity zone in the middle latitudes.

Analyzes the data of visual observations of auroras on the territory of the USSR, and hydrogen emission spectrum at Murmansk during the period of the IGY and IGC. A region of higher auroral activity at middle latitudes (58°-50°N.) is confirmed, and the hydrogen emission of auroras during magnetic disturbances found to occur in a belt close to 60°N. lat. (DLC.)

72417. **ISAEV, SERGEĬ IVANOVICH,** *and others.* Sovmestnaīa sovetsko-frantsuzskaīa ėkspeditsiīa po issledovaniiū polīarnykh siīanii. (Geomagnetizm i aėronomiīa, 1962. v.2, no.5, p.1014-15.) Text in Russian. *Other authors:* A.B. Korotin *and* ĬA.I. Fel'dshteĭn. **Title tr.:** The joint Soviet-French expedition on auroral research.

Describes the program of simultaneous observations of auroras and geomagnetic variations performed by the joint Soviet-French expedition at arctic and antarctic conjugate stations at Yarensk in Arkhangel'sk Province, 62°11′N. 49°06′E., and at the Port-o-France observatory on Kerguelen Island. In the Arctic, the program was: hourly visual observations of auroras at meteorological stations in the region; photographing of the entire sky at Arkhangel'sk, Nar'yan Mar, Syktyvkar and Yarensk; continuous electrophotometric observations were made of auroral emissions in separate lines and of the integral light, and geomagnetic field variations of all its components, at Yarensk. Identical observational instruments and photo-cameras were used by the French and the Russian scientists. (DLC.)

ISAKOV, N. A., *see* Tumanov, I.I., *& others.* Polevaīa ustanovka . . . 1962. No. 76226

72418. **ISAKSEN, FINN T.** Lydbandintervju om kjøtt-og fleskeproduksjonen i Nord-Norge. (Norden, Nov. 1, 1960. årg. 64, nr.21, p.572, +, port.) Text in Norwegian. **Title tr.:** Taped interview on meat and pork production in North Norway.

South Norway is suited to pork production and produces enough for the entire country. North Norway excells in beef, for domestic use and for export; the North Norway and Målselv breeds, good for both meat and dairy purposes, should not be changed for other breeds; the excess skimmed milk could be used for veal production. Natural conditions in North Norway are suited also to sheep raising; mutton and wool are in demand. (DA.)

72419. **ISAKSSON, OLOV.** Två lapska kultplatser. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1961, p.54-65, illus.) Text in Swedish. **Title tr.:** Two Lapp places of cult.

Describes a site near Vistträsk and another in Junosuando parish in Norrbottens län, north Sweden, where sacrificial stones, also burial-like mounds and carvings have been found, evidently the first case of graves associated with a Lappish place of cult. (SPRI.)

72420. **ISAKSSON, OLOV.** Norrbottnisk landsbygd. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1961, p.9-32, illus.) Text in Swedish. **Title tr.:** Norrbotten countryside.

Presents photographs with accompanying text, showing typical older features of architecture in this north Swedish province. Regional differences between the coastal farming, the forest and the mountain areas, national distinctions in the Lappish, Swedish- and Finnish-speaking areas are stressed. Certain characteristic features, especially in Tornedalen are shown, the square barn with steep roof resembling Lapp huts, etc. The photos were taken in the course of studies initiated in 1958 by the Norrbotten Museum. (SPRI.)

72421. **ISAKSSON, OLOV.** Svenskt, finskt, ryskt; byggnadsskick i Tornedalen. (Norrbotten, 1962, p.25-56, illus.) 24 refs. Text in Swedish. **Title tr.:** Swedish, Finnish, Russian; ways of building in Tornedalen.

Discusses characteristic architectural features of this frontier region between north Sweden and Finland approx. 65°45′ – 69°N. Swedish influence is negligible, that of Finnish traditions strong. Finnish versions of such typical Tornedal features as cowsheds with pyramid-shaped roofs, storehouses with outward-curving walls, barns with slanting walls, well-arms fixed on roof-tops, etc. can be found in a 50-100 km. wide belt from Uleåborg northward toward Torne River. Traces of influence of Karelian-Russian architecture are also shown. (SPRI.)

ISAKSSON, OLOV, *see also* Skum, N.N. Nils Nilsson Skum . . . 1961. No. 75729

72422. **ISHCHENKO, V. S.** Pervye rezul'taty izucheniīa sporovo-pyl'tsevogo sostava mezozoĭskikh otlozheniĭ severnoĭ chasti Pechorskoĭ depressii. (Materialy po geologii i poloznym iskopaemym Severo-Vostoka Evropeĭskoĭ chasti SSSR. Sbornik statei, 1962. vyp.2, p.17-23, map.) 9 refs. Text in Russian. **Title tr.:** First results of investigation of the spore-pollen composition of Mesozoic deposits in the northern part of the Pechora depression.

Reports on deposits uncovered by exploratory drillings in four identified regions of Bol'shezemel'skaya Tundra. Mesozoic in this area consists of Triassic and Middle Jurassic continental deposits, Upper Jurassic and Lower Cretaceous marine and Cretaceous(?) continental deposits. Six spore-pollen complexes different in age are distinguished and each is described noting their composition, predominent plants and comparison with other regions. Transition of flora from Triassic to Lower Cretaceous is characterized. (DLC.)

72423. **ISICHENKO, N. A.,** *and* **V. P. AL'KHIMENIUK.** Gazoobmen u krys raznogo vozrasta pod vliīaniem pereokhlazhdeniīa. (Patologicheskaīa fiziologiīa i ėksperimental'naīa terapiīa, 1961. god 5, no.4, p.47-50, table.) 4 refs. Text in Russian. Summary in English. **Title tr.:** Gas exchange in rats of different age under the effect of overcooling.

O_2-uptake and CO_2-output increased in adult rats during the recovery period, following moderate intensive cooling. Old and immature animals did not respond to mild cooling, and O_2 uptake did not increase in immature rats, after intense chilling. Rectal temperature is not re-established in old and immature rats as quickly as in adult ones. (DNLM.)

72424. **ISOTALO, AIMO.** Lapin maatalouden kehittämismahdollisuuksista. (Lapin tutkimusseura. Vuosikirja, 1961. v.2, p.48-57, tables.) Text in Finnish. Summary and captions in English. **Title tr.:** Possibilities of developing agriculture in Lapland.

Lapland Province constitutes about one third of the total area of Finland, but has only about 3% (70,000 ha.) of the cultivated land. The main type of agriculture is milk and meat production, based on the cultivation of forage crops. The conditions are good for getting a better yield from these crops; the area of cultivated land also can be increased. (SPRI.)

72425. **ISSEKUTZ, B.,** *Jr., and others.* Effect of severe cold stress on the nitrogen balance of men under different dietary conditions. (Journal of nutrition, Oct. 1962. v.78, no.2, p.189-97, illus., tables.) 12 refs. *Other authors:* K. Rodahl *and* N. C. Birkhead.

Study of young men living on sufficient or low protein or caloric intakes, at room and low (8°C.) temperatures. Cold induced almost constant shivering and RMR about twice the BMR. A negative N balance was noted with the protein- and caloric-adequate diet, whilst the N loss with the other three diets noted at room temperature, was markedly increased at 8°C. The negative N balance persisted for 4-6 days even after transfer to room temperature and adequate protein diet. (DLC.)

ISSEKUTZ, B., *see also* Rodahl, K., *& others.* Effects of dietary protein . . . work capacity . . . cold. 1962. No. 75156

ISSLEDOVANIĬA LEDNIKOV i lednikovykh raĭonov. Moskva, 1961- , in progress. Collections of papers on glaciological work issued by the Interdepartmental Committee for Academy of Sciences' Institute of Geography. *See* No. 69565

ISSLEDOVANIĬA PO FIZIKE I MEKHANIKE MERZLYKH GRUNTOV, *see* Materialy . . . merzlykh gruntov, sbornik 4. 1961. No. 73869

72426. **ISTOMIN, A. S.** Na novye rubezhi. (Sel'skoe khozĭaĭstvo Severo-Zapadnoĭ zony, Mar. 1962, no.3, p.6-8.) Text in Russian. **Title tr.:** Toward new goals.

Achievements of Zaostrovskiy collective farm on the Severnaya Dvina River near Arkhangel'sk, are outlined by its chairman. It has 1600 head of cattle, including 874 cows with an average yield of 2,423 kg./yr., also a potato crop of 141 cwt./hectare, 53.6 cwt. meat/100 hectares of arable. Plans to increase production are sketched. They involve mainly putting grassland under the plow. (DLC.)

72427. **ISTOMIN, A. V.,** *and* **M. K. MAZUROV.** Ėkonomicheskaĭa ėffektivnost' obogashcheniĭa zheleznykh rud na Olenegorskoĭ fabrike po magnitno-flotat͡sionnoĭ skheme. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Flotat͡siĭa . . . 1961, p.80-83, tables.) Text in Russian. **Title tr.:** Economic effectiveness of iron ore enrichment at the Olenegorsk plant according to the magnetic-flotation plan.

Presents economic calculations, comparison and appraisal of two methods of iron ore enrichment: one, the magnetic-gravitational used during 1956-1959; the other a magnetic-flotation method recently worked out, is expected to supersede the first one. It allows a higher concentrate of iron (65% Fe) to be obtained and less silicon; it also leaves less iron ore in the waste than does the magnetic-gravitational method. (DLC.)

72428. **ISTOMIN, IVAN GRIGOR'EVICH, 1917-** . Pron'ka. (Druzhba narodov, Mar. 1961, no.3, p.140-48.) Text in Russian. **Title tr.:** Pron'ka.

Daily life on an Ostyak reindeer farm in the Khanty-Mansi National District is depicted in a tale of a stable-man suspected of having lost a kolkhoz stallion. It is translated from Samoyed by its author, a Nenets (Samoyed) writer. (DLC.)

72429. **ISTOMIN, P.** Gorit "Ogonek." (Klub, Apr. 1962. god 11, no.4, p.16-17, illus.) Text in Russian. **Title tr.:** The "Spark" still glows.

Describes scouting exploits in the Northern Urals by a group of mountaineers, a 200-km. journey from the Vogul village Ust'-Man'ya to view the unusual rock formations of Man'-Pupy-Ner (mountain of Stone Idols) and Tore-Porre-Iz, etc. (DLC.)

72430. **ISTOSHIN, B. V.,** *and* **A. P. ALEKSEEV.** Mnogoletnie izmeneniĭa temperatury vody v Norvezhskom i Grenlandskom morĭakh v letniĭ period. (Murmansk. Polĭarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozĭaĭstva i okeanografii. Nauchno-tekhnicheskiĭ bi͡ulleten', 1959. no.2 (10), p.15-21, illus., tables, map.) Text in Russian. **Title tr.:** Long-term changes of water temperature in the Norwegian and Greenland Seas the summer.

Presents results of observations since World War II mainly in May and June, of layers down to 500 m. Deviations from the norm, monthly temperatures and temperatures of currents and their branches, and general temperature conditions of the years 1947-1958 are considered. (DLC.)

ISTOSHIN, B. V., *see also*

Alekseev, A.P., *& others.* Hydrographic conditions . . . 1961. No. 69691

Alekseev, A.P., *& others.* International investigations . . . 1961. No. 69692

72431. **ITKONEN, ERKKI ESAIAS, 1913-** . Beobachtungen über die Entwicklung des tscheremissischen Konjugationssystems. *(In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.85-125.) Refs in text. Text in German. **Title tr.:** Observations on the development of the Cheremiss conjugation system.

Comparative analysis of the formation, function, and grammatical differentiation of verbs and nouns in west Finno-Ugric languages; morphological affinites to pre- , proto- , and modern Lappish are included. (DSI.)

72432. **ITKONEN, ERKKI ESAIAS, 1913-** . Gibt es im Ostseefinnischen Spuren eines Duals? (Folk, 1961. v.9, no.3, p.1-20.) Refs. in text. Text in German. **Title tr.:** Are there any traces of a dual in Balto-Finnish?

Certain grammatical archaisms in Finnish indicate that the dual, a typical and distinctive feature of Lappish, existed in ancient Finnish. This in turn suggests the derivation of both languages from a common ancestral Finno-Lappish tongue. (DSI.)

72433. **ITKONEN, TERHO.** Lp. *binâl.* (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.139-46.) Refs. in text. Text in German.

Etymological analysis of this Lappish word meaning hard-wood or hard needle tree. Its possible derivation from the Finno-Ugric *pine,* meaning tooth, also barb or flint, i.e. hard material, is discussed. (DSI.)

72434. **ITKONEN, TOIVO IMMANUEL, 1891-** . Kaksi vanhaa kirkon "komsiota." (Suomen Muinaismuistoyhdistys. Suomen museo, 1960. v.67, p.74-82, illus.) 6 refs. Text in Finnish. Summary in German. **Title tr.:** Two old church cradles.

Describes 250-300 year old Lappish cradles, preserved in two churches near Oulu, Finland. The

cradles are thought to have borne an infant for burial, and been left in the church as memorial. The wooden frame structure, leather covering, lining, suspension technique, etc. are compared with other old and modern Lappish cradle types. (DLC.)

72435. ITKONEN, TOIVO IMMANUEL, 1891- . *Kuivi,* ein heiliger Ort der Lappen. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.127-38, illus., map.) 12 refs. Text in German. **Title tr.:** *Kuivi,* a sacred site of the Lapps.

Describes an ancient cave sanctuary on Kuivi, one of the four summits of Mt. Paistunturit, near the Teno (Tana) River, Ustjoki parish. The etymology of *kuivi,* probably the name of a mountain god or guardian spirit, is discussed. Folkloristic and historical data on similar sacrificial places in Sweden and on Kola Peninsula are given, including the Ukonsaari cave near Inari, surveyed in 1953 by Erkki Itkonen, Jouko Hautala, and Matti Hako. The Lapps' persisting secrecy about the location and cults of these sanctuaries is noted. (DSI.)

72436. ITKONEN, TOIVO IMMANUEL, 1891- . Der "Zweikampf" der lappischen Zauberer, *noai'di,* um eine Wildrentierherde. (Suomalais-ugrilainen seura. Aikakauskirja, 1960. v.62, no.3, p.1-76.) Approx. 35 refs. Text in German. **Title tr.:** Duel of Lappish sorcerers, *noai'di,* over a herd of wild reindeer.

Discusses a 17-18th century legend cycle from the upper Ounasjoki basin in Finland. The tales are about the shamans' powers to attract wild reindeer: trance, transformation into animal shape, contests between rival sorcerers, use of drums, incantations, etc. (DLC.)

72437. ĬTSIKSON, M. I. Pervaĭa Vsesoĭuznaĭa konferentsiia po geologii i metallogenii Tikhookeanskogo rudnogo poĭasa. (Geologiia rudnykh mestorozhdenii, Jan.-Feb. 1961, no.1, p.119-27.) Ref. Text in Russian. **Title tr.:** The first All-Union Conference on the Geology and Metallogeny of the Pacific Ore Belt.

Reports in some detail this conference at Vladivostok Sept. 26 - Oct. 2, 1960, with more than four hundred present, 62 organizations represented, 150 papers delivered. General problems of geology and metallogeny, magmatism and mineralization, the role of faults in development of mineralization, the geology and metallogeny of ore provinces, geochemistry of ore deposits, and other matters were considered. The Kolyma massif, the Okhotsk-Chukotka volcanic belt, Kamchatka, and other arctic areas were under frequent discussion. Plans for further studies are summarized. (DLC.)

72438. ĬUDANOV, I. G. Osobennosti raspredeleniia i sostoianie syr'evoĭ bazy promysla sel'di v moriakh Severnoĭ Atlantiki. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten', 1960. no.3 (13), p.21-24, tables.) Text in Russian. **Title tr.:** Characteristics of distribution and composition of herring resources in the North Atlantic seas.

Discusses the beginning, in 1947, and expansion of Russian North Atlantic herring fisheries, fishing areas and seasons; catches since 1951 in different including the arctic areas, share of European countries in the herring catch. (DLC.)

72439. ĬUDANOV, I. G. Pervyĭ reĭs nauchno-poiskovoĭ sel'dianoĭ ėkspeditsii PINRO v severo-zapadnuiu Atlantiku letom 1960 g. (Okeanologiia, 1961. t.1, vyp.4, p.756-57, table, fold. map.) Text in Russian. **Title tr.:** The first PINRO herring reconnaissance cruise in the northwest Atlantic in summer 1960.

Outlines work of trawlers *Boguchar* and *Balaklava,* Apr. 29-Aug. 25, 1960, in waters off the North American coast of Nova Scotia and Newfoundland, searching for new fishing grounds to replace the depleted herring fishery in the northeastern North Atlantic. Large flocks of gulls and herds of dolphins, indicating shoals of herring, were observed on the continental shelf. Continuation of the search is planned for 1961. PINRO (Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii) is the Polar Research Institute of Marine Fisheries and Oceanography. (DLC.)

72440. ĬUDANOV, I. G. Sostoianie zapasov i perspektivy promysla atlanticheskо-skandinavskikh sel'dei. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten' 1959. no.2 (10), p.3-7, tables.) Text in Russian. **Title tr.:** Condition of stock and prospects of the fishery of Atlanto-Scandinavian herring.

Discusses general lines of Norwegian fisheries and fluctuations in catches since 1900; stock of herring in the Greenland - Norwegian Seas; stock and its composition in 1958; estimate of stock for 1959; suggestions for drift net assortment for 1959. (DLC.)

72441. ĬUDANOV, I. G. Stepen' urozhaĭnosti atlantichesko-skandinavskikh sel'dei v 1960 g. po dannym ucheta ikh segoletkov v Barentsevom more. (Voprosy ikhtiologii, 1962. t.2, vyp.1(22), p.69-72, table, map.) 3 refs. Text in Russian. **Title tr.:** Size of recruitment of Atlanto-Scandinavian herring in 1960 according to counts of fingerlings in the Barents Sea.

Reviews recruitment in the preceding few years and reports on the 1960 counting activities in this sea, and south and southwest of Svalbard. According to the results, 1960 is to be above average in herring production, 1959 having been an average year. (DLC.)

ĬUDANOV, I. G., *see also*

Devold, F., & *others.* International herring investigations . . . 1961. No. 70994

Marti, ĬU. ĬU., & *others.* Prichiny umen'sheniia zapasov . . . sel'dei. 1961. No. 73847

72442. ĬUDIN, B. A. Kontaktovo-metasomaticheskie izmeneniia osnovnykh porod Tsaginskogo massiva pod vliianiem shchelochnogranitnoĭ magmy. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniia . . . 1962, p.81-88, table, map, diagrs.) 8 refs. Text in Russian. **Title tr.:** Contact-metasomatic alteration of Tsaga massif rocks under the influence of alkaline granite magma.

Describes alteration of medium-grained gabbro and gabbro-diabases and gigantic-grained gabbro and labradorites under influence of alkaline granites. Chemical changes in the contact zone of these rocks are outlined. (DLC.)

72443. ĬŪDIN, B. A. Shchelochnye granity raĭona Glavnogo khrebta Volch'ikh, Monche- i Chunatundr. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniĭa . . . 1962, p.89-108, illus., tables, map, diagrs.) 11 refs. Text in Russian. **Title tr.**: Alkaline granites in the Glavnyy Ridge region of the Volch'i, Monche and Chuna Tundras.

Outlines the geologic position of alkaline granites in the structure of this gabbro massif. Mode of occurrence of the alkaline granite veins is analyzed, their petrography described in detail noting mineral composition, texture, optical properties of some minerals; data on chemical composition are presented. Contact-metasomatic alteration of gabbro rocks and eruptive brecchias under influence of alkaline granites is analyzed. Petrogenesis, age and development of alkaline magmatism are discussed; some new interpretations are offered. (DLC.)

72444. ĬŪDIN, N. I. Angaro-Pitskiĭ zhelozorudnyĭ basseĭn. (*In:* Krasnoĭarskaĭa . . . ėkspeditsiĭa. Poleznye iskopaemye . . . 1962, p.117-25.) 20 refs. Text in Russian. **Title tr.**: The Angara-Pit iron ore basin.

Outlines the genetic types and mineralogy of large ore deposits in the southeastern Yenisey Ridge, and the Angara - Bol'shoy Pit interfluve. Iron ores of this basin are of typical sedimentary character and products of chemical and mechanical differentiation. Hematite and magnetite are their main minerals. With reserves estimated at 4.5 - 5 billion tons, these deposits are considered an important base for the iron industry in the near future. (DLC.)

72445. ĬŪDINA, V. V. Subshchelochnye raznovidnosti sibirskikh trappov v basseĭne r. Bol'shoĭ Botuobii; pravyĭ pritok r. Viliŭĭa. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geologicheskaĭa, June 1961, no.6, p.79-97, illus., tables, diagrs., map.) 18 refs. Text in Russian. **Title tr.**: Subalkaline varieties of Siberian traps in Bol'shaya Botuobuya River basin; right tributary of the Vilyuy River.

Outlines the development of trap magmatism and origin of these subalkaline rocks, from studies of 1955-1956 and 1960. Trap magmatism occurred here in two stages, developing non-differentiated intrusions in the earlier and differentiated intrusions in the later. Differentiated intrusions are separated into: intrusive sheets, small cross-cutting bodies of amygdaloidal subalkaline dolerites, and metasomatic and hydrothermal veins. The petrography and mode of occurrence of the rocks are outlined. (DLC.)

ĬŪDOVICH, L. A., *see*

Ben'kova, N.P., & L.A. ĬŪdovich. Daily variations of blackout. 1962. No. 70134

Ben'kova, N.P., & L.A. ĬŪdovich. Sutochnye variatsii . . . 1961. No. 70136

ĬŪDOVIN, B. S., *see* Brandaus, A.I., & B.S. ĬŪdovin. Ėnergeticheskaĭa ustanovka . . . "Lenin." 1961. No. 70363

ĬŪMATOV, B. P., see

Bogoliŭbov, B.P., & *others*. Opredelenie moshchnosti potolochin . . . 1962. No. 70298

Bogoliŭbov, B.P., & *others*. Opyt . . . Zapoliarnogo rudnika. 1962. No. 70299

72446. ĬŪRASOV, V. F. Dinamika temperaturnykh reaktsiĭ golovnogo mozga i organov pri okhlazhdenii razlichnykh otdelov tsentral'noĭ nervnoĭ sistemy. (Fiziologicheskiĭ zhurnal SSSR, Apr. 1962. t.48, no.4, p.413-21, illus., tables.) 26 refs. Text in Russian. **Title tr.**: Dynamics of cerebral and visceral temperature responses to cooling different regions of the central nervous system.

Irrespective of the CNS region cooled, temperature fell most sharply in the cerebral cortex, less so on the medial level and least at the lowest plane of the brain. Temperature reaction of the viscera depended on the location cooled, and response was not identical even when the same region was cooled. Effects of direct cooling of the brain, etc. are also described. (DLC.)

72447. ĬŪRKEVICH, I. A. K izucheniiŭ fatsial'no-geokhimicheskikh zakonomernosteĭ v tolshche mezo-kaĭnozoĭskikh otlozheniĭ Zapadno-Sibirskoĭ nizmennosti. (Akademiĭa nauk SSSR. Institut geologii i razrabotki goriŭchikh iskopaemykh. Geokhimiĭa kaustobiolitov i ikh mestorozhdeniĭ, 1962, p.61-99.) 39 refs. Text in Russian. **Title tr.**: On study of facies-geochemical patterns in Mesozoic-Cenozoic strata of the West Siberian plain.

Reports study of Mesozoic-Cenozoic deposits as collected from drillings in the Berezovo, Malyy Atlym, Tyumen, Khanty-Mansiysk and other localities. Chemical analyses were made to determine pH, SiO_2, Al_2O_3, CaO, MgO and other components. Obtained data for Jurassic and Cretaceous deposits are compared and evaluated. This type of chemical study is considered pertinent also for oil prospecting. (DLC.)

72448. ĬŪRTSEV, B. A. *Lesquerella arctica* (Wormskj.) Wats. v Sibiri. (Akademiĭa nauk SSSR. Botanicheskiĭ institut. Botanicheskie materialy gerbariia, 1961. t.21, p.148-57, map.) 24 refs. Text in Russian. **Title tr.**: *Lesquerella arctica* (Wormskj.) Wats. in Siberia.

Reviews earlier studies of this plant first described from Greenland, and presents account of its synonyms, occurrence in Siberia, habitats, and associations, records from America. (DLC.)

72449. ĬŪRTSEV, B. A., *and* M. N. KARAVAEV. Novyĭ ostrolodochnik iz sektsii *Baicalia* Bge. v gornykh stepiakh severo-vostochnoĭ ĬAkutii. (Moskovskoe obshchestvo ispytateleĭ prirody, otdel biologicheskiĭ. Biŭlleten' 1961. t.66, vyp. 4, p.34-41, illus., map.) 11 refs. Text in Russian and Latin. Summary in English. **Title tr.**: A new species of *Oxytropis*, section *Baicalia* Bge. from the mountain-steppes of northeast Yakutia.

Describes: Oxytropis scheludjakovae Karav. et Jurtz. ranging over the Yana and Indigirka River systems. The plant is closely related to *O. splendens* Dougl. of the North American prairies. (DLC.)

72450. ĬŪRTSEV, B. A. O novykh vidakh ostrolodochnikov iz Sibiri. (Akademiĭa nauk SSSR. Botanicheskiĭ institut. Botanicheskie materialy gerbariia, 1961. t.21, p.259-70.) 11 refs. Text in Russian and Latin. **Title tr.**: New species of the genus *Oxytropis* DC. from Siberia.

Description in Latin and Russian of two new species, one of them, *Oxytropis czekanowskii* Jurtz. sp. n., found in Yakutia on the Olenek River. Type location, related forms etc. are noted. (DLC.)

IURTSEV, B. A., *see also* Panfilov, D.V., & *others*. Eshche . . . 1962. No. 74633

72451. IVANCHUK, V. I. Klassifikatsiia spektrov poliarnykh siianii. (Kiyev. Universitet. Sbornik rabot po Mezhdunarodnomu geofizicheskomu godu, 1961. vyp. 1, p.58-66, illus., graphs, diagrs.) 7 refs. Text in Russian. **Title tr.**: Classification of auroral spectra.

Describes a new method of photographic recording of auroras by manual guiding of a specially constructed spectrograph camera, so as to keep the moving auroral image fixed on the photographic film (ground glass). With such a guided spectrograph, SP-48, the Kiev State University (KGU) Polar Expedition took 60 auroral spectra in the "green" band: 4,700-6,100 Å at the Tiksi IGY station during Jan.-Mar. 1959, and obtained satisfactory resolution of auroral details, with a dispersion of 86Å/mm in Hβ region. Various auroral forms and spectra based on the records of the expedition are presented, discussed, and classified. The various forms and types of aurora are found to differ from each other as much as they differ in their altitudes; and the glow of auroras is considered not produced by hydrogen corpuscles, but, possibly, by electrons of 10-100 *keV* energy. (DLC.)

72452. IVANHOE, L. F. Right-lateral strike-slip movement along the Lake Clark fault, Alaska. (Geological Society of America. Bulletin, July 1962. v.73, no.7, p.911, fold. map.) 4 refs.

A right-lateral displacement of approx. eight miles is indicated along this break in the Alaska Range. Correlations (mapped) between equivalent rocks on either side are good over a distance of about 55 miles. The movement along the fault is believed relatively recent; and the break may be one of the more recent of several subparallel faults in the region. (DGS.)

72453. IVANOV, A. G. Midii Barentsova moria. (Priroda, Oct. 1962. god 51, no.10, p.107-108.) Text in Russian. **Title tr.**: Mussels of the Barents Sea.

Notes the nutritive value of mussels and mussel meal; their study in the Barents Sea; effect of river discharges on their distribution and biomass; ecology, prospects of exploitation. (DLC.)

72454. IVANOV, A. M. K voprosu o geologicheskom polozhenii i stratigrafii svity imandra-varzuga na Kol'skom poluostrove. *(In:* Akademiia nauk SSSR. Karel'skii filial. Problemy geologii . . . 1961, p.74-83.) 14 refs. Text in Russian. **Title tr.**: On the geologic position and stratigraphy of the Imandra-Varzuga series of Kola Peninsula.

Outlines the internal structure and petrographic properties of effusive schists, sedimentary and metamorphic complexes of the Imandra-Varzuga series. It is of various origins, different formation conditions, and different degrees of metamorphism. It should not be named as if a single series, but considered part of a greater structural unit of the Kola Peninsula. (DLC.)

72455. IVANOV, B. G. Skopleniia krevetok v zapadnoi chasti Aliaskinskogo zaliva. (Rybnoe khoziaistvo, 1962. god 38, no.1, p.14-17.) 7 refs. Text in Russian. **Title tr.**: Shoals of shrimp in the western part of the Gulf of Alaska.

Reports on experimental trawling during Mar. 26 - May 11, 1961: location and nature of rich grounds, their depth and temperature, forms of shrimp common, their geographic distribution, etc. (DLC.)

IVANOV, B. G., *see also* Beliaev, G.M., & B.G. Ivanov. . . . *Toporkovia* Djakonov. 1961. No. 70094

72456. IVANOV, G. Vazhnaia otrasl'. (Sel'skoe khoziaistvo Sibiri, Apr. 1962. god 7, no.4, p.71-72.) Text in Russian. **Title tr.**: An important branch.

Describes fur farming by the Put' k kommunizmu collective in Khanty-Mansi National District. In 1960, it had 56 mink, 118 silver and 60 blue foxes; its annual production is worth 480,844 rubles. The best workers are cited; pen construction, the stock, its housing, feeding, and mating, etc. are briefly discussed. (DLC.)

72457. IVANOV, K. G. Geomagnitnye iavleniia nablıudavshiesia na Irkutskoi magnitnoi observatorii vsled za vzryvom Tungusskogo meteorita. (Meteoritika, 1961, vyp.21, p.46-48, diagrs.) 8 refs. Text in Russian. **Title tr.**: Geomagnetic phenomena observed at the Irkutsk Magnetic Observatory after the explosion of the Tunguska meteorite.

Analyzes the magnetograms of this station registered June 30, 1908. Variation of the magnetic field (*H*), its vertical component and declination are reported; comparison is made with the magnetic stations at Sverdlovsk, Tbilisi and Pavlovsk. The passage of magnetic waves through an ionized medium is noted. (DLC.)

72458. IVANOV, K. G. Ob énergii vzryva Tungusskogo meteorita. (Meteoritika, 1961, vyp.21, p.44-45.) 2 refs. Text in Russian. **Title tr.**: On the explosion energy of the Tunguska meteorite.

Explains an equation for calculating explosive energy, and finds that of the Tungusskiy meteorite to have been $(3\text{-}5)\cdot 10^{23}$ erg., which corresponds with other calculations. (DLC.)

72459. IVANOV, K. P. O fiziologicheskikh mekhanizmakh khimicheskoi termoregulıatsii. (Fiziologicheskii zhurnal SSSR, Apr. 1962, t.48, no.4, p.436-43, illus., tables.) 12 refs. Text in Russian. **Title tr.**: Physiological mechanisms of chemical thermoregulation.

Cooling rabbits raised the O_2-consumption of their muscles by 150% or more over the initial level; it would increase to 200-400% and over when shivering appeared. With severance of the spinal cord on the thoracal level or of somatic nerves innervating the given muscles, these changes did not appear during cooling. (DLC.)

72460. IVANOV, K. P. O fiziologicheskikh mekhanizmakh khimicheskoi termoregulıatsii. (Fiziologicheskii zhurnal SSSR, Oct. 1962, t.48, no.10, p.1225-33, illus., tables.) 6 refs. Text in Russian. **Title tr.**: Physiological mechanism of chemical thermoregulation.

Account of experiments with rabbits and rats. Cooling produced weak electric activity of the muscles investigated, accompanied by a mild tonic tension and minimal mechanical vibrations. This microvibration is claimed to be the cause of increased metabollsm in the process of thermoregulation. (DLC.)

72461. IVANOV, N. V. Metod oprobovaniia po empiricheskim krivym. *(In:* Akademiia nauk SSSR.

Kol'skiĭ filial. Magmaticheskie obrazovaniĭa . . . 1962, p.4-13, tables, diagrs.) 4 refs. Text in Russian. **Title tr.:** Sampling method by empirical curves.

Describes a new statistical method for determining distribution laws of an important mineral in ore deposits and its approximate content: 164 sections at one site and 82 sections at another in an unspecified rare metal deposit were analyzed. For each section, characteristic curves were drawn of layers poor and rich in ores and distribution of grains of the valuable mineral in 1 cm^2. Then compounded empirical curves were composed. By this method, any kind of useful mineral deposit can be tested with minimum effort and cost. (DLC.)

72462. IVANOV, NIKOLAĬ SERGEEVICH. Teploobmen v kriolitozone. Moskva, Izd-vo Akademii nauk SSSR, 1962. 200 p. illus., tables, graphs, diagrs. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. Institut merzlotovedeniĭa.) Approx. 400 refs. Text in Russian. **Title tr.:** Heat exchange in cryolithozone.

Deals with the thermodynamics of freezing and thawing of soils and rocks from viewpoint of theory and method on the basis of studies of the Permafrost Institute of the Academy of Sciences' Siberian Branch. The work has five main sections; the first two discuss the present understanding of formation conditions of the heat regime of the lithosphere; and theoretical and experimental bases for investigation of heat and mass exchange in soils and rocks. Thermodynamic processes of thawing and freezing, and the mechanism of heat and water transfer in soils and rocks are considered. Finally the theory of heat conductivity in soils and rocks is presented as a statistical system. Recent Russian and foreign literature concerning these problems is evaluated. Methods for various type of studies are described. (DLC.)

72463. IVANOV, SERGEĬ VASIL'EVICH. Kul'turno-istoricheskie sviāzi ėntsev i nganasan po dannym ikh ornamenta. (Akademiĭa nauk SSSR. Institut ėtnografii. Kratkie soobshcheniĭa, 1962. vyp.37, p.57-66, illus.) 10 refs. Text in Russian. **Title tr.:** Cultural and historical links between the Enets and the Nganasans according to their ornamentation.

Study of decorative motifs typical for these two small Samoyed groups, based on museum collections. Ornamental patterns in cloth, fur, and leather work, also on bone, wood, and metal artifacts are discussed, and their complexity attributed to late extraneous influences. The basic designs however, are closely related to those still used by peoples of the far Northeast, the Chukchis, Koryaks, Eskimos, Yukaghirs, Lamuts. Ethnic implications of this factor are discussed: the ethnic nucleus of the Enets and Nganasans includes an ancient aboriginal stratum culturally akin to the present population of the far North and Northeast. The aboriginal inhabitants of the Khatanga and Anabar basin were assimilated linguistically by the Tungus. As Tungus-speaking groups, they moved to the Taymyra basin, where they subsequently came in contact with Samoyed tribes and adopted their language. In the late 17th - early 18th century, these groups fused and became the present Samoyed-speaking Nganasans. This theory was previously formulated by B.O. Dolgikh (No. 25000.) (DLC.)

72464. IVANOV, SERGEĬ VASIL'EVICH. Ornament narodov Sibiri kak istoricheskiĭ istochnik. *(In:* Nauchnaĭa konferentsiĭa po istorii Sibiri i Dal'nego Vostoka. Voprosy istorii . . . *pub.* 1961, p.345-50.) Approx. 30 refs. **Title tr.:** Ornament of the peoples of Siberia as historical source.

Discusses the indigenous motifs and borrowed components of ornament patterns of the Ob-Ugrians, Tungus, Yakuts, Paleosiberians, and Eskimos: development, diffusion, similarities and differences, historical evolution of geometric and zoomorphic designs, techniques of application, etc. The ethnogenetic value of ornament study is stressed and main areas for future research indicated. (DLC.)

72465. IVANOV, SERGEĬ VASIL'EVICH. Religiöse Vorwürfe in der Kunst der Völker Nordasiens vor der Revolution. *(In:* Opuscula ethnologica memoriae Ludovici Biró sacra, Budapest, 1959, p.113-36.) 33 refs. Text in German. **Title tr.:** Religious subjects in the art of the peoples of northern Asia before the Revolution.

Discusses religious and magic motifs in the pictorial art of Ob-Ugrian, Samoyed and Tungus tribes, Dolgans, Gilyaks, Koryaks, Chukchis, and Asiatic Eskimos. Three main groups of religious wood carvings are differentiated: zoo- and anthropomorphic sculptures not endowed with a soul of their own; images or receptacles of the souls of living or deceased human beings and animals; likenesses of spirits, including masters of nature, shaman helpers, guardian and sickness spirits, etc. The religious art of the Ostyaks, Voguls and Nenets-Samoyeds shows traces of incipient polytheism in addition to the animistic concepts found in more or less developed stages among Tungus-Manchu and Paleosiberian peoples. (DLC.)

72466. IVANOV, SERGEĬ VASIL'EVICH. Sovremennoe iskusstvo narodov Sibiri; skul'ptura. (Sovetskaĭa ėtnografiĭa, Nov.-Dec. 1961, no.6, p.9-28, illus.) 15 refs. Text in Russian. Summary in English. **Title tr.:** Contemporary art of the peoples of Siberia; sculpture.

Analyzes the work of professional sculptors: Vogul, Yakut, Chukchi, etc., and folk craftsmen, e.g. the Uelen bone-carving center. Style, workmanship, realism, symbolism, and dynamics, choice of subject, social and political import, traditional and acculturative trends, etc. are discussed. (DLC.)

IVANOV, SERGEĬ VASIL'EVICH, *see also* Akademiĭa nauk SSSR. Istoriko-ėtnograficheskiĭ atlas . . . 1961. No. 69544

72467. IVANOV, V. A. Soveshchanie po voprosu razvitiĭa syr'evoĭ bazy fosforitov v raĭonakh Sibiri i Dal'nego Vostoka. (Sovetskaĭa geologiĭa, June 1961, no.6, p.143-45.) Text in Russian. **Title tr.:** Conference on development of sources of phosphorite in Siberia and the Far East regions.

Describes program, papers presented and decisions of this conference, held in Moscow, Dec. 15-17, 1960. Phosphorites in West Siberia, Krasnoyarsk Province, and some other areas are reported. (DLC.)

72468. IVANOV, V. B. K voprosu o klassifikatsii sukhogo snega primenitel'no k arkticheskim usloviĭam. (Leningrad. Universitet. Uchenye zapiski, 1962. no.317, ser. geograficheskikh nauk, vyp.8,

p.180-89, table.) 5 refs. Text in Russian. **Title tr.:** A classification of dry snow applicable to arctic conditions.

Reports own study of the structure and physical-mechanical conditions of snow in a high-latitude area of the Arctic in 1950-1951. Based on this study and evaluation of the literature, a classification is proposed, dividing dry snow into groups, types and species mainly according to density and hardness. The two groups are young and old snow; three types are established as fresh, consolidated, and granular snow; and eight species of snow are distinguished. (DLC.)

72469. IVANOV, V. F., *and* E. G. NIKIFOROV. Opyt vycheslenia prilivo-otlivnykh techenii metodom Ganzena. (Leningrad. Arkticheskii i antarkticheskii nauchno-issledovatel'skii institut. Trudy 1961 t.210, Metodika okeanologicheskikh issledovanii, Sbornik statei, vyp.1, p. 249-72, tables, diagrs.) 4 refs. Text in Russian. **Title tr.:** An experience in computing the tide-and-ebb currents by Hansen's method.

Investigates by mathematical analysis, the theoretical basis and application of Walter Hansen's method for calculating the tide and ebb currents in the marginal arctic seas. A system of linear differential equations in real variables is set for a numerical determination of tidal currents induced by a long free wave of periodic motion. The technique of a numerical solution of the elements of sea currents in an arctic aquatorium of about 250,000 km² is demonstrated for given current velocities along the contour of the sea basin. (CaMAI.)

72470. IVANOV, V. M. O sviazi gidrometeorologicheskikh professov v priatlanticheskom raione Arktiki s teplovym i dinamicheskim sostoianiem Gol'fstrima. (Problemy Severa, 1961. vyp.4, p.27-45, diagr., tables, map.) 39 refs. Text in Russian. **Title tr.:** The correlation of hydrometeorological processes in the Atlantic area of the Arctic with thermal and dynamic conditions of the Gulf Stream.

Reviews the Russian and foreign literature on the influence of the Gulf Stream upon hydrometeorologic conditions in adjacent arctic seas and on the extent of the Barents Sea ice. The macro-hydrometeorological processes, decisive for long-range forecasting, are found to depend, not so much on the temperature of the inflowing waters as on dynamics, that is on the speed of the North Atlantic Current, which is affected chiefly by the force of the northeast and southeast trade winds. (DLC.)

72471. IVANOV, V. N. Nauchnaia konferentsiia v IAkutskom universitete. (Voprosy istorii, Oct.1962, no.10, p.115-16.) Ref. Text in Russian. **Title tr.:** Scientific conference at Yakutsk University.

Reports on a conference, dealing mainly with recent and economic development, held in May 1962 marking forty years of autonomy in Yakutia. Need for more thorough study of its history in the Soviet period and for better coordination between its scientific institutions was stressed. (DLC.)

72472. IVANOV, VLADIMIR VLADIMIROVICH. K geokhimii kadmiia v mestorozhdeniiakh deputatskoi gruppy. (Geokhimiia, 1961, no.2, p.150-55, tables, graph.) 14 refs. Text in Russian. Summary in English. **Title tr.:** On the geochemistry of cadmium in the deposits of the Deputatskiy group.

Analyzes the distribution of this metal in the Deputatskiy (69°18′N. 139°54′E.) cassiterite-sulfide deposits and others of northeastern Yakutia. In copper minerals (chalcopyrite, stannite, tetrahedrite) and lead minerals (galena, boulangerite, frankeite), the cadmium content is established and data are tabulated. The possibility of isomorphism between cadmium and copper in copper minerals and between cadmium and lead in lead minerals is assumed. (DLC.)

72473. IVANOV, VLADIMIR VLADIMIROVICH. Parogidrotermy Kurilo-Kamchatskoi vulkanicheskoi zony. (Vsesoiuznoe soveshchanie po geotermicheskim issledovaniiam. Trudy 1961. t.2, Problemy geotermii i prakticheskogo ispol'zovaniia tepla zemli, p.43-65, illus., tables, fold. col. map, graphs.) 29 refs. Text in Russian. **Title tr.:** Steam hydrothermal properties of the Kuril-Kamchatka volcanic zone.

Reviews hydrothermal activity in this area: types of steam and water, temperature, composition and other features of thermal activity are characterized. Volcanic gases, with CO, CO_2, H_2S, SO_2, CH_4, HCl, and other components and temperature of 100-600°C., are described and divided into two main types. Thermal waters also are treated and their geologic and geochemical formation conditions discussed. Carbonate-nitric and nitric springs are distinguished and their chemical composition reported. Main provinces and regions of hydrothermal activity are identified and mapped. Practical applications of geothermal steam are discussed, and the Pauzhetskiye springs are considered most suitable for development. (DLC.)

IVANOV, VLADIMIR VLADIMIROVICH, *see also* Aver'ev, V.V., *& others.* Problems of using volcanic thermae . . . 1960. No. 69918

IVANOV-KHOLODNYĬ, G. S., *see* Antonova, L.A., & G.S. Ivanov-Kholodnyi. Korpuskuliarnaia gipoteza . . . 1961. No. 69824.

72474. IVANOVA, E. I. Proportsii tela i kharakter rosta kitov Dal'nego Vostoka. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchanii, 1961. vyp.12, p.72-78.) 16 refs. Text in Russian. **Title tr.:** Somatic proportions and growth character of Far-Eastern whales.

Reviews earlier work; discusses body-size proportions, and from them, growth in whales of different areas, presenting own observations, in the Far East. The sperm-, blue- and fin-whale, the killer- and minke-whale are analyzed. Embryos of different stages are included in the investigation. (DLC.)

72475. IVANOVA, EVGENIIA NIKOLAEVNA, *and* **N. N. ROZOV.** Classification of soils and the soil map of the USSR. *(In:* International Congress of Soil Science, 7th, *Madison, Wisc.*, 1960, Transactions, v.4, commission 5, *pub.* 1960, p.77-87, 3 tables.) Summary in French and German.

Discusses the genetic principles underlying the classification of soils; outlines the main subdivisions, classes and types, with table of the polar-boreal group as established by the Interdepartmental Commission on Nomenclature, Systematics and Classification of Soils under the USSR Academy of Sciences in 1958. The new soil map of the USSR on scale of 1:10,000,000, pub. 1960, is reported; it delineates areas of tundra, sub-

arctic boggy, and boreal forest soils as well as 15 types of mountain soils. (DGS.)

72476. IVANOVA, EVGENIĬA NIKOLAEVNA. Nekotorye zakonomernosti stroeniĭa pochvennogo pokrova v tundre i lesotundre poberezh'ĭa Obskoĭ guby. (Akademiĭa nauk SSSR. Pochvennyĭ institut im. V. V. Dokuchaeva. O pochvakh Urala, Zapadnoĭ i Tsentral'noĭ Sibiri, 1962, p.49-116, diagrs.) Approx. 120 refs. Text in Russian. **Title tr.:** Some structural patterns of soil cover in the tundra and forest tundra of the Ob Bay coast.

Characterizes the natural conditions and the soils of the Ob Bay area and the Yamal and Gydan Peninsulas from a field trip in 1955 and from literature data. The forest-, shrub-, middle-, and arctic-tundra subzones are distinguished. Soils of each zone are described, noting the vegetation cover, soil sections, relief forms, and other features. Geographic patterns of soils are outlined. Complexes of tundra soils are analyzed. Some conclusions are drawn in regard to utilizing these soils for agriculture. Classification of tundra, swamp-tundra and podsolic soils is offered. (DLC.)

72477. IVANOVA, EVGENIĬA NIKOLAEVNA, *and others.* Novye materialy po obshcheĭ geografii i klassifikatsii pochv polĭarnogo i boreal'nogo poĭasa Sibiri. (Pochvovedenie, Nov. 1961, no.11, p.7-23.) 52 refs. Text in Russian. *Other authors:* N. N. Rozov, etc. **Title tr.:** New materials on general geography and classification of soils of the Siberian polar and boreal belts.

Reports on soil maps of Siberia with special reference to the soil map of the USSR at 1:10,000,000 scale, pub. in 1960. Polar and boreal soil zones are distinguished and characterized. Polar belt soils are divided into arctic and tundra zones, the former with two facies and the latter three, which are described. The boreal belt is divided into three soil-bioclimatic provinces, these also are described. Recent literature on soil studies is evaluated. (DLC.)

72478. IVANOVA, G. M. O zamene sena silosom. (Sel'skoe khozĭaĭstvo Severo-Zapadnoĭ zony, Feb. 1961. god 4, no.2, p.51.) Text in Russian. **Title tr.:** Replacing hay with silage.

Reports results of such by the Academy of Sciences' Komi Branch in feeding dairy cattle: the milk yield was not affected and its decrease in fat content negligible (0.07%). These results are important for Komi ASSR, where hay is a difficult crop. (DLC.)

IVANOVA, L. E., *see* Golovanov, G.A., & L.E. Ivanova. Opyt primeneniĭa dugovykh grokhotov . . . 1962. No. 71741

IVANOVA, L. N., *see* Khaĭtser, L. L., & *others.* O pervichnoĭ okraske . . . 1962. No. 72755

72479. IVANOVA, T. F. Geokriologicheskoe raĭonirovanie territorii Evropeĭskogo severa. *(In:* (Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.13-17, map.) 14 refs. Text in Russian. **Title tr.:** Geocryological zonation of the territory of the European North.

Divides Arkhangel'sk Province, Komi ASSR and adjacent areas into four regions and a subregion according to the relationship between geocryological and general geographic features. In each, the conditions of permafrost development and such basic features of the frozen ground as its distribution, temperature, composition, and structure, are relatively uniform. The zone of scattered, insular permafrost lies north of the Inta - Semzha line. The forest tundra zone with permafrost in relict peat bogs and on spotty microrelief has a southern limit from Abez' to Nes'. The transition zone of forests in the south with average permafrost thickness 60-70 m. to tundra in the north with average permafrost thickness 200 m.; the southern limit is approx. Khanovey to Oksino. The tundra zone of continuous permafrost on water divides, slopes and terraces, has permafrost in 80-90% of the territory; its southern limit lies from Vorkuta to Indiga and north to the littoral of the Pechora Sea. The sub-region is the Pechora littoral, with numerous lakes and streams, discontinuous permafrost, milder climate, with the frozen layer consisting mainly of sand cemented with ice. (DLC.)

72480. IVANOVA, T. N. Khibinskiĭ shchelochnoĭ massiv i svĭazannye s nim apatito-nefelinovye mestorozhdeniĭa. *(In:* Akademiĭa nauk SSSR. Karel'skiĭ filial. Problemy geologii . . . 1961, p.90-101, illus., table, map, cross-section.) 10 refs. Text in Russian. **Title tr.:** The Khibiny alkaline massif and its apatite-nepheline deposits.

Reports a structural-geologic and petrographic study. Apatite-nepheline deposits are divided according to form, occurrence conditions and composition of enclosing rocks, into magmatic and metasomatic. Both groups are analyzed as to distribution, mode of occurrence, age, and other features. Formation of the Khibiny massif and its rocks are evaluated. (DLC.)

72481. IVANOVA, T. N. Zakonomernosti lokalizatsii apatitovykh mestorozhdeniĭ v khibinskom plutone. (Vsesoĭuznaĭa ob"edinennaĭa sessiĭa po zakonomernostiam razmeshcheniĭa poleznykh iskopaemykh i prognoznym kartam, 2d, *Kiyev,* 1960. Doklady sessii, chast' 1, p.158-67, map, cross-section.) 8 refs. Text in Russian. **Title tr.:** Distribution laws of apatite deposits in the Khibiny pluton.

Characterizes the alkaline rocks of the Khibiny intrusion, with which the apatite deposits are connected. Apatite is widely distributed in it as an accessory mineral in various magmatic rocks, especially in ijolite-urtites. Geologic-petrographic features of apatite-nepheline rocks are outlined noting their magmatic origin. The process of Khibiny pluton formation is reviewed. (DLC.)

IVANOVA, V. G., *see* Menĭaĭlova, G.A., & V.G. Ivanova. Kontaktovo-metamorficheskaĭa poroda . . . 1961. No. 73931

IVANOVSKAĬA, A. V., *see* Zadkova, I.I., & *others.* Osadochnye formatsii . . . 1961. No. 76618

72482. IVANOVSKIĬ, A. B. Nekotorye Streptelasmatida srednego i verkhnego ordovika s r. Podkamennaĭa Tunguska. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaĭa geologiĭa, 1961. vyp.15, Materialy po paleontologii i stratigrafii Zapadnoĭ Sibiri, p.197-214, plates, tables.)

11 refs. Text in Russian. **Title tr.**: Some Streptelasmatida of the Middle and Upper Ordovician from the Podkamennaya Tunguska River basin.

Presents systematic description of eight species of Ordovician rugose corals, belonging to order Streptelasmatida, Wedekind, 1929. Four of the eight are new: *Streptelasma enisseicum, S. tungussensis, Kenophyllum holophragmoides,* and *Protocyathactis cybaeus. Protocyathactis* is also a new genus. (DLC.)

72483. IVANOVSKIĬ, A. B. Znachenie rugoz dlīa stratigrafii silura zapada Sibirskoĭ platformy. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'īa. Trudy, ser. neftīanaīa geologiīa, 1960. vyp.10, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.143-56, tables, diagr., map.) 12 refs. Text in Russian. **Title tr.**: Importance of rugosa for Silurian stratigraphy in the west of the Siberian platform.

Reports study of rugose corals in the Yenisey part of Siberian platform, between the Noril'sk region and the Podkamennaya Tunguska. Lower, middle and upper Llandoverian and Wenlockian are reviewed and vertical distribution of rugosa species reported. Correlation of the Silurian section according to the rugosa fauna is given, and a biostratigraphic division of the deposits based on the corals is offered. (DLC.)

72484. IVARBEEV, A. Zapisat' v pravila perevozok. (Grazhdanskaīa aviatsiīa, July 1961. god 18, no.7, p.21.) Text in Russian. **Title tr.**: Transportation instructions should indicate.

Freight dispatcher at the Magadan airport complains about the high rate of spoilage in fruits and vegetables due to delays en route. Perishable foodstuffs should be so marked when air-freighted. (DLC.)

72485. IVASHIN, M. V. Metodika opredeleniīa sledov zheltykh tel beremennosti i ovuliatsii u gorbatogo kita. (Moskva. Vsesoīuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Trudy 1957. t.33, p.161-72, illus., tables.) 13 refs. Text in Russian. **Title tr.**: Methods of identifying traces of corpora lutea of pregnancy and ovulation in the humpback whale.

Outlines earlier studies, and reports his own, performed on 66 females. Macroscopic indications and microscopic structure of corpora lutea remnants are described in detail, and their size and limits demarcated. Differences between yellow-body traces of pregnancy and of ovulation are outlined, and connections with reproductive size, and biology indicated. (DLC.)

72486. IVASHIN, M. V. O periodichnosti pitaniīa gorbatogo kita v īuzhnoĭ chasti Atlanticheskogo okeana. (Moskovskoe obshchestvo ispytateleĭ prirody, otdel biologicheskiĭ. Biūlleten' 1961. t.66, vyp.6, p.110-15, illus.) 11 refs. Text in Russian. Summary in English. **Title tr.**: Feeding periodicity of the humpback whale in the southern Atlantic.

Taking into consideration the degree of fullness of stomach and of the food digested, author figures the number of feedings in daytime during December - March; the daily food consumption: 4,000 kg. of crustaceans, etc. The animals do not feed at night. (DLC.)

72487. IVENSEN, IŪ. P. Granitnye massivy Bol'shoĭ Kameshek i Sopki Kamennye, Severnyĭ Timan. (Akademiīa nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp. 2, Materialy po geologii Komi ASSR, p.73-90, illus., tables.) 5 refs. Text in Russian. **Title tr.**: The Bol'shoy Kameshek and Sopki Kamennyye granite massifs, northern Timan.

Reports study in 1959 of Bol'shoy Kameshek, 6 x 4 km., on the right bank of the lower Chernaya River; it looks like a stockwork body and is intruded into Riphean chloride-sericite schists. The granites are described in detail noting varieties, structure and texture, quantitative mineralogic composition, and other features. The Sopki Kamennyye massif, 5 x 4.5 km., on the Velikaya - Khariusovaya Viska watershed is similarly described. (DLC.)

72488. IVENSEN, IŪ. P. Rifeĭskiĭ magmatizm poluostrova Kanin i severnogo Timana. (*In:* Akademiīa nauk SSSR. Komi filial. Geologicheskiĭ institut. Materialy . . . 1961, p.62-82, map.) 12 refs. Text in Russian. **Title tr.**: Riphean magmatism of the Kanin Peninsula and northern Timan.

Reports a 1959 field study in three areas: granitoids and syenites of northern Timan, pegmatites of southeastern Kanin, granites, pegmatites and gabbro-monzonites in northern Kanin, and other igneous rocks were examined. Their petrography and mineralogy are characterized. Age, tectonic position and possible metallogeny are analyzed. (DLC.)

IVENSEN, IŪ. P., *see also* Vikhert, A.V., *& others.* Geologicheskoe stroenie . . . 1961. No. 76386

72489. IVES, JOHN DAVID. Indications of recent extensive glacierization in north-central Baffin Island, N.W.T. (Journal of glaciology, June 1962. v.4, no.32, p.197-205, illus., maps.) 10 refs. Summary in French and German.

Studies of the geomorphology and rock lichen development north of the Barnes Ice Cap prompt the conclusion that 70% of this extensive, interior region was covered by permanent ice some 300-400 years ago. The northern Barnes Ice Cap was significantly larger then than now; it dammed a lake in the upper Isortoq valley, over 80 km. long and up to 300 m. deep. Excluding the icecap, less than 2% of the area is glacierized today. Proof of former extensive ice cover rests largely upon restricted rock lichen development. When sufficient time has elapsed for complete colonization, few indications of the former existence of an ice cover will remain. This type of glacierization may have affected large areas in the high Arctic. Absence of evidence of glaciation, therefore, cannot be relied upon to delimit nunatak areas (plant refugia) during the last glaciation.–From author's abstract. (DLC.)

72490. IVES, JOHN DAVID. Iron mining in permafrost, central Labrador-Ungava, a geographical review. (Geographical bulletin, May 1962. no.17, p.66-77, illus., fold. map, diagr.) 9 refs.

Large-scale mining of iron ore in the vicinity

of Schefferville was partly based on the proving about 1950, of 400 million tons of ore which were assumed to be not permanently frozen. Subsequently however, realization that certain ore bodies are permanently frozen has raised problems of costs, methods, and the future of the industry in this area. Conditions of permafrost are little known even in the main ore-producing areas. A tentative outline is given of its distribution in the known ore-producing and the potential mining areas of northern Quebec-Labrador. (DGS.)

72491. IVES, JOHN DAVID. A pilot project for permafrost investigations in central Labrador-Ungava. Ottawa, Queen's Printer, 1961. 26 p. illus., graphs, maps incl. 1 fold. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Geographical paper no.28.) 13 refs.

Describes in detail a method for estimating the occurrence of permafrost in marginal areas of varied relief and vegetation where ground temperature is not known. It was tested in June 1959 -June 1960 near Schefferville, in an area 4000 x 2000 yd. in extent and 2000 - 2550 ft. in altitude. Measurements were made of ground temperatures at eleven sites, air temperatures and wind speeds at two stations, and snow depth (mapped). Three vegetation types were defined and mapped. The correlation obtained between vegetation cover, relief, snow depth and ground temperature regime indicates that surface conditions can be used to map permafrost distribution. (DGS.)

IVES, JOHN DAVID, *see also*

Andrews, J.T., & E.M. Matthew. Geomorphological studies . . . 1961. No. 69790

Løken, O. . . .vertical extent glaciation NE Labrador. 1962. No. 73575

72492. IVLEV, N. F. Zhelezo-margantsevaia mineralizatsiia v devonskikh otlozheniiakh basseina r. Kureiki. (Geologiia i geofizika, 1962, no.3, p.112-15, cross-section.) 3 refs. Text in Russian. **Title tr.:** Iron-manganese mineralization in Devonian deposits in the Kureyka River basin.

Iron-manganese mineralization is connected with Middle Devonian lagoon deposits red in color. It occurs in siderite concretions where manganese isomorphically replaces iron. The geochemical conditions are described, and the possibility considered of detecting more valuable iron-manganese mineralization. (DLC.)

72493. IZBEKOV, D. D. Trudovoĭ vklad komsomol'tsev i molodezhi zolotodobyvaiushcheĭ promyshlennosti IAkutii v gody Velikoĭ otechestvennoĭ voĭny. (Yakutsk. Universitet. Uchenye zapiski, 1960, vyp.7, Seriia obshchestvennykh nauk, p. 5-17, tables.) Refs. Text in Russian. **Title tr.:** Labor contribution of young communists and youth to the gold-mining industry in Yakutia during the years of the Great Fatherland War.

Outlines such work in the Aldan and Allakh-Yun' (61°08′N. 138°03′E.) mine fields during World War II, with 1294 individuals organizing meetings (354) and lectures (630). Young people were trained to work at mining operations, high standards of output were set, students recruited from the mining technical schools, etc.Based chiefly on unpublished materials in archives and on local newspapers. Achievements of the IAkutzoloto and Dzhurdzhurzoloto trusts in Aldan and Allakh-Yun' districts are noted. (DLC.)

72494. IZMAĬLOV, V. V. Ob izmerenii glubiny pogruzheniia podderzhivaiushchego buia pri postanovke avtonomnykh stantsiĭ. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp. 1, p.33-34.) Ref. Text in Russian. **Title tr.:** On the measuring of submergence depth of the supporting buoy in installation of automatic stations.

Presents a brief description of the methods of installations of automatic current measuring stations in the arctic seas, and determination of their submergence depth (8-11 m.) (CaMAI.)

IZRAILEV, L. M., *see* Prokopchuk, B.I., & L.M. Izrailev. Pervye nakhodki almazov . . . 1962. No. 74964

72495. IZRAILEV, V. M. O stroenii i klassifikatsii form poligonal'nogo rel'efa Vorkutskogo raiona. (*In:* Moskva. Universitet. Geograficheskiĭ fakul'tet. Voprosy geograficheskogo merzlotovedeniia . . . 1962, p.98-108, illus.) 11 refs. Text in Russian. **Title tr.:** On the structure and classification of polygonal relief forms in the Vorkuta region.

Reports a study in Bol'shezemel'skaya Tundra: three main elements of polygonal relief are recognized: elevated blocks of polar relief, depressed marshy channels between the blocks, and 50 - 500 m. depressions with swampy bottoms. Three main types of relief in the region are distinguished: the rolling-ridge relief of water divides, basins between the divides, and river and creek valleys. Each type is analyzed, and subsequently divided into smaller units. Various kinds of peat bog are reported and described: monolithic, polygonal, and other. Micro- and mezzo- relief forms are characterized. The origin of polygonal relief is discussed and attributed to successive frost cracking of surface rocks. (DLC.)

72496. IZRAITEL', S. A. Ustranit' nedostatki v provetrivanii rudnikov. (Bezopasnost' truda v promyshlennosti, Feb. 1962. god 6, no.2, p.4-7.) Text in Russian. **Title tr.:** Imperfections in mine ventilation should be corrected.

Criticizes the lack of heating in mines operated by the Noril'sk combine and the Yakutia, Magadan and Murmansk provincial economic councils, among others. Claims that permafrost conditions would be adversely affected by air heated to + 2°C. are discredited, from experience of summer temperatures to + 30°C. in Yakutia and Magadan mines. Also criticized is the waste of air in ventilation of unworked sections of the Nittis-Kumuzh'ye mine, Kola Peninsula. (DLC.)

72497. IZVEKOV, M. V. Izmereniia elementov dreifa v raionakh s bol'shimi glubinami. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik

statei, vyp.1, p.94-101, diagrs., graphs, table.) Text in Russian. Title tr.: Measurements of drift elements in great-depth regions.

Describes the method of determining the actual drift of ice in the Arctic Basin. The astronomical determination of the floe traverse in the sea cannot be done more frequently than at several hours', sometimes days', intervals because of weather conditions. Thus a straight line traverse determined between the two consecutive astronomical readings is of considerable length. The floe drifts not in a straight line from one reading point to another however, but a zig-zag or a looping path which may be several times longer than the straight traverse between two astronomical readings. Therefore, the astronomical determination of the drift gives neither correct speed of the ice movement, nor the actual length of its path. The older, so-called "base," method is also discussed. Then follows a description of the design and operation of the "Dreyfograf", a device for a continuous and automatic recording of the direction and speed of the pack with respect to the bottom of the sea at any given moment of time. The apparatus was tested for a prolonged period in 1957 on the drifting station North Pole-4, and it showed a satisfactory performance. (CaMAI.)

72498. IZVEKOV, M. V., *and* N. F. KUDRIAVTSEV. Kolebaniia sistem avtonomnykh stantsii pod deĭstviem volneniia i ikh vliianie na tochnost' izmereniia techeniĭ. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p.23-28 illus. tables.) 2 refs. Text in Russian. Title tr.: Wave-induced vibrations in the system of automatic stations, and how they affect the accuracy of current measurements.

Determines theoretical errors in current direction and velocity measurements obtained by means of anchored self-recorders, as a function of wave height, length, and period, and length of the cable between anchor and recording system. Computed values of the directional error (adjusted for magnetic effects) deviate considerably from observed values obtained in Kara Sea, but the deviation diminishes with increasing state of agitation of the sea. The velocity errors (unconfirmed) apparently increase with increasing depths. (CaMAI.)

72499. JACKSON, BRUCE LAWELLIN, 1937– . Potential waterpower of Lake Chakachamna, Alaska. Washington, D.C., Mar. 1961. ii, 20 l. maps, graphs, tables. (U.S. Geological Survey. Reports, open file series, no.613.) 4 refs.

Presents available data on this 26-sq. mi. high-mountain glacial lake about 80 mi. west of Anchorage; estimates the potential power which could be developed in the region. Outflow from the lake varies greatly; storage required can be developed by drawing the lake below its natural level; a powerhouse in the McArthur valley with a mean head of 1004 ft. and a mean flow of 3196 c.f.s., would develop 218,000 kw. Principal market for this power could be the Anchorage area and the Kenai Peninsula. (DGS.)

72500. JACKSON, CHARLES IAN. Meteorological research at Lake Hazen, 1961. (Arctic, Dec. 1961. v.14, no.4, p.236.)

Notes investigations of the unusual prevalence of calms at this site in interior Ellesmere Island. Pilot balloon observations were made at six-hour intervals from May 16 - July 31, and with frequency increased to ten/day till Aug. 18. Data obtained on winds up to 25,000 ft., indicate that the quiescent surface conditions extend to heights of several thousand feet. (DI.)

72501. JACKSON, CHARLES IAN. Operation Hazen. The meteorology of Lake Hazen, N.W.T. based on observations made during the International Geophysical Year 1957-58; part 2, synoptic influences on surface weather; part 3, a guide to local forecasting in the Lake Hazen area; part 4, an annotated bibliography on the meteorology of Ellesmere Island. Ottawa, Apr. 1960. p.195-295, graphs, tables. (Canada. Defence Research Board, Operation Hazen, Hazen 9.) Refs. *Also issued as:* McGill University, Arctic Meteorology Research Group, Publication in meteorology No. 16. In sequence to No. 58934.

Analyzes the synoptic conditions over northern Ellesmere Island during Dec. 1957 - Jan. 1958 in detail and in general for the rest of the IGY period. Attempt is made to relate events in the lower troposphere, below 500 mb, to surface weather, based mainly on upper air observations from Alert. Unusually high temperatures were recorded at Alert and Eureka as well as at Lake Hazen in January, whereas intense cold continued throughout December except for rapid fluctuation at midmonth. The December cold seems to result from clear, sunless skies and light surface winds or calms; the January warming was caused by overcast skies especially with snowfall, or moderate-to-strong surface winds. Warm air arriving over northern Ellesmere in midwinter probably comes from the Greenland Sea, the advection above 1500 m., surmounting the barrier of North Greenland. The more normal of the 1957-58 weather features, are cited for forecasters. Surface wind speeds at Lake Hazen should not be forecast on the basis of conditions elsewhere. Various forms of whiteout may occur at Lake Hazen, none frequently. The thick ice, max. 54-78 in., on the lake is excellent for ski landings and when cleared of snow, nearly as good for wheeled aircraft. Bibliography of 55 items. (DWB.)

72502. JACKSON, CHARLES IAN. Summer precipitation in the Queen Elizabeth Islands. (*In:* International Geographical Congress 1960. Physical geography . . . 1961. p.140-53, map, diagrs., graph, tables.) 15 refs.

Discusses the origin and nature of the precipitation, on the basis largely of the June-Aug. records of the Alert, Eureka, Isachsen, Mould Bay and Resolute weather stations, in an attempt to extrapolate these coastal values to the interior and highlands. From this three-summer record, it appears that microphysical processes of rain formation function freely under normal conditions. Among the various macrophysical precipitation mechanisms, orographic precipitation is important,

but the amount of summer precipitation is generally controlled by the degree of synoptic activity. Examples are given of particularly active synoptic situations, July 1956, which brought measurable precipitation to most of these stations. (DGS.)

72503. JACKSON, D. E., *and* **A. C. LENZ.** Zonation of Ordovician and Silurian graptolites of northern Yukon, Canada. (American Association of Petroleum Geologists. Bulletin, Jan. 1962. v. 46, no. 1, p. 30-45, map, graph, tables.) 16 refs.

Presents a zonal classification of the graptolite shales near the Richardson and Ogilvie Mts. Conclusions are based on four measured sections and 13 supplementary localities examined in 1956-1960. Twenty-two graptolite zones are recognized; their geographical distribution, faunal assemblages, and correlation with British and Canadian Arctic Islands zones are commented upon. A new formational name, Road River, is proposed for these graptolitic shales and carbonates. At the type locality, 66° 44′ N. 135° 46′ W., the formation is underlain conformably by Cambrian (?) shales and argillites, and overlain disconformably by Devonian Fort Creek shale. The Siluro-Ordovician boundary is located on a faunal break.—From authors' abstract. (DGS.)

72504. JACKSON, JOHN A., *and others.* 1960 Greenland Expedition: I, the crossing of the North and Central Staunings; II, the first exploration of the South Staunings; III, the Hjørnespids. (Alpine journal, Nov. 1961. v. 66, no. 303, p. 250-60, illus., fold. map.) *Other authors:* A. Blackshaw and I. McNaught-Davis.

Reviews events of this Alpine Club climbing and research expedition of 38 members led by Sir John Hunt, based on Mestersvig, East Greenland. Exploration of the North and Central Staunings between Mestersvig and Alpefjord in July-Aug., is reported by Jackson. Blackshaw describes the experiences of the ten-man party which scaled several 7,000-8,000 ft. peaks in the first known exploration of the South Staunings (71° 40′ N. 25° W.). McNaught-Davis gives an account of climbing the 9,000 ft. Hjørnespids approx. 72° 05′ N. 24° 50′W.) second highest peak in the Staunings Alper. Routes, peaks, glaciers, etc. are shown on map, scale 1 in.: 8 mi. (DGS.)

72505. JACOB, STANLEY W., *and* **R. L. WEBB.** An experimental approach to the supercooling of canine hearts. (Surgical forum 1960. v. 11, p. 200-202.) 6 refs.

Reports on experiments with isolated hearts of puppies, 2-4 weeks old, cooled to about -20° C. and submitted to a pressure of some 30,000 lb./sq. in. The hearts did not freeze and appeared normal both grossly and microscopically. However, they did not react to electric stimulation and failed to resume rhythmicity when transplanted. (DNLM.)

72506. JACOB, STANLEY W., *and others.* Experimental studies in cryobiology. (American journal of surgery, Aug. 1961. v. 102, no. 2, p. 254-64, illus.) 14 refs. *Other authors:* T.H. Moghul, S.C. Collins, *and* J.E. Dunphy.

Study of deep cooling of human cells and tissues, of mammalian organs and organisms, aided by new methods and devices. Human conjunctiva cells and spermatozoa survived freezing to near absolute zero. Dog kidney and heart were frozen by various techniques to low temperatures, and the hearts resumed rhythmicity after rewarming. The effects of deep hypothermia on skin grafting, a tumor and tumor transplantation, and on high air pressure (650 lb./sq. in.) are also reported. (DNLM.)

JACOB, STANLEY W., *see also* Rastegar, M.J., & *others.* Influence of hypothermia. 1961. No. 75051

72507. JACOBI, HANS. Evarssuaq, en saerprae get grønlandsk kvindeskikkelse. (Grønland, Jan. 1961, nr. 1, p. 27-34, illus.) Text in Danish. **Title tr.:** Evarssuaq, a distinctive type Greenlandic woman.

Sketches the life and character of this unusual woman who lived at Jakobshavn, West Greenland during 1872-1953, and some details on life there in former times. (CaMAI.)

72508. JACOBI, HANS. "Saelens" forlis. (Grønland, Sept. 1962, nr. 9, p. 342-51, illus.) Text in Danish. **Title tr.:** The wreck of the *Saelen.*

Discusses loss of this Upernavik schooner with 13 aboard off West Greenland between Prøven and Egedesminde in 1932. (DLC.)

72509. JACOBSEN, GEORGE. Jacobsen-McGill University Expedition Axel Heiberg Island, 1959-61. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v. 2, p. 1188-92, maps.)

Contains brief account of the expedition's objectives, results of 1959 reconnaissance, and plans for 1960-1961. Main objective was to obtain knowledge of the Pleistocene and Recent physiographic evolution of central Axel Heiberg Island, including geology and permafrost. (DGS.)

JACOBSON, ELAINE, *see* Alaskan Science Conference 1960. 1961. No. 69643

72510. JACOT, MICHAEL. North shore. (Imperial oil review, Apr. 1961. v. 45, no. 2, p. 14-18, illus.)

Describes this 400,000 sq. mi. area north of the Gulf of St. Lawrence, its landscape, timber, towns, iron ore developments, electric, power, etc. (DGS.)

JAEGGIN, R. P., *see* Koulomzine, T., & R.P. Jaeggin. Discovery of the iron ore . . . 1961. No. 73038

72511. JÄRVINEN, KAUKO. Maailman rautamalmimarkkinat ja Lapin malmit. (Lapin tutkimusseura. Vuosikirja, 1961. v. 2, p. 3-17, tables, diagrs., map.) Text in Finnish. Summary and captions in English. **Title tr.:** The world market for iron ore and the ores of Lapland.

Reviews the world-wide production of ore and discusses the competitive status of Finnish Lapland. A typical trend in the development is the increasing share of freight cost in the marketing price. Lapland iron ore is competitive in quality and shipping cost, but the annual production of rich concentrate should be raised to one million tons. (SPRI.)

72512. JAHN, ALFRED. Geomorfologicheskie issledovaniia pol'skoĭ nauchnoĭ ėkspeditsii na

Shpitsbergene. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei . . . vyp. 16, 1961, *its:* Trudy t. 123, p. 141-57, illus., map, diagrs.) 20 refs. Text in Russian. **Title tr.:** Geomorphic investigation of the Polish scientific expedition in Spitsbergen.

Reports development of marine terraces, postglacial movements and periglacial processes studied in the Hornsund area. Terraces at 2-4, 7-13, 16-17, 25, 32, 38-41, 45 and 65 m. are distinguished and described. Glaciation and development of shores are discussed. Postglacial vertical movements are reported. Periglacial forms such as stone rings, solifluction, frost action in soils, and others are analyzed. (DLC.)

72513. JAKHELLN, CHR. A. Nord-norsk naeringsliv i 1957-58. (Studieselskapet for nord-norsk naeringsliv. Skrift 1958. nr. 22, p.5-31.) Text in Norwegian. **Title tr.:** North-Norwegian industry in 1957-58.

Reviews and compares with previous year, the status of agriculture, forestry, fisheries, hunting industry, mining, factories, construction, trade, electric power, shipping, transportation. The region suffered unemployment; fishing was poor, credit tight; emigration increased. (SPRI.)

72514. JALAS, JAAKKO. Fälle von Introgression in der Flora Finnlands, hervorgerufen durch die Tätigkeit des Menschen. *(In:* Hustich, I., *editor.* Symposium on man's influence on nature in Finland, *pub.* 1961. p.58-81, illus., table.) 79 refs. Text in German. **Title tr.:** Cases of introgression in the flora of Finland due to man's activities.

Discusses hybridization in several plant species resulting from human occupance and activity in various regions; among others, the shrubs *Artemisia borealis,* and *A. campestris* L. are cited, the former common to northern Finland and the coast of Kola Peninsula. (DLC.)

JALBERT, ROLAND A., *see* Alaskan Science Conference 1960. 1961. No. 69643

72515. JAMALAINEN, E. A. Taxering av overvintringsskador på åkerväxter. (Nordisk jordbrugsforskning, 1960. årg. 42, häfte 3, p.107-110, table.) Text in Swedish. **Title tr.:** Analysis of over-wintering damage in agricultural plants.

Stresses the importance of such analysis in northern areas and offers directions and a sample table from analyses of fall wheat, fall rye and red clover plots. Non-biological damage is indicated: from cold, on plots with no or small amounts of snow; from stationary ground water or water in frost-free soil under ice or snow; physiological drought when upper soil layers have thawed and lower layers remain frozen; and the freezing of plants. Biological damage is caused chiefly by overwintering fungi, of which a list is provided. (DA.)

72516. JAMBOR, J. L., *and* **R. W. BOYLE.** Gunningite, a new zinc sulphate from the Keno Hill-Galena Hill area, Yukon. (Canadian mineralogist, 1962. v.7, pt.2, p.209-218, illus., map, graph, tables.) 3 refs.

Describes this hydrous zinc sulfate, $ZnSO_4 H_2O$, identified in 1960 on a specimen from Keno Hill, and found in samples from other properties in the area. X-ray and crystallographic data are summarized; physical and optical properties are noted: very fine-grained, vitreous luster; hardness about 2.5, etc. Chemical analysis was not possible because of insufficient gunningite; spectrographic analysis showed traces of Si, Cu, and Mn. Relationship of gunningite to other members of the kieserite group was studied by means of synthetic preparations. Szomolnokite and szmikite of the kieserite group occur sparsely in the area. Gunningite is derived directly from the oxidation of sphalenite, which in the Keno Hill deposits is composed of (Zn, Fe, Cd, Mn) S. If in oxidation the supply of water is restricted or evaporation takes place, the metal-bearing solutions become super-saturated, with precipitation of a number of hydrates of zinc, manganese, and iron, of which gunningite is one. (DGS.)

JAMES, H. THOMAS, *see* Lindman, E.L. Foundation for Alaska's public schools . . . 1961. No. 73512

72517. JAMIESON, D., *and* **H. A. VAN DEN BRENK.** Relation of mast cell changes to hypothermia in the rat. (Biochemical pharmacology, 1961. v.7, no.1, p.35-46, illus., tables.) 20 refs.

Comparative study of hypothermia, produced by compound 48/80 and by chlorpromazine and related drugs. The problem of mast cell rupture histamine or 5HT release, and action of hypothermia antagonists is evaluated and their mutual effects elucidated. (DNLM.)

72518. JANELID, INGVAR. Mining huge ore bodies in Sweden. (Mining congress journal, Dec. 1960. v. 46, no. 12, p. 39-42, + .)

Describes among others, modern iron ore operations at two northern mines, Kiruna and Malmberget, where annual extraction is 12.6 and 4.73 million tons respectively. The sublevel caving method is discussed; it makes selective mining and mechanization possible at Kiruna. Ore loading and transport is by electrically driven loaders and shuttle cars. The various mining methods used at Malmberget are described: block caving, long-hole mining, shrinkage stoping and sublevel caving. The haulage system (described) is hampered by the several small ore bodies, varying as to area, dip, and strength. (CaOG.)

72519. JANES, T. H. *and* **G. E. WITTUR.** The primary iron and steel industry in Canada. Ottawa, Queen's Printer, 1962. vii, 79 p. illus., graph, tables. (Canada. Dept. of Mines and Technical Surveys, Mineral Resources Division, Mineral information bulletin, MR 46.) Refs.

Describes all stages in this industry, from the smelting of iron ore to the end of the rolling process, with 1960 production data and operations of some 14 larger companies. Supplies of raw materials include the Knob Lake, Wabush Lake, Mount Reed - Mount Wright iron ore deposits of Northern Quebec - Labrador. Imports of primary iron and steel have declined steadily since 1956; Canada had fallen to fifth place in per capita steel consumption in 1959, and in 1960 consumed only 690 lbs. per capita. (DLC.)

JANLÖV, CARL ERIC, *see* Hjelmström, L., & C.E. Janlöv. Redogörelse . . . 1961. No. 72163

72520. JANSKY, LADISLAV. Maximal steady state metabolism and organ thermogenesis in mammals. *(In:* Symposia on arctic biology and medicine. Proceedings 1962, p. 175-201, illus.) 31 refs. Also issued by National Council of Canada as NRC 6579.

Following a definition and elaboration of "maximal steady state metabolism," methods of estimating the effort producing it are discussed, with total cytochrome oxidase activity used as check. The MSSM of different species was found to be about six times larger than the basal metabolism. Results obtained with cytochrome oxidase were similar. Three-fourths of the total cytochrome oxidase activity (of hamsters) involves the muscles, indicating their importance in thermogenesis. (CaMAI.)

72521. JANUSSEN, HANS. Isrekognoscering med for ringe hjaelpemidler. (Atuagagdliutit: Grønlandsposten, July 20, 1960. Ukiut 100-at, nr. 12, p. 14-15, illus.) Text in Danish. **Title tr.:** Ice reconnaissance with insufficient equipment.

Describes work of the station at Narssarssuaq (61° 09′ N. 45° 25′ W.), West Greenland, since Nov. 30, 1959. Twice-weekly ice observations are made, charted, and a copy sent to Meteorologisk Institut, Copenhagen; salvage and search operations are carried on. Approx. 16 mill. D. kr. have been granted to equip and operate the station, and its three Catalinas. More is needed: the aircraft require up-to-date equipment. (DLC.)

72522. JANUSSEN, HANS. Supermarkedet i Narssaq begyndte på et koldt loft. (Atuagagdliutit: Grønlandsposten, July 20, 1960. Ukiut 100-at, nr. 12, p. 12-13, + , illus.) Text in Danish and Eskimo. **Title tr.:** The supermarket at Narssaq started in a cold loft.

Describes the Royal Greenland Trading Co. shop opened at this West Greenland village (60° 54′ N. 46° W.) in 1960. It cost 1.8 mill. D. kr. to build; the company's previous shops at Narssaq are also referred to. (DLC.)

72523. JAPAN. *Maritime Safety Board.* Alaska coast pilot: v. 1, Dixon Entrance to Yakutat Bay. 2d. ed. 1961. 463 p. illus., tables, maps incl. fold. *(Its:* no. 256) Refs. Text in Japanese, with key words in English. Supersedes the 1932 edition.

Presents information similar to U.S. Coast Pilot, Southeast Alaska 10th ed. on which, with other sources, it is based. Most place names, statistical and numerical data are given in English as well as Japanese. (DN-HO.)

72524. JAPAN. *Science Council. National Committee for the IGY.* Cosmic-ray intensity during the International Geophysical Year, no. 1: bi-hourly neutron intensity July 1 - December 31, 1957. Tokyo, Mar. 1959, xv, 196 p. tables, graphs.

Includes data from Churchill, Resolute, College, Murchison Bay, Thule, Yakutsk. (SPRI.)

JAPPE, ARTHUR L., *see Alaska sportsman.* Snowslide Chilkoot Pass. 1962. No. 69641

JÁRAI, ISTVÁN, *see* Mestyán, G., *& others.* Effect of local thalamic heating . . . 1960. No. 73954

72525. JARDETZKY, WENCESLAS S. Aperiodic pole shift and deformation of the earth's crust. (Journal of geophysical research, Oct. 1962. v. 67, no. 11, p. 4461-72, maps, diagr.) 25 refs.

Confirms his theory of zonal rotation of the earth by the relative positions of the path of the North Pole, recently determined from paleomagnetic data in eastern Europe and the Far East, and the paths based on North American, British, Indian, and Australian data. A theoretical explanation of the aperiodic pole shift is attempted by taking into account a yielding interval mass of the earth covered by a flexible shell crust plus a layer of the mantle. The pole wandering probably will continue until the axis of the total maximum moment of inertia of the shell reaches a position close to the total angular momentum of the earth. (DLC.)

72526. JARDETZKY, WENCESLAS S. Polar wandering, shifting of the earth's axis and dipole variations. (Annales de géophysique, Oct.-Dec. 1958. t. 14, fasc. 4, p. 502-504.) 14 refs. Text in English. Summary in French. Columbia University. Lamont Geological Observatory, publication no. 276.

Points out that the polar wandering during geologic time can be explained by the gliding of the solid shell over a fluid core. The facts that the main dipole is not located on the earth's axis of rotation, and that the position of the magnetic poles is asymmetric with respect to the equator seem to indicate an additional torsion in the earth's interior. The necessity of separating an aperiodic pole shift from the displacement of the earth's axis is emphasized. It is conjectured that the pole of the ecliptic, pole of the earth's rotation, and the magnetic pole should have been very close together over Alaska if paleomagnetic data, and the continental drift toward the end of the Tertiary are considered. (DLC.)

72527. JARMAN, HUGH G. The iron-ore industry of the Canadian North. (Mining magazine, Feb. 1961. v. 104, no. 2, p. 89-91, illus.)

Describes the activities, difficulties, etc. of the Iron Ore Co. of Canada in exploiting the Knob Lake deposits. Three projects are noted particularly; the Seven Islands harbor, the Quebec North Shore and Labrador Railway, and completion of the St. Lawrence Seaway. (DGS.)

72528. JARVIK, ERIK. Devonian vertebrates. *(In:* International Symposium on Arctic Geology. Proceedings 1961, v. 1, p. 197-204, diagrs., table.) 10 refs.

Reviews briefly, the 10,000 specimens of fossil vertebrates taken from the Middle and Upper Devonian Old Red deposits of East Greenland, during the Danish expeditions led by Lauge Koch. Representatives of all the chief groups of lower vertebrates are included; best known are the Ichthyostegalia, the oldest and most primitive tetrapods, which also bridge the gap between fish and tetrapod. Important material has also been collected of phyllolepids, antiarchs, dipnoans, osteolepiforms, and porolepiforms. Excellent porolepiform material, found in 1956 in the Middle Devonian of Canning Land (71° 20′ N. 22° W.), sheds

considerable new light on the ancestry of the Urodela (Caudata). (DLC.)

72529. JEFFERY, GEOFFREY M. Survival of trophozoites of *Plasmodium berghei* and *Plasmodium gallinaceum* in glycerolized whole blood at low temperatures. (Journal of parasitology, Aug. 1962. v. 48, no. 4, p. 601-606, tables.) 13 refs.

Glycerine in phosphate buffer, added to the blood to make a final concentration of 16.6% (or 4.2 or 8.4%) produced a high proportion of survival of these protozoans when frozen to, or kept at -20° or -70° C., and irrespective of whether temperature fluctuated during storage, freezing was slow or fast, or freezing and thawing were repeated. By contrast, parasites released from blood cells by hemolysis, appeared more damaged by glycerol than without it. (DLC.)

JEGSTRUP, J. H. J., *see* Denmark. Greenland. 1961. No. 70974

72530. JELETZKY, JURJIZ ALEXANDER, 1915- . Eastern slope, Richardson Mountains: Cretaceous and Tertiary structural history and regional significance. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v. 1, p. 532-83, illus., maps, diagr.) 31 refs.

Summarizes results of a detailed stratigraphic-paleontological survey, made in summers 1955-1958, of the uppermost Jurassic and Cretaceous rocks of the Richardson Mts., Porcupine Plains, and Eagle Plains (about 3000 sq. mi.). Mid-Valanginian, late Aptian, early Albian, and late Albian - early Cenomanian orogenic phases have affected the area; most of these correspond to well-known orogenic phases and have broadly regional or circumboreal range. Subsidence of the Richardson Mts. trough persisted through the older Cretaceous orogenic phases, and continued at least until Coniacian time. The Upper Cretaceous rocks are constantly involved in major dislocations, e.g., the Alpine (Laramide) movements caused folding, faulting, and elevation of the entire trough. The eastern slope of the Richardsons is dominated by fault block tectonics. Strike-slip faults predominate and form a single, conjugate system analogous to that of California. The Donna River fault zone appears to be the master fault of the system. Contrasts are noted with the structure of the stable belt of the lower Peel and lower Mackenzie Rivers to the east, also with the large, open folds of the central Richardson Mts. The Cretaceous and Tertiary structures of the eastern Richardsons are basement controlled, in contrast to the alpine type deformation and lack of basement control in the Canadian Rocky Mts., the Selwyn, Wernecke, and the Ogilvie Mts. (DLC.)

72531. JELETZKY, JURJIZ ALEXANDER, 1915- . Pre-Cretaceous Richardson Mountains trough: its place in the tectonic framework of arctic Canada and its bearing on some geosynclinal concepts. (Royal Society of Canada. Transactions, June 1962. ser. 3, v. 56, sect. 3, p. 55-84, maps, cross-sections.) 56 refs.

Reports (as complement to paper *supra)* on the tectonic setting and structural history of this depositional trough in northern Yukon Territory, in light of the orogenic concept of geosyncline. Thus it is classified as a non-geosynclinal intracratonic trough, not, as usually considered, part of the Cordilleran geosyncline. The trough's history during the Jurassic is reconstructed: formation over the ancestral cratonic Aklavik arch, accumulation of 5000-8000 ft. of sediments, brief emergence of the crest of Aklavik arch and the trough's margins during strong mid-Jurassic? tectonic movements, accumulation of conglomerates north and south of the crest. (DGS.)

72532. JELETZKY, JURJIZ ALEXANDER, 1915- . Upper Jurassic and Lower Cretaceous rocks, west flank of Richardson Mountains between the headwaters of Blow River and Bell River, Yukon Territory, parts of 116P and 117A. Ottawa, Queen's Printer, 1961. 42 p. map, graphs, tables, fold. diagr. in pocket. (Canada. Geological Survey, Paper 61-9.) 6 refs.

Reports on 1959 field work in the area 67° 30′ - 68° 30′ N. 136° 20′ - 138° W. Diagnostic fossils were found only in the lower part of the sequence; distinct stratigraphic units were hard to determine. Tentative stratigraphy and age determinations are given; six units, largely dark grey to black shales and siltstones are described, based on eight measured sections, shown on fold. diagram. (DGS.)

72533. JELINEK, ARTHUR J., 1928- . An index of radiocarbon dates associated with cultural materials. (Current anthropology, Dec. 1962. v. 3, no. 5, p. 451-77, diagr., tables, maps.) 82 refs.

Tabulates by major geographic areas some 2,500 carbon-14 dates, indicating the material (bone, charcoal, wood, etc.), laboratory, assumed associated culture stage (food collecting, food producing, urban, etc.) and publication, mostly 1955-1961. Northern North America, associated exclusively with food-collecting cultures, is represented by 63 datings in the Western Arctic (ranging from 4043 ± 280 B.C. to modern), Aleutians 19 (2650 ± 80 B.C. to 1858 ± 100 A.D.), Eastern Arctic including Greenland, 30 (2081 ± 170 B.C. to 1549 ± 100 A.D.). North Eurasian datings are included in general listings for Scandinavia and the USSR. (DSI.)

JELLINEK, M., *see* Musacchia, X.J., & *others.* Effect of hibernation . . . 1962. No. 74175

72534. JELLY, DORIS H. Polar cap absorption events identified from H.F. vertical ionosonde data. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962. v. 1, p. 122-26, illus., graphs.) 7 refs.

Identifies the origin of the polar cap radio wave absorption (PCA) by analyzing the data on the minimum frequency recorded by vertical incidence ionosondes (f_{min}), obtained at IGY World Data Center, Boulder, Colorado, for both Arctic and Antarctic. All PCA events are found to be easily identified from the plots of Δf_{min}, and the ionosonde minimum frequency data to have advantages over riometer data. Stations used are Resolute Bay, Churchill, and Winnipeg; Godley Head, Cape Hallett, and Byrd. Additional very weak absorption events were studied for Resolute

Bay, Churchill, and Baker Lake; Cape Hallett, Scott Base, and Byrd. The PCA events are shown to occur at the same time in the Arctic and Antarctic. (DLC.)

72535. **JELLY, DORIS H.**, *and others.* Study of polar cap and auroral absorption at HF and VHF frequencies. *(In:* NATO. Radio wave absorption . . . *pub.* in Journal of atmospheric and terrestrial physics, Dec. 1961, *pub.* 1962. v. 23, p. 206-215, table, graphs, diagrs., map.) 11 refs. Summary in French. *Other authors:* A.G. Matthews and C. Collins.

Summarizes results of a study of polar blackouts as observed on HF ionosonde equipment, in relation to polar cap absorption, observed on riometers at 30 Mc./s. Criteria are established for selecting those blackouts which correspond to polar cap absorption events (some forty during an 11-year solar cycle). The distribution of the events shows a close association with the mean sunspot number. Preliminary results on the spatial distribution of the auroral type of absorption at 30 Mc./s. indicate that the absorbing region may have a rapid transition (within 35 km. at the 60 km. level) as seen from the polar and zenith antennas at one site or may at times have a minimum extent of 380 km. from measurements at two stations.—From authors' abstract. IGY data from nine Canadian stations (five in the Arctic) were used in this study. (DLC.)

JELLY, DORIS H., *see also*

Collins, C., & *others*. HF blackouts . . . 1961. No. 70782

Collins, C., & D.H. Jelly. Ionospheric disturb. & cosmic rays. 1961. No. 70783

72536. **JELSTRUP, HANS SEVERIN, 1893–** . Minnetale over Direktør Kaare S. Klingenberg. (Norske Videnskaps-akademi, *Oslo.* Årbok 1959 *pub.* 1960, p.93-95, port.) Text in Norwegian. Title tr.: Memorial lecture on Director Kaare S. Klingenberg.

Summarizes the scientific activities of Kaare Sverressøn Klingenberg, 1872-1959, director of the Norwegian Geographical Survey during 1921-1945, also his role in scientific organizations. He served on the Norwegian-Finnish Boundary Commission in 1925 and was chairman of the Norwegian-Swedish Boundary Commission in 1929. (DLC.)

72537. **JENNESS, DIAMOND, 1886–** . Eskimo administration: 1, Alaska. Montreal, July 1962. 64 p. maps. (Arctic Institute of North America. Technical paper no. 10.) 24 refs.

Examines U. S. educational, health, and economic programs and policies for Alaskan Eskimos from 1867 to 1960, as part of a study of Eskimo administration in North America. The educational objective, enunciated in 1880, of preparing the Eskimos for white industrial and social life has not been adequately accomplished for various reasons, discussed, including an attempt during the 1930's to restore the old ways of life. Tuberculosis, mostly from inadequate diet and housing, is the main health problem. The Eskimos benefited from the introduction of reindeer in 1891, and direct government marketing of their fox pelts and handicrafts; but their economy, still mostly based on hunting-fishing-trapping is extremely low. Correlation is found between their inadequate schooling, especially lack of fluent English, and their low incomes; the latter are responsible in turn for the malnutrition and poor housing conditions. It is suggested that the Eskimos be prepared more adequately, and encouraged to migrate southward, for assimilation into the white, wage-earning economy. (CaMAI.)

72538. **JENNESS, DIAMOND, 1886–** . Human resources of Canada's Northlands. Montreal, 1961. 19 p. 3 refs. Paper presented at Resources for Tomorrow Conference, *Montreal,* Oct. 26, 1961.

Analyzes current native, mainly Eskimo, rehabilitation problems and their solution. A higher than average birthrate and a decline in mortality increase the Canadian Eskimo population of eleven thousand by about 400(3.3%) yearly; its existing labor force of two thousand males is increased by a hundred a year however, about 1% of the population. Restricted to unskilled jobs owing to illiteracy, or semi-literacy, the Eskimos have only 15% of their available labor force in steady wage-employment. The majority depend on government allowances to complement substandard incomes derived from fur hunting and casual jobs, or are totally dependent upon welfare. With defense construction tapering off, and mineral resources exploitation slow in starting, the unskilled jobs decline in number. Most government economic experiments have proved abortive. The two successful ones lack the capacity of considerable expansion: handicraft industry of Cape Dorset, Povungnituk, Rankin Inlet etc., and the salmon and char fishing revived in 1958 on George River. Resettlement of southern Eskimos, victims of the slump in the fur market, to depopulated but game-rich areas of the high Arctic is only a palliative involving a fraction of the Eskimo population, as the colonies at Sachs Harbour, Resolute Bay, Grise Fiord, and Alexandra Fiord comprise only 220 individuals. A solution of the rehabilitation problem should be sought in education and in the training of a skilled labor force. The latter should be employed in industries of the Arctic as available, and part should be integrated into the general labor market of southern Canada. Contrary to the common opinion, the author considers opportunity outside the Arctic to have potential attractions for young Eskimos. (CaMAI.)

72539. **JENNESS, DIAMOND, 1886–** . Obituary R.M. Anderson, 1877-1961. (Arctic, Dec. 1961. v. 14, no.4, p.268.)

Tribute by a fellow member of the Arctic Expedition of 1913-1918. Dr. Anderson was long Chief of the Division of Biology in the National Museum of Canada. (DGS.)

72540. **JENNESS, JOHN L.**, 1913-18 and after. (North, Nov.-Dec. 1962. v. 9, no.6, p.2-11, illus.)

Reviews development in communications in the Yukon and Northwest Territories since Stefansson's expedition nearly 50 yrs. ago: transportation facilities by water, air, road, and rail are described; the advantages and disadvantages of each in turn appraised; telephone, telegraph, radio, postal services are sketched; some economic and social applications noted. (CaMAI.)

JENNESS, R. A., *see*

Brack, D.M. Southampton Island . . . 1962. No. 70360

Canada. Settlement handbook. 1962. No. 70545

72541. JENNESS, STUART EDWARD, 1925– . Field work, 1961. Ottawa, Feb. 1962. 82 p. (Canada. Geological Survey, Information circular no. 5.) Refs. Mimeographed.

Includes the Polar Continental Shelf Project, Operation Ogilvie in Yukon Territory, Roads to Resources Project in northern Ontario, Operation Leaf River in Quebec-Labrador, an airborne magnetometer survey over the Muskox Intrusion in the Coppermine River area of Mackenzie District, Operation Klondike, etc. (DLC.)

JENNESS, STUART EDWARD, 1925– , *see also*

Harker, P., & S.E. Jenness. Summary research . . . 1962. No. 72030

Lord, C.S., & S.E. Jenness. Field work 1960. 1961. No. 73591

72542. JENNEY, CHARLES PHILLIP. Geology and ore deposits of the Mattagami area, Quebec. (Economic geology, June-July 1961. v.56, no.4, p. 740-57, maps, tables.) 19 refs.

Summarizes known information to establish a framework for further detailed work, outlining the general geology of the area 49°25′-49°50′N. and 77°15′-78°W. The Precambrain rocks are intensely folded, schisted and altered by hydro-thermal and magmatic invading solutions. Most of the surface is covered by about 75 ft. of glacial overburden. Description is given of the zinc-copper ores, and the 25-mile-long mineralized zone. Published ore reserves at end of 1959 were 30 million tons averaging 12% Zn, 0.75% Cu, and smaller amounts of Au and Ag. (DGS.)

JENNINGS, ROBERT W., *Jr., see* Abel, J.F., & R.W. Jennings. Tunneling glacial till. 1961. No. 69464

72543. JENNOV, JOHANNES GERHARDT. Moskusoksen som tamdyr i Vestgrønland. (Svensk faunistisk revy, 1950. årg. 12, no.2, p.48-52, illus.) Text in Danish. **Title tr.:** Musk oxen as a domestic animal in West Greenland.

Discusses its possibilities in this new area, reviewing successful development of herds in Svalbard, Norway, and Nunivak Island in the Bering Sea, all areas of greater humidity than the native habitat of the muskox in north and northeast Greenland. From an established herd in West Greenland, at least 1,300 tons of meat could be produced yearly, and muskoxen could replace sheep in southern Greenland. (DLC.)

72544. JENNOV, JOHANNES GERHARDT. Något om vildrenens och myskoxens förekomst på Nordostgrönland. (Svensk faunistisk revy, 1953. årg. 14, nr.1, p.13-27, 7 illus.) 21 refs. Text in Swedish. **Title tr.:** Notes on the occurrence of wild reindeer and muskox in northeast Greenland.

Discusses factors that control or modify the incidence of these grazing animals in the 120,000 km² ice-free area of northeast and North Greenland. Only a small part of it has vegetation. Numbers of both species are cited as observed by several expeditions from 1823 when the Eskimos left the region. The variations in these numbers are discussed, and recent estimates given for Greenland and northern Canada. Climate, slow growth rate of vegetation and predators are considered in relation to the population decline, as is the excessive killing of reindeer in West Greenland. To establish a sound basis for a wild animal husbandry, field studies are recommended of numbers and physical condition of the animals, on conditions and capacities of grazing areas, and the over-wintering possibilities of various localities. Introduction of domesticated muskox to West Greenland is recommended for reserve stock. (DLC.)

72545. JENSEN, ADOLF SEVERIN, 1866-1953. On specific constancy and segregation into races in sea-fishes. København, 1944. 19 p. (Danske Videnskabernes Selskab. Biologiske meddelelser, bd. 19, nr.8.) Refs.

Discusses studies on correlation between sea-water temperature and the number of vertebrae and rays in the median fins in certain fishes, also the development of races within certain species inhabiting waters of notable temperature differences. Development of the embryo in warmer water requires less time than in colder; it also results in fewer vertebrae and rays. The marine fishes concerned include *Pholis gunnelus, Ammodytes lancea, Gadus callarias, Clupea harengus, Lycodes vahlii, Triglops pingelii.* Mature specimens of the last two species are found to be larger in the races of colder waters. No local races can be demonstrated for *Anguilla anguilla* and *A. rostrata* because they are bred in warm water and later migrate to colder regions. The various species treated are distributed in the West, southwest, and East Greenland, and Labrador waters, Davis Strait, the North Atlantic, northern Norwegian waters, and the White Sea. (DLC.)

72546. JENSEN, BENT. Åndemaneren, der forskraekkede missionaeren. (Grønland, June 1962, nr.6, p.209-216, illus.) Text in Danish. Summary in English. **Title tr.:** The shaman who frightened the missionary.

Recounts tale of a meeting between the northwest Greenland shaman Uíne and a missionary. Uíne, asked to demonstrate his art, evoked his assistant spirit called *ningiuat* and convinced the missionary of the powers of the shaman. The position in Eskimo mythology of *tôrnârssuk*, described by the early missionaries as the master of the assistant spirits, *tôrnat,* is discussed. (DLC.)

72547. JENSEN, BENT. Folkways of Greenland dog-keeping. (Folk, 1961. v.3, p.43-66, illus., sketch-map.) 57 refs.

Discusses the Eskimo's relationship to sled-dogs as a factor in indigenous culture and social life; and reports on field studies of 1959 in Umának District, approx. 71°N. on the west coast. Sealing is the main occupation; dogs and sled are important in this hunting and in transport generally. Dog-training and -driving techniques, driving signals, and veterinary measures, are described. The influence of dog behavior on man, its interpretation in Eskimo lore, traditional and modern customs in dog-keeping, etc. are dealt with. (DSI.)

72548. JENSEN, BENT. Konebytning. (Grønland, Apr. 1961, no.4, p.139-46, illus.) Text in Danish. **Title tr.:** Wife exchange.

Discusses this custom among the Eskimos, noting paucity of evidence on the alleged custom of wife lending as a courtesy to travelers among the North American and Greenland Eskimos. Temporary

exchange of wives during special festivities is considered, as is the social duty of offering to lend one's wife as household aide in case of illness in the home. The wife exchange custom generally, disappeared long ago in Greenland, but seems to have lasted longer in Canada. In North Alaska the custom developed into systems of partnerships in cases where the men concerned were friends, the children of such unions being considered sisters and brothers. (CaMAI.)

72549. JENSEN, BENT. Qarajaq, en forladt boplads. (Grønland, Oct. 1961, nr.10, p.393-99, map, illus.) Text in Danish. **Title tr.:** Qarajaq, an abandoned settlement.

This site at 70°30′N. 50°45′W. in innermost Umának Fjord, West Greenland, was first settled in the 1860's, and in 1915 had 34 inhabitants. Game and fish were plentiful, imported supplies were obtained from Ikerasak, 25 km. to the west. Qarajaq was abandoned for Ikerasak in 1921 after an influenza epidemic, but is visited by hunters. (DLC.)

72550. JENSEN, GUSTAV, 1890– . Da kajakposten var i vildt slagsmål med en stor bjørn. (Atuagagdliutit: Grønlandsposten, May 20, 1960. Ukiut 100-at, nr.8, p.5, 24.) Text in Danish. **Title tr.:** When the kayak mailman got into a fight with a big bear.

Reminiscences of a seal hunter from Qagssimiut (approx. 60°45′N. 47°W.) in Julianehåb district of West Greenland, who helped carry the mail by kayak for many years. (DLC.)

72551. JENSEN, HENRY. Statistical studies on the IGY microseisms from København and Nord. København, 1961. 67p. illus., tables, graphs, maps. (Denmark. Geodaetisk Institut. Meddelelser no.39.) 51 refs. Summary in Danish.

Deals with microseisms in the period range of 3-8 sec., using records from Danish seismological stations at København, Ivigtut, Scoresbysund, and Nord, mostly for the IGY period. Short-period microseisms seem related to local phenomena, the 3-8 sec. microseisms of distant origin. Routine readings of amplitudes and periods are examined; addition of ∝, the direction of approach to the recording station, is recommended. Three-station methods, single-station methods of determining the direction of approach are described, as well as the empty half-plane method whose reliability appears to be connected with the probable error of ∝; the error may be less than 10°. Statistical results of amplitude *(A)* and period values obtained from Nord and Scoresbysund during the IGY are compared; annual mean of *A* at Nord is much smaller, probably because of distance. Microseismic waves at Nord approached mainly from the southwest; very few reached Nord from the Arctic Basin, or from the Greenland Sea, confirming the view that these waves cross continental areas more easily than oceans. No further data on the actual nature of microseismic waves is reported. (DGS.)

JENSEN, HENRY, *see also* IUGG. Seismol. proceedings 1960. 1961. No. 72397

72552. JENSEN, K. MØRCH. Methods of forecasting of stream lines in the Greenland region. (*In:* International Geographical Congress 1960. Physical geography . . . 1961. p.154-55.)

Outlines forecasting methods used by the Danish meteorological service; points out the failure of the old extrapolation methods, especially in the Greenland area; discusses the possibility of constructing better prognostic maps for Greenland at reasonable cost, based on current knowledge of dynamics of the atmosphere. (DGS.)

JENSEN, PALLE, *see* Denmark. Byggeriet . . . 1959. No. 70968

72553. JENSEN, PAUL. Danske fiskeriundersøkelser ved Øst-Grønland. (Fiskets gang, Aug. 3, 1961. årg.47, nr.31, p.548-49.) Text in Danish. Reprinted from *Dansk fiskeritidende,* June 30, 1961. **Title tr.:** Danish fishery investigations in East Greenland waters.

The 1957 and 1958 work continued in 1959, concentrated on cod in the fjord and bank areas of Skjoldungen, Angmagssalik and Kungmiut. Ice conditions, the worst in years, halted the studies at Angmagssalik. Cod was found quantitatively and qualitatively poorer than in previous years. Age distribution varied, but young cod was observed in various areas. One year class was found larger in East Greenland than in southwest Greenland but equal to that of northern West Greenland waters. This, together with tagging recoveries indicates that cod migrating from West to East Greenland and Iceland originated in northern Davis Strait. (DA.)

72554. JENSEN, STIG BAK. Some dolerite dykes in the southern part of the Godthaab District, West Greenland. København, C.A. Reitzel, 1962. 38p. illus., map, tables. (Meddelelser om Grønland, bd. 169, nr.4.) 20 refs. *Also issued as:* Greenland. Geologiske Undersøgelse. Miscellaneous papers no.35.

Reports location and distribution of about twenty post-orogenic doleritic dikes, near Sermilik and Graedefjord (63°30′N. 51°W.) as mapped in 1952. Mineralogical and petrographic methods (optical constants, etc.) identified the chief minerals, plagioclase, pyroxene, and hornblende. Examination of samples collected at various altitudes within two dikes indicates that no noteworthy differentiation took place during or after the intrusion. The older and younger systems of the remaining dikes near Amitsuarssugssuaq, 63°40′N. 51°10′W., are petrographically indistinguishable. (DGS.)

72555. JENSEN, WILLARD C. Timber piles in permafrost at Alaskan radar station. (American Society of Civil Engineers. Soil Mechanics and Foundations Division. Journal, Feb. 1961. v.87, no.SM1, p.15-27, illus., table, diagrs., map.) 5 refs.

Describes test results, design, and construction of timber piles for an early warning radar station near Kotzebue. Pile load-deflection tests and soil temperature investigations were performed during and after construction. Data are given on point bearing support, pile deflection, slurry-pile adfreeze strengths, subgrade thermal changes, and slurry freeze-back time by a natural or mechanical method. Design of pile lengths in this area can be based on the tangential adfreezing strength and embedment of piles into the permafrost at least four times the active zone depth.–From CRREL. (DLC.)

72556. JEWTUCHOWICZ, STEFAN. Studia z geomorphologii glacjalnej północnej części Sørkappu.

Łódź. 1962. 80 p. illus., diagr. (Acta geographica Lodziensia, no.11.) 47 refs. Text in Polish. Summary in English. **Title tr.**: Glacial morphologic studies in northern Sørkapp.

Discusses recent development of the Gåshamna outwash plain, a 5 km.^{2} area on the south coast of Hornsund Fjord, Vestspitsbergen. The relief is considered the outcome of the combined action of sea waves, glaciers, meltwaters, and periglacial processes. The cause and the morphological effect of ablation in summer 1959 on several glaciers in south Vestspitsbergen are described, p.31-49. Observations are reported (p.51-65) on the structures of kames and eskers occurring in the Gåshamnöyra region and on the Bunge glacier, both south of Hornsund Fjord. Position and orientation of stones in glacier ice and fluvioglacial sediments on the Gåshamna outwash plain and the Bunge and Gås glaciers are described. (CaONA.)

72557. JIUSTO, JAMES E., *and* R. R. ROGERS. Experiments on Greenland whiteout modification, 1960. Hanover, N.H., Aug. 1961. iv, 23p. illus., tables, diagr., map. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Technical report 84.) 9 refs.

Presents results of studies of supercooled whiteouts at Camp Fistclench, and above-freezing clouds and fogs at Camp Tuto. Several seeding agents were tried, using aircraft, tethered blimp-balloon, and rocket delivery. Successful dissipation of supercooled clouds was achieved with dry ice. As little as five lb. of ice per mile, dispersed from aircraft, produced efficient clearing action and line openings up to 2.5 mi. wide. An inexpensive seeding scheme, involving a tethered blimp-balloon and open baskets of dry ice attached at intervals along the tether line, was capable of opening holes in low cloud overcasts. This technique appears feasible for maintaining safe landing corridors at icecap airstrips during fog and low stratus conditions. Liquid carbon dioxide, Greenland soil particles, silver iodide, carbon black, calcium chloride, and sodium chloride were ineffective as seeding materials. –From CRREL. (CaMAI.)

72558. JIUSTO, JAMES E., *and* R. R. ROGERS. Seeding whiteouts in Greenland. (Research trends, spring 1961. v.9, no.1, p.5-7, illus., map.)

Describes experiments on supercooled clouds and fog in the vicinity of Camp Fistclench on the icecap at 6850 ft. elevation. Dry ice, crushed into pieces of less than one in. diameter were released from aircraft flying 50-100 ft. above the clouds. The supercooled water began to crystallize immediately. Within 5-10 min. the seeded track could be distinguished by its darker texture, and the appearance of sun dogs, sun pillars, and halos. Snow began to reach the ground in 15-20 min. Clearing began in 25-30 min. A simpler technique, in which baskets of dry ice were attached to the tethering line of a blimp at 25-ft. intervals, initially produced plumes of ice crystals as much as 100 yd. downwind of the baskets. After about 30 min. snowfall commenced, and a clearing line up to 0.5 mi. wide resulted. The seeding process continued for about an hour, until the dry ice had evaporated. –From CRREL. (DLC.)

JOBS, PER, *see* Rapp, A., & *others*. Iskilar i Padjelanta? 1962. No. 75041

72559. JOCHELSON, VLADIMIR IL'ICH, 1855–1937. Zamĕtki o foneticheskikh i strukturnykh osnovakh aleutskago ĭazyka. (Akademiia nauk SSSR. Izvestiia, 1912, p.1031-1046.) Offprint. 7 refs. Text in Russian. **Title tr.**: Notes on the phonetic and structural principles of Aleut.

Morphological and phonological analysis of the eastern or Alaskan dialect presented at the Oct. 17, 1912 session of the Academy's History and Philology division. Two Aleut dialects are recognized: the eastern, spoken on Alaska Peninsula, Unalaska, Umnak, St. George and St. Paul Islands; and the western on Attu and Mednyy Island; there is also one subdialect used on Atka and Bering Islands. The close affinity between Aleut and Eskimo indicates a common linguistic origin, Aleut being probably the oldest Eskimo dialect. (DSI.)

JOENSEN, J. S., *see* Devold, F., & *others*. International herring investigations . . . 1961. No. 70994

72560. JØRSTAD, FINN A. Werner Werenskiolds forfatterskap, en bibliografi. (Norsk geografisk tidsskrift, 1961. bd.18, hft. 1-2, p.8-28.) Text in Norwegian. **Title tr.**: Werner Werenskiold's works, a bibliography.

Lists about 350 works by this Norwegian geographer and geologist, pub. 1910-1962. A systematic index is appended. His contributions to newspapers and encyclopedias are not included. (DLC.)

72561. JØRSTAD, IVAR, 1887– . Distribution of the Uredinales within Norway. (Nytt magasin for botanikk, 1961. v.9, p.61-134, tables, map.)

Comprehensive study of rusts based on nearly half a century of observations including the arctic areas of Norway. For each rust, the host(s) and detailed lists of occurrence are given in most cases with the altitude above sea level. An alphabetic list of host genera with their rusts concludes the study. (DLC.)

72562. JOHANSEN, HANS CHRISTIAN, 1897– . Die Jenissej-Faunenscheide in Sibirien und ihr Durchbruch. (International Ornithological Congress, 11th, 1954. Proceedings *pub.* 1955, p.383-86.) 8 refs. Text in German. **Title tr.**: The Yenisey faunistic divide in Siberia and its breaching.

Discusses the genesis of this divide, between the eastern and western Palearctic, and its physical and ecological boundaries. Its arctic sector, the forest tundra and taiga avifauna are described. Man's role in piercing this divide by deforestation, cultivation and settlement, is outlined. (DLC.)

72563. JOHANSEN, KJELL. Buoyancy and insulation in the muskrat *Ondatra zibeticus*. Fort Wainwright, Alaska, Oct. 1961. 6 p. illus. table. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-15.) 4 refs.

Reports measurements of the amount of air trapped in the non-wettable fur: it represents 21.5% of the dry volume of this animal, and gives it a specific gravity of 0.790. The importance of the air layer for buoyancy and insulation is discussed. (CaMAI.)

72564. JOHANSEN, KJELL. Distribution of blood in the arousing hibernator. Fort Wainwright, Alaska, Oct. 1961. 10 p. table. (U.S. Air Force.

Arctic Aeromedical Laboratory. Technical report 61-11.) 14 refs.

Reports a study with radioactive indicators which shows pronounced antero-posterior differential in vasoconstriction during the peak of arousal and blood flow in the muscle over 16 times greater in the anterior part of the body. Likewise, the myocardium, lungs, diaphragm and brown-fat body showed considerable increase of blood flow, the gastrointestinal tissues, a reduction; and the skin, liver and thyroid, insignificant changes. (CaMAI.)

72565. JOHANSEN, KJELL. Evolution of temperature regulation in mammals. (*In:* Symposia on arctic biology and medicine. Proceedings 1962. p.73-131, illus., tables.) 56 refs.

Discusses the problem on the basis of extensive work of others with lower mammals, and own studies on the armadillo, claimed to be the most primitive of them all. Average low body temperature, partial temperature regulation with considerable differences between species, lack or insufficient mechanisms of heat dissipation, low metabolism, etc. were found to characterize the lower mammals. From these findings, and considering the highly controlled conditions in other mammals, author tentatively outlines the phylogenetic development of thermoregulation in mammals. (CaMAI.)

72566. JOHANSEN, KJELL. Observations on the wood frog *Rana sylvatica* in Alaska. Fort Wainwright, Alaska, Oct. 1961. 7 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-16.) 12 refs.

Reports observations and some physiological measurements made on chiefly young frogs, in Fairbanks. Abundance, its decline in the fall and the probable cause (cannibalism) are discussed. Reaction to sharp drop in temperature by increased but brief activity, cold lethargy and nervous coordination is noted. 0_2-consumption versus ambient temperature, etc. are described. (CaMAI.)

72567. JOHANSEN, KJELL. Observations on the wood frog *Rana sylvatica* in Alaska. (Ecology, 1962. v.43, no.1, p.146-47, illus.) 7 refs.

Notes on observations made in Fairbanks concerning size (and growth) in the first and second year of life; effect of temperature drop on motion and movement coordination, 0_2-consumption and metabolism. (DLC.)

JOHANSEN, KJELL, *see also* Alaskan Science Conference 1960. 1961. No. 69643

72568. JOHANSON, A. E., *and* **A. V. JONES.** Variations with height and form of N_2^+ rotational temperatures in aurora. (Canadian journal of physics, Jan. 1962. v.40, no.1, p.24-32, table, graphs, diagrs.) 10 refs.

Reports measurements in Canada (Saskatoon?) showing a definite increase in rotational temperature with emission height; gradients of about 6°K./km. were found in the 100-160 km. region. Type-A red and sunlit auroral forms gave higher temperatures more frequently than did more normal types; the former showed many temperatures between 700° and 1000°K. which correspond to heights in the 200-250 km. range. When temperatures were classified according to auroral forms, diffuse and pulsating surfaces showed higher temperatures more frequently than bands and arcs. –From authors' abstract. (DLC.)

72569. JOHANSSON, ARNE H. Bondeskogsbruket i Finland. (Skogen, Feb. 17, 1961. årg. 48, nr.4, p.62-63, illus.) Text in Swedish. **Title tr.:** Farm forestry in Finland.

Describes the chain of organizations developed to provide professional advice to owners of farm woodlots which comprise 60% of the Finnish forest area. Technicians of local associations give advice on planning, logging, selling, etc. These associations are financed by a fee levied on forest owners. Public regional forest services provide auditing skills, forest law enforcement, personnel training, informational activities. Two central organizations are concemed with forest development and they control the local and regional services. The Finnish Forest Service Section for Privately Owned Forests has general jurisdiction over all. (DA.)

JOHANSSON, B. W., *see* Hanson, A., & B.W. Johansson. Myocardial lactate concentration . . . 1961. No. 72010

72570. JOHANSSON, RUNE. Norrbottens län. (Norrbotten, 1962, p.213-21.) Text in Swedish. **Title tr.:** Norrbottens län.

Outlines history of administration in this northernmost Swedish county. Mentioned in records as early as the 14th c., it was part of Västerbotten organized as a county in 1637, with a governor at Umeå. Norrbotten became a separate county in 1810, after the war with Russia; Piteå was the capital from 1819 and Luleå since 1856. (SPRI.)

72571. JOHNSEN, RAGNVALD. Fridtjof Nansen og norsk ski-idrett. (Naturen, 1961. v.85, nr. 7-8, p.487-94, illus.) Text in Norwegian. **Title tr.:** Fridtjof Nansen and Norwegian skiing achievements.

Summarizes Nansen's influence on this national sport. Though as a youth he won in competition, he valued skiing mainly as a means of covering distance. His notable ski trips prior to his crossing of the Greenland icecap in 1888 are sketched. The central ski association of Norway was organized in the year of Nansen's birth, 1861. (DGS.)

72572. JOHNSGARD, PAUL A. Classification and evolutionary relationships of the sea ducks. (Condor, 1960. v.62, no.6, p.426-33, tables.) 16 refs.

Review and analysis of taxonomic systems since Delacour and Mayr (1945) revised the classification of the Anatidae. Author considers their classification the "closest to reality," except that he claims generic distinction for the Steller eider, from the typical eiders. A sequence of genera of sea ducks is proposed. (DLC.)

72573. JOHNSGARD, PAUL A. Wintering distribution, changes in mallards and black ducks. (American midland naturalist, Oct. 1961. v.66, no.2, p.477-84, tables.) 4 refs.

Estimates based on the Audubon Society's annual Christmas counts since 1900. It appears that during this period the mallard has increased in numbers everywhere except the extreme northeast of North America; while the black duck has increased hardly anywhere in relation to the mallard. Deforestation and changes in land use are held responsible for this trend. (DLC.)

JOHNSON, A. I., *see* Lamb, H.H., & A.I. Johnson. Climatic variation . . . 1961. No. 73286

JOHNSON, ALBERT W., 1926– , *see* Alaskan Science Conference 1961. 1962. No. 69644

72574. JOHNSON, ARTHUR, 1903– . Preliminary report on water power resources of Eklutna Creek, Alaska. Washington, D.C., Aug. 1947. 23 l. 3 maps fold. in pocket, 2 graphs, 4 tables. (U.S. Geological Survey. Reports, open-file series, no. 631.) Ref. Mimeographed.

Presents results of field mapping and geological examination, also soundings of Eklutna Lake by the Anchorage Public Utilities, in 1947. Physical characteristics of this creek, 61°26′N. 149°21′W., are favorable for development of water power. Storage to equalize the stream flow can be provided in Eklutna Lake, at 870 ft. altitude, and the fall to sea level developed by building an eight-mile pipe line or a five-mile tunnel. Storage of about 150,000 acre-feet can be provided by a range in lake stage of 40-50 ft. Approx. 15,000 kw. can be developed 100% of the time, 18,000 kw. 50% of the time. A general map on a scale of 1:125,000 and detailed maps at 1 in. = 1,000 ft. and 1 in. = 100 ft. are included. (DGS.)

72575. JOHNSON, ARTHUR, 1903– . Report on reconnaissance of Lake Chackachamna, Alaska. Washington, D.C., Jan. 1950. 8 l. illus. (U.S. Geological Survey, Reports, open file series, no. 632.) Refs. Mimeographed.

Describes investigation of this lake, 61°12′N. 152°22′W., 85 mi. west of Anchorage, on Aug. 3, 1948. Precipitation and runoff are heavy, but concentrated during the summer; a large storage capacity is needed for power development. Two ways to control the lake are indicated, one involving a 350 ft. high dam. (DGS.)

JOHNSON, ARTHUR HOLMES, 1894– , *see* Ameigh, G.C., & Y.M. Chaffin. Alaska's Kodiak Island . . . 1962. No. 69738

72576. JOHNSON, FREDERICK ASHBY, 1903– Waterpower resources near Petersburg and Juneau, southeastern Alaska. Washington, D.C., U.S. Govt. Print. Office, 1962. v, 102p. illus., maps, graph, tables. (U.S. Geological Survey. Water-supply paper 1529.) 19 refs.

Deals with three groups of water power sites on streams of the Alaska mainland between Thomas Bay, approx. 57°N. 132°45′W. near Petersburg, and the Juneau area. The geographic, climatic, and hydrologic conditions of the 12 sites are briefly described, the mountainous terrain stressed as presenting difficulties to transmitting power to the few nearby locations suited to industrial development. Storage possibilities could be developed at nearly all the sites for substantial equalization of the annual runoff. The three power sites near Petersburg have a total potential of 44,500 kw. of primary power; four others about 35 mi. southeast of Juneau near Port Snettisham have 113,000 kw., and the third group, four power sites, has a 31,800 kw. primary power potential. Schemes of development in accord with the topography and geology are outlined but their realization depends on growth of industry and population. In 1959 the electric energy consumed in the Petersburg and Juneau service areas was less than 2% of that available from the 190,000 kw. potential of these sites. (DLC.)

72577. JOHNSON, FREDERICK ASHBY, 1903– . Waterpower resources of the Bradley River basin, Kenai Peninsula, Alaska. (*In:* U.S. Geological Survey. Waterpower resources of the United States. Water-supply paper, 1961. no. 1610-A, p. A-1 to A-25, illus., maps incl. fold. in pocket, tables.) 2 refs.

Evaluates the potential of this basin as a basis for classifying public lands for water-power purposes; also outlines two general power development plans, both of which utilize Bradley Lake to regulate the flow. Reconnaissance investigation in Sept. 1954, as reported in No. 45809, was supplemented by field examination in Oct. 1959. Runoff at the outlet of Bradley Lake determined as about 334 c.f.s., or 84 in./yr., on the 54 sq. mi. drainage area, could be increased by additional diverted runoff to 421 c.f.s. Development through a mean gross head of 1, 131 ft. to a powerhouse at tidewater, some 3.5 miles from the lake, would provide for generation of 32,400 kw. continuously. A lesser degree of development generating 28,300 kw., was also considered. Water could be conveyed from lake to powerhouse by tunnels and pipelines; it could also be conveyed to two power houses on the Bradley River. (DGS.)

JOHNSON, GERALD W., *see* Alaskan Science Conference 1960. 1961. No. 69643

JOHNSON, HAROLD C., *see* Wathne, F., & H.C. Johnson. Shrimp exploration . . . 1961. No. 76502

JOHNSON, J. A., *see* Gott, V.L., & *others*. Myocardial energy substances . . . P & hypothermic arrest. 1962. No. 71806

JOHNSON, VON J., *see* Alaskan Science Conference 1960. 1961. No. 69643

72578. JOHNSON, WILLIAM D. An exploratory study of ethnic relations at Great Whale River. Ottawa, Oct. 1962. 21 p. tables. (Canada. Dept. of Northern Affairs and National Research. Northern Coordination and Research Centre, 62-7.) Ref.

Reports on his 1960 sociological study of acculturation tensions in this community on southeast Hudson Bay. It has a population of 375 Eskimos, 202 Indians and 23 whites. The Indians exhibit distrust and resentment of the Eskimos and the whites; the origins of this negative attitude are analyzed. The Eskimos are found more closely integrated with the whites than are the Indians, who preserve a stronger cohesion among themselves and aloofness toward non-Indians. Eskimos are found more gregarious and adaptable, preferred as labor force for their greater conscientiousness and honesty, and valued for better school attendance by their children. A major grievance is also the lack of a permanent Indian agent, aggravated by the presence of an Eskimo-oriented Northern Service Officer. The social and economic inequality between Eskimos and Indians is intensified by the dislocation of the latter's traditional economic activities and cultural criteria, their loss of autonomic leadership, and their economic and political dependence on the whites. (CaMAI.)

72579. JOHNSTON, A. G. Index of publications of the Geological Survey of Canada, 1845-1958. Ottawa, Queen's Printer, 1961. x, 378 p. col. map, price list, fold. in pocket.

Lists publications of the Survey from its inception chronologically in 14 types of reports, with complete references. In pt. 2, the reports and maps are grouped by area according to the national topographic system; an index map as revised in 1960 together with a price list is folded in pocket. (DGS.)

72580. JOHNSTON, CHARLES. Platinum mining in Alaska. (Mining magazine, Apr. 1962. v.106, no.4, p.204-209, illus.) *Reprinted* from Platinum metals review, Apr. 1962.

Describes growth and operations of the only primary producer of platinum metals in the United States, the Goodnews Bay Mining Co., at Platinum, 59°N. 161°50'W. Discovery of this metal in 1926 by Walter Smith, an Eskimo, the unprofitable hand-mining operations until 1933, when the Northland Development Co. obtained title to most of the claims and started dragline operations in Aug. 1934. The Goodnews Bay Mining Co. succeeded Northland in 1935, and installed new machinery; it produces an average of 15,000 troy oz. of crude platinum a year. (DGS.)

JOHNSTON, D. R., *see* Davis, T.R.A., & D.R. Johnston. Seasonal acclimatization . . . 1961. No. 70913

72581. JOHNSTON, DEREK. Newfoundland's mineral industry, 1960. (Canadian mining journal, Apr. 1961. v.82, no.4, p.80-82.)

Reports mineral exploration and development in 1960: iron ore developments in the Wabush Lake area of Labrador by the Iron Ore Co. of Canada, Labrador Mining and Exploration, and Wabush Iron Co.; explorations for molybdenite near Aillik Bay, iron ore in the Wabush Lake area, and columbium-beryl near Seal Lake. (DGS.)

72582. JOHNSTON, G. H. Bench marks in permafrost areas. (Canadian surveyor, Jan. 1962. v.16, no.1, p.32-41, diagrs.) 25 refs.

Reviews the literature on the problem of installing reliable, permanent bench marks in permafrost regions. Various types used by American, Canadian, and Soviet agencies are discussed and diagrammed. Factors influencing their stability are noted and particular design features discussed. A protective casing at least to the permafrost table should be installed over the bench mark rod to isolate it from frost-heaving effects in the active layer. The rod should be anchored in the permafrost at a depth below which the annual temperature variation is less than 2°F. For most locations, the protective casing should be placed to a depth of 30 ft. with the rod extending an additional 5 ft. Dry augering of holes is preferable as it causes little disturbance of the thermal regime of the permafrost and permits a more rapid freeze-back of backfill. Experience in installing these bench marks at Inuvik in Mackenzie District is described.—From CRREL. (DLC.)

72583. JOKI, AULIS JOHANNES, 1913- . Finnisch-ugrisches im Ossetischen? (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.147-70.) Refs. Text in German. **Title tr.:** Finno-Ugric in Ossetic?

Discusses the etymology of names for certain metals (iron, silver, copper, etc.) common to Ossetic, an Iranian language of the Caucasus Mts., and Finno-Ugric, especially Zyryan and Vogul. Ancient linguistic and cultural contacts are implied by these reciprocal word borrowings. (DSI.)

72584. JOKINEN, RAIJA. Über die Illative *tasā, tasi* im Lulelappischen. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.171-75.) Refs. in text. Text in German. **Title tr.:** The illatives *tasā, tasi* in Lule Lappish.

Comparative grammatical and phonetic discussion of pronouns and particles in Lappish dialects. (DSI.)

JOKINEN, RAIJA, *see also* Suomalais-ugrilainen seura. Commentationes fenno-ugricae . . . Ravila. 1962. No. 76004

JOKINS, H., *see* Bernhard, W.F., & *others*. Alterations in myocardial metabolism . . . 1961. No. 70168

72585. JOLLEY, THEODORE R., *and* **H. W. RUSSELL.** Control of fires in inactive coal deposits in western United States, including Alaska, 1948-58. Washington, D.C., 1959. 22 p. illus. tables. (U.S. Dept. of the Interior. Bureau of Mines. Information circular 7932.)

Reviews the Bureau of Mines program for control of coal-formation fires, and for fire-control projects, two of the latter in Alaska during 1954. The Ranger Station fire in subbituminous coals at Kachemak Bay 59°35'N. 151°30'W. was controlled by isolation; the fire in bituminous coals at Moose Creek in the Matanuska coalfield was extinguished by smothering. (DGS.)

JONES, A. VALLANCE, *see* Johanson, A.E., & A.V. Jones. Variations . . . aurora. 1962. No. 72568

72586. JONES, I. W. Sedimentary basins and petroleum possibilities of Quebec. (Geological Association of Canada, Proceedings, Oct. 1962. v.14, p.43-58, illus., maps.) 7 refs.

Deals with the six regions in Quebec that are stratigraphically and structurally favorable for oil and gas exploration. Most of them are in southern Quebec, but a 1000 sq. mi. area just south of James Bay, underlain by flat-lying Silurian siltstones, sandstones, limestones and dolomites not more than 600-ft.-thick, has been reported to show oil seepages. The major part of this James Bay - Hudson Bay Lowland is in Ontario and Manitoba, and is dealt with by B.V. Sanford, q.v. (DGS.)

72587. JONES, J. WILBUR, *and* **M. M. NIELSEN.** Analytical study and foundation for the establishment of counties in the State of Alaska; collated material from public and private sources in Alaska, California, and Washington, D.C., 1959. Various pagings. fold. map, tables. Mimeographed.

Proposes division of Alaska into 94 counties, and suggests names, county seats, and boundaries. Topography, economy, etc. of each proposed county are described. Criteria and problems of delimitation are outlined. (DGS.)

JONES, M. B., *see* Smith, W.M., & M.B. Jones. Astronauts . . . personal autonomy. 1962. No. 75769

72588. JONES, RALPH. Wakefield's trawlers pioneered application of loran and radar to fishing the American Arctic. (Pacific fisherman, May 1961. v.59, no.6, p.12.)

Describes the Wakefield Fisheries Co. use of electronic navigation aids since 1947, for king

crab fishing in the Bering Sea, where a level sea floor and characteristic fog and overcast conditions favor these devices. Use of reflector buoys to maintain fishing position has increased production. (DI.)

72589. **JONES, ROY F.** Blazing Alaska's early air trails. (Alaska sportsman, Jan.-Feb. 1961. v.27, no.1, p.36-38, +; no.2, p.40-43, +, illus.)

Recounts experiences in the first commercial aviation venture in Alaska, 1922-1924. A 180 hp., 90 mi./hr. seaplane with open-air cockpit, and accommodation for three passengers was used. Exploits of Eielson, Wien, and other Alaskan bush pilots of the 1920's are noted. (DI.)

JONES, T. L., *see* Canada. Hydrographic Service. Pilot . . . 1961. No. 70568

72590. **JÓNSSON, JÓN.** Chairmen's summaries of area reports; distant northern seas. (International Council for the Exploration of the Sea. Annales biologiques, 1958 *pub.* 1960. v.15, p.8.)

Reviews research and condition with respect to temperature; water masses and movements; ice; plankton and primary production; halibut and redfish, tagging, size distribution, etc. (DI.)

72591. **JÓNSSON, JÓN.** Chairmen's summaries of area reports; distant northern seas. (International Council for the Exploration of the Sea. Annales biologiques 1959 *pub.* 1961, p.9.)

Reviews activities and conditions in 1959 in hydrography including temperature, salinity, O_2, P, and ice; water movements; plankton; fisheries and fisheries research. (DI.)

JÓNSSON, JÓN, *see also* Bodvarsson, G., & J. Jónsson. Fluctuations in marine populations . . . 1961. No. 70271

JOPPA, E. L., *see Northern miner* . . . Carol project. 1962. No. 74402

72592. **JORDAN, A. T.** Mine rescue training. (North, May-June 1961. v.8, no.3, p.24, illus.)

Describes a course at the North Rankin Nickel Mine, Keewatin District, in Sept. 1960; five Eskimos were among the trainees. (DLC.)

72593. **JORDAN, GEORGE F.** Redistribution of sediments in Alaskan bays and inlets. (Geographical review, Oct. 1962. v.52, no.4, p.548-58, maps, sections.) 5 refs. Paper presented at the Tenth Pacific Science Congress, *Honolulu,* Aug.-Sept. 1961.

Notes major changes in submarine physiography revealed by recent resurveys in Alaskan tidal waters by the U.S. Coast and Geodetic Survey. Bottom changes in Cook Inlet 1910-1959, Monti Bay an arm of Yakutat 1892-1958; Lituya Bay 1926-1959, and Taku Inlet 1890-1960 are shown on charts and sections. Effects of the July 10, 1958 earthquake in the Yakutat Bay and Lituya Bay areas, also the 6-7 km. advance of Taku Glacier are shown and discussed briefly. (DLC.)

72594. **JORDAN, GEORGE F.** Submarine physiography of the U.S. continental margins. Washington, D.C., Mar. 1962. 28 p. maps, profiles, graph. (U.S. Coast & Geodetic Survey. Technical bulletin no.18.) 30 refs.

Includes a general description of the bottom configuration of the Alaskan continental margin, with some detail on three selected profiles across Bering Sea and the Gulf of Alaska. Pamplona Spur, a submarine ridge approx. 59°30'N. 142°30'W. and its possible structural significance are noted. Regional descriptions are given of the submerged ridge of the Aleutian Islands, also the Aleutian Trench, nearly 1.5 mi. deeper than the abyssal Pacific floor south of Unimak I., and between them a terrace-like feature called the Aleutian Bench. Frequent earthquakes along the outer edge of the Aleutian Ridge disturb the ocean bottom, generating seismic sea waves. Seamounts, common in the Gulf of Alaska, rise 3,000 ft. and more above the gently sloping bottom; one of 10 mi. diam. base and about 700 fathoms below the surface is shown in profile. (DLC.)

JORDAN, GEORGE F., *see also* Pacific Science Congress. 1961. No. 74619

72595. **JORDAN, MARILYN.** *Angelette* of Petersburg reflects the new trend in fishing. (Pacific fisherman, May 1962. v.60, no.6, p.19-20, illus.)

Describes the 52-ft. Alaskan halibut-and-salmon fishing boat, her equipment and gear. Built of fir with steel mast and boom and metal stabilizer poles, the vessel is powered by a GM 6-110 engine and an auxiliary diesel, has a hydraulic system for the anchor, seine winch and Puretic power block. Use of braided nylon gangions for halibut fishing, a Kolstrand combination halibut and seine gurdy, an all-nylon net for salmon, innovations in the galley, depth sounders, loran and other features are noted. (DI.)

72596. **JORDAN, WILHELM,** *and* **Mrs. JORDAN.** Shrimping among the icebergs. (Fish boat, July 1961. v.6, no.8, p.28+, illus.)

Describes a day of winter shrimping aboard a combination salmon seiner-shrimp trawler in the Petersburg area of Southeast Alaska; equipment methods, local conditions. (DI.)

JOSEPH, E. J., *see* Burkhardt, M.D., & *others*. Sea conditions . . . 1962. No. 70462

JUDY, W. V., *see*

Honda, N., & *others*. Effects of adrenaline and noradrenaline . . . rabbits. 1962. No. 72227

Honda, N., & *others*. Influence of prior cold exposure . . . 1962. No. 72228

72597. **JUHLIN, LENNART,** *and* **W. B. SHELLEY.** Role of mast cell and basophil in cold urticaria with associated systemic reactions. (American Medical Association. Journal, Aug. 12, 1961. v.177, no.6, p.371-77, illus., tables.) 19 refs.

Describes the three kinds of cold-hypersensitivity syndromes, then presents two cases, and own special studies. The basophils and mast cells in cold urticaria patients were found to discharge their granules upon cooling, thus releasing histamine into the skin. (DNLM.)

72598. **JULIUS, ANTHONY L.,** *Jr.* Possible physical effect of solar particles on meteorological parameters in Alaska. (Science, May 26, 1961. v. 133, no.3465, p.1707-1708, table.) 5 refs.

Analyzes changes in sea-level pressure and 500-mb zonal flow during 16 days following a day in which the geomagnetic field was particularly

disturbed. Statistical significance was found in the reception of solar particle invasions to these parameters, indicating (together with X-ray data from artificial satellites) that a physical relation exists between such particles and atmospheric changes. (DLC.)

72599. JULL, R. K. Silurian Halysitidae of the Ronning group, western Canada. (Alberta Society of Petroleum Geologists. Journal, June 1962. v.10, no.6, p.326-30, diagrs., table.) 10 refs.

Presents diagrammatic illus. of 19 Silurian species and forms of *Halysites* and *Catenipora* from the Ronning group, using specimens of these corals from northeastern British Columbia and the Mackenzie Mts., as well as from the Attawapiskat formation in northern Ontario. (DGS.)

JUNG, M., *see* Beyda, E.J., & *others*. Effect of hypothermia . . . digitalis. 1961. No. 70193

JUNGER, ARNE, *see* Beach, F.K. Muskeg, signal & noise. 1961. No. 70083

72600. JUPP, DOROTHY. The run goes through. (Newfoundland quarterly, summer 1961. v.60, no.2, p.47.)

Describes "The Run", the mile and a half of sea water between Caribou Islands and the southeast Labrador coast. In rough weather, communications are cut between mainland and the islands. (CaONL.)

72601. JUSTIN-BESANÇON, L., *and others*. Nouvelles observations d'hypothermie accidentelle de l'adulte. (Revue médicale française, Nov. 1960. t.41, no.10, p.429-43, illus., tables.) 54 refs. Text in French. *Other authors:* H. Pequignot, J.P. Étienne, P. Mauvais, and J.P. Gay. **Title tr.:** New observations on accidental hypothermia of the adult.

Reports a study of three cases of this hypothermia with rectal temperatures ranging between 27° and 23°C. The cases are described in detail as to condition at admission, and early, hourly changes in temperature, pulse, blood pressure, etc.; rewarming, medication and clinical course; laboratory findings, etc. A general discussion based on these and two earlier milder cases, deals with etiology, physiology and pathology, treatment, prognosis, sequelae, etc. An essentially similar paper entitled *Les hypothermies accidentelles* was pub. in Schweizerische medizinische Wochenschrift, 1960. Jahrg.90, no.34, p.940-47. (DNLM.)

KAARBØ, RIKARD, *see* Stockinger, C., & F.W. Gulbranson. Skipsfarten . . . 1958. No. 75940

72602. KABAN'KOV, V. ĬA. Osobennosti ritmichnosti sredne-verkhnekembriĭskikh otlozheniĭ severo-vostoka Sibirskoĭ platformy i usloviĭa nakopleniĭa ritmichnoĭ tolshchi. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t.117, Geologiĭa . . . 1961, p.69-80, illus.) 4 refs. Text in Russian. **Title tr.:** Rhythmicity features of Middle and Upper Cambrian deposits in the northeast of the Siberian platform and the accumulation conditions of the rhythmic stratum.

Describes rhythmic bedding as studied in 1955 and 1958-1959 in the Olenek, Birekte and Taryr River valleys. Two types of rhythmites are distinguished and characterized, noting thickness of the beds, their texture, mineralogic composition, structure, and other features. Regional distribution of the rhythmic stratum is outlined. Oscillating movements are considered to foster development of rhythmites. (DLC.)

KABANOV, N. E., *see* Akademiĭa nauk SSSR. *Institut geografii*. Dal'niĭ Vostok . . . 1961. No. 69546

72603. KACHADOORIAN, REUBEN, 1921– . Geologic aspects of the November 1960 high-explosive test at the Project Chariot site, northwestern Alaska. Washington, D.C., May 1961. 15 l. graphs, table, maps incl. one fold in pocket. (U.S. Geological Survey. Trace elements investigations report no. TEI-784.) Mimeographed.

Reports on the detonation of a 256-lb. spherical charge of TNT at 8.7 ft. depth in steeply dipping thinly bedded mudstone of Late Jurassic age. It produced a symmetrical crater of eight ft. depth, 26 ft. diam. An asymmetrical apron of ejected debris was deposited within a 550-ft. radius, its spatial distribution controlled by the nearness of the parent material to the explosive, and its fragment size by the cementation of the mudstone by ice (permafrost) and by nearness to the center of the explosion. Fallout distribution was controlled by the 12-knot southerly wind. Results of pre-shot and post-shot studies are outlined. Detailed geologic map and sections, scale 1 in.=13 ft. are included. (DGS.)

72604. KACHADOORIAN, REUBEN, 1921– , *and others*. Geologic investigations in support of Project Chariot phase III, in the vicinity of Cape Thompson, northwestern Alaska, preliminary report. Washington, D.C., Jan. 1961. 104 l. graphs, tables, maps, incl. fold. in pocket. (U.S. Geological Survey, Trace elements investigations report TEI-779.) 30 refs. Mimeographed. *Other authors:* R.H. Campbell, G.W. Moore, D.W. Scholl, A.H. Lachenbruch, G.W. Greene, B.V. Marshall, D.F. Barnes, R.V. Allen, R.M. Waller, *and* M.J. Slaughter.

Reports work of the 1960 field season together with some amplification of previous years. The Chariot test site at the mouth of Ogotoruk Creek, is geologically and topographically well situated for experimental excavation by detonation of nuclear devices as proposed by the U.S. Atomic Energy Commission. The site lies in frozen mudstone which has been complexly folded and faulted; within a 15-mi. radius bed rock consists of consolidated clastic and chemical sediments, ranging in age from Early Mississippian to Cretaceous; faulting is extensive. Work on coastal processes furnishes a physical background for ecological studies. Depth and temperature of permafrost were measured by two new holes drilled; the thermal regime of the lower Ogotoruk Creek valley is evaluated. Gravity measurements indicate a broad uneven gravity low near Cape Seppings and Kivalina. Substantial radioactive fallout inland would probably contaminate the deep aquifers, but the shallow alluvial aquifer of the Ogotoruk Creek drainage appears to be depleted and replenished each year. Generalized geologic map at scale 1:125,000 and structure section are included. (DGS.)

KACHADOORIAN, REUBEN, 1921– ; *see also* Cobb, E.H., & R. Kachadoorian. Index of . . . mineral deposits of Alaska . . . 1961. No. 70775

72605. **KACHURIN, SERGEĬ PETROVICH.** Karstovyĭ i termokarstovyĭ protsessy v oblasti rasprostraneniia mnogoletnemerzlykh porod. (*In:* Nauchnoe soveshchanie po izucheniiu karsta. Obshchie voprosy . . . 1962, p.145-51, illus., table.) 23 refs. Text in Russian. Title tr.: Karst and thermokarst processes in permafrost regions.

Outlines differences of climatic conditions leading to formation of karst and thermokarst. Karst is mainly a chemical process, while thermokarst is physical. Their origin, its causes and their effects on the landscape are characterized. Thermokarst is a typical phenomenon, and abundant in permafrost regions: it appears on uplands and river terraces, regions of unconsolidated frozen rocks; whereas karst appears only occasionally and under certain conditions. The two differ fundamentally, but may develop simultaneously when geologic, hydrogeologic and permafrost conditions conducive to each are present. Such cases can be found in the Pechora region, Central Siberian plateau, the Lena River region, and Transbaykal. (DLC.)

72606. **KACHURIN, SERGEĬ PETROVICH.** Permafrost science (geocryology). (*In:* Akademiia nauk SSSR. Soviet geography . . . 1962, p.81-86, map.) 21 refs. Translation of No. 65520. (DGS.)

72607. **KACHURIN, SERGEĬ PETROVICH.** Termokarst na territorii SSSR. Moskva, Izd-vo Akademii nauk SSSR, 1961. 292 p., illus., diagrs., tables & maps incl. fold. Over 500 refs. Text in Russian. Title tr.: Thermokarst on the territory of the USSR.

Comprehensive study of subsidence forms of relief caused by melting of ground ice. The Russian and foreign literature is broadly reviewed. The causes and laws of thermokarst development are outlined. Physical-geographic factors determining its development: thermal, geologic, hydrogeologic, climatic, hydrologic, geobotanical, and other are evaluated. Regional features of thermokarst in northern European USSR, western, middle, and eastern Siberia, in Chukotka-Kamchatka and other regions are characterized. Its classification, regional distribution, development history are analyzed. Practical knowledge of thermokarst is discussed. (DLC.)

72608. **KADANE, DAVID,** *and* **H. KADANE.** Nunivak holiday. (Alaska sportsman, Oct. 1962. v.28, no. 10, p.21-23, illus.)

Recounts experiences during a week's visit to the Eskimo village of Mekoryok on Nunivak Island off the west coast of Alaska. Ivory masks carved by the villagers, a reindeer roundup, and a seal hunt are described. (DI.)

KADANE, HELENE, *see* Kadane, D., & H. Kadane. Nunivak . . . 1962. No. 72608

72609. **KADEK, M. G.** Georgiĭ Iakovlevich Sedov, 1877-1914. (*In:* Kuznetsov, I.V., *ed.* Liudi . . . 1962. p.567-75, port., map.) 15 refs. Text in Russian.

Describes the life, arctic explorations and tragic end of Sedov. In 1902 and 1903 with the *Pakhtusov,* he carried out mapping and description of the coasts of Novaya Zemlya. In 1909 he made investigations in the Kolyma mouth area, and the next year hydrographic investigations and mapping of Krestovaya Bay in Novaya Zemlya. He undertook an expedition to the North Pole in 1912, and spent the first winter on Novaya Zemlya, the second (1913-14) on Franz Joseph Land, and on Feb. 15, 1914, set out for the Pole. He fell sick, died on March 18, and was buried on Rudol'fa Island, Franz Joseph Land. (DLC.)

72610. **KADENSKIĬ, ALEKSEĬ ALEKSANDROVICH.** Geologiia i petrologiia iuzhnoĭ chasti Anabarskogo shchita. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 198 p. illus., tables, diagrs., maps incl. fold. (Akademiia nauk SSSR. Geologicheskiĭ muzeĭ. Trudy, vyp.6.) Approx. 140 refs. Text in Russian. Title tr.: Geology and petrology of the southern part of the Anabar shield.

Describes the stratigraphy of Archean deposits, tectonics of the shield, and petrology of various rock as studied by a group of scientists in 1956-1958. Petrography of granulite facies, petrochemical outline of charnockite rocks, amphibolite facies of rocks, granites and pegmatites of amphibolite facies, mylonites and pseudotachylites, are reported. Distribution of rare elements in the Archean rocks of the Anabar shield are outlined: barium, strontium, zirconium, gallium, and others. Trap formation of the Lower Triassic also is characterized, and petrographically described. (DLC.)

KÄÄRIK, AINO, *see* Buchwald, N.F., & *others* . . . Parasitical fungi & hosts . . . 1961. No. 70425

72611. **KÄLLANDER, HANS** *and* **R. LENNERSTEDT.** Fågelobservationer i norra Lule och södra Torne lappmarker. (Fauna och flora, 1960, hft. 3-4, p.121-39, illus.) Text in Swedish. Title tr.: Bird observations in northern Lule Lappmark and southern Torne Lappmark.

Reports on the birds seen in this north Swedish region approx. 67°30′-68°N. 20°E., mostly in the summer of 1957. Author's trip then is chronicled, and the 89 species seen are listed. (DA.)

72612. **KAHLA, MARTTI.** Bibliografinen luettelo Neuvostoliitossa vuosina 1918-1959 julkaistusta suomalais-ugrilaisesta kielitieteellisestä kirjallisuudesta; osa 1, Tieteelliset tutkimukset ja artikkelit. (Suomalais-ugrilainen seura. Aikakauskirja, 1960, no.7, p.1-194.) Text in Finnish and Russian. Title tr.: Bibliographic index of Finno-Ugric linguistic literature published in the USSR, 1918-1959; pt. 1, scientific works and papers.

Lists 1602 publications including 366 on northern languages: 28 on Lappish, 195 Zyryan, 62 Ostyak and Vogul, 81 Samoyed. In two sections: the first, 457 works written in languages, mostly Estonian, using the Latin alphabet; the second in Cyrillic, predominantly Russian. A break-down by language, listings of linguistic institutions and expeditions, and a personalia index are appended. (DLC.)

72613. **KAHLE, ANNE B.** Solar activity and polar cap absorption events. College, Alaska, July 1962. iv, 68 l. graphs, tables. (Alaska. University. Geophysical Institute, Geophysical research report UAG-R129.) 68 refs. *Also issued as:* U.S. Air Force. Cambridge Research Laboratories, Contract no.AF19 (604)-5574, Scientific report no.2; AFCRL-62-708.

Surveys current knowledge on the visible features of solar flares and associated solar radio emission, solar ultraviolet and X-rays, solar cosmic rays and polar cap absorption, and solar corpuscular streams. Data on the occurrence of these phenomena in conjunction with polar cap absorption

(PCA) events are tabulated. All large PCA events, which are caused by solar cosmic rays, are associated with large solar flares. The more intense the PCA event, the shorter the time interval between the flare and the onset of a sudden commencement magnetic storm. Theories of origin of the various types of solar emission, also theories of interplanetary magnetic fields and their plausibility from the standpoint of observed PCA events, are discussed. High latitude radio wave absorption events are fairly common; during polar radio "blackouts", radio-wave transmissions over large sections of the Arctic become impossible for hours or even days. Distinction is made between polar cap absorption and auroral zone absorption, in the former's comparatively smooth, steady pattern, long duration and widespread occurrence. Diagram shows a typical PCA event of Aug. 26, 1958. (DGS.)

72614. KAĬKOV, N. M. Ftor v prirodnykh vodakh Murmanskoĭ oblasti i ego gigienicheskaīā ocēnka. (Gigiena i sanitariīā, Apr. 1961, god 26, no.4, p.94, table.) Text in Russian. **Title tr.:** Fluorine in natural waters of the Murmansk Province and its hygienic evaluation.

Notes earlier work and reports present study covering 85 brooks, rivers and lakes. Nearly all showed 0.1 mg. F or less per liter. These findings are discussed against the high and increasing incidence of caries among school children. (DLC.)

KAITA, H., *see* Lewis, M., & *others.* Blood groups . . . 1961. No. 73474

72615. KALASHNIKOV, N. V. Devonskaīā i permskaīā konulīarii Severnogo Urala. (Paleontologicheskiĭ zhurnal, 1961, no.4, p.153-56, illus.) 7 refs. Text in Russian. **Title tr.:** Devonian and Permian conulariids of the Northern Ural.

Presents a taxonomic description of two new species of these problematic fossils assigned to the Scyphozoa. *Conularia devonica* found in Givetian deposits of the Bol'shoy Yelets River basin in the Polar Ural, and *C. petschorica* from Lower Permian deposits of the Shchugor basin, tributary to the Pechora, are described and illus. (DLC.)

72616. KALASHNIKOV, N. V. Fauna permskikh otlozheniĭ īūgo-vostochnoĭ chasti poluostrova Kanin. (*In:* Akademiīā nauk SSSR. Komi filial. Geologicheskiĭ institut. Materialy . . . 1961, p.44-61, table, plates.) 19 refs. Text in Russian. **Title tr.:** Fauna of Permian deposits in the southeastern part of the Kanin Peninsula.

Presents systematic description of brachiopod, pelecypod and gastropod fauna, collected in the Nadtey River basin, Cape Yarni-Sale and other areas. Special attention is given to brachiopods of the Kazanian stage. *Strophalosia kaninensis* n. sp. is described as resembling *S. pulchella,* described by C.O. Dunbar (No. 39619) in Greenland. Migration of Permian boreal fauna is noted. (DLC.)

KALASHNIKOV, V. K., *see* Bershadskiĭ, V.L., & *others.* Ėlektroprivod grebnoĭ ustanovki . . . 1959. No. 70174

72617. KAL'BERG, E. A. Seregovskiĭ solīānoĭ kupol. (Materialy po geologii i poleznym iskopaemym Severo-Vostoka Evropeĭskoĭ chasti SSSR. Sbornik stateĭ, 1962. vyp.2, p.49-59, map, cross-sections.) 6 refs. Text in Russian. **Title tr.:** Seregovo salt dome.

Describes the Seregovo structure on the right bank of the Vym' River in Komi ASSR. This isolated outcrop of Paleozoic deposits in an area of gently bedded Mesozoic deposits is characterized. The Seregovo dome is oval in form with axes 4.4 x 3 km. Stratigraphy of the Triassic and Permian deposits (700-750 m. thick) is outlined. Rocks of undetermined age are also described, among them rock salt. The main mineral of rock salt is halite, mixed with clays, dolomites and other rocks. Structure and tectonics of these salt domes are characterized. Age of the salt is discussed and considered Devonian. (DLC.)

KALELA, AARNO, *see* Baldwin, W.K.W., & *others.* Report on botanical excursion . . . 1962. No. 69980

72618. KALELA, OLAVI, *and others.* Seasonal change of habitat in the Norwegian lemming, *Lemmus lemmus* (L.). Helsinki, 1961. 75 p. diagrs., tables, graphs, plates. (Suomalainen Tiedeakatemia. Toimituksia: Annales Academiae scientiarum Fennicae, ser. A, IV, Biologica, no.55.) 35 refs. *Other authors:* T. Koponen, E.A. Lind, U. Skarén, *and* J. Tast.

Reports on a study conducted from the beginning of winter 1958-59 to the end of winter 1959-60, in several localities in Finnish Lapland particularly Karigasniemi and Kilpisjarvi, where most of the 2400 specimens used were collected. The main emphasis is on population ecology, and habitat selection at different seasons. Study areas, their vegetation substrates, etc., food and habitat, are treated in detail, with plant and site preferences indicated. Migrations in late summer and fall, their causes, sequence timing, etc., trends in population structure are dealt with in turn; and populations at conclusion of the study are discussed. Attempts are made to find out the ultimate destination of the migrants, and the history of the occupants of new areas is traced. The main food sources are shown to be certain mosses and graminids; favored habitat types are mineral soils with good snow cover and moss in winter, peatlands in summer. Fall migration occurs at termination of the breeding season and before watery patches freeze. (DSI.)

KALELA, OLAVI, *see also* Koponen, T., & *others.* Spring migration . . . lemming. 1961. No. 72953

72619. *KALENDAR' ZNAMENATEL'NYKH I PAMĪĀTNYKH DAT.* ĪAkutskaīā Avtonomnaīā Sovetskaīā Sofsialisticheskaīā Respublika; k 40-letiīū so dnīā obrazovaniīā. (Kalendar' znamenatel'nykh i pamīātnykh dat, Apr. 1962. god 7, no.4, p.44-48.) Text in Russian. **Title tr.:** Yakut Autonomous Soviet Socialist Republic; 40th anniversary of its founding.

Concise presentation of pertinent statistical data: territory, population (1961 total: 527,400), economy, industrialization, etc. A list briefly annotated of 28 publications of 1958-1961 is added, they are of political or economic interest, Yakut literature, etc. (DLC.)

72620. KALETSKAĪA, MARIĪA SAMOĬLOVNA. Chetvertichnye otlozheniīā i nekotorye cherty razvitiīā rel'efa vostochnoĭ chasti Pechorskogo basseĭna. (*In:* Vsesoīūznoe soveshchanie po izucheniīū chetvertichnogo perioda. Materialy . . . 1961, t.2, p.7-11.) Text in Russian. **Title tr.:** Quaternary deposits and some features of relief development in the eastern part of the Pechora basin.

Describes relief forms and Quaternary deposits from Pay-Khoy south to the Usa, from own field work in 1955-1956 and materials of others. The number of glaciations, and their centers are dealt with. The thickness and composition of glacial and interglacial deposits, fauna and flora, and stratigraphy of these deposits are discussed. Two phases of the last glaciation are distinguished and correlated with those of the Yenisey. (DLC.)

72621. KALETSKAIA, MARIIA SAMOILOVNA. K stratigrafii chetvertichnykh otlozhenii Pechorskogo basseina. (*In:* Materialy po geologii . . . Evropeiskoi chasti SSSR, sbornik statei 1961, vyp. 1, p.79-83, cross-section.) 4 refs. Text in Russian. **Title tr.:** On the stratigraphy of Quaternary deposits of the Pechora basin.

Reviews the recent studies and offers a new stratigraphic division for the Quaternary system illustrated by a stratigraphic section. Two horizons of moraines separated by interglacial or interstadial deposits are recognized, and two horizons of marine deposits having boreal and arctic boreal fauna are identified. Other features of this new stratigraphic division are summarized. (DLC.)

72622. KALETSKAIA, MARIIA SAMOILOVNA, *and* **A.D. MIKLUKHO-MAKLAI.** O mezozoiskoi kore vyvetrivaniia na zapadnom sklone Poliarnogo i Pripoliarnogo Urala. (Akademiia nauk SSSR. Doklady, Aug. 21, 1961. t.139, no.6, p.1425-27, map.) Text in Russian. **Title tr.:** On the Mesozoic weathering crust on the western slope of the Polar and Subpolar Ural.

Reports on a study in the Kozhim-Lemva interfluve in 1958; also on others' observations in some other localities. Weathered rocks, products of weathering, chemical changes and other features are described, and the age of the process is discussed. This weathering crust is presumed to be Upper Jurassic - Cretaceous. (DLC.)

72623. KALETSKAIA, MARIIA SAMOILOVNA. Paleogeograficheskie osobennosti poslednego lednikovogo pokrova na krainem severo-vostoke Evropeiskoi chasti SSSR. (Materialy po geologii i poleznym iskopaemym Severo-Vostoka Evropeiskoi chasti SSSR. Sbornik statei, 1962. vyp.2, p.60-66, fold. map.) 20 refs. Text in Russian. **Title tr.:** Paleogeographic features of the last glaciation cover in the extreme northeast of European USSR.

Presents a paleogeographic map of the last glaciation cover of Pay-Khoy, Komi ASSR and some adjacent areas, based on field studies in 1954-1956. Distribution, types, and thickness of glacial deposits, limits of maximal distribution of this glaciation and that of its last phase are analyzed and mapped. After reaching its maximum extent, the last glaciation had conditions of insufficient feeding and its activity declined. Wide distribution of fossil ice is noted. (DLC.)

72624. KALIBERDA, V. Svobodnoe vremia liubimym delam. (Klub, Sept. 1961. god 11, no.9, p.10-11, illus.) Text in Russian. **Title tr.:** Leisure and hobbies.

Describes avocational activities of a seamen's wives' club in Murmansk: concerts and music discussions, pisci- and floricultural groups, etc. (DLC.)

72625. KALININ, A. N. O deformatsiiakh zdanii v raionakh s surovymi klimaticheskimi usloviiami. (Transportnoe stroitel'stvo, Aug. 1960. god 10, no.8, p.36-37, illus., table.) Text in Russian. **Title tr.:** Deformation of buildings in areas with severe climatic conditions.

Reports studies made in 1956 and 1959 in the Pechora coal basin of the causes of deformation in nine buildings which had cracks in foundations and walls. Conditions were similar in all cases and the three-story brick school in the railroad settlement at the Vorkuta Station of the Northern (Pechora) Railroad is described as typical. With a prevailing southwest wind in winter at Vorkuta, snow is blown away from one side of the structure and it accumulates on the other; hence permafrost increased under the lee side. The effects of this uneven freezing depth are augmented by certain defects in the preparation of the ground for the building: insufficient drainage, etc. Instructions for controlling factors which cause deformation are summarized. (DLC.)

72626. KALINKO, MIKHAIL KUZ'MICH. Nekotorye dannye o litologicheskikh issledovaniiakh v Sovetskoi Arktike. (Vsesoiuznoe soveshchanie po litologii i mineralogii osadochnykh porod, 3rd, *Baku* 1956. Trudy *pub.* 1962, p.21-29.) Text in Russian. **Title tr.:** Some data on lithologic investigations in the Soviet Arctic.

Reviews (for a conference on the lithology and mineralogy of sedimentary rocks) the investigations in the Ust'-Yenisey, Khatanga depressions, Lena downwarp, etc., and in the Arctic Basin, the Kara and Laptev Seas. Those made in connection with oil prospecting and with developing methods for lithologic studies have special attention; and those on Permian deposits of the Khatanga depression and Lena downwarp are treated in greater detail. Geochemical studies of sedimentary rocks and bottom sediments of Arctic Basin are also reviewed. (DLC.)

72627. KALINKO, MIKHAIL KUZ'MICH. Rezul'taty poiskov nefti i gaza na Aliaske. (Geologiia nefti i gaza, Aug. 1961. god 5, no.8, p.49-53, map.) 10 refs. Text in Russian. **Title tr.:** Results of the oil and gas search in Alaska.

Reviews the geology and the quest for oil and gas since 1853. Naval Petroleum Reserve No. 4 explorations (1923-1943) and others to 1960 are reported; discoveries in the Kenai Peninsula and elsewhere are noted. The arctic coastal plain region, the Umiat downfold, the central Alaska Mesozoic folded zone, and the Tertiary folding of southern Alaska are described with reference to oil and gas prospects. Comparisons are made with similar arctic areas of the USSR, to which search for oil also should be directed. (DLC.)

KALINKO, MIKHAIL KUZ'MICH, *see also* Gramberg, I.S., *& others.* K voprosu o dal'neishem napravlenii neftepoiskovykh rabot . . . 1961. No. 71815

KALINOVSKAIA, G. P., *see* Mishin, V.M., *& others.* Godovoi khod magnitnoi aktivnosti . . . 1961. No. 74061

72628. KALIUZHNYI, V. A., *and* **N. G. PYKHOVA.** Novye materialy o litologo-mineral'nom sostave i raschlenenii srednedevonskikh otlozhenii v Ukhtinskom raione na IUzhnom Timane. (Akademiia nauk SSSR. Doklady, Sept. 21, 1962. t.146, no.3, p.662-65, diagr.) 9 refs. Text in Russian. **Title tr.:** Recent data on the lithologic-mineral

composition and separation of Middle Devonian deposits in the Ukhta region of the southern Timan.

Reports on the composition and age of Givetian deposits; also on spore-pollen analyses and identified fauna. The Lower Chib'yu layer is divided into two; paleogeographic conditions of both are discussed. (DLC.)

72629. KALĬUZHNYĬ, V. A. Timan, novaĭa provintsiia rossypeĭ. (Akademiia nauk SSSR. Komissiia po probleme zakonomernosti razmeshcheniia poleznykh iskopaemykh. Zakonomernosti razmeshcheniia poleznykh iskopaemykh, 1960. t.4, Rossypi, p.117-25, illus., tables, map, diagr.) 6 refs. Text in Russian. **Title tr.:** Timan, a new placer province.

Describes a cross-section of the sedimentary cover on the eastern slope of the Timan Range and reports the formation and distribution of titanium-bearing placers. Devonian (Givetian and Frasnian) deposits are analyzed, noting their mineralogic composition, grain size, facies, and titanium placer concentration. Riphean-Cambrian titanium placers also are found. (DLC.)

72630. KALLIO, ARVO. An exploratory study of agricultural production and research in the northern European countries with special emphasis on Norway, Sweden, Finland & Denmark. Palmer, Alaska, University Agricultural Experiment Station, Jan. 26, 1959. 49 p. Mimeographed.

Reviews, from a study in 1956, the research and extension programs, soils, forage and cereal production, plant pathology, horticulture, dairying and stock-raising, marketing, etc. Plant varieties and farming practices suitable for subarctic areas are evaluated with respect to Alaska. Greenland practices are noted. (DA.)

72631. KALLIOLA, REINO. Man's influence on nature in Finland. (*In:* Hustich, I. Symposium on man's influence . . . *pub.* 1961 in Fennia, 85, p.9-23, 3 text maps.) 28 refs.

Divides rural Finland as 13.8% agricultural, 71.6% forested, and 14.6% wasteland. Most of the wasteland (open swamp, mountain country, stony ground, and some sand dunes) is in the northern part of the country. Oulu and Lapland provinces, roughly half of the area of Finland, are largely untouched by man. Their flora and fauna have increased in numbers, though the latter has been adversely affected: the original stock of beaver and deer exterminated, many carnivores driven into ever-contracting areas; salmon have disappeared. An estimated 22% of the original floral species have lost territory, some rare forms probably vanished, and 42% become more common as a result of cultivation. The number of faunal elements has increased but existence of many original species depends on conservation measures. Disturbance of the earth's surface in Lapland due to gold panning activities, recent road construction, drainage, and reservoir development, is discussed. In 1958 this province ranked second in volume of rock and earth transport; in 1957 construction started on the Valajaskoski power plant at Rovaniemi as part of the Kemi basin regulation. The latter ultimately includes inundating the Posoaapa, Finland's largest swamp, with the water of Lake Lokka, 418 km.². National parks are discussed: the 500 km.² Pallas-Ounas, Lemmenjoki 380 km.², and Pyhatunturi 30 km.² There are also four nature parks, mainly for scientific use, the Kevo 340 km.², Sompio 175 km.², Maltio 160 km.², and Malla 30 km.². (DLC.)

72632. KÁLMÁN, BÉLA. Die russischen Lehnwörter im Wogulischen. Budapest, Verlag der Ungarischen Akademie der Wissenschaften, 1961. 327 p. tables. Refs. in text. Text in German. **Title tr.:** Russian loanwords in Vogul. Translated by H. Tokody-Krüger.

Etymological study based partly on interviews with Vogul students during author's sojourn in Leningrad, winter 1957-58. Historical background and dialectal peculiarities of Russian spoken in West Siberia are discussed, also Vogul secondary borrowing of Zyryan and Tartar words through Russian, old and new loanwords, their subject fields, and words erroneously attributed to Russian. Phonetic changes, morphological, semantic, and stylistic problems are analyzed. A list of approx. 900 Russian words (including proper names) adopted in Vogul is appended. The monograph is reviewed with minor criticism by V.I. Lytkin in *Voprosy iazykoznaniia,* 1962, no.6, p.139-41. (DLC.)

72633. KÁLMÁN, BÉLA. Über die Rolle der Füllworte und Füllsilben in den wogulischen Liedern. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.177-93.) Refs. in text. Text in German. **Title tr.:** The role of filler-words and -syllables in Vogul songs.

Comparative analysis of Vogul, Ostyak, and Samoyed verse meters and rhythms. The use of expletives to complement a lack in the needed number of sonants is discussed with examples (music and lyrics) from Vogul songs recorded by the author in Leningrad, winter 1957-1958. (DSI.)

72634. KALUGINA, A. A. Novye vodorosli dliia Belogo moria. (Akademiia nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1959. t.12, p.149-53, illus.) 16 refs. Text in Russian. **Title tr.:** Algae new to the White Sea.

Describes five forms new not only to the White Sea but to the Soviet Arctic in general. Earlier records, habitat and substrate, location, etc. are considered. (DLC.)

72635. KAMENIKHIN, N. T. Obrazovanie podnanosnogo l'da v Verkhne-Kolymskom raĭone. (Sovetskaia geologiia, June 1961, no.6, p.118-19.) Text in Russian. **Title tr.:** Formation of subdrift ice in the upper Kolyma region.

Describes some lenses of buried ice in river valleys of this region. One lens in the El'gen'ya (61°52′N. 149°35′E.) valley, is 25 m. thick, over 300 m. wide and more than 6-7 km. in length. It lies 2 m. and more deep, covered with sandy-clayey and silty-clayey drift. Another, smaller lens is also described. As a rule they appear in the southern slopes of the valleys. Their formation is discussed: they are considered relics of the last glaciation, more rapidly buried, and preserved by glacial drift, in the southern slopes than on the northern, where thawing of the glacier proceeded slowly; the glacier lenses were not buried by the drift which was not intensive. (DLC.)

72636. KAMEYA, SHINOBU, *and others.* A study of oxygen consumption during profound hypothermia induced by perfusion of the entire body. (Surgical forum 1960. v.11, p.190-91, illus.) 2 refs. *Other*

authors: M. Oz, W.E. Neville, *and* G.H.A. Clowes, Jr.

Reports on dogs slowly or rapidly cooled below 20°C. No significant difference in O_2-consumption was noted between the group cooled in the two ways. Slow perfusion however, may cause an oxygen depth at low temperature, notwithstanding the low O_2-consumption. (DNLM.)

KAMEYA, SHINOBU, *see also*

Neville, W.E., & *others.* Profound hypothermia . . . 1961. No. 74310

Oz, M., & *others.* Relationship of blood volume . . . 1960. No. 74596

72637. KAMINER, N. S., *and others.* Magnitnaia buria v seredine maia 1959 g. i variatsii kosmicheskikh luchei. (Akademiia nauk SSSR. Mezhduvedomstvennyi komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, VII razdel programmy MGG: kosmicheskie luchi. Sbornik statei, 1961. no.4, p.59-83, table, graphs incl. fold.) 23 refs. Text in Russian. Summary in English. *Other authors:* L.I. Dorman *and* IA. L. Blokh. **Title tr.:** The magnetic storm of mid-May 1959, and cosmic ray variation.

Analyzes the effect of the chromospheric flare of May 10, 1959 on cosmic-ray intensity, geomagnetic, and upper atmosphere variations; data of 44 world stations are used including eight in the arctic region. (DLC.)

KAMINER, N. S., *see also* Blokh, IA. L., & *others.* . . . vliianiia magnitnykh bur' na kosmicheskie luchi . . . 1960. No. 70256

KAMOLIKOVA, T. L., *see* Kopylova, Z.A., & T.L. Kamolikova. Ob urovne askorbinovoi kisloty . . . 1962. No. 72964

72638. KAMPP, Å. H. Landbrug i den nordlige del af Meløy herred. (Geografisk tidsskrift, 1962, bd.61, p.99-118, illus., maps, tables, diagr.) 17 refs. Text in Danish. Summary in English. **Title tr.:** Agriculture in the northern part of Meløy district.

Presents a general account of soil and weather conditions in this district, approx. 66°50′N. 13°30′E., and describes the farming there as studied in 1953. Meløy is typical of North Norway in its land use, livestock and crops. Dairy cows average 1.4 per hectare of cultivated soil and 26.6/100 inhabitants. The land is 85.7% in grass, 6.6% potatoes, 0.6% barley and oats, and 4.4% green fodder. Family farming has always been subsidiary to fishing, which until recently was the main source of cash income. New industry is under development, creating new markets for agricultural products. Development of agricultural products however, is hampered by the lack of labor and by the farms being divided and occupied by industrial workers. Comparisons are made with farming on the Faroe Islands and in the Hebrides. (DLC.)

72639. KAMSHILOV, MIKHAIL MIKHAĬLOVICH, 1910– Biologiia grebnevikov pribrezh'ia Murmana. (Akademiia nauk SSSR. Murmanskii morskoi biologicheskii institut. Trudy 1961. vyp. 3 (7), p.36-48, illus., tables, maps.) 35 refs. Text in Russian. **Title tr.:** The biology of ctenophores of the Murman coastal waters.

Reports a study of the locally common forms, *Bolinopsis infundibulum* and *Beroë cucumis,* including distribution, numbers, and fertility, in this area. Food (mainly plankton), growth (quick), and enemies, including experiment in feeding the two species to codfish, are dealt with. (DLC.)

KAMYSHENKO, I. D., *see* Burnazian, A.I., & *others.* Obespechenie radiatsionnoi bezopasnosti . . . 1961. No. 70464

KAN, LAI BING, *see* Hand, C., & L.B. Kan. Medusae . . . 1961. No. 71983

72640. KANAEV, NIKITA PETROVICH. Literatura sovetskoi IAkutii. (*In:* IAnovskii, N.N. Literatura narodov Sibiri, 1956, p.31-70.) Ref. Text in Russian. **Title tr.:** Literature of Soviet Yakutia.

Analyzes the prose and verse of some thirty contemporary Yakut writers: literary trends, folkloristic elements, Russian influence, style, topics, etc. Some data on the writers and the more important works are included. (DLC.)

72641. KANAEVA, I. P. Srednii ves Copepoda Tsentral'noi i Severnoi Atlantiki, Norvezhskogo i Grenlandskogo morei. (Moskva. Vsesoiuznyi nauchno-issledovatel'skii institut morskogo rybnogo khoziaistva i okeanografii. Trudy 1962. t.46, p.253-66, illus., tables.) 24 refs. Text in Russian. **Title tr.:** Mean weight of copepods of the central and northern Atlantic, the Norwegian and Greenland Sea.

Reports determinations made during two summer months of 1954, 1957, and two spring months of 1958, 1959, by methods described in the introductory part. The common forms are considered with respect to body length and width, and weight, of both sexes and developmental stages. Some additional 75 are tabulated as to length and weight. Size (length) is compared and graphically represented for different areas. (DLC.)

72642. KANDROR, IOSIF SOLOMONOVICH. Fizicheskoe razvitie novorozhdennykh i detei v vozraste do 3 let, rodivshikhsia v Arktike. (Pediatriia, June 1961. god 40, no.6, p.41-46, tables.) 12 refs. Text in Russian. Summary in English. **Title tr.:** The physical development of the newborn and of children under three, born in the Arctic.

Reports a study of children weighing at birth 2500 grams and over, all born in Tiksi and Bukhta Provideniya to mothers residing not less than a year in the Arctic. Indices of development of the newborn were "the most favorable." The weight curve of those under three which showed in the past a certain deviation from the norm, approached and occasionally exceeded that in moderate climate. (DNLM.)

72643. KANE, J. A. Re-evaluation of ionospheric electron densities and collision frequencies derived from rocket measurements of refractive index and attenuation. (*In:* NATO. Radio wave absorption . . . *pub.* in Journal of atmospheric and terrestrial physics, Dec. 1961, *pub.* 1962. v. 23, p.338-47, graphs.) 12 refs.

Re-evaluates data derived by means of the Appleton-Hartree formalism from observations obtained in a rocket-borne propagation experiment carried out at Ft. Churchill, Northern Manitoba, under polar blackout conditions (No. 59052). Subsequent laboratory measurements of the energy dependence of the collision frequency indicate that the Appleton-Hartree formalism can not be used to derive the true electron collision frequency. Instead, the formalism of the Boltzmann transfer equation, which slightly affects the derived values

of electron density, should be used. The latter yields true collision frequencies approximately 2.5 times lower than those derived from the Appleton-Hartree formula. (DLC.)

KANEDA, EISUKE, *see* Nagata, T., & E. Kaneda. Photoelectric analyzer . . . 1961. No. 74204

72644. KANEVSKIĬ, Z. M. Klimaticheskaīa kharakteristika raĭona Russkoĭ Gavani, Novaīa Zemlīa. (Issledovaniīa lednikov i lednikovykh raĭonov, 1962. vyp.2, p.112-43, tables, graphs.) 15 refs. Text in Russian. Summary in English. **Title tr.:** Climatic characteristics of the Russkaya Gavan' region, Novaya Zemlya.

Reports climatological observations carried out in the IGY program, 1957-1959, in this region of the northern island. The two meteorological stations set up, Bar'yer Somneniy and Ledorazdel'naya, are sketched and data of earlier stations, Mys Zhelaniya in 1931 and Russkaya Gavan' in 1932, also other studies are evaluated. Air pressure and temperature, humidity, cloudiness, precipitation, and wind regime results are reported. Climatic conditions at the coast and on the glacier are compared; and marine features are outlined, which do not change even under influence of ice cover of the sea. Development of the bora wind and other meteorological phenomena are characterized. (DLC.)

KANEVSKIĬ, Z. M., *see also*

Akademiīa nauk SSSR. Materialy . . . meteorologicheskie nablīūdeniīa. 1961. No. 69547

Akademiīa nauk SSSR. Materialy . . . meteorologicheskie nablīūdeniīa. 1961. No. 69548

KANG, B. S., *see* Rennie, D.W., & *others*. Phys. insulation Korean diving women. 1962. No. 75107

72645. KANIVETS, V. I. Pervye rezul'taty raskopok v Un'inskoĭ peshchere. (*In:* Materialy po arkheologii Evropeĭskogo Severo-Vostoka, 1962. vyp.1, p.103-144, illus., table, cross-sections, diagrs., map.) Approx. 40 refs. Text in Russian. **Title tr.:** Initial results of excavations in the Un'inskaya cave.

Reports on test diggings in 1959 by the Pechora archeological party of the Academy of Sciences' Komi Branch, headed by the author. The cave (approx. 61°50'N. 58°40'E.) on the upper Un'ya, right tributary to the Pechora, was surveyed by B.I. Guslitser in 1955-1957 and his archeological finds described by G.A. Chernov (No. 63909). The structure, size and faunal content of the cave are described. Most of the archeological inventory belongs to the 4-13th century A.D. Cult objects, ornaments and metal (including silver) artifacts predominate, suggesting a place of worship by Ugric tribes, culturally akin to ancestral Ostyaks and Voguls of the lower Ob region. A few much older objects are present also, mostly pottery of the iron and bronze ages. Data are tabulated from the semi-quantitative spectral analysis of metal artifacts. (DLC.)

72646. KANIVETS, V. I. Sredneaziatskie i germanskie monety na Severnom Urale. (*In:* Materialy po arkheologii Evropeĭskogo Severo-Vostoka, 1962. vyp.1, p.145-54, illus., map.) 17 refs. Text in Russian. **Title tr.:** Central Asian and Germanic coins in the northern Ural.

Describes six silver coins found in 1959 in the "medieval" layer of the Un'inskaya (cf. *supra)* and Kaninskaya caves. Coins were used as votive offerings by Ostyaks and Voguls till the early 20th century. These finds indicate the extent of the Ob-Ugric tribes' trade and barter relations in earlier times: Near and Middle East via Bukhara; Western Europe through Novgorod merchants and Zyryan middlemen. (DLC.)

KANIVETS, V. I., *see also* Guslitser, B.I., & V.I. Kanivets. Pervaīa paleoliticheskaīa stoīanka . . . 1962. No. 71933

KANTOR, SIDNEY, *see* Zingg, W., & S. Kantor. Observations . . . hypothermia. 1960. No. 76700

72647. KANTOROVICH, VLADIMIR. Po Kamchatke spustīa mnogo let. (Druzhba narodov, Dec. 1962. no.12, p.216-38.) Text in Russian. **Title tr.:** Kamchatka revisited after many years.

Describes his air trip in 1961 viewing sites visited on his train and boat journey of 1929. General impressions are given of the Peninsula and its volcanoes, Petropavlovsk and Ust'-Kamchatsk, their ports and fishing industry. Visits to two northern fishing kolkhozes are sketched and one to Klyuchi: a fur hunters' hamlet in 1929, now a town of 8,000 with daily scheduled flights to Petropavlovsk, a volcanological station, etc. A volcanological party's ascent of Klyuchevskiy during the Aug. 14-15, 1961 eruption is recounted. The economic growth of the province based mainly on fisheries and the cultural progress of the aborigines: Koryaks, also Chukchis and Tungus, are contrasted with conditions of the past. (DLC.)

KANWISHER, JOAN T., *see* Scholander, S.I., & J.T. Kanwisher. Latitudinal effect . . . 1959. No. 75422

72648. KAPITONOV, V. I. O sibirskom v'īurke, *Leucosticte arctoa* Pall., v Kharaulakhskikh gorakh. (Moskovskoe obshchestvo ispytateleĭ prirody; otdel biologicheskiĭ. Biūlleten'. 1962. t.67, no.3, p.119-22, illus.) Text in Russian. **Title tr.:** The Siberian finch *Leucosticte arctoa* Pall. in the Kharaulakh Mts.

Reviews distribution of the rosy finch in Asia, America, and in these mountains (70°30'N. 129°E.) of northern Yakutia. Its call, pairing, nesting, breeding, eggs, the young, their care and food, food of adults, and coloration are described. Relations with other animals are discussed. (DLC.)

72649. KAPITONOV, V. I., *and* **F. B. CHERNIAVSKIĬ.** Vorob'inye ptitsy nizov'ev Leny. (Ornitologiīa, 1960. vyp.3, p.80-97, illus.) 8 refs. Text in Russian. **Title tr.:** Passerine birds of the lower Lena.

Reports a study conducted during 1955-1957 in latitude 69°-71°41'N. Each species, with its Latin name, is described as to frequency and registered occurrence, nests and nesting, eggs, hatching and young, food, movements, etc. Twenty-nine nesting forms were recorded. (DLC.)

72650. KAPLAN, M. A. Izmenenie kul'tury i byta nanaĭtsev Nanaĭskogo raĭona v rezul'tate sotsialisticheskikh preobrazovaniĭ. (Vsesoīūznoe geograficheskoe obshchestvo. Izvestiīa, Mar.-Apr. 1961. t.93, vyp.2, p.136-48, illus.) 3 refs. Text in Russian. **Title tr.:** Changes in the culture and life of the Nanaets of the Nanayskiy District resulting from social reforms.

Comparative study of the Golds living on the collective farms of the Nanayskiy District in Khabarovsk Province, based mainly on field trips

of 1930-1933 and 1955-1957. Changes due to the acculturative process since the 1930's are discussed: development of the fishing and hunting industries, introduction of subsidiary agriculture and stock-raising, mechanization of equipment, transition to settled life, etc. Production norms, kolkhoz revenues, wages, etc. are exemplified. The current way of life, housing, furnishings, clothes, arts and crafts, cultural and educational growth, health services, position of women, marriage pattern, etc. are dealt with. (DLC.)

72651. KAPLIANSKAIA, F. A., *and* **V. D. TARNOGRADSKII.** K paleogeografii chetvertichnogo perioda vnelednikovoĭ oblasti Zapadno-Sibirskoĭ nizmennosti. (*In:* Leningrad. Vsesoiuznyĭ n.-i. geologicheskii institut. Trudy, 1961, t.64, Problemy chetvertichnogo . . . , p.97-101.) Text in Russian. **Title tr.:** On the paleogeography of the Quaternary period in the periglacial area of the West Siberian plain.

Reports the main paleogeographic features of this area on the southern border of the Pleistocene ice sheets. Frozen ground, ice wedges, cryoturbation, changes of river-flow direction during the Samarovo, Taz and Zyryanka glaciations in the Ob, Yenisey, Poluy and other river areas are briefly summarized. The extent of the periglacial zone is discussed. (DLC.)

72652. KAPLIN, ALEKSEĬ ALEKSEEVICH. Sovetskie mekha, prekrasnyĭ tovar. (Okhota i okhotnich'e khoziaĭstvo, Jan. 1962. god 8, no.1, p.17-19. illus.) Text in Russian. **Title tr.:** Soviet furs are excellent merchandise.

Reports results of the 32d International Fur Auction in Leningrad, with 205 buyers from 24 countries present, including 52 from England. The entire stock of 822,000 squirrel skins, the best from the northern Pechora basin and Yakutia was sold out. The range of prices for sable, mink, muskrat, etc. is noted. (DLC.)

72653. KAPLIN, PAVEL ALEKSEEVICH. Fiordovye poberezh'ia Sovetskogo Soiuza. Moskva, Izdvo Akademii nauk SSSR, 1962. 188 p. illus., maps, diagrs. (Akademiia nauk SSSR. Institut okeanologii.) Approx. 350 refs. Text in Russian. **Title tr.:** Fiord coasts of the Soviet Union.

Reports results of a five-year geomorphic investigation in the Chukotskiy Peninsula, Koryak upland, eastern Kamchatka, Novaya Zemlya and Kola Peninsula. The first part (p.6-56) deals with morphologic features of fiords, their formation factors and origin. Tectonic forces, water and glacier erosion and transgressions of seas are analyzed in relation to their formation. Properties of rocks of fiord areas, and elevation of ocean level in the post-glacial period are considered important conditions for present fiord development. In the second part, the fiord areas are treated in turn. Chukotka, the Koryak Range, Kamchatka Peninsula, Kola Peninsula, Novaya Zemlya, Franz Joseph Land, and Severnaya Zemlya, and their fiords are described in detail noting geologic-geomorphic conditions for fiord development, morphologic features of fiords, their origin, etc. General features of the USSR fiords are summarized; and the evolution of the shore line in fiord areas is outlined. (DLC.)

KAPLIN, PAVEL ALEKSEEVICH, *see also*

Budanov, V.I., & *others.* O priznakakh . . . moreĭ. 1961. No. 70431

Budanov, V.I., & *others.* Present-day vertical movements . . . 1961. No. 70432

Ionin, A.S., & *others.* Karta . . . 1961. No. 72403

72654. KAPLIUK, L. F. Kachestvennyĭ sostav gumusa pochv obskoĭ lesotundry i ego izmeneniia pod vliianiem okul'turivaniia. (Pochvovedenie, 1962, no.5, p.51-61, tables.) 17 refs. Text in Russian. Summary in English. **Title tr.:** Qualitative composition of humus in the Ob forest-tundra soils and its changes under cultivation.

Reports on his 1954-1956 study of gleyed, slightly podsolic, and alluvial turfy soils in the Salekhard region (66°32'N.). These soils are characterized by rather small reserves of humus and nitrogen. The carbon-nitrogen ratio is higher in the upper horizons, and much lower in the lower horizons. The humus has high solubility. Fulvic acids predominate over humic acids. Cultivation and application of organic and mineral fertilizers cause changes in the humus content and its composition. Nitrogen increases and fulvic acid decreases. (DLC.)

72655. KAPLIUK, L. F. Ostatochno-poĭmennye dernovye pochvy obskoĭ lesotundry. (Pochvovedenie, 1962, no.11, p.34-44, tables, text map.) 10 refs. Text in Russian. Summary in English. **Title tr.:** The residual alluvial turfy soils of the Ob forest-tundra.

Reports study in the valley of the Palyapta River tributary to the Poluy, near Salekhard, where these soils are not widely distributed but only found on the river terraces above the floodplain. They are characterized by a thick (20-40 cm.) humus horizon, a large amount of humus, nitrogen, phosphorus, and sometimes iron and manganese. These soils have high potential fertility but are poor in nutrient elements. In the first year, of cultivation, it is possible to obtain a good harvest by using only mineral fertilizer. (DLC.)

72656. KAPP, HANS E. A petrographic comparison of a Tertiary alkaline igneous complex in northeastern Greenland with the Monteregian hills of eastern Canada. (Canadian mineralogist, 1961. v.6, pt. 5, p.582-94, map, graphs.) 9 refs.

Describes the general geology and petrology of the 50-mile belt of late Cretaceous to Tertiary intrusive rocks, located near 72°N. 24°W., and compares some aspects of this complex with hills near Montreal. The magma intruded a sequence of flat-lying, unmetamorphosed, arenaceous sediments ranging from Carboniferous to late Cretaceous in age, with very small contact effects. Pneumatolytic-hydrothermal alteration of both intrusive and sedimentary rocks and deposition of sulfides and oxides are conspicuous throughout. Some economic deposits were found. Close relation of the Greenland and Monteregian complexes is shown by their alkaline character, mineralogical paragenesis, trend of differentation, age sequence, and other features. Results of field study near Pictet Bjerge in 1957-1959, as part of the Danish East-Greenland Expedition led by Lauge Koch. (DLC.)

KAPUSTIN, IU. L., *see* Borodin, L.S., & IU. L. Kapustin. Berbankit . . . 1962. No. 70335

KARACZUN, KONSTANTY, *see* Kowalczuk, J., & K. Karaczun . . . elements of earth's magnetism . . . 1961. No. 73052

KARAKHANOVA, M. I., *see* Volkov, V.P., & *others.* Petrokhimicheskie osobennosti . . . 1961. No.76422

72657. KARASEV, N. Konferent͡siia pisateleĭ-severiān. (Ogonëk, Apr. 1961. god 39, no.14, p.1, illus.) Text in Russian. **Title tr.:** The Northern Writers Conference.

Reports the conference in Komarovo, Mar. 1961 attended by 31 writers from the small nations of the North, including the Chukchi IU.S. Rytkhėu, the Nanaets (Gold) G. Khodzher, the Samoyed (Nenets) I. Istomin, the Ostyak I. Shul'gin, the Tungus I. Ydygir, and others. (DLC.)

72658. KARASEV, V. M. Primenenie plastmass na atomnom ledokole "Lenin." (Sudostroenie, 1961. god 27, no.8, p.58-60, illus.) Text in Russian. **Title tr.:** The use of plastics on the icebreaker *Lenin.*

Notes extensive use of plastics for floor and and wall coverings, etc. A high-frequency electric welding machine generating heat up to 230-240°C. bonded the 3 mm.-thick polyvinyl-chloride plastic sheets used on the bridges, engine rooms, service areas, etc. Special electrodes were used to seal seams, affix fasteners, etc. to protective machine-jackets made of the same plastic but only 0.3-0.6 mm. thick. (DLC.)

KARASIK, A. M., *see* Demenit͡skaia, R.M., & *others.* Itogi . . . zemnoĭ kory v T͡Sentral'noĭ Arktike . . . 1962. No. 70949

72659. KARAVAEV, MIKHAIL NIKOLAEVICH, 1903– . Po stepiām r. Indigirki. (Moskovskoe obshchestvo ispytateleĭ prirody. Biūlleten' 1961. n. ser. t.66, otdel geologicheskiĭ, t.36, vyp.6, p.123-24.) Text in Russian. **Title tr.:** Along the Indigirka steppes.

Summarizes a 1960 botanical study of the steppe zone, in the upper Indigirka basin and not more than 700 m. above sea level. The flora consists of about a hundred higher plants, and some of the more characteristic species are cited. (DLC.)

KARAVAEV, MIKHAIL NIKOLAEVICH, 1903– *see also* IUrt͡sev, B.A., & M.N. Karavaev. Novyĭ ostrolodochnik . . . 1961. No. 72449

KARDOPOL'T͡SEVA, O. I., *see*

Plotnikova, M.I., & *others.* . . . . o metodike kartirovaniia terras . . . 1962. No. 74828

Plotnikova, M.I., & *others.* Rezul'taty litologicheskikh issledovaniĭ . . . 1960. No. 74830

72660. KAREV, G. I., *and* **V. P. KOCHEVYKH.** O soderzhanii askorbinovoĭ kisloty v kormovykh lishainikakh tundry. (Botanicheskiĭ zhurnal, Nov. 1962. t.47, no.11, p.1686-88, tables.) 5 refs. Text in Russian. **Title tr.:** Ascorbic acid content in fodder lichens of the tundra.

Reports on determinations in 20 species of lichens from the forest tundra and tundra of European Russia. Dependence of content on environmental factors and on the protein content is noted. (DLC.)

72661. KARI, LAURI E. Fungi exsiccati fennici, Institutio Botanica Universitatis Turkuensis. Turku, 1957. 195 p. text map. (Turku, formerly Åbo, Finland. Yliopisto. Julkaisuja, sarja A2, biologica-geographica, osa 23.) Text in Latin. **Title tr.:** Fungi exsiccatae of Finland; Botanical Institute, University of Turku (Åbo).

Presents a catalog of some five hundred fungi in the herbarium collections at the Institute. Host plant, literature references, date and location of the find, and scientific name are given. Indexes to the fungi and the host plants are appended. More than a score of the finds are from arctic areas of Finland. (DLC.)

KARĪAGINA, Z. V., *see* Idliz, G.M., & Z.V. Karīagina. O kometnoĭ prirode Tungusskogo meteorita. 1961. No. 72329

72662. KARIMOVA, G. U. Nekotorye rezul'taty nablūdeniĭ za ozonom v Arktike v 1958 g. (Konferent͡siia po atmosfernomu ozonu, *Moskva,* 1959. Atmosfernyĭ ozon . . . doklady i rezolūt͡sii, *pub.* 1961. p.32-41, tables, map, graphs.) 2 refs. Text in Russian. Summary in English. **Title tr.:** Some results of observations of ozone in the Arctic.

Presents results of ozonometric observations made at Dikson Island, Kheysa Island in Franz Joseph Land, and the drifting station North Pole-6. Annual variation was found to be 44% at the drifting station, and 30% at Dikson. The ozone maximum was observed at about 80°N. (DLC.)

72663. KARKALIT͡SKIĬ, I. M. Mery profilaktiki chastichnogo D-gipovitaminoza u līūdeĭ, zhivushchikh v usloviiākh Arktiki v period polīarnoĭ nochi. (Voprosy pitaniia, 1962. t.21, no.1, p.45-48, illus., tables.) 2 refs. Text in Russian. Summary in English. **Title tr.:** Prophylactic measures against partial hypovitaminosis-D in arctic residents during the polar night.

Reports a study of 500 young subjects living 1-3 yrs. in the North. Alkaline phosphatase in their blood was elevated in proportion to the length of their arctic sojourn. Administration of vitamin D, alone or combined with UV irradiation, reduced alkaline phosphatase activity. This treatment is suggested for individuals in arctic areas, to prevent vitamin D deficiency. (DLC.)

KARLGREN, BERNHARD, *see* Ahlman, H.W., & B. Karlgren. In memoriam . . . No. 69519

72664. KARLOV, E. M. Kanin poluostrov dolzhen byt' oblesen. (Priroda, Dec. 1961. god 50, no.12, p.61, illus.) Text in Russian. **Title tr.:** Kanin Peninsula should be afforested.

Notes that forests (forest-tundra) reach to 66.6°N. on the Peninsula, and that climatic, soil and water conditions favor extension northward; recommends afforestation of the central part with fir. (DLC.)

KARLOV, E. M., *see also* Marchenko, A.I., & E.M. Karlov. Mineral'nyĭ obmen v elovykh lesakh . . . 1962. No. 73800

72665. KARLSSON, GUNNAR. Arbetsmarknadsåtgärder i skogsbruket. (Skogen, Mar. 3, 1961. årg. 48, nr.5, p.98-99.) Text in Swedish. **Title tr.:** Labor Market Directorate measures in forest work.

Describes efforts in Norrland to relieve unemployment among forest workers in the recession resulting from declining world prices of 1957-1959. Some 27,400 hectares of forest land, both privately and company owned, were cleared in 1958-1960, and 500 unemployed were still engaged in the project in 1959; 400 km. of roads and several bridges were built on state-owned forest land.

The Labor Market Directorate provided the funds, the State Forest Service planned and supervised the work. The county's first regular forest school was built in 1959-1960 at Tärendö, 67°10′N. 19°10′E., also financed (75%) by unemployment fund. (DA.)

KARLSSON, K. A., *see* Nordkvist, M., & K.A. Karlsson. Epizootiskt . . . 1962. No. 74375

72666. KARLSTROM, THOR NELS VINCENT, 1920– . The glacial history of Alaska: its bearing on paleoclimatic theory. (New York Academy of Sciences. Annals, Oct. 1961. v.95, art. 1, p.290-340, map, graphs, tables.) 108 refs. Paper resulting from a conference on Solar variations, climatic change, and related geophysical problems, New York, Jan. 24-28, 1961.

Reviews pertinent Alaskan data in relation to independently dated paleoclimatic evidence from other regions; discusses their relation to current paleoclimatic theories on the ice age. Alaskan data consist of regional synthesis of field observations on surficial deposits, especially mapping and radiocarbon-dating of glacial deposits in the Cook Inlet region. Author concludes that the pertinent Alaskan and collated paleoclimatic evidence is incompatible, both regionally and chronologically, with the geologic model required by the Ewing and Donn climatic theory. A harmonic or near-harmonic system of climatic cycles is suggested, with several wave lengths expressed in years as simple ratios of the glacial substage cycle, most ratios being in phase with the Pettersson tide-generating force cycle of about 1700 years. A theory of geometric variations of solar insolation and associated geophysical phenomena is favored over the "sunspot theory" of intrinsic solar activity, as the primary cause of past climatic oscillations. The latter activity may be subcyclical manifestations of the geometric variations. Several chronologies are compared graphically. (DLC.)

KARLSTROM, THOR NELS VINCENT, 1920– , *see also*

International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

Pacific Science Congress. 1961. No. 74619

KARMANOV, I. I., *see* Akademiia nauk SSSR. *Institut geografii.* Dal'nii Vostok . . . 1961. No. 69546

72667. KARO, HENRY ARNOLD, 1903– . The new *Surveyor.* (International hydrographic review, Jan. 1961. v.38, no.1, p.27-32, illus., 3 fold. diagrs.)

Describes the new U.S. Coast and Geodetic Survey vessel, 2,600 ton, 3,520 hp., especially designed and outfitted for survey and oceanographic work. She has a service speed of 15 knots, and a cruising range of 10,500 miles, useful in surveying the long coastline of the United States, including 34,000 miles in Alaska, besides carrying out photographic and oceanographic missions. Outboard, inboard and deck profiles are appended. (DN-HO.)

KARPACHEVSKIĬ, L. O., *see* Vznuzdaev, N.A., & L.O. Karpachevskiĭ. Kharakteristika . . . pochv Kozyrevskogo lesnichestva. 1961. No. 76458

72668. KARPEVICH, A. F. Akklimatizatsiia ryb i bespozvonochnykh. (Zoologicheskiĭ zhurnal, 1962. t.41, vyp. 7, p.969-85, tables.) 42 refs. Text in Russian. Summary in English. **Title tr.:** Acclimatization of fish and invertebrates.

Outlines past transportation efforts and achievements abroad and in Russia, including cold-water forms (salmon, trout) and crustaceans. Causes of failures are mapped: insufficient theoretical study of new environment(s) and other relevant factors; economic aspects are discussed. (DLC.)

72669. KARPEVICH, A. F., *and* **E. N. BOKOVA.** Peresadki ryb i vodnykh bespozvonochnykh, provedennye v SSSR v 1957-1959 gg. (Voprosy ikhtiologii, 1961. t.1, vyp. 3 (20), p.552-63, table.) 2 refs. Text in Russian. **Title tr.:** Transplantations of fishes and aquatic invertebrates carried out in the USSR in the years 1957-1959.

Reviews activities affecting 32 species of fish: over 100 million larvae and fry and 50,000 adults. Particulars are presented in tabular form, and according to species. Invertebrates transplanted are listed according to species. Origin and destination of transplanted material, season of transplantation, age of material, etc. are noted. (DLC.)

72670. KARPOV, GEORGIĬ VLADIMIROVICH. Issledovatel' zemli sibirskoĭ. Moskva, Geografgiz, 1961. 56 p. illus., map. Text in Russian. **Title tr.:** Explorer of Siberia.

Popular biography of P.A. Kropotkin, 19th century geographer, geologist, and explorer of eastern Siberia. His expeditions are described including that to the Olekma and Vitim River region. His theory on the extent of continental ice-age glaciation is noted, also the controversy as to the existence of a high latitude land mass, subsequently identified as Franz Joseph Land. (DLC.)

72671. KARPOVA, L. A., *and* **R. E. SVINUKHOVA.** Rezhim tsiklonicheskoĭ deiatel'nosti nad Beringovym morem. (Vladivostok. Dal'nevostochnyĭ nauchno-issledovatel'skiĭ gidrometeorologicheskiĭ institut. Trudy 1962. vyp. 14, p.88-95, tables, charts.) Ref. Text in Russian. **Title tr.:** The regime of cyclonic activity over the Bering Sea.

Reports data on the recurrence of various types of pressure fields over this sea and characterizes cyclonic activity from analyses of synoptic charts for 1955-1959. Recurrence of cyclones, their trajectories, speed of movement and other features are described. Their seasonal variation and distribution and depths are also characterized. (DLC.)

72672. KARPOVICH, V. Belyĭ medved', pod okhranoĭ. (Okhota i okhotnich'e khoziaĭstvo, June 1962. god 8, no.6, p.22-23.) Text in Russian. **Title tr.:** Polar bear is protected.

Discusses the stock, increasing in Franz Joseph Land, Vrangel Island, Uelen in Chukotka, but elsewhere declining due to depredations by hunters, polar station personnel, etc., despite protective regulation. Polar bear data are maintained by the Kandalaksha Preserve, of which the author is deputy director. (DLC.)

72673. KARPUKHIN, N. S. Zapretit' uslovno sploshnye rubki v lesakh Kamchatki. (Lesnoe khoziaĭstvo. Nov. 1961. god 14, no.11, p.83.) Text in Russian. **Title tr.:** Conditional clear cutting must be prohibited in the forests of Kamchatka.

Logging operations in the coniferous forests of the Kamchatka valley with this so-called conditional clear-cutting method leave a great amount

of standing or felled timber as waste. This increases the fire hazard and breeds forest pests. Clear cutting must be done and the non-commercial timber utilized for production of wood panels, etc. (DLC.)

72674. KARTASHEV, NIKOLAĬ NIKOLAEVICH, 1919– . Ptitsy Komandorskikh ostrovov i nekotorye predlozheniia po ratsional'nomu ikh ispol'zovaniiu. (Zoologicheskiĭ zhurnal, Sept. 1961. t.40, vyp.9, p.1395-1410, illus., tables.) 11 refs. Text in Russian. Summary in English. **Title tr.:** The birds of the Commander Islands and some proposals for a rational utilization of them.

Describes the numerical and species composition of this avifauna in summer. While the number of individuals is high, that of dominant forms is only two: *Uria lomvia* and *Fulmarus glacialis* making up over 60% of the population. Small size of the islands, isolation, lack of woods, etc. explain the prevalence of marine and shore birds. Proposals for regulating exploitation conclude the survey. An introductory outline of earlier studies is included. (DLC.)

72675. KARTASHOV, IZMAIL PAVLOVICH. Proiskhozhdenie ozera Krasnogo. (Akademiia nauk SSSR. Doklady, Jan. 1, 1962. t.142, no.1, p.156-58, map.) 4 refs. Text in Russian. **Title tr.:** The origin of Krasnoye Lake.

Presents a geologic map and outlines the geologic-geomorphic structure of this area in the lower Anadyr River plain. Structure of the friable deposits, relief forms, terrace development, contact with the Anadyr, and other features of the lake are described. It originated from Würm glaciers developed in the Pekul'ney Range; it is 476.4 km² in area, and considered a periglacial relict lake. (DLC.)

72676. KARTAVENKO, N. T. Griby, vyzyvaiushchie gnil' drevesiny kedra na Urale. (Akademiia nauk SSSR. Ural'skiĭ filial. Institut biologii. Trudy 1955. vyp.6, p.119-44, illus., tables.) 33 refs. Text in Russian. **Title tr.:** Fungi causing rot of the wood of the Siberian pine in the Urals.

Account of a three-year survey, including the Northern Ural. The rot-causing species are described in detail (vegetative and reproductive stages included) as well as damage caused to the trees. Distribution and extent of damages; effect of rot upon the value of timber and upon growth and fertility, as well as measures of combatting rot, are also discussed. (DLC.)

72677. KASAHARA, HIROSHI, 1919– . Fisheries resources of the North Pacific Ocean. Vancouver, B.C., Univ. of British Columbia, 1961. 135 p. illus. tables, maps. About 175 refs. (*Its*: H.R. MacMillan lectures in fisheries, 1960, pt.1, as delivered Jan.-Feb. 1960.)

Presents introductory chapters on such general aspects as oceanography, distribution of important commercial fish, and fishery production of the area. Salmon, herring, cod, pollock, flounders, and more southerly fish are treated in turn. Each species dealt with as to economic importance and yield; geographic and vertical distribution; migration; spawning and growth; food; fisheries, and its prospects. (DLC.)

72678. KASHEVAROVA, N. P. Ostrakody kontinental'noĭ fatsii kazanskogo iarusa vostochnogo sklona Srednego Timana i poluostrova Kanin. (Leningrad. Vsesoiuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp.179, Mikrofauna SSSR, sbornik 13, p.487-515, tables, plates.) 24 refs. Text in Russian. **Title tr.:** Ostracods of continental facies of the Kazanian stage in the eastern slope of the Middle Timan and Kanin Peninsula.

Outlines the stratigraphic distribution of ostracods in Upper Permian deposits in the Tsil'ma and Pizhma River basins, Middle Timan Range, Kanin Peninsula, and some other regions. Systematic description is given of 15 species, nine of them new, in fam. Darwinulidae, Permianidae, Cytheridae and Placideidae. (DLC.)

72679. KASHIK, O. I. Torgovlia v Vostochnoĭ Sibiri v XVII - nachale XVIII vv.; po dannym tamozhennykh knig Nerchinska, Irkutska, Ilimska. (*In*: Nauchnaia konferentsiia po istorii Sibiri i Dal'nego Vostoka. Voprosy istorii . . . *pub.* 1961, p.187-98.) Refs. Text in Russian. **Title tr.:** Trade in East Siberia in the 17th-early 18th centuries; according to customs register data of Nerchinsk, Irkutsk, Ilimsk.

Describes the fur trade of Siberia, including Yakutia: fur taxation (*iasak*), purchase and barter, trade routes via Yakutsk and the Lena River, resupply of trading posts and provisioning of the hinterland, trade relations with China, etc. (DLC.)

72680. KASHIRTSEV, ARKADIĬ SERGEEVICH. Geologicheskiĭ muzeĭ Instituta geologii IAkutskogo filiala SO AN SSSR. (Geologiia i geofizika, 1961, no.5, p.107-109, illus.) Text in Russian. **Title tr.:** The Geological Museum of the Geological Institute of the Yakut Branch of the Siberian Division of the Academy of Sciences of the USSR.

Notes establishment of this institute in 1959 with five departments planned: mineralogy and petrography, mineral resources, regional geology, historical geology, and paleontology. By 1961 the museum had assembled more than a couple of thousand specimens. (DLC.)

KASHIRTSEV, ARKADIĬ SERGEEVICH, *see also* Vikhert, A.V., *& others*. Geologicheskoe stroenie . . . 1961. No. 76386

72681. KASHKIN, N. I. O prisposobitel'nom znachenii sezonnykh migratsiĭ *Calanus finmarchicus* Gunnerus, 1770. (Zoologicheskiĭ zhurnal, Mar. 1962. t.41, vyp.3, p.342-57, illus., map.) Approx. 60 refs. Text in Russian. Summary in English. **Title tr.:** The adaptive value of seasonal migrations of *Calanus finmarchicus* Gunnerus, 1770.

Presents an analysis and discussion of the migration of this important planktonic crustacean, in arctic waters and the North Atlantic. The biological aspects of seasonal migrations were found to be linked to the currents. The range of the species is maintained by vertical seasonal migrations during which these crustaceans are carried by surface currents to the northeast in spring and summer, and by intermediate and deep currents to the southwest in the fall and winter. (DLC.)

72682. KASHKINA, A. A. Ikhtioplankton iugovostochnoĭ chasti Barentseva moria. (Akademiia nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp.4(8), p.97-133, illus., tables. maps.) Approx. 75 refs. Text in Russian.

Title tr.: The ichthyoplankton of the southeastern Barents Sea.

Reports on materials collected on three cruises of R/V *Professor Derīugin* in midsummers of 1958 and 1959, with aim to elucidate the reproduction and development of common local fishes. Some 18 species are dealt with, including cod, herring, flounder, capelin, plaice. Times and frequency of appearance, location, water temperature and salinity are considered, as well as size, and in some cases description of fish larvae, spawning season, etc. Differential diagnostic data are supplied for closely related species and zoogeographic aspects noted. (DLC.)

72683. KASHMENSKAIÂ, O. V. Chetvertichnye otlozheniia basseina r. Berelekh; verkhov'ia r. Kolymy. (*In*: Vsesoīūznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.144-46.) Text in Russian. **Title tr.**: Quaternary deposits in the Berelekh River basin, upper Kolyma.

Reports a study of alluvial and glacial deposits. On the Berelekh, 14 terraces are distinguished as belonging to four stratigraphic horizons: terraces I-VII, VIII, IX-XI, and XII-XIV. Spore-pollen analyses are made for each horizon and predominant vegetation reported. Morainic material is also described. Local glaciation and valley glaciers are recorded. (DLC.)

72684. KASK, JOHN LAURENCE, 1906– . Canada's freshwater fisheries prospects. (Canadian fisherman, June 1962. v.49, no.6, p.41-44, illus.)

Discusses prospects for commercial lake fishing, including a potential production of 20 million lbs./yr. in the Yukon and Northwest Territories, with nine million lbs. from Great Slave Lake and two million from Great Bear. Productivity of northern lakes, affected by latitude, geology, and stream drainage, is generally lower. Because of this and the slow growth rate of fish, some newly opened northern lakes are to close periodically for the fish stocks to recover. (DI.)

72685. KASK, JOHN LAURENCE, 1906– . The fisheries of the U.S.S.R., 1961. (Canada. Dept. of Fisheries. Trade news, Jan. 1962. v.14, no.7, p.6-11, illus.)

Deals with pre-Revolutionary and recent condition in sea fisheries, based on a five-week study trip. Planning and planning authorities, research, technical equipment and manpower are outlined. Fisheries schools and education, technical and research institutes (VNIRO, PINRO, etc.) are discussed. The fresh-water fisheries, fishing ports, and fishing seen by author are described. (DI.)

72686. KASTEN, FRITZ. Horizontal visual range in polar whiteout. Hanover, N.H., May 1962. iv, 5 p. (U.S. Army. Cold Regions Research and Engineering Laboratory, Special report 54.) 14 refs.

Summarizes in non-mathematical terms, research carried out at the Meteorologisch-Geophysikalisches Institut der Johannes Gutenberg-Universität, Mainz, West Germany, based on field measurements made in 1959 near Site 2 and Camp Tuto, Greenland. Visual range of a black object is greater than that of any brighter object and is independent of the visual ground albedo; objects of low or medium visual albedo are almost equivalent to black objects. Visual range of white objects depends mostly on the visual ground albedo; it tends to zero when the visual ground albedo is greater than 0.94 even in clear air. Results explain the optical conditions encountered in arctic or polar whiteout. Visual albedo, visual extinction coefficient, and visual range, as computed theoretically, are borne out by the Greenland measurements. (DWB.)

72687. KASTEN, FRITZ. Über die Sichtweite im polar whiteout. (Polarforschung, Bd. 5, 1960 *pub.* Nov. 1961. Jahrg. 30, Heft 1-2, p.41-44.) 12 refs. Text in German. **Title tr.**: On the visual range in polar whiteout.

Discusses the optical characteristics of whiteout and presents some quantitative statements concerning the visual range under such conditions (cf. No. 65599). (CaMAI.)

72688. KATAEV, E. F. Sel'skoe khoziaĭstvo Komi ASSR za 40 let. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Oct. 1961. god 4, no.10, p.12-15.) Text in Russian. **Title tr.**: The agriculture of Komi ASSR for the last 40 years.

Outlines the development of this industry since the founding of the republic in 1921: 28 state farms, 118 collectives and over 400 subsidiary farms have 100,000 hectares under cultivation, as compared with 29,400 hectares in 1913. Tractors and other modern equipment unknown in pre-Revolutionary time are used; cattle have increased from 86,800 head in 1913 to 117,400 in 1961; etc. Agriculture is not developing at the rate that industry and the population are however, and the agricultural resources of Komi should be more fully utilized. The collective and state farms and workers are cited. (DLC.)

72689. KATAJA, AIRI. The 1960 Kuusamo-Salla earthquake, II: macroseismic data. (Geophysica, 1961. v.7, no.3, General geophysics, p.179-89, tables, diagr., maps.) 5 refs.

Analyzes answers to some 300 questionnaires distributed by the Sodankylä Seismological Station following earthquakes on Feb. 2 and 20. Macroseisms were recorded over areas of 18,000 and 14,000 sq. km. respectively; in both cases the highest reported intensity was V. Epicenter of the first quake is traced to near 67°N. on the Russian side of the Russo-Finnish border, the second at 66.4°N. 28.6°E. Effect of ground conditions on wave propagation is discussed inconclusively. (CaMAI.)

72690. KATAJA, AIRI. Seismological notes: earthquakes felt in Finland. (Geophysica, 1961. v.7, no.3, General geophysics, p.194-95, map.)

Lists six earthquakes occurring Mar. 3, 1960 - Mar. 21, 1961 in the area 65.1°-67.4°N. Epicenters or place of observation are mapped. (CaMAI.)

72691. KATCHENKOV, S. M. Malye ėlementy v nizhnepaleozoĭskikh otlozheniiakh Vostochnoĭ Sibiri. (Leningrad. Vsesoīūznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1962. vyp.190, geologicheskiĭ sbornik no.7, p.463-72, tables, diagrs.) ? refs. Text in Russian. **Title tr.**: Small elements in the lower Paleozoic deposits of Eastern Siberia.

Reports quantitative determination of Sr, Ba, V, Cr, Mn, Ni, Ti, Fe, Cu, also in part Si, Al, and Na, in the Sinian, Cambrian, and Silurian deposits. Samples were collected in Sukhaya and Nizhnyaya

Tunguska River regions and the Zayarsk bore hole, and more than 350 were analyzed by spectrum analysis. Results are tabulated, diagrammed and compared. Sedimentation conditions and source of dispersal material are discussed. (DLC.)

72692. KATENIN, A. E. Endotrofnaia mikoriza u vidov lileĭnykh i liutikovykh v Arktike. (Botanicheskiĭ zhurnal, Sept. 1962. t.47, no.9, p.1273-82, illus., table.) About 50 refs. Text in Russian. Summary in English. **Title tr.:** Endotrophic mycorrhiza in plants of the lily and crowfoot families in the Arctic.

Mycorrhizae of phycomycetes were found in 12 out of 13 species examined in the vicinity of Vorkuta, but in *Ranunculus samojedorum* none was found. The mycorrhizae showed no differences from those of non-arctic plants, and in most cases appear to exist in symbiosis with the host plant. (DLC.)

72693. KATS, NIKOLAĬ IAKOVLEVICH, 1894– . O vypuklykh bolotakh poberezhiĭ moreĭ na zapadnykh granitsakh SSSR. (Moskovskoe obshchestvo ispytateleĭ prirody, otdel biologicheskiĭ. Biulleten' 1961. t.66, vyp. 2, p.44-64, tables, map.) 30 refs. Text in Russian. Summary in German. **Title tr.:** The high moors on the sea coasts on the western limits of the USSR.

Study of regional (climatic) types of coastal moors and their vegetation, including those on the White Sea, in the Arkhangel'sk district. Following description of these swamps, their types are discussed, including an Arkhangel'sk type. This type is characterized by a mass development of *Cladonia* and by dominance of subarctic and boreal forms. Changes in vegetation from north to south and west to east are also reviewed. (DLC.)

72694. KATZ, HANS RUDOLF, 1923– . Late Precambrian to Cambrian stratigraphy in East Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.299-328, illus., maps, section, table.) 35 refs.

Discusses stratigraphy of the thick succession of unmetamorphosed sedimentary rocks underlying the fossiliferous Lower Cambrian in the Caledonian fold belt of East Greenland. Subdivision is made into the late Precambrian Eleonore Bay group (four formations), and the Eocambrian Mörkebjerg formation. Throughout the sequence of the Eleonore Bay group, a typical mixed-shelf association represents the depositional product of a miogeosyncline. With the beginning of Eocambrian time, the geosyncline became smaller, and some marginal deposits were exposed to erosion. The area considered however, remained mainly sea-covered. Volcanic activity is indicated for Eocambrian time in East Greenland as well as in the comparable Hecla Hoek succession of Spitsbergen. Cold climatic conditions prevailed early in Eocambrian; rather rapid amelioration took place while the members of the Mörkebjerg formation were being deposited. A regional disconformity marks its apparent upper limit. The subsequent transgression of the Bastion formation brought with it ollenellid trilobites, the first fossils of the Lower Cambrian. (DLC.)

72695. KATZMAN, J. Changes in the diurnal hour of maximum of the cosmic-ray intensity. (Canadian journal of physics, Oct. 1961. v.39, no.10, p.1477-85, table, graphs.) 8 refs.

Analyzes data from the Canadian stations Ottawa, Churchill, and Resolute. There is strong evidence at Ottawa that the beginning of the 22-year cycle in the diurnal hour of maximum is repeating itself in the present sunspot polarity cycle. Results for Churchill are inconclusive and there is no indication of a 22-year cycle at Resolute. There is evidence, however, that the diurnal hour of maximum at Resolute changes with changes in K_p. (DLC.)

72696. KAUFMAN, ALVIN. Trends in Alaska's mineral industry. Washington, D.C., 1961. 43 p. map, graphs, tables. (U.S. Bureau of Mines. Information circular 8045.) Refs.

Reports status, problems, and potentialities: annual output is only $20 million due to difficult physical environment, the undeveloped economy, and low grade or insufficient reserves of known deposits. Successful mineral developments in similar areas elsewhere, Canada and Scandinavia, are described. Probable trends to 1980 in the Alaskan economic development, population growth, taxes, legislation, imports, and export outlets are discussed in relation to their possible effect on the mineral industry; and future consumption (1970 and 1980) is estimated by mineral. Resources are described in coal, natural gas, petroleum, mercury, and iron-bearing materials; prospects for new discoveries are promising. Oil and gas have the greatest potential for early development, followed by locally produced bricks and clays. Iron production on Prince of Wales Island for shipment to Japan is a possibility. Statistics on value of mineral production 1906-1960, mineral consumption 1955-1958, and exploration expenditures 1955-1959, also pertinent figures on the Alaskan economy were compiled by R. Robotham. (DGS.)

72697. KAVERIN, N. V dalekom Noril'ske. (Okhrana truda i sotsial'noe strakhovanie, Feb. 1962. god 5, no.2, p.12.) Text in Russian. **Title tr.:** In far-off Noril'sk.

Head doctor of the Noril'sk city Hospital and Polyclinic Association sketches prophylactic and other preventive medical measures introduced at the Noril'sk Mining Metallurgical Combine; regular check-ups, clinical observation of sickness-prone employees, dietetic therapy, lectures, etc. (DLC.)

72698. KAWAMURA, YOJIRO. Neuro-muscular organization of shivering. (*In:* Symposia on arctic biology and medicine 1960. Proceedings, 1; neural aspects of temperature regulation, *pub.* 1961. p.193-224, illus.) 17 refs.

Account of electromyographical analysis of shivering in limb, jaw and other head muscles of dogs at different rectal temperatures. The order of appearance of shivering in these muscles is recorded and the increased muscle tonus preceding shivering is identified. The effects of lung expansion, of proprioceptor activity, of acetylcholine or epinephrine are also determined. Appended, p.218-22, is discussion of the paper. (CaMAI.)

72699. KAYSER, CHARLES, 1899– . Réactions de l'homéotherme au stimulus froid. (France. Centre national de la Recherche scientifique. Colloques nationaux 1955, p.C5-C21, tables.) 84 refs. Text in

French. Title tr.: Reactions of the homeotherm to cold stimulus.

Reviews briefly manifestations of acclimatization, the nervous mechanism of thermoregulation and its peripheral receptors, diet and thermoregulation, hypothermia. The homeotherm in the cold, it is concluded, mobilizes all means of heat production to secure survival. The significance of thermoregulation and thermogenesis in making the homeotherm relatively independent of the ambient temperature is noted. The great plasticity of the mammalian organism is manifested in the capacity to survive the "apparent death" of hypothermia. (DLC.)

72700. KAZAKOV, IURII. Polnochnyĭ match. (Fizkul'tura i sport, Jan. 1961, god 31, no.1, p.38-39, illus.) Text in Russian. Title tr.: A midnight match.

A sports writer describes a mid-summer sea voyage on the *IUshar* from Arkhangel'sk to Mezen' and a night soccer match between crews of the *IUshar* and the *Kamenka*. The port and lumber mills of Mezen' are sketched. (DLC.)

KAZAKOVA, M. E., *see*

Gerasimovskiĭ, V.I., & M.E. Kazakova. Betalomonosovit. 1962. No. 71645

Semenov, E.I., & M.E. Kazakova. Ankilit . . . 1961. No. 75464

Tikhonenkova, R.P., & M.E. Kazakova. Vlasovit . . . 1961. No. 76145

72701. KAZANSKIĭ, IU. P., *and* **V. P. KAZARINOV.** Piatoe vsesoiuznoe litologicheskoe soveshchanie. (Geologiia i geofizika, 1961, no.10, p.129-30.) Text in Russian. Title tr.: The Fifth All-Union Lithological Conference.

Describes conference at Novosibirsk in June 1961, with more than 350 participants representing 95 organizations. Two main problems were considered: the methods for delineating various facies and drafting paleogeographic maps, and the sedimentary formations and distribution of mineral resources in West Siberia. (DLC.)

72702. KAZANSKIĭ, S. L. Opredelenie tolshchiny teploizoliatsii i sloia snezhnoĭ obvalovki ledianykh skladov. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Materialy k osnovam ucheniia o merzlykh zonakh zemnoĭ kory, 1961. vyp. 7, p.178-91, tables, graphs.) 7 refs. Text in Russian. Title tr.: Determining the thickness of thermal insulation and snow insulation of ice storehouses.

Presents formulas derived by the hydraulic analog method which permits calculation of the temperature field for any initial and boundary conditions and in which the thermal processes can be reproduced on a hydraulic integrator for practically any time interval. The air temperature and heat exchange through insulating layers of sawdust, ice, and snow were studied for Noril'sk, Magadan, Khanty-Mansiysk, Sverdlovsk, Moskva and Stalingrad; results are tabulated and graphed. The derived formulas are simple and convenient; they may be used in studying factors of heat exchange through the protective coverings and in planning the insulation of storehouses.—From CRREL. (DLC.)

72703. KAZANSKIĭ, V. I. O razmeshchenii verkhnemezozoĭskikh granitoidnykh intruzivov i ochertaniiakh rudonosnykh ploshchadeĭ v Tikhookeanskom rudnom poiase. (Geologiia rudnykh mestorozhdeniĭ, July-Aug. 1961, no.4, p.3-18, maps.) 55 refs. Text in Russian. Title tr.: On the distribution of upper Mesozoic granitoid intrusives and the outlines of ore-bearing areas in the Pacific ore belt.

Delineates the distribution plan of Mesozoic granitoid intrusions as exemplified in the Yana region of the Verkhoyansk-Chukotka folded province, and other regions. Their Mesozoic magmatism and metallogeny are discussed. The main tectonic structures of the Yana region are characterized and their role in metallogeny is interpreted. (DLC.)

KAZANTSEV, A. V., *see* Petukhov, P.Z., & *others*. Vliianie vzryvov . . . 1961. No. 74765

72704. KAZARINOV, VLADIMIR PANTELEĬMONOVICH, 1912– , *and* A. L. IANSHIN. Perspektivy poiskov fosforitov i kaliĭnykh solei v Sibiri i na Dal'nem Vostoke; informatsionnoe soobshchenie. (Geologiia i geofizika, 1961, no.10, p.16-27.) 21 refs. Text in Russian. Title tr.: The outlook for phosphorite and potash-salt prospecting in Siberia and the Soviet Far East, an information bulletin.

Reports work and conclusions of a conference on this problem, at Novosibirsk in June 1961. At present, between the Urals and the Pacific, there is no production nor any known deposits from which phosphate and potash fertilizer could be produced. Pertinent studies are reported. The Vilyuy syncline, the Nordvik and some other northern regions are cited as suitable for study. (DLC.)

72705. KAZARINOV, VLADIMIR PANTELEĬMONOVICH, 1912– . Problema boksitov Sibiri. (Geologiia i geofizika, 1962, no.10, p.42-52.) 14 refs. Text in Russian. Title tr.: The bauxite problem in Siberia.

Reviews the search for bauxites in various areas including the Yenisey Ridge and the Chadobets region near the mouth of the Podkamennaya Tunguska. Three types of structures are distinguished, with which bauxite deposits are connected. Suggestions are offered for further prospecting. (DLC.)

72706. KAZARINOV, VLADIMIR PANTELEĬMONOVICH, 1912– , *and others*. Vtoroe mezhvedomstvennoe soveshchanie po voprosam sostavleniia litologo-paleogeograficheskikh kart Sibiri. (Geologiia i geofizika, 1961, no.5, p.109-111.) Text in Russian. *Other authors:* S.P. Mikutskiĭ *and* M.M. Odintsov. Title tr.: The second interdepartmental conference on problems of compiling lithologic-paleogeographic maps of Siberia.

Reports the conference at Irkutsk in Feb. 1961, the 60 participants representing 17 organizations. Plans for preparing maps at 1:2,500,000 and other scales were discussed. Some of the papers presented are mentioned. (DLC.)

KAZARINOV, VLADIMIR PANTELEĬMONOVICH, 1912– , *see also* Gurova, T.I., & V.P. Kazarinov. Litologiia . . . 1962. No. 71923

72707. KEATINGE, W. R., *and* M. B. McILROY. Changes in arterial pressure, right atrial pressure and cardiac output during sudden exposure to cold. (Journal of physiology, Feb. 1962. v.160, no.2, p.23P-24P.) Ref.

Reports on the effects of a one-minute ice-water shower upon young volunteers. Mean arterial

and pulse pressures, heart rate and output, as well as differential pressure between right atrium and esophagus rose during the shower while forearm and hand volume fell sharply. (DLC.)

72708. KEATINGE, W. R. The effect of repeated daily exposure to cold and of improved physical fitness on the metabolic and vascular response to cold air. (Journal of physiology, July 1961. v.157, no.2, p.209-220, tables.) 30 refs.

Reports a study of young men exposed to air of 5-7°C. and of another group, given physical training in warm conditions. BMR did not change in either group, and no evidence of increased heat production in the cold, except by raised muscle tone and shivering, was found. Effects of repeated cold exposure, and of training, upon immediate metabolic response are also discussed. (DLC.)

72709. KEATINGE, W. R. The effect of work and clothing on the maintenance of the body temperature in water. (Quarterly journal of experimental physiology, Jan. 1961. v.46, no.1, p.69-82, tables.) 28 refs. *Summarized in:* Polar record, Jan. 1962. v.11, no.70, p.87.

Account of varied experiments with young naval rating immersed in water of 5° to 37.8°C. The effects on core temperatures of work or standstill, of hard or light work, of clothing or lack of it, of moving or of still water are evaluated and discussed, as are also effects of the subjects' fatness. (DNLM.)

72710. KEATINGE, W. R., *and* **M. EVANS.** The respiratory and cardiovascular response to immersion in cold and warm water. (Quarterly journal of experimental physiology, Jan. 1961. v.46, no.1, p.83-94, illus., tables.) 32 refs.

Account including the course of pulmonary ventilation, of end-tidal pCO_2, heart rate, and core temperature in 12 unclothed men immersed in water of 5°, 15°, and 25°C. The effects of repeated immersion (at 15°C.) and of clothing are also reported, and the significance of ventricular extrasystoles observed during cold immersion, discussed. (DNLM.)

72711. KEATINGE, W. R. The return of blood flow to fingers in ice-water after suppression by adrenaline or noradrenaline. (Journal of physiology, 1961. v.159, no.1, p.101-110, illus., tables.) 14 refs.

Fingers with adrenaline or noradrenaline introduced iontophoretically, showed a few minutes after immersion in ice-water, a high blood flow. Subsequently the flow became stabilized at a lower level. These results indicate that a major cause of cold-vasodilatation is loss or impairment of vascular response to constrictor hormones, at near-freezing point. (DLC.)

72712. KEELING, L. The organic terrain factor and its interpretation. (*In:* National Research Council of Canada . . . Proceedings of the Seventh Muskeg Research Conference . . . 1961. p.102-126, illus.)

Discusses main points (time, kind, circumstances) in planning operations in muskeg. Most cover classes and topographic features can be identified through interpretation of a photo mosaic on approx. 1 in: 0.5 mi. scale, and understanding of the five high-altitude air-form patterns of marbloid, stipploid, terrazzoid, reticuloid and dermatoid. Air photos are presented which depict the characteristics of each air-form pattern; an example of patterned ground near Fort Providence, Mackenzie District, is shown. Preliminary routes may be sketched out, and route analysis dictated for a 12-15 mi. route, within one working day, by the methods suggested. Air photo interpretation is an economical aid in selection of routes in organic terrain. (DLC.)

KEENER, R. B., *see* Gustafson, P.F., *& others.* Fission-product radioactivity . . . stratosphere. 1962. No. 71934

KEENLEYSIDE, MILES HUGH ALSTON, 1929– , *see* Kerswill, C.J., & M.H.S. Keenleyside. Can. salmon off Greenland. 1961. No. 72747

KEILING, R., *see* Gros, C.M., *& others.* Strahlenschutzwirkung der Kälte bei Fischen. 1959. No. 71874

KEINONEN, L. S., *see* International Conference on soil mechanics . . . 1961. No. 72383

72713. KEITHAHN, EDWARD LINNAEUS, 1900– . Chirikof, the foggy island. (Alaska sportsman, Apr. 1962. v. 28, no.4, p.16-17, +, illus., map.)

Discusses early white settlement on this island in the Gulf of Alaska, said to have been site of a penal colony in Russian times. (DI.)

72714. KEITHAHN, EDWARD LINNAEUS, 1900– , Heraldic screens of the Tlingits. (Alaska sportsman, Feb. 1962. v.28, no.2, p.16-19, +, illus.)

Describes the carved and painted screens made by these Southeast Alaska Indians who dwelt north of the range of red cedar required for totem poles. The screens, probably enlargements of decorative box panels, were produced mainly during 1830-1850; some of the designs are similar to those on Chilkat blankets. (DI.)

72715. KEITHAHN, EDWARD LINNAEUS, 1900– . Human hair in Tlingit art. (Alaska sportsman, May 1962. v.28, no.5, p.22-23, +, illus.)

Describes these Northwest Coast Indians' use of hair for decorating ceremonial objects, illus. by artifacts in the State Museum, Juneau; the hair obtained from relatives, rather than slaves or enemies, was supposed to have magic power, and to link the deceased with the ceremonial occasions. (DI.)

72716. KEITHAHN, EDWARD LINNAEUS, 1900– . Stone artifacts of Southeastern Alaska. (American antiquity, July 1962. v.28, no.1, p.66-77, illus.) 16 refs.

Discusses the probable use of some 25 stone artifact types: chopping and cutting tools, weapons, lamps, pipes, ornaments, etc. The implements originated mostly among the Tlingits and Haidas at least 175 years ago. Their function is interpreted on the basis of Indian tradition, needs of aboriginal industries, and experimental use of the tools. (DSI.)

KEITHAHN, EDWARD LINNAEUS, 1900– , *see also* Alaskan Science Conference 1960. 1961. No. 69643

KEITZ, EDWIN L., *see* Strom, G.H., & *others*. Scale model studies . . . snow drift. 1962. No. 75964

72717. KELDYSH, MSTISLAV VSEVOLODOVICH, 1911– . . XXII s"ezd Kommunisticheskoĭ partii Sovetskogo Soĭuza i zadachi Akademii nauk SSSR. (Akademiia nauk SSSR. Vestnik, Dec. 1961. god 31, no.12, p.7-34.) Text in Russian. Title tr.: The 22d Congress of the Communist Party of the Soviet Union and the functions of the Academy of Sciences of the USSR.

Reviews the drastic changes in the Academy's structure and scope according to directives of Apr. 12, 1961. The Academy had 241 institutions including 160 research institutes, and an overall staff of 23,771. Half of the institutions connected with industry and production were transferred to jurisdiction of the recently created State Committee for Coordination of Scientific Research Work and other agencies. Institutes of mining, metallurgy, power engineering, electromechanics, forestry, wood chemistry, soil sciences, etc., and all the branches of the Academy together with one-third of its personnel were affected. Twenty-seven scientific councils on problems of the structure and development of the earth, of physiology, of oceans, seas and utilization of their resources, and other fields were set up. This far-reaching reorganization is explained as a government effort to increase the importance of science throughout the country. (DLC.)

72718. KELEHER, J. J. Comparison of largest Great Slave Lake fish with North American records. (Canada. Fisheries Research Board. Journal, May 1961. v.18, no.3, p.417-21, table.) 23 refs.

Reports size and weight records for 11 of 25 species from catches in this lake and other sources. Only two of the records exceed those for North America. This indicates that maximal size is not obtained in unexploited, oligotrophic lakes. (DI.)

72719. KELLER, ABRAHAM SAMUEL, 1921– , *and others*. Geology of the Shaviovik and Sagavanirktok Rivers region, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1961. p.169-222, table, maps, diagrs., graphs, incl. fold. on plates 21-26 in pocket. (U.S. Geological Survey. Professional paper 303-D, Exploration of Naval Petroleum Reserve No.4, 1944-53, pt.3, areal geology). 15 refs. *Other authors:* R.H. Morris and R.L. Detterman.

Describes general physiography and glacial history of this uninhabited 3,200 sq. mi. area on the north slope of the Brooks Range; it was investigated in 1951-1952 by two six-man parties, in order to correlate the Mesozoic and late Paleozoic rocks in the Arctic Foothills province from the Itkillik River east to the Canning, and to determine the petroleum possibilities. Rocks of Mississippian to Tertiary age are present; the Triassic and older rocks probably had a northerly source; the younger rocks, a southerly source. One intrusive mass, a small mafic sill of undetermined age is known. Major deformation of the rocks occurred during a Late Jurassic - Early Cretaceous orogeny and during the Tertiary. Several rock units contain potential petroleum reservoir beds, including the Lisburne group, the Sadlerochit and Shublik formations, etc. Structurally and stratigraphically the part east of the Ivishak River appears slightly more promising. Map at scale 1:125,000 and sections supplement the text. (DGS.)

KELLER, GEORGE VERNON, 1927– , *see*

International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

Plouff, D., & *others*. Geophysical studies . . . T-3, 1958 to 1959. 1961. No. 74831

72720. KELLOGG, W. W. Chemical heating above the polar mesopause in winter. (Journal of meteorology, June 1961. v.18, no.3, p.373-81, graphs, table.) 41 refs.

Reports earlier predictions that the upper atmosphere, 70-100 km., at high latitudes is warmer in winter than in summer as verified during the IGY by direct temperature measurements with rockets at Fort Churchill. Caluclations based on radiative balance alone however, indicate that there should be a net loss of heat in the middle of this region of about 10^{-4} watts per g. of air, or a temperature decrease of about 10° per day. Author suggests that this heat loss can be compensated by a release of the energy of recombination of atomic oxygen, which may be carried downward from higher altitudes by large-scale subsidence. Explanation of high winter temperatures in terms of heating by auroral particles is ruled out. Some theoretical and observational needs for further study are noted, including synoptic rocket observations to at least 90 km. and to the polar region. —From author's abstract. (DLC.)

72721. KELLY, GEORGE F., *and others*. Racial comparison of redfish from the western North Atlantic and the Barents Sea. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.150, ICES/ICNAF Redfish Symposium, p.28-38, illus., tables, maps.) 4 refs. *Other authors:* A.M. Barker *and* G.M. Clarke.

A morphometric and meristic study of races of this fish, including material from the Labrador Sea, and southward. The data presented make it difficult to determine whether the forms of *Sebastes* studied "are genetically or environmentally controlled." About 140 fish from the Barents Sea were examined. (DI.)

KELLY, GEORGE R., *see* Strom, G.H., & *others*. Scale model studies . . . snow drift. 1962. No. 75964

72722. KELLY, MAURICE W. The wolf and the coyote. (Alaska sportsman, Oct. 1960. v.26, no.10, p.36-38, illus.) Alaska wildlife library no.5-6.

Describes the physical characteristics and habits of both, their distribution and control in Alaska. Wolf population is high despite a $50 bounty. They travel extensively, usually in packs of five-six, and in northern Alaska, close to caribou migrations. Coyotes probably appeared in Alaska during the 1898 gold rush, increased greatly until 1935, then began to decline for reasons unknown, vacating parts of their former range. They seem unable to occupy an area simultaneously with foxes. (DI.)

72723. KELLY, THOMAS E. Photogeology, a

quick, economical tool for oil hunters. (Oil and gas journal, Nov. 20, 1961. v.59, no.47, p.265, +, illus., maps, port.) 4 refs.

Suggests the value of photogeomorphology to exploration geology; providing five examples from the Cook Inlet basin of Alaska, a region of low relief, few rock outcrops, and heavy vegetation cover, not suited to ordinary photogeology. (DGS.)

KELLY, THOMAS E., *see also* Alaskan Science Conference 1960. 1961. No. 69643

KELSALL, JOHN P., *see* Harington, C.R., & *others*. Barren Ground grizzly . . . 1962. No. 72025

72724. KEMMERIKH, ALEKSEĬ OSKAROVICH. Gidrografiia Severnogo, Pripolîarnogo i Polîarnogo Urala. Moskva, Izd-vo Akademii nauk SSSR, 1961. 140 p. illus., tables, maps, graphs, diagrs. (Akademiia nauk SSSR. Institut geografii.) 84 refs. Text in Russian. **Title tr.**: Hydrography of the Northern, Subpolar and Polar Urals.

Based on the literature and author's field study during 1954-1959. Development, density and morphologic features of the river net are characterized. Rivers and lakes of this 324,000 km² are described, noting stream length, basin area, runoff, feeding of the rivers, ice-cover periods, and other features. Some thirty of the rivers are over 100 km. in length, among the larger are the Pechora, Severnaya Sos'va, Usa, Sos'va, Shchuch'ya, etc. The lakes number over 4250, of which 76% belong to the Polar Ural. The larger lakes are described in greater detail noting basic measurements, water temperature, chemical composition, and other data. Factors affecting river runoff are analyzed: precipitation, snowfall, evaporation, etc. Annual and monthly discharge are calculated for the larger rivers. Flooding and winter flow characteristics are described. (DLC.)

72725. KEMMERIKH, ALEKSEĬ OSKAROVICH. Samoe glubokoe ozero Urala. (Priroda, Apr. 1961. god 50, no.4, p.112, illus.) Text in Russian. **Title tr.**: The deepest lake in the Urals.

Describes Bol'shoye Shchuch'ye Ozero (67° 52′N. 66°17′E.) its dimensions, depth (to 136 m.), geology and physiography, bottom, water, etc. (DLC.)

72726. KEMMERIKH, ALEKSEĬ OSKAROVICH. Selevye pavodki na Polîarnom i Pripolîarnom Urale. (Meteorologiia i gidrologiia, Mar. 1961 . no.3, p.35-36.) Text in Russian. **Title tr.**: Mud-laden torrents in the Polar and Sub-Polar Urals.

Describes the mud freshets of recent years: one on a brook tributary to the Naroda River, 64° 20′N. 61°E., at the end of May 1954, started with a front wave 20 m. high bearing snow, pebbles, rubble, boulders up to 0.5 m. diam., and mud, with great velocity and roar. Another brook, tributary to the Gena-Khadatu River in the Shchuch'ya Basin, approx. 66°48′N. 68°22′E. in the Polar Ural on June 14, 1958, turned into a torrent with a 6 m. front wave; it was saturated with pebbles, crushed rock, mud, and boulders up to 0.3 m³ in volume. Another freshet is described which occurred on July 16, 1959, when the Naroda River, swollen by a cascade of rain, 60 mm. precipitated in six hours, turned into a torrent of water and stones which stripped the bark off nearby trees to a height of 1.5 m. Geographic and hydrological data of the 1958 freshet region are given. (DLC.)

72727. KEMMERIKH, ALEKSEĬ OSKAROVICH, *and* **L. S. TROITSKIĬ.** Sovremennoe oledenenie khr. Oche-Nyrd na Polîarnom Urale. (Issledovaniia lednikov i lednikovykh raĭonov, 1961. vyp.1, p.115-25, illus., diagrs., map.) 11 refs. Text in Russian. Summary in English. **Title tr.**: Contemporary glaciation in the Oche-Nyrd Range of the Polar Ural.

Describes seven glaciers in the region 68°-68°08′N., discovered by the senior author in 1957 and re-examined in 1958: Aleshkova, Bocha, Dolgushina, MGG, MIIGAIK, Terent'yeva, and Parus. (CaMAI.)

72728. KEMPTER, ENRICO. Die jungpaläozoischen Sedimente von Süd Scoresby Land, Ostgrönland, 71½°N., mit besonderer Berücksichtigung der kontinentalen Sedimente. København, 1961. 123 p. illus., tables, profiles, maps incl. 1 fold. (Meddelelser om Grønland, bd. 164, nr.1.) 49 refs. Text in German. Summary in English. **Title tr.**: The young Paleozoic sediments of south Scoresby Land, East Greenland, 71½°N., with particular consideration of the continental sediments.

Reports and maps at scale 1:100,000 the stratigraphy and structure of these sediments, investigated in 1956 and 1957 during the Danish Expedition to East Greenland under L. Koch. Conglomeratic arkoses of the Bjørnbos Corner and the Gurreholmsdal formations are overlain unconformably by marine deposits. The former formation, over a thousand meters thick and containing quartzite and granite pebbles, is probably of Carboniferous age and is separated from the other by an important fault. The Gurreholmsdal formation, two thousand meters thick and containing granite and gneiss, rests with a nonconformity on Caledonian gneisses. Spores from the lower third of this formation are consistent with a lower Permian age. The intense normal faulting and the horst and graben structure of the area probably result from a still active strong uplift tendency of the Staunings Alper crystalline on the west, and a stretching caused by subsidence of the sedimentary basin of Jameson Land to the east, with south Scoresby Land acting as a hinge zone.—From author's abstract. (DGS.)

KEMPTON, P., *see* Wells, V.L., & P. Kempton. *Amanita* Alaska. 1961. No. 76525

72729. KEMSIES, EMERSON. Subspeciation in the Smith's longspur, *Calcarius pictus*. (Canadian field-naturalist, July-Sept. 1961. v.75, no.3, p.143-49, illus.)

Reports 123 specimens examined during the breeding season, spring-summer 1959, from northern Ontario to north-central Alaska, also 117 migrant specimens. Evidence confirms the existence of three subspecies of *C. pictus*, one breeding in Alaska, one northwest of Churchill, and one in northern Ontario on the Hudson Bay coast. The subspecies are named and described; geographical distributions are given. (CaOGB.)

72730. KENDALL, G. R., *and* **A. G. PETRIE.** The frequency of thunderstorm days in Canada. Toronto, June 21, 1962. 17 p. maps, graph, tables. (Canada. Meteorological Branch. Circular CIR-3688, TEC-418.) 7 refs.

Maps and tabulates data of reports from principal Canadian weather stations during 1941-1960. Smallest number of thunderstorm days is recorded in the Arctic; at some stations, none, e.g. Alert, Eureka, Padloping Island. Snag in the Yukon, and Fort Smith in Mackenzie District have the most: 11.1 and 12.1 days a year respectively. (DWB.)

72731. **KENT, A. D.,** *and* **A. G. WILSON.** Arctic hut heating and ventilation trials. Ottawa, Jan. 1961. 20 l. illus., diagrs., graphs, tables. (National Research Council of Canada. Div. of Building Research. Research paper no.109, NRC No. 5996.)

Reports on a field study made at the Royal Canadian Engineers' Donjek River Camp in Yukon Territory, Oct. 1950-Apr. 1951. Records of outdoor and indoor temperature and relative humidity were kept, ventilation rate provided by a roof vent was estimated, and a heat balance was determined for each day. With severe weather of -50°F., the oil heating system provides comfortable quarters for up to 14 men. Little surface condensation or frosting is experienced, and heat losses are low. Electricity, where available, can be used to increase comfort and lower fuel consumption. (DLC.)

72732. **KENT, PERCY EDWARD,** *and* **W. A. C. RUSSELL.** Evaporite piercement structures in the northern Richardson Mountains. (*In*: International Symposium on Arctic Geology. Proceedings 1961. v.1, p.584-95, map, diagr., table.) 7 refs.

Describes two small areas of gypsum emplaced in Cretaceous rocks on the arctic slopes of these mountains. The main exposure nine mi. west of Aklavik crops out along the Donna River for about 300 yds. at 68°14′N. 135°27′W.; five miles north, a mile-long belt of gypsum outcrops is found. Both occurrences are interpreted as piercement domes of deep-seated origin, probably from a Cambrian horizon. Petrological studies and chemical analyses suggest that the diapir at depth may have been primarily of calcium sulphate. Extrusion mechanism may have been expansion on hydration of anhydrite to gypsum associated with hydrothermal activites. Appended (p.590-95) is *Petrographical examination of exotic rocks associated with the . . . diapirs,* by Rienk Lakeman: metasomatism observed is apparently due to basic or ultrabasic intrusions; the diapirism postdated the metasomatism. (DLC.)

KENWAY, R. W., *see* Iron Ore Co. Mining op. Carol Project. 1962. No. 72406

72733. **KENYON, J. R.** Experimental deep hypothermia. (British medical bulletin, Jan. 1961. v.17, no.1, p.43-47, illus., tables.) 27 refs.

Following a brief review of experiments in cooling and cooling methods since 1766, author describes perfusion hypothermia with the pump oxygenator; temperature gradients in the body; condition of the heart, vascular system and brain; metabolism; blood coagulation. Experiments conducted and reported by author are on dogs, and with emphasis on circulatory arrest. (DNLM.)

72734. **KENYON, KARL WALTON, 1918–** , *and* **D. W. RICE.** Abundance and distribution of the Steller sea lion. (Journal of mammalogy, May 1961. v.42, no.2, p.223-34, illus., tables, map.) 17 refs.

Describes conditions including the Aleutians and the eastern Bering Sea. Hauling out takes place in winter and spring prior to breeding, mostly in nice weather. The Pribilof Islands are the northernmost breeding grounds, though some animals migrate as far as Bering Strait. In 1958 and 1959, 98 rookeries and hauling grounds, with an estimated population of 100,000, were counted. The world population is estimated at 250,000. (DLC.)

72735. **KENYON, KARL WALTON, 1918–** , *and* **J. W. BROOKS.** Birds of Little Diomede Island, Alaska. (Condor, 1960. v.62, no.6, p.457-63, illus., tables.)

Reports observations made for the first time, in spring, with 40 species listed, 13 of them breeding on the island. Magnitude of breeding populations (extremes: 50 to 1,000,000), and arrival date records, are followed by notes on species seen, where and when, also flight directions, food, breeding, etc. (DLC.)

72736. **KENYON, KARL WALTON, 1918–** . Cuvier beaked whales stranded in the Aleutian Islands. (Journal of mammalogy, Feb. 1961. v.42, no.1, p.71-76, illus., tables.) 9 refs.

Describes two specimens of this widely distributed but not common species, from Amchitka beaches. Body measurements and weight of organs, tooth structure and age, stomach contents, condition of ovaries, etc. are also considered. Rifle fire was apparently the cause of death of the two animals. (DLC.)

72737. **KENYON, KARL WALTON, 1918–** . History of the Steller sea lion at the Pribilof Islands, Alaska. (Journal of mammalogy, Feb. 1962. v.43, no.1, p.68-75, illus., tables, maps.) 10 refs.

Traces the population size since 1786 till its near extinction in 1914, and subsequent recovery thanks to protection. Rookeries past and present, and causes of changes among them are also dealt with. (DLC.)

72738. **KENYON, KARL WALTON, 1918–** . The Pacific walrus. (Oryx, Nov. 1960. v.5, no.6, p.332-40, illus.) 8 refs.

Reports a summer 1958 inquiry into hunting and utilization of walrus by Eskimos in the Bering Sea region, the field studies carried out by biologists of the U.S. Dept. of Health, Education, and Welfare, and the Alaska Dept. of Fish and Game on St. Lawrence, Little Diomede, and Round Islands, with an aerial counter on the northern Bering Sea ice. Many Eskimos of the islands and coast depend upon the walrus, and 1100 are taken annually; the hunting on Little Diomede is described. The high value of the ivory fosters excessive exploitation however, and carcasses of about half the walruses killed are not used. Though not in immediate danger of extermination, the Pacific walrus population is declining, and conservation education among the Eskimos is required. The new State of Alaska regulations may keep the take within safe limits, if enforced. In 1960, the Walrus Islands in northeast Bristol Bay, the only regular summer hauling grounds in U.S. territory, was set aside as a walrus refuge. The natural history and physical aspects of the mammal are described. (CaONM.)

72739. **KENYON, KARL WALTON, 1918–** . The sea otter in Alaska. (Alaska sportsman, Feb.

1961. v.27, no.2, p.16-18, illus., map.) Alaska wildlife library no.10.

Describes the appearance of this valuable fur-bearer, its distribution, food habits, and care of young. Over-exploited almost to extinction prior to protection by international treaty in 1911, the herds now 20,000 - 30,000 range mostly between Adak and Kiska Islands in the Aleutians; large stretches of their former range, including the Pribilof Islands, have not been repopulated. Transplants are difficult, due to physiological structure, but experiments in method by the U.S. Fish and Wildlife Service continue. (DI.)

72740. KENYON, KARL WALTON, 1918– . Sleep on the deep. (Pacific discovery, May-June 1961. v.14, no.3, p.22-24, illus.)

Describes and illustrates sleeping positions, afloat on the water, of the Alaska fur seal and sea otter. Buoyancy derives from a blanket of air enclosed in fur. In the seal, flippers protect the nose from the water. (DGS.)

72741. KENYON, W. A. Old Fort Albany relics. (Beaver, summer 1961. outfit 292, p.21-23, illus.)

Describes archeological investigations in 1960 on a south branch of the Albany River in northern Ontario, near James Bay. The site marks the location of a fort, probably the second Fort Albany, occupied approx. 1688–1721. Its construction and objects found are noted. Complete excavation is planned. (DI.)

KEPPLER, E., *see* Pfotzer, G., *& others*. . . . X-ray bursts in the auroral zone. 1962. No. 74771

72742. KERBLAĬ, T. S. Zakonomernosti Es i ikh ispol'zovanie v radioprognozirovanii. (Akademiīa nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniīa radiovoln. Trudy 1961. vyp.19 (29), p.96-112, graphs, tables, map.) 16 refs. Text in Russian. **Title tr.:** The Es regularities and their utilization in radio-reception forecast.

Discusses the properties and characteristics of the sporadic ionospheric layer Es, as it affects radio reflection and MPCh prediction. The irregularity of occurrence in time and space, semi-transparency, dependence of Es-MPCh on the technical parameters of sonds used, different types of Es, such as reflection layer by diffusion, or by reflection from gradients, etc. The daily and seasonal variations in the limiting frequency, *fo*, of Es, and geographical distribution of the latter; the types of Es for the polar and auroral zones, and middle and equatorial latitudes are discussed. Data from the North Pole-6 drifting station, Murmansk, Bukhta Tikhaya, Churchill and Fairbanks are used. The defects in the method of Es-MPCh prognosis and the ways for their correction are given in conclusion. (DLC.)

72743. KERN, J. W. Solar-stream distortion of the geomagnetic field as a mechanism for producing polar auroras and electrojets. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962. v.I, p.165-68.) 14 refs.

Describes a mechanism for charge separation in the geomagnetically trapped corpuscular radiation of the sun. Charge separation may be due to the opposite direction of adiabatic drift for protons and electrons. The excess of electrons or protons escaping trap into the upper atmosphere, gives rise to electric fields which may account for some observed phenomena associated with the polar aurora and the electrojet current system. (DLC.)

72744. KERN, J. W., *and* **E. H. VESTINE.** Theory of auroral morphology. (Journal of geophysical research, Mar. 1961. v.66, no.3, p.713-23, diagrs.) 38 refs.

Develops a new theory based on the production of instabilities in electron sheets. It predicts longer duration of homogeneous auroral arcs in early evening, shorter during morning hours. Observed transitions from glow to homogeneous arcs to ray arcs and draperies are also predicted. One feature is the lowering of mirror points accompanying development of brighter features of a display. The theory is also effective in explaining horizontal and vertical luminous wave-progressions found in flaming aurora. –From authors' abstract. (DLC.)

KERNER, ROBERT T., *see* Okun', S.B. Rossiĭsko-Amerikanskaīa kompaniīa. 1939, 1951. No. 74505

KERNS, WILLIAM H., *see* Thomas, B.I. *& others*. Placer mining Alaska, methods costs. 1959. No. 76114

72745. KERR, ARNOLD D. Settlement and tilting of footings on a viscous foundation. Hanover, N.H., Mar. 1962. iv, 12 p. diagrs., graphs. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Research report 81.) 6 refs.

The concept of the Pasternak foundation, consisting of the Winkler foundation with shear interactions, is extended to the case of visco-elastic deformation, and the behavior of the foundation subjected to different types of load is studied as a function of time. The differential equation for vertical surface displacements due to creep is formulated, and solutions for several loading cases are worked out. A viscosity parameter related to the shear deformations and a visco-compressibility parameter of the vertical foundation elements are considered. A procedure to determine these parameters is suggested, and application of the analysis to the creep behavior of snow foundations is discussed. –From CRREL. (CaMAI.)

72746. KERR, J. W., *and* **H. P. TRETTIN.** Mississippian rocks and the mid-Palaeozoic earth-movements in the Canadian arctic archipelago. (Alberta Society of Petroleum Geologists. Journal, May 1962. v.10, no.5, p.247-56, illus., map.) 33 refs.

Discusses stratigraphic and structural geology of the Queen Elizabeth Islands and Ellesmere, specifically the two structural provinces of the Franklinian geosyncline and the Sverdrup Basin. Plant fossils collected by the senior author from Axel Heiberg and Ellesmere Islands were identified as early Upper Mississippian, though rocks of Mississippian age have been unknown in the Canadian Arctic Islands. In this area, the Sverdrup Basin strata rest with pronounced angular unconformity on the Franklinian geosyncline; the oldest strata hitherto were considered Middle Pennsylvanian, but these new fossils indicate that the Mid-Paleozoic orogeny of the Franklinian eugeosyncline took place between Early or Middle Devonian and Late Mississippian times, probably reaching its climax in the Late Devonian. Deformation of the Franklinian miogeosyncline took place somewhat later, perhaps in latest Devonian

or early Mississippian. Relation of this orogenic activity to deformations in northern Yukon Territory, northern Greenland, and a phase of the Caledonian diastrophism in Spitsbergen, is discussed. (DGS.)

72747. **KERSWILL, C. J.,** *and* **M. H. A. KEENLEYSIDE.** Canadian salmon caught off Greenland. (Nature, Oct. 21, 1961. v.192, no.4799, p.279.) 3 refs.

Records capture on Oct. 10, 1960, south of Sukkertoppen of a fish 71 cm. long tagged May 22, 1959 as a smolt of 17.5 cm. in the Miramichi River, New Brunswick. This represents a record in migration (1,500 miles) for Canadian Atlantic salmon. (DLC.)

72748. **KERT, GEORGIĬ MARTYNOVICH.** Imennaia i glagol'naia osnovy v kil'dinskom dialekte saamskogo iazyka. (*In:* Akademiia nauk SSSR. Institut iazykoznaniia. Voprosy finno-ugorskogo . . . 1962, p.143-53.) 7 refs. Text in Russian. **Title tr.:** Nominal and verbal stems in the Kil'din dialect of Lappish.

Comparative morphological and etymological study of word stems in this dialect spoken on and around the Kil'din Island off northwest Kola Peninsula. (DLC.)

72749. **KERT, GEORGIĬ MARTYNOVICH,** *and* **M. I. MATUSEVICH.** K voprosu o sostave soglasnykh fonem v voron'inskom govore kil'dinskogo dialekta saamskogo iazyka. (Leningrad. Universitet. Uchenye zapiski 1962. no.314, seriia filologicheskikh nauk vyp.63, Finno-ugorskaia filologiia, p.19-37, diagrs., fold. table.) Refs. in text. Text in Russian. **Title tr.:** Structure of consonant phones in the Voron'ye speech of the Kildin Lappish dialect.

Phonetic analysis of a Lappish patois spoken at Voron'ye (68°27′N. 35°21′E.): occlusives, fricatives, affricates, and sonants. (DLC.)

72750. **KERT, GEORGIĬ MARTYNOVICH.** Obraztsy saamskoĭ rechi; materialy po iazyku i fol'kloru saamov Kol'skogo poluostrova: kil'dinskiĭ i iokan'gskiĭ dialekty. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 216 p. 20 refs. Text in Russian. **Title tr.:** Samples of Lappish speech; materials on the language and folklore of Kola Peninsula Lapps: Kil'din and Iokanga dialects.

Presents 54 contemporary texts and traditional folk-tales in phonetic transliteration and in Russian translation. The phonetic characteristics of the two dialects and their idioms as spoken at Lovozero, Umbozero, Voron'ye, Teriberka (Kildin dialect) and at Chalmny-Varre and Iokanga (Iokanga dialect) are discussed and a glossary of some 20 local words is appended. The linguistic samples were recorded in 1955–1960 by several dialect parties headed by the author, from the Institute of Language, Literature and History of the Academy of Sciences' Karelian Branch. (DLC.)

72751. **KESSEL, BRINA.** Additional distribution records of some birds in interior Alaska. (Condor, 1960. v.62, no.6, p.481-83.)

New records of ten species with notes on earlier records, breeding and young, food, plumage, etc. (DLC.)

KESSLER, E., *see*

Decaud, J., & E. Kessler. Étude du débit sanguin . . . 1961. No. 70928

Decaud, J., & E. Kessler. Réactions vasomotrices . . . 1961. No. 70929

72752. **KESSLER, HELMUT,** *and others.* Vergleichende thermo-elektrische Messungen von Organ-, Blut- und Gewebstemperaturen bei Hypothermie durch Oberflächen und Blutstromkühlung. (Archiv für klinische Chirurgie, 1959. Bd. 293, Heft 2, p.111-19, illus.) 21 refs. Text in German. *Other authors:* H. Keyssler *and* R. Parhofer. **Title tr.:** Comparative thermo-electric measurements of organ, blood, and tissue temperatures, during hypothermia induced by surface and circulation cooling.

Comparative study of cooling as produced by the two methods in dogs. Temperature of diverse organs was found to depend primarily on the heat transport of the blood: the better the circulation, the quicker the adaptation to blood temperature. The merits of the methods for surgery are considered. (DNLM.)

KETTELKAMP, D. B., *see* Mills, W.J., & D.B. Kettelkamp. Kuskokwim medicine . . . 1961. No. 74031

KEYSSLER, H., *see*

Kessler, H., & *others.* Vergleichende thermo-elektrische Messungen . . . 1959. No. 72752

Pichlmaier, H., & *others.* Experimentelle Untersuchungen . . . Unterkühlung. 1961. No. 74790

KHAIN, V. E., *see* Bogatskiĭ, V.V., & *others.* Osnovnye problemy tektoniki . . . 1962. No. 70281

72753. **KHAĬTSER, L. L.** Novye dannye po stratigrafii permi i triasa r. Adz'vy; severnaia chast' grīady Chernysheva. (Moskovskoe obshchestvo ispytateleĭ prirody. Biulleten', nov. ser. t.67, otdel geologicheskiĭ, Jan.-Feb. 1962. t.37, vyp.1, p.57-71, diagrs.) 14 refs. Text in Russian. Summary in English. **Title tr.:** New data on the stratigraphy of Permian and Triassic deposits in the Adz'va River area, northern part of the Chernysheva Ridge.

Reports from paleontologic data the Permian deposits of this area subdivided into the following stratigraphic units: Sakmarian and Artinskian stages, Vorkuta coal-bearing series (Kungurian stage) and Pechora coal-bearing series (Kazanian-Tartarian? stage). The Vorkuta series subsequently is divided into two and the Pechora series into several strata. Triassic deposits are described for the first time. Outcrops of basaltic rocks also are described. (DLC.)

72754. **KHAĬTSER, L. L.** O fatsiiakh peschanykh i galechnykh otlozheniĭ uglenosnoĭ tolshchi Pechorskogo basseina. (Akademiia nauk SSSR. Doklady, Dec. 1, 1962. t.147, no.4, p.912-15, diagrs.) 7 refs. Text in Russian. **Title tr.:** Facies of sandy and pebbled deposits of the coal-bearing stratum of the Pechora basin.

Three facies-lithologic groups are distinguished among the sandstones: those with signs of marine origin and with horizontal-wave like bedding; sandstones without signs of marine origin and with various types of cross bedding; those with horizontal bedding and with signs of agitation ripples. Conglomerates of the coal-bearing stratum also were studied and their facies are analyzed. The wide distribution of delta facies of sandy and pebbled deposits is noted. (DLC.)

72755. **KHAĬTSER, L. L.,** *and others.* O pervichnoĭ okraske peschanykh osadkov nizhnego triasa Pechorskogo ugol'nogo basseĭna. (Akademiia nauk SSSR. Doklady, Mar. 11, 1962. t.143, no. 2, p.417-19, illus.) 3 refs. Text in Russian. *Other authors:* L.N. Ivanova *and* F.I. Entsova. **Title tr.:** On the primary color of arenaceous sediments of the Lower Triassic in the Pechora coal basin.

Reports a petrographic study of reddish-brown concretions in the Kheyyakha basin of southeastern Pay-Khoy and on the Bol'shaya Synya, tributary to the Usa. Petrographic composition, cementation and diagenesis of sandstones and concretions are described. Conservation of the primary reddish-brown color of the arenaceous rocks is noted. (DLC.)

72756. **KHAĬTSER, L. L.** Triasovye otlozheniia basseĭna r. Khei-IAgi na iugo-zapadnom sklone Paĭ-Khoia. (Materialy po geologii i poleznym iskopaemym Severo-Vostoka Evropeĭskoĭ chasti SSSR. Sbornik stateĭ, 1962, vyp.2, p.24-41, table, maps, cross-sections.) 8 refs. Text in Russian. **Title tr.:** Triassic deposits of the Khey-Yaga River basin on the southwest slope of Pay-Khoy.

Characterizes and correlates the Khey-Yaga series of Triassic deposits and divides it into lower and upper subseries; each is described in detail, noting lithologic and petrographic characteristics, facies and sedimentation conditions. Age and stratigraphy of the series are analyzed and correlated with sections of Triassic deposits of the Pechora coal basin. Geologic history of Khey-Yaga (Kheyyakha) basin development in the Triassic is summarized. Further studies are suggested. (DLC.)

KHAĬTSER, L.L., *see also* Abramov, V.P., & *others.* Ob uchastii ledovogo faktora . . . 1961. No. 69466

KHAKHALEV, E.M., *see* Tal'virskiĭ, D.B., & E.M. Khakhalev. Stroenie peverkhnosti doiurskogo fundamenta . . . 1961. No. 76074

72757. **KHAKHIN, N.** Sovershenstvovat' tekhnologiiu buksirovaniia lesa v plotakh v Angaro-Eniseĭskom basseĭne. (Rechnoĭ transport, Feb. 1961. god 20, no. 2, p.16-18.) Text in Russian. **Title tr.:** Improve the technology of towing rafts of logs in the Angara-Yenisey basin.

Suggests changes in the assembly, size, construction, etc. of rafts to improve towing on different types of stream. Only rafts of shallow draft (ca. 80 cm.) can clear the lower Angara, but deep-draft structure is needed to withstand the heavy wind-and-wave turbulence of the lower Yenisey. At present, the Angara rafts continue down the Yenisey as far as Igarka or Dudinka, two or three consolidated into a single unit to increase draft. Auxiliary vessels needed for safe towing would increase operating costs. (DLC.)

KHALANSKIĬ, A.S., *see*

Koshkina, T.V., & A.S. Khalanskiĭ. O razmnozhenii . . . 1962. No. 73004

Koshkina, T.V., & A.S. Khalanskiĭ. Vozrastnaia izmenchivost' cherepa . . . 1961. No. 73005

72758. **KHARITONOV, LUKA NIKIFOROVICH.** Zalogi glagola v iakutskom iazyke, osnovnye itogi issledovaniia. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniia, 1961. vyp.6, p.37-44.) Text in Russian. **Title tr.:** Verb voices in Yakut, basic study results.

Morphological analysis of Yakut verb semantics. Traces of an affixal voice structure may be vestiges of a medial (passive action) voice still preserved in some Turkic languages. (DLC.)

72759. **KHAR'KIV, A. D.** Brusit iz kimberlitov IAkutii. (Geologiia i geofizika, 1961, no.8, p.98-102, illus., tables.) 3 refs. Text in Russian. **Title tr.:** Brucite from kimberlites of Yakutia.

Reports discovery of this mineral in the Zapolyarnaya and Novinka kimberlite pipes. Its form of occurrence, color, varieties, chemical composition, heat tests, and X-ray analysis are given. (DLC.)

KHARNAS, S. SH., *see* Konikova, A.S., & *others.* Izmenenie obmena veshchestv . . . 1962. No. 72925

KHAUSTOVA, M.N., *see* Likhanov, B.N., & M.N. Khaustova. Fiziko-geograficheskie razlichiia . . . 1961. No. 73496

72760. **KHIL'TOV, IU. N.** Regressivnyĭ metamorfizm v ksenolitakh kristallicheskikh slantsev dokembriia kimberlitovykh trubok na territorii IAkutskoĭ ASSR. (*In:* Akademiia nauk SSSR. IAkutskiĭ filial. Almazy IAkutii . . . 1961, p.37-44, illus.) 7 refs. Text in Russian. **Title tr.:** Retrogressive metamorphism in xenoliths of Precambrian crystalline schists in kimberlite pipes of the Yakut ASSR territory.

Reviews the petrographic characteristics of crystalline schists, the rock-forming and accessory minerals. Contact alteration of xenoliths under influence of kimberlites is discussed. Conditions and processes of retrogressive metamorphism in crystalline schists are reported. (DLC.)

KHITROV, V.G., *see* Gerasimovskiĭ, V.I., & V.G. Khitrov. K geokhimii bora . . . Lovozerskogo massiva. 1961. No. 71646

KHLEBNIKOV, V.K., *see* Lazukov, G.I., & V.K. Khlebnikov. O gorizonte tazovskoĭ moreny . . . 1961. No. 73361

72761. **KHLEBOVICH, VLADISLAV VIL'GEL'MOVICH, 1932–** . Nakhozhdenie arkhiannelidy *Nerilla antennata* O. Schmidt na poberezh'e Barentseva moria. (Zoologicheskiĭ zhurnal, Jan. 1961. t.40, vyp.1, p.130-31, illus.) 11 refs. Text in Russian. Summary in English. **Title tr.:** Occurrence of the archiannelid *Nerilla antennata* O. Schmidt on the Barents Sea coast.

Reports this worm from the tidal zone of East Murman, the northernmost location so far recorded. Brief description and comparative notes are supplied. (DLC.)

KHLOBYSTIN, L.P., *see* Piadyshev, N.P., & L.P. Khlobystin. Novaia stoianka . . . 1962. No. 74785

72762. **KHLONOVA, ANNA FEDOROVNA.** K paleofloristicheskoĭ kharakteristike verkhnego mela vostochnoĭ poloviny Zapadno-Sibirskoĭ nizmennosti po dannym sporovo-pyl'tsevogo analiza. (Geologiia i geofizika, 1961, no.7, p.70-76.) 15 refs. Text in Russian. Summary in English. **Title tr.:** On paleofloristic characteristics of the Upper Cretaceous in the eastern part of the West Siberian lowland according to spore-pollen analysis data.

Reports composition and ecologic conditions

of spore and pollen for the upper horizons of Upper Cretaceous deposits including those distributed in the Bol'shaya and Malaya Kheta, the Taz, Yeloguy and other river basins. A reconstruction of Upper Cretaceous climate is attempted: a warm and humid, essentially marine-coastal climate prevailed. (DLC.)

72763. KHLONOVA, ANNA FEDOROVNA. Vidovoĭ sostav pyl'tsy i spor v otlozheniiakh verkhnego mela Chulymo-Eniseĭskoĭ vpadiny. Novosibirsk, Izd-vo Sibirskogo otdeleniia AN SSSR, 1960. 104p. tables, map, diagrs., 10 plates. (Akademiia nauk SSSR. Sibirskoe otdelenie. Institut geologii i geofiziki. Trudy, vyp.3.) 68 refs. Text in Russian. **Title tr.:** Species composition of pollen and spores of Upper Cretaceous deposits in the Chulym-Yenisey depression.

Presents a monographic account of the collections made in 1950-1953 in the Chulym, Kem', Sym, Bol'shoy Dubches, Ratta and other river exposures: 140 spore and pollen species are described and illus. of which 74 are new. Three spore-pollen complexes are distinguished corresponding to stages of Upper Cretaceous deposits: the Chulym-Turonian, Kas-Senonian, and Sym-Danian. The Taz spore-pollen complex also is dealt with and found analogous with the Sym. (DLC.)

KHMELEVA, V., *see* Filippov, P., & V. Khmeleva. Sidiat u moria . . . 1962. No. 71394

72764. KHMELEVSKOĬ, I. F. O predvaritel'nykh rezul'tatakh izmereniĭ temperatury firnovo-ledianoĭ tolshchi na novozemel'skom lednikovom shchite. (*In:* Akademiia nauk SSSR. Institut geografii . . . Materialy gliatsiologicheskikh . . . 1961. vyp.3, p.34-35, graph.) Text in Russian. **Title tr.:** On preliminary results of temperature measurements in the firn-ice stratum on the Novaya Zemlya glacial shield.

Summarizes observations during Feb. 1958-Mar. 1959, mainly in two boreholes, one in the feeding, the other in the ablation zone. Temperature measurements were made to 15m. depth sometimes to 30m. Some data for 1958 are graphed. Type of glacial feeding and character of temperature distribution are briefly noted. (DLC.)

KHMELEVSKOĬ, I.F., *see also* Razumeĭko, N.G., & *others.* Marshrutnoe termozondirovanie . . . 1962. No. 75081

72765. KHOCHOLAVA, G. M. Ob anomal'nom pogloshchenii v poliarnoĭ shapke. (Geomagnetizm i aeronomiia, 1962. v.2, no.1, p.105-113, tables.) 22 refs. Text in Russian. **Title tr.:** On anomalous absorption in the polar cap.

Discusses the established correlation between flares in the chromosphere of the sun and the anomalous absorption of radio waves in the zones of the polar caps. Geomagnetic storms, and auroras during the periods of absorption are described, and no correlation found between these phenomena and anomalous absorption of the period 36-240 hrs. in the North Polar cap, approx. 59°-90°N. (DLC.)

72766. KHOCHOLAVA, G. M. Ob anomal'nom pogloshchenii v poliarnoĭ shapke. (Geomagnetizm i aeronomiia, 1962. v.2, no.6, p.1095-1102, tables, graphs.) 16 refs. Text in Russian. **Title tr.:** Anomalous absorption in the polar cap.

Discusses an additional ionization, due to collisions of electrons with neutral particles at the altitudes of 50-60 km. and above, thus causing the anomalous absorption of radio waves above the Arctic Circle. The additional electron concentration produced by cosmic particles of 10-100 Mev is shown to reach 10^4-10^5 per cm^3 when the stream density of these particles reaches 10^{-6}-10^{-10} per cm^3. The dynamics of the region of anomalous absorption before and after the commencement of SC type geomagnetic storms are investigated and three types of anomalous radio wave absorption in the Arctic are established: one connected with magnetic disturbances and auroras; a "zonal" absorption which continues after the storm; and an absorption of short duration which transforms into the "zonal" absorption during the storm. (DLC.)

72767. KHODAKOV, V. G. Snezhnyĭ pokrov i sovremennoe oledenenie Poliarnogo Urala. (Issledovaniia lednikov i lednikovykh raĭonov, 1962. vyp.2, p.41-49, tables, diagrs.) 4 refs. Text in Russian. Summary in English. **Title tr.:** The snow cover and present glaciation of the Polar Ural.

Reports results of spring snow measurements in 1958, 1959 and 1960, along the Vorkuta parallel: 67°30'N. Volume of snow accumulation on glaciers of various types is reported and evaluated. The snow concentration depends on amount of winter precipitation, wind velocity, and the relief. These factors are analyzed. Wind velocity and exposure of slopes are discussed, and exemplified in three glaciers. (DLC.)

KHODAKOV, V.G., *see also*

Akademiia nauk SSSR. . . . Poliarnyĭ Ural; abliatsiia, stok. 1962. No. 69553

Akademiia nauk SSSR. . . . Poliarnyĭ Ural; snezhnyĭ pokrov. 1962. No. 69558

KHODINOV, A.S., *see* Bogolubov, B.P., & *others.* Opredelenie moshchnosti potolochin . . . 1962. No. 70298

72768. KHODZHA-AKHMEDOV, CH. L. Izuchenie anomal'nogo pogloshcheniia radiovoln pri pomoshchi samoletnoĭ ionosfernoĭ stantsii. (Geomagnetizm i aeronomiia, 1962. v.2, no.1, p.114-20, tables, graphs.) 3 refs. Text in Russian. **Title tr.:** Investigation of anomalous radiowave absorption from an airborne ionospheric station.

Reports seven flights in the area 70°-90°N. 30°-180°E. during Apr. 1960, to record excessive radiowave absorption in the ionosphere. The data analyzed indicate that apparently two types of spatial distribution of absorption may exist, and can be differentiated during both high and moderate geomagnetic disturbances. The second polar zone of radiowave absorption is better expressed when magnetic disturbances are of moderate intensity. (DLC.)

72769. KHODZHER, GRIGORIĬ. Na konferentsii pisateleĭ Severa. (Dal'niĭ Vostok, July-Aug. 1961. god 29, no.4, p.151-54.) Text in Russian. **Title tr.:** On the Conference of Writers of the North.

Reports the meetings of Mar. 21-29, 1961, in Komarovo near Leningrad attended by 32 writers from the small northern peoples of the USSR, the author a participant; the five papers delivered, poems read, etc. Canadian skepticism of the conference is dealt with. (DLC.)

KHODZHER, GRIGORIĬ, *see also* Kuznetsov, A. Bol'shaia literatura . . . 1962. No. 73257

KHOKHLINA, N.S., *see* Baranenkova, A.S., & N.S. Khokhlina. Distribution . . . of larvae and young redfish . . . 1961. No. 70004

72770. KHOKHLOV, IVAN VASIL'EVICH, *and others*. Razrabotka ugol'nykh mestorozhdeniĭ Pechorskogo basseĭna. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1960. 292 p. tables, diagrs., graphs, maps, cross-sections. 47 refs. Text in Russian. *Other authors:* N.V. Sherstnev, V.P. Fedanov, *and* S.I. Zaĭtsev. **Title tr.**: Exploitation of the Pechora basin coal deposits.

Gives an extensive account of Pechora coal, the mining methods and techniques. The Vorkuta mining operations, started in 1934, have 34 shafts and 17.5 million tons annual (1959) production. Geologic reserves are estimated at 262 billion tons. The geologic structure of the coal basin, the underground mining methods, mining operations and mechanization are described in the first part of this book. The second part deals with results of experimental investigation for determining conditions of underground mining beneath rivers and other water bodies. Hydrogeologic and geophysical investigations, permafrost research, studies of rock deformation, and other problems are outlined. Results of the investigations are summarized and an economic appraisal is given. Employment of new techniques is reported. (DLC.)

KHOKHLOV, V.A., *see*

Savinykh, V.K., & V.A. Khokhlov. Mashina . . . 1962. No. 75387

Savinykh, V.K., & V.A. Khokhlov. Mekhanizatsiia ustroĭstva . . . 1962. No. 75388

72771. KHOKHUTKIN, IGOR' MOISEEVICH, 1934– . O rasprostranenii nazemnykh molliuskov na Urale. (Zoologicheskiĭ zhurnal, Feb. 1961. t.40, vyp.2, p.178-83, table.) 8 refs. Text in Russian. Summary in English. **Title tr.**: Distribution of terrestrial molluscs in the Ural.

Records 38 species and their distribution. The mollusc fauna of the Northern Ural comprises cold- and drought-resistant forms, like *Vertigo alpestris, V. modesta, Agriolimax reticulatus,* and others. (DLC.)

72772. KHOMIAKOVA, L. Rasshiriat' vosstanovitel'nye raboty na Kol'skom poluostrove. (Lesnoe khoziaĭstvo, Mar. 1961. god 14, no.3, p.70-71.) Text in Russian. **Title tr.**: Reforestation work on Kola Peninsula must be increased.

Reports on the reforestation of cutover areas by lumbering establishments (lespromkhoz) of Murmansk Province in the previous 18 months: collecting cones and seeds, cultivating the soil, etc. Lack of mechanized equipment and difficulties due to boulders are stressed. (DLC.)

72773. KHOMICH, LIUDMILA VASIL'EVNA. Olen'i narty i upriazh' u nentsev. (Akademiia nauk SSSR. Muzeĭ antropologii i etnografii. Sbornik, 1961. t.20, p.40-53, illus.) 12 refs. Text in Russian. **Title tr.**: Reindeer sledges and harness of the Nenets.

Study based on the Museum collection and data from field work of 1949, 1953 and 1958. The origin of Samoyed reindeer transport in imitation of dog-driving is discussed and various hypotheses advanced on the time of its appearance. The shape and structure of various types of passenger and transport sleds are described, also harness hitches, selection of reindeer, etc. Nenets-Samoyed terminology is given in text. (DLC.)

72774. KHOMICHEVSKAIA, L. S. Ob ostatochnom zhil'no-poligonal'nom kharaktere bugristykh torfianikov v Igarskom raĭone. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy 1962. t.19, p.81-84, illus.) 14 refs. Text in Russian. **Title tr.**: On the residual vein-polygonal character of peat mounds in the Igarka region.

Reports on abundant distribution of peat mounds 10-20 m. in diameter and 4-6 m. above the surface. A cross-section of one to 33.35 m. depth is described. Distribution of permafrost and ground temperature is also registered. Development and origin of these peat mounds are discussed, and frost heaving considered to be responsible for them. (DLC.)

72775. KHOREVA, I. M., *and* **R. E. GITERMAN.** Novye dannye o raschlenenii tretichnykh otlozheniĭ v nizhnem techenii Aldana. (Akademiia nauk SSSR. Doklady, May 21, 1961. t.138, no.3, p. 659-62, table.) 6 refs. Text in Russian. **Title tr.**: Recent data on the dismemberment of Tertiary deposits in the lower course of the Aldan.

Reports on Oligocene, Miocene and Pliocene deposits substantiated by a study of Tertiary fossil flora from various sites and bore holes in the lower Aldan basin. Development of Tertiary deposits and of Tertiary flora is evaluated; and the phytogeographic origin of this flora discussed. (DLC.)

KHOREVA, I. M., *see also*

Alekseev, M.N., & *others*. Chetvertichnye otlozheniia . . . 1961. No. 69697

Chebotareva, N.S., & *others*. Stratigrafiia . . . 1961. No. 70682

72776. KHOREVA, T. M. Osobennosti rezhima tsirkuliatsii i pogody Grenlandskogo, Barentseva i Karskogo morei pri formirovanii i preobrazovanii zapadnoĭ formy atmosfernoĭ tsirkuliatsii. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.240, Voprosy dolgosrochnykh prognozov pogody . . . p.95-146, maps, tables.) 7 refs. Text in Russian. **Title tr.**: Specific features of the circulation regime, and weather of the Greenland, Barents, and Kara Seas during formation and transformation of the western form of atmospheric circulation.

Analyzes the peculiarities in atmospheric processes during the formation and the ensuing transformation of the western form (W) of atmospheric circulation. The weather regime is characterized in the region of the Greenland, Barents, and Kara Seas. Three distinct periods in the development of the western circulation form are found and data presented on anomalous air temperatures, and recurrence of prevailing wind directions at 14 circumpolar stations during each period. (CaMAI.)

72777. KHOREVA, T. M. Polozhenie vysotnoĭ planetarnoĭ frontal'noĭ zony pri razvitii ustoichivykh protsessov zapadnoĭ formy atmosfernoĭ tsirkuliatsii. (*In:* Leningrad. Arkticheskiĭ . . . institut. Trudy 1961. t.235, Sbornik statei po sinopticheskoĭ meteorologii, p.47-65, table, charts.) 16 refs. Text in Russian. **Title tr.**: Location of

the upper air planetary frontal zone during the development of stable processes of the western form of atmospheric circulation.

Two variants of the development are considered for the Northern Hemisphere: one following stable processes of the meridional form, the other following stable processes of the eastern form. Certain features in the evolution of the upper air planetary frontal zone are established which may be applied to the analysis of flowing atmospheric processes and in forecasting their further development. (SPRI.)

KHOREVA, T. M., *see also* Leningrad. Arkticheskiĭ . . . institut. Rukovodstvo . . . 1961. No. 73408

72778. KHOROSHEVA, O. V. O prostranstvenno-vremennom raspredelenii polīarnykh siīaniĭ v Arktike zimoĭ 1957/58 g. (Akademiīa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniīu Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polīarnye siīaniīa i svechenie nochnogo neba. Sbornik statei, 1961. no.7, p.14-21, tables, map, graphs.) 3 refs. Text in Russian. Summary in English. **Title tr.:** On the spatio-temporal distribution of auroras in the Arctic during the winter of 1957/58.

Discusses results of simultaneous photographic recording of auroras by a chain of Soviet stations: Murmansk, Vize Island, Uyedineniya Island, Dikson, Cape Chelyuskin, Olenek, Mostakh, Tiksi, Kazach'ye, Vrangel Island, Cape Shmidt, and Cape Uelen, between 60° and 68°N. lat. (except Vize and Olenek), 30°-190°E. The purpose of the observations was to establish the longitudinal extent covered by a single auroral display. The observations carried out during Dec. 1957-Feb. 1958 were used in selecting data of 42 nights for reduction. It was found that simultaneous occurrence of auroras was observed in 95% of cases along the chain of stations covering the longitude intervals of not less than 50°(2000 km.). This result does not depend on the size of the intervals (50°-150°in longitude), and remains constant for all arctic regions investigated. A conclusion is drawn that during the period of the maximum of solar activity, the auroras appear simultaneously over the dark, and probably, the day side of the entire arctic region, and that the auroral displays observed simultaneously at different stations are parts of the same aurora. (CaMAI.)

72779. KHOROSHEVA, O. V. Prostranstvenno-vremennoe raspredelenie polīarnykh siīaniĭ i ikh svīaz' s vysokoshirotnymi geomagnitnymi vozmushcheniīami. (Geomagnetizm i aèronomiīa, 1961. t.1, no.5, p.695-701, diagrs., graphs.) 10 refs. Text in Russian. **Title tr.:** Spatio-temporal distribution of auroras and their relationship to high latitude geomagnetic disturbances.

Reports that during the 1957–1958 winter, 95% of the auroral display occurrences in the Arctic happened simultaneously over the observation range approx. 60°-180°E. These simultaneous auroral activities are shown to form a unique physically related zone of which the brightness, width, and latitude change synchronously along the entire observation range of approx. 120° in longitude. This zone of auroras apparently encircles the earth, and has a regular displacement whose direction is southward during the local evening hours, and northward during the local morning. The second or the inner zone of auroras, discussed by A.P. Nikol'skiĭ, q.v., can be explained by this zone of auroras around the earth, and its diurnal displacement by 10° or more in latitude. A correlation is made between local geomagmatic disturbances, and the integral brightness of auroras. This closed circular zone of auroras, it is suggested, represents the zone of electric current. (DLC.)

72780. KHOROSHEVA, O. V. Sutochnyĭ dreĭf zamknutogo kol'tsa polīarnykh siīaniĭ. (Geomagnetizm i aèronomiīa, 1962. t.2, no.5, p.839-54, graphs, maps, tables.) 11 refs. Text in Russian. **Title tr.:** Daily drift of a closed ring of auroras.

Reports investigation of the longitudinal extent of auroral displays which showed them to originate simultaneously in a ring of 360 degrees of the earth's longitude. At any moment of universal time the ring is shifted to the nightside sufficiently to pass over the approx. 60°-65° geomag. lat. in which auroras most frequently occur. The size of the ring is such to make the part which gets to the day side of the globe pass over the approx. 75-80° latitudes which represent the inner zone of auroral displays. Both zones should be considered however, as envelopes of instantaneous positions on this unique closed circle. A natural relation of such a ring to the continuously present solar corpuscular radiation captured by the earth's magnetic field is suggested. The diurnal drift of the ring is considered to be due to the effect of "solar wind" on the earth's magnetic field and explains diurnal variations in the azimuths of the auroral arcs. (DLC.)

KHOROSHEVA, O. V., *see also* Fel'dshteĭn, ÎA.I., *& others.* Auroral planetary distrib. 1962. No. 71370

KHOROSHIKH, PAVEL PAVLOVICH, *see* Lisitsyna, N.K. Arkheologicheskie issledovaniīa . . . 1962. No. 73527

KHOROVICH, L. I., *see* Tarakanov, G.P., & L.I. Khorovich. Mashina dlīa bureniīa . . . 1960. No. 76083

72781. KHRAPKOVA, N. V. Skopleniīa promyslovykh ryb i ikhtioplanktona v Kamchatskom zalive. (Akademiīa nauk SSSR. Institut okeanologii. Trudy 1961. t.43, p.295-308, illus., maps.) Text in Russian. **Title tr.:** Concentrations of food fishes and of ichthyoplankton in Kamchatka Bay.

Reports on two surveys made during Aug. 5-14 and Sept. 15-22, 1956, covering largely the shelf area. Sixteen species were recovered, most of them bottom forms. Location and depth of finds, frequency, size of catches, ovarial and larval development, size and weight of fish, etc. are noted. Largest concentrations were around the 150 m. isobath. (DLC.)

72782. KHRAPKOVA, N. V. Skopleniīa promyslovykh ryb i ikhtioplanktona v Korfo-Karaginskom raĭone. (Akademiīa nauk SSSR. Institut okeanologii. Trudy 1961. t.43, p.285-94, illus., maps.) Text in Russian. **Title tr.:** Concentrations of food fishes and of ichthyoplankton in the Korfa-Karaginskiy area.

Reports on research trawling and on collections of eggs and larvae during Aug. 14 - Sept. 6, 1956 off the coast of Kamchatka. Fourteen species are included, nearly all bottom fish. Location and abundance of catches, sizes, and

nature of bottom are considered, as well as state of development of eggs, larvae and young. Biggest catches were realized in Korfa Bay. (DLC.)

KHRAPOVITSKIĬ, *see* Burgutto, IA., & Khrapovitskiĭ. Skorostnaia obrabotka sudov . . . 1962. No. 70458

72783. **KHRUSTALEV, L. N.** Fil'tratsionnye svoĭstva sezonnoprotaivaiushchikh suglinistykh gruntov v raĭone Vorkuty. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Materialy k osnovam ucheniia o merzlykh zonakh zemnoĭ kory, 1961. vyp.7, p.157-63, table, diagr.) 8 refs. Text in Russian. **Title tr.:** Filtration properties of seasonally thawing clayey soils in the Vorkuta region.

Reports a 1959 study of the flow of ground water in the active layer as a factor to be considered in foundation engineering and hydrologic analyses. Field measurements of the powdery, impervious clays revealed a macroporosity of 8%, a figure considered low because of the breakdown of soil during the sinking of the boreholes in thawed ground. The horizontal and vertical coefficients of permeability were determined and compared with standard laboratory results. Macropore filtration, which is 300-400 times greater than micropore filtration, was found to account for considerable movement of ground water in these soils. Both the mathematical treatment and field measurement of filtration attributable to macropores are described. –From CRREL. (DLC.)

72784. **KHRUSTALEV, L. N.** Vodopronitsaemost' glinistykh gruntov sloia sezonnogo promerzaniia, protaivaniia v usloviiakh estestvennogo zaleganiia. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.82-87, illus., tables, graph.) 5 refs. Text in Russian. **Title tr.:** Water permeability of clayey ground in the layer of seasonal freezing and thawing under natural bedding conditions.

Reports tests in 1959–1960 near Vorkuta to determine filtration properties of the ground. Water permeability in the active layer is found to be 2-3 times greater than in analogous unfrozen ground. The coefficient of filtration of thawed ground depends upon size of macropores. Clayey ground subject to seasonal freezing and thawing is anisotropic as far as water permeability is concerned. (DLC.)

KHRUSTALEV, L. N., *see also* Petrashkov, G.D., & L.N. Khrustalev. O vliianii tekstury . . . 1961. No. 74754

72785. **KHUZIN, R. SH.** Perspektivy razvitiia promysla belukhi na evropeĭskom Severe. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ, 1961. vyp.12, p.133-37, tables.) 8 refs. Text in Russian. **Title tr.:** Prospects of development of beluga whaling in the European North.

Notes the antiquity of Russian whaling in this region; catches since 1947, general and according to areas; research on stock, etc.; prospects of enlarging the catches. (DLC.)

KHVALIN, N. N., *see* Tumanov, I.I., & *others*. Polevaia ustanovka . . . 1962. No. 76226

72786. **KHVEDELIDZE, G. V.** Vliianie gipotermii v sochetanii s gibernatsieĭ na uslovnye refleksy, vyrabotannye so slukhovogo analizatora. (Biulleten' eksperimental'noĭ biologii i meditsiny, June 1962. t.53, no.6, p.32-33, graphs.) refs. Text in Russian. Summary in English. **Title tr.:** Effect of hypothermia combined with hibernation upon the conditioned reflexes of the auditory apparatus.

Reduction of rectal temperature in dogs to 23-24°C. ("hypothermia-hibernation") produced no disturbances of the temporary connection or differentiation. (DLC.)

72787. **KHVOSTOVA, V. A.** Raspredelenie redkikh zemel' v aktsessornykh mineralakh pegmatitov IUzhnoĭ IAkutii. (Akademiia nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov. Trudy 1962. vyp.8, p.147-55, illus., tables, graphs.) 5 refs. Text in Russian. **Title tr.:** Distribution of rare earths in accessory minerals of pegmatites in southern Yakutia.

Reports study of minerals containing rare earths in the granite pegmatites and diopside-scapolite and phlogopite veins of the Emel'dzhak deposits. The accessory minerals in these veins are garnet, epidote, sphene, ortite, zircon and apatite. They are described, noting chemical composition and content of La, Ce, Pr, Nd, Yb, Lu, Y, and other rare earth elements. (DLC.)

KICENIUK, TARAS, *see* Perry, B. Simulated wave-riding dolphins. 1961. No. 74731

72788. **KIELAN, ZOFIA.** On two olenellid trilobites from Hornsund, Vestspitsbergen. (*In:* Polska wyprawa na Spitsbergen, 1957-1958. Geological results . . . 1960, pt.7, *pub. as* Studia geologica polonica, v.4, p.83-92, plates.) 17 refs. Summary in Polish.

Presents taxonomic description of Lower Cambrian trilobites from the black shales of the Slakli series, Sofiekammen formation, Hecla Hoek succession. Almost all specimens found belong to *Olenellus svalbardensis* n. sp.; it and *Nevadella* sp. (one specimen) are described, noting their locality, diagnosis, material, organs, ornamentation and other features. Geographic distribution also is discussed. (DLC.)

72789. **KIELY, VERNON R.** Economic and business situation in Alaska with special reference to wholesale and retail trade in Fairbanks and Anchorage. College, Alaska, the University, Mar. 1960. 161p. tables. (U.S. Small Business Administration. Small business management research reports.) 19 refs.

Analyzes the volume and characteristics of trade in both areas in 1959 according to such major product groups as food, drugs, hardware, etc. The federal government as a market, prospects for extending the two wholesale trading areas, and financing commercial enterprises are outlined. Operating cost data are tabulated: transportation, occupancy, labor, taxes, utilities, and discussed. Conclusions are offered on trade expansion possibilities. (DI.)

72790. **KILLIN, A. F.** Survey of the copper industry in Canada 1959. Ottawa, Queen's Printer, 1960. 107p. map, graph, tables. (Canada. Dept. of Mines and Technical Surveys, Mineral Resources Div. Mineral information bulletin MR 47.) Refs.

Provides detailed information on the sources of primary production, trade and consumption. Includes, p.51-59, the Hudson Bay Mining and Smelting Co. properties near Flin Flon, Man., and the Sherritt Gordon operations at Lynn Lake, Man. The North Rankin Nickel Mines copper-nickel mine near Rankin Inlet in Keewatin District is described on p.67-69. (DLC.)

72791. KILLIN, A. F. Survey of the copper mining industry in Canada 1960. Ottawa, Queen's Printer, 1962. 77p. maps, diagr., graphs, tables. (Canada. Dept. of Mines and Technical Surveys. Mineral Resources Division, Mineral information bulletin MR 54.) Refs.

Reports a record output of 438,383 short tons of copper, valued at $264,336,899, ranking fifth in world copper production. Producing mines in northern Manitoba are described p.37-39, at Rankin Inlet in Keewatin District p.42. Exploration and development in northern Manitoba is noted p.44. Data on producers, reserves, production, etc. are tabulated. (DLC.)

KILPATRICK, T. B., *see*

Archibald, D.C., & *others*: Aerial ice observing . . . 1962. No. 69838

Archibald, D.C., & *others*. Aerial sea ice observ. & reconn. . . . 1959-60. 1960-61. No. 69840

Archibald, D.C., & *others*. Aerial sea ice reconn. 1961. No. 69839

Monsinger, M.N., & T.B. Kilpatrick. Ice thickness data Can. 1961-62. 1962. No. 74099

KIM, D. N., *see* Pevzner, M.E., & *others*. Vliianie buro-vzryvnykh rabot . . . 1961. No. 74766

KIMBALL, DONALD STEVENS, 1903– , *see* Davis, T.N., & D.S. Kimball. Auroral display Feb. 1958. 1962. No. 70905

KIMELDORF, D. J., *see* Newsom, B.D., & D.J. Kimeldorf. Tolerance of rats . . . 1962. No. 74315

KIMURA, R., *see* Perlman, H.B., & *others*. Cochlear blood flow . . . 1959. No. 74727

72792. KING, ELIZABETH R. An aeromagnetic profile from Anchorage to Nome, Alaska. (Geophysics, Dec. 1961. v.26, no.6, p.716-26, diagrs., graphs, maps.) 11 refs.

Describes and interprets a total-intensity profile obtained on a 500-mi. flight by a U.S. Geological Survey airplane on May 4, 1954. The profile crossed eight of the major tectonic elements of Alaska at right angles to their trend. It has a net gradient downward to the northwest; a great variety of magnetic anomalies superimposed on the gradient originates from variations in lithology along the traverse. Except for a large one over the Yukon River, these anomalies are caused by magnetic rocks at or near the surface. The magnetic profile is divided into four major segments and nine subsegments, according to characteristic magnetic patterns. Each segment in turn is related to a tectonic unit; widths and depths are estimated. (DLC.)

72793. KING-FARLOW, R., *and* **E. WOWERN.** Grønlands poststempler siden 1938. (Lyngby frimaerkeklub. Katalog, 1959. no.768, p.17, + , illus.) Text in Danish. Mimeographed English translation available (copy at SPRI). **Title tr.:** Greenland postmarks since 1938.

Describes official and unofficial postmarks used since the introduction of stamps for overseas mail in 1938. Domestic mail went free until 1958. Postal "stations" and "agencies" in operation during the period are listed. (SPRI.)

72794. KINGERY, WILLIAM DAVID, *and* **C. M. ADAMS,** *Jr.* Basic research on ice and snow. Bedford, Mass., Nov. 14, 1962. v, 8p. (Massachusetts Institute of Technology, Contract no.AF19 (604)-5994, final report prepared for U.S. Air Force. Cambridge Research Laboratories, AFCRL-62-1080.) 9 refs.

Summarizes the results of current work on ice and snow phenomena with engineering applications, such as aircraft landings on sea ice and arctic construction. Specific aspects being investigated include: snow metamorphism and comminution, ice solidification, surface properties and mechanical properties of ice, brine migration and oxygen diffusion in ice. Reports published or in preparation are listed. (CaMAI.)

72795. KINGERY, WILLIAM DAVID. Ice alloys. (Science, July 21, 1961. v.134, no.3473, p.164-68, illus., graph, diagrs.) 8 refs.

The use of ice and snow as construction material is reviewed briefly, and selected ice-alloy systems are discussed. The structural properties of ice and snow can be improved by appropriate alloying. The addition of wood pulp to ice substantially increases short-time strength also resistance to deformation and to impact and shock loading. The addition of sawdust 15% by volume increases the strength by a factor of three; fiberglas, 5% by volume in one experimental study, increased the strength by a factor of ten.—From CRREL. (DLC.)

72796. KINGERY, WILLIAM DAVID, *Editor.* Summary report, Project Ice Way. L.G. Hanscom Field, Bedford, Mass., May 1962. xx, 182, 34p. illus., maps, diagrs., graphs, tables. (U.S. Air Force. Cambridge Research Laboratories, Air Force surveys in geophysics no. 145; Terrestrial Sciences Laboratory project 7628; AFCRL-62-498.) Refs.

Discusses preliminary results of this joint Air Force - Navy project on the ice of North Star Bay near Thule Air Base, Greenland, Jan.-June 1961. Site selection for an aircraft landing strip and parking pads, and engineering aspects of construction are discussed by D.W. Klick, J.E. Dykins, J.A. Pate, D.L. Anderson, and W.D. Kingery. Operational experience on the 11,000 x 300 ft. runway is recounted by D.W. Klick. Tests of aircraft including a B-52 jet bomber indicate that the ice can carry heavier loads than previously believed. No skidding or sliding was reported; the ice runway surface was considered as good as the main runway at Thule AB. Studies of sea-ice strength, mechanical properties, salinity, deformation and deterioration are reported by Kingery, R.L. Coble, Dykins, D.N. French, J.H. Brown, C.D. Horton, H.A. Hobbs, Anderson, and M.P. Langleben. Appended are reports on project organization, personnel, pilot reaction, summary of data, Thule AB weather summary, logistics, and aircraft operations. (DWB.)

72797. KINSMAN, D. J. J., *and others*. Glacial history of Beerenberg, Jan Mayen Island. (Nature, Sept. 1, 1962, vol.195, no.4844, p.897-98.) 5 refs. *Other authors:* J.W. Sheard *and* F.J. Fitch.

Presents some amplification and comment to

the report by Fitch, q.v. Undisputed evidence of a glacial surge was recorded during the party's studies. The breaching of the crater rim of Beerenberg is treated further as well. (DLC.)

KINSMAN, D. J. J., *see also* Fitch, F.J., *& others.* Glacier re-advance Jan Mayen. 1962. No. 71430

KINZHALOV, P. S., *see* Gomon, G.O., *& others.* Svechenie almazov . . . 1962. No. 71752

72798. KIPARSKY, VALENTIN. Das Mammut. (Zeitschrift für slavische Philologie, 1958. Bd. 26, Heft 2, p.296-300.) Refs. in text. Text in German. **Title tr.:** The mammoth.

Etymological analysis of the Russian word *mamont,* mammoth, considered of Nenets-Samoyed, not West-Tungus, origin. (DLC.)

KIPPER, J. M., *see* Burkhardt, M.D., *& others.* Sea conditions . . . 1962. No. 70462

72799. KIRBY, R. P. Deglaciation in central Labrador-Ungava as interpreted from glacial deposits. (Geographical bulletin, Nov. 1961, no.16, p.5-23, illus., maps, graph.) 12 refs. Also in French p.24-39.

Presents some results of a study of glacial deposits in the Schefferville area, where field research was carried out 1958-59, under auspices of the McGill Sub-Arctic Research Laboratory. Final dissolution of ice in the Labrador Peninsula probably took place in Schefferville area. Detailed mapping of the glacial morphology and examination of the glacial deposits reveal evidence of final regional ice movement from the north-northwest across Schefferville, although glacial striations indicate earlier movements from other directions. After ice movement ceased, hummocky moraine forms and glacio-fluvial material were laid down. Rapid disintegration then took place with the final pieces melting on the larger depressions north of Schefferville. Working area extended from Gillespie Lake to Gemini Lake, 55°10′ - 54°40′N., and included the hilly belt west of the town. (DGS.)

72800. KIRBY, R. P. Movements of ice in central Labrador - Ungava. (Cahiers de géographie de Québec, Apr. - Sept. 1961. année 5, no.10, p.205-218, illus., map, diagr., table.) 28 refs.

Compares conclusions reached in earlier studies with those from recent observations of the direction of ice movement in an area within 30 mi. of Schefferville. Both erosional and depositional indicators of ice movement were studied, and 18 detailed till fabric analyses of ground moraine carried out. Striation and till fabric evidence indicates that final movements of the ice were outward in opposite directions, NNW and SSE, from the latitude of Kivivic Lake, 55°N 67°20′W. This apparent ice-dispersal center must have been a late glacial feature, for the penultimate ice movements throughout the area were from a westerly quadrant. Author regards the central Labrador Peninsula as an ice-divide in the sense of an ice-remnant rather than an ice dispersal center. (DGS.)

KIR'IANOV, G., *see* Radovanskiĭ, R., *& G.* Kir'ianov. Raboty . . . okhotovedov. 1961. No. 75020

72801. KIRICHENKO, ALEKSANDR NIKOLAEVICH, 1884– . Nastoiashchie poluzhestkokrylye. Heteroptera, vostochnogo sektora arkticheskoĭ Evrazii. (Entomologicheskoe obozrenie, 1960. t.39, vyp.3, p.617-28, table.) 6 refs. Text in Russian. **Title tr.:** True hemiptera Heteroptera in the eastern sector of arctic Eurasia.

Records of the true bugs from many collections over many years. About 75 forms from 21 localities on mainland and islands from Kanin Peninsula and Kolguyev Island to Chukotka and the Commanders. Collector, location, habitat, geographic distribution, etc. are noted. The material is also presented in tabular form. (DLC.)

72802. KIRICHENKO, I. P. L.M. Starokadomskiĭ. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, July-Aug. 1962. t.94, vyp.4, p.359-60.) Test in Russian.

Describes the life and scientific activities of Leonid Mikhailovich Starokadomskiĭ, 1875-1962, a medical doctor. He participated in Vil'kitskiĭ's Hydrographic Expedition in the Arctic Ocean on the icebreakers *Taĭmyr* and *Vaĭgach* 1910-1915, in the course of which Severnaya Zemlya was discovered. The results of this expedition are being prepared for publication. Starokadomskiĭ was active again in 1932-1934 in the Arctic as member of Northeastern Polar Expedition. Some of his publications are listed. (DLC.)

KIRIENKO, V. F., *see* Pevzner, M.E., *& others.* Vliianie buro-vzryvnykh rabot . . . 1961. No. 74766

72803. KIRILLOV, A. S. K voprosu o vozniknovenii Sibirskoĭ platformy. (Sovetskaia geologiia, Aug. 1962, no.8, p.16-24.) 25 refs. Text in Russian. **Title tr.:** On the origin of the Siberian platform.

Notes current disagreement on the time and mode of origin of the Siberian platform, and discusses temporal and structural paleogeographic conditions pertinent to the problem. During the lower Proterozoic and in some places during the Sinian, the central part of the Siberian platform was under the influence of erosion. At the same time a marine depression prevailed in the Yenisey Ridge area and the Baykal-Patomsk zone. The history of tectonic movements and absolute age of some rocks are calculated and the origin of the Siberian platform placed at 1600-1700 million yrs. B.P. (DLC.)

72804. KIRILLOV, A. S. Osnovnye cherty sviazi magmatizma i tektoniki Sibirskoĭ platformy. (Geologiia i geofizika, 1961, no.11, p.40-46, diagr.) 19 refs. Text in Russian. Summary in English. **Title tr.:** Main features of the relation between magmatism and tectonics of the Siberian platform.

Reports main features of volcanism of the Tungusskiy syncline, Anabar and Aldan anticline, and other regions. Physical-chemical processes in the crust, specific features of the structures and tectonic movements are considered factors influencing the mode and extent of magmatism. Diminution of the earth's crust under the platform is discussed. Distribution of traps in syncline and anticline areas is noted. (DLC.)

72805. KIRILLOV, A. S. Proiavleniia almazonosnosti v Krasnoiarskom krae. (*In:* Krasnoiarskaia . . . ekspeditsiia. Poleznye iskopaemye . . . 1962, p.126-35, table, map.) 7 refs. Text in Russian. **Title tr.:** Manifestation of diamonds in Krasnoyarsk Province.

Reports the systematic search for diamonds carried on since 1946. All the finds are connected

with western areas of the Siberian platform. The prospecting in the Khatanga, Nizhnyaya Tunguska, Podkamennaya Tunguska, and Angara basins and the Yenisey Ridge is reviewed and data tabulated on finds, noting type of deposit, number of diamond crystals, and date of find. The Podkamennaya Tunguska basin has been the most productive, yielding 152 of the 203 crystals, especially the basin of the Tychany, tributary to the Chuna (88 crystals). The Khatanga and Nizhnyaya Tunguska basins have been least productive. All the finds have been in alluvial deposits. Characteristics of diamonds are given and areas favored for further prospecting are stated. (DLC.)

72806. KIRILLOV, F. N. Perspektivy razvitiia rybnogo promysla v nizov'e reki Indigirki. (Akademiia nauk SSSR. IAkutskiĭ filial. Doklady 1957. v.8, p.82-91, illus., tables.) 6 refs. Text in Russian. **Title tr.:** Prospects of developing fisheries in the lower Indigirka.

Describes the three sectors of this river, the water and ice conditions, the main fishes and their distribution. Catches (since 1946), shoals and their composition, fishing gear are reported; prospects are discussed. (DLC.)

72807. KIRILLOV, F. N. Riapushki basseĭna reki Leny. (Akademiia nauk SSSR. IAkutskiĭ filial. Doklady 1957. v.8, p.79-81, table.) 3 refs. Text in Russian. **Title tr.:** Whitefishes of the Lena River basin.

Deals with two species, one of them, *Coregonus sardinella* Val., from the arctic sector of this river. Reproduction, migration, morphology, etc. are noted. (DLC.)

72808. KIRILLOV, S. V poiskakh Severo-vostochnogo prokhoda. (Morskoĭ flot, Dec. 1962. god 22, no.12, p.4-5, illus.) Text in Russian. **Title tr.:** In search of the Northeast Passage.

Traces development of the Northern Sea Route, stressing the exploratory work of the Pomors from the 11-12th century; their hand-written sailing directions (for Novaya Zemlya, the Northern Dvina, White Sea, etc.), their ms. on maritime law, sailing regulations, etc., charts, ice classification. (DLC.)

72809. KIRILLOV, V. Komi ASSR nakanune iubileia. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Feb. 1961. god 4, no.2, p.88, illus.) Text in Russian. **Title tr.:** Komi ASSR on the eve of the jubilee.

Notes crop objectives for 1961 to celebrate the 40th anniversary in August of Komi Autonomous Republic. Collective farm workers are striving for at least 200 cwt. milk, and 17 cwt. meat/100 hectares and 150 cwt. vegetables, 165 cwt. potatoes/hectare. State farm workers have 300 cwt. milk and 18 cwt. meat as their objectives. (DLC.)

72810. KIRILLOVA, TAT'IANA VASIL'EVNA. O raschete effektivnogo izlucheniia v raĭonakh TSentral'noĭ Arktiki. (Mezhvedomstvennoe soveshchanie po aktinometrii i atmosfernoĭ optike. 2nd, *Leningrad,* 1959, *pub.* 1961. Aktinometriia i atmosfernaia optika, p.72-79, tables, graphs.) 4 refs. Text in Russian. **Title tr.:** On calculation of effective radiation in regions of the Central Arctic.

Notes that the usual empirical formulas and radiation graphs are inadequate for calculating effective radiation in the arctic regions. With the polar day and night in mind, two radiation graphs are constructed: one for May-September, the other October-April. Aerologic soundings up to 5 km. by the drifting stations North Pole-4 and North Pole-5 were used. Clear sky and cloudiness were taken into consideration. (DLC.)

72811. KIRILLOVA, V. Doshkol'noe vospitanie v IAkutskoĭ ASSR. (Narodnoe obrazovanie, Jan. 1961, no.1, p.19-21.) Text in Russian. **Title tr.:** Pre-school education in Yakut ASSR.

Critical review of current conditions. Despite a 2.4 increase of nursery and kindergarten facilities since 1955, less than half the pre-school children are accommodated. Kindergartens of the Yakutsk, Aldan, Oymyakon, and Vilyuysk Districts are crowded. Qualified personnel is lacking, especially recent graduates specializing in pre-school education. Conditions are aggravated by the kindergartens in northern areas operating on a 24-hour basis under severe weather conditions. Teaching Russian to Yakut children as well as their native language adds to the difficulties. Organization, teaching methods, use of visual aids, recreational facilities, child care, housing, etc. are discussed, shortcomings indicated. (DLC.)

72812. KIRIN, F. IA. Problemy osvoeniia zemel' dlia sel'skokhoziaĭstvennogo proizvodstva po prirodnym zonam SSSR v period razvernutogo stroitel'stva kommunizma. (Geografiia v shkole, May-June 1962. god 25, no.3, p.7-15.) 25 refs. Text in Russian. **Title tr.:** Problems of land reclamation for farming according to natural zones of the USSR in the period of full-scale building up of communism.

Notes increase of land under cultivation from 118.2 to 204.6 million hectares in 1913-1961. The prospects for further increase are discussed chiefly by quotation from V.V. Dokuchaev and other Soviet authorities on soil science and agriculture; utilization of tundra and forest tundra is mentioned on p.14 quoting Dokuchaev's *Uchenie o zonakh prirody,* 1948, and stressing the difficulties.(DLC.)

72813. KIRIUSHINA, M. G., *and others.* Osobennosti proiavleniia noveĭsheĭ tektoniki v Sovetskoĭ Arktike. (*In:* International Association for Quaternary Research. Neotektonika SSSR . . . 1961, p.157-64.) Text in Russian. *Other authors:* IA. I. Pol'kin, V.I. Sokolov, *and* S.A. Strelkov. **Title tr.:** Recent tectonics of the Soviet Arctic and features of their manifestation.

Summarizes the tectonic movements which penetrated northern Siberia at the end of the Neogene and during the Quaternary period. The regions of minor tectonic activity and areas of orogenic belts, such as the Northern Ural - Pay-Khoy, Byrranga Ridge, and Verkhoyansk, are described. Important features of the late tectonic dislocations are their usual adaptation to the Mesozoic-Cenozoic plan and their diversified character. Tectonic structures are described and amplitude of the movements outlined. Total amplitude of uplift fluctuates between 60 and 1100 m., predominantely 200 - 500 m. (DLC.)

72814. KIRIUSHINA, M. T. O proiavleniiakh neotektoniki v predelakh Anabarskogo kristallicheskogo shchita i prilegaiushchikh territoriĭ. (*In:* Vsesoiuz-

noe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.147-50.) Text in Russian. **Title tr.:** Effects of recent tectonics within the limits of the Anabar crystalline shield and adjacent territories.

During the entire Quaternary period, including Recent, the Anabar shield has been in uplift, whereas the Khatanga depression, the Fomich and Popigay River valleys have been in a submergent stage. The effects of recent tectonic movements on development of the river net and relief forms are summarized. (DLC.)

72815. KIRKER, R. JAMES. Geology of the Rond Lake seep. (Oil in Canada, Feb. 1, 1962. v.14, no.14, p.19-20.) Abstract of paper presented to the 1962 meeting of the Alberta Society of Petroleum Geologists.

Describes drilling of four holes in this oil seep about 60 mi. north-northeast of Fort Good Hope, in Mackenzie District. No oil was found and the seep is concluded to be coming from a small breeched Cretaceous oil pool. Melting of the permafrost each summer releases new oil which oozes to the surface. (DGS.)

KIRKLIN, J. W., *see* Lim, R., & *others*. Circulatory arrest . . . 1961. No. 73501

KIRKNESS, WALTER, *see* Alaskan Science Conference 1960. 1961. No. 69643

72816. KIRKPATRICK, W. S. Challenges and opportunities in developing Canada's northland. (Western miner and oil review, Feb. 1961. v.34, no.2, p.28-33, illus.)

Discusses the economic aspects of developing resources for competition on world markets. Northern products are mostly raw materials for export; and their rate of development depends on availability of foreign markets. Government policy for international trade and tax relief for northern areas would foster development. Experience of the Consolidated Mining and Smelting Co. at Pine Point, Mackenzie District, is cited. (DGS.)

72817. KIROVA, O. A. O mineralogicheskom izuchenii prob pochv iz raĭona padeniia Tungusskogo meteorita, sobrannykh ėkspeditsieĭ 1958 g. (Meteoritika, 1961, vyp.20, p.32-39, illus., map, diagr.) 7 refs. Text in Russian. **Title tr.:** On the mineralogical investigation of soil samples from the region of Tungusskiy meteorite fall, collected by the expedition of 1958.

Describes the collection of samples from an area of over 1000 km² and reports results of chemical and other investigations of ore slimes and soil. Magnetic and non-magnetic parts of the samples are described. Magnetite and silicate globules (little balls) are analyzed and illus. The comet type of this meteorite is considered, and further studies are suggested. (DLC.)

72818. KIRSANOV, A. I., *and* **R. I. EFIMOV.** Drobovoe burenie s ochistkoĭ zaboia vozdukhom v usloviiakh mnogoletneĭ merzloty. (Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut metodiki i tekhniki razvedki. Trudy 1961, sbornik no.3, p.85-94, tables, graphs.) Text in Russian. **Title tr.:** Chilled steel shot drilling by clearing the bore hole with air under permafrost conditions.

Reports tests in the Kolyma basin in Magadan Province, conducted by the Northeastern geologic survey to determine the effectiveness of using compressed air to cool the bit and transport cuttings to the surface. At two sites, both in permafrost regions, these experimental drillings were made to 200 m. depth using air and water. Component rocks, temperature conditions of the permafrost, drilling tools, speed, and techniques are described. The chilled steel shot method using compressed air was found advantageous for permafrost areas, its capacity up to 30 to 35% higher than that of other standard drilling methods. (DLC.)

KIRSANOV, A.I., *see also* Maramzin, A.V., & *others*. K voprosu o temperaturnom rezhime . . . 1961. No. 73797

72819. KIRWAN, J. L. Belcher Islands, N.W.T. (Canadian geographical journal, Sept. 1961. v.63, no.3, p.84-89, illus., map.)

Describes the climate (inhospitable), geology, and Eskimo population of these islands in southeastern Hudson Bay. The many long, narrow peninsulas, and unusual U- and S-shaped patterns of the islands result from different erosion rates of the hard volcanic rocks, most still above sea level, and the softer sedimentary ones, mostly under the water. Some two hundred Eskimos who live there are nomadic hunters of seal, walrus, and geese; and they make stone carvings of good quality for the trade. Potentially valuable iron deposits may increase their means of livelihood. (DGS.)

72820. KISELEV, IA. E. Pechora potechet vspiat'; v laboratoriiakh uchenykh. (Master lesa, June 1961, no.6, p.25, map.) Text in Russian. **Title tr.:** The Pechora is to flow backward; in the scientists' laboratories.

Outlines a plan for redirecting a quarter of the Pechora discharge and a seventh of the Vychegda southward into the Kama, a tributary of the Volga to offset the disastrous drying-up of the Caspian Sea. (DLC.)

KISELEV, IU. G., *see* Demenitskaia, R.M., & *others*. Itogi . . . zemnoĭ kory v Tsentral'noĭ Arktike . . . 1962. No. 70949

72821. KISELEV, IVAN ALEKSANDROVICH, 1881– . Novaia forma *Peridinium africanum* Lemm. iz Mezenskogo zaliva Belogo moria. (Akademiia nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy 1960. t.13, p.43-46, illus.) 3 refs. Text in Russian and Latin. **Title tr.:** A new form of *Peridinium africanum* Lemm. from the Mezen Bay of the White Sea.

Describes a new form found on the south shore similar to *P. tatricum* found in ponds of the Tatra Mts. The present form lives in brackish water. (DLC.)

72822. KISELEV, O. N. Ryby morskikh glubin; nablĭudeniia iz gidrostata. (Priroda, Dec. 1962. god 51, no.12, p.96-98, illus.) Ref. Text in Russian. **Title tr.:** Fishes of the ocean depths; observations from the hydrostat.

Reports on observations from a cylindrical diving device operated like Beebe's bathysphere, and lowered to a maximal depth of 600 m. Cod, haddock, herring, redfish, etc. are described, especially as to schooling and behavior in the Barents and Greenland Seas. (DLC.)

72823. KISELEV, V. Oplata truda okhotnikov-

kolkhoznikov. (Sel'skoe khoziaĭstvo Sibiri. Oct. 1962. god 7, no.10, p.80-81.) Text in Russian. **Title tr.:** Wages of hunter-farmers.

Outlines the pay system for hunters on collectives in the Evenki National District: in 1961, they averaged 2.07 rubles/day, approx. 70% the value of their catch. The average value of catch during the hunting season was 900-1100 r. for men, 500-600 for women. (DLC.)

72824. KISELEV, V. Puti uvelicheniia dobychi sobolia v Evenkii. (Okhota i okhotnich'e khoziaĭstvo, Sept. 1962. god 8, no.9, p.6-7.) Text in Russian. **Title tr.:** Ways of increasing the sable catch in Evenki Land.

The 1961 sable returns represented 81% of the value of all the skins from hunters of the Evenki (Tungus) National District; it was 42 times more than in 1941 and 4.5 times more than in 1951. The sable population of the district is estimated at 93-95 thousand, and the possible catch at 30-31 thousand annually, far more than is actually taken. Extension of trapping, more hunters, improvements in processing skins, and better equipment for the hunters are suggested as means of increasing the catch. (DLC.)

72825. KISELEVA, N. S. Vliianie skorosti zamorazhivaniia i ottaivaniia opukholevoĭ tkani na rost opukholi pri perevivke. (Biulleten' eksperimental'noĭ biologii i meditsiny, Apr. 1961. t.51, no.4, p.98-102, illus., tables.) 14 refs. Text in Russian. Summary in English. **Title tr.:** The effect of rate of freezing and thawing of tumor tissue on its growth in transplants.

Walker carcinosarcoma and Ehrlich's ascitic carcinoma showed best take upon transplantation after slow freezing and rapid thawing. Rapid freezing and slow thawing produced poorer results. (DLC.)

72826. KISHCHINSKIĬ, A. A. Ob izmeneniiakh v ornitofaune Kol'skoĭ tundry i rasselenii nekotorykh vidov ptits. (Problemy Severa, 1961, vyp.4, p.165-71, table.) 18 refs. Text in Russian. **Title tr.:** The changes in the avifauna of the Kola Tundra and in the distribution of some bird species.

Reviews the ornithological data from the Barents Sea coast between Teriberka and Gavrilovo (69°10'N. 35°10'E. – 69°11'N. 35°51'E.) and on the lower Teriberka and Voron'ya Rivers. In 1881-1892, 70 species were known. Comparisons are made with own observations of 1955-1957 when 86 species were found. The shore birds had declined from 58.8 to 51.1% of the population, birds of the open tundra also had decreased, while those of shrubby habitat had increased from 11.4 to 25.6%. These changes are explained by the warming of the Arctic. (DLC.)

72827. KISLIAKOV, A. G. Sviaz' gidrologicheskikh uslovii s kolebaniiami chislennosti pokoleniĭ treski. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ 1961. vyp.13, p.260-64, illus., tables.) Ref. Text in Russian. **Title tr.:** Connection between hydrological conditions and fluctuations in the size of cod generations.

Reviews conditions in the northeastern Atlantic, indicating that thermal conditions and the currents there are the main factors determining the size of the year-classes of cod in the Barents Sea. Thermal conditions affect primarily spawning and hatching; currents, the distribution of larvae and fry. (DLC.)

72828. KIVALO, E., *and* S. TALANTI. On the hypothalamic-hypophyseal neurosecretory system of the camel and the seal. Helsinki, 1962. 9p. illus. (Suomalainen Tiedeakatemia. Toimituksia: Annales Academiae scientiarum Fennicae, ser. A, V, Medica, No.89.) 16 refs.

Histochemical and histological study of material from nine seals and three camels, with comparative material from horses, cows and laboratory animals. The amount of neurosecretory substance varied only, though life conditions of these species differ greatly. (DLC.)

72829. KIVRIN, V. Vpervye zimoĭ. (Sovetskiĭ soiuz, 1961, no.12 (142), p.45-47, illus.) Text in Russian. **Title tr.:** For the first time in winter.

Photoreportage on the late fall 1961 navigation on the Northern Sea Route, mainly under escort of the atomic *Lenin* and the conventional icebreaker *Moskva:* river boat convoys to the Ob, Yenisey, and Lena, re-supply of wintering stations, setting up drifting station North Pole-10 and automatic weather stations, etc. Navigation in the Vil'kitskogo Strait was extended by 15-20 days, and the first ships reached the Laptevykh Sea ports 20-25 days earlier than usual. Navigation on the Yenisey continued through October. Some three hundred vessels of all classes and types were involved in the 1961 arctic traffic. (DLC.)

72830. KLAIN, GEORGE J., *and others.* Interrelationships of cold exposure and amino acid imbalances. (Journal of nutrition, Nov. 1962. v.78, no.3, p.359-64, tables.) 15 refs. *Other authors:* D.A. Vaughan *and* L.N. Vaughan.

Rats kept at 25°C. showed severe metabolic disorder when on an amino acid imbalanced diet. In a cold environment (7°C.) however, ingestion of such diet had no ill effect and the animals grew as well as controls. Moderate cold thus appears to correct amino acid imbalances. (DLC.)

KLAIN, GEORGE J., *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Vaughan, D.A., *& others.* Post-cold behavior riboflavin-deficient rats. 1962. No. 76356

72831. KLASSOV, N. V kraiu vulkanov. (Sovetskiĭ soiuz, 1961, no.2 (132), p.30-31, illus.) Text in Russian. **Title tr.:** In the land of volcanoes.

Photosketch of Klyuchevskaya Sopka with a panoramic aerial view of this volcanic range of Kamchatka. (DLC.)

72832. KLEIBER, MAX. Temperature responses and adaptations in domestic animals. *(In:* Symposia on arctic biology and medicine. Proceedings 1962, p.243-89, illus. tables.) 23 refs.

Reports study of a variety of animals, indicating that domestication has not basically changed the responses to heat or cold. The reaction to cold is an increase in metabolic rate, or, a more economical way: insulative cooling, lost in man except Australian aborigines. The main concern of the paper is heat-adaptation. (CaMAI.)

72833. KLEIN, DAVID B. The Alaskan mountain goat. (Alaska sportsman, Mar. 1961. v.27, no.3,

p.14-16, illus.) Alaska wildlife library no.11.

Describes its appearance, habits, and distribution in Alaska. The population of 12,000 - 14,000 is mostly in coastal mountains from Southeast Alaska to the Kenai Peninsula; northward and westward range extensions are indicated. This goat has many characteristics in common with Dall sheep, but differs in habitat because of different feeding habits. The wool is used in making Chilkat blankets. (DI.)

72834. KLEIN, DAVID B. The Sitka black-tailed deer. (Alaska sportsman, Sept. 1960. v.26, no.9, p.13-15, illus.)

Describes physical characteristics, breeding, predators, food habits, and management of *Odocoileus hemionus sitkensis*. The 150,000 (1958) population is distributed along the coast of Southeast Alaska, the Prince William Sound area, Kodiak and Afognak Islands. Deep snow hampers browsing, numbers fluctuate according to winter weather; and hunting limits and seasons are adjusted. In 1958, approx. 13,000 were taken by hunters. (DI.)

72835. KLEIN, R., *and* P. USHER. Effect of external cooling of the leg on muscle intracellular water and potassium. (Society for Experimental Biology and Medicine. Proceedings, Apr. 1961. v.106, no.4, p.784-87, table.) 10 refs.

Immersion of the rat's leg in a mixture of acetone and ice produced a rise of intracellular water in the muscle of that leg and a fall in potassium in the intracellular water. No change in muscle sodium was noted. (DLC.)

72836. KLEIN, RICHARD L., *and* M. L. EVANS. Effects of ouabain hypothermia and anoxia on cation fluxes in embryonic chick heart. (American journal of physiology, Apr. 1961. v.200, no.4, p.735-40, illus., tables.) 9 refs.

Of the three factors, hypothermia was found to inhibit equally K influx and efflux, between 30°and 20°C.; when 10°and 5°C. are reached, Q_{10}'s, for influx become greater than for efflux. Active transport of Na and K was insensitive to hypothermia. (DLC.)

72837. KLEINE, RALF M. The accident prevention program at Consolidated Discovery Yellowknife Mines Limited. (Canadian mining and metallurgical bulletin, Sept. 1962. v.55, no.605, p.659-63, illus., graphs, tables.)

Outlines general features of mine safety programs and describes that started in 1959 at this mine on Great Slave Lake: indoctrination of personnel, mine rescue and first-aid classes, etc. (DGS.)

72838. KLEĬNENBERG, SERGEĬ EVGEN'EVICH, 1909– . Izuchenie morskikh mlekopitaīushchikh v SSSR i osnovnye napravleniīa semiletnego plana issledovaniĭ. (Akademiīa nauk SSSR. Ikhtiologicheskaīa komissiīa. Trudy soveshchaniĭ 1961. vyp.12, p.7-13.) 21 refs. Text in Russian. **Title tr.**: The study of marine mammals in the USSR and the basic trends of the seven-year research plan.

Outlines Russian achievements in this field, particularly since the Revolution, and aims for the near future. These include research in new areas, in the Antarctic, North Atlantic and Western Arctic; migration of marine mammals over the oceans; biology and ecology of selected species (beluga, seals, walrus); and rational utilization of Caspian and Black Sea stocks. (DLC.)

72839. KLEIVAN, HELGE. Fridtjof Nansen som etnograf. (Naturen, 1961. årg.85, nr.7-8, p.447-61, 4 illus.) Text in Norwegian. **Title tr.**: Fridtjof Nansen as an ethnographer.

Reviews Nansen's publications and activities in behalf of primitive peoples, colonial regions, and underdeveloped nations. His concern for the disruption of the Greenland Eskimo way of life and the thesis of his *Eskimoliv* (No. 11982) were applicable to primitive and subject peoples generally. His efforts before the League of Nations mandate commission are briefly discussed. (DGS.)

72840. KLEIVAN, HELGE. Fridtjof Nansens "Eskimoliv", bakgrunn og perspektiv; i 100-året for hans fødsel. (Grønland, Dec. 1961, nr.12, p. 441-54, illus., port.) Text in Norwegian. **Title tr.**: Fridtjof Nansen's *Eskimoliv*, background and perspectives; on the centenary of his birth.

Reviews Nansen's experiences in and around Godthåb, West Greenland, during his wintering there after crossing the icecap in 1888. He took an active part in Eskimo life, and made ethnographical investigations, though some of his theories have been discredited. Nansen admired the Eskimo culture and regarded the contact with European civilization as a disaster. His *Eskimoliv* (No. 11979, 11981-82) was intended to draw attention to the plight of the native peoples, not to attack Denmark. (DLC.)

72841. KLEIVAN, HELGE. Økologisk endring i Labrador. (Naturen, 1962. årg. 86, nr.4, p.200-213, diagr.) Text in Norwegian. **Title tr.**: Ecological change in Labrador.

Discusses changes in Eskimo life as result of introduced cultural and commercial factors, beginning with the Herrnhut mission in 1771. Two basic ecological elements were the advent of individual-family wooden houses with wood-burning stoves to supersede communal, traditional houses of stone and sod, heated with oil lamps; and the beginning of hunting small fur-bearing animals for commerce. Both elements involved increased transport, feeding greater numbers of dogs, and more time spent working. The effects on two communities are described in detail. Killinek in northern Labrador has been deserted by many of its former inhabitants. At Hebron, much farther south, dependence upon imported fuel has resulted in evacuation by government order. (DGS.)

72842. KLEIVAN, INGE. Digteren B.S. Ingemann og Grønland. (Grønland, July 1961, nr.7, p.241-69, illus., ports.) Text in Danish. **Title tr.**: The poet B.S. Ingemann and Greenland.

Analyzes this Danish writer's novel about Greenland, *Kunnuk og Naja eller Grønlaenderne* pub. in 1842 (copy in DLC), noting his sources, chiefly E. Saabye's *Brudstykker af en dagbog, holden i Grønland 1770-80*, cf. No. 15099-15100. Some misconceptions of natural conditions and native life are pointed out, also the numerous songs in Greenlandic style. The book has helped make Greenland and its people known, although it unduly romanticized them. Other works by Ingemann translated into Greenlandic are mentioned, as are certain problems of translation. (CaMAI.)

72843. **KLEIVAN, INGE.** The swan maiden myth among the Eskimo. København, Munksgaard, 1962. 49 p. (Acta arctica, fasc. 13.) 67 refs.

Contains a comparative study based on 41 Eskimo and one Chukchi myths. There is essential resemblance between the variants and a hypothetically basic form is derived. The genetic relationship between the Eskimo variants and the Old World swan maiden myths seems beyond doubt, but precisely when and where the Eskimo version developed cannot be determined. How it has been adapted to the various narrators' cultural backgrounds and natural environments is demonstrated. The majority of the variants accurately reflect specific local conditions. (CaMAI.)

72844. **KLEMM, ANTAL.** Mehrgliedrige Satzteile. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . p.231-32.) Refs. in text. Text in German. **Title tr.:** Multi-member phrases.

Discusses the repetitive use of the predicate in Nenets (Yurak-Samoyed), Selkup (Ostyak-Samoyed), Ostyak, and Vogul: a pre-agglutinative stage of Finno-Ugric languages. (DSI.)

72845. **KLENOV, E. P.** Stratigrafiia tretichnykh otlozhenii zapadnoi Kamchatki. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.151-54.) Text in Russian. **Title tr.:** Stratigraphy of Tertiary deposits of western Kamchatka.

Notes recent geologic mapping, drillings and geophysical investigations in the area, and explains the present stratigraphic division of Tertiary deposits. Various series and subseries are briefly reported, noting their lithologic properties, thickness and some fauna. (DLC.)

72846. **KLENOV, V. I.** "Kamennye tsvety" na Chukotke. (Moskva. Universitet. Vestnik, ser.5, geografiia, Nov.-Dec., 1962, no.6, p.78, illus.) Text in Russian. **Title tr.:** "Stone flowers" on Chukotka.

Describes an unusual form of microrelief observed in the eastern part of the Chukchi Peninsula. On a flat surface covered with stone placers, flower-like fragments of granites are found. Their forms, sizes, etc. are described. These fragments are not of bedrock. (DLC.)

72847. **KLENOVA, MARIIA V.** Proiskhozhdenie rel'efa dna Barentseva morfa. (Voprosy geografii, 1961. sbornik 52, prikladnaia geomorfologiia, p. 165-76, maps.) 35 refs. Text in Russian. **Title tr.:** Origin of the Barents Sea bottom relief.

Reviews recent studies, own and others', on the formation of bottom relief, bathymetry, regional division, tectonics, and bottom sediments. The main forms of bottom relief are characterized. (DLC.)

72848. **KLEPPEN, MATHIS.** Lauvtreressursene i vare viktigste barskogområder. Oslo, 1959. 19 p. tables. (Skogindustrienes økonomiske institut. Informasjon B, nr.15.) 5 refs. Text in Norwegian. **Title tr.:** Hardwood supplies in our main softwood districts. A summary was listed as No. 65726.

Presents tabulated data, with explanatory text, on hardwood currently available in East and South Norway, Trøndelag and Helgeland, on distribution by species (mostly birch), quality classification; also the amount probably available in coming years and suitable for industrial purposes. Calculations are based on revised forest inventory statistics and quality investigations made on location. (DA.)

KLEPPEN, MATHIS, *see also* Schleistrøen, A. Prognoser . . . 1961. No. 75414

KLER, M. M., *see* Kukharenko, A.A., & M.M. Kler. K geokhimii skandiia . . . 1962. No. 73194

72849. **KLEVITS, S. S.,** *and* **IU. V. MUKHIN.** Primenenie elektrorazvedki pri poiskakh podzemnykh vod v usloviiakh mnogoletnei merzloty. (Razvedka i okhrana nedr, May 1961. god 27, no.5, p.47-49, graphs.) Text in Russian. **Title tr.:** Application of electric prospecting to search for ground water in permafrost conditions.

Recommends this method where the field-work period is short and hydrogeologic prospecting difficult. By the electric method, the area of covered talik, to be used for water supply, is determined. (DLC.)

KLICK, DONALD W., *see*

Kingery, W.D. . . . Project Ice Way. 1962. No. 72796

Needleman, S.M., & *others.* Evaluation of an arctic ice-free land site . . . 1961. No. 74245

72850. **KLIMASZEWSKI, MIECZYSŁAW.** Studia geomorfologiczne w zachodniej części Spitsbergenu między Kongsfjordem a Eidem-bukta. Kraków, 1960. 168 p. 70 illus. on 38 plates. (Kraków. Uniwersytet Jagielloński. Prace geograficzne, zesz 1.) Text in Polish and English. **Title tr.:** Geomorphic studies of the western part of Spitsbergen between Kongsfjorden and Eidembukta.

Reports results of work in 1938 as participant in the First Polish Glaciological Expedition to Spitsbergen. The development of glacial and periglacial processes, origin of glacial and periglacial forms and deposits were investigated in the region 78°58′-79°20′N., including the Brøgger Peninsula and the bays Engelskbukta, S. Jonsfjorden, and Eidembukta. The course of morphogenetic processes in frontal and border glaciers had particular attention: their formation of moraines, marginal valleys, kames, sandrs, and other glacial forms. Detailed account is given of the geomorphology of mountains, plains and glaciers. Glacial and periglacial areas are characterized in detail, including their deglaciation, fossil ice development, solifluction and other phenomena. (DLC.)

KLIMCHUK, S., *see* Verkhoturov, M., & S. Klimchuk. Tysiachniki v Kondinskoi taige. 1961. No. 76376

72851. **KLIMENCHENKO, IU.** Atomokhod za rabotoi. (Neva, 1961, no.9, p.217-18, illus.) Text in Russian. **Title tr.:** Nuclear ship in service.

Notes 40 river boats navigated the ice-jammed Laptev Sea to the Lena Sept. 20-Oct. 1, 1960, in convoy of seven icebreakers. The superior performance of the nuclear *Lenin*, Capt. Pavel Akimovich Ponomarev, is stressed. (DLC.)

72852. **KLIMOVA, I. G.** Verkhneiurskie ammonity Zapadno-Sibirskoi nizmennosti. (Sibirskii nauchno-issledovatel'skii institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaia geologiia, 1961. vyp.15, Materialy po paleontologii i stratigrafii Zapadnoi Sibiri, p.13-28, text map, plates.) 18 refs. Text in Russian. **Title tr.:** Upper Jurassic ammonites of the West Siberian plain.

Presents a systematic description of 14 forms found in the course of drilling, some of it in the lower Ob region. For each, the material found, its features, comparison, stratigraphic position, and distribution, are stated: gen. *Cardioceras, Amoeboceras, Prorasenia,* etc. are represented. (DLC.)

72853. KLINEBURGER, CHRIS. Trophy walrus. (Alaska sportsman, July 1962. v.28, no.7, p.14-18, illus.)

Recounts experiences while hunting walrus in May 1961 from the Eskimo village of Savoonga on St. Lawrence Island, Alaska. Hunting methods, a drum dance, and preparation of walrus hides to make an umiak are described, with photos by S. Gillsater. (DI.)

72854. KLINOV, FILIPP IAKOVLEVICH. Nekotorye osobennosti tverdoĭ fazy vody v atmosfere pri nizkikh otritsatel'nykh temperaturakh vozdukha. (Leningrad. Glavnaia geofizicheskaia observatoriia. Trudy 1960. vyp.104, p.46-52, illus., tables, graphs.) 2 refs. Text in Russian. **Title tr.:** Some features of solid phase water in the atmosphere under low negative air temperature.

Reports observations in Verkhoyansk during 1952-1954 on the formation and evaporation of ice in air of −35° to −58°C. Condensation of water vapor, formation and shapes of snowflakes and ice crystals, size, and forms of ice crystals, their structural features, relative stability, etc. are described. Forecasting of weather from forms of snowflakes and snow crystals is briefly noted. (DLC.)

72855. KLINOV, FILIPP IAKOVLEVICH. Opticheskie iavleniia na ledianykh kristallakh. (Leningrad. Glavnaia geofizicheskaia observatoriia. Trudy 1961. vyp.109, p.100-113, illus., table) 3 refs. Text in Russian. **Title tr.:** Optical phenomena in ice crystals.

Describes various forms of halos and meteorological conditions for their occurrence, as observed through ice crystal clouds at Verkhoyansk over many years. Various forms of the crystals are described and illus. The optical phenomena are depicted in 26 forms. Temperature, atmospheric pressure, relative and absolute humidity, also its deficit are noted. (DLC.)

72856. KLINOV, FILIPP IAKOVLEVICH. Voda v atmosfere pri nizkikh temperaturakh. Moskva, Izd-vo Akademii nauk SSSR, 1960. 170 p. illus., tables, graphs, diagrs. 146 refs. Text in Russian. **Title tr.:** Water in the atmosphere at low temperatures.

Describes the different phases and crystal forms of atmospheric moisture in the temperature range −35° to −58°C., on the basis of experiments on the direct crystallization of water vapor under field conditions, in the vicinity of Verkhoyansk. The classification and grouping of ice crystals, aspects of the crystallization of water vapor, structure and growth of ice crystals, crystallization on fine wires and glass, structure of ice fogs, and characteristics of related atmospheric and optical phenomena and their reproduction are dealt with in turn. Numerous photographs of ice crystals are included.—From CRREL. (DLC.)

72857. KLIORINA, I. S., 1915– . Prokopii Nesterovich Sokol'nikov i ego perepiska s L.N. Tolstym. (Yakutsk. Universitet. Uchenye zapiski, 1960. vyp.7, seriia obshchestvennykh nauk, p.49-80, port.) Refs. Text in Russian. **Title tr.:** Prokopii Nesterovich Sokol'nikov and his correspondence with L.N. Tolstoy.

Tribute to Dr. Sokol'nikov, 1865-1917, first Yakut physician (who saved life of the author when a child), and an evaluation of his humanitarian activities and high moral qualities. His service, professional and personal, to the indigenous population and political exiles is described. His letters to Tolstoy, some unpublished, express his philosophical, etc. views and depict local health conditions and social problems, the scarcity of medical help, political trends, etc. (DLC.)

72858. KLITSUNOV, V. I. Rezul'taty povysheniia otvetstvennosti za bezopasnost' truda. (Bezopasnost' truda v promyshlennosti, Aug. 1962. god 6, no.8, p.11-12.) Text in Russian. **Title tr.:** The results of increased responsibility for labor safety.

Reports on the improvements of safety conditions in mines of the Vorkutugol' Combine, as result of administrative and technical reorganization. Also greater responsibility has been laid on the personnel for violation of safety regulations, after several accidents in these mines in 1961. Great improvements are claimed during the six-month safety campaign in 1962: transportation, aeration and ventilation, ground-water drainage, electric power supply, and maintenance of the worked-out shafts, etc., all are improved; and fatal accidents have decreased 30%. (DLC.)

72859. KLIUGE, GERMAN AVGUSTOVICH, 1871–1956. Spisok vidov mshanok, Bryozoa, dal'nevostochnykh morei SSSR. (Akademiia nauk SSSR. Zoologicheskii institut. Issledovaniia dal'nevostochnykh morei SSSR, 1961. vyp.7, p.118-43, illus.) Text in Russian. **Title tr.:** List of species of Bryozoa from the Far-Eastern seas of the USSR.

Lists 223 forms from 70 years' collections: 1879-1949, with notes on locations and geographic range, and depth of occurrence. The Bering, Okhotsk and Chukchi Seas harbor these invertebrates. (DLC.)

72860. *KLUB.* Nashi interv'iu. (Klub, Jan. 1961. god 10, no.1, p.12-14, 23.) Text in Russian. **Title tr.:** Our interviews.

Sketches the cultural and educational events at Mirnyy, Noril'sk, and in the Magadan Province: plays, ballet, music, lectures, sports, etc. (DLC.)

72861. *KLUB.* Pochin kul'trabotnikov Arkhangel'ska. (Klub, Mar. 1961. god 10, no.3, p.5.) Text in Russian. **Title tr.:** Enterprising spirit of cultural workers of Arkhangel'sk.

Describes the organization of lectures, reading groups, amateur theatricals, etc. for industrial workers and farmers. (DLC.)

72862. KLUBOVA, T. T. O genezise melovykh glin Zapadno-Sibirskoĭ nizmennosti. (Akademiia nauk SSSR. Doklady, Mar. 1, 1961. t.137, no.1, p.182-83.) 2 refs. Text in Russian. **Title tr.:** On the genesis of Cretaceous clays in the West Siberian lowland.

Reports on lithologic and mineralogic investigations of clayey rocks from Berezovo, Khanty-Mansiysk and Omsk key wells. The clay minerals are of detrital origin, and were formed by weathering of the source rocks. The hydromica

group are the main rock-forming minerals. Kaolinite is a steady and significant admixture in the Lower and beidellite in the Upper Cretaceous. An allothigenic origin of these minerals is discussed. (DLC.)

72863. KLUMOV, S. K. Belukha Sovetskogo Severa; syr'evaia baza i promysel. (Moskva. Vsesoiuznyi nauchno-issledovatel'skii institut morskogo rybnogo khoziaistva i okeanografii. Trudy 1939. t.12, 79 p. illus., tables, maps.) 37 refs. Text in Russian. Summary in English. **Title tr.:** The white whale of the Soviet North; stock and exploitation.

Comprehensive study of the beluga, dealing (p.4-22) with its taxonomy, the White Sea population, its distribution, movements, feeding grounds, and its stock in the southern part of the Sea; similar aspects of the beluga in the Kara Sea, also some information on the Barents and Laptev Seas. Pt. 2 (p.23-72) covers the exploitation, past and present; whaling gear and methods; modernization of methods; conservation, etc. (DLC.)

72864. KNAPP, DAVID GOODWIN, 1907– Some features of magnetic storms in high latitudes. (Journal of geophysical research, July 1961. v.66, no.7, p.2053-85, tables, graphs, maps.) 18 refs.

Discusses a disturbance named "cusped bay", observed in high latitudes during severe magnetic storms and characterized by a marked displacement of the recorded trace, coupled with augmented short-period fluctuations. Several of these events recorded during the IGY, some with amplitudes approaching 2000 γ, were measured on magnetograms and plotted on maps as equivalent overhead current vectors. They show some of the characteristics of systems based on hourly-value changes during storms. The study of cusped bays is recommended as a supplement to the use of hourly values and a means of probing details of magnetic activity. A catalog of IGY storms (by D.G. Knapp and E.B. Fabiano) is appended.–From author's abstract. (DLC.)

KNAPP, DAVID GOODWIN, 1907– , *see also* Nelson, J.H., & *others*. Magnetism earth. 1962. No. 74288

KNAUSS, JOHN A., *see* Pacific Science Congress. 1961. No. 74619

72865. KNEZHEVICH, R. M. Teplovoĭ potok s raznykh uchastkov poverkhnosti tela pri raznykh temperaturakh okruzhaiushcheĭ sredy. (Gigiena i sanitariia, July 1961. god 26, no.7, p.58-61, tables.) 4 refs. Text in Russian. **Title tr.:** Heat flow from various parts of the body surface at different environmental temperatures.

Reports study of conditions at 25, 21, and 5°C. At low (and high) temperatures, greatest changes in heat flow were noted on the face, hands and soles; the least from (lightly dressed) chest and belly. (DLC.)

72866. KNIAZEV, S. A., *and* B. I. TARBAEV. Novye dannye po geologii grady Chernysheva. (*In:* Materialy po geologii . . . Evropeĭskoĭ chasti SSSR, sbornik statei 1961, vyp.1, p.23-33, map, cross-section.) 12 refs. Text in Russian. **Title tr.:** New data on the geology of Chernysheva Ridge.

Reports the stratigraphy and tectonics of this ridge (66°30'N. 60°E.) in the Polar Ural, from recent studies and geologic mapping of the area. Ordovician(?), Silurian, Devonian, Carboniferous, Permian, Triassic and Jurassic deposits are described, noting the fauna identified. The tectonic structure is analyzed. Chernysheva is considered to have anticline type of structure and its main features are described. (DLC.)

72867. KNIGHT, CHARLES A. Polygonization of aged sea ice. (Journal of geology, Mar. 1962. v.70, no.2, p.240-46, plates, diagrs.) 18 refs. Washington. University. Dept. of Meteorology and Climatology. Contribution no. 58; Office of Naval Research Project 307 252, Contract Nonr-477(24).

Describes and explains features in arctic pack ice, one-three yrs. old, from observations of specially prepared thin sections at Drifting Station Charlie (77°30'-78°N. 170°-175°W.) during fall 1959 and at the Arctic Research Laboratory, Barrow, Alaska, in winter and spring 1960. Polygonization is related to internal stress. The subboundaries of the polygonization structure are accounted for by dislocation phenomena and by the freezing of brine in tapering internal fractures. Movement of subboundaries in ice under stress is illustrated. Effects of polygonization on the purification and mechanical properties of sea ice are noted.–From author's abstract. (DGS.)

72868. KNIGHT, CHARLES A. Studies of arctic lake ice. (Journal of glaciology, Oct. 1962. v.4, no.33, p.319-35, illus., graphs, diagrs.) 17 refs. Summaries in French and German.

Discusses possible causes of preferred crystal orientation in fresh-water ice based on presented data of ice orientation as studied in Ikroavik, Imikpuk and Malikpit Lakes near Barrow, also Peters, and Shrader Lakes in the Brooks Range, northern Alaska. Initial ice orientations are evidently determined by wind conditions. Orientation selection during growth at the bottom of the ice also takes place, but in the lake ice examined, it appears to be largely unsystematic. Constitutional supercooling can cause c-axis horizontal orientations. Striations are locally significant but lack uniformity. (DLC.)

72869. KNIGHT, W. E., *and others*. Response requirements for military radiacs, I; the effects of arctic conditions on the performance of Navy radiacs. San Francisco, Aug. 29, 1961. 33 p. illus., graphs, table. (U.S. Naval Radiological Defense Laboratory. USNRDL-TR-524.) Refs. *Other authors:* D.H. Williams *and* H.R. Wasson.

Summarizes results of a survey of simulated arctic operating conditions to determine the factors applicable to radiac design. Enduring cold and windchill are considered most prejudicial to operation of this portable, water-tight, battery-operated radiation detector and indicator; it is not dependable for extended periods in winter unless special precautions as to simple thermal insulation, use of proper dry cells, careful battery check, etc. are taken. (DGS.)

72870. KNOLL, CLARA GALBRAITH. The Kuskokwim. (Alaska sportsman, Nov. 1960. v.26, no. 11, p.30-31, +, illus.)

Describes this Alaskan river valley: its history, landscape, industry including the Red Devil mercury mine, and villages, Bethel, at the head of ocean-going navigation, with approx.

1000 population, the largest. Trapping, especially for beaver, and fishing are the main means of livelihood for the Eskimo and Indian inhabitants. Agricultural and tourist potentialities of the valley are noted. (DI.)

72871. KNOPOFF, L. Analytical calculation of the fault-plane problem. (Canada. Dominion Observatories. Publications 1961. v.24, no.10, p. 309-315, graphs, table.) 6 refs. Paper presented at the Symposium on Earthquake Mechanism, Helsinki, 1960. *Also issued as:* California. University. Institute of Geophysics, Pub. no.203.

Presents an example of a machine-calculated solution to the fault-plane problem, i.e., maximization of a certain probability function, in the Mount Fairweather earthquake of July 10, 1958. Use of the preliminary epicenter accounts for minor discrepancies in two calculations, but author's calculated first motions agree with Stauder's visual results as reported in No. 68480. (DLC.)

72872. KNOPOFF, L. Statistical accuracy of the fault-plane problem. (Canada. Dominion Observatories. Publications 1961. v.24, no.10, p.317-19, graphs.) 3 refs. Paper presented at the Symposium on Earthquake Mechanism, Helsinki, 1960. *Also issued as:* California. University. Institute of Geophysics, Pub. no. 204.

Shows, by numerical example of the Mt. Fairweather earthquake of July 10, 1958, that the statistics of the probability function used in the analytical calculation of the fault-plane problem are approximately the same as that of a gaussian distribution function. (DLC.)

72873. KNORRE, K. G., *and others.* Vozrast gornykh porod Aldanskogo shchita po dannym argonovogo metoda. (Akademiîa nauk SSSR. Komissiîa po opredeleniîu absoliûtnogo vozrasta geologicheskikh formaſsiĭ. Trudy sessii 10, 1961 *pub.* 1962, p.249-52, table.) 2 refs. Text in Russian. *Other authors:* A.I. Tugarinov, E. ÎA. Gavrilov, *and* V.L. Zverev. **Title tr.:** Age of rocks of the Aldan shield according to data by the argon method.

Reports absolute age determination of twelve samples collected in the metamorphosed rocks of the Aldan shield. The age of micas determined by argon method varies between 160 and 2205 million yrs. Data are compared with age determination of same rocks by the lead method. (DLC.)

72874. KNORRING, O. Kurs na Ledovityĭ. (Ogonëk, Sept. 1962. god 40, no.37, p.9-11, illus.) Text in Russian. **Title tr.:** Toward the Arctic Ocean.

Journalist's account of a summer 1962 trip by steamer from Krasnoyarsk to Dudinka, thence by railroad to Noril'sk, and return. The travel facilities, impressions of Dudinka, Noril'sk, Igarka, Turukhansk and other towns, the Igarka permafrost station, the workmen, engineers, etc. he met are described. (DLC.)

72875. KNORRING, O. Po putîam i polustankam. (Ogonëk, Jan. 1961. god 39, no.2, p.20-22, illus.) Text in Russian. **Title tr.:** On the road and at whistle stops.

Sketches life of a four-man team of entertainers presenting movies, talks, music, etc., in a railroad car along the Severnaîa (Pechora) Railroad; reaction of audience, life of railroad personnel, etc. (DLC.)

KNOWLES, DAVID M., *see* Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

KO, E. S., *see* Padhi, R.K., *& others.* Deep hypothermia & extracorporeal circ. 1961. No. 74621

72876. KOBEŤS, N. V. Primenenie aėrometodov pri poiskakh kimberlitovykh tel v Daldynskom almazonosnom raĭone ÎAkutii. (*In:* Akademiîa nauk SSSR. Laboratoriîa aėrometodov. Primenenie aėrometodov pri poiskakh . . . almazov, 1960, p.19-46, illus., maps, plates.) 9 refs. Text in Russian. **Title tr.:** Application of aerial methods to the search for kimberlite bodies in the Daldyn diamond-bearing region of Yakutia.

Reviews the geologic characteristics of the region, noting Lower Paleozoic carbonate rocks, igneous and Quaternary deposits. Tectonic structure of the region is also sketched. Prospecting for kimberlite pipes using air photography, aerial magnetic and ground magnetic survey is described. Interpretation of relief, river net, vegetation, geologic structure and other features is outlined. Results of this kind of prospecting in D'aakhaa Creek (left tributary to the Daldyn), Kient-Yuryakh Creek and Sytykan River region are reported in greater detail. The combination of aerial and ground methods promises the best results in kimlite prospecting. (DLC.)

72877. KOBÎAKOVA, Z. I. Osobennosti sostava, raspredeleniîa i produktivnosti donnoĭ fauny Onezhskogo zaliva Belogo moriîa. (Leningrad. Universitet. Nauchnyĭ bîulleten' 1949. no.23, p.27-31, table.) 4 refs. Text in Russian. **Title tr.:** Characteristics of the composition, distribution, and productivity of the bottom fauna in the Onega Bay, White Sea.

Discusses the salinity (low), and temperature (relatively high) of the Bay; its lack of high arctic forms, and benthic forms new for the area; biomass at different levels is reported and compared with that of the White Sea; main components of benthos are stated. (DLC.)

72878. KOBLENŤS, ÎA. P. The recent destruction of Semenovskii Island. Translated by B.J. Hobson. Boston, Mass., Feb. 1961. 2p. illus. (American Meteorological Society. Translation T-R-350.)

English translation of No. 59248. (CaMAI.)

72879. KOCH, LAUGE, 1892– Journeys and expeditions to Greenland in the years 1913-59: a summary. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.293-98, map.) Refs.

Notes briefly in turn his thirty-odd expeditions; the early journeys to North Greenland in 1913-1923; expeditions to the east coast in 1926-1939, and those of 1947-1958. Geologic mapping of the area 72° - 76°N. has been completed; material is ready for a geologic outline map from 76°N. through Peary Land; about one-third of the Scoresby Sund region 70° - 72°N. has been mapped. Nearly all the scientific results have been published in *Meddelelser om Grønland,* including 14 papers from the north-coast expeditions and 217 papers from those on the east coast; others are in preparation. (DLC.)

72880. **KOCH, LAUGE,** 1892– . Precambrian and Early Palaeozoic structural elements and sedimentation: North and East Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961, v.1, p.148-54, maps.)

Summarizes results of 24 expeditions; dealing mainly with the Precambrian sediments found in three distinctly developed geosynclines: the northwest (eastern part of the Innuitian), Archean rocks exposed in the Thule District and Inglefield Land; the northeast, Archean Shield exposed in Victoria Fjord and Dronning Louises Land; and the central east, Archean shield exposed in Dronning Louises Land and southwest Scoresby Sund. Map shows extent of the three geosynclines, indicates their theoretical boundaries under the Inland Ice; also shows zones of Caledonian folding. (DLC.)

72881. **KOCH, WALTER.** Relationship between air temperature and mean radiant temperature in thermal comfort. (Nature, Nov. 10, 1962. v.196, no. 4854, p.587, table.) 7 refs.

Analysis of this relationship with groups of 6-8 persons exposed to air temperature about equal, higher, or lower (down to 15.3°F.) than the mean radiant temperature. It is calculated "that an increase of 1°F. in air temperature can be compensated by a decrease of 1.39°F. in mean radiant temperature and vice versa." (DLC.)

72882. **KOCHETKOV, O. S.** K mineralogii i geokhimii titana v devonskikh otlozheniiakh severnogo Timana. (*In:* Akademiia nauk SSSR. Komi filial. Geologicheskii institut. Materialy . . . 1961, p.83-85.) Text in Russian. **Title tr.:** On the mineralogy and geochemistry of titanium in the Devonian deposits of northern Timan.

Titanium mineralization is detected in Devonian terrigenous-detrital deposits, 15 m. thick. Titanium-containing minerals are: ilmenite, leucoxene, brookite and anatase. The highest, and productive, concentration is expected in the basal stratum in fine-grained sandstones. (DLC.)

72883. **KOCHETKOV, T. P.** Vozniknovenie i istoriia razvitiia osnovnykh strukturnykh elementov severa TSentral'noi Sibiri. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei . . . vyp.16, 1961, *its:* Trudy t.123, p.85-94.) 9 refs. Text in Russian. **Title tr.:** Formation and development history of the main structural elements in north-central Siberia.

Deals with the stable unit within an orogenetic system i.e. northern part of the Siberian platform, and with the folded frame of this platform, viz the Turukhan zone of folds, Taymyr folded area and Verkhoyansk - Kolyma folded zone. Origin, development and tectonic history of these structures are interpreted. (DLC.)

72884. **KOCHETKOV, V. M.** O seismicheskom raionirovanii territorii IAkutii. (Geologiia i geofizika, 1962, no.5, p.97-106, maps.) 22 refs. Text in Russian. Summary in English. **Title tr.:** On seismic zoning of the territory of Yakutia.

Reports the 1958-1960 investigations of the Yakutsk seismic station. A new map of seismic intensity for Yakutia is presented and its main features described. The area is divided into two zones: a western one of insignificant seismicity, and an eastern of higher seismicity. (DLC.)

72885. **KOCHEVYKH, V. P.** Vliianie osadkov na golodnyi obmen u lugovykh trav v Zapoliar'e. (Akademiia nauk SSSR. Izvestiia, ser. biologicheskaia, 1962, no.2, p.220-29, tables.) 20 refs. Text in Russian. Summary in English. **Title tr.:** Effect of precipitation upon the starving metabolism of meadow grasses in the Arctic.

Account of studies conducted at the Nar'yan-Mar agricultural station and elsewhere on the lower Pechora. Due to specific local conditions, an increase in dry matter may occur in cut grass, due to continued photosynthesis. Also precipitation especially dew, may produce succulent and nutritive hay. (DLC.)

KOCHEVYKH, V. P., *see also* Karev, G.I., & V.P. Kochevykh. O soderzhanii askorbinovoi kisloty . . . 1962. No. 72660.

KØBENHAVN. UNIVERSITET. *see* Universitetets Arktiske Station.

72886. **KOENIG, LAWRENCE S.** A review of studies relating meteorological parameters to snow conditions on the Greenland Ice Cap. Bedford, Mass., Feb. 1962. iii, 8p. graphs, tables. (U.S. Air Force. Cambridge Research Laboratories GRD. Research notes no.79, AFCRL-62-259.) 15 refs.

Resupply missions to DEW Line sites on the Greenland Inland Ice land on unprepared landing strips. Six-hr. weather observations are regularly sent to the launch point, Søndrestrøm Air Base, but site personnel make no snow observations hence forecasting snow surface conditions at these sites is difficult. Literature search yields meagre pertinent information on correlation of snow surface and weather conditions. Snow and micrometeorological observations are to be made at the sites, for one year, and these data reduced. (DWB.)

KOERNER, R. M., *see* Apollonio, S., & *others.* Devon I. Exped. 1961. No. 69832

KÖVER, GYÖRGY, *see*

Hársing, L., & *others.* Hypothermia . . . 1961. No. 72048

Hársing, L., & *others.* Hypothermia . . . inulintérre. 1961. No. 72050

Hársing, L., & *others.* Hypothermia . . . kicserélödésére. 1961. No. 72049

72887. **KÖVESI-ANDRÁSSY, MAGDA.** Das Infinitiv-Bildungsuffix ung. *-ni* im Spiegel der verwandten Sprachen. (Suomalais ugrilainen seura. Aikakauskirja, 1960. v.62, no.2, p.1-26.) Refs. Text in German. **Title tr.:** The Hungarian infinitive-forming suffix *-ni* in the light of related languages.

Comparative grammatical analysis of verbal noun suffixes and their functions in Zyryan and Vogul. (DLC.)

72888. **KOGARKO, L.N.** O beskhlornom shairerite nefelinovykh sienitov Lovozerskogo massiva; Kol'skii poluostrov. (Akademiia nauk SSSR. Doklady, July 11, 1961. t.139, no.2, p.435-37, tables, graphs.) 13 refs. Text in Russian. **Title tr.:** On chlorine-free schairerite from nepheline syenites of the Lovozero massif, Kola Peninsula.

Describes mode of occurrence, physical prop-

erties and chemical analyses of this mineral, first described from California by W.F. Foshag. There it contains 3.44% chlorine, whereas the Lovozero massif schairerite has only 0.02%; other differences due to different conditions of origin are noted also. (DLC.)

72889. KOGARKO, L.N. Osobennosti raspredeleniia ftora v nefelinovykh sienitakh Lovozerskogo massiva, Kol'skiĭ poluostrov. (Geokhimiia, 1962, no.4, p.318-29, tables, diagr.) 24 refs. Text in Russian. Summary in English. **Title tr.:** Features of fluorine distribution in nepheline syenites of the Lovozero massif, Kola Peninsula.

Reports on laws of fluorine distribution, based on study of 95 samples of various rocks deposited in three main intrusive phases. Average content in the massif is 0.14%; concentration varies: 0.21% in the first phase, 0.12% in the second, and 0.18% in the third. The fluorine-bearing minerals vary according to the chemical features of the alkaline rocks. (DLC.)

72890. KOGARKO, L.N. Usloviia obrazovaniia villiomita v nefelinovykh sienitakh, Lovozerskiĭ massiv. (Geokhimiia, 1961, no.1, p.72-74, graphs.) 9 refs. Text in Russian. Summary in English. **Title tr.:** The conditions of villiaumite formation in nepheline syenites, the Lovozero massif.

Reports on the occurrence and distribution of this mineral in the alkaline rocks of the massif. Its crystallization conditions are analyzed. The stability of crystalline alkaline halides in the presence of water vapor is noted. Excess of alkalies and high content of volatile constituents are considered the main conditions for villiaumite occurrence. An attempt is made to explain its presence and the absence of halite in the nepheline-syenites of this massif of Kola Peninsula. (DLC.)

KOKHANCHIK, K.L., *see* Riabokon', N.F., & *others.* Ugli . . . 1962. No. 75123

KOKKONEN, AILA, *see* Koponen, T., & *others.* Spring migration . . . lemming. 1961. No. 72953

72891. KOKORIN, R.G. Vekovoĭ khod magnitnykh ėlementov po dannym sovetskikh magnitnykh políarnykh observatoriĭ. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1962. t.241, Geofizicheskie issledovaniia . . . vyp.4, p.109-114, graphs, tables.) Text in Russian. **Title tr.:** Secular variation of magnetic elements according to the data of Soviet magnetic polar observatories.

Presents variation data 1933-1959 from geomagnetic records of the stations at Bukhta Tikhaya, Matochkin Shar, Ostrov Dikson, Mys Chelyuskin, Bukhta Tiksi, and Uelen. The mean year values of declination, horizontal, and vertical components for all day were used for obtaining the regularities due to the secular variation in the values of magnetic elements. (DLC.)

72892. KOKSHARSKAIA, K. B., *and* **G. P. ABAIMOVA.** O faune Tabulata paleozoĭskikh otlozheniĭ tsentral'noĭ chasti khrebta Tas-Khaíakhtakh, IAASSR. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniia 1962. vyp.7, geologiia, p.11-38, tables incl. fold., plates.) 28 refs. Text in Russian. **Title tr.:** Tabulata fauna of Paleozoic deposits in the central part of the Tas-Khayakhtakh Ridge, Yakut ASSR.

Reports on Ordovician, Silurian and Devonian tabulate corals collected on the Dogdo and Solon'ya basins in 1957-1959, the first time in the Tas-Khayakhtakh Ridge. Of 57 species identified, systematic description is given for 16; four species are new: *Mesofavosites lezoevi, Favosites ruchini, F. dogdoensis,* and *Syringopora kaschirzevi;* one subspecies also is new. Stratigraphic division of carbonate deposits according to tabulata is given. (DLC.)

KOKUBUN, SUSUMU, *see* Nagata, T., & *others.* Similarity magnetic disturbance. 1962. No. 74206

KOLBE, R. W., *see* Fromm, E., & *others.* Interglacial peat . . . near Luleå . . . 1960. No. 71520

KOLEGOVA, NINA ANDREEVNA, *see* Akademiia nauk SSSR. Komi-russkiĭ slovar'. 1961. No. 69581

KOLESNIK, Z. A., *see* Motovilov, P. I., & Z. A. Kolesnik. O mikroflore vod . . . 1961. No. 74132

72893. KOLESNIKOV, A. Sever bol'shikh skorosteĭ. (Grazhdanskaia aviatsiia, Dec. 1961. god 18, no.12, p.16-17, illus.) Text in Russian. **Title tr.:** North, the region of high speeds.

Sketches operations of the passenger and freight jets on the Moscow to Magadan and Chukotka run: last-minute check-ups, loading, flight schedules, etc. The 7,000 km. route to Chukotka, longest in the Arctic, takes 11 hrs. actual flying time. Regular Moscow-Kamchatka flights are to start soon. (DLC.)

72894. KOLESNIKOV, BORIS PAVLOVICH. Izuchennost' rastitel'nogo mira Kamchatskoĭ oblasti i zadachi nauchno-issledovatel'skikh rabot. (*In:* Akademiia nauk SSSR. Komissiia po problemam Severa. Syr'evye resursy . . . 1961, p.143-59, map.) 62 refs. Text in Russian. **Title tr.:** Knowledge of the plant life of Kamchatka Province and tasks of scientific studies.

Reviews the published and unpublished sources on botany from the 18th century, and summarizes work of the main expeditions. Flowering plant species (828) are noted, as are the 286 endemic plant forms. The forests are characterized. Phytogeographic regions are mapped and discussed. Further investigations needed are summarized. (DLC.)

KOLESNIKOV, BORIS PAVLOVICH, *see also* Akademiia nauk SSSR. *Institut geografii.* Dal'niĭ Vostok . . . 1961. No. 69546

72895. KOLESNIKOVA, R. S. Novaia sreda dlia vydeleniia i sokhraneniia IAkutskikh shtammov brutselleza krupnogo rogatogo skota. (Akademiia nauk SSSR. IAkutskiĭ filial. Nauchnye soobshcheniia, 1961. vyp. 5, biologiia, p.113-16.) Text in Russian. **Title tr.:** A new medium for isolation and preservation of Yakut strains of cattle brucellosis.

Describes lack or inadequacy of media hitherto used, and describes a new one, selected from 72 variants. It was found the best for local strains of *Br. abortus bovis.* (DLC.)

KOLESNIKOVA, V. V., *see* Bussen, I.V., & *others*. Amfibolovye peridotity . . . 1962. No. 70476

72896. KOLESOV, A. A. Osadki pri ottaivanii mnogoletnemerzlogo allīuvial'nogo suglinka Vorgashorskogo ugol'nogo mestorozhdeniia. (*In*: Akademiia nauk SSSR. Institut merzlotovedeniia. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshchei i inzhenernoi geokriologii . . . p. 73-81, tables, graph, diagrs.) 10 refs. Text in Russian. **Title tr.:** Settling during thawing of permafrost alluvial loams of the Vorga-Shor coal deposits.

Reports compressibility characteristics of thawing alluvial loams determined in tests by using an electrothermal die 50 cm. in diameter and thawing temperature of +40°C. The relative settling under pressure ranges from 0.5 to 2.5 kg./sq. cm., and it is uniformly linear. Construction on such ground during the thawing process is not permitted. (DLC.)

72897. KOLGANOV, N. S. Fibrillīatsiia i defibrillīatsiia serdtsa pri vosstanovlenii ego deiatel'nosti posle klinicheskoi smerti v usloviiakh gipotermii. (Eksperimental'naia khirurgiia, 1962. god 7, no.3, p.15-21, illus., tables.) 16 refs. Text in Russian. Summary in English. **Title tr.:** Fibrillation and defibrillation of the heart during restoration of its activity following clinical death during hypothermia.

Dogs made hypothermic to 25-18°C. and bled, showed first cardiac contractions only after numerous arterial blood transfusions and defibrillations, with fibrillation often reappearing. Cardiac activity was restored in 31 out of 34 dogs; 19 animals survived "clinical death" lasting over an hour. (DNLM.)

72898. KOLGINA, LIUDMILA PAVLOVNA, *and others*. Litologiia i zakonomernosti razmeshcheniia porod-kollektorov v otlozheniiakh iury i nizhnego mela Zapadno-Sibirskoi nizmennosti. Moskva, Izd-vo Akademii nauk SSSR, 1961. 128 p. illus., tables, maps, diagrs. (Akademiia nauk SSSR. Institut geologii i razrabotki goriuchikh iskopaemykh.) About 60 refs. Text in Russian. *Other authors:* L.G. Or'ev, E.S. Rabikhanukaeva, *and* O.A. Chernikov. **Title tr.:** Lithology and distribution laws of rock-reservoirs in the Jurassic and Lower Cretaceous deposits of the West Siberian plain.

Reports analyses of the lithology, mineral-petrographic composition, and physical properties of these reservoir rocks, collected from 58 wells drilled in the Salekhard, Berezovo, Turukhansk and Ust'-Port areas. Reservoir rocks were classified according to porosity into five (A-E) categories. Reservoirs of Lower, Middle and Upper Jurassic and Valanginian, Hauterivian-Barremian and partly Aptian stages are described in detail, and appraisal given. (DLC.)

72899. KOL'MAN, O. V. Plavanie amerikanskoi atomnoi podvodnoi lodki "Sidragen" v Severnom Ledovitom okeane. (Okeanologiia 1962. t.2, vyp.6, p.1115-17, illus., map.) Text in Russian. **Title tr.:** The cruise of the American atomic submarine *Seadragon* in the Arctic Ocean.

Notes the *Skate, Nautilus, Sargo,* and *Seadragon* operating in arctic waters, with special attention to the *Seadragon* cruise in Aug. 1960; the route, equipment and some scientific observations are briefly summarized. (DLC.)

72900. KOL'MAN, O. V. Sopostavlenie techenii vychislennykh dinamicheskim metodom, s instrumental'nymi nabliudeniiami. (Leningrad. Arkticheskii i antarkticheskii nauchno-issledovatel'skii institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovanii, sbornik statei, vyp.1 p.264-67, chart.) Text in Russian. **Title tr.:** A comparison of current parameters, calculated by the dynamic method with those determined instrumentally.

Compares the elements of sea currents calculated by the dynamic method with those determined for the same currents instrumentally at 20 half-day hydrological stations in the Barents Sea. It was found that the true velocity, v_t, of the currents can be obtained by multiplying the calculated velocity, v_d, by a factor 4, and that the short-period variations in the currents during the tide and ebb period cannot be calculated with the dynamic method. (CaMAI.)

72901. KOLOBKOV, M. Muzhestvennyi vitiaz' nauki. (Sibirskie ogni, Nov. 1961. god 40, no. 11, p.169-72.) Text in Russian. **Title tr.:** The heroic champion of science.

Biographical sketch of Nansen, explorer, humanitarian; his polar expeditions, activities at the League of Nations. (DLC.)

72902. KOLOMEETS, E. V., *and others*. Issledovanie variatsii intensivnosti kosmicheskikh luchei, magnitnogo polia zemli i poliarnykh siianii vo vremia magnitnoi buri 25 marta 1958 g. (Akademiia nauk SSSR. Mezhduvedomstvennyi komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, VII razdel programmy MGG: kosmicheskie luchi, Sbornik statei, 1961. no. 4, p.35-48, tables, graphs.) 13 refs. Text in Russian. Summary in English. *Other authors:* G. A. Sergeeva *and* K. F. Tarasova. **Title tr.:** Study of intensity variation of cosmic rays, the earth's magnetic field and auroras during the magnetic storm of March 25, 1958.

Discusses the latitude effect on the correlation between the variation of the intensity of cosmic rays, the geomagnetic variations, and the auroral activity observed over the range 82°N.-73° S. geomag. lat. It was found that a decrease in intensity of neutron and hard cosmic ray components commenced simultaneously at 72 cosmic ray, 12 magnetic field and 7 auroral observation stations. A pronounced latitude effect was observed in the neutron component of cosmic rays, but only a weak one in the hard component. The cosmic rays' intensity, the brightness of aurora, and the geomagnetic field intensity were found to increase 2.5 to 3 hours prior to the onset of a sharp decrease in cosmic ray intensity. (DLC.)

KOLOMEETS, E. V., *see also* Dorman, L.I., & *others*. Issledovanie . . . kosmicheskikh luchei . . . 1961. No. 71081

72903. KOLOMIETS, N. G. Kholodostoikost' gusenits sibirskogo shelkopriada i temperaturnyi rezhim v mestakh ikh zimovki. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961, no. 1, p.113-20, diagrs., tables.) 14 refs. Text in Russian.

Title tr.: Cold resistance of the caterpillar of the Siberian egger and the temperature regime where they winter.

Reports results of laboratory experiments and field observations, with conclusion that *Dendrolimus sibiricus* Tschetv. caterpillars survive -18°C., in the moss, snow, soil surface. (DLC.)

72904. KOLOMIETS, N. G., *and* **A. B. GUKASIAN.** Simpozium po probleme sibirskogo shelkopriada. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961, no. 3, p.113-14.) Refs. Text in Russian. **Title tr.:** Symposium on the problem of the Siberian egger.

Reports work of this symposium at Novosibirsk, Dec. 19-20, 1960. The main papers are summarized and need stressed for further ecological and biological studies of *Dendrolimus sibiricus*, also methods of control. (DLC.)

72905. KOLOSOV, A. Zaochnaia podgotovka okhotovedov. (Okhota i okhotnich'e khoziaistvo, Jan. 1962. god 8, no.1, p.21.) Text in Russian. **Title tr.:** Correspondence course for hunting experts.

Notes a special hunters' division of the All-Union Correspondence-Course Institute of Agriculture (Vsesoiuznyi sel'skokhoziaistvennyi institut zaochnogo obrazovaniia, VSKhIZO): with a six-year curriculum, qualified instructors, laboratories, experiment farm, etc., briefly described by the deputy-director of the Institute. (DLC.)

72906. KOLSRUD, KNUT. Sommersete; til problemet om halvnomadisme og seterflytting blant norske sjøsamer. Oslo, Norsk Folkemuseum, Universitetsforlaget, 1961. 74 p. maps. (Samiske samlinger, bd. 5, pt. 1.) 34 refs. Text in Norwegian. **Title tr.:** Summer pastures; on the problem of semi-nomadism and the move to mountain pastures among Norwegian sea Lapps.

Discusses the 16th-17th century custom among Lapps in the inner fjord areas of Nordland and southern Troms, of moving with their cattle to outlying pastures in the summer. The practice may have been a relic of a semi-nomadic migration cycle or a rational agricultural practice adopted from the Norwegians. The latter explanation is favored. Lapps in this region practiced agriculture as a regular part of their economy; middle Troms was a transition zone; further north the sea Lapp culture proper was combined with cattle raising; the semi-nomadic element increased toward the east. Details are given on the course of Norwegian and Lapp settlement in Ofoten and Tysfjord regions and in Finnmark; and on the movements of the Lapps. (SPRI.)

KOL'TSOVA, T. V., *see* Gerling, É.K., & *others*. Opredelenie vozrasta . . . 1962. No. 71658

72907. KOLTUN, VLADIMIR MIKHAĬLOVICH, 1921– . Spikuly kremnevykh gubok v otlozheniiakh verkhnego mela Zaural'ia i paleogena Severnogo Urala. (Paleontologicheskiĭ zhurnal, 1961, no. 1, p.61-69, illus.) 3 refs. Text in Russian. **Title tr.:** Spicules of Silicispongiae in the Upper Cretaceous of the Transural and in the Paleogene of the Northern Ural.

Reports on the composition and distribution of Senonian sea sponges in the Synya River region of Tyumen Province, based on analyses of their spicules. Representatives of orders Triaxonida, Tetraxonida and Cornacuspongida are described and illus., their ecologic conditions discussed. The sponges of Tertiary (Paleogene) deposits of the Ivdel' region of the Northern Ural are similarly treated. The depth of Paleogene sea is estimated. (DLC.)

KOMAR, V. A., *see*

Zhuravleva, Z.A., & V.A. Komar. K stratigrafii rifeia . . . 1962. No. 76684

Zhuravleva, Z.A., & *others*. Stroenie i vozrast otlozhenii . . . 1961. No. 76685

KOMAROV, A. A., *see* Bialobzheskiĭ, G.V., & *others*. Osobennosti . . . dorog . . . 1962. No. 70196

KOMAROV, A. G., *see* Evdokimov, IU. B., & A.G. Komarov. Opyt opredeleniia vozrasta . . . 1961. No. 71311

72908. KOMAROV, V. B. Opyt postroeniia profilei po aėrosnimkam bez geodezicheskogo obosnovaniia v raionakh kimberlitovykh trubok. *(In:* Akademiia nauk SSSR. Laboratoriia aėrometodov. Primenenie aėrometodov pri poiskakh . . . almazov, 1960, p.66-84, tables, diagrs., graphs. incl. fold.) 5 refs. Text in Russian. **Title tr.:** An attempt at profile construction from aerial photographs without geodetic substantiation in regions of kimberlite pipes.

Outlines the photogrammetric considerations and reports on the trials in the Daldyn region of Yakutia, using air photos for geomorphic studies and compiling of structural maps, where surface field work is difficult. A graph-analytical method is proposed in which special control flights and use of a statoscope replace the otherwise necessary geodetic leveling. Three profiles across kimberlite pipes made with this method are compared with profiles obtained from map and ground leveling. This method is recommended for structural mapping at 1:50,000 scale. (DLC.)

72909. KOMAROV, VALENTIN DMITRIEVICH. Water permeability of frozen sand. Translated by M. Corbin. Wilmette, Ill., Jan. 1961. 5 p. table, graphs, diagr. (U.S. Army. Corps of Engineers. SIPRE. Translation 66.)

English translation of No. 52375. (CaMAI.)

72910. KOMBAGIR, SEMEN NIKOLAEVICH. 30 let Sovetskoĭ Évenkii. Krasnoyarsk, Krasnoiarskoe knizhnoe izd-vo, 1960. 27 p. Text in Russian. **Title tr.:** Soviet Evenki-land is 30 years old.

Socio-economic sketch of the Evenki National District formed in Dec. 1930, a 740,500 km² mountainous area in northern Krasnoyarsk Province. Its physical geography, fauna, flora and climate are outlined, as is the way of life of the aboriginal Tungus and Yakut inhabitants in pre-Soviet times. Material and cultural changes brought about by the collectivization of the 1930's and its consolidation in 1951-1955 are cited, and kolkhoz incomes for 1959 are discussed. Fur hunting, reindeer raising (primarily for transport), and fur farming are the basic industries with some dairy and truck farming as well. Health and veterinary services, housing and electrification, educational, cultural and recreational facilities, trade turn-

over, etc. are dealt with. State aid is available for housing of kolkhoz members settling down from nomadic life, for buying stock, for child care and boarding school, as marriage portion (200 rubles) of both boys and girls, etc. (DLC.)

72911. KOMHYR, W. D. Measurements of atmospheric ozone at Moosonee Canada, July 1, 1957 to July 31, 1960. Toronto, 1961. 14 p. graphs, tables. (Canada. Meteorological Branch. Canadian meteorological memoirs no.6.) 10 refs.

Reviews the program at this James Bay station, covering the IGY-IGC periods, and to continue at least until summer 1961. Procedure for application of final corrections to ozone data, spectrophotometer tests and calibrations are noted; comments are made on direct sunlight, moonlight, and zenith sky observations. Final coded ozone data are tabulated on WMO forms O-1 and O-2 at the end of the report. Annual variation of total ozone was similar in pattern to other mid-latitude stations, with a peak in late winter and early spring, and a broad annual minimum in the fall. (DWB.)

KOMHYR, W. D., *see also* Sullivan, H.M., & *others*. . . . Ozone Resolute . . . 1957-59. 1961. No. 75994

72912. KOMLEV, L. V., & *others*. O vozraste shchelochnykh intruziĭ Khibinskikh i Lovozerskikh tundr; Kol'skiĭ Poluostrov. (Akademiîa nauk SSSR. Doklady, Jan. 1, 1961. t.136, no.1, p.172-74, table.) 14 refs. Text in Russian. *Other authors:* A.D. Mikhalevskaîa *and* S.I. Danilevich. **Title tr.:** On age of the alkaline intrusion of the Khibiny and Lovozero Tundras; Kola Peninsula.

Reviews previous estimates of the age of these rocks and the methods used, and reports on the lead isotope method used to determine isotope composition and age of lovchorrite from Vud'yavrchorr mountain in the Khibiny massif and loparite from Alluayv mountain in the Lovozero massif. The data obtained are tabulated and evaluated. The absolute age of the Khibiny and Lovozero massifs is stated as 290 ± 1 million years; the Keyvy massif 1600 million years. (DLC.)

KONDAKOV, KONSTANTIN GAVRILOVICH, *see* Rozhkov, I.S., & *others*. K voprosu o perspektivakh . . . 1962 No. 75243

72913. KONDORSKAIÂ, N. V., *and* **R. Z. TARAKANOV.** Kurilo-Kamchatskie zemletriâseniîa. (*In:* Akademiîa nauk SSSR. Sovet po seĭsmologii. Zemletriâseniîa v SSSR, 1961, p.370-83, tables, chart, diagrs.) Text in Russian. **Title tr.:** The Kuril-Kamchatka earthquakes.

Reports data on the travel time of seismic waves, distribution of earthquake foci, the energy of earthquakes and dynamic features of seismic waves of the Kuril-Kamchatka zone. Density of epicenter distribution is mapped and evaluated. Observations are outlined for 1911-1952 and 1952-1957. (DLC.)

72914. KONDORSKAIÂ, N. V., *and* **N. S. LANDYREVA.** Osobennosti seĭsmichnosti Kamchatskoĭ oblasti po dannym nabliûdeniĭ seti stafionarnykh seĭsmicheskikh stantsiĭ. (Akademiîa nauk SSSR. Izvestiîa, ser. geofizicheskaîa, Oct. 1962, no.10, p.1320-32, maps, graphs, table.) 11 refs. Text in Russian. **Title tr.:** Peculiarities in seismicity of the Kamchatka region from observation data of the seismic station network.

Presents detailed data on strong earthquakes ($E \geq 10^{21}$ ergs) for 1911-1960 in the region 50°-58° N. 156°-166°E. The energy of earthquake sources, its attenuation along the path from source to observation point, and earthquake distribution in time and space as a function of the energy are studied. Earthquakes are classified according to their energy and depth of focus. Maps show epicenters, density of seismic energy, density of earthquake epicenters, and seismic activity in the Kamchatka region. The zones of maximum seismicity east of Shipunskiy Peninsula and Cape Kamchatskiy (53°15′-56°N.) are identified. (DLC.)

72915. KONDORSKAIÂ, N. V. Some results of investigation of earthquakes from Kurile-Kamchatka zone. (Studia geophysica et geodaetica, 1959. roč. 3, no.4, p.360-68, graphs, diagrs.) 15 refs. Summary in Russian. Report delivered at the Geophysical Institute, Charles University, Prague, Oct. 14, 1958.

Reviews the seismic travel times for this zone from the 1954-1957 records of Russian seismic stations. The data are generalized and analyzed, and the dynamic peculiarities of earthquake waves in the zone interpreted. Strain-rebound increment curves for separate regions of the investigated area, and for different focal depths are given, and the formula for the amplitudes of body waves, depending on the epicentral distance, is derived. (DLC.)

72916. KONDORSKAIÂ, N. V. Travel times and some dynamic characteristics of seismic waves. (International Union of Geodesy and Geophysics. Association of Seismology and Physics of the Earth's Interior. Travaux scientifiques, 1959. sér. A. fasc. 20, p.113-21, maps, diagr., graph.) 7 refs. Presented at the Toronto meeting, 1957.

Includes discussion of travel times and the main seismic elements of 22 Far East earthquakes with magnitudes M > 6, well recorded on seismograms of Soviet stations. Focal depths of earthquakes southeast of Hokkaido were 30 km., and Kamchatka 60 km.; seismic waves also showed different features, e.g., travel times of the longitudinal and transverse waves. Comparison was made with Jeffreys-Bullen curves, and with special Wadati curves; the latter appeared to coincide with author's results in the Far East. Epicenters of Kuril-Kamchatka earthquakes (intensity and depth) for 1954-1956, are mapped at 1:5,000,000 scale, also for Kamchatka at 1:2,500,000. (DGS.)

72917. KONDRAT'EV, G. V Zapolîar'e kollektiv okhotnikov. (Okhota i oktnich'e khozîaĭstvo, May 1961. god 7, no.5, p.54.) Text in Russian. **Title tr.:** In Zapolyar'ye, a hunters' association.

Notes its establishment in 1960 on Kola Peninsula, training in shooting, etc. (DLC.)

72918. KONDRAT'EVA, K. A., *and* **N. I. TRUSH.** K voprosu ob opredelenii glubin sezonnogo promerzaniîa i protaivaniîa gruntov. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.2, p.59-70, tables, graphs.) 4 refs. Text in Russian. **Title tr.:** On the problem of determining depths of seasonal freezing and thawing of ground.

Deals with calculating variations in ground freezing and thawing within given time periods with climatic conditions, soil structure, composition and moisture content taken into account. The V.F. Tumel' method based on the rate and periods of seasonal freezing and thawing, is recommended when an approx. value is sufficient; and for more accurate values, the method of V.A. Kudrîavtsev is recommended. The Tumel' method was tested in borehole measurements at sites near Salekhard to determine the intensity of freezing and thawing during 1952-1957. Findings for the various sites were similar despite differences in the nature of the surface. Greater variation was found with respect to soil structure composition and moisture. Similar data on rates of freezing and thawing from other points in Siberia are plotted and compared. (DLC.)

72919. KONDRAT'EVA, K. A. Nekotorye dannye dlîa ucheta vliîaniîa rastitel'nogo pokrova pri raschete glubin sezonnogo promerzaniîa i protaivaniîa gruntov. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.1, p.39-44, tables, diagr.) 8 refs. Text in Russian. **Title tr.:** Some data for calculating the influence of the vegetation cover in computing depths of seasonal freezing and thawing of ground.

Draws attention to vegetation and snow covers, as diminishing amplitudes of the ground temperature compared with those of the air temperature. The method worked out by Moscow University permafrost department for calculating such effect was tested in six years' field studies in the Salekhard, Bratsk, Syktyvkar, and the Malyy Ol'doy River regions. Data obtained on decrease of temperature amplitude under vegetation cover are tabulated; the method worked out, and nomograms are considered satisfactory. (DLC.)

72920. KONDRAT'EVA, K. A., *and* N. I. TRUSH. Nekotorye dannye obrabotki Salekhardskikh statsionarnykh ploshchadok. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.2, p.71-79, tables, graphs.) 2 refs. Text in Russian. **Title tr.:** Some data on the working of the Salekhard station plots.

Reports investigation of the dynamics of active layer temperature regime under natural and modified conditions near the Salekhard dam in 1955-1958, on plots of 25 m. diam. with a 25 m. deep borehole in the center. One plot was left in its natural state; snow was removed from the natural vegetation of another; and both snow and vegetation were removed from the third plot. Soil and air temperatures, and the depth of the snow cover as recorded are graphed and tabulated. Removal of the snow cover brought about the greatest changes in the temperature regime and depth of penetration of annual temperature fluctuations; after two years, equilibrium became established between air and soil temperatures. The layer of annual temperature fluctuations became somewhat colder (0.2°C. in 3 yr.) on the third than on the second plot, but the underlying layer was unaffected by the removal of the vegetation cover. Hence it was concluded that removal of the snow and vegetation covers has practically no effect on the depth of seasonal thawing in northern permafrost regions. (DLC.)

KONDRAT'EVA, K. A., *see also* Kudrîavtsev, V.A., & *others.* O kartirovanii . . . 1961. No. 73189

72921. KONDRATOVA, N. S. Vliîanie inzhenernoĭ podgotovki poverkhnosti grunta na sostavliaîushchie teploobmena v raione Vorkuty. (*In:* Akademiîa nauk SSSR. Institut merzlotovedeniîa. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.33-35, table, graph.) 3 refs. Text in Russian. **Title tr.:** Influence of engineering modifications of the ground surface upon the heat exchange components in the Vorkuta region.

Reports observations since 1958 of the effect of disturbing the natural tundra cover of permafrost. On test plots 20 × 20 m. observations were made on the standard meteorological elements, soil temperature, heat fluxes in the soil and radiation. On one plot, the vegetation and top soil was removed; the control plot was left with its natural small-hummock tundra with dwarf birch and occasional moss vegetation; on both, the soil layer was 10-20 cm. thick. The thermal flux into the ground of the experimental plot began 20-25 days earlier than on the control. It was concluded that the warm season can be extended artificially, the depth of thawing increased, and the permafrost level dropped by clearance of snow and top soil. (DLC.)

72922. KONDRATSOVA, O. F. Kharakternye cherty temperaturnogo rezhima pribrezhnykh vod Murmana v 1959 g. (Akademiîa nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1961. vyp.3(7), p.5-14, illus., tables, maps.) 2 refs. Text in Russian. **Title tr.:** Characteristic traits of the temperature regime of the Murman coastal waters in 1959.

Disucsses climatic conditions over the area since 1953; water temperatures in 1954, 1958 and 1959 on the surface, in the 50 m. column, and at the bottom, along several profiles, anomalies, and vertical temperature gradients. The characteristics of 1959 are then briefly summarized: warm winter, very warm summer, early autumn homeothermy, etc. (DLC.)

72923. KONDRATSOVA, O. F. Teplovye usloviîa iûzhnoĭ chasti Barentseva moriîa v 1960 g. (Akademiîa nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp. 4(8), p.3-10, illus., table, maps.) Ref. Text in Russian. **Title tr.:** Thermal conditions of the southern Barents Sea in 1960.

Discusses air temperatures and, in detail, water temperatures in the upper and bottom strata with horizontal distribution, anomalies, etc. On the whole, thermal conditions were found to be near normal. (DLC.)

72924. KONEV, B. Severo-vostochnaîa poliîarnaîa ékspeditsiîa. (Morskoĭ flot, Dec. 1962. god 22, no.12, p.6-9, illus.) Text in Russian. **Title tr.:** The Northeastern Polar Expedition.

Describes this 331 man expedition in 1932-1933 to the Kolyma River mouth, sponsored by the Water Transport Commissariat (Narodnyĭ komissariat vodnogo transporta) and headed by N.I. Evgenov. Author was a participant. With the icebreaker *Litke* (Capt. N.M. Nikolaev), the *Sever, Suchan, Anadyr', Uritskiĭ, Mikoîan, Krasnyĭ partizan* and *Temp.* left Vladivostok in June with 868 passengers and considerable cargo for the gold industry being set up in the Kolyma basin by Dal'stroĭ. The voyage via Petropavlovsk-in-Kamchatka and Pro-

videniya Bay, the passage of Bering Strait at the end of July, and slow progress in the Chukchi Sea due to heavy ice conditions are sketched. The flotilla arrived at Kolyma (Ambarchik) Bay on Sept. 4, encountering the *Sibiriakov* on her notable traverse of the Northern Sea Route. Unfavorable weather hampered the unloading, and approach of winter forced the expedition to seek winter quarters in Chauna Bay; Evgenov fell sick, was evacuated, and replaced by A.P. Bochek. Living conditions and investigations carried out during the winter are described. The vessels returned to Kolyma Bay in July 1933 and unloaded the cargo, and excepting the *Anadyr'*, and *Sever* which had to make a second wintering, they sailed back to Vladivostok, arriving on Jan. 4, 1934. Captains and navigators of the vessels, the doctors and scientists of the expedition are listed. Its significance is stressed, as its logistic support gave an early start to the (gold) mining operations of Kolyma basin. (DLC.)

KONFERENTSIIA PO ATMOSFERNOMU OZONU, *Moskva,* **1959.** *See:* Karimova, G.U. Nekotorye rezul'taty . . . *1961.* Gol'm, T.S. Vremennoĭ khod . . . *1961.*

72925. KONIKOVA, A. S., *and others.* Izmenenie obmena veshchestv pri glubokoĭ gipotermii. (Eksperimental'naia khirurgiia, 1962. god 7, no.2, p.58-62, illus.) 11 refs. Text in Russian. Summary in English. *Other authors:* S. Sh. Kharnas, IU. E. Babskaia, A.V. Pogosova, *and* M. IA. Avrutskii. **Title tr.:** Metabolic changes during deep hypothermia.

Unless special steps are taken, deep hypothermia in dogs is accompanied by a drop in pH and alkaline reserves, by increased pyruvic acid titer, increased activity of lactodehydrogenase in the blood, and a lowered titer of the SH groups. The authors have also demonstrated a reversible structural rearrangement within protein molecules, due to cooling. (DNLM.)

72926. KONISHCHEV, V. N. Nekotorye osobennosti pokrovnykh suglinkov iugo-vostochnoĭ chasti Bol'shezemel'skoĭ tundry v sviazi s ikh genezisom. (*In:* Moskva. Universitet. Geograficheskii fakul'tet. Voprosy geograficheskogo merzlotovedeniia . . . 1962, p.131-40, illus., tables, diagrs.) 4 refs. Text in Russian. **Title tr.:** Some features of covering loams in southeastern Bol'shezemel'skaya Tundra in connection with their genesis.

Reports a 1959 study in the Vorga-Shor region of Komi ASSR, where covering loams are found on various types of relief lying on rocks of different origin, age and lithology. Thickness, composition, and granulation of these loams are described, and they are divided into two horizons. They originated from eluvial deposits through frost weathering. Their connection with polygonal relief is stressed. (DLC.)

72927. KONNOVA, O. S. Osobennosti kristalloobrazovaniia segregatsionnogo l'da v promerzaiushchikh dispersnykh gornykh porodakh i rol' obmennykh kationov v etom protsesse. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Fiziko-khimicheskie protsessy v promerzaiushchikh i merzlykh gornykh porodakh, 1961, p.47-56.) 35 refs. Text in Russian. **Title tr.:** Aspects of the crystal formation of segregated ice in freezing dispersed soils, and the role of exchange cations in this process.

Discusses factors in the formation and growth of ice crystals, including those determining crystal form and dimensions, the association of particles in crystallization, effect of impurities and surface energy of mineral particles on the rate of growth, and inception of crystallization centers. Exchange cations are found to have a substantial effect on the intensity of crystallization, on the nature of crystal growth, and on the structure of ice and frozen texture of the soil.—From CRREL. (DLC.)

72928. KONNOVA, O. S. Vliianie obmennykh kationov na kriogennuiu teksturu gornoĭ porody i strukturu segregatsionnogo l'da. (*In:* Materialy po laboratornym issledovaniiam merzlykh gruntov, 1961. sbornik 4, p.53-80, illus., tables, diagrs., fold. plate.) 6 refs. Text in Russian. **Title tr.:** Effect of exchange cations on the cryogenic texture of rocks and the structure of segregated ice.

Shows that the structure of segregated ice and its crystallographic orientation, as well as the intensity of ice segregation and the nature of the growth of ice inclusions, are directly dependent on the physicochemical properties of the soil. Three types of cryogenic texture and segregated ice structures were established according to their dependence on physicochemical properties. They are described with reference to the presence of univalent and polyvalent exchange cations. Changes in ice structure caused by the effect of exchange cations on the nutrition regime and crystal growth are described. Clays and clayey loams were used in the investigation.—From CRREL. (DLC.)

72929. KONOVALOVA, M. V. Granitsa kamennougol'noĭ i permskoĭ sistem IUzhnogo Timana na osnovanii izucheniia foraminifer. (*In:* Soveshchanie po utochneniiu unifitsirovannykh stratigraficheskikh skhem paleozoia . . . Perm', 1962, t.4, p.202-209, table.) Text in Russian. **Title tr.:** The boundary of the Carboniferous and Permian systems in Southern Timan substantiated by foraminifer study.

Describes a compiled lithologic-stratigraphic section of bordering layers of upper Carboniferous and lower Permian. The *Schwagerina* horizon, treated in detail, is divided into three zones mainly according to foraminifera, etc., and the fauna of each zone listed. The boundary between Carboniferous and Permian deposits is put along the layer with *Pseudofusulina lutuginiformis* Raus. (DLC.)

72930. KONOVALOVA, M. V. Novye pozdnekamennougol'nye i rannepermskie fuzulinidy Timano-Pechorskoĭ provintsii. (Paleontologicheskiĭ zhurnal, 1962, no.1, p.47-57, table, plates.) 10 refs. Text in Russian. **Title tr.:** New late Carboniferous and early Permian fusulinids from the Timan-Pechora province.

Describes the stratigraphy and taxonomy of these foraminifers obtained from structural-prospecting drillings in the Ayyuva, Burkem, Severnaya Mylva, Dzhebol basins, etc. Their stratigraphic zones are distinguished. Thirteen new species of subfam. Schwagerininae (Dunbar and Henbest) are systematically described and illus. (DLC.)

72931. KONOVALOVA, M. V. Novye vidy sakmarskikh foraminifer Timano-Pechorskoĭ provintsii.

(Paleontologicheskiĭ zhurnal, 1962, no.3, p.16-23, plates.) 3 refs. Text in Russian. **Title tr.:** New species of Sakmarian foraminifers in the Timan-Pechora province.

Presents systematic description of 15 new species from lower Permian deposits; they were collected in drillings in the Ayyuva, Burkem, Severnaya Mylva River basins, and in the Troitsko-Pechorsk region. These new species belong to gen. *Glomospira, Bradyina, Climacammina,* and *Globivalvulina.* (DLC.)

72932. KONSTANTINOV, K. G. Mechenie donnykh ryb v Barentsevom more; dopolnennyĭ tekst doklada, prochitannogo na sovmestnom soveshchanii sovetskikh i norvezhskikh uchenykh v avguste 1958 g. (Voprosy ikhtiologii, 1961. t.1, vyp.2 (19), p.275-80, tables.) 24 refs. Text in Russian. **Title tr.:** Tagging of bottom fish in the Barents Sea; enlarged text of lecture, read before the joint meeting of Soviet and Norwegian scientists in August 1958.

Outlines tagging mainly cod, conducted since 1934 by Soviet ichthyologists. Numbers tagged and recovered; distance, direction and speed of migration are given. Data on the wolffish *Anarhichas minor* are also supplied. (DLC.)

72933. KONSTANTINOV, K. G. Miksina u Vostochnoĭ Grenlandii. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten' 1959, no.2 (10) p.53, table.) 2 refs. Text in Russian. **Title tr.:** Myxine in East Greenland.

Records of three hagfish *M. glutinosa* caught with a small-meshed trawl off Greenland: location, depth, nature of bottom, temperatures, etc. (DLC.)

72934. KONSTANTINOV, K. G. O mestnykh stadakh okuniа-kliuvacha Severnoĭ Atlantiki. (Rybnoe khoziaĭstvo, 1962. god 38, no.2, p.12-15, tables, map.) Text in Russian. **Title tr.:** Local populations of redfish in the North Atlantic.

Discusses size of fish in different areas, morphometric differences between populations, including those from Bjørnøya, and Kopytova (Barents Sea) banks and from Denmark Strait. Data are tabulated and analyzed. (DLC.)

72935. KONSTANTINOV, K. G. Sutochnye vertikal'nye migratsii treski i pikshi. (Moskva. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Trudy 1958. t.36, p.62-82, illus., tables.) 114 refs. Text in Russian. **Title tr.:** Diurnal, vertical migrations of cod and haddock.

Reports investigations conducted in the Barents Sea during 1952 and 1954. Both species were found to make diurnal, vertical migrations. Of environmental factors, only light had an effect on these movements. Its influence is indirect however, the fish seeking out levels of illumination, proper for optimal predation. The significance of the migration for the fisheries is also discussed. (DLC.)

72936. KONSTANTINOV, N. A. Narodnye reznye kalendari. (Akademiia nauk SSSR. Muzeĭ antropologii i etnografii. Sbornik 1961. t.20, p.84-113, tables.) Refs. Text in Russian. **Title tr.:** Carved folk calendars.

Describes the Museum collection of early Russian calendars. Noted among others are Koryaks' perforated wooden tablet and the Chukchis' notched stick for counting days, also several Yakut and Zyryan calendars of wood, modelled on old Russian prototypes. (DLC.)

72937. KONSTANTINOV, V. V dalekoĭ tundre. (Pioner, Feb. 1962. god 39, no.2, col. illus. insert at p.32-33.) Text in Russian. **Title tr.:** In the distant tundra.

Color photos of life in the Taymyr National District. (DLC.)

72938. KONSTANTINOVA, G. S. K voprosu ob opredelenii promerzaniia pochvy metodom elektrosoprotivleniia. (*In:* Moskva. Universitet. Geograficheskiĭ fakul'tet. Voprosy geograficheskogo merzlotovedeniia . . . 1962, p.184-90, tables, graphs, diagr.) 8 refs. Text in Russian. **Title tr.:** Determination of soil freezing by the electrical resistance method.

A Rymsha electric frozen-ground gage with a wooden base and megohmmeter was used to test the electrical resistance of sandy loams (moisture content 60% and 40%), fine sand (30% and 20%), supersaturated peat (about 200%), distilled water, and Yenisey River water at -11° to -32°C. air temperatures. The actual freezing, the ground and air temperatures were measured simultaneously with the resistance. The results indicated that the resistance of an entire layer of ground or water increased when even a negligible portion of the layer freezes, that the resistance increases constantly and proportionately as the layer freezes, and that the relationship between the thickness of the freezing layer and the resistance is nearly linear. Results of freezing depth test on an experimental plot at Igarka are tabulated, with indication of the soil composition at various depths. The change in resistance with decreasing temperature of the frozen ground was not proportional to the reduction of frozen water content of the ground. Temperature changes in the ground or ice were reflected in changes of resistance. The electric frozen-ground gage can detect freezing and thawing of ground, but cannot detect small quantities of ice in the ground. (DLC.)

72939. KONSTANTINOVA, G. S. Mnogoletnemerzlye gornye porody Eniseĭsko-Piasinskogo Severa. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Igarskaia merzlotnaia stantsiia. Trudy 1961. vyp.2, p.114-39, table, graphs, map.) 54 refs. Text in Russian. **Title tr.:** Permafrost in the Yenisey-Pyasina North.

Outlines geological and geographic conditions for permafrost development in the area east of the Yenisey and from Igarka (67°27′N.) north to the Kara Sea (73°53′N.). Pub. and unpub. data are used as well as own field observations. Temperature, precipitation, relief and geologic structure are characterized. Permafrost, seasonal thawing and freezing, depths and temperature of permafrost in tundra, forest tundra, and northern taiga

are described, with data and geocryologic map. Snow cover, relief, vegetation cover and other factors affecting development of permafrost are characterized. (DLC.)

72940. KONSTANTINOVA, G. S. Mnogoletnemerzlye porody Eniseĭskogo krīazha. (Akademiīa nauk SSSR. Institut merzlotovedeniīa. Trudy 1962. t.19, p.65-71, table, cross-sections.) 4 refs. Text in Russian. **Title tr.:** Permafrost of the Yenisey Ridge.

Describes its distribution, thickness, temperature, ice content and other features, as studied by the Angara-Pit expedition of the Igarka geocryological station. Permafrost occurs in this region as islands where the friable material is sufficient, and the soil freezes deep in winter but warms only slightly in summer. Its thickness does not exceed 12 m. and averages about 7 m. Its temperature at 4-5 m. depth ranges from -0.1° to -1.0°C. and averages -0.5°C. Seasonal thawing and freezing, thermokarst forms of relief, physical-geographic factors in its formation and other aspects of permafrost are briefly discussed. (DLC.)

72941. KONSTANTINOVA, G. S. O vliīanii snega na temperaturu mnogoletnemerzlykh porod v basseĭne Pīasiny i v nizov'īakh Eniseīa. (*In:* Akademiīa nauk SSSR. Institut geografii. Snezhnyĭ pokrov . . . 1962, p.130-32, tables.) Text in Russian. **Title tr.:** The influence of snow on permafrost temperature in the Pyasina basin and on the lower course of the Yenisey.

Reports influence of snow cover on permanently frozen ground in forest tundra, the Noril'sk-Dudinka region, and in taiga, Igarka region. In the Pyasina tundra, when the snow cover is 10-15 cm. thick and of 0.5 g./cm.³ density, the ground temperature at 8-10 m. depth is about -10°C.; when the snow cover is over 2 m. thick, ground temperature at that depth is 4°C. higher. Similar measurements are reported for the forest tundra of the Noril'sk-Dudinka region, and the taiga around Igarka. In all these geographic zones, with similar climatic and hydrogeologic conditions the snow cover is a main factor affecting the temperature regime of permafrost. Substantial thickness of the snow cover may even lead to degradation of the permafrost. (DLC.)

72942. KONSTANTINOVA, G. S. Razvitie mnogoletnemerzlykh porod Igarsko-Khantaĭskogo raĭona v poslelednikovoe vremīa. (Akademiīa nauk SSSR. Institut merzlotovedeniīa. Trudy 1962. t.19, p.32-43, illus., table, cross-sections.) 12 refs. Text in Russian. **Title tr.:** Development of permafrost in the Igarka-Khantayka region in postglacial time.

Reports a study in a relatively small area from Igarka north to the Khantayka valley, and from the Yenisey east to the Kulyumbe River. Factors which foster permafrost, the high latitude and the geologic conditions, and that which impedes its development, i.e. the snow cover, are analyzed. Permafrost began to develop in this region after the period of thermal maximum and it is still in process of formation. The permafrost stratum is not more than 35-40 m. thick and is mostly of epigenetic origin. (DLC.)

72943. KONSTANTINOVA, M. M. Protivoluchevoe deĭstvie snizheniīa temperatury tela, rezul'tat voznikaīushcheĭ pri ėtom gipoksii. (Akademiīa nauk SSSR. Doklady 1961. t.138, no.1, p.223-26, illus., tables.) 25 refs. Text in Russian. **Title tr.:** Irradiation protection of lowered body temperature, the effect of resulting hypoxia.

Reports on experiments with mice made hypothermic to 18°, 12° and 6°C. O_2-tension in liver and spleen fell with body temperature. Protection was low at 18°; produced a 16% increase of survival at 12°, and 36% at 6°C. (DLC.)

72944. KONSTANTINOVA, M. M. Vliīanie prodolzhitel'nosti umerennoĭ gipotermii na napriīazhenie kisloroda v tkaniīakh i radiochuvstvitel'nost' mysheĭ. (Akademiīa nauk SSSR. Doklady 1962. t. 145, no.2, p.436-37, table.) 6 refs. Text in Russian. **Title tr.:** Influence of the duration of moderate hypothermia upon oxygen tension in tissues and upon radiation sensitivity of mice.

Oxygen tension in liver and spleen dropped by around half during brief hypothermia of 18°C.; prolongation of cooling did not change results significantly. Similarly, extension of cooling had no effect on irradiation survival time. (DLC.)

72945. KONSTANTINOVA, OL'GA ALEKSANDROVNA. Kategoriīa imeni sushchestvitel'nogo; po materialam govora poligusovskikh ėvenkov Baĭkitskogo r-na Ėvenkiĭskogo natsional'nogo okruga. (Leningrad. Gos. pedagogicheskiĭ institut. Uchenye zapiski 1955. t. 111, Materialy Gertsenovskikh chteniĭ, p.155-58.) Text in Russian. **Title tr.:** The noun; based on materials of the dialect spoken by the Poligus Evenki of the Baykitskiy Rayon of the Evenki National District.

Morphological study of the grammatical forms and functions of the noun in this Tungus subdialect. (DLC.)

72946. KONTOROVICH, A. Ė., *and others.* Nekotorye cherty geokhimii mezozoĭskikh otlozheniĭ Turukhanskogo i Napasskogo raĭonov Zapadno-Sibirskoĭ nizmennosti. (Geologiīa i geofizika, 1961, no.6, p.3-14, tables, diagrs.) 8 refs. Text in Russian. Summary in English. *Other authors:* N.M. Babina *and* L.D. Minina. **Title tr.:** Some features of the geochemistry of Mesozoic deposits of the Turukhansk and Napas regions of the West Siberian lowland.

Reports results on content of elements of iron and alkali-earth groups (Ti, V, Mn, Cr, Co, Ni, Sr and Ba), as well as of natrium, potassium, and calcium in the deposits as collected in Tym and Turukhan stratigraphic test holes. Some regularities are established in distribution of these elements along the cross-sections as well as in change of the relation $\frac{Na_2O}{K_2O}$ in clays. These regularities are connected with the intensity of chemical weathering in water-collecting areas. (DLC.)

72947. KONZHIN, ANATOLIĬ IVANOVICH. Bobovo-ovsīanye smesi v Zapoliār'e. (Sel'skoe khoziīaĭstvo Sibiri, Feb. 1961. god 6, no.2, p.32-33, tables.) Text in Russian. **Title tr.:** Legume-oat mixtures in the Arctic.

Reports results of growing oats mixed with

five strains of peas three of field peas (*Pisum sativum*), and two vetches at the Igarka agricultural experiment station in 1958-1959. The silage crop of field peas with oats averaged 364 cwt./hectare, peas with oats 320 cwt., and vetch with oats 304 cwt. Nitrogen and protein content of the mixtures are tabulated and discussed. (DLC.)

72948. KOO, TED SWEI-YEN, 1910– Age and growth studies of red salmon scales by graphical means. (*In:* Koo, T.S.Y., Studies of Alaska red salmon . . . 1962. p.53-121, illus., tables, map.) 40 refs.

Reports tests of a "scale curve" method on a large number of *Oncorhynchus nerka*. Method is found accurate in age determination of young and adult fish. The two sizes in the Bristol Bay run are found by the method to be fish which spent (the smaller) two, or (the larger) three years in the sea. Details of growth in fresh waters, as well as in downstream migrants are revealed and some earlier errors corrected. (DI.)

72949. KOO, TED SWEI-YEN, 1910– . Age designation in salmon. (*In:* Koo, T.S.Y., Studies of Alaska red salmon . . . 1962, p.41-48, tables.) 10 refs.

Points out the confusing differences in age nomenclature between workers with Atlantic and Pacific salmon, also the differences within the latter group. Changes in the direction of European or the Gilbert-Rich terminology are suggested. (DI.)

72950. KOO, TED SWEI-YEN, 1910– . Differential scale characters among species of Pacific salmon. (*In:* Koo, T.S.Y., Studies of Alaska red salmon . . . 1962. p.123-35, illus., table.) 2 refs.

Synopsis of characters used to differentiate the five species of Pacific salmon of the American waters. Identification keys, and photographs of scales from parr and adult stages, are included. (DI.)

72951. KOO, TED SWEI-YEN, 1910– , *Editor.* Studies of Alaska red salmon. Seattle. University of Washington Press, 1962. 469 p. illus., tables, maps. (Washington University. Publications in fisheries, new ser. v.1.) About 250 refs.

Collection of papers, some of them early theses made at the Fisheries Research Institute, Bristol Bay, and brought up-to-date. The papers are abstracted under the authors' names, viz:

THOMPSON, W.F. The research program of the Fisheries Research Institute in Bristol Bay, 1945-58.

KOO, T.S.Y. Age designation in salmon.

KOO, T.S.Y. Age and growth studies of red salmon scales by graphical means.

KOO, T.S.Y. Differential scale characters among species of Pacific salmon.

MATHISEN, O.A. The effect of altered sex ratios on the spawning of red salmon.

BURGNER, R.L. Studies of red salmon smolts from the Wood River lakes, Alaska.

BURGNER, R.L. Sampling red salmon fry by lake trap in the Wood River lakes, Alaska.

MATHISEN, O.A. Photographic enumeration of red salmon escapement.

BEVAN, D.E. Estimation by tagging of the size of migrating salmon populations in coastal waters. (DI.)

72952. KOON, LEVI. The hunter and the giant. (Beaver, spring 1962. outfit 292, p.16-19, illus.)

Eskimo legend recounted by a resident of Povungnituk, northern Quebec; illus. by photographs of author's stone carvings. (DI.)

KOPALIN, V. P., *see* Fugzan, M.D., *& others.* Modelirovanie lūkovykh ustroĭstv . . . 1961. No. 71523

72953. KOPONEN, TERTTU, *and others.* On a case of spring migration in the Norwegian lemming. Helsinki, 1961. 30 p. map, illus., diagr., tables. (Suomalainen Tiedeakatemia. Toimituksia: Annales Academiae scientiarum Fennicae, ser. A. IV, Biologica, no.52.) 13 refs. *Other authors:* A. Kokkonen *and* O. Kalela.

Reports a study from early May to early June 1960 in the Kilipisjärvi district of northwest Finnish Lapland, with the peak of the migration during May 10-14. The migrants were mature animals, males dominant. Their movements over the ice of Lake Kilpisjärvi are treated in detail, the orientation, mechanism behavior, aggressiveness, etc., discussed. (DLC.)

KOPONEN, TERTTU, *see also* Kalela, O., *& others.* Seasonal change of habitat . . . 1961. No. 72618

72954. KOPOSOV, GEORGIĬ. Atom krushit l'dy. (Ogonëk, Jan. 1962. god 40, no.3, p.16, 6 col. plates.) Text in Russian. **Title tr.:** The atom crushes the ice. English version pub. in *Soviet Union today,* Apr. 1962, p.8-11.

Journalist's sketch of the Arctic Institute's High Latitude Expedition of Sept.-Oct. 1961 under D.D. Maksutov on the atomic icebreaker *Lenin,* Capt. Boris Makarovich Sokolov. The convoy through Vil'kitskiy Strait, setting up the drifting station North Pole-10, etc. are touched upon and illus. (DLC.)

72955. KOPOSOV, GEORGIĬ. Pokazyvaet Petropavlovsk. (Ogonëk, July 1961. god 39, no.27, p.8, illus.) Text in Russian. **Title tr.:** Petropavlovsk presents.

Reports construction of a 112 m. tower for the Nikol'skaya Sopka station near Petropavlovsk-in-Kamchatka, the easternmost television center of the Soviet Union. (DLC.)

72956. KOPTEV, A. P. Aktinometricheskie issledovaniĭa s samoleta v Arktike. (*In:* Lietuvos TSR Mokslų Akademija. Aktinometrijos . . . 1962, p.245-50, tables, graph.) Text in Russian. Summary in Lithuanian and English. **Title tr.:** Actinometric investigations by aircraft in the Arctic.

Reports Aug.-Sept. 1959 observations in an unidentified area of the central Arctic Basin. Total and reflected radiation was registered over various underlying surfaces: clouds, ice cover of the sea, open sea, and tundra. Albedo of clouds, water and ice is reported. Methods are briefly discussed; aerial observations are considered to supply satisfactory actinometric data. (DLC.)

72957. KOPTEV, A. P. Al'bedo oblakov, vody i snezhno-ledīanoĭ poverkhnosti; po dannym "Leta-

– ĭūshcheĭ observatorii". (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t. 229, Radiatsionnyĭ i teplovoĭ balans Arktiki, p.167-74, tables, graphs.) 2 refs. Text in Russian. **Title tr.:** Albedo of clouds, water and snow-ice cover; according to data of the "Letaĭūshchaĭa observatoriĭa" expedition.

Presents a preliminary analysis of these data obtained during the so-called Flying Observatory expedition in Aug.-Sept. 1959. Albedo of clouds was found to depend on the underlying surface of the earth and on the thickness of clouds. An empirical formula for the albedo of ice as a function of its packing degree is obtained. A mean value for albedo of clouds was found to be 58, sea in clear weather: 15, and when overcast: 9. (CaMAI.)

72958. KOPTEV, A. P., *and* **B. A. PĬĀTNENKOV.** O pogloshchenii i proniknovenii solnechnoĭ radiatsii v sneg i led v Arktike. (Problemy Arktiki i Antarktiki. Sbornik stateĭ, 1962. vyp. 10, p.71-76, tables, graphs.) 4 refs. Text in Russian. **Title tr.:** On the absorption and penetration of solar radiation in snow and ice of the Arctic.

Reports studies carried out in 1949-1950 on Cape Sterlegova in Krasnoyarsk Province and 1958-1959 on the drifting station North Pole-6. Pyranometers and albedometers used are described. Results obtained from snow of 0.29 to 0.42 g/cm³ density and firn of 0.47-0.60 g/cm³ density, at various depths are tabulated, graphed and interpreted. Radiation properties of snow and ice are analyzed. Dispersed and absorbed radiation are calculated. The character of the radiation is found to be a factor in the radiation properties of snow as well as the physical conditions and fabric of the snow itself. (DLC.)

72959. KOPTEVA, A. V. K metodike nablūdeniĭ s samoleta nad prilivnymi splocheniĭami, szhatiĭami i razrezheniĭami l'dov. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t. 210, Metodika okeanologicheskikh issledovaniĭ, Sbornik stateĭ, vyp. 1, p.273-76, maps.) Text in Russian. **Title tr.:** The airborne method of observations of tidal consolidation, compression, and thinning of ice.

Offers some considerations and suggestions as to the technique of such observations, and the observation routes in the Laptev Sea, Ob Bay and the East Siberian Sea. (CaMAI.)

72960. KOPYLKOV, B. N., *and* **V. G. SUKHOVA.** Kompleksnoe ispol'zovanie i okhrana vodnykh resursov Zapadnoĭ Sibiri i Severnogo morskogo puti. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp. 10, p.81-86.) Text in Russian. **Title tr.:** Broad utilization and conservation of the water resources of Western Siberia and the Northern Sea Route.

Reviews conference held Dec. 12-16, 1961 in Novosibirsk. Construction of Nizhne-Obskaĭa hydroelectric station (6-7.5 million kwt.), expansion of river transportation on the Ob, Yenisey and Pechora, construction of the Vorkuta-Yugorskiy Shar, Solikamsk-Ukhta railroad, timber, grain and oil transport, etc. are characterized with emphasis on the Ob-Irtysh basin, the Ural and Pechora coal basin, and the Northern Sea Route. (DLC.)

72961. KOPYLOV, A. N. K biografii S. U. Remezova. (Akademiĭa nauk SSSR. Institut istorii. Istoricheskiĭ arkhiv, Nov.-Dec. 1961. god 7, no.6, p.237.) 2 refs. Text in Russian. **Title tr.:** Contributions to the biography of S.U. Remezov.

Discusses some new information on the noted Siberian cartographer Semen Ul'ĭanovich Remezov, in a service record for 1681-1688, recently discovered in the Central State Archives of Ancient Documents (TsGADA), Moscow. His age is mentioned as 47 in 1688 or 1689, thus advancing his assumed date of birth 20 years to 1641-42. (DLC.)

72962. KOPYLOVA, T. N., *and* **V. G. KORCHAGIN.** Litologo-stratigraficheskoe raschlenenie permskikh otlozheniĭ v Pur-Olenekskom raĭone. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t. 117, Geologiĭa . . . 1961, p.84-93, table.) 2 refs. Text in Russian. **Title tr.:** The lithologic-stratigraphic separation of Permian deposits in the Pur-Olenek region.

Describes the lithology and stratigraphy of a compiled section, based on study of six boring cores and exposures in the Pur and tributary valleys. Permian deposits 200-340 m. thick are divided into ten beds and each is described as to thickness, lithologic properties, floral and faunal characteristics. (DLC.)

72963. KOPYLOVA, T. N. O khimicheskom sostave bitumov permskikh i kembriĭskikh otlozheniĭ Olenekskogo podnĭatiĭa. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t. 121, vyp. 18, Sbornik statei po geologii i neftegazonosnosti Arktiki, p.103-109, tables.) 6 refs. Text in Russian. **Title tr.:** Chemical composition of the bitumen of the Permian and Cambrian deposits in the Olenek uplift.

Reports methods and data of analyses of four samples. The elementary and group composition of bitumen is described. The Permian bitumen contains 20% hydrocarbons and Cambrian deposits of the Lapar series 5%. The chemical composition of the hydrocarbons is also given. Permian oils differ from Cambrian and possess an aromatic texture. (DLC.)

72964. KOPYLOVA, Z. A., *and* **T. L. KAMOLIKOVA.** Ob urovne askorbinovoĭ kisloty v krovi zdorovykh lūdeĭ i bol'nykh ostrymi infektsiĭami v Arkhangel'ske. (Voprosy pitaniĭa, 1962. t. 21, no.4, p.66-71, illus., table.) 12 refs. Text in Russian. Summary in English. **Title tr.:** The level of ascorbic acid in the blood of healthy subjects and those sick from acute infections, in Arkhangel'sk.

Reports a study of blood from about 900 healthy and 150 sick persons. Patients with infectious hepatitis or influenza showed a considerably lowered vitamin level. Administration of 300 mg. of the vitamin per day to healthy persons raised the blood content to an optimal level, but had no effect on the sick. (DLC.)

KOPYTIN, V. I., *see* Babkin, P.V., & V.I. Kopytin. Geologicheskie i mineralogicheskie osobennosti . . . 1961. No. 69947

KORABEL'NIKOVA, V. V., *see* Kosygin, M.K., & *others*. Struktury zhelezorudnykh mestorozhdeniĭ . . . 1960. No. 73025

72965. **KORANDA, JOHN JAMES.** Arctic summer. (Natural history, Aug.-Sept. 1959. v.68, no.7, p.405-415, illus.)

Describes the main character of the tundra near Point Barrow; the intensity of life and reproduction during the brief summer. Lemmings (two species) are discussed as to their role as food for predatory birds, and their abundance as determinant of number of owls and their eggs. Snow buntings, Alaskan longspurs, ptarmigans, jaegers, phaleropes, and other birds and their summer activities are described. Growth of the young is rapid. (DLC.)

72966. **KORANDA, JOHN JAMES.** Plant ecology and the Arctic National Wildlife Range. (*In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.37-44.)

Discusses potentialities for botanical study in this area on the north and south slopes of the Brooks Range, northeastern Alaska. Its varied habitats and topography are cited. It exhibits the effects of patterned ground on the distribution of vegetation, the floristic relationships between eastern and western Arctic, the transition from subarctic forest to tundra, spruce growing at the northernmost limits, and effects of ice fields *(aufeis)* on vegetation along rivers. Approx. 250 plant species are found in the area; floristic elements on the north slope are outlined. (CaMAI.)

KORCHAGIN, V. G., *see* Kopylova, T.N., & V.G. Korchagin. Litologo-stratigraficheskoe raschlenenie . . . 1961. No. 72962

KORCHAK, H., *see* Masoro, E.J., & *others*. . . . inhibitory mechanisms . . . lipogenesis. 1961. No. 73866

KORCHINSKAIĀ, E. I., *see* Gorbunova, G.S., & E.I. Korchinskaiā. Novoe beskhlornoe udobrenie . . . 1960. No. 71761

72967. **KORDÉ, KIRA BORISOVNA.** Vodorosli kembriiā IUgo-Vostoka Sibirskoĭ platformy. Moskva, Izd-vo Akademii nauk SSSR, 1961. 148 p. illus., tables incl. fold., maps, 28 plates, (Akademiiā nauk SSSR. Paleontologicheskiĭ institut. Trudy, t.89.) 87 refs. Text in Russian. **Title tr.:** Cambrian algae in the southeastern Siberian platform.

Describes systematically 89 species (72 new) from 14 genera, collected in 1951-1954 in the Amga, Lena, Aldan River basins and other areas. Special attention has been given to the system, evolution and stratigraphic importance of fossil algae. Morphology of gen. *Epiphyton,* the most numerous, is treated in detail. Ecology and distribution patterns of algae are also dealt with *in extenso.* Paleogeographic value of Cambrian algae is outlined. (DLC.)

72968. **KOREĬSHA, M. M.** Rezhim sovremennogo oledeneniiā khr. Suntar-Khaiāta. (Issledovaniiā lednikov i lednikovykh raĭonov, 1961. vyp.1, p.136-53, illus., tables, diagr., map.) 11 refs. Text in Russian. Summary in English. **Title tr.:** Character of contemporary glaciation in the Suntar-Khayata Range.

Presents a catalog of 62 glaciers, some forty of which were studied during June 1957-Sept. 1959. Data are provided of observations on Glacier No. 31, a typical valley glacier reaching an altitude of 2728 m. Accumulation and ablation were studied, also ice structure and velocity. This and the other glaciers lie in the infiltration-freezing zone of ice formation; their glaciation energy is low, as evidenced by low velocity of their movement, insignificant thickness, inertia of glaciation, etc. These glaciers have retreated slowly during the last two centuries. (CaMAI.)

72969. **KOREN', T. N.** Novyĭ siluriĭskiĭ rod Uralograptus. (Paleontologicheskiĭ zhurnal, 1962, no.3, p.136-37, illus.) 5 refs. Text in Russian. **Title tr.:** New Silurian genus *Uralograptus.*

Describes systematically a new graptolite, *Uralograptus insuetus* n. gen., n. sp., found in the Molyud-Vozh River basin on the western slope of Polar Ural. It belongs to fam. Cyrtograptidae identified by Aver'ianov in 1929. Its geologic position: lower Wenlockian, *Oktavites spiralis* zone. (DLC.)

72970. **KOREN', T. N.** O novykh nakhodkakh ludlovskikh graptolitov na Poliārnom Urale. (Leningrad. Vsesoiūznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy, nov. ser. 1961. t.67. Materialy po geologii Urala, sbornik statei, p.175-80, plate.) 4 refs. Text in Russian. **Title tr.:** New finds of Ludlovian graptolites in the Polar Ural.

Describes systematically three Silurian graptolites found in the Kharuta River basin of Komi ASSR: two new species, *Pristiograptus gertrudae* and *P. charutensis* of fam. Monograptidae, and *Linograptus posthumus* (Richter). (DLC.)

KORENBERG, É. I., *see* Zemskaiā, A.A., & É.I. Korenberg. Paraziticheskie gamazovye kleshchi . . . 1962. No. 76651

KORENEVA, E. V., *see*
Arkhipov, S.A., & *others*. Stratigrafiiā . . . 1961. No. 69859
Pacific Science Congress. 1961. No. 74619

72971. **KORENNOV, B. I.** Élektricheskie svoĭstva gornykh porod i metody ikh izmereniiā v élektromagnitnom pole; kriticheskiĭ obzor. (*In:* Akademiiā nauk SSSR. Institut merzlotovedeniiā. Severo-Vostochnoe otdelenie. Teplo- i massoobmen . . . 1961, p.128-43, graphs, diagrs.) 40 refs. Text in Russian. **Title tr.:** Electrical properties of rocks and methods of their measurement in an electromagnetic field.

Reviews the main methods of electrical surveying of rocks as reported in the Russian and foreign literature. Electrical resistance of rocks, measurements of its parameters under laboratory and field conditions are described. Experimental investigation of the specific resistance of permafrost is reviewed. Measurement of dielectric permeability in permafrost and its dependence upon temperature and density are reported. Achievements and tasks in electrical surveying are summarized. (DLC.)

72972. **KORFF, SERGE ALEXANDER, 1906–** .
Observation at College, Alaska, on the November, 1960 cosmic ray increases. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.2, p.303-306, graphs.) 8 refs.

Reports on the cosmic ray increases at College during Nov. 9-23, 1960, and the associated solar flares, radio outbursts, auroras, magnetic disturbances, longitude effects, and ionospheric effects in the Northern Hemisphere. In discussing these phenomena, they are found consistent with a view that the low energy cloud of particles emitted

by the sun is of considerable angular extent, and goes out more or less radially from the sun, while the high energy particles are sometimes emitted at larger angle to the solar radius. (DLC.)

72973. KORHONEN, MIKKO. Zum syntaktischen Gebrauch des lappischen Verbs *gâl'gât* "sollen, müssen." (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.233-51.) Refs. in text. Text in German. **Title tr.:** Syntactic use of the Lappish verb *gâl'gât* "shall, must."

Comparative syntactic, morphological and etymological analyses of this verb in Lappish dialects of Fennoscandia and Kola Peninsula. (DSI.)

72974. KORÎAKIN, V. S. Osobennosti dvizheniia i morfologii lednika Shokal'skogo i sosednikh s nim lednikov Novoĭ Zemli. (*In:* Akademiia nauk SSSR. Institut geografii . . . Materialy glîatsiologicheskikh . . . 1961. vyp.3, p.35-36.) Text in Russian. **Title tr.:** Features of the movement and morphology of Shokal'skogo and adjacent glaciers of Novaya Zemlya.

Reports different approaches for measuring velocity and direction of glacier movements on Novaya Zemlya in 1957-1959. Movement varies substantially in different parts of the glacier with maximal speed in the central part: 96 m. a year. Some features of its movement are closely connected with the morphology of the glacier, and pertinent aspects of Shokal'skogo morphology are summarized. (DLC.)

72975. KORÎAKIN, V. S. Osobennosti dvizheniia l'da i morfologii lednikov v oblasti pokrovnogo oledeneniia Novoĭ Zemli. (Issledovaniia lednikov i lednikovykh raĭonov, 1962. vyp.2, p.76-85, graphs.) 12 refs. Text in Russian. Summary in English. **Title tr.:** Features of ice movement and glacier morphology in the glaciation cover region of Novaya Zemlya.

Reports instrumental observations made within the IGY program 1957-1959, on the Shokal'skogo Glacier and other glaciated areas of Novaya Zemlya. Speed of ice movement is reported as measured in various sections of the glacier. It varies from 40 to 150 m./yr. Monthly change in ice movement also is given, with a 4.5 m. minimum in Feb. and maximum of 10.0 m. in July. Morphology of Shokal'skogo and other glaciers is described. (DLC.)

KORÎAKIN, V. S., *see also* Chizhov, O.P., & V.S. Korîakin. Changes . . . regimen Nov. Zemlya ice sheet. 1962. No. 70731

72976. KORKINA, E. I. Davnoproshedshie (predproshedshie) vremia v îakutskom îazyke. (Akademiia nauk SSSR. Sibirskoe otdelenie. ÎAkutskiĭ filial. Nauchnye soobshcheniia, 1959. vyp.2, p.112-19.) 15 refs. Text in Russian. **Title tr.:** The pluperfect (pre-past) tense in Yakut.

Linguistic study of the grammatical structure and semantic use of this tense corresponding to the plusquamperfect of Indo-European languages. (DLC.)

72977. KORKINA, E. I. Leksicheskie osobennosti govora naseleniia Olenekskogo raĭona. (Akademiia nauk SSSR. Sibirskoe otdelenie. ÎAkutskiĭ filial. Nauchnye soobshcheniia, 1961. vyp.6, p.65-74.) 3 refs. Text in Russian. **Title tr.:** Lexic peculiarities in the speech of the Olenek District population.

Discusses so-called "Evenkisms," some 130 Evenki-Tungus loanwords and 35 Yakut words with a secondary meaning borrowed from Evenki; they are found in the dialect of the linguistically Yakut but ethnically Evenki population of the upper Olenek River region. A glossary of these dialectal terms is appended. (DLC.)

72978. KORKINA, E. I. Nekotorye morfologicheskie osobennosti govora naseleniia Bulunskogo raĭona. (Akademiia nauk SSSR. Sibirskoe otdelenie. ÎAkutskiĭ filial. Nauchnye soobshcheniia, 1961. vyp.6, p.59-64.) 2 refs. Text in Russian. **Title tr.:** Certain morphological features of the speech of the Bulun District population.

Linguistic analysis of Yakut as spoken by the Yakutized Eveny-Lamuts and Evenki-Tungus of the lower Lena River. (DLC.)

72979. KORKINA, R. I. O nekotorykh osobennostiakh vzaimodeĭstviia podzemnykh vod i chetvertichnykh otlozheniĭ v usloviiakh razvitiia mnogoletnemerzlykh porod raĭona Khal'mer-îu. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Fiziko-khimicheskie protsessy v promerzaîushchikh i merzlykh gornykh porodakh, 1961, p.86-89, graph, map.) 2 refs. Text in Russian. **Title tr.:** Some features of the interaction of ground water and Quaternary deposits under conditions of permafrost formation in the Khal'mer-Yu area.

Discusses conditions for the occurrence of continuous and discontinuous taliks in connection with the circulation of deep-lying ground water. Electric profiles of Quaternary formations in the Khal'mer-Yu mining area, Arkhangel'skaya Oblast', are described. Dispersed Quaternary formations of 20 m. or deeper, hinder the extension of taliks, while continuous taliks can occur in shallower Quaternary formations, especially those subjected to tectonic disturbances. The practical significance of these findings and the confirmation of earlier investigations by Akimov are touched upon.—From CRREL. (DLC.)

72980. KORNEV, B., *and* A. KUZNETSOV. Zapadnaia Sibir', novaia krupnaia neftegazonosnaia provintsiia. (Geologiia nefti i gaza, Dec. 1961. god 5, no.12, p.57-58.) Text in Russian. **Title tr.:** West Siberia, a new large oil and gas-bearing province.

Reports on Aug. 1961 meeting on the expansion of prospecting in West Siberia: the Tyumen, Novosibirsk and Krasnoyarsk geological survey plans for 1962-1964 were presented. Prospecting in the Ob, Pur, Taz and Yenisey basins is also expected. Northern areas of the West Siberian plain are considered especially suitable for oil and gas accumulation. (DLC.)

72981. KORNILOV, N. A. O kvartse iz sul'fidnykh medno-nikelevykh rud Pechengi. (Geologiia rudnykh mestorozhdeniĭ, July-Aug. 1962, no.4, p.123-26, illus.) 4 refs. Text in Russian. **Title tr.:** On quartz from sulfide copper-nickel ores of Pechenga.

Notes this quartz closely connected with the ore's enclosing rocks from which it was derived in the process of ore emplacement. In close association with the sulfides is terrigenous quartz of sedimentary rocks, or quartz of hydro-thermal veins. Mode of occurrence is discussed. (DLC.)

72982. **KORNILOV, N. A.** O sul'fidnykh olivinitakh i garʦburgitakh Allarechenskogo nikelenosnogo intruziva; Kol'skiĭ poluostrov. (Akademiiā nauk SSSR. Doklady, Sept. 1, 1962. t.146, no.1, p.199-202, illus., tables.) 8 refs. Text in Russian. **Title tr.:** Sulfide olivinites and harzburgites of the Allarechensk nickel-bearing intrusive, Kola Peninsula.

Reports results of study of material composition of these two rocks which differ in hypersthene content. Their primary minerals are olivine, hypersthene (in harzburgites), and sulfides; content and occurrence are described. These rocks in various parts of the intrusive underwent different stages of metamorphism. According to structural features, they are close to magnetitic and titanomagnetitic olivinites and peridotites, and they belong to ultrabasic rocks. (DLC.)

KORNUTOVA, E. I., *see* Ganeshin, G.S., *& others.* Karta . . . 1961. No. 71580

72983. **KOROLEFF, ALEXANDER MICHAEL,** 1889– . Recent developments in logging mechanization and full-tree logging in Russia. Montreal, 1960. 18 p. (Pulp and Paper Research Institute of Canada. Technical reports series, 190, Woodlands research index no. 118.)

Reviews Russian literature since May 1958, and application of the more important elements of the full-tree logging system, assessing its progress and prospects. Formerly 75% of the labor force of this industry worked in the woods; with mechanization, more of the work is done at the terminal, seasonal labor is reduced. By 1959, 75-90% of the principal phases of logging were mechanized. The advantages and disadvantages of full-tree logging are discussed; as is the possible application of this technique to extracting the complete tree for terminal processing outside the USSR. (CaOF.)

72984. **KOROMPAY, B.** Die finnisch-ugrische Ethnologie. (Acta linguistica, *Budapest,* 1960. t.10, fasc. 1-2, p.131-80.) 9 refs. Text in German. Summary in Russian. **Title tr.:** Finno-Ugric ethnology.

Review article surveying the Finnish, Russian, Hungarian, etc. contributions to Finno-Ugric anthropology and listing approx. 1200 publications, nearly half on northern tribes. Major works of the 19th and 20th century are covered to 1958 in five categories: bibliography and history of investigation; ethnology and travel descriptions; material culture; religion, customs, and archeology; folklore, etc. An author list is appended. (CtY.)

72985. **KOROSTOVTSEVA, N. V.** O mekhanizme povysheniĭa ustoĭchivosti krys k glubokoĭ gipoksichesko-giperkapnicheskoĭ gipotermii pod vliiāniem predvaritel'noĭ trenirovki. (Fiziologicheskiĭ zhurnal SSSR, Oct. 1962. t.48, no.10, p.1209-217, illus., tables.) 9 refs. Text in Russian. **Title tr.:** On the mechanism of increased resistance of rats to deep hypoxy-hypercapnic hypothermia, as affected by preceding training.

Reports studies of rats exercised by thrice-daily exposure to 5°C. under hypoxy-hypercapnic conditions. When subsequently made hypothermic under such conditions, these animals were less susceptible to hypoxia; but their resistance to hypothermia was independent of their resistance to hypoxia. (DLC.)

72986. **KOROSTOVTSEVA, N. V.** O rezhime trenirovki i nekotorykh pokazateliākh trenirovannosti krys k glubokoĭ gipoksichesko-giperkapnicheskoĭ gipotermii. (Fiziologicheskiĭ zhurnal SSSR, Dec. 1962. t.48, no.12, p.1466-70, illus.) 2 refs. Text in Russian. **Title tr.:** Training schedule and some indicators of training, for deep hypoxy-hypercapnic hypothermia in rats.

Reports: a thrice-daily exposure to cold produced the best training effects. Resistance to hypothermia increased parallel with the increase in metabolic processes and with the decrease of sensitivity to hypoxia. These changes can be considered as indirect indicators of the capacity to withstand deep hypothermia. (DLC.)

72987. **KOROTIN, A. B.** Sopostavlenie sutochnykh khodov poiāvleniĭ vodorodnoĭ ėmissii i radiootrazheniĭ na chastote 72 *Mgts.* (Akademiiā nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: poliārnye siiāniiā i svechenie nochnogo neba. Sbornik statei, 1961. no.6, p.31-32, graph.) 3 refs. Text in Russian. Summary in English. **Title tr.:** A comparison of diurnal variations of appearance of hydrogen emission, and radio echoes at 72 Mhz frequency.

Discusses the results of systematic observations of hydrogen emission with an SP-47 spectrograph at the Loparskaya station (63°6 geomag. lat. 126°7 geomag. long.) and at the Murmansk section of the Institute of Terrestrial Magnetism, 40 km. from the Loparskaya station; also the subsequent analysis of over 1,000 spectra with hydrogen emission lines. The intensities of both phenomena were found to show a satisfactory coincidence for the fall and winter months. (DLC.)

KOROTIN, A. B., *see also* Isaev, S.I., *& others.* Sovmestnaiā sovetsko-franʦuzskaiā . . . 1962. No. 72417

72988. **KOROTKEVICH, E. S.** ÎÂkov ÎÂkovlevich Gakkel'; k 60-letiiū so dniā rozhdeniiā. (Vsesoiūznoe geograficheskoe obshchestvo. Izvestiiā, May-June 1962, t.94, vyp. 3, p.258-59, port.) Text in Russian. **Title tr.:** ÎÂkov ÎÂkovlevich Gakkel'; on his 60th birthday.

Reviews the course of life and main activities of this noted geographer, active in arctic exploration since 1932. His participation in 21 expeditions, including those of the *Sibiriākov* and the *Cheliūskin,* are mentioned, also that of 1948 in Arctic Basin, when the Lomonosov Ridge was discovered; his published works (170) are mentioned but not listed. At present he is head of the geography department of the Arctic and Antarctic Institute, Leningrad. A similar article by the same author pub. in *Problemy Arktiki* . . . 1962, vyp. 10, p.101-103. (DLC.)

72989. **KOROTKEVICH, O. S.** Novye dannye o diatomovykh vodoroslīākh litorali Barentseva moriā. (Akademiiā nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1959. t.12, p.88-98, illus.) 8 refs. Text in Russian and Latin. **Title tr.:** New data on the diatoms of the Barents Sea littoral.

Outlines earlier research and lists diatom

forms so far recorded. Nine new forms from the Dal'ne-Zelenetskaya area are described, with differential diagnosis, and notes on habitat, synonyms, etc. (DLC.)

72990. KOROVIN, ARKADIĬ IVANOVICH. Temperatura pochvy i rastenie na Severe. Petrozavodsk, Gos. izd-vo Karel'skoĭ ASSR, 1961. 192 p. illus., tables. (Akademiīa nauk SSSR. Karel'skiĭ. filial.) About 200 refs. Text in Russian. **Title tr.:** Soil temperature and plant growth in the North.

Account of experimental studies with cultivated plants to foster the spread of agriculture and horticulture in the 60°-62°N. belt of European and Asiatic Russia. Earlier studies, domestic and foreign, are reviewed; methods of temperature control in the soil and other methods of present study, effects of lowered temperature on germination, the root system and the organs above ground are dealt with, p.40-106. Influence of low temperature on the succession of developmental phases and the duration of the vegetative period is covered, p.107-131; as is low temperature and fruition of plants (p.132-58). Mitigating the adverse effect of cold soil under conditions of the North is discussed, p.159-74. The low content in nutrients and usually high acidity of the northern soils are also considered. (DLC.)

72991. KOROVINA, B. IA. Prognoz metanoobil'nosti shakht Vorkutinskogo mestorozhdeniīa. (Ugol', Feb. 1961. god 36, no.2, p.34-37, diagrs., tables, plan.) 10 refs. Text in Russian. **Title tr.:** Forecasting the amount of methane in pits of the Vorkuta deposits.

Outlines results of investigating the methane content by drilling in various parts of the coal deposits to 460 m. depth. Data on methane pressure (up to 30.8 atmos.) and rate of escape (0.005-15.0 liter/min. through a 75 mm. diam. opening) are tabulated and analyzed, and interpolation of these data to the deeper (to 900 m.) strata is discussed. Configuration of the deposits and location of several pits are diagrammed. (DLC.)

72992. KORT, V. G. Okeanografiīa. (Mezhdunarodnyĭ geofizicheskiĭ god. Informatsionnyĭ biulleten', 1960, no.8, p.26-34, fold. map.) Text in Russian. **Title tr.:** Oceanography.

Reviews the Russian IGY oceanographic program. Expeditionary vessels are listed; and studies reported including those in the Norwegian and Greenland Seas, the central Arctic Basin, and the northwest Pacific. Oceanic circulation, ice transport from the Arctic Basin, meteorologic, hydrologic, geologic, biologic, and other studies are briefly mentioned. (DLC.)

72993. KORYTIN, S.A. Opyt okhotnikov v primenenii pakhuchikh primanok na promysle lisitsy. (Ratsionalizatsiīa okhotnich'ego promysla, 1961. vyp 9, p.60-68.) Text in Russian. **Title tr.:** Hunters' experience in use of baits with odor in fox-trapping.

Outlines means and methods used in various regions including Arkhangel'sk and Tyumen Provinces and other northern areas. Seven types of bait are distinguished, their good results stressed. (DLC.)

72994. KORZH, D., *and* L. ANISIMOVA. Uchityvat' osobennosti raboty nerusskikh shkol. (Narodnoe obrazovanie, Mar. 1961, no.3, p.51-53.) Text in Russian. **Title tr.:** Problems peculiar to non-Russian schools should be taken into account.

In Karelian schools, with three-languages in the curriculum, study of Finnish was made optional 1958/59 to ease the work load. Russian phonetics has particular difficulties for Karelian-speaking children, the importance of a pre-school training in spoken Russian, the need for new Russian primers and better qualified kindergarten and elementary school teachers, etc. are discussed. (DLC.)

72995. KORZHAVIN, KONSTANTIN NIKOLAEVICH. Vozdeĭstvie l'da na inzhenernye sooruzheniīa v usloviīakh Sibiri. (Akademiīa nauk SSSR. Sibirskoe otdelenie. Izvestiīa, 1961, no. 10, p.31-42, tables, diagrs.) 21 refs. Text in Russian. **Title tr.:** Effect of ice on engineering construction under the conditions of Siberia.

Spring ice on Siberian rivers notable for its thickness and strength, poses serious problems in bridge building. Effects of ice pressure on structures are reported in detail from author's systematic studies during 1934-1960 and since 1954 using a motion picture camera. Data on the mechanical properties of the ice during and after breakup and the pressure on vertical and sloping bridge piers are tabulated, diagrammed and discussed. Methods for estimating this pressure are proposed. The hypotheses on pressure and the requirements generally of the State All-Union Standard (GOST) for bridge construction are found not applicable in Siberia. (DLC.)

72996. KORZHENEVSKIĬ, B.A. Nekotorye novye dannye po geologii severnoĭ chasti Sredinnogo Kamchatskogo khrebta. (Akademiīa nauk SSSR. Doklady, Feb. 11, 1962, t.142, no.5, p.1143-45.) 3 refs. Text in Russian. **Title tr.:** Some new data on the geology of the northern part of the Sredinnyy Range, Kamchatka.

Reports a 1960-1961 study of tectonics and volcanism in northern Kamchatka. A stratigraphic and petrographic description of Tertiary-Quaternary rocks is presented. Tectonically, four structural stages in the Kamchatka-Koryak anticline are distinguished and each is characterized. Geologic development of the region is interpreted. (DLC.)

KORZHINSKIĬ, DMITRIĬ SERGEEVICH, 1899– , *see* Akademiīa nauk SSSR . . . Fiziko-khimicheskie problemy . . . 1961. No. 69566]

72997. KORZHUEV, SERGEĬ SERGEEVICH, *and* R.V. FEDOROVA. Chekurovskiĭ mamont i usloviīa ego obitaniīa. (Akademiīa nauk SSSR. Doklady, Mar. 1, 1962. t.143, no.1, p.181-83, diagrs.) 5 refs. Text in Russian. **Title tr.:** The Chekurovka mammoth and its life conditions.

Reports the find of mammoth remains on left bank of the lower Lena, 2.5km. from Chekurovka village in 1960, vestiges of wool, skin, and flesh along with the skeleton. It is identified as a later type *Elephas primigenius* Blum. Geologic description of the site is given and spore-pollen analyses are presented of the deposits in which the remains were found. Three phases in vegetation are reported. It was richer, and the climate warmer than at present. (DLC.)

72998. KORZHUEV, SERGEĬ SERGEEVICH. Stroenie doliny srednei Leny i istoriīa ee razvitiīa

v chetvertichnom periode. (*In:* Vsesoĭuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.203-208.) Text in Russian. **Title tr.:** Structure of the middle Lena valley in the Quaternary period.

Distinguishes eight terraces belonging to three geologic complexes. Their composition, age, and other features are reported. According to geologic structure and origin, the middle Lena valley is divided into five sections, which are briefly described. Five stages in relief formation are recognized. (DLC.)

72999. KOSHELKINA, Z. V. Inoceramy i ikh stratigraficheskoe znachenie dlia raschleneniia iurskikh otlozhenii Sibiri. (*In:* Vsesoĭuznyĭ aĕrogeologicheskiĭ trest. Materialy po regional'noĭ geologii . . . 1961, p.140-66, plates.) 15 refs. Text in Russian. **Title tr.:** *Inoceramus* and their stratigraphic importance for separating Jurassic deposits of Siberia.

Describes the stratigraphy of Jurassic deposits in the eastern part of the Vilyuy depression and the Verkhoyansk foredeep, with attention to the role of various of these molluscan fossils. Their monographic literature is reviewed, and a short description given of 22 species, 14 of them new. (DLC.)

73000. KOSHELKINA, Z. V. Novye dannye po stratigrafii nizhneiurskikh morskikh otlozhenii r. Viliuia. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Aug. 1961, no.8, p.88-98, illus., tables, sections.) 14 refs. Text in Russian. **Title tr.:** New data on the stratigraphy of Lower Jurassic marine deposits of the Vilyuy River.

Reports own studies earlier, in 1958, and those of others. Columnar sections of the Domerian and Toarcian stages of these deposits are described according to layers, noting distribution of ammonite fauna. Distribution of paleontologic remains in both stages is listed for the Vilyuy, Markha, Tyung and Bol'shaya Botuobuya. An ammonite *Paltarpites argutus* Buckman is described. (DLC.)

73001. KOSHELKINA, Z. V. Novye vidy *Inoceramus* iz sredne- i verkhneiurskikh otlozhenii nizov'ev Leny. (Paleontologicheskiĭ zhurnal, 1962, no.1, p.66-73, plates.) 3 refs. Text in Russian. **Title tr.:** New Middle and Upper Jurassic species of *Inoceramus* from the lower reaches of the Lena.

Reports nine new species of this molluscan genus: *I. lungershauseni, I. sibiricus, I. popovi, I. elegans, I. polaris, I. borealis, I. vagti, I. tolli,* and *I. arcticus.* Systematic description, comparison, geographic distribution are given for each. (DLC.)

73002. KOSHKINA, T. V. Migratsii norvezhskogo lemminga, *Lemmus lemmus.* (Zoologicheskiĭ zhurnal, 1962. t.41, vyp.12, p.1859-74, tables.) 23 refs. Text in Russian. Summary in English. **Title tr.:** Migrations of the Norway lemming, *Lemmus lemmus.*

Reports a study from stationary posts, of the spring and autumn migrations, in southern Kola Peninsula. The spring migration showed a peak in numbers and was set in motion by melting of the snow and warm weather in the areas where the animals hibernate. The fall migration was due to overcrowding caused by intense reproduction, shortage of food and space, and later by adverse weather. These migrations extend the range of the animal southward, down to the sea, some penetrating to the isles of the Kandalaksha Bay. (DLC.)

73003. KOSHKINA, T. V. Novye dannye po pitaniiu norvezhskogo lemminga, *Lemmus lemmus.* (Moskovskoe obshchestvo ispytateleĭ prirody, otdel biologicheskiĭ. Biulleten' 1961. t.66, vyp.6, p. 15-32, illus., tables.) 12 refs. Text in Russian. Summary in English. **Title tr.:** New data on the diet of the Norway lemming, *Lemmus lemmus.*

Reviews earlier work on the subject, and describes southern Kola Peninsula where conditions were studied during 1958 and 1959. Contents of some thousand stomachs, food remains, and grazing effects formed the basis of the investigation. The diet was found to be monotonous over the seasons consisting of mosses (listed), sedge and cotton grass. Roots, leaves, stems and bark of higher plants are not eaten, nor are seeds, mushrooms or lichens. Food shortage is considered to be a factor in fall migration, and in numerical reduction during the winter. (DLC.)

73004. KOSHKINA, T. V., *and* **A. S. KHALANSKIĬ.** O razmnozhenii norvezhskogo lemminga, *Lemmus lemmus* L., na Kol'skom poluostrove. (Zoologicheskiĭ zhurnal, Apr. 1962. t.41, vyp.4, p.604-615, illus., tables.) 12 refs. Text in Russian. Summary in English. **Title tr.:** Reproduction of the Norway lemming, *Lemmus lemmus* L. on the Kola Peninsula.

Reports a comprehensive study conducted in both northern and southern parts of the area. Intensity of reproduction varied greatly in different years. In favorable years, litters are cast in both summer and in winter under the snow, the number of litters reaching five per annum. Maturity is attained in summer at the age of 1-1.5 months. Average litter size was 3.74-6.62. Reproduction is high during increase of population while its density is not high. (DLC.)

73005. KOSHKINA, T. V., *and* **A. S. KHALANSKIĬ.** Vozrastnaia izmenchivost' cherepa norvezhskogo lemminga i analiz vozrastnogo sostava populiatsii u ėtogo vida. (Moskovskoe obshchestvo ispytateleĭ prirody; otdel biologicheskiĭ. Biulleten' 1961. t.66, vyp.2, p.3-14, illus., tables.) 8 refs. Text in Russian. Summary in English. **Title tr.:** Variation with age in the skull of the Norway lemming and analysis of age composition in populations of this species.

Study of 597 skulls collected in southern Kola Peninsula at the 1958 population peak. Based on the method described, the authors distinguish five groups: juvenile, subadult, two adult groups, and old. This enabled an analysis of seasonal fluctuation in age groups and determination of life span, intensity of reproduction, etc. (DLC.)

73006. KOSHLIAK, V. A. O sviazi teplovogo polia Zapadno-Sibirskoĭ nizmennosti s rel'efom doiurskogo fundamenta. (Geologiia nefti i gaza, Jan. 1961. god 5, no.1, p.39-44, table, diagr., profile.) 5 refs. Text in Russian. **Title tr.:** On the relationship between the heat field of the West Siberian plain and the pre-Jurassic basement relief.

Reports geothermal investigations in about 40 boreholes, six of them, Khanty-Mansiysk, Uvat, Berezovo, etc. in arctic areas. Temperature gradients were measured and equal values plotted. The obtained data reveal the structure, lithologic properties, and hydrogeologic regime of the pre-Jurassic basement. (DLC.)

73007. KOSICHENKO, L. P. Èksperimental'naîa peredelka sutochnogo ritma mitozov putem izmeneniîa svetovogo rezhima. (Akademiîa nauk SSSR. Doklady 1962. t.147, no.1, p.259-62, illus.) 9 refs. Text in Russian. **Title tr.:** Experimental alteration of the diurnal mitotic rhythm by changing the light conditions.

Reports on experiments with mice exposed to a reverted and a six-hour rhythm. In the first case, a reversal of mitotic activity resulted, with its maximum in the evening and minimum in the morning. The six hours light-dark rhythm had no effect, condition remaining normal, viz maximal mitotic activity at 8 A.M., minimal at 8 P.M. (DLC.)

73008. KOSICHENKO, L. P. Vliîanie neprerývnogo osveshcheniîa na sutochnyĭ ritm mitoticheskoĭ aktivnosti épiteliîa rogovitsy. (Akademiîa nauk SSSR. Doklady 1961. t.138, no.4, p.982-84, illus.) 8 refs. Text in Russian. **Title tr.:** Effect of continuous illumination upon the 24-hour rhythm of mitotic activity in the corneal epithelium.

Reports studies in mice kept on continuous light for periods of 12 or 60 hrs. and 14.5 days. Changes in the normal rhythm in the frequency of mitoses were already noticed after 12 hrs. of illumination but were most pronounced after 14.5 days. There were also differences in location of the mitoses between the experimental group and the controls. (DLC.)

73009. KOSINSKAIÂ, EKATERINA KONSTANTINOVNA, 1900– . Desmidievye vodorosli, vyp.1. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1960. 706 p. illus., plates, maps incl. fold. (Flora sporovykh rasteniĭ SSSR, t.5. Kon"îugaty, ili sîepliânki, 2.) Refs. Text in Russian. **Title tr.:** Desmid algae, fasc. 1.

Comprehensive monograph on these microscopic fresh-water algae of the USSR. The general part (p.9-90) deals with the cell, its parts and organs, reproduction, teratology, distribution: wide to cosmopolitan, study in Russia, etc. The systematic part, including keys, (p.91-511), treats 184 well established species. For each, the synonyms, morphology, distribution, including far northern areas from Kola Peninsula and Novaya Zemlya eastward to Chukotka and Kamchatka (with numerous maps), habitat, etc. are given. Alphabetic lists of Russian and scientific names are appended. (DLC.)

73010. KOSMINSKAIÂ, I. P., *and* **R. M. KRAKSHINA.** O zakriticheskikh otrazheniîakh ot granitsy Mokhorovichicha. (Akademiîa nauk SSSR. Izvestiîa, ser. geofizicheskaîa, June 1961. no.6, p.822-34, maps, graphs.) 10 refs. Text in Russian. **Title tr.:** On the supercritical reflections from the Mohorovičić boundary.

Describes kinematic and dynamic properties of P-ref. waves recorded during deep seismic soundings in the continental zone of the Sea of Okhotsk, and recognized as supercritical waves reflected from the Mohorovičić (M) boundary. No such waves are found in regions of the oceanic and transitional types of the earth's crust. P-ref. waves may be accompanied by the weather P waves refracted from M of comparable intensity. (DLC.)

73011. KOSMINSKAIÂ, I. P., *and* **R. M. KRAKSHINA.** On supercritical reflections from the Mohorovičić discontinuity. (International Union of Geodesy and Geophysics. Association of Seismology and Physics of the Earth's Interior. Travaux scientifiques, 1961. sér. A, fasc.21, p.39-54, map, graphs.) 9 refs.

Contains principal data on these reflections recorded in the northern and central parts of the Okhotsk Sea in connection with deep seismic soundings during the IGY. Kinematic and dynamic characteristics of the reflections in this area of continental crustal structure are described; analysis of the data showed different P-wave velocities recorded according to the crustal structure. P-ref. waves whose apparent velocity decreases with distance were considered supercritical reflections. No such reflections were recorded in regions of oceanic-type crustal structure, e.g. east of the Kuril-Kamchatka Trench. Hence these waves are considered supercritical reflections from the Mohorovičić discontinuity. (DGS.)

KOSMINSKAIÂ, I. P., *see also*

Aver'îanov, A.G., & *others.* Deep seismic sounding . . . 1961. No. 69921

Pacific Science Congress. 1961. No. 74619

Veĭtsman, P.S., & *others.* On research of the earth's crust . . . 1961. No. 76367

KOSOLAPOV, A. I., *see* Kosolapova, M.N., & A.I. Kosolapov. Primenenie gidrokhimicheskogo metoda . . . 1962. No. 73012

73012. KOSOLAPOVA, M. N., *and* **A. I. KOSOLAPOV.** Primenenie gidrokhimicheskogo metoda pri poiskakh kimberlitovykh tel. (Geologiîa i geofizika, 1962, no.2, p.95-100, graphs.) 5 refs. Text in Russian. **Title tr.:** Use of the hydrochemical method in prospecting for kimberlite bodies.

Reports chemical analyses of surface waters in the northwestern Yakutia, where kimberlite bodies are mostly distributed. A field laboratory was set up and the quantitative content of zinc, copper, lead, molybdenum and other metals determined by the dithizone method. Data are reported from some four hundred water samples analyzed. The water of the Zapolyarnaya, Novinka, and Sytykanskaya kimberlite pipes is described, and the pH, mineralization, content of zinc and other metals are reported. This hydrochemical method, authors claim, is certain to find wide application in prospecting for kimberlite bodies. (DLC.)

73013. KOSOV, B. F. Îÿvleniîa sovremennoĭ érozii v raĭone g. Salekharda. (Moskva. Universitet. Vestnik, ser. 5, geografiîa, Sept.-Oct. 1962. no.5, p.59-62, illus.) Text in Russian. **Title tr.:** Current erosion in the Salekhard region.

Reviews the climatic, geologic and geomorphic characteristics of this region near the mouth of the Ob, and describes the gully erosion phenomena. This process starts where the turfy cover of the surface is destroyed. Factors in gully erosion are characterized. (DLC.)

73014. KOSOV, B. M. Glavneĭshie itogi geologorazvedochnykh rabot v Sibiri i perspektivy ikh

dal'neĭshego razvitiĭa. (Sovetskaĭa geologiĭa, Apr. 1962, no.4, p.3-14.) Text in Russian. **Title tr.:** Main results of geologic prospecting work in Siberia and the outlook for further development.

Reviews recent searches for oil, natural gas, coal, iron ore, gold, diamonds and other useful minerals. Ten natural gas deposits in the Berezovo region, oil in the Shaim area, oil search in the Vilyuy depression, Malaya Kheta anticline are briefly mentioned. New primary deposits of diamonds in the Aykal area of the Siberian platform, are noted. Plans for further prospecting are discussed. (DLC.)

73015. KOSSOVOĬ, L. S., *and* D. V. OBRUCHEV. O nizhnem devone Severnogo Timana. (Akademiĭa nauk SSSR. Doklady, Dec. 11, 1962. t.147, no.5, p.1147-50, illus., diagr.) 5 refs. Text in Russian. **Title tr.:** On the Lower Devonian in northern Timan.

Reports recent data concerning the distribution, lithologic composition and stratigraphy of Lower Devonian deposits. A comparative section of these deposits is described. Ichthyofaunal remains are reported and a new genus *Timanaspis* of fam. Trematraspididae is identified. The boundary between Silurian and Lower Devonian is determined. (DLC.)

73016. KOSSOVSKAĬA, ANNA GRIGOR'EVNA, *and* V. D. SHUTOV. O korreliatsii zon regional'nogo ėpigeneza i metageneza v terrigennykh i vulkanogennykh porodakh. (Akademiĭa nauk SSSR. Doklady, July 21, 1961. t. 139, no. 3, p.677-80, table, map, plate.) 13 refs. Text in Russian. **Title tr.:** On correlation zones of regional epigenesis and metagenesis in terrigenous and volcanic rocks.

Discusses the problem of regional metamorphism and the character of transition of sedimentary rocks into metamorphic, with increasing depth. Zones of alteration from Cretaceous to Permian for the Verkhoyansk geosyncline are established and evaluated. The terrigenous complex of the Verkhoyansk region is correlated with the volcanic complex of New Zealand as described by D.S. Coombs. Regional epigenesis and progressive metamorphism, the facies developed and their mineral associations are summarized. Differences in the two cases are noted and generalization of epigenetic processes in volcanic and terrigenous rocks is found of no value. (DLC.)

73017. KOSSOVSKAĬA, ANNA GRIGOR'EVNA, *and* V. D. SHUTOV. Zonality in the structure of terrigene deposits in platform and geosynclinal regions. (Eclogae geologicae Helvetiae, Dec. 1959. v. 51, no. 3, p. 656-66, illus., map, diagr.) 16 refs. Paper presented at the Fifth International Congress of Sedimentology, Geneva and Lausanne, Switzerland, June 2-7, 1958.

Reports a zoning in the composition of sedimentary rock masses, established during investigations of Mesozoic deposits in the Verkhoyansk geosyncline on the Siberian platform and of Paleozoic deposits on the Russian platform. The zones, which can be mapped in an area, are characterized by an aggregate of definite structural-textural features of the rocks and their mineral composition. They reflect stages in the alterations of terrigenous rocks during the process of epigenesis and metagenesis.—From authors' abstract. (DGS.)

73018. KOSTETSKAĬA, E. V. Nekotorye zakonomernosti v raspredelenie khlora v nefelinovykh sienitakh Lovozerskogo massiva; v sviazi s ikh petrokhimicheskimi osobennostiami. (Geokhimiĭa, 1961, no. 10, p. 891-900, tables.) 13 refs. Text in Russian. Summary in English. **Title tr.:** Some patterns in chlorine distribution in the nepheline syenites of the Lovozero massif; in connection with their petrochemical features.

Reports the distribution of chlorine in 50 samples of the differentiated complex, ten samples of eudialyte lujavrites and seven of sodolites, all characterized by a very high deficiency of SiO_2 and high alkalinity. The average chlorine content for various rocks is determined and evaluated noting some patterns in this distribution. In the rocks of the differentiated complex, the highest chlorine content is found in urtites with titanates. (DLC.)

73019. KOSTETSKAĬA, E. V. O soderzhanii khlora v ėvdialitakh Lovozerskogo massiva. (Geokhimiĭa, 1961, no. 11, p. 988-94, illus., tables.) 5 refs. Text in Russian. Summary in English. **Title tr.:** On the chlorine content in eudialytes of the Lovozero massif.

Reports chlorine concentration and mineralization in various intrusive phases of this massif in Kola Peninsula. The chlorine content in eudialytes of the second intrusive phase is 1.25%, and of the third, 1.45%. A certain mobility of chlorine during eudialyte crystallization is noted. (DLC.)

KOSTIAEV, A. G., *see* Popov, A.I., & A.G. Kostiaev. Karty periglatsial'nykh . . . 1962. No. 74886

73020. KOSTIUKOVSKIĬ, B. U skal Paduna. *(In:* Marĭagin, G.A. Goroda, kotorykh ne bylo na karte, 1960, p. 242-93, illus., plates.) Text in Russian. **Title tr :** By the rocks of the Padun rapids.

Describes the construction of Bratsk at the site of the Angara River hydroelectric station: its beginning in 1954, with the workers living in tents, gradual emergence of the town in 1955, 1957 and 1958. Some of the outstanding workers are characterized. Role of this power station in the industrial development of the Angara basin is sketched. (DLC.)

KOSTKO, V., *see* Sobolev, Z., & V. Kostko. Pod kontrolem mass. 1962. No. 75785

73021. KOSVEŃ, MARK OSIPOVICH, 1885- Ėtnograficheskie rezul'taty Velikoĭ Severnoĭ ėkspeditsii 1733-1743 gg. (Akademiĭa nauk SSSR. Institut ėtnografii. Trudy 1961. t. 64, Sibirskiĭ ėtnograficheskiĭ sbornik 3, p.167-212.) Over 100 refs. Text in Russian. **Title tr.:** Ethnographic results of the Great Northern Expedition, 1733-1743.

Exhaustive study based largely on unpublished archival materials. The earlier phase, V. Bering's expedition of 1725-1730, is reviewed. The 1733-1743 operations in the arctic coastal area from the Yamal Peninsula to Cape Chelyuskin, and those along the Aleutian Islands and the Alaskan coast are treated in detail: scientific scope, results, particularly in ethnography, the participants major and minor. The field research, manuscript report,

and publications of Kh. P. Laptev, G.F. Müller, J.G. Gmelin, S.P. Krasheninnikov, G.W. Steller, J. Lindenau, J.E. Fischer, etc. are discussed and evaluated; artist-members J.W. Lursenius, J.C. Berckhan, J. Dekker and their work are also noted. Of major importance are the data they recorded on the material and spiritual culture, social structure, language, territorial distribution and physical characteristics of the inhabitants along their itineraries, among others, the Tungus, Yakuts, Yukaghirs, Kamchadals, Koryaks, Chukchis, Asiatic and Alaskan Eskimos, and Aleuts. The artifacts collected were deposited in the Peter-the-Great Curio Cabinet in St. Petersburg, later incorporated into the collection of the Academy of Sciences. (DLC.)

73022. KOSVEN, MARK OSIPOVICH, 1885- Iz istorii ėtnografii korli͡akov v xviii v. *(In:* Akademii͡a nauk SSSR. Institut ėtnografii. Trudy t. 78, Sibirskiĭ . . . 1962, p.276-91.) 2 refs. Text in Russian. **Title tr.:** Historical data on 18th century Koryak ethnography.

Presents five documents preserved in the G.F. Müller collection of the Central State Archives of Ancient Documents (TsGADA). The 2-4 page reports, written 1767-1777, contain firsthand information on the Koryaks of the Fort Gizhiginsk (now Gizhiga) area, their way of life, seasonal migration, economy, social organization, religious beliefs, contacts with Russians and Chukchis, tribal warfare, etc. Data on fur tax levies and listings of clan names are included. Biographical information is given on the authors of the reports, also general descriptions of the documents and criteria for their dating. (DSI.)

73023. KOSYGIN, ÎURIĬ ALEKSANDROVICH, 1911- , *and others.* Osnovnye strukturnye ėlementy Sibiri v pozdnem dokembrii. (Geologii͡a i geofizika, 1962, no. 10, p. 68-82, map.) 28 refs. Text in Russian. Summary in English. *Other authors:* A.K. Basharin, N.A. Berzin, O.A. Votakh, B.N. Krasil'nikov, *and* L.M. Parfenov. **Title tr.:** Main structural elements of Siberia in the late Precambrian.

Presents a tectonic regionalization based on geologic and geophysical investigations of 1958-1962. The area from the Urals east to the Pacific is reviewed, and the main structures, such as kraton, old platforms, geosynclines, etc., are characterized. The structures of the Siberian platform, Verkhoyansk-Chukotka province, and other areas are briefly characterized. (DLC.)

73024. KOSYGIN, ÎURIĬ ALEKSANDROVICH, 1911- . Razvitie Sibirskoĭ platformy v dokembrii. (Geologii͡a i geofizika, 1962, no. 7, p.16-31.) 75 refs. Text in Russian. **Title tr.:** Development of the Siberian platform in the Precambrian.

Evaluates the tectonic structures and development history of che Siberian platform during the Precambrian period, distinguishing the Archean and the Proterozoic phases, The Archean is divided into two stages: an earlier, 2200-2500 million yrs., and a later, called thermal, from 400-700 to 1800 million yrs. Events and structures of each are briefly interpreted. In the Proterozoic phase also, two stages are recognized and characterized. (DLC.)

KOSYGIN, ÎURIĬ ALEKSANDROVICH, 1911- , *see also* Kuznet͡sov, ÎU. A., & ÎU. A. Kosygin. Osnovnye cherty tektoniki . . . 1962. No. 73261

73025. KOSYGIN, M. K., *and others.* Struktury zhelezorudnykh mestorozhdeniĭ trappovoĭ provint͡sii Sibirskoĭ platformy; tezisy. (Vsesoi͡uzna͡ia ob"edinenna͡ia sessii͡a po zakonomernostiam razmescheniĭa poleznykh iskopaemykh i prognoznym kartam; 2d, *Kiyev,* 1960. Doklady sessii, chast' 2, p. 14-17.) Text in Russian. *Other authors:* V.V. Korabel'nikova *and* L.G. Strakhov. **Title tr.:** Structures of the iron ore deposits of the trap province of the Siberian platform; theses.

Reviews the Angara-Ilim and adjacent iron ore deposits connected with trap formation. Volcanic pipes are characteristic of their structure. Forms, size, etc. of these pipes are discussed and three groups differentiated. Their depths, mineralization and component materials are indicated, and other features summarized. (DLC.)

73026. KOTENEVA, T. V. Ob opredelenii karbonatov shchelochnozemel'nykh metallov v glinistykh porodakh. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei po geokhimii osadochnykh porod, 1961, vyp. 2, p.80-83, tables, diagrs.) 2 refs. Text in Russian. **Title tr.:** On determination of carbonates of alkali-earth metals in argillaceous rocks.

Reports a chemical study of Permian deposits of Cape Tsvetkova and the Kharaulakh Mts., and Triassic deposits of the central sector of the Soviet Arctic. Diagrams show correlation in gram-molecule of alkali-earth metals and sums of carbonic acid and sulfates for Permian and Triassic deposits. Relative data on determination of calcium and magnesium oxides are also given. (DLC.)

73027. KOTLI͡AKOV, VLADIMIR MIKHAĬLOVICH. Annotirovannyĭ spisok sovetskoĭ literatury po gli͡at͡siologii, 1956-1960. *(In:* Akademii͡a nauk SSSR. Institut geografii . . . Materialy gli͡at͡siologicheskikh . . . 1961, vyp. 3, p.41-133.) Text in Russian. **Title tr.:** Annotated list of Soviet literature on glaciology, 1956-1960.

Lists 661 papers, conference reports, etc. in Russian or with Russian summary, dealing with glaciers in the USSR and the Antarctic, physical-mechanical properties of snow, avalanches, snow distribution, snow cover study methods, conferences, etc. The references are grouped according to certain regions where pertinent: Arctic and Polar Ural, Antarctic, Siberia and Far East, etc., and each item is briefly characterized. Indexes of authors, subjects, and geographic names are appended. (DLC.)

73028. KOTLI͡AKOV, VLADIMIR MIKHAĬLOVICH, *and* K. S. LOSEV. Issledovani͡a snezhnogo pokrova za rubezhom. *(In:* Akademii͡a nauk SSSR. Institut geografii. Snezhnyĭ pokrov . . . 1962, p.59-86.) About 200 refs. Text in Russian. **Title tr.:** Snow cover investigations in foreign countries.

Reviews work in the United States, Canada, Japan, England, Norway and other countries, noting scope of the studies and leading journals. Snow survey and mapping of various countries are recorded. Investigation of the physical-mechanical

properties is evaluated, and that of thawing treated also. Investigations of the Greenland, Alaskan, Canadian, etc. snow cover are mentioned, and an extensive literature list is appended. (DLC.)

73029. KOTLĬAKOV, VLADIMIR MIKHAĬLOVICH. Itogi i perspektivy glīatsiologicheskikh issledovaniĭ. (Akademiīa nauk SSSR. Vestnik, Apr. 1961. god 31, no.4, p.127-29.) Text in Russian. **Title tr.:** Results and outlook of glaciological explorations.

Summarizes proceedings of the conference in Moscow, Jan. 23-26, 1961 attended by representatives of organizations which participated in IGY glaciological work. Observations in various parts of the earth, including Franz Joseph Land, Novaya Zemlya, and the Polar Ural, confirm that glaciers generally are in retreat, with some local exceptions. In Franz Joseph Land glaciers considered in balance, are shown to be losing 3.8 km.^{3}, i.e. 1/340th of their mass a year, while the decrease is quite small in Novaya Zemlya. A new principle of zonal division of glaciers and a new theory of glacier movement advanced by P.A. Shumskiĭ, are noted; a Soviet Glaciological Section of the Interdepartmental Geophysical Committee is being set up. (DLC.)

73030. KOTLĬAKOV, VLADIMIR MIKHAĬLOVICH. Kolebaniīa rezhima lednikov. (Akademiīa nauk SSSR. Vestnik, Dec. 1962. god 32, no. 12, p.104-105.) Text in Russian. **Title tr.:** Fluctuations in the regime of glaciers.

Reports a symposium of the Glaciology Section of the Interdepartmental Geophysical Committee at Alma-Ata, June 25-July 5; it was on the evolution of the present state of earth's glaciation. The main papers are summarized, including one by P.A. Shumskiĭ, stressing the impossibility of stability in glaciers, and one by A.N. Krenke, who outlined the fluctuations in speed of glacier retreat in the Atlantic-European Province (from Greenland to Novaya Zemlya) in the last three decades. (DLC.)

73031. KOTLĬAKOV, VLADIMIR MIKHAĬLOVICH. O kompleksnoĭ metodike izucheniīa snezhnogo pokrova v raĭonakh razvitiīa sovremennogo oledeneniīa. *(In:* Akademiīa nauk SSSR. Institut geografii. Snezhnyĭ pokrov . . . 1962, p.39-46, illus., graph.) 7 refs. Text in Russian. **Title tr.:** A comprehensive method of snow-cover investigation in regions of present glaciation.

Reports on a study on Novaya Zemlya in 1956, and in 1957-1958 in the Antarctic where similar conditions prevail: low air temperature, strong wind, absence of thaw, presence of glaciers, etc. Snow studies on special test plots, on the trail, and in laboratories are described. Investigation of meteorologic conditions, crystallometry of solid precipitation, snow storm phenomena, microrelief of the snow surface, fluctuation of thickness, solidity of the surface snow, and other features are summarized. Laboratory investigations of snow and firn structure and texture, snow weight, capillarity, air permeability, and other observations, are sketched. Some of the instruments used are described and illus. (DLC.)

73032. KOTLĬAKOV, VLADIMIR MIKHAĬLOVICH. Soveshchanie sovetskikh glīatsiologov, posvīashchennoe itogam Mezhdunarodnogo Geofizicheskogo Goda. (Akademiīa nauk SSSR. Izvestiīa, ser. geograficheskaīa, May-June 1961, no. 3, p. 140-43.) Text in Russian. **Title tr.:** Meeting of Soviet glaciologists on the results of the International Geophysical Year.

Reports the Jan. 23-28, 1961 meeting of about a hundred glaciologists, who participated in the 1957-1959 studies in Franz Joseph Land, Novaya Zemlya, Polar Ural, Suntar-Khayata Range, various other mountains of the USSR, and the Antarctic. For appraisal of the over-all results, three symposia dealt with: the material balance and present regime of the glaciers; the problems of glacier movements; and the concrete interrelations between climate and glaciation. Papers presented are briefly reported. (DLC.)

73033. KOTLĬAR, S. G. O trekh tipakh granitoidnykh intruziĭ v basseĭne srednego techeniīa r. Indigirki. (Sovetskaīa geologiīa, Sept. 1961, no. 9, p. 115-26, text maps.) 8 refs. Text in Russian. Summary in English. **Title tr.:** On three types of granitoid intrusions in the middle Indigirka River basin.

Outlines tectonic structure of the Yana-Kolyma Mesozoic folded zone and distribution of granitoid intrusions. Based on tectonic conditions of their formation, their development, history, form of structure and composition, three types of intrusions are distinguished and described: hybridized, autometasomatic and pegmatite-bearing. (DLC.)

73034. KOTOV, V. L. Sostoīanie i zadachi regulirovaniīa promysla morskikh mlekopitaīushchikh. (Akademiīa nauk SSSR. Ikhtiologicheskaīa komissiīa. Trudy soveshchaniĭ, 1961. vyp. 12, p. 14-17.) Text in Russian. **Title tr.:** Status and aims in control of marine mammal exploitation.

Presents some data on recent kill of seals, whales, belugas, etc. in the arctic seas of the USSR and its southern seas. Also, general regulations controlling these activities. (DLC.)

KOTOVA, L. T., *see* Lepeshkov, I.N., & *others*. Prirodnye soli . . . 1962. No. 73433

73035. KOTTHAUS, ADOLF. Contributions to the race problem in redfish. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v. 150, ICES/ICNAF Redfish Symposium, p. 42-44, table.)

Brief account of over 1500 specimens studied, from areas including East and West Greenland waters. Author concludes that "there is no doubt that *Sebastes viviparus* must be considered as a true species." Not so the *Sebastes marinus* group, for which three alternatives are suggested. (DI.)

73036. KOTTHAUS, ADOLF. Preliminary remarks about redfish otoliths. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v. 150, ICES/ICNAF Redfish Symposium, p. 45-50, illus.)

Comprehensive study of material from areas between the Barents Sea and Labrador. Growth curves of otoliths from different areas are given.

The investigation is claimed to be valuable for distinguishing certain redfish types. (DI.)

73037. KOTTHAUS, ADOLF. Rotbarschbrut im zentralen Nordatlantik; Forschungsfahrt mit "Anton Dohrn", 24.4 - 1.6.61. (Informationen für die Fischwirtschaft, 1962. Jahrg. 9, Nr. 1/2, p. 7-14, diagrs., maps.) Text in German. **Title tr.:** Redfish spawn in the central North Atlantic; research cruise with the *Anton Dohrn,* Apr. 24 - June 1, 1961.

Reports on the number and size distribution of redfish larvae (cf. maps) in an area including the waters off southern Greenland. Bottom topography and temperature profiles at 30 m. depth are charted. Comparison is made with simultaneous Icelandic (R/V *Aegir)* larvae investigations in Denmark Strait. (SPRI.)

KOTTHAUS, ADOLF, *see* Dietrich, G., & *others.* Redfish Irminger Sea. 1961. No. 71028

73038. KOULOMZINE, THEODORE, *and* **R. P. JAEGGIN.** Discovery of the iron ore deposit of Mount Wright Iron Mines Co. Limited. (Canadian mining and metallurgical bulletin, Oct. 1961. v. 54, no. 594, p. 761-67, illus., maps, graphs, tables.) 16 refs. Paper presented at the Canadian Institute of Mining and Metallurgy meeting, Toronto, Apr. 1960.

Presents a case history of successful use of geophysics in an area already worked over. The deposits are described as staked by this company in 1956, 1957, and 1958, after the major deposits in this 50 sq. mi. mining area, known as Mt. Wright, had been discovered and partly outlined. Geophysical measurements by magnetic profiles and geological observations by drilling were made simultaneously. The ore deposit, mostly hematite was found in an area devoid of rock outcrops. The ore itself is of excellent concentrating quality and purity; estimated reserves are 147 million tons of oven-pit ore. (DGS.)

73039. KOVACS, F. Some remarks on Uralic numerals. (Acta linguistica, *Budapest,* 1960. t. 10, fasc. 1-2, p.117-29.) 23 refs. Summary in Russian.

Discusses the absence of numerals common to Finno-Ugric and Samoyed despite the genetic kinship between these languages. The ancestral Uralic people of the neolithic, i.e. approx. 4,000 B.C., had no concept of abstract numbers. The formation of true numerals developed in two separate systems after the division of Uralic into the Finno-Ugric and Samoyed families. (CtY.)

73040. KOVAL', S. F. G.N. Potanin i I.D. Cherskiĭ, novye materialy. (Vsesoîuznoe geograficheskoe obshchestvo. Izvestiîa, May-June 1961. t. 93, vyp. 3, p.250-53.) 2 refs. Text in Russian. **Title tr.:** G.N. Potanin and I.D. Cherskiĭ; new materials.

Reports newly discovered documentary evidence on collaboration between the well known geographer and ethnographer, Grigoriĭ Nikolaevich Potanin and Ivan Dement'evich Cherskiĭ, geologist & explorer of Russian arctic regions. Potanin aided Cherskiĭ by obtaining better conditions for his studies, employment and scientific career. Some letters of Potanin concerning the life and work of Cherskiĭ are cited. (DLC.)

73041. KOVALENKO, E. V., *and* **F. V. KUZNETSOV.** Sistemy razrabotki moshchnykh pologikh plastov Noril'skogo mestorozhdeniîa. (Ugol', May 1962. god 37, no.5, p.17-24, illus., tables.) Ref. Text in Russian. **Title tr.:** Systems of mining the thick gently sloping strata of the Noril'sk deposit.

The Noril'sk coal field at the base of the Taymyr Peninsula covers 40,000 km.^{2} of the northwestern part of the Tunguska coal basin; its resources amount to many billion tons. The deposit consists of 28 coal strata with a total thickness of 35 m. The uppermost layer is overlain by sandstone. Three thick layers are being mined at present. The various methods are described with technical details. Their defects are noted and plans for correcting them discussed; 38-50% of the coal is being left underground, fires are frequent and hamper the work. (DLC.)

73042. KOVALEV, A. Razvivat' priîamye smeshannye perevozki po morskim i rechnym putiîam. (Rechnoĭ transport, Mar. 1961. god 20, no. 3, p. 5-9, table.) Text in Russian. **Title tr.:** Direct freighting over combined sea-river routes should be furthered.

Discusses the high cost of rail freighting and trans-shipment, and suggests a more extensive use of sea-going river boats for transporting raw materials to manufacturing points and finished products to consumer centers. Advantages of the White Sea and White Sea-Baltic Canal route for sending Kola Peninsula apatite concentrates, etc. to the Volga-Kama basin are cited, also those of sending cargo by sea direct (without trans-shipment) to ports up the Lena, Yana, Indigirka and Kolyma Rivers, etc. (DLC.)

73043. KOVALEVA, G. A. Novye dannye o bazal'nykh konglomeratakh siniĭskikh otlozheniĭ na tsentral'nom i vostochnom Taĭmyre. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t. 117, Geologiîa . . . 1961. p.59-68, illus.) 3 refs. Text in Russian. **Title tr.:** New data on Sinian basal conglomerates in central and eastern Taymyr.

Describes the lithologic composition, thickness, and petrography of these conglomerates in the Shrenk, Moskvichka and Leningradskaya River basins, based on field study of 1957-1958. They have interlayers of effusive and carbonate rocks, which are also described. The age of gneisses and crystalline schists, under dispute, is discussed. (DLC.)

KOVALEVSKIĬ, A. F., *see* Plekhanov, G.F., & *others.* O vliîanii vzryva . . . 1961. No. 74820

73044. KOVALEVSKIĬ, V. M., *and* **R. P. LAKHNO.** Uplotnennye snezhnye avtomobil'nye dorogi. (Lesnaîa promyshlennost', Feb. 1961. god 39, no.2, p. 12-15, illus.) Text in Russian. **Title tr.:** Snow-compacted highways.

Snow roads may be made by removing with snow plows, all but 3-10 cm. of the snow cover, or by snow compaction; the latter method has three variants: compaction without preliminary mixing; compaction after mixing and loosening the snow; mixing, loosening, and heating the snow before compaction. Conditions for each method are outlined, and bearing strength is determined at 5-8 kg/cm^2

for the first, 20 kg/cm² for the second, and 30 kg/cm² for the third compaction method. Economic advantages in construction and maintenance of the second-type roads are stressed. Equipment developed by the Northern Industrial Research Institute (SevNIIP) in Arkhangel'sk and others is briefly described. (DLC.)

73045. KOVALEVSKIĬ, V. P. Poezdka sovetskikh geografov po Severnoĭ Skandinavii. (Akademiīa nauk SSSR. Izvestiīa, ser. geograficheskaīa, Jan.-Feb. 1961, no.1, p.146-49.) Text in Russian. **Title tr.:** Trip of the Soviet geographers to northern Scandinavia.

Reports on the ten-day post-Congress field trip in 1960, to Kiruna, Narvik, Tromsø, Honningsvåg, Russenes, and Ivalo. These places are briefly described, their industry, population, economy and general life. (DLC.)

73046. KOVAL'SKIĬ, VITALIĬ VLADIMIROVICH. K voprosu o vydelenii nekotorykh kharakternykh tipov kimberlitov ÎAkutii. (Geologiīa i geofizika, 1961, no.2, p.61-76, illus., tables.) 11 refs. Text in Russian. Summary in English. **Title tr.:** On the problem of isolating some characteristic types of Yakutia kimberlites.

Discusses genetic types of kimberlites distributed in the Yakutia diamond-bearing province and analyzes the classifications hitherto used by other scientists. New studies of kimberlite bodies, in which author participated, in the Alakit, Muna, and Olenek River basins and elsewhere are reported and evaluated. A new classification is offered. Three facies of kimberlites are distinguished, vein, dike, and crater types; they are characterized and considered suitable criteria for prospecting purposes. (DLC.)

73047. KOVAL'SKIĬ, VITALIĬ VLADIMIROVICH. K voprosu o vzaimootnosheniīakh zherlovoĭ i zhil'noĭ fatsii kimberlitovykh porod; na primere Olenekskogo almazonosnogo raĭona. (Akademiīa nauk SSSR. Sibirskoe otdelenie. ÎAkutskiĭ filial. Nauchnye soobshcheniīa 1962. vyp.7, geologiīa, p.89-98, illus., tables.) 3 refs. Text in Russian. **Title tr.:** On the interrelationship of pipe and vein facies of kimberlite rocks, as exemplified in the Olenek diamond-bearing region.

Reports study of "inclusion of kimberlite in kimberlite." Two groups of such inclusions are distinguished: those with breccia texture and those of massive kimberlite with porphyritic texture. Both are analyzed in detail, noting differences in texture, structure, mineralogic and chemical composition. Data obtained indicate that formation of kimberlite veins (vein facies) filled with finely porphyritic kimberlites occurred earlier than that of pipes and pipe-like bodies (pipe facies). (DLC.)

73048. KOVAL'SKIĬ, VITALIĬ VLADIMIROVICH. Veshchestvennyĭ sostav kimberlitovykh tel; na primere Munskogo i Olenekskogo almazonosnykh raĭonov. *(In:* Akademiīa nauk SSSR. Sibirskoe otdelenie. ÎAkutskiĭ filial. Petrografiīa i mineralogiīa . . . almazov, 1962. Trudy, sbornik no.8, p.39-73, illus., tables, diagrs.) 11 refs. Text in Russian. **Title tr.:** Material composition of kimberlite bodies, as exemplified by the Muna and Olenek diamond-bearing regions.

Notes that kimberlite pipes and pipe-like bodies of the Muna and Olenek regions are characterized by breccia texture. Their main minerals, olivine, phlogopite, ilmenite, garnet, perovskite, etc. are described, as are the secondary minerals also. Contact interrelationship between kimberlite pipes and enclosing rocks is analyzed. Chemical analyses of the Olenek and Muna kimberlite bodies are compared with those of the Alakit and Daldyn regions, as well as those of South Africa. The material composition of kimberlite dikes and dike-like bodies is also treated. Each morphologic group of kimberlite rocks differs from the others according to structure, texture and material composition. All these rocks are divided into kimberlites and kimberlite breccia; and into three facies; vein, dike and pipe. (DLC.)

KOVAL'SKIĬ, VITALIĬ VLADIMIROVICH, *see also* Vasil'ev, V.G., & *others.* Problema proiskhozhdeniīa almazov. 1961. No. 76345

KOVER, ALLAN N., *see* Hartshorn, J.H., & *others.* Investigations of ice-free sites . . . 1961. No. 72056

73049. KOVIÂZIN, N. M. Osobennosti ékonomicheskogo raĭonirovaniīa v natsional'nykh raĭonakh Sovetskogo Severa. (Leningrad. Universitet. Uchenye zapiski, 1962. no.315, ser. geog. nauk, vyp.17, p.81-93.)15 refs. Text in Russian. **Title tr.:** Characteristics of economic zoning in national districts of the Soviet North.

Supports the ethnic-territorial, in preference to strictly economic, criteria for delimitation of national districts. The former afford a more effective basis for broad development of the resource potential and of the aboriginal population. The location of rivers as inter- and intra-regional communication routes and that of mineral resources determine the rise of commercial and industrial centers. Such centers in the North characteristically develop into economic production and marketing foci based either on reindeer, fur trade, etc. collectives or on large-scale mining enterprises, such as Noril'sk, Magadan, Kirovsk, etc. With progressive industrialization, river transport will be superseded by railroads with the rail net linking industrial and commercial centers, as does the Severo-Pechorskaīa line. (DLC.)

KOVRIGIN, F. P., *see* Kovrigina, E.K., & F.P. Kovrigin. Stratigrafiīa dokembriīa . . . 1960. No. 73050

73050. KOVRIGINA, E. K., *and* F. P. KOVRIGIN. Stratigrafiīa dokembriīa zapadnogo sklona Eniseĭskogo krīazha v basseĭnakh rek Verkhneĭ i Nizhneĭ Surnikh, Stolbovoĭ i Isakovki. (Leningrad. Vsesoīuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyĭ sbornik, 1960, no.40. Geologiīa i poleznye iskopaemye Vostochnoĭ Sibiri, p.3-15, tables incl. fold., map.) 7 refs. Text in Russian. **Title tr.:** Precambrian stratigraphy of the western slope of the Yenisey Ridge in the Verkhnyaya and Nizhnyaya Surnikha, Stolbovaya and Isakovka River basins.

Reports a study of terrigenous, carbonate and volcanic Precambrian rocks made in the field seasons of 1958 and 1959. Sections of Precambrian deposits especially in the Isakovka basin are

analyzed and described. Geologic map of the region, mostly above 60°N. is presented. A preliminary stratigraphic table of time-rock units is offered and compared with such for other regions of Yenisey Ridge. (DLC.)

73051. KOVROVA, A. M. Kharakteristika turbulentnosti svobodnoĭ atmosfery v vostochnom sektore Arktiki. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.10, p.55-61, table, graphs.) 7 refs. Text in Russian. **Title tr.:** Turbulence characteristics of the free atmosphere in the eastern sector of the Arctic.

Characterizes atmospheric turbulence significant for aviation on the basis of data obtained at the Cape Shmidta and Provideniya Bay polar stations. Temperature and wind soundings were made for Jan. 1958-1960 and for April, July and October 1958-1959. Analysis of the material is reported and vertical changes of turbulence in the first kilometer of the air layer, at 2-5 km., and at greater heights are characterized. Factors affecting the turbulence fluctuations, and its monthly and seasonal changes are also characterized. (DLC.)

73052. KOWALCZUK, JERZY, *and* **K. KARACZUN.** Results of observations of elements of earth's magnetism in the Hornsund fiord on Spitsbergen in 1957. (Acta geophysica polonica, 1961. v.8, no.1/2, p.59-74, graphs, tables, maps.) 10 refs. Summary in Polish.

Reports on the results of magnetic observations made at secular points Isbjörnhamna-Wilczekodden, Dunöyane-Hus, Gåshamna-Konstantinovka, Treskelodden, and Suffolkpynten in Hornsund. Magnetic declination, horizontal component *H*, and inclination of geomagnetic field were measured, and the secular variation of declination for the last three hundred years was analyzed. (DLC.)

73053. KOZAK, W., *and others.* Long-lasting reversible changes in the reflex responses of chronic spinal cats to touch, heat and cold. (Nature, Jan. 13, 1962. v.193, no.4811, p.171-72, illus.) 8 refs. *Other authors:* W.V. Macfarlane *and* R. Westerman.

Study in habituation of cats with thoracic spinal sections performed in the first week of life. Responses to cold immersion of one foot, and gradual adaptation to it (and to heat) are included in the report, as well as the effects of drugs acting on control neurons. It is concluded that the spinal cord "provides a useful model of acclimatization, habituation and learning." (DLC.)

73054. KOZHEVNIKOV, SAVVA. Chelovek iz Zolotoĭ doliny. *(In:* Iokhimovich, D.I. Moĭa Sibir', 1960, p.269-91.) Text in Russian. **Title tr.:** The man from Zolotaya valley.

Popular sketch of Mikhail Alekseevich Lavrent'ev, vice-president of the Academy of Sciences and chairman of its Siberian Division. He was instrumental in the selection of the site for the new Academy town (Akademgorodok) near Novosibirsk. His life in Zolotaya dolina (Golden valley), the temporary community of scientists, is sketched. The growth of the Siberian Division, foundation of new institutes, and Lavrent'ev's own work in hydrodynamics are described. (DLC.)

73055. KOZLIĬANINOV, M. V., *and* **I. M. OVCHINNIKOV.** O sviāzi prozrachnosti vod s techeniiāmi v severo-vostochnoĭ chasti Tikhogo okeana. (Akademiiā nauk SSSR. Institut okeanologii, Trudy 1961. t.45, p.102-112, illus., maps.) 2 refs. Text in Russian. Summary in English. **Title tr.:** Connection between water transparency and currents in the northeast Pacific.

Reports a study made during the 29th run of the *Vitiāz'* Oct. 1958-Mar. 1959, with comparative profiles of transparency and currents, one of them along 54° 30′N. Different water masses carried by current are outlined as well as differing transparencies. In zones of water mixing, transparency decreased and became considerable in frontal zones, reaching to a depth of 2000-3000 m. (DLC.)

73056. KOZLOV, B. K. Ėnergeticheskoe ispol'zovanie geotermicheskikh istochnikov Kamchatki. *(In:* Akademiiā nauk SSSR. Komissiiā po problemam Severa. Syr'evye resursy . . . 1961, p.127-36, graphs, diagrs.) Text in Russian. **Title tr.:** Utilization of geothermal sources of energy of Kamchatka.

Discusses the resource potential in thermal springs and in steam occurrences near volcanoes or at great depths, their utilization for heating and for producing electric energy. Some methods for developing these sources are described and figured. Economic considerations in establishing electrical stations and hot-water reservoirs are dealt with. Use of geothermic sources in Italy and Iceland are cited and prospects for Kamchatka are found favorable. (DLC.)

73057. KOZLOV, E. K. Osnovnye itogi izucheniiā i perspektivy otkrytiiā medno-nikelevykh mestorozhdeniĭ na Kol'skom poluostrove. *(In:* Akademiiā nauk SSSR. Karel'skiĭ filial. Problemy geologii . . . 1961, p.20-31, table.) 23 refs. Text in Russian. **Title tr.:** Main results of investigating the copper-nickel deposits of Kola Peninsula and prospects for discovery.

Reviews studies carried out by various organizations since 1946, and describes Monche, Pechenga and Fedorova Tundra deposits and those of the Lake Lovno region: their intrusions, copper and nickel mineralization, degree of differentiation, and other features. Absolute age data by potassium - argon and lead methods are given for intrusions and some rocks. Some new copper-nickel possibilities are indicated. (DLC.)

73058. KOZLOV, E. K. Zakonomernosti razmeshcheniiā sul'fidnykh medno-nikelevykh mestorozhdeniĭ na territorii Kol'skogo poluostrova. (Vsesoiūznaiā ob"edinennaiā sessiiā po zakonomernostiām razmeshcheniiā poleznykh iskopaemykh i prognoznym kartam, 2nd., *Kiyev,* 1960. Doklady sessii, chast' 1, p.142-49.) 3 refs. Text in Russian. **Title tr.:** Distribution laws of sulfide copper-nickel deposits on the territory of Kola Peninsula.

Outlines features of nickel-bearing intrusions of basic and ultrabasic rocks, and those of the Monche Tundra, Pechenga, Lovozero, Sal'nyye Tundra and Fedorova Tundra. Synorogenic and post-orogenic intrusions are discussed and their main features characterized. The structural-

geologic position of intrusions and distribution of ore fields, are summarized. (DLC.)

73059. KOZLOV, I. T., *and* **P. P. LEVSHOV.** Amakinit, novyĭ mineral iz gruppy brusita-pirokhroita. (Vsesoīūznoe mineralogicheskoe obshchestvo. Zapiski, 1962. ser.2, chast' 91, vyp.1, p.72-77, illus., tables.) 6 refs. Text in Russian. **Title tr.:** Amakinite, a new mineral of the brucite-pyrochroite group.

Reports this mineral found in the course of drilling in Udachnaya-vostochnaya kimberlite pipe at 300 m. depth. Its occurrence, physical and optical properties, results of chemical and X-ray analyses are described. Amakinite is considered the third member of the brucite-pyrochroite group. It was named for the Amakinskaīa expedition, which conducts the diamond deposit searches in Yakutia. (DLC.)

73060. KOZLOV, I. T. O vzaimootnosheniīakh kimberlitovykh trubok i ikh zhil. (Akademiīa nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniīa 1959. vyp.2, p.35-39, illus., table.) 3 refs. Text in Russian. **Title tr.:** On interrelationships between kimberlite pipes and their veins.

Two types of veins are distinguished: those independent of the kimberlite pipes, and small veins directly connected with pipes. The latter are divided into two types according to mode of occurrence, those in kimberlites and those in enclosing rocks; both are analyzed, noting their structural petrographic, mineralogic and chemical features. (DLC.)

KOZLOV, I. T., *see also* Ilupin, I.P., & *others.* K voprosu o genezise mineralov-sputnikov almaza . . . 1961. No. 72351

73061. KOZLOV, L. I. Neliīūminestsiruīūshchie almazy pri normal'nom (obychnom) rezhime polevoĭ rentgenovskoĭ laboratorii, osnashchennoĭ apparatom LSh-2 i trubkoĭ AV-25. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ sbornik, 1962. vyp.28, p.65-68, table.) Text in Russian. **Title tr.:** Non-luminescent diamonds in the normal procedures of the field X-ray laboratory, equipped with LSK-2 apparatus and AV-25 pipe.

Reports field work in the basin of the Ud'a tributary to the Anabar. Of 11 collected grains tentatively distinguished as diamonds, only five exhibited luminescence properties in the field tests. Those grains which did not were tested again, using URS-70 apparatus, ultraviolet rays and UFS-3 light filter. The new tests are found more advantageous, and it is proposed to install this equipment in the field X-ray laboratory. (DGS.)

73062. KOZLOV, MIKHAIL PETROVICH. Rezul'taty opredeleniĭ nekotorykh mekhanicheskikh kharakteristik snega v Arktike. *(In:* Akademiīa nauk SSSR. Institut geografii. Snezhnyĭ pokrov . . . 1962, p.47-53, tables, graphs.) 5 refs. Text in Russian. **Title tr.:** Results of determination of some mechanical characteristics of snow in the Arctic.

Reports a 1948-1950 study at the Cape Sterlegova polar station on the tundra of the Kara Sea coast. Snow cubes of five (mostly) to ten (rarely) cm. to the side, 0.20 to 0.48 g./cm^3 density and 0° to -40°C. temperature, were tested for resistance to crushing, shearing, fracturing and breaking. The results, which vary according to temperature and density, are tabulated and graphed. (DLC.)

KOZLOV, MIKHAIL PETROVICH, *see also* Gordienko, P.A., & M.P. Kozlov. Vysokoshirotnye . . . ėkspeditsii . . . 1962. No. 71769

73063. KOZLOV, N. A. Ispol'zovanie termistorov MMT-4 pri geotermicheskikh izmereniīakh. *(In:* Akademiīa nauk SSSR. Institut merzlotovedeniīa. Severo-Vostochnoe otdelenie. Teplo- i massoobmen . . . 1961, p.115-20, tables, diagr.) 12 refs. Text in Russian. **Title tr.:** Use of the MMT-4 thermistor in geothermal measurements.

Describes the construction and testing of this semi-conducting geothermometer for use in drillings of 36-45 mm. diam. and hundreds of meters deep. Temperature measurements with the MMT-4 and with a mercury thermometer in the three drill holes in the Daldyn region of Yakutia, are tabulated and interpreted. Precision tests disclosed some discrepancies between various types of geothermometers, which are reported, and improvements suggested. (DLC.)

KOZLOV, V. I., *see*

Bruk, S.I., & V.I. Kozlov. Naselenie zemnogo shara . . . 1962. No. 70414

Bruk, S.I., & V.I. Kozlov. Osnovnye problemy ėtnicheskoĭ kartografii. 1961. No. 70415

KOZLOVA, M. I., *see* Markevich, V.P., & M.I. Kozlova. Nekotorye osobennosti tektoniki . . . 1962. No. 73814

73064. KOZLOVA, N. Severnyĭ kraĭ. (Mestnaīa promyshlennost' i khudozhestvennye promysly, Mar. 1961. god 2, no.3, p.37.) Text in Russian. **Title tr.:** Northern region.

Criticizes the scarcity of consumer goods and services in the Yamal-Nenets and Khanty-Mansi National Districts. The district capitals, Salekhard and Khanty-Mansiysk, have a reasonably adequate number of clothing, footwear, etc. manufacturing and repair shops, hardware and appliance outlets, etc.; but smaller settlements lack such facilities. Tyumen Province authorities are urged to remedy these conditions and to improve selection of imports: goods in little demand are plentiful, essential supplies are scarce. (DLC.)

73065. KOZLOVSKAIA, S. F. Chetvertichnye oledeneniīa severnoĭ chasti Sredne-Sibirskogo ploskogor'īa. *(In:* Leningrad. Vsesoīūznyĭ n. -i. geologicheskiĭ institut. Trudy 1961, t.64, Problemy chetvertichnogo . . . p.102-113, map.) Text in Russian. **Title tr.:** Quaternary glaciations in the northern part of the Central Siberian plateau.

Describes the distribution of Quaternary glacial deposits in the Kochechum (64°17′N. 100° 10′E.) and upper Vilyuy basins, the Anabar massif and adjacent areas. Moraines, cirques, outwash plains, glacial boulders, fluvioglacial deposits and other glacial features are described and mapped. Interglacial deposits have not been discovered, hence the number of glaciations and stratigraphy of the Quaternary deposits are subject to further study. (DLC.)

73066. KOZLOVSKIĬ, B. A., *and* B. I. GROSHEV. Za sovershenstvovanie lesoustroitel'nykh rabot. (Lesnoe khoziaĭstvo, Dec. 1961. god 14, no.12, p.22-27.) Text in Russian. **Title tr.:** Toward the improvement of forest management work.

Reports a plan to divide the RSFSR into 25 zones according to geographic, climatic, economic and silvicultural conditions, for purposes of forest management. Six of these zones include far northern areas: the taiga zone of the European North, including Arkhangel'sk Province and Komi Republic; the coniferous forests of the Northwest, including parts of Murmansk Province and Karelia; the northern taiga in Western and Eastern Siberia and the Far East including parts of Tyumen and Krasnoyarsk Provinces; Yakutia, Magadan Province, Chukotka and the Koryak National District; Kamchatka Peninsula; the forest tundra extending from Murmansk Province to Kamchatka. Basic organizational principles for forest management and exploitation in each zone are discussed. (DLC.)

73067. KOZLOWSKI, THEODORE THOMAS, 1917– , *Editor.* Tree growth. N.Y., Ronald Press, 1962. 442 p. illus., maps, graphs. Refs.

Contains papers presented at the International Conference on Forest Tree Growth, Tucson, Arizona, Apr. 10-14, 1960. Two pertinent to the North are abstracted under their authors' names, viz: Ecological variability and taxonomy of forest trees, by O. Langlet; and Temperature and tree growth near the northern timber line, by P.U. Mikola, q.q.v. (DLC.)

73068. KOZUBOV, G. M. Plodonoshenie sosny na Kraĭnem Severe. (Lesnoe khoziaĭstvo, Jan. 1962. god 15, no.1, p.35-36, table.) Text in Russian. **Title tr.:** Seed bearing of pine in the far North.

Reports Institute of Forestry studies in the Khibiny Mts. and Apatity Station on Kola Peninsula and in the Loukhi and Kalevala districts of northern Karelia, in 1959-1960. Data of seed-bearing and germination of pine are tabulated and discussed. Methods of gathering and drying the cones are described. Even in conditions of the far North, pine is found to yield good seed. (DLC.)

KOZYREVA, R. V., *see* Markovin, V.I., & L.IA. Krizhevskaia. Rabota sektorov . . . 1962. No. 73835

KRAKSHINA, R. M., *see*

Aver'ianov, A.G., & *others.* Deep seismic sounding . . . 1961. No. 69921

Kosminskaia, I.P., & R.M. Krakshina. O zakriticheskikh otrazheniiakh . . . 1961. No. 73010

Kosminskaia, I.P., & R.M. Krakshina. Supercritical reflections Moho. 1961. No. 73011

73069. KRAMP, PAUL LASSENIUS, 1887– . Pteropoda. København, 1961. 13 p. map, table. (Meddelelser om Grønland, bd.81, nr.4.) 15 refs.

Reports the distribution of *Clione limacina* (Phipps), *Limacina helicina* (Phipps), and *L. retroversa* Fleming in the Labrador Sea, Baffin Bay - Davis Strait, and Smith Sound areas between Greenland and Canada. These molluscs were collected by the *Godthaab* Expedition 1928 under E. Riis-Carstensen. The abundance or rarity of each species where collected is tabulated, also water temperature and depths of hauls. Previous distribution records are given and the 1928 occurrence compared with the *Dana* 1925 records and such since 1950. (DGS.)

73070. KRANCK, ERNST HÅKAN, 1898– . Gypsum tectonics on Axel Heiberg Island, Northwest Territories, Canada. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.438-41, diagr.) 6 refs.

Describes briefly, the structural features studied by the Jacobsen-McGill Expedition to Axel Heiberg Island in preliminary work near South Fjord. Strong folding has taken place, with some strata steeply tilted as a result of the intrusion of gypsum domes. Two different types of piercement mechanics may be compared: one slowly formed circular domes; the other rapidly formed elongated anticlinal domes. The folding was probably effected by a highly plastic substratum under a more rigid supracrust. (DLC.)

73071. KRANCK, ERNST HÅKAN, 1898– . The tectonic position of the anorthosites of eastern Canada. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finlande, 1961. no.196, p.299-320, map, diagr.) 59 refs.

Reviews present knowledge of these plutonic igneous rocks of eastern Canada, including three Labrador areas: Mealy Mountain near Lake Melville, Square Harbour in the southeast, and Nain the type area. Explains abundance of this rock type in the Grenville province of the Shield; also its presence in the Labrador trough, neither case related to the general structure. Observations indicate a multi-stage formation, with repeated recrystallization, high temperatures during the principle stage, and many coarse-grained varieties. Concentration of anorthosite in 200,000 sq. km. of eastern Canada, may depend upon the length of time needed to develop the Grenville geosyncline, prior to the Quebec-Labrador orogenies of 1400-800 million yrs. ago. (DLC.)

73072. KRANCK, SVANTE HAKAN. Chemical petrology of metamorphic iron formations and associated rocks in the Mount Reed area in northern Quebec. Cambridge, Mass., 1959. 144 p. maps, diagrs. 69 refs. Ph.D. thesis to Massachusetts Institute of Technology. Typescript.

Presents results of 1955-1957 summers' field work with the Quebec Cartier Mining Co. and laboratory work on minerals using rapid silicate analysis methods at MIT. The area studied, 150 mi. north-northwest of Sept Iles at the southern end of the Labrador trough, is underlain by high-grade metamorphic rocks mainly of sedimentary origin including iron formation and dolomitic marble. The phase equilibria among the silicate minerals in the iron formation mainly ferrohypersthene, ferroaugite, and cunningtonite, were studied. Analyses show the mineral assemblages of the silicate iron formation to be in at least approximate equilibrium, and no support for the idea that volatile components can freely diffuse through the rocks. Some new data are contributed on the phase chemistry of silicates and carbonates in iron formation. Basic rock analyses are appended, p.117-38. (CaOG.)

73073. KRAPIVNER, R. B. Problema soedineniĭa basseĭnov Kamy, Vychegdy i Pechory v chetvertichnoe vremia i periglafsial'nye otlozheniia basseĭna r. Kamy. (Moskovkoe obshchestvo ispytateleĭ prirody. Biŭlleten' 1961. n.ser., t.66, otdel geologicheskiĭ, t.36, vyp.2, p.81-101, tables, map, diagrs.) 27 refs. Text in Russian. Summary in English. **Title tr.:** The problem of the connection of the Kama, Vychegda and Pechora basins during the Quaternary period, and the periglacial deposits of the Kama River basin.

Describes glacial deposits of the upper Kama region and evaluates Kama, Pechora and Vychegda valley history during first post-maximal glaciation. The Pechora and Vychegda Rivers were probably dammed by the advancing glacier, and formed vast preglacial lakes; then these rivers broke through to the south and flowed into the Kama basin. (DLC.)

73074. KRASAVTSEV, O. A. Zakalivanie drevesnykh, rasteniĭ k sverkhnizkim temperaturam. (Akademiia nauk SSSR. Izvestiia, ser. biologicheskaia, 1961. no.2, p.228-31, illus.) 6 refs. Text in Russian. Summary in English. **Title tr.:** Hardening of woody plants to very low temperatures.

Account of experiments with twigs of various species cooled to temperatures as low as -253°C. The protoplasts of plants acclimatized to such temperatures could withstand dry condition in the absence of vital gases and consequently suspend metabolism. Slowly thawed, they resume normal physiological functions. (DLC.)

73075. KRASHENINNIKOV, G. F. Zadachi litologicheskikh issledovaniĭ. (Akademiia nauk SSSR. Vestnik, Oct. 1961. god 31, no.10, p.132-34.) Text in Russian. **Title tr.:** Tasks of lithological investigations.

Reports the fifth All-Union Lithological Conference at the Institute of Geology and Geophysics in Novosibirsk June 20-24, 1961, with 86 organizations represented. Mixed effusive-sedimentary rock formations, represented chiefly by folded structures in Siberia, drew special attention; there were two post-conference field trips, one to the northwestern part of the Siberian platform and adjacent parts of the West Siberian plain. (DLC.)

73076. KRASHENINNIKOV, V. G. Vnutrenniĭ vodnyĭ transport vostochnykh raĭonov Sovetskogo soiuza. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, July-Aug. 1961. t.93, vyp.4, p.312-19.) Text in Russian. **Title tr.:** Inland water transport in the eastern regions of the Soviet Union.

Reports on the effort to increase river transportation in Siberia and the Soviet Far East regions as projected in the 1959-1965 plan. The Ob, Yenisey, Angara, Lena, Vilyuy, Kolyma, Indigirka, Yana, Olenek, and other rivers are discussed as to their role in timber and other types of transport. (DLC.)

73077. KRASIKOVA, VERA ALEKSANDROVNA, 1921– , *and* O. L. OL'SHANSKAIA. Chir kak ob"ekt akklimatizatsii. (Voprosy ikhtiologii, 1961. vyp.17, p.115-21, illus., tables.) 3 refs. Text in Russian. **Title tr.:** *Coregonus nasus* Pall. as object of acclimatization.

Reviews recent work on the broad whitefish of the Yenisey basin: gonadal development, development and behavior of larvae, food of larvae and fry, growth, response to temperature and oxygen conditions. This species has been suggested for introduction into new areas. (DLC.)

73078. KRASIKOVA, VERA ALEKSANDROVNA, 1921– , *and* S. M. SESIAGIN. Nabliudeniia za nerestom chira, *Coregonus nasus* Pall., v r. Rybnoĭ, sistema r. Piasiny. (Voprosy ikhtiologii, 1962. t.2, vyp.2 (23), p.295-98, tables.) 2 refs. Text in Russian. **Title tr.:** Observations on the spawning of the broad whitefish *Coregonus nasus* Pall. in the Rybnaya River, of the Pyasina River system.

Describes the location (69°25′N. 88°10′E.) and course, bottom and hydrology of the Rybnaya; migration and composition of the spawning schools, fecundity, spawning proper, of this commercially important fish. (DLC.)

73079. KRASIKOVA, VERA ALEKSANDROVNA, 1921– . Ozernaia peliad', *Coregonus peled* Gmelin, iz ozera Makovskogo; promyslovo-biologicheskiĭ ocherk. (Voprosy ikhtiologii, 1961. t.1, vyp.3 (20), p.462-67, tables.) Text in Russian. **Title tr.:** The lake whitefish *Coregonus peled* Gmelin, from Makovskoye Lake; a fishery-biological outline.

Describes the location (66-67°N. 84-86°E.) area, depth and bottom configuration of the lake, and its fish food resources. Morphology of this whitefish, its movements, growth, maturation, spawning, and food are reported, with data on the fishery. (DLC.)

KRASIL'NIKOV, B. N., *see* Kosygin, IU.A., & *others.* Osnovnye strukturnye elementy . . . 1962. No. 73023

KRASIL'NIKOV, D. D., *see* Kuz'min, A.I., & *others.* Iiul' 1959 g. . . . 1962. No. 73250

73080. KRASIL'NIKOVA, N. A. Fosfority Krasnoiarskogo kraia. *(In:* Krasnoiarskaia . . . ekspeditsiia. Poleznye iskopaemye . . . 1962, p.190-201, table, map, diag.) 10 refs. Text in Russian. **Title tr.:** Phosphorites of Krasnoyarsk Province.

Reports the great need of phosphorites to be used extensively for fertilizer in this and other areas of Siberia. Productive reserves have not been discovered as yet. Phosphorites of Sinian, Cambrian, Ordovician, Devonian and Carboniferous deposits in this province are reviewed, including those in the Podkamennaya Tunguska, Kureyka, and Moyero River basins. Their chemical composition and other properties are analyzed. Recommendations are given as to where and what kind of prospecting should be conducted for phosphorites of productive value. (DLC.)

73081. KRASIL'NIKOVA, N. A., *and others.* Prognoznaia otsenka fosforitonosnosti raĭonov Sibiri i Dal'nego Vostoka. (Sovetskaia geologiia, Sept. 1961, no.9, p.82-95.) 17 refs. Text in Russian. Summary in English. *Other authors:* IU. F. Shmel'kova, B.G. Gurevich, *and* G.A. Obolenskaia. **Title tr.:** Prognostic evaluation of phosphorite distribution in some regions of Siberia and the Far East.

Characterizes phosphorite occurrences in regions of the Siberian platform and the Far East, not sufficiently studied as yet. The Podkamennaya

Tunguska and Angara-Ilim regions are among those mentioned, but the others are remote from the North. (DLC.)

73082. KRASILOVA, N. S. Printsipy sostavleniia regional'nykh polevykh inzhenerno-geologicheskikh klassifikatsii skal'nykh porod na primere g. Krasnoiarska. (Moskva. Universitet. Vestnik ser.5, geologiia, Sept.-Oct. 1962, no.5, p.7-22, tables.) 3 refs. Text in Russian. **Title tr.:** Principles of construction in the regional field of engineering-geologic classifications of rock types, as exemplified in the town of Krasnoyarsk.

Examines various criteria of rock classification such as age, sedimentation conditions, stages of diagenesis, tectonic disturbances, and others. In the engineering-geologic approach to such classification, the primary consideration is the strength and other engineering characteristics of the rocks. Such classification is presented for the Krasnoyarsk region, characterizing on this basis, various categories of rocks. (DLC.)

73083. KRASNA, IRWIN H., *and others.* A study of left atrial pressures in profound hypothermia. (Surgery, Mar. 1961. v.49, no.3, p.375-80, illus., tables.) 10 refs. *Other authors:* M. Shuster *and* I.D. Baronofsky.

Reports on dogs cooled to 10°C. or below. Near 20° body temperature, a slight rise in left atrial pressure occurred. Below 20°C., in the limits of cardiac arrest a significant rise of this pressure was observed. All animals showed severe pulmonary congestion and hemorrhage. (DLC.)

73084. KRASNOIARSKAIA KOMPLEKSNAIA EKSPEDITSIIA. Poleznye iskopaemye Krasnoiarskogo kraia; ugli, zhelezo, nerudnoe syr'e. Moskva, Izd-vo Akademii nauk SSSR, 1962. 208 p. tables, maps incl. fold. (Akademiia nauk SSSR. Sovet po izucheniiu proizvoditel'nykh sil.) Refs. Text in Russian. **Title tr.:** The useful minerals of Krasnoyarsk Province; coal, iron, non-metalliferous raw materials.

Presents 13 papers on resources and their development prospects, all except Ermakov's abstracted in this Bibliography under the authors' names viz (titles tr.):

GROMOV, L.V. Ore districts of Krasnoyarsk Province.

RIABOKON', N.V., *and others.* Coals of Krasnoyarsk Province.

BOCHKOVSKII, F.A., *and* G.M. LUSHCHIKHIN. Prospects for obtaining coking coal in the southern half of the Tungusskiy basin.

MEDVEDKOV, V.I. Iron ores.

Ermakov, V.K. Precambrian ferruginous quartzites in the right bank of the Minusinsk depression.

IUDIN, N.I. The Angara-Pit iron ore basin.

KIRILLOV, A.S. Manifestation of diamonds in Krasnoyarsk Province.

GROMOV, L.V. Industrial precious stones of Krasnoyarsk Province.

IGNATOVA, M.D. Carbonate flux deposits.

IGNATOVA, M.D. Kirgitey talc deposits.

LEPESHKOV, I.N., *and others.* Natural salts of Krasnoyarsk Province.

KRASIL'NIKOVA, N.A. Phosphorites of Krasnoyarsk Province.

IGNATOVA, M.D. Marshalite deposits. (DLC.)

73085. KRASNOIARSKAIA KOMPLEKSNAIA EKSPEDITSIIA. Prirodnoe raionirovanie tsentral'noi chasti Krasnoiarskogo kraia i nekotorye voprosy prigorodnogo khoziaistva. Moskva, Izd-vo Akademii nauk SSSR, 1962. 216 p. illus., tables, maps incl. fold., diagrs. Refs. Text in Russian. **Title tr.:** Natural divisions of the central part of Krasnoyarsk Province and some problems of town economy.

Presents 14 papers outlining results of a multi-purpose expedition in 1956-1959, to explore local food production for the growing population of towns and industrial localities in central Krasnoyarsk Province (approx. 56-59°N.) Papers in the first part deal with climate, relief and soil-forming rocks, vegetation and soil cover. Those in the second part deal with agricultural zones, fodder base for cattle-breeding, vegetation and potato production, etc. (DLC.)

73086. KRASNOIARSKAIA KOMPLEKSNAIA EKSPEDITSIIA. Prirodnye usloviia Krasnoiarskogo kraia. Moskva, Izd-vo Akademii nauk SSSR, 1961. 250 p. tables, maps incl. fold. (Akademiia nauk SSSR. Sovet po izucheniiu proizvoditel'nykh sil.) Refs. Text in Russian. **Title tr.:** Natural conditions of Krasnoyarsk Province.

Presents a group of complementary papers on the geologic structure, physical geography, and natural resources of this important administrative province which extends from the Arctic Ocean south to the Sayan Mts. All the papers except Spizharskii, Dodin, and Khil'tova's are described in this Bibliography under their authors' names, viz (title tr.):

GROMOV, L.V., *and* I.N. LBOVA. Krasnoyarsk province, a short outline.

LIKHANOV, B.N., *and* M.N. KHAUSTOVA. The physical-geographic diversity of Krasnoyarsk Province.

MARKOV, F.G. The geologic structure and metallogeny of the Taymyr folded zone.

MARKOV, F.G. Geologic structure of the Taymyr lowland.

Spizharskii, T.N. The Baykal folded system, its geologic structure.

Dodin, A.L. Main features of the geologic structure and metallogeny of the eastern part of the Altay-Sayan folded zone.

Khil'tova, V. IA., *and* I.N. Krylov. The Precambrian of the Gutara-Agul region of eastern Sayan.

EROKHINA, A.A. The soils and arable land areas of Krasnoyarsk Province.

CHEREPNIN, L.M. Vegetation of Krasnoyarsk Province.

SHCHERBACHEV, V.D. Forest resources of Krasnoyarsk Province.

SHUTYI, M.E., *and* E.E. TEODORONSKAIA. The rivers and water-power resources. (DLC.)

KRASNOV, I. I., *see*

Ganeshin, G.S., & *others.* Karta . . . 1961. No. 71580

Zarrina, E.P., & I.I. Krasnov. . . . Sanchugovka-Taz . . . 1961. No. 76645

KRASOV, L. M., *see* Gnevushev, M.A., & *others.* Ob okraske iakutskikh almazov. 1961. No. 71713

73087. **KRASOVSKIĬ, VALER'IAN IVANOVICH.** O prirode izlucheniia OH v verkhneĭ atmosfere. (Akademiia nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: poliarnye siianiia i svechenie nochnogo neba. Sbornik stateĭ 1961. no.5, p.29-31.) 6 refs. Text in Russian. Summary in English. **Title tr.:** On the nature of OH emission in the upper atmosphere.

Discusses the possible origin and nature of airglow hydroxyl (OH) emission as it appears from incomplete information provided by several spectrograms obtained during the IGY at Yakutsk and Zvenigorod. The OH emission may result from ozone-hydrogen reaction when OH rotational temperature is higher than 250°K, and OH emission below 250°K rotational temperature may be due to the combination of oscillatory excited O_2 molecules with atomic hydrogen. The highest rotational temperature of 380°K was recorded at Zvenigorod, and the lowest of 200°K at Yakutsk and Zvenigorod. (CaMAI.)

73088. **KRASOVSKIĬ, VALER'IAN IVANOVICH,** *and others.* On the OH airglow. (Journal of atmospheric and terrestrial physics, Apr. 1961. v.21, no.1, p.46-53, table, diagrs.) 14 refs. *Other authors:* N.N. Shefov *and* V.I. IArin.

"An increase of the OH emission intensity with increasing rotational temperature, and seasonal variations of the intensity and rotational temperature of OH have been established by spectral observations at Yakutsk. No such behavior has been observed at Zvenigorod. At both locations, variations of the relative populations of the OH vibrational levels and a correlation between the OH and H_α airglow intensities have been observed. —Authors' abstract. (DLC.)

73089. **KRATKOVSKIĬ, N. A.** Ob iskusstvennom osemenenii korov zamorozhennym semenem. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Jan. 1962. no.1, p.67-68.) Text in Russian. **Title tr.:** Artificial insemination of cows with frozen semen.

Reports on experiments in 1958 at the Nar'yan-Mar and Khanty-Mansiysk stations of the Agricultural Research Institute of the Far North. Frozen semen from the best sires at the central station of the Stock Breeding Institute was used. The stock produced gives milk up to 5% fat content instead of the 3-4% local average. (DLC.)

73090. **KRATOCHVIL, JOSEF.** Reinen *(Rangifer* sp.) under etologisk synsvinkel, noen betraktninger. (Polarboken, 1961-62, p.131-35.) Text in Norwegian. **Title tr.:** Reindeer *(Rangifer)* from an ethological viewpoint, some remarks.

Discusses the internal organization of the herd and summarizes Rousseau's views of herd types. Among reindeer, the herd organization is flexible and partly determined by a hierarchy among the animals. Air photos disclose that reindeer herds move mostly in a wedge-shaped, or a snake-like round or elliptical formation. Rank within the herd seems to depend on various external factors but with recurrent features. Most Norwegian experts are agreed however, that there are no specific leader animals among reindeer. (SPRI.)

73091. **KRATTS, KAUKO OTTOVICH., *and* IU. I. LAZAREV.** Osnovnye cherty tektonicheskikh struktur iatuliia Karelii. *(In:* Akademiia nauk SSSR. Karel'skiĭ filial. Problemy geologii . . . 1961, p.43-57, cross-sections, map.) 21 refs. Text in Russian. **Title tr.:** The main features of tectonic structures of the Jatulian of Karelia.

The Jatulian stratum: Proterozoic series consisting mainly of conglomerates, dolomites, fillites, and effusive rocks, is of great thickness, and characterized by remains of stromatolites, *Carelozoon jatulicum.* Development of troughs and synclines is outlined including those in northern Karelia. (DLC.)

73092. **KRATTS, KAUKO OTTOVICH.** Svekofennidy i karelidy. *(In:* Akademiia nauk SSSR. Karel'skiĭ filial. Problemy geologii . . . 1961, p.5-9, table.) 11 refs. Text in Russian. **Title tr.:** The Svecofennian and Karelian systems.

Reports current discussions among Finnish scientists concerning the age and geology of these systems. Karelian formations are divided: early and late. Comparison of the two systems is made and features which are similar in these are summarized. (DLC.)

KRAUS, DAVID, *see* Voskresenskiĭ, A.I., & K.I. Chukanin. Meteorol. conditions icing clouds. 1961. No. 76436

KRAVCHENKO, D. V., *see* Akademiia nauk SSSR. *Institut geografii.* Dal'niĭ Vostok . . . 1961. No. 69546

KRAVCHENKO-BEREZHNOĬ, R. A., *see* Denisov, A.P., & *others.* O zavisimosti fizicheskikh svoĭstv apatita . . . 1961. No. 70959

73093. **KRAVTSOV, A. I.** Gazonosnost' Khibinskikh apatitovykh mestorozhdeniĭ. *(In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy geologii . . . 1961, p.77-88, table.) 9 refs. Text in Russian. **Title tr.:** Gas-bearing properties of the Khibiny apatite deposits.

Presents a new classification of natural gases. Gases of igneous rocks are discussed. Studies of the Khibiny apatite deposits since the detection of combustible gas in the Yukspor tunnel in 1951 are outlined, and their results summarized. The Khibiny are hydrocarbon gases, 85-95% methane and 2-10% heavy hydrocarbons. Their origin, organic or inorganic, is discussed, the author supporting inorganic origin. (DLC.)

73094. **KRAVTSOV, A. I.** Osnovnye geologicheskie zakonomernosti rasprostraneniia prirodnykh gazov na territorii SSSR. (Izvestiia vysshikh uchebnykh zavedeniĭ. Geologiia i razvedka, Jan. 1962, god 5, no.1, p.62-73, tables, map, diagrs.) 14 refs. Text in Russian. **Title tr.:** The main geologic laws in distribution of natural gases on the USSR territory.

Analyzes gas-forming processes closely connected with the structure of the earth's crust. Migration of volcanic and, in part, metamorphic gases in deep faults is discussed. Oil and gas occurrences in volcanic pipes in the Markha, Amga, Lena and Olenek River regions of Yakutia are reported, and hydrocarbon gases of the Udachnaya and

Zarnitsa kimberlite pipes noted. Natural gases of the USSR are mapped, indicating occurrence in connection with tectonic structures. (DLC.)

KRAVTSOV, G. S., *see* Godlevskiĭ, M.N., & *others*. Voprosy teploobmena . . . 1962. No. 71718

73095. KREBS, CHARLES J. Population dynamics of the Mackenzie Delta reindeer herd, 1938-1958. (Arctic, June 1961. v.14, no.2, p.91-100, graphs, tables.) 11 refs.

Analyzes fluctuations in the size of both government- and Eskimo-owned herds of *Rangifer tarandus* in the Reindeer Grazing Preserve of northern Mackenzie District. Each of the six Eskimo-owned herds increased in numbers for a few years, then declined and ultimately, except one, was returned to the nucleus, government herd. Annual variation in herd size is examined in relation to the birth, death, and dispersal rates. The last which represents losses by straying, approx. 17,000 since 1938, usually yearlings, is the most important, birth rate the least. Effects of herd size and composition (tabulated by age and sex) on the birth and dispersal rates are deemed negligible. Dispersal is apparantly caused by factors extrinsic to the herd itself, e.g. insects, weather, man, and their interactions. (DI.)

73096. KREFFT, GERHARD. Rare fish; records of the Institut für Seefischerei, Hamburg. (International Council for the Exploration of the Sea. Annales biologiques, 1958, *pub.* 1960. v.15, p.70-72.)

Records 31 species of arctic forms, largely from East and West Greenland waters. Date and location of find, and size are noted. A great proportion was found in stomachs of other fish. (DI.)

73097. KREĬDA, N. A. Materialy k pochvennomu raĭonirovaniiu severa Russkoĭ ravniny. (Akademiia nauk SSSR. TSentral'nyĭ muzeĭ pochvovedeniia. Sbornik rabot, 1960. vyp. 3, p.113-23, map.) 11 refs. Text in Russian. **Title tr.**: Materials on soil regionalization in the north of the Russian plain.

Summarizes soil-botanic investigations: tundra and forest-tundra-podsol zones are distinguished, subzones are established and each characterized as to areas of distribution, soil type, vegetation, etc. The entire region is divided into four soil-climatic provinces: Kanin, Kanin-Timan, Malozemel'skaya and Bol'shezemel'skaya Tundras. Each province is briefly characterized, noting types of soil, soil-forming rocks, relief forms, vegetation, cover, soil composition, and other features. (DLC.)

73098. KREĬDA, N. A. Ob osvoenii pochv Kraĭnego Severa. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, July 1961. god 4, no.7, p.21-24.) Text in Russian. **Title tr.**: Soil use in the far North.

Discusses the problem of utilizing the floodplain of the lower Pechora between 67° and 68°N. Hay is taken from 6% of it though the area could be increased 3-5 times. Its soils and vegetation are classified: 100-150 tons of manure/hectare annually are recommended for melioration purposes, and the results obtained by the Zonal Agricultural Experiment Section at Nar'yan-Mar are cited: 150-200 cwt. potatoes/hectare, 250-400 cwt. cabbage, and 150 cwt. oats for silage. (DLC.)

73099. KREIDER, MARLIN BOOKS, 1922- . Effect of diet on body temperature during sleep in the cold. (Journal of applied physiology, Mar. 1961. v. 16, no. 2, p. 239-42, illus., table.) 4 refs.

Reports on two groups of young subjects fed diets of similar caloric content but of different composition. The latter had no effect on rectal or skin temperatures during sleep. Earlier experiments indicate that caloric content is the important factor in rate of body cooling at night. (DLC.)

KREIENBERG, W., *see* Harth, O., & *others*. Der Einfluss der Bluttemperatur . . . 1960. No. 72055

KREĬMER, S. E., *see* Milovanova, I.B., & *others*. Ėkstraktsionnyĭ sposob . . . 1962. No. 74034

73100. KREĬNOVICH, EROKHIM ABRAMOVICH. Imennye klassy i grammaticheskie sredstva ikh vyrazheniia v ketskom iazyke. (Voprosy iazykoznaniia, Mar.-Apr. 1961. god 10, no.2, p.106-116, tables.) 8 refs. Text in Russian. **Title tr.**: Noun classes and the grammatical means of expressing them in the Ket language.

Morphological study of the three Yeniseian noun classes or genders: masculine, feminine, and inanimate. (DLC.)

KREJSA, R. J., *see* McAllister, D.E., & R.J. Krejsa. Placement prowfishes . . . 1961. No. 73670

73101. KREMER, B. A. Severnyĭ polius-1. (Priroda, June 1962. god 51, no.6, p.60-65, illus.) Text in Russian. **Title tr.**: North Pole-1.

Reviews Soviet expeditionary and research activities in the High Arctic since 1920, honoring the 25th anniversary of the first drifting station. Preparation and execution of the 1937-38 expedition under the leadership of I.D. Papanin are outlined; fate and exploits of the station, other later Soviet drifting stations are noted. (DLC.)

73102. KREMER, B. A. N.G. Shilling i issledovanie Severnogo Ledovitogo okeana; k 50-letiiu so dnia smerti. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Mar.-Apr. 1961. t.93, vyp.2, p. 171-73.) 28 refs. Text in Russian. **Title tr.**: N.G. Shilling and the exploration of the Arctic Ocean; on the 50th anniversary of his death.

Reviews some publications and imaginative ideas of Nikolaĭ Gustavovich Shilling (1828-1911) concerning the Arctic Ocean: his hypothesis of Franz Joseph Land (cf. No. 42463), forecast of ways to reach North Pole, and others are noted. (DLC.)

73103. KREMS, A. IA. Eshche raz o metodike poiskov mestorozhdeniĭ nefti i gaza v Timano-Pechorskom neftegazonosnom basseĭne. (Geologiia nefti i gaza, Mar. 1961. god 5, no.3, p.63-64.) 3 refs. Text in Russian **Title tr.**: Postscript on the method of oil and gas search in the Timan-Pechora basin.

Letter to editor emending V.A. Levchenko's statement (No. 59727) that the geologic structure of the Timan-Pechora basin was revealed only by geophysical data. Geological studies are emphasized. Recent drillings in this area are evaluated. (DLC.)

73104. KREMS, A. IA. Osnovnye rezul'taty geologorazvedochnykh rabot na neft' i gaz v 1960 g. i

napravlenie ikh na 1961-1965 gg. v raĭonakh Timano-Pechorskoĭ provintsii. (Geologiia nefti i gaza, Aug. 1961. god 5, no.8, p.11-16, map.) Text in Russian. **Title tr.**: The main results of oil and gas prospecting in 1960 and the direction for 1961-1965 in districts of the Timan-Pechora province.

Reports the find of the productive Zapadno-Tebukskoye oil deposits, 60-65 km. east of Ukhta, Komi ASSR. At 1950-2000 m. depth, these deposits have a potential yield of 350-400 tons a day. For the first time in the USSR, the oil was found in Silurian carbonate-sandstones. Other newly discovered deposits in the Lem'yu area are noted with a 30-40 ton/day potential. Natural gas discovery is also reported. The actual Komi gas yield in 1960 was 1290 million m^3. The plan for 1961-1965 is described, noting locations and type of prospecting. (DLC.)

73105. KRENDELEV, F. P. Vnedrenie rezul'tatov nauchnykh issledovaniĭ v narodnoe khozĭaĭstvo geologo-geofizicheskimi uchrezhdeniiami Sibirskogo otdeleniia. (Geologiia i geofizika, 1962, no.6, p.110-11.) Text in Russian. **Title tr.**: Application of research results to the national economy by geologic and geophysical institutes of the Siberian Branch of Academy of Sciences of the USSR.

Reports a joint meeting of the Scientific Council of the geologic-mineralogic, geophysics, geographic and other institutes held in Novosibirsk Apr. 23-26, 1962. Their various activities are briefly reviewed and further plans noted, including some work in arctic regions. (DLC.)

73106. KRENDELEV, F. P. Zasedanie Ob"edinennogo uchenogo soveta po geologo-geograficheskim naukam. (Geologiia i geofizika, 1962, no.5, p.140-41.) Text in Russian. **Title tr.**: A session of the joint scientific council on geologic and geographic sciences (of the Siberian Branch of the Academy of Sciences).

Reports the meeting of Jan. 24-29, 1962 in Novosibirsk: activities of the volcanological station in Petropavlovsk, Kamchatka, the expedition to study the Tunguska meteorite, and seismic and geologic work in Siberia are briefly summarized.(DLC.)

73107. KRENKE, A. N. Glacier domes with firn alimentation on the Franz-Joseph Land. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no. 54, *pub.* 1961. p.256-64, diagrs., graphs, table.) 7 refs. Summary in French.

Presents some results of glaciological studies made on Gukera Island, 80°N. 52°E. by the Glaciological Expedition of the Institute of Geography of the Academy of Sciences, USSR during the IGY. Author compares nourishment (alimentation) of the Jackson Dome and Churlyanis Dome. The former is higher, more remote, and has less ablation, it has three vertical zones, those of firn alimentation, ice alimentation and ablation. The Churlyanis Dome has no firn zone. Different reaction of various glaciers in the same region to relatively small climatic differences is discussed; glacier sensitivity to climatic variations in space does not always coincide with glacier reaction to climatic changes over a period of time. (DWB.)

73108. KRENKE, A. N. Lednikovye kupola s firnovym pitaniem na Zemle Frantsa-Iosifa. (Akademiia nauk SSSR. Institut geografii. Materialy glîatsiologicheskikh issledovaniĭ. Khronika obsuzhdeniia, 1961. vyp.1, p.42-43.) Text in Russian. **Title tr.**: Ice domes with firn feeding in Franz Joseph Land.

Reports study in 1957-1959 of the Dzheksona Glacier dome on Gukera Island: its temperature and radiation regimes, and its firn nourishment as established. Comparison is made with the Churlyanisa dome on the same island which is ice fed. (DLC.)

73109. KRENKE, A. N., *and* **N. G. RAZUMEĬKO.** Lednikovye kupola Zemli Frantsa-Iosifa. (Priroda, Apr. 1961, no.4, p.94-96, illus., diagr.) Text in Russian. **Title tr.**: The ice domes of Franz Joseph Land.

Reports glaciological investigations conducted in the IGY. The Churlyanisa and Dzheksona Cupolas represent two different types of glaciers, which differ in feeding, climatic conditions, temperature regime. A temperature paradox is noted: the ice temperature of the Dzheksona dome is higher than that of Churlyanisa, despite the fact that the air temperature on Dzheksona is lower. Both types of dome have wide distribution in Franz Joseph Land. (DLC.)

73110. KRENKE, A. N. Lednikovyĭ kupol s firnovym pitaniem na Zemle Frantsa-Iosifa. (Issledovaniia lednikov i lednikovykh raĭonov, 1961. vyp.1, p.70-84, tables, graphs, diagrs., map.) 8 refs. Text in Russian. Summary in English. **Title tr.**: Firn-fed ice dome on Franz Joseph Land.

Presents results of field observations conducted on the Jackson ice dome (approx. 80° 15′N. 52°50′E.), Hooker Island, by the Institute of Geography expedition of 1957-1959. Morphology, climatic conditions, and glacier motion were studied; bore holes were made to 20 m. depth for temperature measurements and observation of the snow-firn-ice layers. The equilibrium line is at about 270 m. above sea level, the firn limit at 320-390 m. The firn-accumulation zone occupies nearly one-third of the total area of the ice dome, and ice formation in this zone is of the cold infiltrational type. The volume of the ice dome is decreasing. (CaMAI.)

73111. KRENKE, A. N., *and others.* Nakoplenie i preobrazovanie snezhnogo pokrova na vershine lednikovogo kupola Churliianisa; Zemliia Frantsa-Iosifa. (Issledovaniia lednikov i lednikovykh raĭonov, 1962. vyp.2, p.50-65, tables, graphs incl. fold.) 15 refs. Text in Russian. Summary in English. *Other authors:* T.V. Psareva *and* N.G. Razumeĭko. **Title tr.**: Accumulation and transformation of the snow cover on the top of Churlyanisa ice dome, Franz Joseph Land.

Reports 1957-1959 field observations on this ice dome which has Buffin-type feeding. Microrelief is analyzed; snow thickness, density, hardness, and temperature, its stratification and windblown transport are described. Snow accumulation in the zone of Franz Joseph Land glaciers is affected by frontal hard precipitation during the cyclone regime. The wind influence is characterized. The snow layer reflects the temperature variation of the atmosphere: seasonal, and diurnal. From October to March, a direct stratification of temperature prevails, from April to September, an inverse. (DLC.)

73112. **KRENKE, A. N.,** *and* **R. V. FËDOROVA.** Pyl'tsa i spory na poverkhnosti lednikov Zemli Frantsa-Iosifa. (Akademiia nauk SSSR. Institut geografii. Materialy glîatsiologicheskikh issledovaniĭ. Khronika obsuzhdeniia, 1961. vyp.2, p.57-60, table.) 9 refs. Text in Russian. **Title tr.:** Pollen and spores from the glacier surface of Franz Joseph Land.

Reports study of three samples collected in 1959 from the Sedova Glacier and Churlyanisa ice dome. The sites and the handling of these samples are described. The pollen and spore composition is analyzed. Almost all belong to plant families completely absent in the Franz Joseph Land. Woody plants *Pinus* and *Betula* predominate; among the herbaceous, species of Gramineae, Oxyria, Ranunculaceae and others are noted. Migration of pollen and spores and the value of this type of study are discussed. (DLC.)

73113. **KRENKE, A. N.** V mezhduvedomstvennom geofizicheskom komitete. (Akademiia nauk SSSR. Vestnik, June 1962. god 32, no.6, p.107-108.) Text in Russian. **Title tr.:** In the Interdepartmental Geophysical Committee.

Reviews activities of the Glaciological Section of the Committee, and lists the publications from the Soviet glacier explorations during the IGY. Continuation of such studies, including the Polar Ural, the catalog of glaciers in preparation and investigation of the artificial melting of glaciers for irrigation of arid areas, are noted. (DLC.)

KRENKE, A. N., *see also*

Grosval'd, M.G., & A.N. Krenke. Issledovaniia . . . 1961. No. 71879

Grosval'd, M.G., & A.N. Krenke. Recent changes . . . glaciers Fr. Joseph. 1962. No. 71882

Grosval'd, M.G., & A.N. Krenke. Voprosy glîatsiologii Zemli Frantsa-Iosifa. 1961. No. 71884

Kotlîakov, V.M. Kolebaniia . . . lednikov. 1962. No. 73030

73114. **KRESTOVNIKOV, VALERIAN NIKOLAEVICH.** Novye rakoobraznye fillokaridy paleozoia Russkoĭ platformy, Urala, Timana i Donbassa. Moskva, Izd-vo Akademii nauk SSSR, 1961. 68 p. illus., tables incl. fold., maps. (Akademiia nauk SSSR. Geologicheskiĭ institut. Trudy, vyp.52.) 88 refs. Text in Russian. **Title tr.:** New phyllocarid crustaceans of the Russian platform, Ural, Timan and Donbas Paleozoic.

Describes 19 new species, three varieties, two genera and two problematic forms of Devonian and Carboniferous phyllocarids, especially Archaeostraca. *Mesothyra timanica* n. sp. and two new species of gen. *Dithyrocaris* and *Spathiocaris* in the Timan, *Aristozoe pechorica* n. sp. and some others in the Northern Ural are included. Timan and Ural crustaceans are said to resemble those of the United States. (DLC.)

73115. **KRETZ, RALPH A.** Some applications of thermodynamics to coexisting minerals of variable composition; examples: orthopyroxene-clinapyroxene and orthopyroxene-garnet. (Journal of geology, July 1961. v.69, no.4, p.361-87, diagrs., tables, graphs.) 35 refs.

Presents mineral pairs from crystalline rocks to illustrate the thermodynamic principles of the distribution of chemical species between minerals of variable composition. Among these mineral pairs are four from the Skaergaard complex in East Greenland, six from the Iron Range of northeastern Quebec, and two from granulites in Lapland. Their distribution coefficients are analyzed and discussed. (DGS.)

73116. **KREY, JOHANNES.** The vertical distribution of seston in the northern North Atlantic, as observed during the cruises of "Gauss" and "Anton Dohrn" in late winter and late summer of 1958. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v.149, Contributions to Special IGY Meeting 1959. p.194-99, illus.) 4 refs.

Reports on material collected from the upper layer of 1500 m., and some from above the bottom. Vertical distribution, and distribution in upper 100 m. along the section Kap Farvel - Azores, and others, are analyzed. The role of particles, delivered from melting ice, in the composition of the seston, is also noted. (DI.)

73117. **KRÎAKLIN, IÛ.** Dorogi iz snega. (Master lesa, Nov. 1961, no. 11, p.26.) Text in Russian. **Title tr.:** Snow roads.

Describes the snow-road building equipment for lumbering concerns developed by the Northern Industrial Research Institute (SevNIIP). It consists of a tractor-drawn snow crusher and compressor, which makes 2 km. of 3 m.-wide road/hr. (DLC.)

73118. **KRÎATOV, B. M.** Prikontaktovye izmeneniia kimberlitov i vmeshchaîushchikh porod na trubke "Zarnitsa." (*In:* Akademiia nauk SSSR. Îakutskiĭ filial. Almazy Îakutii . . . 1961, p.64-66, table, diagr.) Text in Russian. **Title tr.:** Contact alteration of kimberlites and included rocks of the Zarnitsa pipe.

Reports chemical analyses and alteration of kimberlites and included carbonate and dolomite rocks caused by contact metamorphism in this pipe in the Daldyn region. Increase of calcite in the kimberlites and its decrease in the included rocks are observed. (DLC.)

KRÎATOV, B. M., *see also*

Bobrievich, A.P., & *others.* . . . Sibirskikh kimberlitov. 1961. No. 70263

Shchukin, V.N., & *others.* . . . kimberlitov i trappov. 1961. No. 75562

KRÎAZHEVSKIĬ, V. V., *see* Bershadskiĭ, V.L., & *others.* Îlektroprivod grebnoĭ ustanovki . . . 1959. No. 70174

73119. **KRIEGER, EDUARDO MOACYR.** Hypothalamic blood pressure responses in hypothermic rats. (Acta physiologica Latino-Americana, 1960, v.10, no.1, p.31-40, illus., tables.) 38 refs.

Pressure responses elicited by hypothalamus stimulation remained unchanged or slightly increased to 28°C of hypothermia. Thereafter they became progressively smaller, disappearing at 19-14°C. The effects of levarterenol or epinephrine, and of adrenalectomy, on pressor responses were also studied. (DNLM.)

73120. **KRINGELBOTTEN, JAKOB.** Skogsägarna i Norge förbereder egna storindustrier. (Skogsägaren, Sept. 1960. årg. 36, nr.9, p.256-57, port.) Text in Swedish. **Title tr.:** Forest owners in Norway are setting up their own large industrial concerns.

Notes wood-working plants projected by forest-owner associations to utilize 400,000 cu. m. excess spruce from Trøndelag and Nordland forests, also one to use excess pine in southern Norway. The reluctance of industry to expand with forest development and increased yield, and the consequent timber-marketing problems confronting lumbering concerns are major factors in the new development. (DA.)

73121. KRINOV, EVGENIĬ LEONIDOVICH. Devi͡atai͡a meteoritnai͡a konferent͡si͡ia. (Meteoritika, 1961, vyp. 20, p.5-13.) Text in Russian. **Title tr.:** The ninth meteoritics conference.

Describes the program and decisions of this conference at Kiev, June 2-4, 1960, which considered mainly the Tungusskiy meteorite expedition in 1958. The type of investigation, summary of results, and further problems are stated. (DLC.)

73122. KRINSLEY, DANIEL BERNARD, 1923– Late Pleistocene glaciation in northeast Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961, v.2, p.747-51, maps.) 6 refs.

Positions of numerous morainal systems and their related marginal channels were plotted on a 1:250,000 base map of Danmarks Fjord and vicinity. Present land areas of Greenland contain only later Pleistocene glacial deposits; early Pleistocene glaciations extended far into areas now sea-covered. Former positions of the ice front as inferred from the morainal systems and their related marginal channels indicate the Greenland Inland Ice as the chief source of ice; the ice-field on Kronprins Christians Land was a secondary source. Fresh moraines adjacent to the icecap front indicate recent advances; however, both main and isolated icecaps are currently receding. (DGS.)

73123. KRINSLEY, DANIEL BERNARD, 1923– . Limnological investigations at Centrum Sø, Northeast Greenland. (Polarforschung, Bd. 5, 1960 *pub.* Nov. 1961. Jahrg. 30, Heft 1-2, p.24-32, diagr., graphs, map.) 6 refs.

Reports study of this lake at approx. 80°10′N. 22°20′W. during summer 1960. Its hydrography indicates that the valley it now occupies was glaciated by an ice stream which moved from west to east. At present, the predominantly northwesterly winds during winter accumulate snow along the longitudinal, southern, and east-central portions of the frozen lake. Consequently thickest ice occurs adjacent to the northwestern shore. During the thaw, 75% of the lake ice melted from the top down and 25% from the bottom up. When the lake is ice covered, horizontal and vertical differences in water temperature are greater prior to the removal of the insulating snow cover and diminish during the thaw period. These temperature differences, as much as 1.1°C. horizontally and 3.5°C. vertically, may be the result of convection currents generated by heat from ground water or bottom sediments, and warmer density currents from meltwater streams.–From author's abstract. (CaMAI.)

73124. KRINSLEY, DANIEL BERNARD, 1923– . Thermal regime in the raised delta of Centrum Sø, northeast Greenland. (U.S. Geological Survey. Professional paper 1962. no.450B, p.B62-B65, maps, graph) 2 refs.

Describes the physical setting of this 12 x 2.5-mi. lake at 80°10′N. 22°W. in a glacial valley, and summarizes air and ground temperature observations in a raised delta May-July 1960. These data, as well as earlier reports, suggest that the area is an arctic desert with a total annual precipitation of four to six inches. (DLC.)

KRINSLEY, DANIEL BERNARD, 1923– , *see also*

Davies, W.E., & D.B. Krinsley. Caves N. Greenland. 1960. No. 70895

Davies, W.E., & D.B. Krinsley. Evaluation of arctic ice-free land . . . North Greenland. 1961. No. 70896

Davies, W.E., & D.B. Krinsley. . . . ice cap margin . . . 1962. No. 70898

Needleman, S.M., & *others*. . . . Centrum Sø . . . 1962. No. 74244

73125. KRISHTOFOVICH, AFRIKAN NIKOLAEVICH, 1885–1953. Izbrannye trudy. Moskva, Izd-vo Akademii nauk SSSR, 1959-1962. 2 v.: 600, 533 p. illus., port., maps. (Akademii͡a nauk SSSR. Botanicheskiĭ institut.) Refs. Text in Russian. **Title tr.:** Selected works.

Contains fifty papers by this noted geologist; 19 of them deal with northerly regions, five described *infra* and 14 in earlier volumes of this Bibliography, viz No. 9325-28, 23451-53, 30218-19, 35723-24, 40849, 65943-44. (DLC.)

73126. KRISHTOFOVICH, AFRIKAN NIKOLAEVICH, 1885-1953. Novye dannye o melovoĭ flore Severnoĭ Ameriki v svi͡azi s florami Dal'nego Vostoka. (Vsesoi͡uznoe paleontologicheskoe obshchestvo. Ezhegodnik, 1935. t.10, p.89-103.) Reprinted in his *Izbrannye trudy,* 1962. t.2, p.168-81. 3 refs. Text in Russian. **Title tr.:** New data on the Cretaceous flora of North America and its relationship to the flora of the Far East.

Reviews extensively C.A. Hollick and G.C. Martin's *Cretaceous flora of Alaska* (No. 7256) also two other American papers dealing with non-arctic regions. The Alaskan is compared with similar flora of Sakhalin and other areas of Far Eastern USSR. Hollick's work is considered a substantial contribution to the evolution of Cretaceous flora of the Arctic Basin. (DLC.)

73127. KRISHTOFOVICH, AFRIKAN NIKOLAEVICH, 1885-1953. O melovoĭ flore Okhotskogo poberezh'i͡a i severnoĭ Kamchatki. (In his *Izbrannye trudy,* 1962, t.2, p.182-210, illus., plate, 28 refs; reprinted from: Materialy po izucheniiu Okhotsko-Kolymskogo krai͡a, 1937. ser. 1, vyp. 5, p.67-96.) Text in Russian. **Title tr.:** On the Cretaceous flora of the Okhotsk Sea coast and northern Kamchatka.

Reports collections made in the Penzhinskaya Bay region, the Khasyn River basin (north of Nagayevo Bay), and in the vicinity of Okhotsk; 13 forms are identified. The Cretaceous system in the north coast of the Pacific is reviewed and the stratigraphic position of the fossil flora analyzed. Comparison is made with the Cretaceous flora of Alaska. (DLC.)

73128. KRISHTOFOVICH, AFRIKAN NIKOLAEVICH, 1885-1953. Ocherk tretichnykh otlozheniĭ Dal'nego Vostoka v svi͡azi s ikh uglenosnost'iu. (In his *Izbrannye trudy,* 1962, t.2, p.478-97.) 7 refs. Text in Russian. **Title tr.:** Outline of the Tertiary deposits of the Far East in relation to their coal-bearing properties.

Includes Tertiary deposits of Kamchatka,

coastal areas of the Okhotsk Sea, the Anadyr region and Chukotka. Their distribution, thickness, age, stratigraphy and fossil plants are reviewed. Indications of coal deposits are noted. (DLC.)

73129. KRISHTOFOVICH, AFRIKAN NIKOLAEVICH, 1885-1953. Tretichnaĭa flora zaliva Korfa na Kamchatke. (In his *Izbrannye trudy,* 1962, t.2, p. 394-421, plates. 70 refs.; reprinted from: Dal'nevostochnyĭ geologorazvedochnyĭ trest. Trudy 1934. vyp. 62, p.3-28.) Text in Russian. **Title tr.:** Tertiary flora of Korfa Bay in Kamchatka.

Presents a systematic description of Tertiary flora collected by I.A. Preobrazhenskiĭ in 1928; in all 29 forms, some of them new: *Larix preobrajenskyi, Cannaephyllum beringii, Quercus atriplicifolia,* and others. Conifers are numerous. Evolution of Tertiary flora is outlined and geological comparisons made with other regions, especially Alaska, the Anadyr, Chukotka, etc. (DLC.)

73130. KRISHTOFOVICH, AFRIKAN NIKOLAEVICH, 1885-1953. Verkhnemelovye rasteniia basseĭna r. Kolymy. (In his *Izbrannye trudy,* 1962, t.2, p.290-315, illus., plates. 47 refs.; reprinted from: Materialy po izucheniiu Kolymsko-Indigirskogo kraia, ser. 2, Geologiia i geomorfologiia, 1938. vyp. 15, p.3-26.) Text in Russian. **Title tr.:** Upper Cretaceous flora of the Kolyma River basin.

Presents a monographic description of this flora, collected in the Silyap and Vstrechnaya basins of Yakutia; 19 species are described from a 600 m.-thick stratum characterized by the presence of *Trapa? microphylla* (*Quereuxia angulata*). Some of them are new: *Zizyphus kolymnensis, Cissus kolymnensis, Hedera ochotica* n. spp. *Aralia* (*Sassafras*) *kolymnensis* n. sp. is also described. Ferns play important role in this flora. The site and age are also considered. (DLC.)

73131. KRISHTOFOVICH, L. V., *and* **A. P. IL'INA.** Biostratigrafiia paleogenovykh i neogenovykh otlozheniĭ Tigil'skogo raĭona zapadnoĭ Kamchatki. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.170-80, plates, tables.) Text in Russian. **Title tr.:** Biostratigraphy of the Paleogene and Neogene deposits in the Tigil' region of western Kamchatka.

Presents a stratigraphic division based on fossil molluscs. The Paleogene deposits are divided into two series, Neogene into three, and all series subsequently divided into subseries, zones and layers. Each stratigraphic unit is described, and, from many years' study the fauna and its distribution, are reported, many new molluscan species identified and illus. on 20 plates at end of volume. Paleogene and Neogene deposits are best studied in the Tigil' region. (DLC.)

73132. KRISHTOFOVICH, L. V. Sopostavlenie tretichnykh otlozheniĭ severnoĭ chasti Tikhookeanskogo kol'tsa kainozoĭskoĭ skladchatosti. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.83-90, fold. table.) Text in Russian. **Title tr.:** Correlation of Tertiary deposits of the northern part of the Pacific ring of Cenozoic folding.

Presents stratigraphic correlation of Tertiary deposits of Kamchatka, Sakhalin, Japan, and northwest America, based on fauna and flora. Paleogene and Neogene deposits are correlated according to molluscan fauna divided into horizons. (DLC.)

73133. KRISS, ANATOLIĬ EVSEEVICH. Marine microbiology (deep sea). Edinburgh, Oliver & Boyd, 1962. 536 p. illus., maps, plates incl. col. Translation by J.M. Shewan and Z. Kabata of No. 59408. (AkAbF.)

73134. KRISS, ANATOLIĬ EVSEEVICH, *and others.* Micro-organisms as hydrological indicators in seas and oceans, IV; the hydrological structure of the Atlantic Ocean, including the Norwegian and Greenland Seas, based on microbiological data. (Deep-sea research, Mar. 1961. v.7, no.4, p.225-36, map, diagr., graphs, table.) 14 refs. *Other authors:* I.N. Mifskevich, I.E. Mishustina, *and* S.S. Abyzov. Pt. I of this series, No. 65948; pt. 2-3 are not arctic in content.

Reports the quantitative distribution of heterotrophs in the water column of portions of Denmark Strait and Greenland Sea, based mainly on samples obtained by the *Ob'* 1956, *Sevastopol'* 1958, and *Lomonosov* 1959. Micro-organisms which assimilate non-humus organic matters are generally scarce in subarctic and arctic waters. Equatorial-tropical water, rich in heterotrophs, was identified in the Greenland Sea at depths to 3000 m. Most of the Atlantic water along 30°W. identified from Denmark Strait to the Tropic of Cancer is of arctic origin, with few heterotrophs. Paradoxically, microbes (heterotrophs) are most abundant in ocean areas where plants and animals are scarcest. The hydroggraphy of Greenland Sea west of Svalbard is more clearly defined than that of the Norwegian Sea. Deep ocean currents which transport equatorial-tropical waters may move poleward more rapidly than hitherto believed; this would account for the abundance of easily decomposed organic matter and consequently of heterotrophs in the deep layers at higher latitudes. (DGS.)

73135. KRISTIANSEN, UVDLORIÁNGUAQ. Der findes i dag 24 lokale blade i Grønland. (Atuagagdliutit: Grønlandsposten, Jan. 1, 1961. Ukiut 101-iat, nr.1, p.40, illus.) Text in Danish and Eskimo. **Title tr.:** There are 24 local papers in Greenland today.

Lists and gives details on these papers; they are pub. in editions of 125-650, five are in Eskimo, 19 in Danish and Eskimo. Most of them began about 1950. (CaMAI.)

73136. KRISTOFFERSEN, JOHN, *and others.* Identification of 20β-hydroxy-pregn-4-ene-3-one in luteal tissue from pregnant whales. (Nature, June 10, 1961. v.190, no.4780, p.1009-1010.) 10 refs. *Other authors:* T. Lunas *and* W. Velle.

Reports on study of extracts of luteal tissue from pregnant fin-whales. Results indicate that progesterone as well as 20β-hydroxy-pregn-4-ene-3-one are naturally occurring gestogens in whales. (DLC.)

73137. KRISTOFFERSEN, SIGFRED A. N. Fugleobservasjoner fra Biskayerhuk, Nord-Spitsbergen. (Stavanger, Norway. Museet. Sterna, May 1962. bd. 5, hefte 2, p.65-79, text map, 5 illus.) Text in Norwegian. Summary in English. **Title tr.:** Bird observations from Biskayerhuk, north Spitsbergen.

Reports observations made in all seasons while trapping in the vicinity of Biskayerhuk, 79°50′N. 12°24′E., in 1938-1940, and 1948-1949.

Occurrence and frequency of the various species, including some occasional visitors, breeding, migration, etc. are noted, with more information on about ten breeding birds, common eider, a fulmar, ptarmigan, gull, etc. (DLC.)

73138. **KRITSUK, L. N.** K voprosu o genezise pustot v mnogoletnemerzlykh gornykh porodakh. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy 1962. t. 19, p.96-101, illus., table.) 18 refs. Text in Russian. **Title tr.:** On the genesis of interstices in permafrost rocks.

Reports study in the Khantayka River basin approx. 68°05′N. 86°30′E. Various deposits are reviewed and among them lacustrine-glacial of 5-6 m. depth, in which open spaces are detected of 1-2 mm. to 1.5-2.0 cm. height and 1-5 cm. diameter. Various explanations of their origin are discussed and an opinion expressed that they were formed by the thawing of frozen rocks in the period of thermal optimum, which began five-six thousand years ago. (DLC.)

73139. **KRITZ, LARS.** Mellanriksvägar till Norge från Norrbottens och Västerbottens län; ekonomisk-geografisk undersökning verkställd åren 1957-58. Stockholm, Norstedt, 1960. 147 p. fold. map, 28 text maps, 22 tables, 19 graphs. (Uppsala. Universitet. Geografiska Institutionen. Meddelanden, ser. A, nr.149.) Refs. Text in Swedish. *Reprinted from:* Nordiska rådet, Förhandlingar 1959, 7:e sessionen. **Title tr.:** International routes to Norway from Norrbotten and Västerbotten provinces; economic-geographic investigation conducted in the years 1957-58.

Describes the present (1957-58) and contemplated routes between northern Sweden and Norway, also the population distribution and economic conditions in the terminal regions. There are two roads from Tärnaby in Västerbotten, one via Hattfjelldal to Trofors, the other via Umbukta to Mo-i-Rana, and there is the railway from Kiruna in Norrbotten to Narvik. Several other possible roads in Västerbotten are discussed, all leading to termini in arctic Norway. Distances and construction conditions are noted. Industrial development, international trade, mining, water power, lumbering, automobile ownership, tourism, and traffic data are discussed in detail. (DLC.)

73140. **KRIUCHKOV, V. V.** Zavisimost' fenofaz u berezy i eli ot temperatury samikh derev'ev. (Botanicheskiĭ zhurnal, July 1962. t. 47, no.7, p.923-37, illus., tables.) 22 refs. Text in Russian. Summary in English. **Title tr.:** Dependence of phenological phases of birch and spruce on the temperature of the trees proper.

Reports on conditions in *Betula tortuosa* Ldb. and *Picea obovata* Ldb. as studied during four years in several areas of the Khibiny Mts. Sap flow in the birch did not start until the temperature in the roots and lower trunk rose above -0.2°C. and in the upper trunk above some 5°C. Unfolding of leaves or needles began when temperature in trunk and branches reached and exceeded 11°C. and lasted 8-9 days for at least 3-4 hours daily. (DLC.)

KRIUK, V. A., *see* Kulikov, M.I., & V.A. Kriuk. Ot patriarkhal'no-obshchinnogo stroia k sotsializmu . . . 1962. No. 73202

73141. **KRIUKOV, D.** Okhotnich'i bogatstva Tiumenskoĭ oblasti, na sluzhbu narodu. (Okhota i okhotnich'e khoziaĭstvo, Dec. 1961. god 7, no.12, p.9-10.) Text in Russian. **Title tr.:** The hunting resources of Tyumen Province must be utilized for the people.

The province has 128 million hectares in hunting grounds inhabited by a score of fur-bearers and ungulates, sable, squirrel, elk, wild reindeer, etc., and many valuable wildfowl. Weaknesses in the hunting industry and lack of effective wildlife protection are noted. The hunters' association, 16 thousand strong in this province, should be activated and conservation measures introduced. (DLC.)

73142. **KRIUKOV, GEORGIĬ LEONIDOVICH.** Redkiĭ vesenniĭ pavodok v predelakh zapadnogo sklona Polĭarnogo Urala. (Meteorologiia i gidrologiia, Apr. 1961, no.4, p.40-41, tables.) Text in Russian. **Title tr.:** A rare spring flood in the region of the western slope of the Polar Ural.

Discusses an exceptionally high spring flood in the Vorkuta and Usa basins and adjacent regions in 1958. The discharge observed on the Vorkuta reached 2,500 m³/sec., and the Usa 3,140 m³/sec. The probability of such a flood in the Vorkuta basin was calculated to be less than one percent. (DLC.)

73143. **KRIUKOVA, IRINA ALEKSANDROVNA,** *and* **E. IAKOVLEVA.** Na vystavke iakutskogo iskusstva. (Dekorativnoe iskusstvo, Feb. 1958, no.2, p.22-26, illus. incl. col.) Text in Russian. **Title tr.:** Exhibition of Yakut art.

Describes a modern folk art exhibit in Moscow, December 1957: bone carvings and engravings, metal ornaments, woodcraft, leather work, embroidery, pottery, etc. The naturalistic style of sculptures, high artistic and decorative quality of ornamentation, traditional and modern trends in pattern designs and color combinations, etc. are discussed. Also noted are objects of majolica ware, a new Yakut craft continuing the ornament traditions of ancient wood-carved vessels. (DLC.)

73144. **KRIVONOSOV, IU.** Gosteĭ v Arktike ne byvaet. (Ogonëk, July 1962. god 40, no.29, p.16, 4 col. plates.) Text in Russian. **Title tr.:** There are no guests in the Arctic.

Journalist's sketch of a few days' stay on drifting station North Pole 10 (in April 1962?): the current work, amenities, etc. (DLC.)

73145. **KRIVOSHEEV, V. G.** Lugovo-stepnye elementy v faune taĭgi basseĭna IAny. (Akademiia nauk SSSR. IAkutskiĭ filial. Nauchnye soobshcheniia 1961. vyp. 5, Biologiia, p.65-70.) 13 refs. Text in Russian. **Title tr.:** Meadow-steppe elements in the taiga fauna of the Yana basin.

Account on non-burrowing vertebrates of the Verkhoyansk district, recorded during May-Sept. 1959, with an introductory description of the area, its phyto-zoological character, etc. Some 11 nesting bird species, 14 swamp dwellers, and seven predators are listed, as well as the more common mam-

mals. The geographic and paleontologic aspects of the local fauna are noted. (DLC.)

73146. KRIVOSHEEV, V. G. Materialy po zimneĭ ėkologii krasnykh polevok, *Clethrionomys rutilus jacutensis* Vinogr. v TSentral'noĭ IAkutii. (Akademiia nauk SSSR. IAkutskiĭ filial. Nauchnye soobshcheniia 1961. vyp. 5, Biologiia, p.79-86, illus., tables.) 5 refs. Text in Russian. **Title tr.:** Materials on the winter ecology of the red vole *Clethrionomys rutilus jacutensis* Vinogr. in central Yakutia.

Account of observations made on this common rodent in October and December 1958 in three separate areas. Movements over the snow, distribution of colonies, response to very low temperatures (-50°C. and below), food, and its provision, are described. (DLC.)

73147. KRIVOSHEEV, V. G. Novye materialy po avifaune basseĭna IAny. (Ornitologiia, 1960. vyp. 3, p.98-105, tables.) 8 refs. Text in Russian. **Title tr.:** New materials on the avifauna of the Yana basin.

Reports observations from a trip made in May-Sept. 1959. Some 36 forms are tabulated as to their frequency of occurrence in the local habitats; and 17 forms, new or rare for the area, are described, including occurrence and geographic distribution, nests, food, etc. (DLC.)

73148. KRIVOVIAZ, O. M. Primenenie ėlektrogidroprivoda dlia mekhanizatsii i avtomatizatsii rudnichnykh ustanovok. (Gornyĭ zhurnal, Apr. 1961. no.4, p.49-51, illus.) Text in Russian. **Title tr.:** Use of the electro-hydraulic drive in the mechanization and automation of mine installations.

Describes the mechanism for automatic ventilation doors, unloading-chute gate, and car pusher at the Nittis-Kumuzh'ye Mine of the Severonikel' Combine in Kola Peninsula. (DLC.)

73149. KRIZHEVSKAIA, L. IA., *and others.* Rabota sektorov Instituta arkheologii AN SSSR; 1, sektor paleolita v 1959 godu; 2, sektor neolita i bronzy v 1959-1960 godakh. (Akademiia nauk SSSR. Institut arkheologii. Kratkie soobshcheniia, 1962. vyp. 88, p.102-112.) Text in Russian. *Other authors:* V.I. Markovin *and* IU.S. Grishin. **Title tr.:** Work of the sections of the Institute of Archeology, Academy of Sciences, USSR; 1, Paleolithic section in 1959; 2, Neolithic and bronze age section in 1959-1960.

Reviews progress reports delivered at various Institute sessions, fieldwork, and publications including a few relevant for northern areas:

L.IA. Krizhanovskaia discussed the use of fire in pebble splitting on the basis of pebble-filled kiln-pits found in a neolithic complex at the Ust'-Belaya site on the Angara River.

R. Ackerman of Philadelphia summarized archeological fieldwork in Alaska.

The Bratsk archeological and the Far Eastern expeditions, both headed by A.P. Okladnikov, continued excavations in the Angara and Sea of Okhotsk regions, respectively.

N.N. Dikov, director of the Anadyr Regional Museum, described the 1956-1959 excavations in Chukotka, noting the find of some bronze implements dated to the first millennium B.C. and the discovery of the oldest site in the interior: the Ust'-Belaya cemetery on the Anadyr River, of the second to early first millennium B.C. (DLC.)

KRIZHEVSKAIA, L. IA., *see also* Markovin, V.I., & L.IA. Krizhevskaia. Rabota sektorov . . . 1962. No. 73835

73150. KROG, HILDUR, *and* M. MONSON. Notes on the metabolism of a mountain goat. (American journal of physiology, Sept. 1954. v. 178, no.3, p.515-16, illus.) 4 refs.

Oxygen consumption of a captive *Oreamnos americanus* remained steady at ambient temperatures of 20° to -20°C., rose by 23% at -30°C. and by 130% above basal level at -50°C. The critical temperature (somewhat below -21°C.) corresponds to the normal winter temperature of the goat's habitat in Alaska. (DLC.)

73151. KROGIUS, F. V. IAponskiĭ lososevyĭ promysel v otkrytom more i ego vliianie na zapasy krasnoĭ. (Rybnoe khoziaĭstvo, 1961. god 37, no.2, p.33-36, tables.) Ref. Text in Russian. **Title tr.:** Japanese high sea salmon fishery and its effect on red salmon.

Account of Japanese high-sea catches of this fish, its reproduction in Kamchatka, stocks, size composition in various areas of the sea. Freshwater catches in Kamchatka and Alaska are noted, and the effect of Japanese catches on the stock discussed. (DLC.)

73152. KROGIUS, F. V. O sviaziakh tempa rosta i chislennosti krasnoĭ. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ 1961. vyp. 13, p.132-46, illus., tables.) 21 refs. Text in Russian. **Title tr.:** Connections between growth rate and the number of sockeye salmon.

Reports a study based on conditions in the fresh waters of Kamchatka. Size and weight of the migrating young are found to depend on the quantity of plankton in the lakes where they were feeding; in many lakes an inverse relation exists between size and number of young; decrease in the number of spawners reduces reproduction both directly and indirectly and causes an increase in food competitors. Relations between biomass and feeders, weight of anadromus fish, and of fish in different waters, are also considered. (DLC.)

73153. KROGIUS, F. V., *and* A. G. OSTROUMOV. Primenenie aėrometodov dlia otsenki zapolneniia nerestilishch tikhookeanskimi lososiami. (*In:* Soveshchanie po primeneniiu aėrometodov . . . 1961, p.132-45, illus., tables.) 30 refs. Text in Russian. **Title tr.:** Use of aerial methods in evaluating Pacific salmon spawning areas.

Describes the aerial photography program on Kamchatka rivers since 1958: flights conducted during August-Sept. 10, the spawning period, types of aircraft and helicopters used; weather conditions favorable for taking air photos, etc. Air visual observations also are described. Quantitative calculation and forecast of the salmon population are outlined. Aerial methods are stressed as of great importance to the salmon fishery. (DLC.)

73154. KROGIUS, F. V. Temp rosta i vozrastnye gruppirovki krasnoĭ, *Oncorhynchus nerka* Walb. v more. (Voprosy ikhtiologii, 1960. vyp. 16, p.67-88,

illus., tables.) 5 refs. Text in Russian. **Title tr.:** Growth rate and age groups of sockeye salmon, *Oncorhynchus nerka* Walb., in the sea.

Reports a study in salmon spawning in Dal'neye Ozero, Kamchatka. Differentiation into slow- and fast-growing groups was found to begin in the lake; in the sea, each group again shows its slow- and fast-growing (and maturing) individuals. Hence fishes ascending to spawn are composed of several (three) age classes. Young fish migrating into the sea are composed of two age classes, 1+ and 2+ years, and remain in the sea two or three years. Details of their growth in the sea, shoaling, rate of growth, etc. are considered. (DLC.)

KROGIUS, F. V., *see also* Egorova, T.V., & *others.* Prichiny . . . 1961. No. 71211

73155. KROKHIN, E. M. Nerestilishcha krasnoĭ, *Oncorhynchus nerka* Walb.; ocherk geomorfologii, temperaturnogo rezhima i gidrokhimii. (Voprosy ikhtiologii, 1960. vyp. 16, p.89-110, illus., tables, maps.) 19 refs. Text in Russian. **Title tr.:** Spawning grounds of the sockeye salmon *Oncorhynchus nerka* Walb.; an outline of the geomorphology, temperature conditions and hydrochemistry.

Reports study of these grounds in the lakes of the Bol'shaya River system of Kamchatka. Long term, monthly temperature averages of the waters and their fluctuations, rate of water flow over the spawning grounds, and the chemistry of the waters including pH, O_2, CO_2 and Ca, Si, Fe, N compounds are dealt with. An introductory part presents an outline of the nature and geology of the lake bottoms. (DLC.)

KROKHIN, I. P., *see* Chochia, N.G., & *others.* Muzhinskiĭ Ural . . . 1961. No. 70733

73156. KRONBERG, PETER. Luftbild Nord-Alaska. (Erde, 1961. Jahrg. 92, Heft 4, p.241-45, illus.) 2 refs. Text in German. **Title tr.:** Air-photo of North Alaska.

Presents an air-photo of an unspecified area of North Alaska, together with its geologic interpretation. Thaw lakes, dry basins of melt lakes, polygonal ice wedges, pingos, small stagnant pools, shore lines, and other surface features are identified and briefly characterized. Photo-interpretation is discussed briefly for its value in planning geologic field surveys and study of microrelief. (DLC.)

73157. KROPOTKIN, PETR NIKOLAEVICH, *and* **M. S. NAGIBINA.** Geologiīa i metallogeniīa Tikhookeanskogo rudnogo poĭasa. (Akademiīa nauk SSSR. Vestnik, Jan. 1961. god 31, no.1, p.119-21.) Text in Russian. **Title tr.:** Geology and metallogeny of the Pacific ore belt.

Reports transactions of the first All-Union conference on this subject held in Vladivostok, Sept. 26 - Oct. 10, 1960: papers delivered, recently compiled maps, including a metallogenetic map of the belt, compiled by the Far East Geological Institute, and a tectonic map of the arctic section of the belt, compiled by IU. M. Pushcharovskiĭ. (DLC.)

73158. KROPOTKIN, PETR NIKOLAEVICH. Osnovnye cherty neotektoniki Kamchatki, Koriākskogo khrebta, Kuril'skikh ostrovov i blizhaĭshikh chasteĭ Tikhogo okeana i Okhotskogo moriā. (*In:* International Association of Quaternary Research. Neotektonika SSSR . . . 1961, p.273-89.) 34 refs. Text in Russian. **Title tr.:** Main recent tectonic features of Kamchatka, the Koryak Range, Kuril Islands and adjacent areas of the Pacific Ocean and the Sea of Okhotsk.

Notes that all these areas belong to a region of present tectonic activity. The structures of each are described. The whole region represents several almost parallel geoanticlines and downfolds divided by large breaks, flexures and overthrusts. The geosynclinal system is characterized by a network of fissures tied to the zone of a large break. Changes in crustal thickness, transversal breaks, marine bottom relief and other features of recent tectonics are characterized. (DLC.)

73159. KROPOTKIN, PETR NIKOLAEVICH. Paleomagnetizm, paleoklimaty i problema krupnykh gorizontal'nykh dvizheniĭ zemnoĭ kory. (Sovetskaiā geologiiā, May 1961, no.5, p.16-38, graph, maps incl. fold.) 75 refs. Text in Russian. Summary in English. **Title tr.:** Paleomagnetism, paleoclimates and problems of large horizontal movements of the earth's crust.

Outlines the principles of paleomagnetism, study of the magnetization of rocks in non-recent geologic history. The position of the North Pole in the Paleozoic, Mesozoic and Cenozoic eras is shown. Paleomagnetic data are compared with those of paleoclimatology, geology and paleobiology, and agreement is noted. Other aspects of paleomagnetism and the continental drift theory are discussed. Achievements of this kind of study are summarized. (DLC.)

73160. KROPOTKIN, PETR NIKOLAEVICH. Principal features of the tectonics of Amur region, Sikhota Alin Range, Sakhalin Island, Kurile Islands and Kamchatka Peninsula. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Proceedings *pub.* 1961. v.12, geology and geophysics, p.349-50.) 7 refs.

Describes, as in No. 52519, structures of Far Eastern USSR and adjacent waters, as part of a symposium on stratigraphic correlation for the Pacific Basin. Anticlinoriums of Kamchatka include Precambrian through Cretaceous deposits. Troughs with Tertiary deposits on the east and west coasts of the Peninsula were folded during the late Pliocene and early Quaternary periods. A possible extension of the earth's mantle at the margin of the Pacific platform is indicated in the Kuril-Kamchatka trough. (DI.)

73161. KROTOV, VIKTOR ALEKSANDROVICH. Sdvigi v razmeshchenii proizvoditel'nykh sil Vostochnoĭ Sibiri. (Akademiīa nauk SSSR. Sibirskoe otdelenie. Izvestiīa 1961, no.10, p.20-30.) 6 refs. Text in Russian. **Title tr.:** Shifts in distribution of productive forces in Eastern Siberia.

Outlines changes in appraisal of Eastern Siberia, formerly considered a poor province, now one of the richest areas of the Soviet Union, abundant in coal of the Tunguska, Taymyr, Lena, Kolyma-Indigirka coal basins; in the iron ore of Yakutia and other areas, in the Kolyma, Indigirka, and

Aldan gold fields; in tin, tungsten, molybdenum, nickel (Noril'sk), natural gas (Vilyuy basin); and above all, in the diamonds of northwest Yakutia. The rapid growth of industry and expansion of the economy of this area are stressed, including its far North: Noril'sk, Dudinka, Igarka, Tiksi, etc.; and development plans are discussed. (DLC.)

73162. KRUMBACH, ARTHUR W., *Jr.* Power sampler for frozen soil. (Soil Science Society of America, Proceedings, Mar.-Apr. 1962. v.26, no.2, p.209, illus.)

Describes components and operation of this device for taking cores from frozen soil. The 2.5 h.p. engine, drive, and transmission assemblies are produced commercially; the extension shaft and 18-in.-long sample tube were made at the U.S. Army Engineer Waterways Experiment Stn., Vicksburg, Miss. More than 1500 frozen cores were taken from woods, pasture, and plowed land in Michigan. In stony soil, excessive vibration of the tube tended to break the core or stop the cutting, thus melting the sample. Supply of several sharp tubes, and provision for speed control are suggested for better results. (DI.)

73163. KRUPIANSKAIA, V. IU., *and others.* Osnovnye problemy ėtnograficheskogo izucheniia narodov SSSR. (Sovetskaia ėtnografiia, May-June 1961, no.3, p.3-12.) Refs. Text in Russian. Summary in English. *Other authors:* L.P. Potapov *and* L.N. Terent'eva. **Title tr.:** Basic problems of the ethnographic study of the peoples of the USSR. Paper read at the Sixth International Congress of Anthropological and Ethnological Sciences, Paris 1960.

Discusses Soviet research in current ethnological processes, including the far North: merging and consolidation of small groups into "nations," resulting changes in economy and culture, formation of ethnically mixed kolkhozes, etc.; exemplified from the Tungus, Yukaghirs, Yakuts, Chukchis, etc. (DLC.)

73164. KRUPITSKAIA, T. M. Opredelenie ėnergeticheskogo spektra pervichnykh sutochnykh variatsiĭ intensivnosti kosmicheskikh luchei. (Akademiia nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, VII razdel programmy MGG: kosmicheskie luchi. Sbornik statei, 1960. no.2, p.94-100, tables, graphs.) 2 refs. Text in Russian. Summary in English. **Title tr.:** Determination of the energy spectrum of the primary diurnal variations in cosmic ray intensity.

Determines the diurnal variation of the neutron and the meson components from observational records of cosmic ray intensity at 11 stations, Ostrov Kheysa and Resolute Bay included. The records of July, 1957 - June, 1958 indicate that the diurnal variations of cosmic ray intensity in high latitudes have a lower amplitude than those recorded at middle latitudes, especially in the case of the meson component. The lower limit of intensity variation in the spectrum was found to be (7.1±0.9) B.e.v. (DLC.)

KRUPP, M.A., *see* Robertson, O.H., & *others.* Physiological changes . . . spawning. 1961. No. 75142

KRUTOIARSKIĬ, M.A., *see* Rabkin, M.I., & *others.* Klassifikatsiia kimberlitovykh porod . . . 1962. No. 75012

73165. KRYKHANOV, L. I. Novyĭ sposob ukhoda za khvoino-listvennym molodniakom na Urale. (Lesnoe khoziaĭstvo, July 1961. god 14, no.7, p.22-24, illus.) Text in Russian. **Title tr.:** A new method of cultivating the young coniferous-deciduous forest in the Ural.

Reports some 500,000 hectares of forest cut annually, and the deciduous species (chiefly birch) supplanting valuable conifers in natural regeneration of the mixed forest. As manual cutting is expensive, the Central and Northern Ural forestry farms are experimenting with aerial application of amino salts 2.4-D; 2-2.5kg. /hectare kills all the birch without damage to the conifers. July 11-30 is the best time. (DLC.)

KRYLOV, A. IA., *see* Ravich, M.G., & A. IA. Krylov. O vozraste . . . 1961. No. 75061

73166. KRYLOV, GEORGIĬ VASIL'EVICH. "Sibirskiĭ shelkopriad". (Lesnoe khoziaĭstvo, May 1961. god 14, no.5, p.85, illus. on inside front cover.) Text in Russian. **Title tr.:** The Siberian egger.

Notes the documentary film produced by the Siberian Division of the Academy of Sciences to spread information on this main pest of the coniferous forests of Siberia, and on methods of its control. The film should be shown throughout the Ural, Siberia, and the Far East. (DLC.)

73167. KRYLOV, V. I. Tempy razmnozheniia tikhookeanskogo morzha. (Zoologicheskiĭ zhurnal, Jan. 1962. t.41, vyp.1, p.116-20, tables.) 5 refs. Text in Russian. Summary in English. **Title tr.:** Rate of reproduction in the Pacific walrus.

Reports results of inspection of 600 animals from the Chukchi and Bering Sea areas. About half of the females give birth once in three years, 43% once in four or more years, the remainder once in a year or two. (DLC.)

73168. KRYLOV, V. V. Organizatsiia i metodika provedeniia neftepoiskovykh i nefterazvedochnykh rabot na Kamchatke. (*In:* Akademiia nauk SSSR. Komissiia po problemam Severa. Syr'evye resursy . . . 1961, p.59-63.) Text in Russian. **Title tr.:** Organization and methods for conducting oil prospecting and oil exploration work in Kamchatka.

Reviews oil prospecting in Kamchatka from 1934; since 1950 prospecting and drilling have been carried on in three areas: Bogachevka, Voyampolka, and Khromovskaya. Organization and methods are described, and appraisal is given of the studied areas. Deep drillings and geophysical investigations have been insufficient. Suggestions are made for further studies. (DLC.)

73169. KRYLOVA, A. K., *and* **V. V. MENNER.** O vozraste iūktinskoĭ svity Sibirskoĭ platformy. (Leningrad. Vsesoiūznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1962. vyp.196, Paleontologicheskiĭ sbornik 3, p.89-106, plates.) 37 refs. Text in Russian. **Title**

tr.: On the age of the Yukta series of the Siberian platform.

Presents evidence that the Devonian Yukta series, distributed in the Nizhnyaya and Podkamennaya Tunguska basins, is of Givetian age. Systematic description is given of some Givetian brachiopods, one pelecypod, and one trilobite which are characteristic for the series. (DLC.)

73170. KRYLOVA, A. K. Stratigrafiia paleozoĭskikh otlozheniĭ r. Kary, Paĭ-Khoĭ. (Leningrad. Vsesoiūznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1962. vyp.196, Paleontologicheskiĭ sbornik 3, p.59-75.) 10 refs. Text in Russian. **Title tr.:** The stratigraphy of Paleozoic deposits of the Kara River, Pay-Khoy.

Reviews previous studies and describes stratigraphy of Silurian, Middle and Upper Devonian, lower and middle Carboniferous and lower Permian deposits. Distribution, composition, thickness and paleontologic data are reported. Correlation of sections of these sedimentary deposits is made. Igneous rocks also are briefly noted. (DLC.)

KRYLOVA, M. D., *see* Sudovikov, N.G., & *others*. Petrografiia. . . . 1962. No. 75977

KRYMSKIĬ, G.F., *see*

Kuz'min, A.I., & *others*. Iiūl' 1959 g. . . . 1962. No. 73250

Kuz'min, A.I., & *others*. Nekotorye rezul'taty . . . kosmicheskikh lucheĭ. 1962. No. 73251

Kuz'min, A.I., & *others*. Vspyshki kosmicheskikh lucheĭ . . . 1961. No. 73253

73171. KRYVELEV, I. A. Preodolenie religiozno-bytovykh perezhitkov u narodov SSSR. (Sovetskaia ėtnografiia, July-Aug. 1961, no.3, p.30-44.) Refs. Text in Russian. Summary in English. **Title tr.:** Eliminating the vestiges of religious folkways among the peoples of the USSR.

Differentiates between historical or cultural traditions and survivals of religious cults. Persisting superstitions are exemplified in some of the religious shamanistic customs and magic practices in northeastern Siberia and the Far East. (DLC.)

73172. KUALUT, PACOME. Hero of an Eskimo epic Ayoqe. (Eskimo, fall 1962. v.62, p.3-9, illus.)

Recounts the tale of an Eskimo from Iglulik who journeyed to an area south of Chesterfield Inlet to avenge the murder of his brother. The Eskimo informant is identified; explanatory notes and commentary are given by G.M. Rousselière. (CaMAI.)

KUCHINKA, C.L., *see* Crowe, B.W. Time lags first 32°F. & 0°F. . . 1962. No. 70857

73173. KUDERSKIĬ, L. A., *and* **V. M. ÉRASTOVA.** Materialy po pitaniiū belomorskogo siga, *Coregonus lavaretus pidschian n. pidschianoides* Pravdin. (Voprosy ikhtiologii, 1962. t.2, vyp.3, (24), p.506-510, illus., tables.) 11 refs. Text in Russian. **Title tr.:** Materials on the feeding of the White Sea whitefish *Coregonus lavaretus pidschian n. pidschianoides* Pravdin.

Reports on examinations of over 600 stomachs of this whitefish, collected during July-Oct. 1948-1950 in the White Sea. Forms making up the food in different months and localities, intensity of food intake, differences in feeding, with age and between areas, are considered. (DLC.)

73174. KUDERSKIĬ, L. A. O faune polikhet Belogo moria. (Zoologicheskiĭ zhurnal, Apr. 1962. t.41, vyp.4, p.629-31.) 7 refs. Text in Russian. Summary in English. **Title tr.:** Polychaete fauna of the White Sea.

Notes six species of these worms: their location, water temperature of the locus; earlier records, synonyms, etc. (DLC.)

73175. KUDINOVA, EKATERINA ANDREEVNA. K voprosu o drevneĭ kore vyvetrivaniia trappov v severo-vostochnoĭ chasti Sibirskoĭ platformy. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniia, 1960. vyp.3, p.18-25, table, graphs.) 11 refs. Text in Russian. **Title tr.:** On the problem of old crust-weathering of traps in the northeastern part of the Siberian platform.

Describes old physical-chemical weathering of traps from samples collected in the Daldyn region, Yakut ASSR. Four types of weathering products are distinguished, and their chemical, mineralogic and thermal analyses are reported. Kaolinite, iron hydroxide and small quantity of free alumina are found. This intensive weathering indicates that a tropical and subtropical humid climate prevailed in this region in the Mesozoic. (DLC.)

73176. KUDLO, B. P. Nekotorye dannye o vodoobmene mezhdu Barentsevym i Norvezhskim moriami. (Moskva. Gosudarstvennyĭ okeanograficheskiĭ institut. Trudy 1961. vyp.64, p.33-38, illus., table.) 3 refs. Text in Russian. **Title tr.:** Some data on water exchange between the Barents and Norwegian Seas.

Deals with the size and character of this water exchange based on direct measurement data. In profile, six currents were found running alternate directions, their quantitative aspects are explained. Findings are compared with results obtained by the dynamic method. (DLC.)

73177. KUDRIAVTSEV, G. P. Avtomatizirovannaia skipovaia pod"emnaia ustanovka. (Gornyĭ zhurnal, June 1961, no.6, p.48-50, illus.) Text in Russian. **Title tr.:** Automatic skip hoist installation.

Describes the installation for hoisting sand, developed by the All Union Research Institute of Gold and Rare Metals (NII-1, Magadan) for gold placer mining in Magadan Province. (DLC.)

73178. KUDRIAVTSEV, N. F., *and* **G. N. SERGEEV.** K metodike izmereniia techeniĭ so l'da, dreĭfuiūshchego v raĭonakh bol'shikh glubin. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik stateĭ, vyp.1, p.102-105, table.) Ref. Text in Russian. **Title tr.:** Methods of measuring currents from ice drifting in regions of great depth.

Shows the limitations of the Makarov-Nansen method used in measuring drifts, because of oceanic currents existing at great depth. Current ve-

locity at any depth level is equal to the velocity sum of the deepest current and the difference of displacement velocity of the floe with regard to the lower and the surface horizons. Certain improvements in the data processing of the Makarov-Nansen device are proposed. An average velocity and direction of the current at 750 m. depth was found to be 0.72 km./day (≈1cm/sec.), and the direction to vary within 23° angle. (CaMAI.)

73179. KUDRÎAVTSEV, N. F. K metodike opredeleniîa istinnoĭ glubiny pogruzheniîa batometrov. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p.117-22, tables.) 3 refs. Text in Russian. **Title tr.**: On the methods of determination of actual submergence depth of bathometers.

Discusses this problem and develops a mathematical method of formulating the equation of the line curvature, by which a more accurate depth of thermobathometer submergence can be evaluated. A mathematical technique is presented by which the semi-empirical coefficient of proportionality that enters the formula for the depth, Z is sought. (CaMAI.)

73180. KUDRÎAVTSEV, N. F. Metod privedeniîa izmerennykh glubin k ustanovlennomu nuliû na morîakh s prilivami po nabliûdeniîam na dvukh i bolee urovennykh postakh. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p.193-218, tables, diagrs.) Ref. Text in Russian. **Title tr.**: A method of reduction of measured depths to the established zero on seas with tides, as observed at two or more sea-level stations.

Discusses in detail the problem of correcting the measured depths of the sea for the change of its level, due to ebb and tide. The cases of simultaneously occurring tides of different height, tides of the same height occurring at different times, and tides of different heights occurring at different times are worked out mathematically, and the method of reduction of determined sea depths to the zero level is indicated in the form of $e_{max} = \frac{1}{2}A \cdot \frac{\Delta\theta}{\Delta T_1}$, where A is the tide amplitude, $\Delta\theta$ is the time difference of full tides at two stations, and ΔT_1 is the duration of the ebb at the first station or of the tide at the second station. The method was tested on the depth, tide, and ebb data obtained by the hydrographic expeditions of 1947 and 1948. The test showed the advantages of the new method over those used previously, in higher accuracy, applicability to different sea conditions, and labor saving. (CaMAI.)

73181. KUDRÎAVTSEV, N. F. Obrabotka urovennykh nabliûdeniĭ mareografami sistemy Graafena. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p.53-56.) Ref. Text in Russian. **Title tr.**: The processing of surface observations of the Graafen automatic tide-gage system.

Expands method of calculation applicable to light swells (No. 59461) to include the entire range of surface swells registered by the Graafen gage. The advantages and possible inaccuracies of 23 calculation formulas are discussed. (CaMAI.)

73182. KUDRÎAVTSEV, N. F. Termicheskaîa inertsiîa mareografov Graafena i sposob ee opredeleniîa. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961, t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p.46-52, tables.) Text in Russian. **Title tr.**: Thermal inertia of the Graafen automatic tide gage and a method of determining it.

Operating instructions for this gage recommend up to 12 hrs. interval between time of submersion and that of starting operation, to enable the instrumentation to reach its thermal operating range. A method is shown by which this waiting time may be shortened to permit the use of the gage for temporary measurements, e.g. from a ship at anchor. A Newtonian law is applied to the analysis of the thermal exchange between the two media, which in turn enables determination of the time when the temperature recorder reaches its operating range (–2 to +8°C. under arctic conditions). The gage measures sea-level fluctuations with amplitudes to eight m., hence may be switched on independently of phase as long as the amplitudes do not exceed four m. Sample calculations are given. (CaMAI.)

73183. KUDRÎAVTSEV, N. F. Voprosy povysheniîa tochnosti izmereniîa napravleniîa morskikh techeniĭ. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik statei, vyp.1, p.75-84, tables, graphs.) 2 refs. Text in Russian. **Title tr.**: The problem of increasing accuracy in measuring ocean current direction.

Discusses defects in various existing current meters. Inaccuracies could be substantially reduced by eliminating the possibility of a resonance between the free oscillation period of the magnetic pointer in the Alekseev BPV-2 self-recorder, and that of the rolling and pitching movements of the station due to sea swells. This can be done by increasing the moment of inertia of the pointer, placing it on a spherical cork-float. A table is given demonstrating a substantial improvement in performance of three automatic stations in stormy weather. (CaMAI.)

KUDRÎAVTSEV, N. F., *see also*

Gorodenskiĭ, N.B., & *others*. Issledovanie na modeli . . . 1961. No. 71780

Izvekov, M.V., & N.F.Kudrîavtsev. Kolebaniîa sistem . . . 1961. No. 72498

Peresypkin, V.I. Vychislenie ékstremal'nykh vysot prilivov . . . 1961. No. 74722

73184. KUDRÎAVTSEV, N. V. O zabolevanii molodniîaka krupnogo rogatogo skota "agylaan-yary" v IAkutskoĭ ASSR. (Yakutsk. Universitet. Uchenye zapiski, 1959, vyp.6, seriîa sel'skokhoziîaistvennykh nauk, p.25-35.) 15 refs. Text in Russian. **Title tr.**: "Agylaan-yary" disease in the young stock of dairy cattle in Yakut ASSR.

Reports 20-70% of the young stock on the collective farms lost annually from various diseases including one characterized by labored breathing, called in Yakut "agylaan-yary". Its symptoms are cited, and comparisons are made with similar diseases in other areas of the Soviet Union and

abroad. It is not infectious and affects chiefly the heart muscles; it is attributed to vitamin deficiency and poor conditions in the stables; it does not occur on the subsidiary farms at Markha and Yakutsk where fodder selection and stables are satisfactory. (DLC.)

KUDRÎAVTSEV, N. V., *see also* Nikolaevskiĭ, L.D., & N.V. Kudrîavtsev. Novye dannye o biologii . . . 1957. No. 74347

73185. KUDRÎAVTSEV, V. A. Merzlotnaîa s"emka kak osnovnoĭ vid merzlotnykh issledovaniĭ. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.1, p.3-10.) Text in Russian. **Title tr.:** Frozen-ground mapping as the basic form of frozen-ground research.

Notes construction failures in frozen ground areas, shortage of trained personnel and insufficient basic research. Emphasis must be put on small-scale surveys and microregional investigation of the distribution and occurrence of frozen ground, its composition and genesis; permafrost thickness, physical and geologic processes of the active layer. Mapping is stressed for the temperature regime, seasonal freezing and thawing, prognoses of frozen-ground conditions, etc., and the scale of such maps is discussed. A nation-wide microregional survey, analogous to the geologic, is recommended. (DLC.)

73186. KUDRÎAVTSEV, V. A., *and others.* Metodika rascheta i konstruktivnaîa skhema okhlazhdaîushchego ustroĭstva dlîa nefteproduktov, zakachivaemykh v ledogruntovye emkosti. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.1, p.307-317, table, diagrs.) 4 refs. Text in Russian. *Other authors:* V.G. Melamed *and* A.E. Gulikov. **Title tr.:** The method for the estimate, and construction plan of cooling installations for petroleum products pumped into iced-ground containers.

Discusses the method and technique of cooling petroleum products as low as −3° to −4°C. preparatory to storing them in permafrost or iced-ground cavities 10-15 m. below the surface. The cooling installation consisting of two sections is described and its structural elements estimated. The first section cools the product from positive to near 0°C. (+0.5°C.) temperature by means of ice which surrounds the pipe batteries with the product flowing through them. The second section cools light oil to −4°C. by cryohydrate mixtures. At −3°C. and below, the permafrost and ice retain mechanical strength to hold and store a large quantity of petroleum products in underground cavities. (DLC.)

73187. KUDRÎAVTSEV, V. A., *and* **V. G. MELAMED.** Novaîa formula rascheta glubiny sezonnogo promerzaniîa i ottaivaniîa gruntov v sluchae ravnykh teplofizicheskikh kharakteristik merzlogo i talogo gruntov. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.2, p.3-17, tables, diagrs.) 14 refs. Text in Russian. **Title tr.:** New formula for calculating the depth of seasonal freezing and thawing of soils when like thermophysical characteristics prevail in frozen and thawed soils.

Reviews three kinds of mathematical approach: one very complicated requires the solution of the Stefan problem and involves use of an electronic computer. Another also based on solution of the Stefan problem for certain cases, is accurate within 5-10%, but may involve errors. The third has many inadequacies. From the first two, a new formula is derived by the junior author, which is accurate and has few limitations when like thermophysical conditions prevail. (DLC.)

73188. KUDRÎAVTSEV, V. A. O godovykh kolebaniîakh temperatur v gornykh porodakh. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.1, p.26-31, diagrs.) Ref. Text in Russian. **Title tr.:** Annual variations of temperatures in rocks.

Discusses underground-rock temperatures in the Leningrad and Anadyr areas for oceanic climate, and at Salekhard, Igarka, Chita for deviations of annual variations from the values given by the attenuation formula, $A_z = A_o \exp\text{-}z\ (\pi/KT)$, where A_z is temperature amplitude at depth z, A_o the amplitude at the surface of the half-space, K is temperature conductivity coefficient of the medium and T- is the variation period. A more accurate formula, $Z_o = Z_p + (KT/\pi)^{1/2}$ ln $(t_{sr}/0.1)$, where Z_o is the depth of the annual variations of temperature, Z_p is the depth of seasonal freezing of the ground, and t_{sr} is the annual mean temperature of the air. (DLC.)

73189. KUDRÎAVTSEV, V. A., *and others.* O kartirovanii sezonnogo promerzaniîa i protaivaniîa gruntov. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.2, p.18-32, tables, graphs, fold. col. map.) 11 refs. Text in Russian. *Other authors:* K.A. Kondrat'eva and N. Kh. Vitkina. **Title tr.:** Mapping the seasonal freezing and thawing of ground.

The microregion method of mapping is explained. Basic features indicated on such maps are the stratigraphic and facies characteristics, the genesis, lithologic composition, structure and bedding of the active layer and of the underlying layers at depths of 3-5 m.; the moisture content of the ground in these layers at the time of investigation, and at the onset of freezing or thawing, and their dynamics for the year; the mean ground annual temperature at the base of the layer of annual temperature fluctuations; the amplitudes of temperature fluctuations at the soil surface under vegetation. A sample map of types of seasonally frozen soils and nomograms for determining the depths of seasonal freezing and thawing of various types of ground are included.—From CRREL. (DLC.)

73190. KUDRÎAVTSEV, V. A. Znachenie merzlotno-temperaturnoĭ zonal'nosti v obrazovanii singeneticheskikh merzlykh tolshch so sloistoĭ kriogennoĭ teksturoĭ. (Merzlotnye issledovaniîa. Sbornik statei, 1961. vyp.1, p.21-25.) 7 refs. Text in Russian. **Title tr.:** Significance of frozen-ground temperature zonality for the formation of syngenetic frozen layers with stratified cryogenic texture.

The thermophysical aspects of the freezing of the active layer from below are considered in connection with the formation of ground ice. Equations are derived for determining the annual heat exchange between the base of the active layer and the underlying permafrost. Freezing from below always occurs in presence of small temperature gradients, which promote ice formation in freezing ground due to the migration of the groundmoisture toward the front of freezing. Each 1000 kcal./sq. m. yr. of heat exchange is capable of producing 1.25 cm. of ice by freezing from below. Freezing

from below can occur when the mean annual temperature of the underlying permafrost is less than -3°C. Thus, the formation of syngenetic frozen layers with stratified cryogenic structure follows the broad classification of permafrost zones.— From CRREL. (DLC.)

KUHL, W., *see* Ewy, Z., & W. Kuhl. Wpływ oziębienia . . . 1961. No. 71323

KUHN, PETER MOUAT, 1920– *see* Bryson, R.A., & P.M. Kuhn. Regional heat budget values. 1962. No. 70421

73191. KUINDZHI, N. N. Soderzhanie askorbinovoĭ kisloty v nekotorykh vidakh ryb Obskogo basseĭna. (Voprosy pitaniĭa, 1962. t.21, no.3, p.83-84, table.) Text in Russian. **Title tr.**: Ascorbic acid content of some fish species from the Ob River basin.

Reports on vitamin C determinations of two fish consumed raw or frozen by Nenets (Samoyeds) of the Yamal Peninsula. Even with an ample fish diet, the vitamin intake was found to be insufficient. (DLC.)

73192. KUIPER, E. The water resources of the Nelson River basin. (*In:* Resources for Tomorrow Conference . . . 1961. v.1, p.337-43, map.)

Describes the river systems of this basin, which includes all tributaries to Lake Winnipeg. The water resources development and installations under construction are reviewed. On the Nelson itself which flows 400 mi. from Lake Winnipeg to Hudson Bay, there is but one developed power site. The need for water resources development on rivers of the Nelson basin in Saskatchewan and southern Manitoba is discussed in some detail. (CaONA.)

KUJALA, VILJO VILHO, 1891– , *see* Buchwald, N.F., & *others*. . . . Parasitical fungi & hosts . . . 1961. No. 70425

73193. KUKES, V. G., *and* **M. N. VLASOVA.** Soderzhanie kholesterina v syvorotke krovi i v sutochnom raſsione pishchi u korennogo naseleniĭa Kraĭnego Severa. (Voprosy pitaniĭa, 1962. t.21, no.6, p.33-36, illus., table.) 11 refs. Text in Russian. Summary in English. **Title tr.**: Cholesterol content of the serum and in the daily food ration of the natives in the far North.

Reports on a study of over a thousand inhabitants of the Okhotsk, Bering and Chukchi seacoasts. It was found that blood cholesterol levels are not directly related to the amounts consumed with the food. The blood level of these northern natives is equal to that found in residents of the central zone of Russia. (DLC.)

73194. KUKHARENKO, A. A., *and* **M. M. KLER.** K geokhimii skandiĭa v shchelochno-ul'traosnovnykh porodakh Kol'skogo poluostrova i Karelii. (Vsesoĭuznoe mineralogicheskoe obshchestvo. Zapiski 1962. ser.2, chast' 91, vyp.5, p.520-36, tables.) 23 refs. Text in Russian. **Title tr.**: Geochemistry of scandium in alkaline-ultrabasic rocks of the Kola Peninsula and Karelia.

Presents data on content and distribution laws of scandium in rocks of Afrikanda, Lesnaya Varaka, Kovdor and other massifs of Kola Peninsula, also those of the Vuori-Yarvi massif of northern Karelia. Sc is the typical element of platform complexes of these rocks. Main concentrators of Sc are monocline pyroxenes, perovskites and titanomagnetites. Connection of Sc with Mg and Fe is analyzed, and the formation of Sc is discussed. (DLC.)

73195. KUKHARENKO, A. A., *and* **E. I. DONĬSOVA.** K probleme genezisa karbonatitov. (Geologiĭa rudnykh mestorozhdeniĭ, Mar.-Apr. 1962, no.2, p.32-47, tables.) 40 refs. Text in Russian. **Title tr.**: On the problem of carbonatite genesis.

Based on the geologic, mineralogic and geochemical investigation of the carbonatites of Kola Peninsula and Karelia. Their geologic position, physical-chemical formation conditions and sources of material are analyzed. Special attention is given to the isotopic relationship of oxygen and carbon in carbonatites. Average content of Zr, Ta and Nb is indicated. A magmatic origin is confirmed. (DLC.)

73196. KUKHARENKO, A. A. Monoklinnye piroksen y shchelochno-ul'traosnovnykh porod Kol'skogo poluostrova. (Leningrad. Universitet. Uchenye zapiski 1962. no.312, ser. geologicheskikh nauk, vyp.13, Geokhimiĭa, p.139-72, tables, incl. fold., diagrs.) 13 refs. Text in Russian. **Title tr.**: Monoclinic pyroxenes in alkaline and ultrabasic rocks of the Kola Peninsula.

Outlines the paragenesis, composition, and chemical properties of the clinopyroxenes, and analyzes them as found in pyroxenites, alkaline pyroxenites, ijolite-melteigites, alkaline pegmatites, olivinites, metasomatic and other rocks; their crystals, chemical composition, optical properties, and other features are described. (DLC.)

73197. KUKHARENKO, A. A., *and* **E. A. BAGDASAROV.** Paragenezis i kristallokhimicheskie osobennosti titanovykh granatov iz shchelochnoul'traosnovnykh porod Kol'skogo poluostrova. (Leningrad. Universitet. Uchenye zapiski 1962. no. 312, ser. geologicheskikh nauk, vyp.13, Geokhimiĭa, p.115-38, illus., tables, diagrs.) 21 refs. Text in Russian. **Title tr.**: Paragenesis and crystallochemical features of titaniferous garnets from alkaline-ultrabasic rocks of the Kola Peninsula.

Describes the occurrence, composition and properties of titaniferous garnets distributed in alkaline and ultrabasic rocks in the Afrikanda, Kovdorskiy, Sallanlatva and other massifs of the peninsula. Special attention is given to the shorlomite and melanite varieties of garnet. The separation of titanium-bearing garnets in the process of alkaline rock formation is discussed. (DLC.)

73198. KUKHARENKO, A. A. Sergeĭ Mikhaĭlovich Kurbatov. (Vsesoĭuznoe mineralogicheskoe obshchestvo. Zapiski 1962. ser. 2, chast' 91, vyp.6, p.739-42, port.) Text in Russian.

Obituary of Kurbatov (1882-1962), a noted mineralogist, professor at Tomsk and Leningrad Universities, who investigated in Kola Peninsula, the Urals, Karelia, and other regions. Of his approx. eighty publications, the principal ones are listed according to year of appearance. (DLC.)

73199. KUKHARENKO, A. A., *and others*. Sul'fatmonaſsit iz karbonatitov Kol'skogo poluostrova. (Vsesoĭuznoe mineralogicheskoe obshchestvo. Zapiski 1961. ser. 2, chast' 90, vyp.4, p.373-81, illus., tables, graphs.) 20 refs. Text in Russian. *Other authors:* A.G. Bulakh *and* K.A. Baklanova. **Title tr.**: Sulfate-monazite from the carbonatites of Kola Peninsula.

Describes, in detail, mode of occurrence, physical properties, chemical composition, optical properties and other mineralogic features of sulfate-monazite from carbonatites, of the Vuori-Yarvi massif, intruded into Archean gneisses and migmatites. This Kola monazite differs from the usual, therefore is called sulfate-monazite, a new variety. Conditions of its origin are discussed; a high concentration of $[SO_4]^{2-}$ in solutions is considered the cause of occurrence. (DLC.)

KUKHARENKO, A. A., *see also* Orlova, M.P., & A.A. Kukharenko. Melility . . . 1962. No. 74539

KUKHTINSKIĬ, G. G., *see* Rozhkov, I.S., & *others.* Nekotorye osobennosti geologii . . . 1961. No. 75246

73200. KULAKOV, ÎU. N. Osnovnye rezul'taty rabot Ust'-Eniseĭskoĭ ėkspeditsii Instituta geologii Arktiki za 1960-1961 gody. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ sbornik 1962. vyp.28, p.57-61.) Text in Russian. **Title tr.:** Main results of work of the Ust'-Yenisey expedition of the Institute of Geology of the Arctic in 1960-1961.

Reports the mapping, magnetic-telluric profiling, collection of stratigraphic material, prospecting for useful minerals and other activities of this expedition which began work in 1959, cf. No. 59481. During three years, it mapped an area about 40,000 km.^{2} on a medium scale. Discovery of phosphorites, possible natural gas and copper-nickel deposits are noted, participants cited. (DGS.)

KULAKOV, ÎU. N., *see also* Sokolov, V.N., & ÎU.N. Kulakov. Ispol'zovanie geologo-geomorfologicheskogo kartirovaniîa . . . 1961. No. 75809

KULEBÎAKIN, N. M., *see* Gomon, G.O., & *others.* Svechenie almazov . . . 1962. No. 71752

73201. KULESHOV, A. A., *and* **R. S. PERMÎAKOV.** Transheĭnaîa podsechka blokov na apatitovom rudnike im. S.M. Kirova. (*In:* Akademiîa nauk SSSR. Kol'skiĭ filial, Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.16-23, illus., tables.) Text in Russian. **Title tr.:** Trench undercutting of blocks in the S.M. Kirov apatite mine.

The undercutting of blocks at this mine as a rule was done by small-hole blastings; but because of hazards and inconvenience, experiments with trench undercutting were made in 1959-60. They are described in some detail; data on labor consumption with the two methods are tabulated and discussed, and the new method found substantially to increase efficiency in mining thick ore deposits. (DLC.)

73202. KULIKOV, M. I., *and* **V. A. KRÎUK.** Ot patriarkhal'no-obshchinnogo stroîa k sotsializmu; k voprosu o pereustroĭstve sotsial'no-ėkonomicheskikh otnosheniĭ u narodnosteĭ Severo-Vostoka Sibiri. (Istoriîa SSSR, Mar.-Apr. 1962. god 6, no.2, p.42-56.) 20 refs. Text in Russian. **Title tr.:** From the patriarchal-communal stage to socialism; reorganization of the social and economic system among the peoples of northeast Siberia.

Discusses the political, administrative, economic, and social measures (some abortive) introduced by the Soviets since the 1920's, mainly among Chukchis, Eskimos, and Koryaks. Cooperatives and collective farms, supply and marketing network, development of the herding, hunting, and fishing industries are considered. Introduction of a subsidiary agricultural economy in Chukotka and Kolyma, establishment of national districts, cultural growth, etc. are dealt with. Aboriginal socio-economic patterns differ, hence the sea-mammal hunting tribes with cooperative team work and reindeer herders with nomadic feudalism have had different tribal attitudes toward collectivization, and the implications are discussed. Selected statistics for 1920-1958 are included: kolkhoz and farmstead incomes, state subsidies and appropriations, mechanized equipment and fishing vessels, etc. (DLC.)

73203. KULIKOVA, V. F. Nekotorye srednedevonskie peletsipody zapadnogo sklona Poliîarnogo Urala. (Leningrad. Vsesoîuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy, nov. ser. 1961. t.67, Materialy po geologii Urala, sbornik stateĭ, p.153-74, plates.) 24 refs. Text in Russian. **Title tr.:** Some Middle Devonian pelecypods in the western slope of the Polar Ural.

Describes systematically forms found in the Ayach-Yaga and Lek-Yelets River regions of Komi ASSR. They belong to fam. Lucinidae, Modiolopsidae, Pteriidae; four genera are represented by seven species: *Paracyclas proavia* (Goldfuss), *P. elleptica* Hall, *P. giganteus* sp. nov., *P. gibbosa* sp. nov., *Phenacocyclas? antiqua* (Goldfuss), *Modiomorpha? tschernovi* sp. nov., *Pteria (Actinopteria) boydi* (Conrad). (DLC.)

KULIKOVA, V. N., *see* Menner, V.V., & V.N. Kulikova. K voprosu . . . 1961. No. 73932

73204. KULKA, JOHANNES PETER, 1921– . Vasomotor microcirculatory insufficiency; observations on nonfreezing cold injury of the mouse ear. (Angiology, Oct. 1961. v.12, no.10, p.491-506, illus.) 9 refs.

Reports studies of mice exposed to 3°C. for 38 minutes to 14 days. Tissue necrosis was preceded by circulatory insufficiency, which developed in four stages, described in detail. Venular dilatation in the presence of arteriolar constriction led to a critical slowing of circulation; plasma leakage caused hemoconcentration and local stasis. It is suggested that similar microcirculatory disorders may take place in other inflammatory conditions. (DLC.)

KULP, JOHN LAWRENCE, 1921– , *see* Haller, J., & J.L. Kulp. Absolute age determ . . . 1962. No. 71960

73205. KUMAI, MOTOI, *and* **K. E. FRANCIS.** Electron microscope studies of snow and fog nuclei. (*In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.163-71, tables.) 4 refs.

Reports studies during 1960 at Site 2 (approx. 78°N.) on the Greenland icecap and in Upper Michigan. Relationships were established between the forms (needle, hexagonal, and dendritic) of snow crystals and the temperatures of the clouds in which they originated. Substances and sizes of snow-crystal nuclei were analyzed, also droplet size and liquid water content of ground fog at Site 2 and sea fog near Thule. The snow crystal nuclei were mostly solid mineral particles, and smaller in Greenland than in Michigan. (CaMAI.)

73206. **KUMAI, MOTOI,** *and* **K. E. FRANCIS.** Nuclei in snow and ice crystals on the Greenland ice cap under natural and artificially stimulated conditions. (Journal of the atmospheric sciences, Nov. 1962. v.19, no.6, p.474-81, illus., graphs, tables.) 17 refs.

Describes procedures and results of summer 1960 observations at about 10,000 x magnification with an electron microscope, of the nuclei of 356 snow crystals examined at Site 2, approx. 77°N. 56°W. Almost all the nuclei were found in the center of these snow crystals. Of the 104 artificially produced ice crystals only 10% had observable nuclei. Of 11 snow crystals collected from a low-level supercooled stratus cloud seeded with dry ice, five crystals had observable nuclei, six had none under the electron microscope. Natural snow crystals occurring on the Greenland Inland Ice in summer formed mainly on clay mineral particles by heterogeneous nucleation, whereas the artificial ice and snow crystals produced by dry-ice seeding may have been initiated by homogeneous nucleation. (DWB.)

73207. **KUMAI, MOTOI,** *and* **K. E. FRANCIS.** Size distribution and liquid water content of fog, northwestern Greenland. Hanover, N.H., Sept. 1962. iv, 13 p. illus., diagrs., graphs, tables. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Research report 100.) 10 refs.

Covers part of the whiteout studies in the Thule area. Specimens were collected at approx. 2-min. intervals from icecap fogs at Site 2 on the Inland Ice and from sea fogs near Thule in summer 1960. Methods of collection and analysis are described. In all, 5499 droplets were studied. In the icecap fog, they had a size range of 1-33μ radius, a mean radius of 8.6μ, a mean volume-radius of 10.4μ, and a liquid water content of 0.015 g./cm^3. The Thule sea fog had a droplet size range of 1-31μ radius, a mean radius of 9μ, etc. Volume distribution, concentration, and liquid water content of the two collections differed considerably, indicating changes in the physical properties of the fog with air mass, space, and time. Data on collection efficiency and characteristics of droplet spectra are tabulated and graphed. Arrangement of apparatus is illus; the fog impactor is diagrammed. (DGS.)

KUMAI, MOTOI, *see also* Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

73208. **KUMAR, M. ASHWINI,** *and others.* Effect of cold on the isolated rat heart. (Indian journal of physiology and pharmacology, Oct. 1959. v.3, no.4, p.235-45, illus., tables.) 27 refs. *Other authors:* R.S. Satoskar, S.B. Marathe, *and* U.K. Sheth.

With the fall of temperature, heart rate slowed progressively and PR and QT intervals became longer. Rate of coronary outflow fell correspondingly, the potassium content of the perfusate diminished while Ca or Na remained unchanged. No ventricular fibrillation occurred. (DNLM.)

73209. **KUNGURTSEV, ANDREĬ ANDREEVICH.** Proektirovanie snegozashchitnykh meropriiatiĭ na dorogakh. Moskva, Avtotransizdat, 1961. 108 p. tables, graphs, diagrs. 70 refs. Text in Russian. Title tr.: Design of snow-protective measures for roads.

Presents data on the annual volumetric variation of snow drifting on highways and railroads in different areas of the USSR including its arctic regions. Features in the distribution of drifts are analyzed and the possibility of forecasting the amount of drifting is discussed. An index is derived for use in designing snow-protective measures; its application to local conditions of relief, vegetation, climate, etc. is discussed. Criteria are established for the planning of roads and snow fences in areas of heavy drifting. The relative merits of various types of fences are evaluated. (DLC.)

73210. **KUNKLE, GEORGE R.** Multiple glaciation in the Jago River area, northeastern Alaska. Ann Arbor, 1958. 40 p. illus., maps. 11 refs. M. Sc. thesis to Univ. of Michigan.

Reports field study in an approx. 100 sq. mi. area along the Jago River, which originates in the Romanzof Mts. on the eastern part of the northern slope of the Brooks Range; observations were also made on the Okpilak River, 10 mi. to the west. The Jago is a glacial meltwater stream, flowing northward in a broad U-shaped valley, fed through tributaries from glaciers on north-facing slopes of the Romanzof Mts. Large alluvial fans were built by the tributaries into the Jago valley. None of the streams is at grade. The Pleistocene continental ice sheet did not cover this area, it underwent multiple glaciation throughout the Pleistocene as the valley glaciers advanced north to form piedmont lobes. Six advances are recognized, described, and correlated with those previously established in the central and western parts of the north slope of the Brooks Range. (CaOGB.) (photostat.).

73211. **KUNST, JAAP, 1891–** . Ethnomusicology; a study of its nature, its problems, methods and representative personalities, to which is added a bibliography. 3rd enl. ed. of *Musicologica.* The Hague, Martinus Nijhoff, 1959. 303 p. ports., illus., tables.

Methodological study of comparative musicology with a listing of over 4,500 publications and several hundred phonograph records of folk music and songs, including Eskimo (41 publications, three records), Alaskan and north Canadian Indian (12 and 3), Lappish (14 and 2), Ostyak, Vogul and Zyryan (10), and Yakut (one publication). Portraits of prominent musicologists are given; and indices of subject matter, peoples and regions, authors and collectors, periodicals and publications are appended. (DSI.)

73212. **KUNZE, ERICH, 1905–** . Aus der Gründerzeit der Fenno-Ugristic; unbekannt gebliebene Briefe von M.A. Castrén, Ahlqvist und Wiedemann. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.253-62.) Refs. Text in German. **Title tr.:** At the birth of Finno-Ugrology; unknown letters by M.A. Castrén, Ahlqvist, and Wiedemann.

Cites and discusses five letters by these famous philologists belonging to the collection of Prof. Ludwig Darmstaedter, now at the Westdeutsche Bibliothek, Marburg/Lahn, Germany. Studies in Zyryan linguistics are mentioned in most of

the letters. Pertinent data linking the letters to each writers' work phase are included. (DSI.)

73213. **KUPEROV, L. P.** Operativnyĭ vybor rabochikh chastot dal'neĭ radiosvi͡azi. (Morskoĭ transport, Nov. 1961. god 21, no.11, p.20-22, table, map.) Ref. Text in Russian. **Title tr.:** Operative selection of working frequencies for long-distance radio communications.

Explains method used at Dikson to determine optimum frequencies of communication Dikson-Moskva. A given state of the ionosphere is presumed "moving" east-west at a speed equal to that of the earth's rotation, so that by watching conditions (frequencies used) at, e.g. Petropavlovsk-on-Kamchatka, optimum frequencies at Dikson may be predicted 4-8 hours in advance. The reliability of this short-range forecast is claimed to be 80%. (DLC.)

73214. **KUPET͡SKIĬ, V. N.** O morskikh landshaftakh v Arktike. (Vsesoi͡uznoe geograficheskoe obshchestvo. Izvestiia, July-Aug. 1961. t.93, vyp.4, p.304-311.) 33 refs. Text in Russian. **Title tr.:** On marine landscapes of the Arctic.

Discusses justification for dividing the Arctic Ocean into geographic landscapes. Several are distinguished: drifting ice on the central Arctic, drifting ice of the lower latitudes of the Arctic, fast-ice landscapes, landscapes of the continental slope, and stationary polynyas. Each of these is characterized and exemplified. (DLC.)

73215. **KUPET͡SKIĬ, V. N.** Stat͡sionarnai͡a polyn'i͡a v Baffinovom zalive "Severnai͡a voda." (Moskva. Gosudarstvennyĭ okeanograficheskiĭ institut. Trudy 1962. vyp.70, p.47-60, table, maps.) 74 refs. Text in Russian. **Title tr.:** A stationary polynya in the Baffin Bay "North Water."

Reviews observations on this area in northern Baffin Bay since the 17th century, including studies by E.H. Smith (No. 16290), M.J. Dunbar (No. 21596), and others. In this area, open water is observed not only in summer but also in several months of winter. North Water is considered a typical polynya, resembling those which occur on the northern coasts of the Bering, Okhotsk, Japan Seas and elsewhere. Currents, etc. are discussed in relation to the origin of this lane of open water; variable winds however, are found to be the main factor in the presence of large polynyas. The air temperature, ice conditions, salinity, hydrobiologic conditions, mammals and birds of these areas are characterized. North Water is considered by the author to be an independent and original marine physical-geographic landscape. (DLC.)

73216. **KUPET͡SKIĬ, V. N.** Stat͡sionarnye polyn'i v Belom more. (Moskva. Gosudarstvennyĭ okeanograficheskiĭ institut. Trudy 1961. vyp.64, p.78-92, tables, map.) 50 refs. Text in Russian. **Title tr.:** Stationary polynyas in the White Sea.

Reports a study of the location and causes of the formation of stationary winter polynyas. High salinities and cooling, characteristic of these areas, produce vertical circulation, which however, does not reach the bottom. Polynyas were found to have maximal biological activity and biomass, which is manifest in the abundance of fish, birds and mammals. (DLC.)

KUPET͡SKIĬ, V. N., *see also*

Evgenov, N.I., & V.N. Kupet͡skiĭ. . . . "Taĭmyr" i "Vaĭgach"; 1910-1915 gg. 1961. No. 71315

Evgenov, N.I., & V.N. Kupet͡skiĭ. . . . "Taĭmyr" i "Vaĭgach" v 1910-1915 godakh. 1962. No. 71316

73217. **KUPREVICH, VASILIĬ FEOFILOVICH, 1897– , *and* V. G. TRANSHEL'.** Rzhavchinnye griby, vyp.1, sem. Melampsorovye. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1957. 420 p. illus., port., fold. map. (Flora sporovykh rasteniĭ SSSR, t.4. Griby, 1.) Refs. Text in Russian. In sequence to No. 42293. **Title tr.:** Rust fungi, fasc. 1, family Melampsoraceae.

Contains a comprehensive review of Russian research in this field and its various aspects (with photographs of its outstanding scientists), followed by sections on the morphology, taxonomy and biology; nomenclature; key to higher taxa; hosts; geographic distribution; economic aspects, etc. The special part (p.167-396) deals in the main with the morphology and taxonomy of 180 species of rusts. For each form, the earlier work and synonyms, morphometry and anatomy, hosts, developmental forms, distribution, etc. are dealt with. The species of each genus are described in order of their hosts; keys are supplied for all taxa. Alphabetic lists of scientific names of both rusts and hosts are appended. These rusts occur where their hosts do, in northern European and Asiatic USSR, including Novaya Zemlya and Kamchatka. (DLC.)

73218. **KUPRIÏANOV, A. B.** Nauchnoe soveshchanie po problemam akklimatizat͡sii i pitaniia naseleniia na Krai͡nem Severe. (Akademiia nauk SSSR. Izvestiia, ser. geograficheskai͡a. Mar.-Apr. 1961, no.2, p.128-30.) Text in Russian. **Title tr.:** Scientific conference on problems of acclimatization and diet of inhabitants of the far North.

Reports the scope, participating organizations, and topics discussed at this conference in Moscow Nov. 28-Dec. 1, 1960. The population in the arctic areas increased threefold between 1926 and 1959. Acclimatization, bioclimatic conditions, problems of physiology and hygiene, also potentials in agriculture, the reindeer industry, and other topics bearing upon the increased population under severe northern conditions were considered. (DLC.)

KUPRIÏANOV, A. B., *see* Agranat, G.A., & *others.* Promyshlennost' . . . 1962. No. 69511

73219. **KUPRIN, O.** Novai͡a istoriia derevni Markovo. (Ogonëk, Sept. 1962. god 40, no.37, p.17-19, illus.) Text in Russian. **Title tr.:** New history of the village of Markovo.

Describes oil discovery at Markovo (57°20′N. 107°04′E.) on the Lena River after many years prospecting: the blow-out on Mar. 18, 1962, from a 2164 m. well which reached Cambrian deposits; the jubilation of geologists and inhabitants, influx of new workers, mobilization of specialists in Baku, etc. (DLC.)

73220. **KUPRINA, N. P., *and* B. I. VTIURIN.** Stratigrafiia i kriogennye osobennosti chetvertichnykh otlozheniĭ v doline Iany. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskai͡a, May 1961, no.5, p.76-87, illus.) 19 refs. Text in Russian. **Title tr.:** The stratigraphy and cryogenic features of Quaternary deposits in the Yana valley.

Describes the distribution, possible age and types of Quaternary deposits on the four terraces of the lower Yana. Each terrace is described, as is the distribution and mode of occurrence of ice veins. A cryogenic method was tried to clarify the stratigraphy of these deposits by relating the formation of ice veins to glaciation epochs, but the results were not satisfactory. The investigations showed that a complex method should be used to establish the stratigraphy of Quaternary deposits, a combination of biostratigraphic, lithologic, geocryogenic and geomorphic methods. (DLC.)

KUPRINA, N. P., *see also*
Alekseev, M.N., & *others*. Chetvertichnye otlozheniia . . . 1961. No. 69697
Chebotareva, N.S., & *others*. Stratigrafiia . . . 1961. No. 70682

73221. KURAKIN, A. F. Perspektivy razvitiia i razmeshcheniia khimicheskoĭ promyshlennosti RSFSR. (Geografiia v shkole, Nov.-Dec. 1961. god 24, no.6, p.13-17.) Text in Russian. **Title tr.:** Outlook for the development and distribution of the chemical industry in the RSFSR.

Notes a chemical industry based on the mineral resources of Kola Peninsula, wood-processing in Arkhangel'sk Province, and production of blacks from Ukhta natural gas in Komi ASSR. (DLC.)

73222. KURASHOV, S. V., *Editor*. Kurorty SSSR. Moskva, Gos. izd-vo meditsinskoĭ lit-ry, 1962. 798 p. illus. incl. col., tables, maps. Text in Russian. **Title tr.:** Health resorts of the USSR.

Collection of some 160 articles on spas and open-air resorts, mineral spring areas, sanatoria and rest homes arranged by province or autonomous republic. Information is given on location, climate, therapeutic value and (as pertinent) chemical analysis of bath and drinking waters, medical facilities, capacity, etc. In the North, sanatoria for TB predominate; a few specialize in nervous and gastric disorders; two (in Murmansk and Tyumen Provinces) are for polio. An alphabetical listing of the health institutions and a bibliographical index of approx. 300 publications are included. Nine papers deal specifically with northern Areas.

Arkhangel'sk Province, by A.P. Speranskiĭ, p.103-106.
Kamchatka, by L.A. Rutenberg, p.170-73.
Karelian ASSR, by S.A. Vishnevskiĭ, p.173-75.
Komi ASSR, by A.P. Speranskiĭ, p.178-80.
Krasnoyarskiy Kray, by S. IA. Slutskiĭ, p.215-20.
Magadan Province, by L.A. Rutenberg, p.244-46.
Murmansk Province, by A.S. Vol'pe, p.264-65.
Tyumen Province, by V.V. Poltoranov *and* S. IA. Slutskiĭ, p.378-80.
Yakut ASSR, by L.A. Rutenberg *and* S. IA. Slutskiĭ, p.407-410. (DLC.)

73223. KURDIUKOV, K. V. Pod deĭstviem rechnogo l'da. (Priroda, Aug. 1961, no.8, p.95-98, illus., diagrs.) Text in Russian. **Title tr.:** Under the action of river ice.

Describes some relief features caused by bottom-ice and surface-ice as observed in the Yenisey and tributary valleys. Flat accumulation boulders and alluvial bridges deposited above the low-water level mainly by bottom ice, bars of coarse gravel and boulders, beach accumulation ramparts, barchan-like accumulation of boulders and other features are delineated and illus., noting the ice action involved. (DLC.)

KURENKOV, I. I., *see* Egorova, T.V., & *others*. Prichiny . . . 1961. No. 71211

73224. KURENTSOV, ALEKSEĬ IVANOVICH, 1896– . Dal'nevostochnyĭ filial Sibirskogo otdeleniia Akademii nauk SSSR. (Akademiia nauk SSSR. Izvestiia, ser. geograficheskaia, Nov.-Dec. 1961, no.6, p.129.) Text in Russian. **Title tr.:** The Far-Eastern Branch of the Siberian Division of the Academy of Sciences, USSR.

Reports geobotanical and zoogeographical mapping of areas from Korea north to Provideniya Bay. A monograph on Kamchatka is in preparation. Soil-geographic investigations, problems of agriculture and forest economy are briefly noted. (DLC.)

KURENTSOV, ALEKSEĬ IVANOVICH, 1896– , *see also* Akademiia nauk SSSR. *Institut geografii*. Dal'niĭ Vostok . . . 1961. No. 69546

73225. KURILIUK, A. D. K voprosu o doĭke oleneĭ v usloviiakh severo-vostoka i iugo-vostoka IAkutii. (Yakutsk. Universitet. Uchenye zapiski, 1959. vyp.6, seriia sel'skokhoziaĭstvennykh nauk, p.37-40, illus., tables.) 6 refs. Text in Russian. **Title tr.:** Milking reindeer under the conditions of northeastern and southeastern Yakutia.

Reports reindeer milk content as averaging 35.7% solids, 10.9% albumen, 1.48% ash, and 19.7% fat, far superior in nutrients to cow's milk which averages respectively: 12.5%, 3.7%, 0.84%, and 4.5%. This milk is an indispensable article of diet in reindeer-raising areas. Milking methods as observed on the Pobeda collective farm in 1954 and 1955 are briefly described; the yield was small, ranging 110-136 milliliter usually, with a maximum of 405 ml., though the fat content was high 19.2-22.8%. (DLC.)

73226. KURILOVA, L. M. Reflektornye izmeneniia temperaturnoĭ chuvstvitel'nosti cheloveka. (Fiziologicheskiĭ zhurnal SSSR, Aug. 1961. t.47, no.8, p.965-70, illus.) 22 refs. Text in Russian. **Title tr.:** Reflectory changes in temperature sensitivity of man:

Study of influence of central nervous reflexes upon the activity of skin thermoreceptors. It was found that the number of functional cold or warm receptor points changes under the influence of cold (0°C.) or heat. Such changes were also elicited by light stimulating the eyes. (DLC.)

73227. KURNOSOV, E. T. Bor'ba s lesnymi pozharami boevaia zadacha. (Lesnoe khoziaĭstvo, Apr. 1961. god 14, no.14, p.1-5.) Text in Russian. **Title tr.:** Control of forest fires is an urgent task.

Damage from forest fires throughout the Soviet Union, including northern areas is stated and causes analyzed: logging waste, sparks from locomotives, burning of grass (in Yakutia), etc. Various great fires are cited: one devastating 40-50 thousand hectares in Yakutia, another which lasted 34 days in Komi ASSR. A network of fire stations should be set up. Uses of aircraft are stressed: a patrol maintained over 550 million hectares of forest, spotted 14,500 fires in 1960. (DLC.)

73228. KUROIWA, DAISUKE. A study of ice sintering. Hanover, N.H., Feb. 1962. iv, 8 p. illus.,

graphs, diagrs. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Research report 86.) 5 refs.

The process of sintering of small ice spheres was examined at various temperatures and in different environments by microscopic observation of thin sections. Inference as to the sintering mechanism was drawn by employing the method used in powder metallurgy. In air saturated with respect to ice, the sintering of an ice sphere having $R<100\mu$ appears mainly due to volume diffusion. Sintering was also observed in a kerosene environment where the vapor phase was completely excluded. Further evidence of material flow due to solid diffusion was obtained from photo-micrographs of thin sections of ice bands. Regelation, ice adhesion, and ice banding of snow may all be reasonably explained in terms of sintering.—From author's summary. (CaMAI.)

KUROIWA, DAISUKE, *see also* Bader, H., & D. Kuroiwa. Physics mechanics snow . . . 1962. No. 69955

73229. KURPITA, P. N. Éffektivnaîa toploizoliîâsiîa kak pokazatel' teplozashchitnoĭ sposobnosti odezhdy. (Gigiena i sanitariîa, Feb. 1961, god 26, no.2, p.58-60, tables.) 4 refs. Text in Russian. **Title tr.:** Effective thermal insulation as index of the protective property of clothing.

A theoretical analysis of arctic clothing combinations, with protective quality evaluated against the weight of clothing. Weight combined with the isolation index is claimed to offer a proper approach to design of arctic outfits. (DLC.)

73230. KURSH, HARRY. This is Alaska. Englewood Cliffs, N.J., Prentice-Hall, 1961. 286 p. plates, map. Refs.

Presents factual information on climate, regions, people, transportation, living costs and standards, employment, housing, public health, education, land acquisition, homestead regulations. Agriculture, natural resources, industries, defense, hunting and fishing, statehood, cities, etc. are also dealt with. Appended are lists of schools, hospitals, chambers of commerce, newspapers, radio and television stations, commercial aircraft operators, wages in Anchorage and Fairbanks, and sources of information on Alaska. (DLC.)

73231. KURZENKOV, SERGEĬ GRIGOR'EVICH. Lyzhnyĭ marafon. (Fizkul'tura i sport, Feb. 1961. god 31, no.2, p.36-38, illus.) Text in Russian. **Title tr.:** Ski marathon.

Recounts experience in World War II when shot down on the Barents Sea coast. (DLC.)

73232. KUSAKIN, OLEG GRIGOR'EVICH, 1930–. Novyĭ vid litoral'nogo raka, Isopoda, Sphaeromidae, iz dal'nevostochnykh morei SSSR. (Akademiîa nauk SSSR. Zoologicheskiĭ institut. Issledovaniîa dal'nevostochnykh morei SSSR, 1962. vyp.8, p.238-42, illus.) 6 refs. Text in Russian. **Title tr.:** A new species of littoral crustacean, Isopoda, Sphaeromidae, from the Far-Eastern seas of the USSR.

Describes: Dynamenella fraudatrix Kussakin, sp. n., males and females, hitherto mistaken for *D. glabra* Rich., an American form. It is common in the intertidal zone of this region, including the Okhotsk Sea. (DLC.)

73233. KUSHNAREV, V. Reĭs cherez Sibir' pervoĭ Kamchatskoĭ ékspeditsii; po neopublikovannym materialam. (Sibirskie ogni, Sept. 1962. god 41, no.9, p.126-33.) 9 refs. Text in Russian. **Title tr.:** The First Kamchatka Expedition's route across Siberia; from unpublished materials.

Discusses recently discovered documents, especially one written by Bering in Ilimsk, Nov. 1725. It includes the planned land route from the Kolyma estuary to Anadyr. As no alternative sea route is mentioned here or elsewhere, Bering is considered unaware of Dezhnev's discovery of the strait between Chukotka and Alaska. Kushnarev takes issue with V.I. Grekov, whose contrary view is based on a misquotation of Bering by A. Polonskiĭ in 1850. The original text of the misquoted passage is cited. (DLC.)

73234. KUSHNAREVA, T. I. Litologicheskaîa kharakteristika i usloviîa formirovaniîa nizhnefamenskikh otlozheniĭ Timano-Pechorskoĭ oblasti. (Izvestiîa vysshikh uchebnykh zavedeniĭ. Geologiîa i razvedka, July 1961, no.7, p.42-55, illus., map.) 16 refs. Text in Russian. **Title tr.:** Lithologic characteristics and formation conditions of the lower Famennian deposits of the Timan-Pechora province.

Describes Izhma layers of Upper Devonian deposits. Four types of sections are recognized. Detritus, alga, oolite, dolomite and other limestones are described. Four zones (from shallow waters to deep sea) of sedimentary facies are distinguished and mapped. (DLC.)

73235. KUSHNAREVA, T. I. Verkhnefamenskie otlozheniîa Timano-Pechorskoĭ oblasti. (Izvestiîa vysshikh uchebnykh zavedeniĭ. Geologiîa i razvedka, Jan. 1962. god 5, no.1, p.38-47, map, cross-sections.) 9 refs. Text in Russian. **Title tr.:** Upper Famennian deposits of the Timan-Pechora province.

Reports a geologic study of these Upper Devonian deposits from various drillings; their thickness, composition and textural features are analyzed. They consist of limestones, dolomites, marls and other rocks. The lithology and facies are described and summarized in a map. Three zones of facies are distinguished and the paleogeography and sedimentation conditions characterized for each. (DLC.)

73236. KUSHNER (KNYSHEV), P. I., *and* **P. E. TERLETSKIĬ.** Karta narodov SSSR; uchebnaîa dliîa srednei shkoly. Moskva, Glavnoe upravlenie geodezii i kartografii MVD SSSR, 1953. Text in Russian. **Title tr.:** Map of the peoples of the USSR; for secondary schools. Map approx. 44x70 in. in colors, at scale 1:5,000,000, as described in No. 52581.

Territorial distribution or area of nomadism, population density and towns of over 10,000 inhabitants are indicated. The Lapps, Zyryans, and Samoyeds of the European part and twenty-two northern peoples of the Asiatic part of the USSR are included. Polar sea boundaries are shown for the Barents and Chukchi Seas. (Cal U.)

73237. KUSHNEV, A. P. Proektirovanie zdaniĭ dliîa raĭonov Krainego Severa. Leningrad-Moskva, Gos. izd-vo lit-ry po stroitel'stvu, arkhitekture i stroitel'nym materialam, 1961. 195 p. illus., tables, diagrs., map. Text in Russian. **Title tr.:** Building design for regions in the far North.

Reviews twenty years' design and construction experience in the Noril'sk mining region. Considerations involved in the planning of buildings and settlements due to frozen ground, climate and local geographic conditions are discussed generally. Specific recommendations are made for the erection of buildings on rock foundations, on taliks, and on disturbed and undisturbed permafrost. Factors involved in the choice of building material for foundations, walls, ceilings, and roofs are discussed, technical specifications are stated, and information is given on cost of materials. Considerable savings can be effected by using aluminum alloy sheets for roofing in place of reinforced concrete panels. Stone, concrete, reinforced concrete, and metal structures are treated in turn. Drawings of the buildings and structures are provided. Practical suggestions are offered to avoid errors.— From CRREL. (DLC.)

73238. KUSTOV, PAVEL. Po Belomor'iu; putevye zapiski. (Neva, 1961, no.3, p.154-61.) Text in Russian. **Title tr.:** In the White Sea region; travel notes.

Recounts experience of a trip across the Belomorsk District in Northern Karelia and the Onega District of Arkhangel'sk Province. The settlements of Belomorsk, Sumskiy Posad on the Suma River, and Nyukhcha with Belomor, the largest fishing kolkhoz of northern Karelia, are described. The history and current development of the town of Onega, its lumber industry, shipping nearby, settlements, and Kiy Island with its 17th century monastery and modern rest home are sketched. (DLC.)

73239. KUSUNOKI, KOU, *and others.* Oceanographic observations at Fletcher's Ice Island (T-3) in the Arctic Ocean in 1959-1960. Montreal, Mar. 1962. viii, 110 p. maps, graphs, tables. (Arctic Institute of North America. Research paper no. 22.) 15 refs. *Also issued as:* U.S. Air Force. Cambridge Research Laboratories, Contract AF 19(604)-8343, Scientific Report no.4. *Other authors:* J. Muguruma, *and* K. Higuchi.

Reports work continued from the IGY. Results of subsurface observations at 35 oceanographic stations and of 183 bathythermograms are given; facilities, instrumentation and methods are described; analysis of temperature, salinity, and chemical data revealed five major water masses in the southern Beaufort Sea, viz: arctic surface, upper intermediate, lower intermediate, Atlantic, and deep shelf waters. Each is characterized and its seasonal changes are described. T-3 drifted at a rate of 1.6 mi./day from Apr. 1959 through Apr. 1960 in the clockwise circulation of the Beaufort eddy. (DGS.)

73240. KUTEĬNIKOV, E. S., *and* **L. M. NATAPOV.** Novye dannye o tektonike severo-vostochnoĭ okrainy Sibirskoĭ platformy. (Moskovskoe obshchestvo ispytateleĭ prirody. Biūlleten' 1961. n. ser., t.66, otdel geologicheskiĭ, t.36, vyp.6, p.96-97.) Text in Russian. **Title tr.:** New data on the tectonics of the northeastern margin of the Siberian platform.

Reports a geologic survey of the Olenek and Kuoyka-Daldyn uplifts, separated by the Kyuyutingdinskiy downwarp. Structure and history of this region is briefly summarized. (DLC.)

KUTEĬNIKOV, E. S., *see also*
Biterman, I.M., *& others.* Nizhnekamennougol'nye otlozheniia . . . 1961. No. 70224
Biterman, I.M., *& others.* Novye dannye . . . 1962. No. 70225

73241. KUTSCHALE, HENRY. Long-range sound transmission in the Arctic Ocean. (Journal of geophysical research, July 1961. v.66, no.7, p.2189-98, table, graphs, diagrs., map.) 15 refs.

Presents results of a series of experiments conducted during July-Aug. 1959 between drifting stations B(T-3) and C to study Sofar sound propagation. Strong hydroacoustic signals from underwater explosions as small as two pounds of TNT were detected at distances to 1150 km. The character of the Sofar signals, which differed markedly from that typical of nonpolar oceans, may be explained by normal-mode wave propagation in a channel bounded by the surface and by the zone of increasing velocity in the upper several hundred meters of water. Irregularities in the ice boundaries apparently strongly attenuate the HF waves but have negligible effect on the amplitudes of LF waves. At least two normal modes were observed; in each, the waves have nearly sinusoidal appearance with periods decreasing from 120 to 30 msec. in the first, and 70-40 msec. in the second mode. Good quantitative fit between experimental data and theoretical dispersion curves are obtained.— From author's abstract. (DLC.)

KUTSCHALE, HENRY, *see also,* Hunkins, K.L., *& others.* Geophys. studies Chukchi cap. 1962. No. 72267

73242. KUUSELA, KULLERVO. Pohjois-Suomen metsäteollisuuden laajenemisen edellytykset. (Lapin Tutkimusseura. Vuosikirja, 1961. v.2, p. 58-73.) Text in Finnish. Summary in English. **Title tr.:** Conditions for expanding the wood industry in North Finland.

Advocates establishment of local industries in this area to make use of the small-size and low-quality inland timber, now considered waste. About 250,000 cu. m. over-mature, partly decayed spruce and 500,000 cu. m. small-size pine, spruce, and birch are presently unexploitable; an additional 1.2 million cu. m. must be considered waste wood under present market conditions. (SPRI.)

73243. KUVAEV, V. B. K vydeleniiu poĭasa kholodnykh kamennykh pustyn' v gorakh severa Evrazii. (Botanicheskiĭ zhurnal, Mar. 1961. t.46, no.3, p. 337-47, illus., tables.) Approx. 100 refs. Text in Russian. Summary in English. **Title tr.:** Separating a belt of cold stony deserts in the mountains of the Eurasian North.

Discusses earlier work and views supporting or opposing the concept of a separate belt of this kind, its lack of physical and chemical weathering; general vegetation elements of these stony deserts. Species common in this belt of the Khibiny and the Polar Ural are stated, noting the scarcity of vascular forms, preponderance of arctic elements among them, their biological and developmental adaptation to the extreme conditions. Eight plant communities are distinguished. (DLC.)

73244. KUYT, E. Movements of young wolves in the Northwest Territories of Canada. (Journal of mammalogy, May 1962. v.43, no.2, p.270-71, tables.)

Presents size and weight data of a wolf litter

of three, tagged in July and trapped in February, some 185 air miles WSW of the den. The direction of their migration supports the "wolves follow caribou" thesis. (DLC.)

73245. KUZAKOVA, E. Shkoly Severa. (Narodnoe obrazovanie, Mar. 1962, no.3, p.20-21.) Text in Russian. **Title tr.:** Schools of the North.

Describes the elementary and secondary day- and boarding-schools of the Nenets National District. The organization, scholastic and shop-work programs, etc. of the Nar'yan Mar and kolkhoz schools are critically discussed. Some elementary schools in exclusively Nenets-speaking (Samoyed) settlements are experimenting successfully with the vernacular as sole medium of instruction. (DLC.)

73246. KUZAKOVA, E. Shkoly v tundre. (Narodnoe obrazovanie, Oct. 1962, no.10, p.25-26.) Text in Russian. **Title tr.:** Schools in the tundra.

Describes current status in the Yamal-Nenets National District: 60 elementary, secondary, vocational, etc. schools, 2,236 Nenets-Samoyeds among the students; fishing crafts, hunting, reindeer-raising, also fur-garment sewing, net weaving, etc. in the teaching program. Boarding school construction is increasing on local collective farms. (DLC.)

73247. KUZIN, I. L. O roli dvizheniĭ zemnoĭ kory i kolebaniĭ urovnîa okeana v formirovanii rel'efa severa Zapadno-Sibirskoĭ nizmennosti. (Leningrad. Vsesoîuznyĭ neftîanoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp.186, Geologicheskiĭ sbornik 6, p.203-211, map, diagr.) 9 refs. Text in Russian. **Title tr.:** On the role of earth crustal movements and ocean level fluctuations in relief formation in the north of the West Siberian plain.

Reviews crustal movements, change of ocean level, tectonic disturbances, and other possible factors in forming relief in this area, especially the Ob-Pur interfluve. Continental glaciations are not indicated and are considered unlikely to have had any part in forming relief. Fluctuations of the ocean level are thought to be the main factor; their amplitude and causes are discussed. Local tectonic movements and development of the river net are briefly outlined. (DLC.)

73248. KUZIN, I. L., *and others.* Osnovnye cherty paleogeografii chetvertichnogo perioda na territorii Zapadno-Sibirskoĭ nizmennosti v svîazi s voprosom ob ee oledeneniîakh. (*In:* Leningrad. Vsesoîuznyĭ n.-i. geologicheskiĭ institut. Trudy 1961, t.64, Problemy chetvertichnogo . . ., p.61-70, table, profile, fold. map.) Text in Russian. *Other authors:* I.V. Reĭnin *and* N.G. Chochia. **Title tr.:** The main features of Quaternary paleogeography in the West Siberian plain territory in connection with the problem of its glaciations.

Reports a study of Quaternary deposits in the North between the Ob and the Yenisey. No traces of continental glaciation were identified. In the formation of the Quaternary deposits, the main factor was the polar basin which covered the area. These deposits are up to 300 m. thick and of marine origin. A stratigraphic core of Pleistocene deposits is presented and its lithologic and paleontologic description given. A peleogeographic map of the area is included. Evidences are summarized and continental glaciations in this region resolutely rejected. (DLC.)

KUZIN, I. L., *see also* Chochia, N.G., *& others.* Muzhinskiĭ Ural . . . 1961. No. 70733

73249. KUZ'KOKOVA, N. N. Sopostavlenie stratigraficheskikh skhem nizhneĭ permi Pechorskogo ugol'nogo basseĭna, Srednei i Verkhneĭ Pechory, Kolvo-Visherskogo kraîa i Timana. (Akademiîa nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp.2, Materialy po geologii Komi ASSR, p.122-31, fold. table.) 30 refs. Text in Russian. **Title tr.:** Correlation of stratigraphic schemes of the Lower Permian of the Pechora coal basin; the upper and middle Pechora, the Kolva-Vishera region and Timan.

Presents a correlation based on the bryozoan, foraminifer, and brachiopod fauna, and on the spores and pollen. The stratigraphic divisions worked out by others are compared. Sakmarian, Artinskian and Kungurian stages are identified and divided into substages and series; sections of each time-rock unit are described. (DLC.)

73250. KUZ'MIN, A. I., *and others.* Iîul' 1959 g. po materialam kompleksnykh geofizicheskikh nabliîudeniĭ v îAkutske. (Akademiîa nauk SSSR. îAkutskiĭ filial. Trudy, ser. fizicheskaîa, 1962. vyp.4, Variatsii intensivnosti kosmicheskikh luchei, p.142-56, tables, fold. graph.) 15 refs. Text in Russian. *Other authors:* G.V. Shafer, îU.G. Shafer, D.D. Krasil'nikov, G.F. Krymskiĭ, A.P. Mamrukov, N.S. Smirnov, *and* V.I. îArin. **Title tr.:** July 1959 according to the data of complex geophysical observations at Yakutsk. Also reported in English, cf. No. 66040.

Presents a detailed report of the Yakutsk Laboratory of Physical Problems on the variations in geomagnetic components, in the state of the ionosphere, in auroras, in the intensity of cosmic ray components, and the aerological variations. The data refer to the periods of the three sudden-commencement magnetic storms of July 11-12, 15-16, and 17-19, and the two magnetic disturbances on July 4-5, and 24-27, 1959. The analysis aims at a solution of the sun-earth physical interrelation and interprets the observed phenomena according to two different models of solar corpuscular streams: the magnetic bag model, and the model of a homogeneous corpuscular stream. Neither model explains completely the observed phenomena, and only a tentative interpretation of them can be given. About 24 hours in advance of SC magnetic storms, a complete absorption of radio waves was observed in the lower layers of the ionosphere. This is attributed to the ultraviolet radiation reaching the ionosphere from the solar flares. (DLC.)

73251. KUZ'MIN, A. I., *and others.* Nekotorye rezul'taty issledovaniĭ variatsiĭ kosmicheskikh luchei. (Akademiîa nauk SSSR. Izvestiîa, ser. fizicheskaîa, 1962. t.26, no.6, p.808-817, diagrs.) 8 refs. Text in Russian. *Other authors:* G.F. Krymskiĭ, G.V. Skripin, N.P. Chirkov, G.V. Shafer,

and IU.G. Shafer. **Title tr.:** Some results of investigations of cosmic ray variations.

Reviews studies at the Yakutsk Laboratory of Physical Problems in 1958-1960. The meteorological effects of cosmic ray intensity, their diurnal variations, cosmic ray flashes and effects during the periods of magnetic storms, and secular variations in cosmic ray intensity are surveyed. The existing schemes of modulation of galactic particles by the solar corpuscular formation are considered unsatisfactory. Further study is recommended of the relationship between the variation of cosmic rays, and the geophysical and heliophysical phenomena. (DLC.)

73252. KUZ'MIN, A. I. Rol' verkhnikh sloev atmosfery v malykh effektakh zhestkoĭ komponenty kosmicheskikh luchei vo vremia khromosfernykh solnechnykh vspyshek. (Akademiia nauk SSSR. IAkutskiĭ filial. Trudy, ser. fizicheskaia, 1962. vyp.4, Variatsii intensivnosti kosmicheskikh luchei, p.61-65, graphs.) 11 refs. Text in Russian. **Title tr.:** The role of the upper layers of atmosphere in the small effects of the hard component of cosmic rays during solar chromospheric flares.

Evaluates the behavior of the upper atmospheric layers, effected by small solar chromospheric flares, as observed from the records of variations in energy characteristics of the hard component of cosmic rays. The observations were carried out from 1957 at the Yakutsk Laboratory of Physical Problems in three underground layers, corresponding to 7, 20, and 60 m. of water equivalent. It was found that the maximum mean variations of ozonosphere temperature during small solar flares of 1957-1959 did not exceed 5°, and no noticeable variations of cosmic ray intensity at the surface of the earth were detected. (DLC.)

73253. KUZ'MIN, A. I., *and others.* Vspyshki kosmicheskikh luchei 12-15 noiabria 1960 g. (Geomagnetizm i aeronomiia, 1961. t.1, no.4, p.510-12, tables, graphs.) 13 refs. Text in Russian. *Other authors:* G.V. Shafer, G.F. Krymskiĭ, *and* IU.G. Shafer. **Title tr.:** Cosmic ray flares of November 12-15, 1960.

Presents basic characteristics of three flares, and analyzes cosmic ray data at 14 world stations, including Resolute Bay, Churchill, Bukhta Tiksi, Murmansk, Deep River, Sulphur, and Yakutsk, to show that the energy spectrum of the flares could be represented by a power series with 3-5 index. The observed phenomena are interpreted as effects of solar corpuscular streams wtih frozen-in magnetic field, whose line of forces are closed on the sun. The role of cosmic rays in ejection of corpuscular streams from the sun, the mechanism of acceleration of cosmic rays on the sun during chromospheric flares, and the considerable part that the sun's magnetic fields play in production of disturbed diurnal variations in the earth's magnetic field are discussed. (DLC.)

73254. KUZ'MIN, M. Kamchatskie kontrolery. (Okhrana truda i sotsial'noe strakhovanie, Sept. 1962. god 5, no.9, p.28.) Text in Russian. **Title tr.:** Kamchatkan inspectors.

Notes enforcement of more stringent safety-control measures at the Kozyrevsk lumbering enterprise of the Kamchatles trust. Accidents and injuries have decreased six-fold in the last five years. (DLC.)

73255. KUZ'MINA, ANGELINA IVANOVNA, 1922– . Fitoplankton Kuril'skikh prolivov kak pokazatel' razlichnykh vodnykh mass. (Akademiia nauk SSSR. Zoologicheskiĭ institut. Issledovaniia dal'nevostochnykh morei SSSR, 1962. vyp.8, p.6-90, illus., tables, graphs, maps.) Approx. 100 refs. Text in Russian. **Title tr.:** Phytoplankton of the Kuril narrows as indicator of different water masses.

Reports a study of the quality, quantity and distribution of the spring-fall plankton as indicators of the water exchange between the Okhotsk Sea and the Pacific. Earlier work is reviewed, material, and methods are outlined, and the individual forms are described in taxonomic order with notes on location, depth and distribution. The phytoplankton of the different channels is then discussed in detail, its horizontal and vertical distribution, and phytogeographic aspects. The nature and origin of the different waters, as indicated by their phytoplankton are analyzed in the final section. (DLC.)

73256. KUZ'MINA, ANGELINA IVANOVNA, 1922– . Kolichestvennoe razvitie i raspredelenie fitoplanktona v severnoĭ chasti Grenlandskogo moria. (Moskva. Vsesoiuznyi nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaistva i okeanografii. Trudy 1962, t.46, p.287-96, table, maps.) 12 refs. Text in Russian. **Title tr.:** Quantitative development and distribution of the phytoplankton in the northern Greenland Sea.

Reports on material collected by the *Ob'* in Aug.-Sept. 1956 between Spitsbergen and Greenland at latitudes 78°-82°56′N. The rather complex distribution of the phytoplankton consistently showed a sharp quantitative drop at 50 m. The plankton in the northern part of the sea was in the spring stage of development, while that on the coast and farther south was in the summer stage. (DLC.)

KUZ'MINA, I. E., *see* Vereshchagin, N.K., & I.E. Kuz'mina. Raskopki . . . 1962. No. 76372

73257. KUZNETSOV, A. Bol'shaia literatura malykh narodov. (Sibirskie ogni, Oct. 1962. god 41, no.10, p.184-86.) Text in Russian. **Title tr.:** Great literature of small peoples.

Describes encounter with a Ket (Yeniseian) girl, Ol'ga Korotkikh, teacher in the elementary-school at Chernyy Ostrov, Podkamennaya Tunguska mouth; she is about to enter the Faculty of the Peoples of the North, Leningrad. The literature of northern minorities is discussed, especially a recently published collection of prose and poetry by writers of 14 northern aboriginal groups. A summary of the novel *Poslednaia okhota* (Last hunt) by Grigoriĭ Khodzhers, a Gold, is included. (DLC.)

KUZNETSOV, A., *see also* Kornev, B., & A. Kuznetsov. . . . neftegazonosnaia provintsiia. 1961. No. 72980

73258. KUZNETSOV, A. S. Naledi i polyn'i na Severo-Vostoke SSSR. (USSR. Glavnoe upravlenie gidrometeorologicheskoĭ sluzhby. Gidrologicheskiĭ institut. Sbornik rabot po gidrologii, 1961, no.2, p.72-86, illus., tables, fold. map.) 11 refs. Text

in Russian. **Title tr.**: Naleds and polynyas in northeastern USSR.

Reports on the aerial reconnaissance of the winter regime of rivers carried out by the Kolyma hydrometeorological service since 1955 from the Indigirka River eastward including Kolyma, Omolon, Bol'shoy Anyuy, Anadyr, and others. Distribution of naleds and polynyas (open spots in the stream surrounded by river ice) was studied and maps compiled at 1:2,000,000 and 1:5,000,000; a small-scale copy is presented. The naleds are mostly distributed in the mountain streams, polynyas in those of the foothills and plains. Their period of activity, forms and measurements, and other features are reported. Chemical composition of the polynya surface water and the water temperature are analyzed. Origin of naleds and polynyas and their genetic interrelationship are discussed. Temperature regime and the river water volume in the winter season are considered the main factors in naled and polynya formation. (DLC.)

73259. KUZNETSOV, ALEKSEĬ PAVLOVICH, 1928– . Nekotorye zakonomernosti struktury i raspredeleniia morskikh biotsenozov na primere biotsenozov raĭona Vostochnoĭ Kamchatki i Severnykh Kuril'skikh ostrovov. (Voprosy ėkologii, 1962. t.4, p.41-42.) Text in Russian. **Title tr.**: Some regularities in the structure and distribution of marine biocenoses, as exemplified in the biocenoses of eastern Kamchatka and the northern Kuril Islands.

Discusses vertical changes in composition of the benthos; environment, substrate and depth as affecting the biocenotic character; dominant leading forms; biocenotic zones (4) of eastern Kamchatka and the northern Kuril. (DLC.)

KUZNETSOV, F. V., *see* Kovalenko, E.V., & F.V. Kuznetsov. Sistemy razrabotki . . . 1962. No. 73041

73260. KUZNETSOV, I. V., *Editor*. Liudi russkoĭ nauki; ocherki o vydaiushchikhsia deiateliakh estestvoznaniia i tekhniki: geologiia, geografiia. Moskva, Gos. izd-vo fiziko-matematicheskoĭ lit-ry, 1962. 580 p. illus., maps incl. fold. Refs. **Title tr.**: Men of Russian science; accounts of outstanding individuals active in the natural sciences and technology: geology, geography.

Presents biographies of 24 geologists and 32 geographers who made great contributions to their respective fields. A score of these scientists and explorers made major discoveries or carried out substantial research in the arctic regions, and their biographies are abstracted in this Bibliography under the authors' names, viz:

V.A. OBRUCHEV on I.D. Cherskiĭ,
D.V. NALIVKIN on F.N. Chernyshev,
V.V. OBRUCHEV on V.A. Obruchev,
V.A. VARSANOF'EVA on A.E. Fersman,
S.I. NABOKO on A.N. Zavaritskiĭ,
A.G. BETEKHTIN on S.S. Smirnov,
E.V. PAVLOVSKIĬ on N.S. Shatskiĭ,
A.I. ALEKSEEV on S.I. Dezhnev,
A.I. ALEKSEEV on V. Bering,
D.M. LEBEDEV on A.I. Chirikov,
A.I. ANDREEV on S.P. Krasheninnikov,
N.N. ZUBOV on S.I. Chelīuskin,
S.L. LUTSKIĬ on D.IA., and Kh.P. Laptev,
N.G. FRADKIN on I.I. Lepekhin,
V.A. DIVIN on V.M. Golovnin,
A.D. DOBROVOL'SKIĬ on O.E. Kotsebu,
B.P. ORLOV on IU.M. Shokal'skiĭ,
S.T. BELOZOROV on G.I. Tanfil'ev,
N.N. ZUBOV on V.A. Rusanov,
M.G. KADEK on G.IA. Sedov.

(DLC.)

73261. KUZNETSOV, IURIĬ ALEKSEEVICH, 1903– , *and* **IU. A. KOSYGIN.** Osnovnye cherty tektoniki i magmatizma Sibiri. (Geologiia i geofizika, 1962, no.5, p.3-13, text map.) Text in Russian. Summary in English. **Title tr.**: Main features of the tectonics and magmatism of Siberia.

Attempt is made to distinguish the main types of large tectonic structures of the whole of Siberia, according to the time of their initial stages. Such classification is considered more advanced than that based on time of completion of folding. Precambrian, Paleozoic and Mesozoic-Cenozoic structures, including the Siberian platform, Kolyma-Omolon massif, North Taymyr massif, Verkhoyansk-Chukotka geosyncline zone, and others are characterized. The structures are divided into two groups: orthogeosynclines and epicratonic structures, characterized by special types of tectonic development and magmatism. (DLC.)

73262. KUZNETSOV, SERGEĬ SERGEEVICH. Geologiia SSSR. Moskva, Gosgeoltekhizdat, 1960. 356 p. tables, cross-sections, maps. 65 refs. Text in Russian. **Title tr.**: Geology of the USSR.

Handbook of historical geology and general geology of the area, with several northern structures specifically treated, including the Kola-Karelia shield (p.15-22), Anabar and Aldan shields (92-101), Siberian platform (114-32), Tungusskiy, Vilyuy and Khatanga synclines (133-48), northern structures of the Ural-Siberia plateau: Taymyr, Severnaya Zemlya, Novaya Zemlya, Vaygach-Pay-Khoy (155-73), structures of northeastern USSR (282-87), the Kamchatka-Kuril arch (290-99). Orohydrology, stratigraphy, magmatism and tectonics of these areas are outlined. (DLC.)

73263. KUZNETSOV, VLADIMIR VASIL'EVICH, 1912– . Biologicheskie osnovy ratsional'nogo ispol'zovaniia i povysheniia promyslovykh bogatstv Belogo moria. (Akademiia nauk SSSR. Izvestiia, ser. biologicheskaia, 1961, no.4, p.608-619, tables.) 10 refs. Text in Russian. Summary in English. **Title tr.**: Biological basis for a rational utilization and increase of fishery resources of the White Sea.

Reports a hydrographic, biological and ecological study of this sea, with emphasis on forms of economic value. Author recommends introduction of new species, in order to increase catches. The introduced fish should have a short life cycle and pelagic spawn. In addition to the already acclimatized pink salmon, the Baltic sprat, *S. sprattus balticus* is recommended for introduction. (DLC.)

73264. KUZNETSOV, VLADIMIR VASIL'EVICH, 1912– . Mnogoletnie kolebaniia chislennosti sel'di i drugie periodicheskie iavleniia v Belom more. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ 1961. vyp.13, p.216-27, tables.) 37 refs. Text in Russian. **Title tr.**: Long-term fluctuations in the numbers of herrings, and other periodic phenomena in the White Sea.

Discusses the recent drop in herring catches

and the cause attributed to it: overfishing. The herring problem is passed in long-range review beginning in the mid-18th century and becoming more accurate and specific for the 20th century. This analysis indicates that the long-range fluctuations in the numbers of herring are due to climatic, specifically thermal, factors. These also affect the productivity of numerous marine invertebrates studied. (DLC.)

73265. KUZNETSOVA, Z. S. O vozmozhnosti prakticheskogo primeneniia variatsii vertikal'noĭ sostavliaiushchei zemnogo magnitnogo polia vmesto variatsiĭ polnoĭ sily. (Akademiia nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniia radiovoln. Trudy 1957. vyp.12 (22), p.86-90, tables, graphs.) Refs. Text in Russian. **Title tr.**: On the possibility of a practical application of the vertical component of the earth's magnetic field instead of the total variation strength.

Shows by the observations at Mys Chelyuskin, Bukhta Tikhaya, Uelen, Kandalaksha, Matochkin Shar, and Tiksi, that the difference between the variations of the total strength of the earth's magnetic field and of its vertical component at these stations during magnetically quiet days does not exceed $\pm 5_{\gamma}$. Therefore δZ can be used instead of δF in measuring the total magnetic field of the earth with F-airborne magnetometers which are accurate to $\pm 5_{\gamma}$. This would facilitate and expedite the measurement. (DLC.)

KVALE, ANDERS, *see* Bergen. Universitet. Seismological bulletin. 1959. No. 70150

73266. KVAVIG, PER, 1917– . Palaeomagnetisme og polvandring. (Naturen, 1961. v.85, nr.5, p.289-93, text map.) Text in Norwegian. **Title tr.**: Paleomagnetism and pole wandering.

Summarizes the theory of continental drift and the changes during geologic time of the positions of the geographic and magnetic north poles. The former appears to have shifted from the northern Pacific Ocean to various positions in the present arctic region; the magnetic pole from near the central Pacific, across Kamchatka, and the New Siberian Islands. (DGS.)

73267. KYZLASOV, L. R. Statuetka severnogo oleniia iz Kanska. (Sovetskaia arkheologiia, 1962, god 6, no.3, p.299-302, illus.) 20 refs. Text in Russian. **Title tr.**: Reindeer sculpture from Kansk.

Describes a mammoth-ivory carving of the Sayan Mt. reindeer (*Rangifer tarandus sibiricus* M.), dated to the first or second century A.D. and linked to mortuary customs. It portrays a reindeer type used for riding by the Kamasinets, a now extinct Samoyed tribe of the Sayan-Altay plateau. (DLC.)

LABEĬSH, V. G., *see* Gorodenskiĭ, N.B., & *others*. Issledovanie na modeli . . . 1961. No. 71780

73268. LABUTIN, IU. V. Dlinnokhvostyĭ suslik Verkhoian'ia. (Akademiia nauk SSSR. IAkutskiĭ filial. Doklady, 1957. v.8, p.135-47, illus., tables.) 9 refs. Text in Russian. **Title tr.**: The long-tailed suslik of Verkhoyansk.

Discusses the economic value of this ground squirrel to this district in northeast Yakutia. Its taxonomy, distribution and habitats, burrows and nests, reproduction, food, etc. are reported. Prospects for expanding its utilization are outlined. (DLC.)

73269. LABUTIN, IU. V. Materialy po ėkologii iastreba-tetereviatnika v IAkutii. (Akademiia nauk SSSR. IAkutskiĭ filial. Nauchnye soobshcheniia, 1961. vyp.5, Biologiia, p.87-93, tables.) Text in Russian. **Title tr.**: Materials to the ecology of the goshawk in Yakutia.

Discusses the numerical relation of this predator and the snow hare; the bird's distribution in the area, nests, reproduction, growth and development of young. The mammals and birds it preys upon, and seasonal changes in its diet also are considered. (DLC.)

73270. LABUTIN, IU. V. Nekotorye osobennosti ėkologii zaitsa-belıaka Verkhoian'ia. (Akademiia nauk SSSR. IAkutskiĭ filial. Doklady 1957. v.8, p.115-23, illus., tables.) 10 refs. Text in Russian. **Title tr.**: Some ecological peculiarities of the white hare around Verkhoyansk.

Reports an investigation aimed at elucidating the vast year-to-year fluctuation in numbers of this animal. Population dynamics and biological aspects of distribution, reproduction and fertility, food and forage conditions are treated in turn. (DLC.)

LABUTIN, IU. V., *see also*

Egorov, O.V., & *others*. . . . *Lepus timidus*. 1957. No. 71208

Naumov, S.P., & IU. V. Labutin. Materialy po avifaune . . . 1961. No. 74238

73271. LACHAPELLE, EDWARD R. Assessing glacier mass budgets by reconnaissance aerial photography. (Journal of glaciology, Oct. 1962, v.4, no.33, p.290-97, illus., graph, diagr. discussion.) 8 refs. Summary in French and German.

Glacier reconnaissance in North America depends largely on aerial photography. Qualitative interpretation of such photography presently yields information on the extent and yearly variations of existing glaciers, vigor of their activity, formation of kinematic waves, snow-line altitudes, residual annual snow accumulation, and recent climatic changes. Methods are proposed whereby such data can be combined with limited ground observations to obtain quantitative mass budget data.—Author's abstract. Studies of Alaskan glaciers are considered among others. (DLC.)

LACHAPELLE, EDWARD R., *see also*

Giddings, J.C., & E. LaChapelle. Diffusion theory . . . 1961. No. 71676

Giddings, J.C., & E. LaChapelle. Formation rate depth hoar. 1962. No. 71677

73272. LACHENBRUCH, ARTHUR HEROLD, 1925– . Depth and spacing of tension cracks. (Journal of geophysical research, Dec. 1961. v.66, no.12, p.4273-92, tables, graphs, diagrs.) 17 refs.

Analyzes elastic stress perturbation caused by a crack in an infinite or semi-infinite medium, in which the initial stress is a step function or linear function of depth. Tables and graphs are presented which can be applied directly to problems in which the variation of stress with depth is arbitrary. The results suggest a means of predicting depth and spacing of tension cracks in terms of the stress field and measurable properties. The method is illustrated with a discussion of cooling joints in basalt; it should also be applicable to contraction cracks in permafrost and glacier crevasses. The work forms part of a con-

tinuing U.S. Geological Survey study of thermal problems in permafrost. (DLC.)

LACHENBRUCH, ARTHUR HEROLD, 1925– , *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

Kachadoorian, R., & *others*. Geologic investigations . . . Project Chariot . . . 1961. No. 72604

LACKMAN, DAVID B., *see*

Philip, R.N., & D.B. Lackman. Observations . . . influenza in 1918-1919. 1962. No. 74774

Philip, R.N., & *others*. Serologic and skin test . . . tularemia . . . 1962. No. 74775

LACKS, HYMAN, *see* Frieberger, A., & H. Lacks. Ice-phobic coatings . . . 1961. No. 71495

LADYSHKINA, T. E., *see* Zhelubovskaĭa, K.V., & T.E. Ladyshkina. Rezul'taty . . . 1962. No. 76667

73273. LAERUM, O. D., *and* **G. S. PEDERSEN.** Svalbardveg 1959; report to the Arctic Institute of North America, 1962. vii, 84 l. illus., & maps, graphs, tables. Refs. Photo copy of typescript.

Contains a summary of the research of 1956-1958 on ice-free land in Svalbard, and reports on work of the 19-man party organized by the Institute of Road and Railway Construction of the Technical University of Norway, June 16-Aug. 29, 1959 in the Kongsfjorden region, viz:

Report from the geological survey in the King's Bay area, 1959, by A. Nissen, p.3-51. *Discusses* geologic and engineering factors affecting possible airfield sites near Kvadehuksletta (78°50′N. 11°00′E.), Kap Mitra (79°N. 11°E.), Kap Guissez (79°N. 11°30′E.), and Fuglehuken (78°50′N. 10°30′E.); also results of a road project on permafrost between Ny-Ålesund and Kvadehuken.

Ice-foot along the coasts of Spitzbergen, by E.S. Pedersen, p.52-56. *Describes* process of formation, noting, with photos, five types. Experience in beaching light motorboats on extensive ice-foot on Kongsfjorden coasts is related. Most Vestspitsbergen coasts are free of ice-foot by the end of June.

Botanical studies in the area west of Ny Aalesund, by O.I. Rønning, p.56-68. *Covers* two-weeks' field study in Aug. 1959, particularly evaluation of three vegetation types in the Kvadehuken area in terms of airfield construction. Effect of snow cover on road alignment and construction near Ny Ålesund is also dealt with. Severe problems are not expected from vegetation type or snow cover in this area. Air-photo interpretation of familiar areas is recommended as a supplement to ground reconnaissance. Some forty photos as well as tabular matter augment the text, and 42 maps, graphs, and tables are appended; nine fold maps with the original typescript could not be reproduced. Also appended are extracts translated from the Norwegian of four reports:

G.S. Pedersen's Report on a reconnaissance journey to Spitzbergen, 1956, p.69-74; it describes four areas for evaluation as possible emergency or permanent landing sites in the trans-polar aviation route system, viz: Kvadehuken, Adventdalen, Kapp Linné, and Kapp Mitra (map).

Report of laboratory investigations of the possible use of seaweed for prevention of thawing, by M. Midttun, p.75-79. Cites six requirements of any material for preventing thawing in permafrost, and reports on the laboratory tests made in 1958 on two seaweed types, one believed common in Svalbard waters; results are promising and field tests are to be started.

H.S. Husebye, in Preliminary report on field tests of seaweed as a frost accumulating carpet, p.79-80, states that tests made at Tiller (20 km. south of Trondheim, Norway) during winters 1958-59 and 1959-60, tend to support laboratory findings but provide no conclusions. Frost-accumulating capacity rather than heat-accumulating effect was tested, assuming that one characteristic will be as suitable as the other. Further tests are to be made in Svalbard.

G.S. Pedersen, in Calculated depth of thaw at Kvadehuken, p.81-84, states depth of thaw calculated for gravel was 9.4 ft., and silt 2.9 ft.; depth of thaw for an asphalt airport pavement (3 in.) on 6 ft. gravel fill over a silt subgrade was calculated to be 7.4 ft. Necessary thickness of peat to prevent thawing of subgrade under airport pavements was calculated to be 1.37 ft. (DAI.)

LAEVASTU, TAIVO, *see* Hela, I., & T. Laevastu. Fisheries hydrography . . . 1961. No. 72099

LaGASSE, A., *see* Roels, H., & A. LaGasse. Influence of cold stress . . . 1961. No. 75164

73274. LAGE, FRITS. Moderne isbrydning. (Søfart, May 1962. årg. 13, no.3, p.22-23, illus.) Text in Danish. **Title tr.**: Modern icebreaking.

Notes Denmark's four icebreakers *Isbjørn, Lillebjørn, Storebjørn,* and *Elbjørn,* and proposes standards for a new and larger one. (DLC.)

73275. LAGERCRANTZ, ELIEL, 1894– . Lappische Volksdichtung, Bd. 5; See- und skoltelappische Texte des südlichen Varangergebiets. Helsinki, 1961. 208 p. illus. (Suomalais-ugrilainen seura. Toimituksia v.124.) 6 refs. Text in German. **Title tr.**: Lappish folklore, v.5; Sea- and Skolte-Lappish texts from the South Varanger region. In sequence to No. 66073.

Presents 65 tales in Sea-Lappish and the mixed Sea-and-Skolt Lappish dialects recorded by the author in 1920 in Nesseby and Neiden. The phonetic structure of the dialects and the style, poetic rendering, phraseology, etc. of the texts are discussed. The stories told by eleven local informants include magical, mythological, legendary, and animal tales, also accounts of personal experiences. The original Lappish texts are supplied, with German translations. The apparatus used for the original recording is described. (DSI.)

73276. LAGERSPETZ, K., *and others*. Effect of cold acclimatization on the succinic dehydrogenase activity in the liver and brain tissues of mice. (Experientia, Dec. 1962. v.18, fasc. 12, p.552-53, table.) 7 refs. *Other authors:* H. Tarkkonen *and* R. Tirri.

The activity of succinic dehydrogenase in the liver of mice kept for 7-12 days at 5°C. rose by 72%. The activity of the same enzyme in the brain remained unaffected by cold. (DLC.)

73277. LAGERSPETZ, K. The postnatal development of homoiothermy and cold resistance in mice. (Experientia, June 1962. v.18, fasc. 6, p.282-84, illus.) 14 refs.

Account based on thousands of measurements of stabilized skin temperatures and environmental temperatures at different ages. Four stages in the development of homoiothermy were discernible at the age of 0-19 days. Resistance to cold dropped perceptibly between the ages of 7 and 18 days. (DLC.)

LaGOW, H. E., *see* Ainsworth, J.E., & *others*. Upper-atmosphere structure . . . 1961. No. 69524

73278. LAGUNOV, I. I., *and others*. Northern salmon. (International Council for the Exploration of the Sea. Annales biologiques 1958 *pub.* 1960. v.15, p.220-21, tables.) *Other authors:* V.V. Azbelev *and* M.N. Mel'nikova.

Reports on total catch in the Murmansk district and in the White Sea for 1958, and on research into the coefficient of return into rivers, repeated spawning, and migration. (DI.)

73279. LAGUNOV, I. I. Opyt podvodnykh nablīudeniĭ posredstvom gidrostata v Barentsovom more. (Akademiīa nauk SSSR. Okeanograficheskaīa komissiīa. Biūlleten' 1961, no.8, p.67-72.) Text in Russian. **Title tr.:** Attempt at underwater observations with a hydrostat in the Barents Sea.

Describes the construction and use of a diving cylinder for oceanographic observations to 400 m. depth. The device consists of a cylindrical steel capsule 2635 mm. high, max. diameter 820 mm. with 950 dm^3 space accommodating a single observer, and observation window and five illuminators. Experiments with the hydrostat are described. Visibility and color of the sea water, features of fish, benthos, etc. as observed are characterized. The hydrostat is considered effective for underwater observations. (DLC.)

LAĬKHTMAN, DAVID L'VOVICH, *see* Dolgin, I.M., & *others*. Itogi meteorologicheskikh . . . 1962. No.71064

LAIRD, MARSHALL, *see* Pacific Science Congress. 1961. No. 74619

73280. LAĬSHEV, A. Rentgenodiagnostika v olenevodstve. (Sel'skoe khozīaĭstvo Sibiri, Mar. 1961. god 6, no.3, p.68-69.) Text in Russian. **Title tr.:** X-ray diagnosis in reindeer husbandry.

Reports an experiment in hoof disease diagnosis in the Taymyr National District by the Far North Agricultural Research Institute. A mobile unit comprising a 43 kg. RU-700 X-ray apparatus and a 110 v. electric motor weighing 60 kg, was used. The animal was strapped on its side to the X-ray sledge. The method is recommended for other reindeer-raising areas. (DLC.)

LAITAKARI, AARNE VIHTORI, 1890– , *see* Finland. Geologinen Tutkimuslaitos. 1960-62, *in progress*. No. 71397

LAKEMAN, RIENK, *see* Kent, P.E., & W.A.C. Russell. Evaporite piercement structures . . . 1961. No. 72732

73281. LAKERNIK, M. M. V gosudarstvennom nauchno-issledovatel'skom institute tsvetnykh metallov, Gintsvetmet. (Tsvetnye metally, Oct. 1961. god 34, no.10, p.13-17.) Text in Russian. **Title tr.:** At the State Non-Ferrous Metal Research Institute, Gintsvetmet.

Outlines the organization and activities of the institute and its numerous laboratories; notes development of autoclave methods of processing nickel concentrate for the Severonikel' Combine plant in Kola Peninsula. (DLC.)

LAKHNO, R. P., *see* Kovalevskiĭ, V.M., & R.P. Lakhno. Uplotnennye snezhnye . . . dorogi. 1961. No. 73044

73282. LAKKA, JORMA. Suomen maatalouden mekanisointi. (Terra, 1962. årg. 74, no.3, p.136-47, maps, graphs, table.) 8 refs. Text in Finnish. Summary in English. **Title tr.:** The mechanization of Finnish agriculture.

Discusses several factors in the decreased use of horses and manpower since 1950: the greater use of tractors, the larger fields, farms, and area in grain. In the Far North and Lapland agricultural districts, arable land has notably increased and the area in oats correspondingly decreased. In 1959 these districts had 2-2.9 tractors per 100 field hectares, 9-10.9 horses/100 ha. in the Far North, and more than 13/100 ha. in Lapland. (DGS.)

73283. LAKTIONOV, ALEKSANDR FEDOROVICH. Novye okeanograficheskie suda. (Okeanologiīa, 1961. t.1, vyp.1, p.172-73, illus.) Text in Russian. **Title tr.:** New oceanographic vessels.

Reports the Soviet arctic research fleet strengthened in 1959 by three hydrographic vessels built in Finland in 1958. They are 40.9 m. in length, 9.81 m. wide, 810 t. displacement, 400 h.p. engine, and speed up to 10 knots; the vessels carry fuel for 1,000 continuous hrs. and water for 35 days. The hull is of pine and fir, the fore part steel plated; accommodations are provided for a crew of 22 and research staff of 13. All three vessels have made trial runs; the *Shtorm* doing oceanographic work in the northern Greenland Sea; the *Azimut* making current studies (in Kara Sea?), and the *Priboĭ* a hydrographic survey in the East Siberian Sea. (DLC.)

73284. LAKTIONOV, ALEKSANDR FEDOROVICH, *and* **Z. S. ROMANOVICH.** Sokrashchennyĭ spisok sovetskoĭ literatury po issledovaniīu Arkticheskogo basseĭna vysokoshirotnymi ėkspeditsiīami i dreĭfuīushchimi stantsiīami; 1937-1962 gg. (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.11, p.115-28.) Text in Russian. **Title tr.:** Abridged list of Soviet literature on the investigation of the Arctic Basin by high latitude expeditions and drifting stations, 1937-1962.

Lists by author some three hundred papers citing the journal in which published, etc. (DLC.)

LAL, DEVENDRA, *see* Craig, H., & D. Lal. Production rate natural T. 1961. No. 70846

LALL, D. F., *see* Thorsteinson, F.V., & *others*. Experimental harvest . . . sea lion in Alaskan waters. 1961. No. 76128

73285. LAMB, HUBERT H. The climates of the 11th and 16th centuries A.D. (Weather, Dec. 1962. v.17, no.12, p.381-89, maps.)

Summarizes selected papers and discussion at the conference on Northern Hemisphere climates of the 11th and 16th centuries held June 16-24, 1962, at Aspen, Colo. Application of tree-ring study to climatic history was revived by Fritts and

Sirén who favored the value of such study at the northern forest-limit and the upper timber-line. Author's maps showing main depression tracts and trough longitudes "predicted" for the two centuries studied, are reproduced; centered on the North Pole, they show zones of most frequent depressions located over the Greenland Sea and northern Scandinavia generally, except during summers 1550-1600, which was a period of cooling in Alaska and northern Canada. (DWB.)

73286. LAMB, HUBERT H., *and* **A. I. JOHNSON.** Climatic variation and observed changes in the general circulation, III; investigation of long series of observations and circulation changes in July. (Geografiska annaler, 1961. v.43, no.3-4, p.363-400, maps, graphs, tables.) 41 refs. In sequence to No. 59556.

Discussion of arctic sea ice charts shows that in summer the extent and distribution of floating ice and cold surface melt water affects the atmospheric circulation much more than the circulation affects the long-term ice situation. Growth or decline of arctic sea ice, however, seems to depend on variations in the direct heating budget, and in the strength of atmospheric circulation, particularly in the colder months. Sea ice extent on nine northern water bodies is tabulated for irregular chronological periods from 1594-97 to 1950-59. Analysis of changes in general atmospheric circulation in July since 1750, also of corresponding changes in rainfall, air and sea temperature, and ice distributions, indicates a period of generally warm climate about 1000-1200, followed approx. 1430-1850 by the "little ice age" cold epoch, which culminated in the 17th century. Slightly reduced effective solar radiation is suggested as a cause of this little ice age; other possible explanations are also noted. (DLC.)

73287. LAMB, HUBERT H., *and others.* A new advance of the Jan Mayen glaciers and a remarkable increase of precipitation. (Journal of glaciology, Oct. 1962. v.4, no.33, p.355-65, table, graphs.) 13 refs. Summary in French and German. *Other authors:* J.R. Probert-Jones *and* J.W. Sheard.

Reports observations of the University of London Jan Mayen and Beerenberg expeditions of 1959 and 1961, on the advance of glaciers around Beerenberg, which began about 1954 and accelerated since 1959. Annual precipitation in the area has been rising, and in the 1950's was almost double that of the 1920's. Other places around the Greenland Sea with increased precipitation attained a maximum in 1930-1940. Likely causes: changes in atmospheric circulation, etc., are discussed, as is the lag in the glaciers' response. The increase of precipitation seems to be the main factor in the glacial advance. (DLC.)

73288. LAMOTHE, CLAUDE, *and* **D. ST. ONGE.** A note on a periglacial erosional process in the Isachsen area, N.W.T. (Geographical bulletin. Nov. 1961. no.16, p.104-113, illus., map, diagrs., graph.) 19 refs. French text p.114-19.

Describes an unusual form of periglacial erosion on Ellef Ringnes Island, five km. northwest of Isachsen. Measurements made in 1960 as part of the Polar Continental Shelf Project show that the back wall of an eroding hollow retreated by as much as 10 m. in one season, due to melting of ground ice and resultant mud flows. These processes are considered some of the most rapid erosional agents at work in the high Arctic. (DGS.)

LAMSON, B. G., *see* Gambino, J.J., & *others.* Post-irridiation cold stress. 1961. No. 71578

73289. LANCASTER, JANE. A railroad to Great Slave Lake. (Professional geographer, Sept. 1961. v.13, no.5, p.31-35, map.) 9 refs.

Reviews status of the proposed railroad from the present end of steel at Grimshaw, Alberta to the Pine Point lead-zinc deposits near the south side of Great Slave Lake. Its benefits to mining developments are indicated. Controversy concerning the route delays construction. The Mackenzie - Great Slave Highways at present link Yellowknife via Hay River and Grimshaw with southern Canada, the sole overland route. (DWB.)

LANDAUD, G., *see* Delost, P., & G. Landaud. Différences . . . 25°C. 1962. No. 70947

LANDER, R. H., *see* Alaskan Science Conference 1961. 1962. No. 69644

LANDMARK, BJØRN, *see*

Brown, R.R., & *others.* Large-scale electron bombardment . . . 1961. No. 70405

Holt, O., & *others.* Electron density & collision frequency. 1962. No. 72222

Holt, O., & *others.* Riometer observ. during blackouts. 1962. No. 72220

73290. LANDMARK, JONAS FR. Lofoten, ed. by Sigv. Rørtveit. (Norden, Dec. 15, 1960. årg. 64, nr.24, p.692-95.) Text in Danish.

Excerpts from an undated manuscript found in an agricultural library in Denmark and probably written around 1900. It describes the natural conditions of the islands. (DA.)

73291. LANDMARK, KÅRE, 1912– . Fjellgrunn og landskap i Nord-Norge. Tromsø, 1960. 40 p. illus., fold. map. (Ottar, Dec. 1960. nr.26; 1960: nr.4.) 12 refs. Text in Norwegian. **Title tr.:** Bedrock and landscape in North Norway.

Analyzes the Precambrian bedrock, Eocambrian sediment formation, rocks in the Caledonian folding zone, and sediments from the Jurassic and Cretaceous; and outlines the Quaternary glaciations. During the latest, probably most of the country was ice-covered, though the Nordland coast, Lofoten islands and certain coastal areas in Finnmark may have remained ice-free. Moraine ridges marking stages of the ice retreat are noted, particularly the so-called Tromsø-Lyngen stage. Well-developed raised beaches are a characteristic feature along the coast of north Norway. Some eight hundred ore deposits in the area are registered but few of commercial value. Most important are the iron ore near Kirkenes, and copper, zinc, lead and pyrites in the vicinity of Rana in Nordland, at Sulitjelma and at Bjørkåsen near Ballangen on Ofotfjorden. Between Saltfjorden and Ofotfjorden in Nordland, limestone, dolomite, quartz and feldspar are quarried at several places, as well as roofing slate at Alta and Lebesby (70°34'N. 27°E.) in Finnmark. Geological research in the three northernmost counties is briefly surveyed. (SPRI.)

LANDYREVA, N. S., *see* Kondorskaĭa, N.V., & N.S. Landyreva. Osobennosti seĭsmichnosti . . . 1962. No. 72914

LANE, R. K., *see* Dodimead, A.J., *& others*. Oceanographic data record . . . 1960. No. 71053

73292. LANE, V. F. V glub' vekov; arkheologicheskie issledovaniia v Pribaĭkal'e. (Priroda, Oct. 1962. no.10, p.72-78, illus.) Text in Russian. **Title tr.:** Into the depth of time; archeological investigations in the Pri-Baykal area.

Popular sketch of recent excavations on the Angara and upper Lena Rivers by the Angara archeological expedition headed by A.P. Okladnikov: paleolithic sites (8-6,000 B.C.) near Balagansk and Krasnyy Yar, the latter yielding a stylized female figurine similar to Mal'ta and Buret' finds; a neolithic cemetery (4,000 B.C.) near Serovo showing an advanced hunting and fishing economy; and a bronze age site (approx. 1,000 B.C.) near Svirsk. The settlement of the area by Turkic Kurykan tribes since the 6th century A.D., their culture, and ties with ancestral Yakuts are described. (DLC.)

73293. LANG, ARTHUR HAMILTON, 1905– , *and others*. Canadian deposits of uranium and thorium. Ottawa, Queen's Printer, 1962. xvi, 324 p. illus., maps, diagrs., sections & tables incl. fold. (Canada. Geological Survey. Economic geology series no.16, 2d. edition.) 236 refs. *Other authors:* J.W. Griffith *and* H.R. Steacy. New edition of No. 30315, out of print.

Provides full information on the geology of these deposits, selected data on related topics; and some two hundred references to more detailed literature. Deposits at end of 1957 are tabulated, otherwise 1958 material included throughout. Eldorado mine near Port Radium, Rayrock mine near Marian River, 100 mi. northwest of Yellowknife, and the small Contact Lake mine, nine miles southeast of the Eldorado, all closed mines, are described, p.186-98. Non-producing deposits include: a low-grade thorium-uranium occurrence at McLean Bay of Stark Lake, near Great Slave Lake; the Rex group of claims, also on Stark Lake; and a low-grade thorium placer occurrence on Yamba Lake, about 200 mi. northeast of Yellowknife. Map 1045A-M1, scale 1 in.: 120 mi., shows mines and deposits, and gives 43 refs. (DGS.)

73294. LANG, ARTHUR HAMILTON, 1905– . On the relation of metal occurrences to tectonic divisions of the Canadian Shield. (*In:* Royal Society of Canada. The tectonics . . . 1962, p.16-21.) 12 refs.

Compares results of own preliminary study of the distribution of metal occurrences, with the subdivisions of the Shield proposed by C.H. Stockwell, q.v. Marked correspondence was found with the Bear (uranium), Slave (gold), and Grenville (ilmenite, magnetite, uranium, etc.) provinces. Degree of correspondence suggests that the distribution of metals is mainly related to the geological history of a particular segment of the Shield, rather than to fundamental differences in the original crust. (DGS.)

73295. LANG, ARTHUR HAMILTON, 1905– . A preliminary study of Canadian metallogenic provinces. Ottawa, Queen's Printer, 1961. 54 p. 3 fold. maps. (Canada. Geological Survey. Paper 60-33.) 54 refs.

Considers the applicability of the concept of metallogenic provinces to Canada, and attempts an outline and description of them. Seventeen maps of metallic mineral types in Canada were compiled, and combined with other data into two comprehensive maps, one of major metals except iron, the other of minor metals except molybdenum, both at scale 1 in.: 120 mi. A third map on the same scale is presented for comparison of tentative geological or physiographic subdivisions with the metallogenic data. The Canadian Arctic Islands are not considered because few metal deposits have been found there. The Canadian Shield, the Western Cordillera, and the Appalachian regions constitute the three main metalliferous portions of Canada. Metallogenic provinces and subprovinces however, may or may not correspond to their geological counterparts. The presence or lack of metals in many places may be the result of orogenic history and the amount of subsequent erosion. Association of niobium and tantalum in the Yellowknife subprovince of the Shield is in contrast to other niobium occurrences where little tantalum is known. (DGS.)

73296. LANG, ARTHUR HAMILTON, 1905– . La prospection au Canada. Ottawa, Queen's Printer, 1960. xiii, 421 p. illus. (7 col.), maps, diagrs., sections, tables. (Canada. Geological Survey. Economic geology series no.7.) Refs. Text in French. **Title tr.:** Prospecting in Canada.

French edition of the 3rd English edition *pub.* in 1956, No. 46239. (DGS.)

73297. LANG, KNUT. Colour and race in the North. (North, Jan.-Feb. 1961. v.8, no.1, p.18, illus.)

Discusses discrimination against Eskimos and Indians in Canada. Primitive home training and background, rather than lack of ability, handicaps these people in competing with whites. (DLC.)

LANGE, G. ROBERT, *see* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

73298. LANGE, GÖSTA. Vem försäkrar att isarna håller? en orientering i en aktuell försäkringsfråga. (Skogen, Nov. 24, 1961. årg. 48, nr.23, p.422-23, illus., table.) Text in Swedish. **Title tr.:** Who insures unbreakable ice? an orientation in current insurance questions.

Notes accidents, about 150 a year in Sweden, mostly in Norrland, because of river and lake ice giving way under truck loads of timber. In many cases insurance did not cover the loss. Various types of insurance are available to company and to independent drivers, as are safety regulations for driving on ice roads, and standards for calculating ice thickness. (DA.)

73299. LANGFORD, R. E. The Cambridge Arctic Canada Expedition, 1961 to Cumberland Peninsula, Baffin Island. (Arctic circular 1961, *pub.* Apr. 1962. v.14, no.3, p.49-52.)

Recounts experiences of his six-man mountaineering party in July-Aug. It crossed Cumberland Peninsula by the Pangnirtung Pass, climbed five virgin peaks, surveyed Rundle Glacier, and found a change in the direction of flow of Glacier Lake. Some geological specimens were collected, and physiological observations made. (CaMAI.)

73300. LANGILLE, R. C. DRB Topside Sounder satellite. (Engineering journal, Jan. 1962. v.45, no.1, p.33-38, illus., diagrs.)

Describes a 275-lb. satellite developed by the Canadian Defence Research Board to study ionospheric conditions from above the ionosphere, in particular in the Arctic. To be launched from California into a 625 mi. circular orbit in 1962, the sun-powered satellite carries equipment also for measuring galactic noise, plasma frequency in the neighborhood of the satellite, and a spectrum of particle energies. The sweep frequency sounder covers the 1.8-11.5 Mc./s. range; its operation is similar to that of a ground ionospheric station. (DLC.)

73301. LANGLEBEN, MANUEL PHILLIP, 1924– . Young's modulus for sea ice. (Canadian journal of physics, Jan. 1962. v.40, no.1, p.1-8, diagrs.) 7 refs.

Discusses the dependence of Young's modulus on brine content for small ice samples. The modulus is determined from the velocity of ultrasonic waves through the samples, brine content from their salinity and temperature. The modulus decreases linearly with increasing brine content over the range of brine content of 0.01-0.1 as a fraction of total volume. Its value is 10×10^{10} dyne/cm^2 when the brine content is 0 and 6.5×10^{10} dyne/cm^2 for a brine content of 0.1—From author's abstract. The work was carried out in North Star Bay, Thule, Greenland, in Mar. 1961, as part of an Air Force program concerned with the construction and testing of a large ice runway and reinforced parking pads for aircraft. (DLC.)

LANGLEBEN, MANUEL PHILLIP, 1924– , *see also* Kingery, W.D. . . . Project Ice Way. 1962. No. 72796

73302. LANGLET, OLOF, 1900– . Ecological variability and taxonomy of forest trees. (*In:* Kozlowski, T.T. Tree growth, 1962, p.357-69, maps, graphs.) 27 refs.

Discusses problems in taxonomic classification when environmental adaptations are mistaken for morphological differences. South-to-north changes of the Scots pine in Sweden are examined and shown to be modifications reflecting climatic change. Their treatment as morphological differences necessitating division of the Scots pine into two distinct subspecies is not warranted. (DLC.)

73303. LANGLET, OLOF, 1900– . Proveniens, virkeskvalitet och frökontroll. (Skogen, June 23, 1961. årg. 48, nr.13, p.240-41.) Text in Swedish. **Title tr.**: Provenance, quality or timber and seed control.

Notes importance of provenance of the parent trees in forest-seed selection as well as high-quality stands. Pine and spruce from well selected seed can be moved successfully to more northerly localities. A law for control of Swedish forest seed is in preparation, and foreign seed purchase should be centralized in a national agency. (DA.)

73304. LANGSTON, DON VAL. Immunizations in Anchorage. (Alaska medicine, Sept. 1962. v.4, no.3, p.67.)

Notes number and kinds, participants in the program: smallpox, polio, typhoid, etc.; school children, etc. (CaMAI.)

73305. LANGWAY, CHESTER C., *Jr.* Some physical and chemical investigations of a 411 meter deep Greenland ice core and their relationship to accumulation. (*In:* International Association of Scientific Hydrology, Symposium of Obergurgl 1962. p.101-118, illus., map, graphs, tables.) 20 refs. Summary in French.

Describes some of the detailed analyses performed on continuous 2-m. core increments at 100 m., 200 m., 300 m., and 400 m. depths, and continuous physical measurements over the upper 117 m. The analyses provided the basis for estimating the variation in accumulation over the entire profile obtained by rotary core-drilling at Site 2 on Greenland Inland ice in 1957. Systematic studies of variations in stratigraphy were carried out using bulk density, structure, and nine other features to determine the limits of annual layering. Results suggest a nearly constant rate of net accumulation of about 34 g./cm^2/yr. for the lower 300 m.; whereas independent pit studies extending back 60 yrs. and stake measurements for a 6-yr. period show a net accumulation rate that averages about 40 g./cm^2/yr., or an increase of about 20% since 1900. Ice from the bottom of the borehole is about 1000 yrs. old, formed about 907 A.D. (DGS.)

73306. LAPHERE, EDWIN M. Flush tank used to prevent sewer freezing. (Sewage and industrial wastes, Jan. 1953. v.25, no.1, p.100-102.)

Discusses causes of freezing of water supply and sewage lines at Fairbanks, Alaska; and describes a flush tank built at one of the many dead ends, its operation costs (low), and usefulness. (DLC.)

73307. LAPIN, IURII EMEL'IANOVICH, 1924– . Osobennosti dinamiki chislennosti sel'di Dvinskogo zaliva Belogo moria. (Zoologicheskii zhurnal, 1962. t.41, vyp.11, p.1681-92, illus., tables.) 9 refs. Text in Russian. Summary in English. **Title tr.**: Features of the herring population dynamics in Dvina Bay of the White Sea.

Reviews earlier studies and, from sampling during 1958-1960, analyzes size and age composition of herring from different areas of the Bay and their shoreward migrations. The small size of the estuarine herring is due to the fact that the fish remain in the river mouth till they attain a certain age and size, after which they move offshore. (DLC.)

73308. LAPINA, NINA NIKOLAEVNA, 1925– . Brakhiopody krestiakhskikh konglomeratov s ust'ia reki Leny. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy 1962. vyp.196, Paleontologicheskii sbornik 3, p.125-50, plates.) 7 refs. Text in Russian. **Title tr.**: Brachiopods of the Krestyakh conglomerates from the Lena River mouth.

Describes a stratigraphic section of Carboniferous conglomerate series, outcropping on Cape Krestyakh and up to 300 m. thick. About twenty species of Lower Carboniferous brachiopods found are systematically described. Some of them are new: *Marginifera krestjachi, Brachythyris latus, Punctospirifer lutkevitchi* and *Cleiothyridina megalaeformis.* (DLC.)

73309. LAPINA, NINA NIKOLAEVNA, 1925– . Stratigrafiia i brakhiopody nizhnekamennougol'nykh otlozhenii severo-vostoka Sibirskoi platformy v basseine r. Olenek. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazve-

dochnyĭ institut. Trudy 1962. vyp.196, Paleontologicheskiĭ sbornik 3, p.107-24, plates.) 15 refs. Text in Russian. **Title tr.:** Stratigraphy and brachiopods of lower Carboniferous deposits in the northeast of the Siberian platform, Olenek River basin.

Outlines the biostratigraphy of these deposits 200-250 m. in thickness. Systematic description is given of some eight brachiopods, considered upper Tournaisian, and confirming the opinion that these lower Carboniferous deposits are upper Tournaisian. Correlation is made with the Kuzbass region. Facies and paleogeographic conditions of sedimentation are characterized. (DLC.)

LAPINA, NINA NIKOLAEVNA, 1925– , *see also* Belov, N.A., & N.N. Lapina. Geologicheskie issledovaniĭa . . . 1962. No. 70118

73310. LAPOINTE, S. M., *and* D. C. ROSE. The effective directional sensitivity of cosmic-ray neutron monitors. (Canadian journal of physics, May 1961. v.39, no.5, p.668-76, table, graphs.) 12 refs.

Calculates numerically the direction of maximum sensitivity for a set of points on the same geomagnetic meridian but extending in latitude from the Equator to the Pole. From the resulting master curves (one for longitude, one for latitude of direction), the direction is obtained in geographic coordinates for 24 cosmic-ray stations. The method of calculation takes into account atmospheric absorption and the energy spectrum of the incident particles. Accuracy of the results is discussed.—From author's abstract. (DLC.)

73311. LAPPARENT, ALBERT F., de. Footprints of dinosaur in the Lower Cretaceous of Vestspitsbergen, Svalbard. (Norway. Norsk Polarinstitutt. Årbok 1960 *pub.* 1962, p.14-21, illus., map, 3 plates.) Summary in French. 17 refs.

Reports 13 tridactylous footprints of a large dinosaur found on a vertical slab at Festningen (78°N. 13°30'E.) during the 21st International Geological Congress excursion to Spitsbergen in 1960. Stratigraphic data are given; the sandstone slab may be considered to correspond to the continental Lower Cretaceous. The prints described in detail, are attributed to a large iguanodon, e.g. *Iguanodon bernissartensis*. The discovery proves the occurrence of Cretaceous dinosaurs as far north as 78°N. and the range of the European genus *Iguanodon* extending to Spitsbergen. (CaMAI.)

73312. LAPRAS, A., *and* M. TOMMASI. À propos des gelures expérimentales; étude histopathologique. (Annales de chirurgie, July 1961. v.15, no.13-14, p.899-904, illus.) 15 refs. Text in French. Summary in English. **Title tr.:** On experimental frostbite; a histopathological study.

Account of experiments on rabbits, with frostbite produced by application of dry ice. Authors found that the necrosis produced is due to direct action of cold on the cells. They claim that the death of cells is caused by physical modifications of protoplasmic water. (DNLM.)

73313. LAPSHINA, E. I. Soveshchanie po voprosam geobotanicheskoĭ kartografii. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. Izvestiĭa 1961, no.1, p.124-26.) Text in Russian. **Title tr.:** Conference on Problems of Geobotanical Cartography.

Reports work of the first All-Union conference on these problems, Nov. 14-18, 1960 at Novosibirsk with nearly two hundred participants. The papers presented dealt with mapping forests, pastures, medicinal plants, etc. in various areas, including Siberia and the Far East. (DLC.)

73314. LAPTEV, A. N. ÎUkagiry; predvaritel'noe soobshchenie uchastnika Kompleksnoĭ îukagirskoĭ ėkspediţsii ÎAF SOAN SSSR, 1959 g. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. ÎAkutskiĭ filial. Nauchnye soobshcheniĭa 1961. vyp.6, p.9-14.) 4 refs. Text in Russian. **Title tr.:** Yukaghirs, preliminary report by a participant in the multi-purpose Yukaghir expedition of the Yakut Branch of the Academy of Sciences' Siberian Division.

Presents own views, as a Yukaghir, on the past and present of the Odul in the Lower, and the Vadul Yukaghirs in the Upper Kolyma Districts of Yakut ASSR. Their traditional economy was based on hunting, mainly wild reindeers, and on fishing, with subsidiary raising of transport reindeer and dogs. These occupations and gear are described; as are the housing and cooking methods, the clan organization and migration grouping, marriage customs and folklore. Use of picture writing by men (route maps) and girls (love missives) is noted. Author also depicts the current material culture of the Yukaghirs and their collective farm economy; they do semi-nomadic reindeer herding, fur hunting and fur farming, stock raising, etc. The Vaduls belong to the Turvaurgin and Stalin kokhozes of mixed Yukaghir-Chukchi-Lamut-Yakut-Russian composition, which combined into a sovkhoz at the end of 1960; the Odul Yukaghirs form the Yukagir kolkhoz. Educational and social achievements, changes in housing and clothing, intermarriage with other aborigines and Russians, etc. are sketched. (DLC.)

73315. LARCHIN, V. A. Opyt plemennoĭ raboty s kholmogorskoĭ porodoĭ skota. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Sept. 1961. god 4, no.9, p.52-55.) Text in Russian. **Title tr.:** Experience with raising Kholmogory cattle.

Notes 85% of this breed in the stock of Arkhangel'sk Province, 90% in Murmansk Province, and 65% in Komi ASSR. (DLC.)

73316. LARICHEV, V. E. The microlithic character of neolithic cultures in Central Asia, Trans-Baikal, and Manchuria. (American antiquity, Jan. 1962. v.27, no.3, p.315-22, illus.)

Comparative study of neolithic stone artifacts belonging to a small-tool tradition of eastern Siberia including the Cis- and Trans-Baykal region and Yakutia. The misnomer "microlithic" culture is due to early terminological confusions. Originally pub. in Russian in the Transactions of the Buryat Research Institute, Ulan-Ude, 1960 (copy not seen), translated by B.L. Pforr and edited by C.S. Chard. (DSI.)

73317. LARICHEV, V. E. Neolithic settlements in Cis-Baikal; 1957-59 excavations. (Arctic anthropology, 1962. v.1, no.1, p.93-95.) Translation by B.L. Pforr, of No. 66122. (DSI.)

LARKIN, P. A., *see* Alaskan Science Conference 1960. 1961. No. 69643

LAR'KIN, VIKTOR GRIGOR'EVICH, *see* Nauchnaĭa konferentsiĭa po istorii . . . Dal'nego Vostoka. 1960. No. 74233

LARMOUR, W. A., *see* Gilliat, R., & W.A. Larmour. Shaggy toys . . . 1961. No. 71690

73318. LARSEN, ERLING. Kvaliteten av timoteihøi i Nordland 1960. (Norden, Nov. 15, 1960. årg. 64, nr.22, p.609, tables.) Text in Norwegian. **Title tr.:** The quality of timothy hay in Nordland in 1960.

The quality has improved, according to samples tested from ten farms in the Helgeland and Salten areas: the protein content is higher than in previous years, calcium is low, but phosphorus is near the requirement. (DA.)

73319. LARSEN, HELGE EYVIN, 1905– . Archaeology in the Arctic, 1935-60. (American antiquity, July 1961. v.27, no.1, p.7-15.) 61 refs. Paper presented to the Society for American Archaeology, May 6, 1960.

Reviews field activities in Alaska (except Southeast), the Aleutian Islands, Canada north of 60°N., northeastern Labrador and adjacent parts of Newfoundland and Greenland. Three broad culture horizons are recognized: a pre- or proto-Eskimo (Denbigh Flint, New Mountain, Sarqaq), a paleo-Eskimo (Choris, Norton, near-Ipiutak, Ipiutak, Dorset), and a neo-Eskimo represented by the northern maritime tradition of Ökvik to Inugsuk. The artifacts of each culture complex are characterized and their chronological sequence discussed. (DSI.)

73320. LARSEN, HELGE EYVIN, 1905– . Rink-Medaljen. (Grønland, Apr. 1961, nr.4, p.147-48, illus.) Text in Danish. **Title tr.:** The Rink medal.

Notes its establishment by the Danish society Det Grønlandske Selskab in 1960; it is to be awarded to persons who have made outstanding contributions to the exploration of Greenland or to the welfare of the Greenlanders. (CaMAI.)

73321. LARSEN, HELGE EYVIN, 1905– . Rink-medaljen tildelt Grønlandsforskeren Dr. Lauge Koch. (Grønland, Feb. 1962, nr.2, p.61-64, illus.) Text in Danish. **Title tr.:** The Rink medal awarded to the Greenland explorer Dr. Lauge Koch.

Notes award in Dec. 1961 to Dr. Koch, who was 33 summers and six winters in Greenland, surveying and doing geological work, 1916 to 1923 in North Greenland, and 1926-1959 in East Greenland. (SPRI.)

73322. LARSEN, HELGE EYVIN, 1905– . The Trail Creek caves on Seward Peninsula, Alaska. (International Congress of Americanists, 34th, *Vienna,* 1960. Proceedings *pub.* 1962, p.284-91, illus.) 11 refs.

Describes some 300 stone and bone artifacts excavated in 1949-1950 in two multi-layer caves in the Goodhope River basin. The inventory, primarily projectile points and foreshafts, no tools (burins, knives, scrapers, etc.), suggests the caves to have been used as temporary shelters by hunters. At least eight different culture stages are discernible, ranging from about 4000 B.C. to the mid-18th century A.D. Datings are based on comparison with similar finds elsewhere in Alaska, Canada, also Siberia. Several objects from the deepest culture-layer may ante-date the Denbigh Flint Complex. (DSI.)

LARSEN, HELGE EYVIN, 1905– , *see also* Arktisk Institut. Danish arctic research . . . 1961-62. No. 69863

73323. LARSEN, JAMES A. Major vegetation types of western Ontario and Manitoba from aerial photographs. Madison, Wis., Feb. 1962. 26 p. tables, maps, stereo. aerial photos 17 x 11 in. (Wisconsin. University. Dept. of Meteorology. Technical report no.7, ONR Contract Nonr 1202 (07), Task No.387-022.) Refs.

Includes interpretation of vegetation types in several areas of Northern Manitoba, viz: Lynn Lake and Brochet 57°55′N. 101°40′W. Zed Lake 56°55′N. 101°18′W., Cochrane Lake 56°50′N. 100°50′W., Ilford 56°4′N. 95°40′W., and God's Lake 54°25′N. 94°20′W. Photography was taken during 1947-1956 on scales of 1:30,000 to 1:60,000. Topographic and vegetational characteristics are summarized in a table. (DWB.)

73324. LARSEN, JOHANNES. Sidste kapitel af dansk hvalfangst. (Søens verden, 1961-1962. årg 3, nr.2, p.42-54, illus., table.) Text in Danish. **Title tr.:** The last chapter in Danish whaling.

Illus. account of whaling in Davis Strait from the 1920's till 1958, last year of Danish participation. (AIKøbenhavn.)

73325. LARSON, ALVIN L., *and* **H. E. EDERSTROM.** Blood glucose changes induced by cold epinephrine and norepinephrine in dogs of various ages. (Society for Experimental Biology and Medicine. Proceedings, May 1962. v.110, no.1, p.131-34, illus., tables.) 18 refs.

Cold exposure for one hour produced significant hyperglycemia in dogs older than five days. Epinephrine with cold similarly affected all ages, though less the five-day and younger pups. Norepinephrine with cold showed a hypoglycemia. Core temperatures are also noted. (DLC.)

LARSON, ANNA M., *see*

Alaskan Science Conference 1960. 1961. No. 69643

Hannon, J.P., & A.M. Larson. Fatty acid metabolism . . . 1962. No. 71992

Hannon, J.P., & A.M. Larson. Fatty acid metab. & norepinephrine cold. 1962. No. 71991

73326. LARSON, STEN. On the influence of the arctic fox *Alopex lagopus* on the distribution of arctic birds. (Oikos 1960. v.11, fasc. 2, p.276-305, map.) 47 refs.

Analysis intended to explain the lack of certain bird species, breeding on the tundra, from coastal areas of Greenland and from Spitsbergen. These areas have no lemmings, hence the arctic foxes, common there, subsist on birds, their "second choice" in food. Bird species with low-degree adaptation to the fox, are thus rare or absent. Some ten such birds are listed. Predation by raven and gulls also plays some role. (DLC.)

LARSSON, B., *see* Andersson, B., & B. Larsson. Influence of local temperature changes . . . 1961. No. 69770

73327. LARSSON, BENGT. Den gamla renskötseln i Arvidsjaur. (Samefolket, Dec. 1961, nr.12, p.177-79, illus., port.) Text in Swedish. **Title tr.:** Old reindeer husbandry in Arvidsjaur.

Summarizes an unpublished paper presented at Geografiska Institutionen, Uppsala Univ. on old

milking pastures in the Lapp village of Malmesjaur, approx. 65°50′N. 19°30′E. Reindeer were milked (procedure described) once a day and the milk used mostly for cheese production, though some was eaten with berries. Milking of reindeer was abandoned about the turn of the century, as interest in meat production increased. (SPRI.)

LARSSON, HARALD, *see* Näslund, M., *& others.* Samernas skolgång; betänkande . . . 1960. No.74203

73328. LARSSON, KATHLEEN R. ALLINGTON. The bogs of central Labrador-Ungava; an examination of their physical characteristics. (Geografiska annaler, 1961. v.43, no.3-4, p.401-417, illus., tables.) 34 refs.

Classifies and describes the bogs of the Knob Lake area, from field examination, aerial photographic study, and library research. Climatic influences are outlined; fundamental processes of bog formation and development are explained. Five major types are recognized on air photographs: string bog, closed strings, sedge meadow, spruce muskeg, and tamarack swamp forest. Two others, actually combinations, are recognizable: string bog with trees, and closed strings with tree growth. Further field work is needed for complete explanation of the string bog. (DWB.)

73329. LARSSON, PETER, *and* **S. ORVIG.** Albedo of arctic surfaces. Montreal, Oct. 1962. iii, 33 p. diagrs., tables. Appendix. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no.54.) 18 refs. *Also issued as:* U.S. Air Force. Cambridge Research Laboratories, Contract no. AF 19(604)-7415, Scientific report no.6. AFCRL-62-1069.

Concludes the albedo portion of a study of the heat balance of the Arctic, complementing the atlas *(infra).* Area occupied by 5% albedo classes per 5° latitude belt expressed as a percentage of the total areas of each belt are tabulated, specific albedo values having been assigned to the classes used in maps of the atlas. Albedos are tabulated for both direct and diffuse radiation conditions where they differ significantly. The direct radiation albedo information is presented in tables and in stereograms for each month. Appended are tables of solar declination and duration of daylight for each 5°-latitude circle from 60°N. to the Pole. (DGS.)

73330. LARSSON, PETER, *and* **S. ORVIG.** Atlas of mean monthly albedo of arctic surfaces. Montreal, Nov. 1961. 2 p. & 12 maps 14.5 x 11.5 in. (McGill University. Arctic Meteorology Research Group, Publication in meteorology no.45.) 42 refs. *Also issued as:* U.S. Air Force. Cambridge Research Laboratories, Contract no. AF 19(604)-7415, Scientific report no.2.

The 12 monthly maps show mean albedo distribution in wide class groups (20% intervals), southward to about the 65th parallel. Sources are discussed; a wide range of reliability is noted. (DWB.)

73331. LASHOV, B. Nasushchnaîa problema olenevodstva. (Sel'skoe khozîaĭstvo Sibiri, Oct. 1961. god 6, no.10, p.75-76.) Text in Russian. **Title tr.:** The urgent problem in reindeer raising.

Discusses the transition from a nomadic to a settled way of life in this industry. Three stages are recommended from experience in the Nenets National District: the first is to restrict seasonal migration to the actual teams of herdsmen, the members of the families not actively engaged in herding to remain in a settled abode. The second stage is to reduce the number who follow the herds to only part of the team; the last step is to let the herds range unattended.* Two collectives in the Nenets District have reached the second stage; the third is under consideration for some naturally closed-off areas: Kolguyev and Vaygach Islands, Kanin and Yamal Peninsulas. Air transportation is required for the complete settlement of reindeer herders. (DLC.)

73332. LASSEN, KNUD. Day-time aurorae observed at Godhavn 1954-56. Charlottenlund, 1961. 70 p. illus., graphs, tables. (Denmark. Meteorologiske Institut. Meddelelser no.15.) 17 refs.

Reports on visual observations of morning auroras, during the 1954/55 and 1955/56 winters in Godhavn, West Greenland. Appearance and characteristic onset near the zenith are described; statistical data are given on variation of direction and on zenith distance of arcs. No appreciable magnetic perturbations accompanied the auroras, but concurrent disturbance of the E- and F-regions of the ionosphere is noted. Quiet rayed bands were observed on some mornings; unlike the other auroras, they came from the south, were accompanied by moderate magnetic perturbations and greater ionospheric disturbance. A group of quiet auroras, observed in the late mid-winter afternoon, is assumed to be part of the daytime auroras. The log for a single night's observation is appended. (DN-HO.)

73333. LASSEN, KNUD. Existence of an inner auroral zone. (Nature, *London,* Oct. 31,1959. v.184, no.4696, p.1375-77, graphs, map.) 12 refs.

Summarizes a study presented in part at the Auroral Conference at Uppsala in Aug. 1958. Observations at Godhavn carried out during the winters of 1954-1955, and 1955-1956 showed auroras occurring on 106 clear mornings without moonlight, many of them at the zenith. Records made at Kingua-Fjord, Chesterfield, Coppermine, and Murchison Bay showed that most of the morning-hours auroras at the locations also occurred near zenith, in agreement with observations by A.P. Nikol'skiĭ (No.53601). It was found that whereas the evening type auroras are strongly related to local magnetic activity, the morning-type auroras are not correlated with local magnetic activity, and appear to be independent of the planetary state of disturbance. Great ionospheric disturbances were found to begin at the same time as the onset of morning auroras. These investigations appear to confirm the theoretical prediction of Alfvén of the existence of an inner auroral zone at a polar distance of 5°-10°. (DLC.)

73334. LASSEN, KNUD. Geophysical activity in Greenland of the Danish Meteorological Institute. (*In:* International Geographical Congress 1960. Physical geography . . . 1961. p.161-62.)

Traces the history of its magnetic studies: at Godthåb since 1728, at Godhavn since 1925, during the two International Polar Years and the IGY.

* So-called extensive herding, cf No. 43292-43293.

Auroral photography was made at the magnetic stations and at Nord during the IGY; results confirmed an indication of earlier observations that in North Greenland, auroras have a diurnal frequency of occurrence with a max. near noon. (DGS.)

73335. LASSEN, KNUD. Local aurorae in the morning hours at Godhavn. Charlottenlund, 1959. 15 p. diagrs., map. (Denmark. Meteorologiske institut. Communications magnétiques, no.24.) 9 refs.

Describes a group of auroras occurring almost every clear morning near zenith. They are presumed to belong to an inner auroral zone crossing Greenland from Godhavn to Danmarkshavn. The auroras are related to the occurrence of sporadic ionospheric layers, but not to magnetic activity.— From author's abstract. (AIKøbenhavn.)

73336. LASSEN, KNUD. On the variation of the magnetic activity at Godhavn. Charlottenlund, 1958. 46 p. tables, graphs. (Denmark. Meteorologiske institut. Communications magnétiques, 7 refs.

Presents results of study based on *K*-indices for 1944-1955. The activity is composed of two main types, J and N_T. J has its maximum in the forenoon; its average variation through the day and the year follows the sun. The daily variation has its maximum at local magnetic noon, the yearly distribution at summer solstice. In the course of the solar cycle, the daily mean value increases with increasing planetaric activity, A_p, whereas the amplitude of the variation follows the sunspot number R. N_T has its maximum in the evening and is most dominant in years near sunspot minimum. Its variation through the sunspot cycle is controlled by R (nearly opposite in phase). The inner border of the zone of maximum N (and auroral) activity is nearest to the magnetic pole in sunspot minimum years.— From author's abstract. (AIKøbenhavn.)

LATEEF, M. A., *see* Craig, R.A., *& others.* Stratospheric warming . . . 1957. 1961. No. 70847

73337. Item withdrawn.

73338. LATS, A. Vek nyneshniĭ i vek minuvshiĭ. (Master lesa, Oct. 1961, no.10, p.12-13, illus.) Text in Russian. **Title tr.:** The present time and times gone by.

Compares the highly mechanized operations at the Verkhovskiy (63°32′N. 40°21′E.) lumbering establishment in Arkhangel'sk Province with the industry in the 1930's: manual work and horse-drawn transport. (DLC.)

73339. LATTMAN, LAURENCE H., *and* **A. V. SEGOVIA.** Analysis of fracture trace pattern of Adak and Kagalaska Islands, Alaska. (American Association of Petroleum Geologists. Bulletin, Feb. 1961. v.45, no.2, p.249-51, map, graphs.) 4 refs. *Also issued as:* Pennsylvania State Univ. College of Mineral Industries. Contribution no. 60-11.

Orientation of fracture traces or "linears" on these two islands shows a pronounced peak in the northeast quadrant in areas of extrusive rocks. Difference in fracture trace orientation on opposite sides of the Finger Bay fault on Adak does not result from major lithologic differences but may be due to a combination of lithologic and structural effects. (DGS.)

LAUFE, ABE, *see* Fitzgerald, E.M. Army doctor's wife . . . 1962. No. 71432

LAUGHLIN, C. D., *see* O'Brien, B.J., *& others.* Measurements . . . electrons . . . 1962. No. 74457

73340. LAUGHLIN, WILLIAM SCEVA, 1919– Acquisition of anatomical knowledge by ancient man. (Viking fund publications in anthropology, 1961. no.31, Social life of early man, p.150-75.) 50 refs.

Evaluation of the probable anatomical information possessed by paleolithic man based on a study of the Aleuts. Their anatomical and medical terminology, methods of descriptive nomenclature and classification are described. The Aleuts' five main sources of anatomical knowledge are discussed and compared with those of Eskimos, Paleosiberians, and Tungus: study of anatomical structures, rational medicine and physical culture, dissection of human bodies, comparative anatomy especially with the sea otter, mummification. The Aleuts' application of this knowledge in their traditional medical practice is dealt with. (DSI.)

73341. LAUGHLIN, WILLIAM SCEVA, 1919– , *and* W. G. REEDER. Aleut-Konyag prehistory and ecology, 1961. Rationale for the collaborative investigation of Aleut-Konyag prehistory and ecology. (Arctic anthropology, 1962. v.1, no.1, p.104-108.)

Discusses the need for inter-disciplinary collaboration to interpret correctly the various aspects of a given culture, and describes methods for the correlation of specialized reports. The eastern Aleuts of Umnak, and Konyag Eskimos of Kodiak Island are selected to exemplify a multilateral study. Geology and physiography of the islands, faunal and human migrations, development and physical changes in isolates, archeological evidence on the ethnography, culture, economy and nutrition of the population, etc. are sketched. Results of the summer 1961 excavations by a joint party of the Departments of Anthropology and Zoology, University of Wisconsin, and headed by the authors, are reported in four papers by the senior and junior authors, leaders of the field party, and by W. McHugh, and A.A. Dahlberg, q.q.v. (DSI.)

73342. LAUGHLIN, WILLIAM SCEVA, 1919– . Aleut-Konyag prehistory and ecology, 1961. Archaeological investigations on Umnak Island, Aleutians. (Arctic anthropology, 1962. v.1, no.1, p.108-110.)

Describes the skeletal (paleo- and neo-Aleut), faunal, and cultural materials excavated at the old village site of Chaluka near Nikolski. Some four hundred recovered artifacts include stone dishes, a new type of double-stepped adze head, also remains of a tent ring or house base of unusual construction. The earliest radiocarbon date, 3750±180 yrs. B.P., is that of a charcoal sample from 300 cm. depth, 60 cm. above the base of the midden. Finds of a Russian skeleton and axe support the author's estimate of occupation continuity from about 2000 B.C. to recent. (DSI.)

73343. LAUGHLIN, WILLIAM SCEVA, 1919– , *and* W. G. REEDER. Revision of Aleutian prehistory. (Science, Sept. 14, 1962. v.137, no.3533, p.856-57, table.) 6 refs.

Description of paleo-Aleut skeletons; bone,

stone and ivory artifacts, and remnants of sea mammals, birds, fish and invertebrates found at Chaluka, Umnak Island, and dated to 1788±180 B.C. Faunal composition and the physical type of (16) human skeletons show no appreciable change for over three thousand years and the styles of artifacts do not suggest ecological adaptation either. (DLC.)

LAUGHLIN, WILLIAM SCEVA, 1919– , *see also* Alaskan Science Conference 1961. 1962. No. 69644

LAUGHLIN, WINSTON M., *see* Alaskan Science Conference 1961. 1962. No. 69644

73344. LAVOTHA, Ö. Das Passiv in der wogulischen Sprache. (Suomalais-ugrilainen seura. Aikakauskirja, 1960. v.62, no.4, p.1-34.) Refs. in text. Text in German. **Title tr.:** Passive voice in the Vogul language.

Comparative analysis of the passive and active sentence structure in Vogul and Ostyak: the active voice stresses the perpetrator or origin of an action, the passive its object or direction. (DLC.)

LAVRENT'EV, ŪU. G., *see* Zhirov, K.K., & *others*. K geokhimii redkozemel'nykh èlementov . . . 1961. No. 76672

73345. LAVRENT'EV, L. N. Pnevmonii krys, sprovotsirovannye okhlazhdeniem, cherez 5 mesiatsev posle rentgenovskogo oblucheniia. (Meditsinskaia radiologiia, Aug. 1961. t.6, no.8, p.77-78.) Text in Russian. **Title tr.:** Pneumonia in rats, provoked by cooling, five months after X-irradiation.

Notes investigations comprising 42 animals, half of them serving as controls. Exposure to 2-4°C. for several days caused the death of all irradiated animals, none of the controls. Histo- and bacteriological conditions of the lungs, are considered. (DNLM.)

73346. LAVRENT'EV, MIKHAIL ALEKSEEVICH, 1900– .Vazhnye problemy organizatsii nauki. (Akademiia nauk SSSR. Vestnik, Dec. 1962. god 32, no.12, p.15-18.) Text in Russian. **Title tr.:** Important problems of organization of science.

Work, achievements and main tasks of the Siberian Division of the Academy of Sciences are briefly outlined by its vice-president to the plenary meeting of Central Committee of the Communist Party in Nov. 1962. The difficulty of recruiting qualified scientists for Academy institutions in Siberia is noted. The importance of studies toward the utilization of underground heat in Kamchatka and the Kurils is stressed, citing drillings (12 of industrial importance) on the Okhotsk seacoast. (DLC.)

LAVRENT'EV, MIKHAIL ALEKSEEVICH, 1900– , *see also* Pacific Science Congress. 1961. No. 74619

73347. LAVRENT'EV, V. Dlia popolneniia zooparka. (Okhota i okhotnich'e khoziaistvo, Aug. 1961. god 7, no.8, p.20, illus.) Text in Russian. **Title tr.:** Contribution to a zoological park.

Notes two bear cubs taken from a den on a steep slope near Shelansk in Magadan Province for the Moscow Zoological Garden. (DLC.)

73348. LAVRENT'EV, V. Ne uspokaivat'sia na dostignutom. (Okhota i okhotnich'e khoziaistvo, May 1961. god 7, no.5, p.4-5, illus.) Text in Russian. **Title tr.:** Don't be satisfied with what has been achieved.

Reports the take of hunters' organizations in Magadan Province, as 136.3% of their objective and the skins worth 1,544,000 rubles more than the value planned. The most successful collectives and hunters are cited. Shortages in equipment (e.g. skis) and other failures are noted; they should be eliminated. (DLC.)

73349. LAVRENT'EV, V. Tak derzhat'; trudovaia pobeda magadanskikh okhotnikov. (Okhota i okhotnich'e khoziaistvo, Apr. 1962. god 8, no.4, p.7-9, illus., ports.) Text in Russian. **Title tr.:** Hold the line; achievement of the Magadan hunters.

Chief hunting inspector outlines work of the professional and amateur hunters, citing the outstanding individuals with data on catch; successful fur farming in the province is also noted. (DLC.)

LAVRENT'EV, V. A., *see* Golovanov, G.A., & *others*. Rekonstruktsiia . . fabriki. 1962. No. 71743

73350. LAVROV, L. Bobry v basseine reki Kondy. (Okhota i okhotnich'e khoziaistvo, Sept. 1961. god 7, no.9, p.29-32, illus.) Text in Russian. **Title tr.:** Beavers in the Konda River basin.

Reports a 500 km. boat trip in 195[k] from Lake Tur-Paul-Tur (approx. 62°10′N. 61°43′E.) down the Yeyt'ya and Konda Rivers to Shaim (60°21′N. 64°10′E.), studying beavers in the Konda-Sos'va Preserve. The land forms and waterways, vegetation and wildlife are outlined. Behavior of the beavers and structure of their huts are described. The heavy spring floods and low water in summer on the upper reaches of the Yeyt'ya are found to hamper beaver propagation in the observed area. (DLC.)

73351. LAVROV, V. V. Voprosy fiziki i mekhaniki l'da. Leningrad, Izd. "Morskoi Transport", 1962. 118 p. illus., diagrs. (Leningrad. Arkticheskii i antarkticheskii nauchno-issledovatel'skii institut. Trudy t.247.) 152 refs. Text in Russian. **Title tr.:** Problems in ice physics and mechanics.

Presents a monographic study on ice formation, its behavior under a load, and its mechanical properties. Under the first of these broad headings the following topics and phenomena are discussed: the structure of liquids, formation of crystals, the effect of impurities on crystal formations, the growth of crystals, the mechanism and process of ice crystal growth in slightly supercooled water, the cause of disc-form ice nuclei, the nature of "bottom" ice, cohesion between ice particles and ice and other bodies, the structure of real crystals as compared with ideal crystals, formation and structure of ice cover. In chapter 2, ice is considered as a material, the work of ice under load, the destruction phenomenon, the scale effect and ice behavior during bending, compression, and tensile deformations; the technology of experimental ice specimen preparation is dealt with, as is the effect of technology on the destruction mechanism of ice, the effect of loading rate, of a continuous and recurrent load, plastic deformation of ice. Mechanical properties of ice are treated as a function of its formation and growth; elastic properties of ice, the ultimate compression bending tensile and shock-load strength of ice are discussed; and

methods are recommended of determination of ice cover strength, the relationship between the deformation modulus and the ultimate strength of ice in bending, the viscosity coefficient of ice, the strain and stress state of ice cover. In a final section, the author discusses the similitude modelling of ice for experimental studies, and presents his own experience in experimental glaciology. (CaMAI.)

73352. LAVRUSHIN, ÎU. A., *and* **R. F. GITERMAN.** Osnovnye ėtapy istorii razvitiia rastitel'nosti v nizov'iakh r. Indigirki v chetvertichnom periode. (Akademiia nauk SSSR. Doklady, July 21, 1961. t.139, no.3, p.681-84, diagr.) 6 refs. Text in Russian. **Title tr.:** The main stages in vegetation development history on the lower reaches of the Indigirka River during the Quaternary period.

Proposes a new stratigraphic scheme consisting of eight local series, each described with the prevailing fossil plants diagrammed, on the basis of spore-pollen analyses. The change of climate in the Quaternary period is noted. (DLC.)

73353. LAVRUSHIN, ÎU. A. Osnovnye osobennosti allîuviia ravninnykh rek subarkticheskogo poîasa i periglîatsial'nykh oblastei materikovykh oledenenii. (*In:* Akademiia nauk SSSR. Geologicheskii institut. Voprosy . . . antropogena, 1961, p.200-211.) 35 refs. Text in Russian. Summary in English. **Title tr.:** Main features of the alluvium of plains rivers of the subarctic belt and periglacial regions of continental glaciations.

From own study of deposits in the lower Yenisey and Indigirka valleys, and other sources, author characterizes alluvium deposits of the subarctic zone. Their specific features are the presence of a considerable amount of ice, ice wedges, and vegetational detritus. River alluvium in tectonically disturbed and stable regions is discussed. Periglacial conditions for forming alluvial, lacustrine and lacustrine-alluvial deposits are evaluated. (DLC.)

73354. LAVRUSHIN, ÎU. A. Stratigrafiia i nekotorye osobennosti formirovaniia chetvertichnykh otlozhenii nizov'ev r. Indigirki. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Feb. 1962. no.2, p.73-87, illus., table, diagr.) 27 refs. Text in Russian. **Title tr.:** The stratigraphy and some formation features of the Quaternary deposits on the lower Indigirka River.

Reports a 1959-1960 study between Mayor-Krest and Oyotung. Various series of these deposits are distinguished; their distribution, composition, flora and fauna, ice veins and other features are described and summarized in a stratigraphic table. (DLC.)

LAVRUSHIN, ÎU. A., *see also* Arkhipov, S.A., & *others*. Stratigrafiia . . . : 1961. No. 69859

73355. LAWRENCE, CARL J. Where is Alaska's second oil field? (Oil and gas journal, Dec. 24, 1962. v.60, no.52, p.103.)

Notes no definite indication of a major oil strike, despite 22 tests drilled in 1962, and the Beluga River gas discovery. Other possibilities include Pan American's 1 Cook Inlet and 1 Middle Ground Shoal in Cook Inlet, both blowouts, also Shell's 1 SRS State, suspended at 14,044 ft. because of weather. Geological considerations favor existence of more than one large field in Alaska. (DGS.)

73356. LAWRENCE, FRED FORREST, 1913–
Preliminary report on water-power resources of Little Susitna River and Cottonwood Creek, Alaska. Washington, D.C., Mar. 1949. 24 l. illus., graphs, tables, map. (U.S. Geological Survey. Reports, open file series, no.633.) Refs. Mimeographed.

Estimates water-power potentialities of these two streams in the Matanuska valley, and provides a basis for classifying the public land involved as to its power value. Two types of development are suggested by diversion of the Little Susitna: one with a dam near the mouth of Fishhook Creek, the other, damming Cottonwood Lake. The first would develop 374 h.p./year, second, 960 h.p./year at the time the study was made, to alleviate the critical power shortage in the Anchorage-Palmer region. (DGS.)

73357. LAWSON, JAMES M. Altimetry in topographic mapping. (Utah. University. Engineering Experiment Station, July 1957. Bulletin no.85, p.48-75, tables.) *Also issued as:* Utah. University. Bulletin, June 1957, v.48, no.13.

Describes methods and limitations of altimetry as used by the U.S. Geological Survey in the Rocky Mountains and in Alaska. Importance of planning, familiarity with the instrument, transportation, etc. are stressed. Characteristics of the multiple-base method and results of a leapfrog-altimetry test in the Brooks Range in 1956, are summarized; comparison is made with phototrigonometric traverses carried out the same summer. Altimeters are considered of value in geologic mapping in Alaska and suitable for other areas requiring at least 80-ft. contour intervals. A more detailed description of the leapfrog method is given in No. 56950. (DI.)

73358. LAWSON, RAY N., *and others*. Thermographic assessment of burns and frostbite. (Canadian Medical Association. Journal, May 20, 1961. v.84, no.20, p.1129-31, illus.) 3 refs. *Other authors:* G.D. Wlodek *and* D.R. Webster.

Description of an infrared temperature scanning method which enabled accurate assessment of the depth and area of skin destruction due to heat or cold. It was reliable in indicating the onset of gangrene in all experimental frostbite injuries of the skin. (DNLM.)

LAZAREV, ÎU. I., *see* Kratts, K.O., & ÎU. I. Lazarev. Osnovnye cherty . . . 1961. No. 73091

73359. LAZAREV, N. A. Sposoby vozobnovleniia lesov na kontsentrirovannykh vyrubkakh v Komi ASSR. (Akademiia nauk SSSR. Ural'skii filial. Institut biologii, Trudy 1960. vyp.16, p.201-205.) Ref. Text in Russian. **Title tr.:** Ways of forest renewal in areas of intensive felling in the Komi ASSR.

Reports an investigation of some ten coniferous forests, conducted since 1956. The effects of accessibility (roads) and soils as well as species succession are stressed. Satisfactory renewal was found only in dry or sphagnum pine forests. (DLC.)

73360. LAZUKOV, G. I. Drevnie pogrebennye doliny na severe Zapadnoi Sibiri. (Moskva. Univer-

sitet. Vestnik, ser. 5, geografiĭa, Sept.-Oct. 1962, no.5, p.18-23, diagr.) 10 refs. Text in Russian. **Title tr.:** Ancient buried valleys in the north of West Siberia.

Reports buried pre-Quaternary valleys in the region of the lower Ob and its tributaries the Severnaya Sos'va, Kazym, Kunovat, Poluy, and also in the Nadym, Pur, Taz, and Yenisey basins. These valleys are filled with Quaternary deposits. The position in relation to the sea level, depth and extent are characterized for some of them. Age, hypsometric position, and development conditions are discussed. Evidence is presented that this old hydrographic net was formed during maximal Neogene regression, and later was filled with deposits during the maximal Quaternary transgression. (DLC.)

73361. LAZUKOV, G. I., *and* **V. K. KHLEBNIKOV.** O gorizonte tazovskoĭ moreny v basseĭne r. Obi. (Geologiĭa i geofizika, 1961, no.4, p.74-87, sections, diagrs.) 7 refs. Text in Russian. Summary in English. **Title tr.:** On the Taz moraine horizon in the Ob River basin.

Deals with the disagreement, still current, concerning the Taz glaciation and its moraine. The so-called Taz moraine horizon at Karymkary (62°01′N. 67°18′E.) and other areas were studied and the spore-pollen analyses made are reported. The moraines in the lower part of the Ob valley are considered to be from a single Samarovo glaciation; and should be so marked on further maps of this area. (DLC.)

73362. LAZUKOV, G. I., *and* **N. S. SOKOLOVA.** Osnovnye osobennosti paleogeografii basseĭna nizhneĭ Obi v chetvertichnom periode. (*In:* Vsesoĭuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.67-74, diagrs.) Text in Russian. **Title tr.:** Main paleogeographic features of the lower Ob basin in the Quaternary period.

Reports results of studies during 1954-1957 in the Ob valley between Khanty-Mansiysk and Salekhard. Distribution and composition of the deposits are described, the Lower, Middle, Upper and Recent Quaternary distinguished. Spore-pollen analyses are evaluated. Paleogeographic environments, changes in vegetation and climate are recorded. (DLC.)

73363. LAZUKOV, G. I., *and* **B. P. NAZAREVICH.** Otlozheniĭa nizhnechetvertichnogo oledeneniĭa v basseĭne nizhneĭ Obi. (Moskva. Universitet. Vestnik, ser.4, geologiĭa. Mar.-Apr. 1962. no.2, p.60-66, map, diagrs.) 4 refs. Text in Russian. **Title tr.:** Lower Quaternary glaciation deposits in the lower Ob basin.

Reports on samples from numerous drillings in the Salekhard, Berezovo, Nadym, Pur, Kazym and other regions. Mineralogic composition, clastic material (gravel, boulders, fragments of igneous and metamorphic rocks) and other properties are described. These are considered glacial deposits transported thither from the centrum in the Ural. (DLC.)

LAZUKOV, G. I., *see also*

Chochia, N.G., & *others.* Muzhinskiĭ Ural . . . 1961. No. 70733

Markov, K.K., & *others.* Osnovnye zakonomernosti razvitiĭa . . . 1961. No. 73833

LAZUKOVA, G. G., *see* Garagulĭa, L.S., & G.G. Lazukova. Opyt primeneniĭa geobotanicheskikh issledovaniĭ . . . 1961. No. 71583

LBOVA, I. N., *see* Gromov, L.V., & I.N. Lbova. Krasnoĭarskiĭ kraĭ . . . 1961. No. 71870

73364. LEADABRAND, RAY L. A note on the disposition of daytime auroral ionization in space. (Journal of geophysical research, Feb. 1961. v.66, no.2, p.421-28, tables, diagrs.) 10 refs.

Describes the properties of an auroral reflecting region discovered during several years of VHF and UHF radar observations at College, Alaska. The layer occurs most frequently when the 80-130 km. height region is sunlit, and extends uniformly over at least several hundred km. in longitude and latitude. Its occurrence is correlated with magnetic activity. (DLC.)

LEADABRAND, RAY L., *see also* Alaskan Science Conference 1961. 1962. No. 69644

LEAHEY, ALFRED, *see also* Canada. Experiment farm substn. Ft. Simpson . . . 1954. No. 70518

LEAND, P. M., *see* Bernhard, W.F., & *others.* Studies in balanced hypothermic perfusion. 1961. No. 70170

73365. LEARMONTH, L. A. About "Ordeal by Ice." (Beaver, spring 1961. outfit 291, p.40-43.)

Comments on F. Mowat's narrative, No. 66874, of exploration in the North American Arctic. Exception is taken to the reconstruction of the last phases of the Franklin Expedition, to the erroneous impression of Canadian default of control over its arctic territories, etc. (DI.)

LEAVITT, FRANK G., *see* Lyons, J.B., & F.G. Leavitt. Structural-stratigraphic studies . . . 1961. No. 73655

73366. LEBEDEV, A. A. O gidrotermal'noĭ stadii serpentinizatsii kimberlitov v svīazi s nakhodkoĭ v nikh brusita. (*In:* Akademiĭa nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Petrografiĭa i mineralogiĭa . . . almazov, 1962. Trudy, sbornik no.8, p.74-86, illus., tables.) 11 refs. Text in Russian. **Title tr.:** On the hydrothermal stage of serpentinization of kimberlites in connection with a find of brucite in them.

Reports on a find of brucite (nemalite) in the contact zone of the Novinka kimberlite pipe in the Muna River basin. The mode of kimberlite alteration is discussed, and the metasomatic conversion of olivine into serpentine and serpentine into antigorite is recognized and described. A second hydrothermal stage of serpentinization is noted. (DLC.)

73367. LEBEDEV, ALEKSEĬ PETROVICH. K genezisu gibridnykh trappov Podkamennoĭ Tunguski, Sibirskaĭa platforma. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geologicheskaĭa, May 1961, no.5, p.17-36, illus., tables, graphs.) 25 refs. Text in Russian. **Title tr.:** On the genesis of the hybrid traps of the Podkamennaya Tunguska, Siberian platform.

Outlines the structure, geologic conditions and, mainly, petrography of hybrid traps, as studied in 1956. Two groups of trap intrusions are distinguished: the gabbro-diorites, monzonites, and leucodiorites; and the diorite-pegmatites and granophyres. The formation conditions differed for

these two groups of rocks, and their genesis is discussed. The first group crystallized from the trap solution with increased acidity; the second by metasomatic processes. The hybridization processes in traps are evaluated. (DLC.)

73368. LEBEDEV, ALEKSEĬ PETROVICH. Trappovaĭa format͡siia nizov'ev basseĭna r. Podkamennoĭ Tunguski. (*In:* Akademiia nauk SSSR. Otdelenie geologo-geograficheskikh nauk. Petrografiia Vostochnoĭ Sibiri, t.1, 1962, p.71-117, illus., tables, map, diagrs.) 8 refs. Text in Russian. **Title tr.:** Trap formation in the lower Podkamennaya Tunguska River basin.

Reviews the stratigraphy and tectonics of the region and the geologic position of trap bodies. The petrography of traps of differentiated and non-differentiated intrusions is treated in detail. Autometamorphic and hybrid traps are analyzed. Occurrence of differentiation and assimilation is outlined. Magnetite mineralization genetically connected with trap is widely distributed. Special attention is given to the Kamyshevskiy Baykitik and Khakdasis deposits. The ore-forming processes of magnetite are characterized. (DLC.)

LEBEDEV, ALEKSEĬ PETROVICH, *see also* Vakar, V.A., & A.P. Lebedev. Vulkanizm format͡sii sibirskikh trappov . . . 1962. No. 76309

73369. LEBEDEV, B. A. Pochvy nechernozemnoĭ polosy Urala. Sverdlovsk, 1956. 77 p. illus., tables, map. (Akademiia nauk SSSR. Ural'skiĭ filial. Institut biologii. Trudy vyp.7.) 47 refs. Text in Russian. **Title tr.:** Soils of the non-chernozem zone of the Urals.

Contains an outline of the geography of the range, including its northern parts; climate, geology, vegetation zones, soil formation, and soil in general. This is followed by a detailed study of soils north of 50°N., their morphology, origin, types, their physical and chemical properties. A last, extensive section (p.41-73) largely based on experimental work deals with means of improving these soils. Manure and different fertilizers are treated among others, effect(s) on different crops, dosages, long range effect on the soil. (DLC.)

73370. LEBEDEV, B. A. K voprosu o pochvennykh usloviiakh proizrastaniia kedra na Urale. (Akademiia nauk SSSR. Ural'skiĭ filial. Institut biologii. Trudy 1955. vyp.6, p.62-75, tables, map.) 10 refs. Text in Russian. **Title tr.:** The problem of soil condition of Siberian pine growth in the Urals.

Reviews earlier studies and types of soils in the area; and describes conditions in the Northern Ural. The lower- and middle-slope soils, the mountain-tundra soils, and the mountain-meadow soils, their character, vegetation and pine growth are included. The great variety of soils on which this tree (*Pinus sibirica*) thrives is pointed out. (DLC.)

73371. LEBEDEV, DMITRIĬ MIKHAĬLOVICH. Alekseĭ Il'ich Chirikov, 1703-1748. (*In:* Kuznet͡sov, I.V., *ed.* Liudi . . . 1962, p.325-36, port.) 5 refs. Text in Russian.

Describes the life and voyages of Chirikov, an outstanding navigator who was one of the leaders of the Great Northern expedition of 1725-1743. He was concerned with keeping records of the 1725-1730 phase of the expedition. His originality and his disagreements with Bering are noted. On July 1, 1741 the *Sv. Pavl* with Chirikov in command became separated from Bering's *Sv. Petr.* Chirikov's voyage on his own, discovery of islands in the Gulf of Alaska and his landing in Alaska on Aug. 20 are noted. His return to Kamchatka is described and the route mapped. (DLC.)

73372. LEBEDEV, M. M., *and* **V. N. BONDARENKO.** K voprosu o vozraste i genezise metamorficheskikh porod T͡Sentral'noĭ Kamchatki. (Sovetskaia geologiia, Nov. 1962, no.11, p.98-105, table, map, diagr.) 9 refs. Text in Russian. **Title tr.:** On the age and genesis of metamorphic rocks of central Kamchatka.

Reports study of geologic sections and mapping of metamorphic rocks of the Sredinnyy and Ganal'skiy Ranges in 1957-1960. Main features are reported, such as the absence of stratigraphic boundaries between rocks of various metamorphic facies, the similar plan of folded structures in not-metamorphosed and metamorphosed rocks, and others. Evidences are discussed that the metamorphism of Cretaceous sedimentary and volcanic rocks appeared in Upper Cretaceous time. Absolute age determination by the potassium-argon method confirms the metamorphic rocks as of Upper Cretaceous age. (DGS.)

73373. LEBEDEV, V. D. O vselenii osetrovykh Sibiri i Dal'nego Vostoka v vodoemy Vostochnoĭ Evropy. (Rybnoe khoziaĭstvo, 1961. god 37, no.10, p.11-14.) Text in Russian. **Title tr.:** Introducing Siberian and Far Eastern sturgeons into East European waters.

Describes north-Asiatic species of these fish, including arctic dwellers like the Siberian sturgeon and the Siberian sterlet, which could be introduced into North European waters. Their ecology, size and growth, food, migrations, etc. are also considered. (DLC.)

73374. LEBEDEVA, E. P. Prostoe predlozhenie v man'chzhurskom iazyke sravnitel'no s évenkiĭskim. (Leningrad. Gos. pedagogicheskiĭ institut. Uchenye zapiski 1955. t.111, Materialy Get͡senovskikh chteniĭ, p.162-64.) 2 refs. Text in Russian. **Title tr.:** The simple sentence in the Manchu language compared to Evenki.

Syntactic analysis of phrase and sentence structure in Tungus-Manchu languages. The comparatively loose word order in the Evenki-Tungus sentence is noted. (DLC.)

73375. LEBEDEVA, I. M. O nekotorykh zakonomernostiakh taianiia lednika MGU na Poliarnom Urale. (Issledovaniia lednikov i lednikovykh raĭonov, 1961. vyp.1, p.126-35, graphs.) Text in Russian. Summary in English. **Title tr.:** Certain features in the melting of the MGU Glacier in the Polar Ural.

Reports studies in summers of 1958 and 1959, using various methods of observing surface and internal melting. Melting was greatest at the terminal of the tongue, less in the firn zone, and least in the central part of the tongue. The high melting rate in the firn zone is ascribed to the high rate of moisture condensation on the plateau and the "absorption" of rain by the firn. The aver-

age daily rate of melting (in terms of water) was 39 mm. in 1958 and 54 in 1959. A formula is supplied for improving the accuracy of rod and runoff measurements by taking into account the effect of solar radiation. (CaMAI.)

73376. LEBEDEVA, M. Kol'tsevanie ptits, mezhdunarodnoe delo. (Okhota i okhotnich'e khoziaĭstvo, Apr. 1962. god 8, no.4, p.14-18, map.) Text in Russian. **Title tr.:** Bird banding is an international concern.

Reviews the development and organization of bird banding abroad and in the USSR; its importance for migration and longevity studies is stressed, and exemplified. Banding in the Soviet Union started in 1924; 678,550 birds of 392 species were banded by 1954, and nearly one million during 1955-1960. Main banding centers of the world are indicated on map. (DLC.)

73377. LEBEDEVA, N. A. Vliianie nizkikh temperatur na morfologiiu khromosom vidov kartofeliа. (Akademiia nauk SSSR. Doklady 1961. t.139, no.2, p.463-66, illus.) 17 refs. Text in Russian. **Title tr.:** Effect of low temperatures upon chromosome morphology of potato species.

Reports study of the effects of 12 hr. exposure to near-freezing temperature. Shortening and diminishing of the chromosomes, polymorphism, and their relation to frost resistance were noted. Death of the cells from cold is attributed to chromosome injury. (DLC.)

LEBEDEVA, NADEZHDA SERGEEVNA, *see* Grozdilova, L.P., & N.S. Lebedeva. Nizhnepermskie foraminifery . . . 1961. No. 71885

LEBEDINSKIĬ, A. I., *see* Fel'dshteĭn, IA. I., & *others*. Auroral planetary distrib. 1962. No. 71370

73378. Le BLANC, JACQUES ARTHUR, 1921– Local adaptation to cold of Gaspé fishermen. (Journal of applied physiology, Nov. 1962. v.17, no.6, p.950-52, illus.) 7 refs.

Response of extremities to immersion in ice water indicates that these inhabitants of the lower Gulf of St. Lawrence area have "a general peripheral adaptation to cold." This is maintained throughout the year. Response to hot immersion was not different from controls. (DLC.)

73379. Le BLANC, JACQUES ARTHUR, 1921– . Peripheral circulation in cold climates. (American heart journal, Mar. 1962. v.63, no.3, p.287-89, illus.) 7 refs.

Presents an outline of peripheral responses to cold, direct and nervous, resulting in reduced circulation: cold adaptation in Eskimos and whites; cold pressor test and responsiveness of the sympathetic neural system. (DLC.)

73380. Le BLANC, JACQUES ARTHUR, 1921– , *and* **G. NADEAU.** Urinary excretion of adrenaline and noradrenaline in normal and cold-adapted animals. (Canadian journal of biochemistry, Feb. 1961. v.39, no.2, p.215-17, table.) 13 refs.

A five-fold increase of these two amines was observed in rats acclimatized to 10°C. Conditions in adrenalectomized animals indicate that the increase in adrenaline originates in the adrenals, that of noradrenaline, outside these glands. (DLC.)

73381. LeBOURDAIS, DONAT MARC, 1887– . Sir Hubert Wilkins in the Canadian Arctic, the making of an explorer. (Canadian geographical journal, May 1962. v.64, no.5, p.160-67, illus.)

Reviews Wilkins' explorations, especially with Stefansson during the Canadian Arctic Expedition, 1913-1918. Flights over the Arctic Basin from Alaska, 1926-1928, and in 1937 are noted, also the *Nautilus* episode. (DGS.)

LECLAIRE, F. P., *see* Ehrlich, W.A., & *others*. Soil . . . Nelson R. . . . 1959. No. 71213

73382. LEDENEV, V. G. Ispol'zovanie termistorov dliа izmereniiа temperatury vody v more. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik stateĭ, vyp.1, p.131-34, diagr.) 3 refs. Text in Russian. **Title tr.:** The use of thermistors for measuring water temperatures at sea.

Describes the MT-54 thermistor, and its application to temperature measurements of water in the sea. The mathematics for calculation of the thermistor resistance bridge is given, and advantages of this thermistor over the conventional electric thermometers are explained. The smallness (like a pinhead) and sturdiness of the thermistor are additional factors for the greater accuracy of its performance in comparison with the electric thermometer, and for the possibility of measuring sea temperature simultaneously at different depths. The test measurements carried out with the thermistor by hydrological stations and from a moving vessel produced study data with an accuracy of 0°.01 C. as against 0°.1 C. given by EST-1 thermometer. (CaMAI.)

73383. LEDENEV, V. G. Ob ispol'zovanii elektromagnitnogo izmeritelia techeniĭ v arkticheskikh moriakh. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, sbornik stateĭ, vyp.1, p.106-110, diagrs., table.) 5 refs. Text in Russian. **Title tr.:** On the use of the electro-magnetic current meter in arctic seas.

Describes application of this device: EMIT to the shallow seas of the Arctic, and its performance during the 1958 navigation season. The problem of the susceptibility of the apparatus to the variations of the vertical component, H_Z, of the earth's magnetic field in high latitudes, and the possible effect of such variations on the readings of the meter is investigated. Calculations of the measured current velocity, V^1, by the formula, $V^1 = E/H_z \cdot l \cdot 10^{-8}$ cm./sec., where E is the potentiometer reading in millivolts, and l is the effective length of the conductor in cm., the maximum error (for $H_Z = 2{,}000\ \gamma$) in V^1 was found to be 5-6 cm./sec. The performance of EMIT in the shallow arctic seas was found satisfactory. (CaMAI.)

73384. LEDUC, JEAN. Catecholamine production and release in exposure and acclimation to cold. (Acta physiologica scandinavica, 1961. v.53, suppl. 183, p.3-101, illus., tables.) Over 150 refs.

Study of rats exposed to acute or chronic cold, with special emphasis on the presence of catecholamines in the urine. Results indicate that these substances "are strongly involved" in resistance to cold and in acclimatization. Further, noradrenaline was found to be the chief mediator

in chemical thermoregulation, with adrenaline apparently forming the second line of defense against cold. The site of origin and the role of dopamine in cold resistance could not be established. The study is preceded by an extensive review of earlier work. (DNLM.)

73385. **LEDUC, JEAN.** Excretion of catecholamines in rats exposed to cold. (Acta physiologica scandinavica, 1961. v.51, fasc. 1, p.94-95, illus.) 5 refs.

Rats exposed to + 3°C. very rapidly increased excretion of noradrenaline, which was still relatively high after a month in the cold. Adrenaline excretion increased slowly to a peak in 6-8 days, and then fell rapidly. Other aspects of these experiments are noted. (DNLM.)

73386. **LEE, DALLAS W.** Control survey operations in Central Alaska. (Surveying and mapping, June 1962. v.22, no.2, p.277-80.)

Outlines methods of control, equipment, and transportation used in mapping a 150-mi. segment, from the Matanuska Valley northward between the Talkeetna and Mt. McKinley Ranges, of the 300-mi. Anchorage-Fairbanks Route 35. The project included reconnaissance mapping for selecting the preliminary route, long-scale topographic mapping to determine the final centerline, photogrammetric, cross-sectioning, bridge-site surveys, section-corner ties, and staking of the final alignment. Each type of survey is described in turn and problems of communications, transportation, and logistics are discussed. (DLC.)

73387. **LEE, FRED S.** Arctic accommodation. (Canadian oil and gas industries, Mar. 1961. v.14, no.3, p.31-34, illus., port.)

Outlines advantages and disadvantages of prefabrication of northern buildings. Testing of a prefab house designed by Arctic Units Ltd. at Cape Dorset on Baffin Island is described and illus. Easily dismantled, its insulation, windows, weight, structural strength, and fire resistance are stressed as favorable features. (DGS.)

73388. **LEE, S. M.** Preliminary report on Port La Perouse-Normand Point area (Port Harrison-Hopewell Point) New Quebec. Quebec, 1961. 9 p. table, fold. map. (Quebec. Dept of Natural Resources, P.R. no.445.) 2 refs.

Reports on the geology of this 400 sq. mi. area, 58°05′-27′N. 77°22′-78°10′W., along the east coast of Hudson Bay, as investigated in summers 1959 and 1960, and shown on map at scale 1:63,360. Precambrian bedrock consists mainly of metamorphosed sedimentaries and volcanic and granitic rocks; some of the latter cut the two older types and contain inclusions and granitized remnants of them. The granitic rocks are cut in turn by numerous dikes of diorite, gabbro, and pegmatite, and veins of quartz. The metasedimentary and metavolcanic rocks are folded into complex synclines surrounded by the granites and gneisses. Faults, some 30 mi. in length, are numerous, and jointing is widespread. Iron-bearing rocks occur in the synclinal basins; soapstone, sulfides, and asbestos are also present in the area. (DGS.)

73389. **LEGENDRE, VIANNEY.** Ogac ou morue de roche, *Gadus ogac* Richardson, 1836: synonymie et bibliographie. (Naturaliste canadien, Apr. 1961. v.88, no.4, p.85-93.) Refs. Text in French. **Title tr.:** Ogac or rock cod, *Gadus ogac* Richardson, 1836: synonymy and bibliography.

Proposes the Eskimo word *ogac* as the French Canadian name for the Greenland cod, and presents references to the species for Quebec; its synonymy and bibliography on its distribution are added. (DGS.)

LEGER, E. G., *see* Dickson, W.J., & E.G. Leger. Muskeg trafficability . . . 1962. No. 71026

73390. **LEGGET, ROBERT FERGUSON.** Building in arctic Canada. (New scientist, Apr. 13, 1961. v.10, no.230, p.42-45, illus., maps.)

General outline of climatic conditions and construction techniques on permafrost. (DLC.)

73391. **LEGGET, ROBERT FERGUSON,** *and others.* Permafrost investigations in Canada. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.956-69, map, diagr., table.) 41 refs. *Other authors:* H.B. Dickens *and* R.J.E. Brown.

Surveys work by the National Research Council of Canada, Division of Building Research; included are: mapping of permafrost distribution in Canada, a long-term project; a current study of basic climatic and terrain factors, to improve prediction of permafrost occurrence. Chief energy factors affecting permafrost distribution cannot be measured accurately enough to determine the thermal condition causing permafrost, which is the integrated effect of climatic and terrain factors over a long period of time. Current study proposes to investigate the thermal characteristics of the terrain factors, and to correlate these with the climatic factors and the distribution of perennially frozen ground. (DLC.)

LEGGET, ROBERT FERGUSON, *see also*

National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

Royal Society of Canada. Soils . . . 1961. No. 75236

73392. **LEHNER, LORE.** Die kulturlandschaftliche Entwicklung Finnisch-Lapplands nach dem Zweiten Weltkriege. (Geographische Gesellschaft in München. Mitteilungen 1960. Bd. 45, p.51-145, illus., tables, maps in pocket.) 288 refs. Text in German. **Title tr.:** Cultural landscape development of Finnish Lapland after the Second World War. Ph.D. dissertation.

Describes the nature, settlement and economy of this 116,000 km² area, based on field study and evaluation of an extensive literature including that in Finnish. Colonization of Lapland and its cultural status before the war are summarized; effects of the war are noted. Main emphasis is given to the post-war period and the population; settlements and new colonization are treated in detail. Agriculture, forestry, industry, water power and transportation problems are outlined. Quantitative and qualitative changes in the area are characterized. (DGS.)

73393. LEHR, PAUL E. Methods of archiving, retrieving and utilizing data acquired by Tiros meteorological satellites. (American Meteorological Society. Bulletin, Oct. 1962. v.43, no.10, p.539-48, maps, diagr., table.) Refs.

Describes methods used for preparing TIROS Vidicon (television) pictures and radiation data for collecting, the cataloguing procedures, and accessibility for research. Area map used for cataloguing TIROS photographic coverage includes areas north and south to 60°. A sample radiation map from Orbit 4, TIROS II shows Northern Quebec, and Labrador. Current plans for the NIMBUS satellite include rapid transmission of selected pictures to area forecast centers for operational use. Copies of picture sequences transmitted from TIROS I can be purchased from the National Weather Records Center, Asheville, N.C. (DWB.)

LEĬBOVICH, Z. F., *see* Riābokon', N.F., & *others*. Ugli . . . 1962. No. 75123

73394. LEIBY, JONATHAN. Design of our new research vessel. (Oceanus, June 1962. v.8, no.4, p.2-11, illus., diagrs.) Ref.

Describes the 195-ft. R/V *Atlantis II*, to be completed in Dec. 1962 for the Woods Hole, Mass. Oceanographic Institution: 2110 ton displacement, steam power plant developing 1400 S.H.P., speed 12 knots, and cruising range 8000 naut. mi. from the fringe ice to the tropics. The vessel accommodates nine officers, 19 crew, and 25 scientists. Photos of model testing, outboard and inboard profiles, arrangement diagrams of the four decks, are included. (DLC.)

73395. LEIGHTY, ROBERT D. Use of aerial photographs and field reconnaissance for ice cap route location at Narssarssuaq, Greenland. (Photogrammetric engineering, Mar. 1962. v.28, no.1, p.147-53, illus., maps.) 3 refs.

Describes methods and procedures of locating a 45-mi. route from Narssarssuaq Air Base, near sea level, to the icecap margin at about 4,000 ft. elevation. The preliminary study was made exclusively from aerial photographs on scale 1:40,000. Field studies were made with the aid of small aircraft and helicopters: reconnaissance and surveying parties were airlifted into the field, and some 500 low-altitude photographs were obtained. Preparation of the final report (No. 66210) on the project is outlined. (DLC.)

73396. LEIJONHUFVUD, AXEL CARLSSON, 1898–
Skogsbruket och avverkningskostnaderna. (Svenska skogsvårdsföreningen. Tidskrift, 1961. årg. 59, nr.2, p.103-32, illus., table.) 7 refs. Text in Swedish. Summary in English. **Title tr.:** Forestry and logging costs.

Notes complete mechanization adapted to Swedish conditions required for competition on world markets and maintenance of the forest industries as a major source of income. Forest holdings should be consolidated to provide larger cutting areas, also greater cutting volume/hectare, to enable standardization of methods, more exact planning, and better organization. Also needed are: an expanded and improved road net, especially in northern areas; intensified training, permanent employment, tenure and industrial safety measures for silviculturists and lumbermen. Finally a more positive public attitude should be fostered toward the aims and objectives of this industry, and the forestry organizations should work together. Contributions to the discussion are included. (DA.)

LEIN, A. IŬ., *see* Bliskovskiĭ, V.Z., & A.IŬ. Lein. Mineralogicheskie korreliātivy . . . 1962. No. 70252

LEINBACH, HAROLD, 1929– , *see*
Brown, R.R., & *others*. Large-scale electron bombardment . . . 1961. No. 70405

Campbell, W.H., & H. Leinbach. Ionospheric absorption . . . 1961. No. 70512

Ortner, J., & *others*. SCNA & geomag. storm. 1962. No. 74545

Reid, G.C., & H. Leinbach. Morphology . . . polar cap absorption events . . . 1962. No. 75097

73397. LEĬPTSIG, A. V. Istoriia razvitiia struktur vostochnoĭ okrainy Sibirskoĭ platformy v mezozoe. (Geologiia i geofizika, 1962, no.4, p.34-43, text maps, diagr.) 14 refs. Text in Russian. Summary in English. **Title tr.:** History of the development of structures on the eastern margin of the Siberian platform during the Mesozoic.

Discusses the history of Mesozoic structures in the wide Verkhoyansk region. Structural analysis, thickness and facies of Triassic, Jurassic and Cretaceous deposits on the lower and middle Lena, the Vilyuy and the upper Yana are treated. Evidence is presented that the Verkhoyansk foredeep and Verkhoyansk anticline developed not during Permian or Lower Mesozoic time, as believed by some scientists, but during the latter half and toward the end of the Mesozoic era. (DLC.)

LEIVESTAD, HELGE, *see* Eliassen, E., & H. Leivestad. Sodium . . . hibernating animals. 1961. No. 71232

73398. LeJEUNE, ROGER. L'omble-chevalier de la baie d'Ungava. (Actualités marines, May-Aug. 1961. v.5, no.2, p.10-12, map.) Text in French. **Title tr.:** The arctic char of Ungava Bay.

Reviews the research preliminary to development of a commercial arctic-char fishery by Eskimos, at the George and Korok River estuaries. Provincial government field parties of 1959-1960 found that the lower 20 mi. of the George River, affected by salt water of Ungava Bay, has larger fish than those caught upstream. The potential annual catch is estimated 30,000 - 100,000 lbs., a fishery considered capable of stabilizing the local Eskimo economy. (CaOGB.)

73399. LeJEUNE, ROGER. Un poisson-miracle: l'omble chevalier. (Actualités marines, Jan.-Apr. 1961, v.5, no.1, p.6-8.) Text in French. **Title tr.:** A miracle fish, the arctic char.

Reports the development of a commercial arctic char fishery cooperative among some hundred Eskimos at the George River estuary on Ungava Bay, under auspices of the Canadian Dept. of Northern Affairs and National Resources and the Quebec Dept. of Fisheries. Technical assistance was provided for production and marketing. Price and market are good for arctic char, and success in this is expected to foster other cooperatives on

Ungava Bay, eventually providing each Eskimo family with $300/yr. income. (CaOGB.)

73400. LEMIEUX, LOUIS. Centre d'Études Nordiques, Université Laval. (Arctic, Dec. 1962. v.15, no.4, p.314-15.)

Describes this research center established at Laval University in Quebec city for physical, biological, and anthropological investigations of northern Quebec-Labrador Peninsula. During summer 1962, 22 individuals received grants for research. Publications of the center are to be in French, with English summaries. (DI.)

73401. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Aėrologicheskie nablīūdeniīā polīārnykh stantsiĭ s 30 iīūniīā po 31 dekabrīā 1957 g.; kniga pervaīā. Pod. red. I.M. Dolgina. Leningrad, Izd-vo "Morskoĭ transport", 1961. 994 p. tables. (*Its:* Trudy, t.243.) Text in Russian. **Title tr.:** Aerological observations at polar stations, June 30-Dec. 31, 1957; book 1. I.M. Dolgin, editor.

Presents tabulated results of observations during 6442 radiosonde ascents at 18 Russian stations: Barentsburg, Tikhaya Bay, Malyye Karmakuly, Cape Kamennyy, Dudinka, Khatanga, Cape Chelyuskin, Tiksi Bay, Ugol'naya Bay, Cape Shmidta, Provideniya Bay, Uelen, and the islands of Vize, Dikson, Uyedineniya, Kotel'nyy, Chetyrekhstolbovoy, and Vrangel. Data on pressure, temperature, relative humidity, wind force and direction are computed for standard levels, standard isobaric surfaces, and intermediate altitudes. Atmospheric conditions and cloudiness during launching are recorded. In introduction, editor reviews the organization and results of aerological observations in the Arctic during the IGY and provides some general information on the 18 stations employed in the present study. (DLC.)

73402. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Geofizicheskie issledovaniīā v Sovetskoĭ Arktike i Antarktike; vyp.4. Leningrad, Izd-vo "Morskoĭ transport",1962. 114 p. tables, graphs, diagrs., maps. (*Its:* Trudy, t.241.) Refs. Text in Russian. **Title tr.:** Geophysical investigations in Soviet Arctic and Antarctic; no.4.

Contains nine papers, eight pertinent to northern areas are abstracted in this Bibliography under their authors' names: A.P. Nikol'skiĭ (3 papers), A.S. Besprozvannaīā, A.I. Ol', N.A. Milīaev, L.N. Zhigalov *and* N.N. Zhigalova, and R.G. Kokorin, q.q.v. (DLC.)

73403. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Materialy nablīūdeniĭ nauchno-issledovatel'skikh dreĭfuīūshchikh stantsiĭ "Severnyĭ polīūs-6" i "Severnyĭ polīūs-7" 1957/58 goda; tom 1. Pod obshcheĭ redaktsieĭ V.M. Driatskogo. Leningrad, Izd-vo "Morskoĭ transport," 1962. 62 p. tables, maps. Text in Russian. **Title tr.:** Observational data of the scientific drifting stations North Pole-6 and North Pole-7 1957/1958; v.1. V.M. Driatskiĭ, editor-in-chief.

The reported drift of North Pole-6 began on Apr. 17, 1957 at 75°37′N. 171°03′. 8E. and ended on Apr. 8, 1958 covering a zig-zag path of 2,560 km., its beginning and end points 743 km. apart. North Pole-7 traveled from Apr. 23, 1957 till Apr. 12, 1958, a zig-zag path of 2,068 km., from 82°06′ N. 195°49′E. to 86°22′. 7N. 210°06′E. a point-to-point distance of 482 km. Besides the routine drifting station observations in oceanology, meteorology, actinometry and aerology (cf. No. 66222), observations on ionospheric conditions, magnetic field of the earth, and auroras were carried out. The report in two parts, astronomical, and oceanological, gives in the first, point number of astronomical position, date, time of the day, number of position lines, geographical coordinates, value of the error of determination of the position, and the duration distance, direction, and speed of drift. The results of the azimuthal determinations are given. In pt. 2, ocean depths are reported, with date and time of the measurement. (DLC.)

73404. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Materialy nablīūdeniĭ nauchno-issledovatel'skikh dreĭfuīūshchikh stantsiĭ "Severnyĭ polīūs-6", "Severnyĭ polīūs-7" 1957/58 goda; tom 2. Pod obshcheĭ red. V.M. Driatskogo. Leningrad, Izd-vo "Morskoĭ transport," 1961. 653 p. illus., tables. Text in Russian. **Title tr.:** Observational data of the scientific drifting stations North Pole-6 and North Pole-7, 1957-1958; v.2. V.M. Driatskiĭ, chief editor.

Contains, p.3-314, tabulated data on meteorological observations May 1, 1957-Apr. 30, 1958: daily, also monthly and yearly means of air and snow surface temperature, humidity, atmospheric pressure, wind speed and direction, cloudiness, precipitation, thickness and state of the snow cover, visibility, atmospheric phenomena. Actinometric observation results for May 1, 1957-Apr. 1, 1958 follow, p.315-653. Instrumentation, methods, and some basic conclusions are described. (DWB.)

73405. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Materialy nablīūdeniĭ nauchno-issledovatel'skikh dreĭfuīūshchikh stantsiĭ "Severnyĭ polīūs-6" i "Severnyĭ polīūs-7" 1957/58 goda; tom 4. Pod obshcheĭ red. V.M. Driatskogo. Leningrad, Izd-vo "Morskoĭ transport," 1961. 607 p. tables. Text in Russian. **Title tr.:** Observational data of the scientific drifting stations North Pole-6 and North Pole-7, 1957-1958; v.4. V.M. Driatskiĭ, editor-in-chief.

Contains tabulated data on geophysical investigations July/Apr. 1957-Apr. 1958. The ionospheric section (p.5-387) includes monthly tables of daily observations on f_0F2, $F2$-$M3000$, $h'F2$, f_0F1, $F1$-$M3000$, $h'F$, f_0E, f_0Es, f_bEs, $h'Es$, types of Es, and $fmin$. The magnetic observations (p.388-607) include hourly values of D, H, and Z, hourly values of amplitudes of r^s, and observed values of D, H, and Z. Instrumentation and methods are briefly reviewed. The observations carried out in partial fulfillment of the IGY program were obtained during the drift of North Pole-6 in the region of 76°53′-80°43′N. 150° 18′E., and North Pole-7, 83°50′N. 161°46′-210°01′E. (DLC.)

73406. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Materialy nablīūdeniĭ nauchno-issledovatel'skikh dreĭfuīūshchikh stantsiĭ "Severnyĭ Polīūs-

6" i "Severnyĭ Poliūs-7" 1958/59 god. Pod redaktsieĭ I.M. Dolgina. Leningrad, Izd-vo "Morskoĭ transport", 1962. 628 p. tables. (*Its:* Trudy t.249.) Text in Russian. **Title tr.:** Observation data of the scientific drifting stations North Pole-6 and -7 in 1958/59. Edited by I.M. Dolgin.

Presents the aerological results. During Apr. 8, 1958-Mar. 31, 1959, North Pole-6, drifting between 81°00′-87°18′N. and 149°00′-39°10′E., released 860 radiosondes, and performed 739 wind observations with optical, and 749 with radio theodolites. North Pole-7 drifted from Apr. 11, 1958 to Mar. 31, 1959 within 86°15′-87°43′N. 209°13′-301°46′E.; released 830 radiosondes, and performed 705 wind observations with optical, and 748 observations with radio theodolites. Methods and techniques of the observations, and their instrumentation are described. The data (616 pages) are presented in 21 tables showing: daily geographic position, monthly means of air pressure, altitude and temperature of air isobaric surfaces, air density, and temperature; the maximum and minimum air temperatures, mean height of isothermal surfaces, frequency of height of the lower boundary of inversion and isothermal layers, and the number of days with inversion and isothermal layers, mean thickness and mean intensity of inversion and isothermal layers; mean altitude and temperature of the tropopause at its lower boundary; monthly means of relative and of specific humidity; mean altitude of the lower limit of clouds, monthly mean and maximum wind speed, wind direction frequency, and the results of temperature and wind soundings of the atmosphere. Regular aerological readings were taken daily at 3 and 15 h. Moscow time. In cooperation with the IGY program, special observations were carried out at 9 and 21 h. Moscow time during the international meteorological intervals, and on individual world days. (DLC.)

73407. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Radiatsionnyĭ i teplovoĭ balans Arktiki. Pod redaktsieĭ N.T. Chernigovskogo. Leningrad, Izd-vo "Morskoĭ transport", 1961. 202 p. tables, graphs. (*Its:* Trudy t.229.) Text in Russian. **Title tr.:** Radiation and heat balance in the Arctic. Edited by N.T. Chernigovskiĭ.

Contains nine papers, all abstracted in this Bibliography under their authors' names: M.S. Marshunova, N.T. Chernigovskiĭ, IU.P. Doronin, S.V. Zvereva, B.M. Gal'perin, L.F. Ovchinnikov, N.N. Andreeva, A.P. Koptev and A.V. Smetannikova, q.q.v. (CaMAI.)

73408. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Rukovodstvo po formulirovke i otsenke opravdyvaemosti dolgosrochnykh prognozov pogody maloĭ i bol'shoĭ zablagovremennosti dlia Arktiki. Leningrad, Izd-vo "Morskoĭ transport," 1961. 56 p. tables, maps. (*Its:* Seriia posobiia i rukovodstva, vyp.36-37.) Refs. Text in Russian. **Title tr.:** Manual of long-term weather prediction, a short and a long time in advance, and of forecast verfication, for the Arctic. Edited by G.IA Vangengeĭm.

In two sections, the first, p.5-38, by L.A. Dydina, T.M. Khoreva, and A.I. Ragozin, deals with prognosis three days and 8-10 days in advance, i.e. medium-range and extended range forecasts. Rules are given for designation of time and area of prognosis, wind velocity and direction, air temperature and distribution of baric fields. Methods of transmitting data on the state of meteorological elements, formulation, terminology, and dissemination of the forecasts and information are specified. The area north of the mainland is divided in 21 sectors, Pechora Sea, Franz Joseph Land, etc. east to Bering Strait, and for each (except the last), the observing stations are stated: 64 in all. The ten western sectors are serviced by the Dikson observatory, five central sectors by Tiksi Bay, and six eastern sectors by the Pevek observatory. Regulations for recording the forecasts, and for incorporation of the actual state of meteorological elements are specified; principles for evaluation of the prognosis fulfilment are established, and rules given for calculating the mean values of fulfilment. In the second section (p.39-55) M. Sh. Bolotinskaia outlines the preparation of forecast charts for the Arctic Basin one-five months in advance; they show mean monthly air pressure distribution for the Northern Hemisphere to 50°N., and are used for prognosis of the isobaric ice drift in the Basin, and other ice characteristics; show also the prevailing airstream directions expected in the arctic seas, used as background information in laying out a course and in ice prognosis; the third type of chart shows distribution of the monthly mean temperature anomaly, used in planning sea operations, and in ice prognoses; and the fourth type, the monthly recurrence of the prevailing wind directions on 18 polar stations at approx. equal intervals along the Northern Sea Route, used in planning and carrying out sea transport operations along the lateral part of the Route. The evaluation of the actual conditions of the elements forecast is discussed, and rules are given for forecast verification. Photocopies of the forecast charts are distributed to the Navy Dept. and other agencies. (CaMAI.)

73409. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Sbornik statei po sinopticheskoĭ meteorologii. Pod red. L.A. Dydinoĭ. Leningrad, Izd-vo "Morskoĭ transport," 1961. 70 p. tables, graphs, maps. (*Its:* Trudy, t.235.) Text in Russian. **Title tr.:** Collected papers on synoptic meteorology. L.A. Dydina, editor.

Contains four papers on atmospheric circulation in the Arctic, by S.T. Serlapov, A.I. Ragozin *and* K.I. Chukanin, T.M. Khoreva, T.F. D'iachenko, q.q.v. (SPRI.)

73410. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Uchashchennye aerologicheskie nabliudeniia za period aprel' 1954-aprel' 1955 g.; kniga pervaia. Pod red. I.M. Dolgina i M.A. Zolotareva. Leningrad, Izd-vo "Morskoĭ transport", 1959. 458 p. tables. (*Its:* Trudy, t.216.) Text in Russian. **Title tr.:** Increased frequency aerological observations during the period Apr. 1954-Apr. 1955; v.1. I.M. Dolgin *and* M.A. Zolotarev, editors.

Presents tabulated results of radiosonde observations at standard heights and isobaric levels at 62 Soviet stations north of about 36°N. including the drifting stations North Pole-3 and 4.

The data include atmospheric pressure, temperature, vertical temperature gradients, relative and absolute humidities, wind speed and direction, velocities of ascent of the radiosondes. State of the cloud cover and other atmospheric conditions during launching are recorded. This volume covers the period Apr.-Sept. 1954; stations reported include: Barentsburg, Tikhaya Bay, Murmansk, Kem', Arkhangel'sk, Cape Zhelaniya, Dikson Island, Amderma, Nar'yan-Mar, Salekhard, Dudinka, Cape Chelyuskin, Kotel'nyy Island, Khatanga, Tiksi Bay, Olenek, Zhigansk, Vilyuysk, Yakutsk, Kresty-Kolymskiye, Cape Shmidta, Anadyr, Markovo, Klyuchi, Nikolayevka. (SPRI.)

73411. LENINGRAD. ARKTICHESKIĬ I ANTARKTICHESKIĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT. Voprosy dolgosrochnykh prognozov pogody bol'shoĭ i maloĭ zablagovremennosti. Pod redaktsieĭ G. ÎA. Vangengeĭma i A. A. Girsa. Leningrad, Izd-vo "Morskoĭ transport", 1961. 218 p. maps incl. fold., tables, graphs. (*Its:* Trudy t.240.) Text in Russian. **Title tr.:** Problems of long-range weather forecasts over a long or short period. Edited by G.ÎA. Vangengeĭm and A.A. Girs.

Contains 13 papers on the preliminary results of the seven-year research plan being carried out by the long-range weather forecasts department of the Arctic and Antarctic Institute. Twelve of these papers are abstracted in this Bibliography under their authors' names, viz: G.ÎA. Vangengeĭm, A.A. Girs (2 papers), E.P. Borisenkov, L.ÎU. Ryzhakov, L.A. Dydina (2 papers) M.Sh. Bolotinskaîa (2 papers), T.M. Khoreva, V.S. Ragozina, A.I. Ragozin *and* K.I. Chukanin. (CaMAI.)

73412. LENINGRAD. NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT GEOLOGII ARKTIKI. Geologiîa i neftegazonosnost' Arktiki. Moskva, Gostoptekhizdat, 1961. 146 p. illus., tables incl. fold., maps, graphs, diagrs. (*Its:* Trudy, t.117, vyp.15.) Refs. Text in Russian. **Title tr.:** Geology and oil-gas properties of the Arctic.

Contains 13 papers concerning the geologic structure and oil-gas prospects in the Soviet Arctic: on the stratigraphy and tectonics, Sinian basal conglomerates of Taymyr Peninsula, Permian deposits of the Pur-Olenek region, permafrost in Noril'sk region, etc. All the papers are abstracted in this Bibliography under their authors' names, viz (titles tr.):

RABKIN, M.I., *and* M.G. RAVICH. The Precambrian of the Soviet Arctic.

MARKOV, F.G., *and* B.V. TKACHENKO. The Paleozoic of the Soviet Arctic.

SAKS, V.N., *and* S.A. STRELKOV. The Mesozoic and Cenozoic of the Soviet and foreign Arctic.

ATLASOV, I.P., *and* V.N. SOKOLOV. Main features of the tectonic development of the central part of the Soviet Arctic.

KOVALEVA, G.A. New data on Sinian basal conglomerates in central and eastern Taymyr.

KABAN'KOV, V.ÎA. Rhythmicity features of Middle and Upper Cambrian deposits in the northeast of the Siberian platform and the accumulation conditions of the rhythmic stratum.

ZHUKOV, V.V. On the rhythmicity of carbonate deposits of the Middle and Upper Cambrian in the northeastern limb of the Sukhana downwarp.

KOPYLOVA, T.N., *and* V.G. KORCHAGIN. The lithologic-stratigraphic separation of Permian deposits in the Pur-Olenek region.

ÈRLIKH, È.N., *and* V.V. ZHUKOV. Tectonic structure of the Sukhana downwarp.

MEZHVILK, A.A. Quaternary deposits of the northern Kharaulakh.

GOR, ÎU.G. Formation conditions of coal-bearing deposits in the Kulyumbe-Kureyka interfluve.

ERMOLOV, V.V., *and others*. Geologic interpretation of air-photo materials from regions of the far North.

OBIDIN, N.I. On methods for investigating the thermal regime of rocks and for sampling water-bearing horizons in the Noril'sk area. (DLC.)

73413. LENINGRAD. NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT GEOLOGII ARKTIKI. Gulinskaîa intruziîa ul'traosnovnykh-shchelochnykh porod. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1961. 274 p. illus., tables, maps and diagrs. incl. fold. (*Its:* Trudy, t.122.) 73 refs. Text in Russian. **Title tr.:** The Gulya intrusion of ultra-basic alkaline rocks.

Collective work dealing with the geologic-petrographic description of the Gulya intrusion, over 25,000 km² in area in the Maymecha-Gulya-Chopko River region of north-central Krasnoyarsk Province. Its geologic structure, the petrographic characteristics of its magmatic rocks, their chemistry, crystallization and metamorphism, are described in the first part by L.S. Egorov, T.L. Gol'dburt, and K.M. Shikhorina. The second part written by E.M. Èpshteĭn, L.I. Anikeeva, and A.F. Mikhaĭlova, gives characteristics of the Gulya intrusion phlogopite deposits, their genesis, types; three stages of carbonatite formation, etc. Productive accumulation of phlogopite deposits is noted, and criteria are outlined for their survey. (DLC.)

73414. LENINGRAD. NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT GEOLOGII ARKTIKI. Sbornik statei po geokhimii osadochnykh porod; vyp. 2. Leningrad, Gostoptekhizdat, 1961. 196 p. illus., tables, diagrs. (*Its:* Trudy, t.119.) Refs. Text in Russian. **Title tr.:** Collection of articles on the geochemistry of sedimentary rocks; no. 2. In sequence to No. 59697.

Presents 12 papers dealing with the chemical properties of bitumen, Triassic clays and other sedimentary rocks, as studied in 1958-1960 in the central regions of the Soviet Arctic. Appendix contains chemical analyses of Triassic argillaceous rocks and instructions for their determination. All the papers are abstracted in this Bibliography under their authors' names, viz (titles tr.):

GRAMBERG, I.S., *and* N.S. SPIRO. Attempt at using geochemical data for facies analysis of Triassic deposits in the Siberian North.

SPIRO, N.S., *and* TS.L. VOVK. The ways of changes in the salt composition of the world ocean.

SPIRO, N.S., *and* K.S. BONCH-OSMOLOVSKAÎA. Investigation of the composition of absorbed cations in Triassic argillaceous deposits.

SPIRO, N.S. On the connection of chemical composition of carbonates and absorbed bases of argillaceous rocks.

SPIRO, N.S., *and* M.V. GOGOLEVA. Estab-

lishment of optimal conditions for determination of mineral composition of clays by the coloring method.

KOTENEVA, T.V. On determination of carbonates of alkali earth metals in argillaceous rocks.

ĖPSHTEĬN, R.IÂ., *and* G.P. GRINBERG. Spectrophotometric determination of niobium in carbonatites.

DANIŨSHEVSKAIÂ, A.I., *and* N.S. SPIRO. Physical-chemical characteristics of hydrocarbon bitumens of sedimentary rocks in the central region of the Soviet Arctic.

SPIRO, N.S., *and* A.I. DANIŨSHEVSKAIÂ. On development of a new method for appraisal of the luminescence-capillarity characteristics of oils and bitumens.

SPIRO, N.S., *and* A.I. DANIŨSHEVSKAIÂ. Comparison of adsorbed characteristics of bitumen from sedimentary rocks in the central region of the Soviet Arctic.

DANIŨSHEVSKAIÂ, A.I., *and* N.S. SPIRO. Spectrophotometric characteristics of some bitumen in the central region of the Soviet Arctic.

DANIŨSHEVSKAIÂ, A.I. An attempt at using chromatography for separation of the resinous part of bitumen from Sangar hard coal. (DLC.)

73415. LENINGRAD. NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT GEOLOGII ARKTIKI. Sbornik statei po geologii i neftegazonosnosti Arktiki, vyp. 16. Leningrad, Gostoptekhizdat, 1961. 188 p. illus., tables, maps, graphs, diagrs. (*Its:* Trudy, t.123.) Refs. Text in Russian. **Title tr.:** Collection of articles on the geology and oil-gas-bearing properties of the Arctic, no.16.

Presents 16 papers dealing with the stratigraphy, tectonics, geomorphology and useful minerals in the Polar Ural, Pay-Khoy, Siberian platform, and two islands: Bennet and Vestspitsbergen, all abstracted in this Bibliography under their authors' names, viz (titles tr.):

VOL'NOV, D.A., *and* D.S. SOROKOV. The geologic structure of Bennet Island.

VINOGRADOV, V.A. Pre - Upper Paleozoic history of geologic development of the northern Verkhoyansk region and northeastern part of the Siberian platform in connection with oil and gas prospects.

USTRITSKIĬ, V.I. On zoning of facies in the Middle Paleozoic deposits of the Pay-Khoy and the northern part of the Polar Ural.

ROGOZOV, IŨ.G. Stratigraphy and paleogeography of Carboniferous deposits of the Subpolar Ural on the middle and upper reaches of the Pechora River basin.

POPOV, IŨ.N. Norian deposits of northeastern USSR and the problem of the Rhaetic stage.

NAKORIAKOV, V.D. On the structure of the pre-Mesozoic basement in the Yenisey belt of the West Siberian platform.

KOCHETKOV, T.P. Formation and development history of the main structural elements in north-central Siberia.

GRAMBERG, I.S., *and others.* On the further direction of oil prospecting in the main promising regions of the Siberian North.

SOROKOV, D.S. Prospects for oil and gas in the Lena-Olenek region.

SOKOLOV, V.N., *and* IŨ.N. KULAKOV. Utilization in oil prospecting of geologic-geomorphic mapping in regions covered by Quaternary deposits.

VENER, R.A., *and* N.N. URVANTSEV. Geologic and chemical features of Noril'sk coal.

JAHN, A. Geomorphic investigations of the Polish scientific expedition in Spitsbergen.

VALENSKIĬ, A.M., *and* V.S. GOLUBKOV. Structure and tectonic control of some nickel-bearing intrusions in the Kureyka River basin.

GORIAINOV, I.N. Hydrothermal pyrrhotite-chalcopyrite mineralization on the middle reaches of the Avam and Verkhniy Khugdyukant Rivers.

PUMINOV, A.P., *and* R.V. FEDOROVA. Peat bog from the Pur River mouth, northeastern part of the Middle Siberian upland.

USPENSKIĬ, A.N. On contemporary ferriferous conglomerate from the central part of the Koryak Range. (DLC.)

73416. LENINGRAD. VSESOIŨZNYĬ NAUCHNO-ISSLEDOVATEL'SKIĬ GEOLOGICHESKIĬ INSTITUT. Problemy chetvertichnogo oledeneniia Sibiri i Dal'nego Vostoka. Leningrad, Otdel nauchno-tekhnicheskoĭ informatsii VSEGEI, 1961. 160 p. tables, maps incl. fold., cross-sections, profiles. (*Its:* Trudy, nov. seriia, t.64.) Approx. 250 refs. Text in Russian. **Title tr.:** Problems of the Quaternary glaciation of Siberia and the Far East.

Contains 13 papers by geologists, reviewing recent studies and discussing the diverse problems still unsolved, of Pleistocene glaciation such as the number and extent of glaciations, paleogeographic conditions of the regions, transgressions of the northern seas, stratigraphy of glacial deposits, etc. Appended is an extensive list of literature covering all the papers. Most of these papers deal with the arctic and subarctic regions of the USSR, and all except E.I. Kornutova and V.V. Solov'ev's are abstracted in this Bibliography under their authors' names, viz (titles tr.):

ZUBAKOV, V.A. The present status of problems of the Pleistocene glaciation of Siberia.

BOĬTSOV, M.N. On the formation of relief under conditions of underground glaciation.

ZAGORSKAIA, N.G. The features of Pleistocene glaciations in the north of West Siberia in the light of new data.

ZARRINA, E.P., *and* I.I. KRASNOV. Origin and stratigraphic position of the Sanchugovka-Taz "moraine-like" deposits in the north of the West Siberian plain.

KUZIN, I.L., *and others.* The main features of Quaternary paleogeography in the West Siberian plain territory in connection with the problem of its glaciation.

ZUBAKOV, V.A. Paleogeographic conditions of Pleistocene glaciation west of the Yenisey in Siberia.

MILIŨKOVA, N.N. Some disputed problems of Quaternary stratigraphy in the northwestern part of the West Siberian plain.

KAPLIANSKAIA, F.A., *and* V.D. TARNOGRADSKIĬ. On the paleogeography of the Quaternary period in the periglacial area of the West Siberian plain.

KOZLOVSKAIA, S.F. Quaternary glaciations in the northern part of the Central Siberian plateau.

Kornutova, E.I. On ancient glaciation in the southern Transbaykal mountains.

CHEMEKOV, IŨ.F. Problems of Quaternary

glaciation in the Northeast and Far East of the USSR.

DEGTÎARENKO, ÎU.P. Ancient glaciations of the Koryak mountain system.

Solov'ev, V.V. Traces of ancient glaciations in the southern Maritime Province. (DLC.)

73417. LENINGRAD. VSESOÎUZNYĬ NEFTÎANOĬ NAUCHNO-ISSLEDOVATEL'SKIĬ GEOLOGORAZVEDOCHNYĬ INSTITUT. Pyl'tsa i spory Zapadnoĭ Sibiri; îura-paleotsen. Leningrad, Gostoptekhizdat, 1961. 660 p. tables, map, plates. (*Its:* Trudy vyp. 177.) Approx. 200 refs. Text in Russian. **Title tr.:** Pollen and spores of West Siberia; Jurassic-Paleocene.

Monographic study by several specialists giving detailed descriptions of the pollen and spores of the predominant terrestrial plants of Jurassic, Cretaceous and Lower Paleogene deposits of Western Siberia, including the arctic areas between the Ob and Yenisey. In two parts: paleontologic and stratigraphic. The first describes 225 species, 30 genera and morphologic groups, with illus. on 85 plates; 190 taxa are new. In pt. 2, palynologic characteristics are given of Jurassic, Cretaceous and Paleocene deposits, illus. by 65 stratigraphic tables. (DLC.)

73418. LEN'KIN, E. N., *and* ÎU. ÎA. LIVSHITS. Novye dannye o rudoproîavlenii na reke Serebrîanoĭ. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ sbornik, 1962. vyp. 27, p.43-46, diagrs.) Text in Russian. **Title tr.:** New data on ore occurrence on the Serebryanaya River.

Reports study of copper-nickel ores in this valley, a right tributary to the Fokina River in the Noril'sk region. They are connected with an olivine dolerite intrusion of Carboniferous age. Size and thickness of the intrusion and mineral composition of the rocks are described. In some probes, the content of copper and nickel ores are of productive value, and conditions are favorable for finding intrusions with better mineralization of these ores. (DGS.)

LENNERSTEDT, ROLF, *see* Källander, H., & R. Lennerstedt. Fågelobservationer . . . 1960. No. 72611

LENNOX, D. H., *see*

Garland, G.D., & D.H. Lennox. Heat flow . . . W. Canada. 1962. No. 71594

IUGG. Seismol. proceedings 1960. 1961. No. 72397

73419. LENT, PETER C. Caribou calving study, northwestern Alaska. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.27-36, maps.) 4 refs.

Describes from aerial observations, the spring inland migration of wintering caribou, convergence upon a common calving ground; its location, the Utukok - Kaolak Rivers area approx. 69°N. 160°W., and its natural characteristics. Calving took place during late May - early June at 500 - 1000 ft. elevation in the *Eriophorum* tussock community. Post-calving movements are traced and tagging operations on the calves are described, noting behavior of mothers and young, weight and measurements of the latter. Comments are added on method of tagging. (CaMAI.)

73420. LENZ, ALFRED C. Devonian rugose corals of the lower Mackenzie Valley, Northwest Territories. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.500-514, illus., table.) 37 refs.

Deals with 18 species of wrinkled corals from the Devonian of the lower Mackenzie and Anderson valleys, including *Aphroidophyllum nowelli* n. gen. et sp. All but one occur within Middle Devonian beds, including 14 from the Hume formation, and three from the Ramparts limestone; the remaining species occurs within the Upper Devonian Kee Scarp limestone. Fossils studied are from the California Standard Co. collection. Stratigraphic units used are shown in table. (DLC.)

LENZ, ALFRED C., *see also* Jackson, D.E., & A.C. Lenz. Zonation . . . graptolites N. Yukon. 1962. No. 72503

73421. LEONARD, ROBERT S., 1930– . Distribution of radar auroras over Alaska. College, Alaska, Apr. 1961. vi, 75 l. illus., map, diagrs., graphs, tables. (Alaska. University, Geophysical Institute. Scientific report no.9, NSF Grant no. Y/22.6/327; *also* Geophysical research report UAG-R116.) 40 refs.

Describes an investigation of the distribution of radar auroras in latitude and time by means of a chain of identical radar systems with overlapping coverage. The generally north-south chain of stations: Barrow, College, Farewell, (62°30′N. 154°W.), King Salmon, and Unalaska, was operated during the calendar year 1958, as part of the United States contribution to the IGY. Previous radar investigations of auroras are summarized. Equipment is described; methods of operations are reviewed. Design of a semi-automatic scaling machine is presented, as well as method used to scale the 50,000 ft. of data-film. Distribution of echo occurrence with range is studied and interpreted; the diurnal pattern of echo occurrence is also discussed. It is suggested that an experiment be conducted at frequencies in the low VHF band, which will separate the echoes by type as they are being recorded. (DGS.)

73422. LEONARD, ROBERT S., 1930– . Distribution of radar auroras over Alaska. (Journal of geophysical research, Mar. 1962. v.67, no.3, p.939-52, illus., graphs, diagrs., map.) 22 refs.

Determines the distribution of ionospheric disturbances as a function of time and location, on the basis of IGY data from five Alaskan stations. An apparent radar auroral zone with a maximum at 67° geomagnetic latitude is shown. The zone spreads to the south during increased magnetic disturbances; evidence is found of lessening activity well north of the visual auroral zone. The layer causing radio wave absorption during auroras is apparently not uniform but contains regions of low absorption. The diurnal occurrence curves indicate two principal maxima: one is observed near local midnight at all stations, the other depends on latitude appearing later in the morning at the northern stations. (DLC.)

73423. LEONARD, ROBERT S., 1930– . Evidence of low-frequency amplitude fluctuations in radar auroral echoes. (Journal of geophysical research, Apr. 1962. v.67, no.4, p.1683-84, diagrs.) 4 refs.

Compares amplitude fluctuations of an auroral radar echo with the magnetic field micropulsations. The 41 Mc./s., 5 kw. radar was located at Healy, Alaska, and the micropulsation detector about 100 km. north-northwest. The amplitude of the echo was measured at a fixed range for each transmitted pulse during a quiet and a disturbed period; from these data, the smoothed power spectrum was computed after correcting for the mean echo amplitude. The results are shown in histograms; the increase during the disturbance is about 10 times. (DLC.)

73424. LEONARD, ROBERT S., 1930– . Measurements of localized distortions in the earth's magnetic field near the auroral zone. (*In:* International Conference on Cosmic rays and the Earth Storm 1961. Proceedings *pub.* 1962. v.1, p.135-37, graphs.) 7 refs.

Reports on auroral radio echo experiments performed at Healy and College, Alaska, with a 41 Mc/s auroral radar to measure changes in orientation of the earth's magnetic field, by utilizing the echoes of aurorally associated ionization. The horizontal antenna had an eight-wavelength wide aperture and was directed along the magnetic meridian. A remote radio receiver was located 130 km. magnetically north of the radar station. The echoes' amplitudes were simultaneously recorded by the radar and the receiver. The ratio of the two amplitudes calculated from the records was found to fluctuate widely, and this was interpreted as due to changes in the direction of the magnetic field. The observed distortions were of strictly local character, suggesting the presence of a fairly restricted line of electric currents in the E layer of the ionosphere. The experiments, but not results, are characterized in *Research directed toward correlation of visual aurora with auroral radar echoes*, Aug. 1962, 3 p. Geophysical research report UAG-R128, Geophysical Institute, Univ. of Alaska. (DGS.)

73425. LEONIDOV, L. Zabytaîa marka. (Master lesa, July 1961, no.7, p.15, illus.) Text in Russian. **Title tr.:** The mark of distinction forgotten.

Criticizes several lumbering concerns of the Pechorales Combine in Komi ASSR for using logs suitable for mine timbers as simple snow-fence posts or as fuel. (DLC.)

73426. LEONOV, B. N., *and others.* Verkhnie galechniki i ėĭkskie otlozheniîa v basseĭne rek Markhi i Tiûnga. (*In:* Vsesoiûznoe soveshchanie po izucheniiû chetvertichnogo perioda. Materialy . . . 1961, t.3, p.195-202, map, profile.) Text in Russian. *Other authors:* N.I. Gogina *and* R.O. Galabala. **Title tr.:** Upper pebbles and Eyk deposits in the basin of the Markha and Tyung Rivers.

Describes the distribution, granularity, petrographic and mineralogic composition, and occurrence of watershed pebbles in this area. Diatom and spore-pollen analyses suggest they are Lower Quaternary in age. Other types of sedimentary deposits, clays, clayey-sands and lenses containing limestones are also distributed in the watersheds and Eyk lake, from which the name derives. Their granularity, mineralogic composition, diatom and spore-pollen analyses and other features are reported. (DLC.)

73427. LEONOV, B. N. Voprosy genezisa rel'efa i geomorfologicheskoe raĭonirovanie Sredne-Sibirskoĭ ploskoĭ vozvyshennosti. (*In:* Vsesoiûznyĭ aėrogeologicheskiĭ trest. Materialy po regional'noĭ geologii . . . 1961, p.167-82, fold. table, map.) Text in Russian. **Title tr.:** Questions of relief genesis and geomorphic regionalization of the Middle Siberian plateau.

General character of the relief is outlined and the endogenic and exogenic factors in relief development are evaluated for the broad area between the Yenisey and Lena from the Arctic Circle south to Kirensk, Bratsk, and the Taseyeva River mouth. Geologic structure, tectonic movements, denudation and accumulation areas, activity of glaciers and other relief-forming processes are characterized. The Middle-Siberian plateau is divided into the Vilyuy lowland and the Middle Siberian highland, the latter consisting of 13 regions. (DLC.)

LEONOV, B. N., *see also*

Biterman, I.M., *& others.* Nizhnekamennougol'nye otlozheniîa . . . 1961. No. 70224

Biterman, I.M., *& others.* Novye dannye . . . 1962. No. 70225

73428. LEONOVA, V. A., *and* **IÛ. V. NIKITIN.** K mineralogii monatsitov pegmatitovykh zhil Chupy. (Vsesoiûznoe mineralogicheskoe obshchestvo. Zapiski 1962. ser. 2, chast' 91, vyp.2, p.136-45, tables, graphs.) 12 refs. Text in Russian. **Title tr.:** On the mineralogy of monazites from the Chupa pegmatite veins.

Reports mineralogic investigation of north Karelian pegmatites and gives mineralogic and chemical analyses of the monazites found near the town of Chupa, 66°16′N. 33°04′E. Three types of pegmatite veins are distinguished and characterized. According to age, two groups of monazites are recognized and described. Their content of rare earth elements is determined. The question of monazite origin and formation is considered. (DLC.)

73429. LEONT'EV, NIKOLAĬ. Rodniki zhivoĭ vody. (Novyĭ mir, Feb. 1961. god 37, no.2, p.147-67.) Text in Russian. **Title tr.:** Sources of new life.

Describes the cultural and artistic life in Nenoksa, one of the oldest Russian settlements on the White Sea. Destroyed by the Swedes in 1419, it became a trading and salt-production center in the 17th century, later a place of banishment for political exiles, and now a prosperous village of seamen and fishers. The industrial and economic growth of the North since the Revolution with railroad construction, urban development, etc. is mentioned. (DLC.)

73430. LEONT'EV, NIKOLAĬ FEDOROVICH. Geograficheskie osnovy kartografirovaniîa podvodnogo rel'efa na gipsometricheskikh kartakh. Moskva, Izd-vo geodezicheskoĭ lit-ry, 1961. 205 p. tables, charts, maps. 120 refs. Text in Russian. **Title tr.:** Geographic bases for the mapping of submarines relief on hypsometric maps.

Concerns the bottom relief of seas and oceans, including the Arctic Basin and the arctic seas. Structure of bottom relief, factors in its formation, development of the bathymetric method in Soviet cartography, its geographic bases, and the cartographic representation of certain types of submarine

relief are treated in turn. Soviet hypsometric maps at 1:1,500,000, 1:1,000,000 and 1:2,500,000 are described. (DLC.)

73431. LEOVY, C. The effect of surface temperature variations on the polar night jet. Santa Monica, Cal., Rand Corp., Dec. 1961. iii, 21 p. graphs, table. (U.S. Air Force. Project Rand, Contract no. AF 49(638)-700, memorandum RM-2951-PR.) 9 refs.

Examines theoretically the possibility of differential heating in the ozone layer due to differences in ground and lower troposphere temperatures, as a mechanism for producing the observed stationary perturbations in the polar night jet stream. Results show the mechanism is not likely to cause these perturbations, but technique of calculating heating rates may be useful in future research. U.S. Air Weather Service data from areas near 60°N. 20°W. and 60°N. 120°E., also ozone distributions from Tromsø, Norway, were used. (DWB.)

73432. LEPAGE, ERNEST, 1905– . Nouveautés dans la flore du bassin de la Baie d'Ungava, Québec. (Naturaliste canadien, Apr. 1962. v.89, no.4, p.113-19, illus.) Text in French. **Title tr.:** Novelties in the flora of the basin of Ungava Bay, Quebec.

Presents some taxa which appear new to science, collected in summer 1961 while exploring the Swampy Bay and Kaniapiskau Rivers in the iron zone of Northern Quebec. Four species are described and locations given. (CaOG.)

LEPAGE, ERNEST, 1905– , *see also*

Baldwin, W.K.W., & *others*. Botanical excursion . . . 1959. No. 69979

Baldwin, W.K.W., & *others*. Report on botanical excursion . . . 1962. No. 69980

Dutilly, A.A., & E. Lepage. Exploration botanique . . . 1962. No. 71159

73433. LEPESHKOV, I. N., *and others*. Prirodnye soli Krasnoĭarskogo kraĭa. (*In:* Krasnoĭarskaĭa . . . ėkspeditsiia. Poleznye iskopaemye . . . 1962, p.178-89, tables, maps, diagr.) 14 refs. Text in Russian. *Other authors:* V.K. Solov'ev, N.N. Romasheva, L.T. Kotova, *and* IU.S. Ustiūkov. **Title tr.:** Natural salts of Krasnoyarsk Province.

Outlines four rock salt deposits, one at Nordvik in the north, another, Troitskoye, in the central region, and two salt lakes in the south. The recently discovered Taseyevo deposits, also central, are described as well. Only Troitskoye is in production: 2,000 tons yearly from ground brines. The Nordvik deposits have been under conservation since 1944. Some salt occurrences in the Nizhnyaya Tunguska basin, the lower Angara, and elsewhere are also noted. The Taseyevo and Tuva deposits should be the first for further exploration. (DLC.)

73434. LEPLEY, L. K. Submarine topography of the head of Barrow Canyon. (Deep-sea research, May/June, 1962. v.9, p.214-17, maps, profile.) 2 refs.

Outlines results of bathymetric survey carried out by the USS *Burton Island* during autumn 1960. a continuous bottom profile was obtained with the AN/UQN-1B echo sounder. Measurements on five canyon crossings were used to compile a bottom-contour chart on a scale of about 1 in.:20 mi., oriented northeast-southeast, contour interval 10 ft., for the continental shelf from 157°-163°W. Bathymetric profiles along the survey tracks indicate, just west of Point Barrow, a flat-bottomed canyon four to ten mi. wide with relief of about 170 ft. The canyon heads on the continental shelf at about 120 ft. depth, approx. 100 mi. west of Point Barrow; west of 158°W. it forks into two main branches, neither of which reaches land. (DLC.)

LERFALD, G. M., *see* Little, C.G., & *others*.

Observ. 2.89 Mc/s. equivalent antenna temp . . . 1962. No. 73541

73435. LEROV, L. Sud'ba moriā. (Ogonëk, Apr. 1961. god 39, no.14, p.10-13, illus., map.) Text in Russian. **Title tr.:** The fate of the sea.

Discusses the disastrous lowering of level of the Caspian Sea and countermeasures proposed; a plan to redirect southward the flow of the Pechora and other northern rivers is briefly outlined. (DLC.)

73436. LESAGE, ALAN M., *and others*. Study of the effects of complete circulatory arrest in the profoundly hypothermic dog. (Surgical forum, 1960. v.11, p.188-89, illus.) *Other authors:* J.W. Freese, W.C. Sealy *and* W.G. Young, *Jr.*

Circulatory arrest for one hour with hypothermia below 10°C. resulted in death of four out of 20 dogs. Death resulted from cerebral damage. Failure to reduce brain temperature to core levels may have been one of the complex causes. (DNLM.)

73437. LeSCHACK, LEONARD A. Arlis II: new arctic drift station. (Naval research reviews, Sept. 1961, p.12-18, illus., maps.) Summarized in: *Polar record,* May 1962, v.11, no.71, p.183.

Describes this station established in Beaufort Sea, during May 1961, by the U.S. Navy's Arctic Research Laboratory at Point Barrow, Alaska. It is located on a 3.5 x 1.5 mi. island of fresh-water (glacial) ice, approx. 80 ft. thick, and drifting northwestward. Work of summer 1961 research parties from the Navy and five universities is noted; year-round occupance of the station is planned. Advantages of an ice-strengthened ship over drift-stations are noted. (DLC.)

73438. LESHCHILOVSKIĬ, I. F. Za dal'neĭshee razvitie lesorazvedeniia na zheleznodorozhnom transporte. (Lesnoe khoziĭaĭstvo, July 1961. god 14, no.7, p.5-13, diagrs., tables.) Text in Russian. **Title tr.:** For further forest development along railroad lines.

The practice of using shelterbelts of trees to protect railroads from snow, was introduced into Russia in 1861; it had slow development in pre-Revolutionary time, but advanced rapidly after the Soviet decree of Mar. 3, 1921. There are now 309,000 hectares of forest belt along Soviet railroads, 64% for snow control, 21% windbreaks. The problems of cultivation, maintenance and improvement of forest belts are stressed: mechanization of the work, selection of qualified personnel, scientific assistance, etc. Use of shelterbelts on the northern railroad lines among others is mentioned, the Oktiābr'skaĭa (Murmanskaĭa) and Severnaĭa (Pechora). (DLC.)

73439. LESHCHINSKAĬA, A. S. Biomassa bentosa Obskoĭ guby i ee kormovoe znachenie dliā ryb. (Akademiia nauk SSSR. Ural'skiĭ filial. Sale-

khardskiĭ stat͡sionar. Trudy 1962. vyp.2, p.27-40, tables, maps.) 70 refs. Text in Russian. **Title tr.**: Biomass of the benthos in Ob Bay and its nutritive value for the fish.

Describes fish yields of this inlet including the Taz estuary, earlier studies of their benthos, and the latter's role as fish food. As basis of the present study, over 250 samples collected in 1958-1960 were investigated. Distribution of the main forms and benthic feeding grounds are outlined. Fish utilization of benthos and biomass of the latter are discussed. The average biomass of the bottom fauna was not rich during the period studied; the richest areas are in the south. Appended (p.41-75) are tabular data (on hydrological conditions, species, distribution, quantity, biomass, vertical migration, fishfood, etc.) as well as the literature applicable to this and to a companion paper *infra*. (DLC.)

73440. LESHCHINSKAIÂ, A. S. Zooplankton Obskoĭ guby i usloviĭa ego obitaniĭa. (Akademiĭa nauk SSSR. Ural'skiĭ filial. Salekhardskiĭ stat͡sionar. Trudy 1962. vyp.2, p.3-26, illus., tables, map.) 70 refs. Text in Russian. **Title tr.**: The zooplankton of Ob Bay, and conditions of its habitat.

Contains an introduction on the fish and food riches of the Ob, and its estuary including Taz Bay. Earlier studies are reviewed and the present work (summer-fall 1958, midwinter 1959) is outlined. Water temperature, O_2-content and movement, sunlight, winds, etc. are indicated. Species composition of the zooplankton, its biomass, and plankton biomass in the winter are reported, and zooplankton of Kara Bay briefly indicated. The utilization of the zooplankton by fishes is dealt with. The distribution of the zooplankton is uneven with respect to areas and seasons; its biomass high, copepods and cladocerans making up the bulk of the biomass. Plankton production of Ob River and Bay is higher than in the Yenisey, Lena, and possibly Pechora. Appended p.41-75 are tabulated data to this and the companion study *supra*. (DLC.)

73441. LESKOVA, E. S. Nekotorye voprosy biologii lozhechnit͡sy arkticheskoĭ, novogo lekarstvennogo rasteniĭa s gipotenzivnym deĭstviem. (Botanicheskiĭ zhurnal, Aug. 1961. t.46, no.8, p.1205-208, tables.) 6 refs. Text in Russian. **Title tr.**: Some problems of the biology of arctic scurvy grass, a new medicinal plant with hypotensive action.

Discusses the popular and scientific notions of the medicinal value of *Cochlearia arctica* Schlecht., size and weight of its seeds from Canada and USSR, germinating power under various conditions, phenology, cultivation, etc. (DLC.)

73442. ***LESNAIÂ PROMYSHLENNOST'.*** Lesnaĭa promyshlennost' v pervom polugodii 1961 goda. (Lesnaĭa promyshlennost', Aug. 1961. god 39, no.8, p.2.) Text in Russian. **Title tr.**: Lumbering in the first half of 1961.

Reports timber production data for the RSFSR as only 94.6% of expectations, 5 million $m.^3$ short of the objective. Areas which failed to meet their quota include Krasnoyarsk, Arkhangel'sk, and Tyumen Provinces and the Karelian and Komi Republics; causes of failure are analyzed. (DLC.)

73443. ***LESNAIÂ PROMYSHLENNOST'.*** Lesnye bogatstva Dal'nego Vostoka na sluzhbu narodnomu khozi͡aĭstvu. (Lesnaĭa promyshlennost', Jan. 1961. god 39, no.1, p.31.) Text in Russian. **Title tr.**: The forest resources of the Far East must be utilized for the national economy.

Reports a conference in Khabarovsk in October 1960: 20-year plans for a network of large logging concerns and lumber mills were outlined; need for a research institute on forest resources development including equipment suited to local conditions were discussed; and means of reforestation in various areas of the Far East were recommended. (DLC.)

73444. ***LESNAIÂ PROMYSHLENNOST'.*** Za peredovye metody lesozagotovok. (Lesnaĭa promyshlennost', Dec. 1961. god 39, no.12, p.17.) Text in Russian. **Title tr.**: For advanced methods of lumbering.

Notes a conference on the mechanization of this industry and raising the output; it was attended by representatives of the leading institutes and organizations active in the field, including the Northern Industrial Research Institute (SevNIIP). (DLC.)

73445. ***LESNOE KHOZI͡AĬSTVO.*** Issledovatel' lesov Dal'nego Vostoka. (Lesnoe khozi͡aĭstvo, Dec. 1961. god 14, no.12, p.74, port.) Refs. Text in Russian. **Title tr.**: Explorer of the forests of the Far East.

Biographical note on the work of Adol'f Antonovich T͡Symek, director of the Far East Forestry Research Institute (Dal'NIILKh), occasioned by his 60th birthday and 40 years' scientific activity. His main publications are listed; the wide range of his research is stressed. (DLC.)

73446. ***LESNOE KHOZI͡AĬSTVO.*** Nauka proizvodstvu; reportazh s Petrozavodskoĭ lesnoĭ opytnoĭ stant͡sii. (Lesnoe khozi͡aĭstvo, Apr. 1961. god 14, no.4, p.70-73, ports.) Refs. Text in Russian. **Title tr.**: Science for industry; reportage from the Petrozavodsk forestry experiment station.

Describes the station set up in 1948 as a research center for Karelia; its staff, headed by M.S. Sin'kevich, its studies, and collaboration with lumbering concerns; its work on natural reforestation in Loukhi, Kem', Rugozero and other districts of northern Karelia and on draining the marshy forest soil in the Loukhi district is noted. (DLC.)

73447. ***LESNOE KHOZI͡AĬSTVO.*** Razvivat' lesnoe khozi͡aĭstvo Zapoli͡ar'i͡a. (Lesnoe khozi͡aĭstvo, Mar. 1961. god 14, no.3, p.76-78.) Text in Russian. **Title tr.**: Forestry must be developed beyond the Arctic Circle.

Reports a conference in Murmansk, Dec. 7-8, 1960; of the 9.8 million hectare forest areas in Kola Peninsula, only 4.6 million hectares are actually forest-covered. Forest classification, wind damage, regeneration and reforestation, protection and improvement, seed supply, aid from scientists, etc. were discussed. (DLC.)

73448. ***LESNOE KHOZI͡AĬSTVO.*** Sorok let sluzheniĭa lesnoĭ nauke. (Lesnoe khozi͡aĭstvo, Aug. 1961. god 14, no.8, p.85-86, port.) Text in Russian. **Title tr.**: Forty years of silvicultural work.

Biographical sketch of Anatoliĭ Borisovich Zhukov, occasioned by his 60th birthday and forty years' scientific work. His activities as deputy-director of the Forestry Research Institute

during 1942-1956 and director of the Academy of Sciences' Forestry and Wood Institute in Krasnoyarsk are noted, also his participation in the multi-volume *Lesa SSSR.* (DLC.)

73449. *LESNOE KHOZĬAĬSTVO.* V Dal'NIILKh. (Lesnoe khozĭaĭstvo, Dec. 1961. god 14, no.12, p.85.) Text in Russian. **Title tr.:** In the Far East Forestry Research Institute.

Notes new departments, laboratories and branches of the institute (Dal'nevostochnyĭ nauchno-issledovatel'skiĭ institut lesnogo khozĭaĭstva), including two new experiment stations in Magadan and Kamchatka Provinces. (DLC.)

73450. **LESTEV, A. V.** Ob osobennostĭakh tralovogo lova okunĭa v Beringovom more. (Rybnoe khozĭaĭstvo, 1961. god 37, no.9, p.49-52, illus.) Text in Russian. **Title tr.:** Features of trawling for redfish in the Bering Sea.

Discusses Soviet fisheries explorations of 1957-1959 and fishing results in 1960, difficulties due to weather and uncharted bottoms, technical measures to be taken because of these conditions, distribution of fish. (DLC.)

73451. **LESTEV, A. V.** Ulovistost' i povrezhdaemost' tralov pri love okunĭa v Beringovom more. (Rybnoe khozĭaĭstvo, 1961. god 37, no.4, p.53-58, illus.) Text in Russian. **Title tr.:** Trawlnet efficiency and durability in perch fisheries of the Bering Sea.

Discusses types of boats and nets used in this newly developing fishery; methods for determining fishing efficiency of the nets used, and how liable to damage; kinds of sea bottoms and their effect on gear; effect of trawling speed; results and recommendations. (DLC.)

73452. **LETTEVALL, ULF.** On the hydracarina of Greenland with a description of *Lebertia (pseudolebertia) groenlandica* n. sp. København, Reitzel, 1962. 40 p. illus., maps, diagrs., tables. (Meddelelser om Grønland, bd. 170, nr.1.) 49 refs.

Reports a new species of water mite collected in 25 specimens during summer 1956 in three spring areas near Godhavn, West Greenland. The 21 localities involved are described as to situation, exposure, bottom conditions, and vegetation; physical and chemical conditions of the water in one of the spring areas are also set forth. Morphological comparisons are made between *Lebertia groenlandica* and three closely allied species, *L. convergens, L. glabra,* and *L. zschokkei.* Hydracarina finds from Greenland are listed. (DGS.)

73453. **LEV, O.M.** Mikrofauna nizhne- i sredneĭurskikh otlozheniĭ Leno-Olenekskogo raĭona. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, 1961. vyp.26, p.35-71, illus. on plates, diagrs., tables incl. fold.) 20 refs. Text in Russian. **Title tr.:** Microfauna of the Lower and Middle Jurassic in the Lena-Olenek region.

Reports a 1958-1961 study of microfauna of the middle and upper Lias and the Aalenian-Bajocian-Bathonian deposits of this region: four complexes are distinguished. Two new foraminifers, *Haplophragmoides zhiganicus* and *Trochammina (?) jakutica* n. spp. are systematically described, as are three ostracods, including n. sp. *Camptocythere elongata.* (DLC.)

73454. **LEVASHOV, G. A.** Mekhanizatsiĭa i avtomatizatsiĭa na shakhtakh Inty. (Ugol', Sept. 1962. god 37, no.9, p.8-10.) Text in Russian. **Title tr.:** Mechanization and automation in the Inta pits.

Reviews technological progress of the Intaugol' coal-mining combine, author being its chief engineer. At the beginning of 1962, loading was 82.2% mechanized. Further mechanization planned for the cutting, loading, transportation, unloading operations, etc. is outlined. The engineers and workers who have been key figures in this program are cited. (DLC.)

73455. **LEVASHOV, K. K.** Petrologiĭa granitoidov Degel'kich-Guuolond'inskogo mezhdurech'ĭa; IUzhnoe Verkhoĭan'e. (Geologiĭa i geofizika, 1962, no.12, p.58-70, table, map.) 10 refs. Text in Russian. Summary in English. **Title tr.:** Petrology of the granitoids of the Degel'kich-Guuoland'a interfluve; southern Verkhoyansk region.

Reports a 1959-1960 field study approx. 61° 27′N. 140°25′E. on the right bank of the upper Yudoma. Intrusive bodies of granitoids are described in detail, noting mineralogic composition and petrographic features. The mineralization is connected with the distribution of tonalites, whereas polymetallic and molybdenum mineralization is paragenetically connected with alaskites. (DLC.)

LEVCHENKO, G. I., *see* USSR. Morskoĭ atlas . . . 1959. No. 76242

73456. **LEVCHENKO, S. P.,** Informatsionnoe soobshchenie o nauchno-tekhnicheskoĭ konferentsii po gidrometeorologicheskomu priborostroeniiu. (Okeanologiĭa, 1961. t.1, vyp.5, p.927-28.) Text in Russian. **Title tr.:** Report on the Scientific Technical Conference on hydrometeorological instrument construction.

Reports the Main Administration of the Hydrometeorological Service conference of Dec. 20-24, 1960, attended by representatives of instrument- and apparatus-making agencies, etc. The papers delivered are summarized, including one by M.E. Azbel', on an automatic radio-meteorological station for remote uninhabited areas. (DLC.)

LEVCHENKO, V. A., *see* Krems, A.IA. Eshche raz o metodike . . . 1961. No. 73103

73457. **LEVENSHTEĬN, RAISA ĬAKOVLEVNA, 1921–** . Kolichestvennoe raspredelenie mnogoshchetinkovykh chervei, Polychaeta, v severnoĭ chasti Tikhogo okeana. (Akademiĭa nauk SSSR. Institut okeanologii. Trudy 1961. t.45, p.214-22, illus., tables, map.) 8 refs. Text in Russian. Summary in English. **Title tr.:** Quantitative distribution of polychaetes in the northern part of the Pacific Ocean.

Reports a study of material collected during the period 1953-1959 at 155 stations. The distribution of these worms resembles that of the benthos in general: its biomass decreases with depth, and from north to south. The biomass in the northwestern Pacific was higher than in the northeastern waters. (DLC.)

LEVENSHTEĬN, RAISA ĬAKOVLEVNA, 1921– , *see* Filatova, Z.A., & R.IA. Levenshteĭn. Kolichestvennoe raspredelenie . . . 1961. No. 71391

73458. **LeVERGE, JOSEPH.** The Eskimo hunter and the welfare state. (Eskimo, fall 1962. v.62, p.10-15 illus.)

Discusses government assistance to Canadian Eskimos as undermining their initiative. Usually, with foresight (yearly cycle described) the hunter can manage without aid. Those who cannot manage, should be helped to change their habits. (CaMAI.)

73459. LEVIN, ALEXANDER, *and others.* Systems research in "micrologistics" and human factor aspects of small group capabilities in a polar area. Natick, Mass., Dec. 1961. x, 176 p. illus., map, diagrs., graphs, tables. (U.S. Quartermaster Research and Engineering Center. Quartermaster Polar Research Project PPO-59.) Refs. 5 appendices. *Other authors:* D.R. Peryam, R. Seaton, N. Morana, *and* A.D. Hastings.

Deals with the initial phase of this research; emphasizes the form in which such groups of men and machines may be assembled and how to determine their effectiveness as complete units. Logistical input and operational output as related to group component design and activity of personnel were also investigated. Since mechanized operations in polar regions are susceptible to breakdown, this study of six-man basic units was made June 1 to Sept. 15, 1959, near Camp Fistclench, approx. 76°59'N. 56°4'W. on the Greenland Inland Ice. Three levels of accommodation were tested: their interactions on the functional capabilities of the six-man user units were examined using a complete assemblage of equipment, in a combination of integrated operational activities. Evaluations of efficiency by subjective (user) and objective (supplier) measurements are given. Methods and procedures were also evaluated preparatory to year-round research on the Inland Ice. Appendices provide statistical data, etc. (DWB.)

73460. LEVIN, MAKSIM GRIGOR'EVICH, 1904–1963. Ancient Eskimo cemetery in Uellen, Chukotka. (International Congress of Americanists, 33rd, *San José, Costa Rica,* 1958. Proceedings *pub.* 1959, v.2, p.65-71, illus.)

Describes the inventories of some 20 burials excavated in 1957 in the multi-layer ancient Eskimo necropolis near Uelen, approx. 15 km. west of Cape Dezhnev. The ivory, bone, and chipped and polished stone artifacts (shown in photos and drawings) date from the Old Bering Sea, Okvik, Birnirk and Punuk stages. They include ornamented harpoon heads, foreshafts and projectile points, a "winged object" with characteristic Old Bering Sea ornament, animal and anthropomorphic figurines, etc. The size and construction (wood and stone flooring) of the graves, position of skeletons, etc. are sketched; the marked Eskimoid features of the dolichocephalic skulls are noted. (DSI.)

73461. LEVIN, MAKSIM GRIGOR'EVICH, 1904–1963. Etnograficheskie i antropologicheskie materialy kak istoricheskiĭ istochnik; k metodologii izucheniia istorii bespis'mennykh narodov. (Sovetskaia etnografiia, Jan.-Feb. 1961, no.1, p.20-28.) 16 refs. Text in Russian. Summary in English. **Title tr.:** Ethnographic and anthropological materials as historical sources; methodology of the study of peoples having no written language.

Paper read at the Sixth International Congress of Anthropological and Ethnological Sciences, Paris 1960.

Demonstrates the application of the Soviet ethnographic concept of economic-cultural types as an auxiliary means of reconstructing historical evolution. Peoples of kindred socio-economic levels of development in similar natural conditions exhibit analogous economic-cultural types regardless of geographic location or historical era. Five type-stages are differentiated in northern Siberia: taiga hunters and fishers, settled river fishermen, arctic sea mammal hunters, taiga hunters and reindeer breeders, tundra reindeer herders. The economy, culture, and chronology of each stage are discussed. (DLC.)

73462. LEVIN, MAKSIM GRIGOR'EVICH, 1904–1963. New blood group data from Siberia. (Arctic anthropology, 1962. v.1, no.1, p.87-92, tables.) 7 refs. Translation by B.L. Pforr, of No. 52787 and 59737. (DSI.)

73463. LEVIN, MAKSIM GRIGOR'EVICH, 1904–1963. On the ethnogenesis of the Tungus. Moskva, Izd-vo vostochnoĭ lit-ry, 1960. 9 p. (International Congress of Orientalists, 25th, Moscow 1960. Delegation from the USSR, Papers.) 20 refs.

Summarizes salient points of various ethnogenetic theories enunciated by the author and others. That of a Lake Baykal origin of the Tungus is dismissed, although Baykal neolithic "Paleoasiatics" were later absorbed by Tungus-speaking tribes. The original homeland of the Tungus is supposed to have been near the area of formation of the Turkic- and Mongolian-speaking peoples, i.e. Northern Mongolia or thereabouts. The time of Tungus penetration into territories originally occupied by Paleosiberians is linked to the spread of reindeer-breeding, a relatively recent development. (DLC.)

LEVIN, MAKSIM GRIGOR'EVICH, 1904–1963, *see also*

Akademiia nauk SSSR. Istoriko-etnograficheskiĭ atlas . . . 1961. No. 69544

Aleksandrov, V.A. Sessiia . . . 1962. No. 69684

Alekseeva, T.I. Otchetnaia arkheologo-etnograficheskaia sessiia . . . 1962. No. 69705

Chard, C.S. Northeast Asia. 1961. No. 70666

LEVIN, W. C., *see* Ritzmann, S.E., & W.C. Levin. Cryopathies . . . 1961. No. 75136

73464. LEVINA, A. P. O stroenii i rasprostranenii allīuvial'nykh otlozheniĭ drevnikh dolin v basseĭne srednego Vilīuia. (Leningrad. Vsesoīuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyĭ sbornik 52. Materialy po chetvertichnoĭ geologii i geomorfologii, 1962, p.39-48, diagrs.) 6 refs. Text in Russian. **Title tr.:** On the structure and distribution of the alluvial deposits of old valleys in the middle Vilyuy basin.

Describes a section of these deposits in detail; their material composition and petrographic composition of their pebbles are reported. They differ in material composition from the Lower Jurassic deposits underlying them, and from the lower Pleistocene alluvial deposits of the fifth terrace of the present Vilyuy. Crust weathering, changes in river net, and other factors are briefly noted. (DLC.)

73465. LEVINE, NORMAN DION, 1912– , *and others.* Survival of *Trichomonas* foetus stored at -28 and -95°C. after freezing in the presence of glycerol. (Journal of protozoology, Aug. 1962. v.9, no.3, p.347-50, illus.) 8 refs. *Other authors:* F.L.

Andersen, M.B. Losh, R.A. Notzold, *and* K.N. Mehra.

Survival of this protozoan, following slow freezing in the presence of 1.0 M glycerol, was much better at -95°than at -28°C.; motility was also better and cultures more readily started. The effect of other media on cold-survival is also considered. (DLC.)

73466. LEVITIN, K., *and* **A. MELAMED.** Vermikulit, kovdorskoe chudo. (Nauka i zhizn', Oct. 1962. god 29, no.10, p.84-86.) Text in Russian. **Title tr.:** Vermiculite, the Kovdor miracle.

Describes in the form of a letter "from the editor" to D.P. Bolotnikov, chief geologist of the Kovdor Mining Combine, unique insulating properties of this micaceous mineral. It occurs in quantity (up to 54 million tons) in Kola Peninsula 5 km. from the Kovdor (67°34′N. 30°28′E.) railroad station. The deposits are in the upper layers and may be mined in open pits by the Kovdor Combine, together with the iron ores beneath. Need to increase the utilization of vermiculite is stressed. (DLC.)

LEVITSKAIA, TS. M., *see* Sokolov, S.G., & TS.M. Levitskaia. O vliianii nizkikh temperatur . . . 1962. No. 75805

73467. LEVOEV, A. S pomoshch'iu aktiva tekhnicheskogo kabineta. (Morskoĭ flot, Nov. 1962. god 22, no.11, p.43.) Text in Russian. **Title tr.:** With the aid of operatives of the technical bureau.

Describes activities of this recently established bureau of the Murmansk polar steamshipline: promotion of efficiency, organizational work, technical information, etc. The bureau under author's leadership aims to increase output and efficiency of crew, engineers and pilots, to introduce innovations in ship installations, etc. (DLC.)

LEVSHOV, P. P., *see* Kozlov, I.T., & P.P. Levshov. Amakinit . . . 1962. No. 73059

73468. LEVSHUNOV, P. A. K voprosu raspredeleniia tiazhelykh uglevodorodov v plotnykh (glinistykh) porodakh. (Geologiia i geofizika, 1962, no.9, p.122-24, diagrs., table.) 3 refs. Text in Russian. **Title tr.:** On the distribution of heavy hydrocarbons in dense (clayey) rocks

Reports results of electric logging in the Igrim bore hole, in the Berezovo gas region of Tyumen Province. Some 146 drilling mud samples from 240-1705 m. depth were collected, and the distribution of heavy hydrocarbons from propane to octane and from methane to ethane is reported. (DLC.)

73469. LEWARTOWSKI, BOHDAN. Wpływ węzła zatokowego na występowanie migotania komór serca w hipotermii. (Acta physiologica polonica, 1961. v.12, fasc. 6, p.813-20, illus., table.) 6 refs. Text in Polish. Summary in English. **Title tr.:** The influence of the S-A node on occurrence of ventricular fibrillation during hypothermia.

Account of experiments with rabbits cooled to 33°C. Destruction of the S-A node was found to facilitate the appearance of ventricular fibrillation. No effect was noted during the refractory period, nor in the diastolic threshold. (DNLM.)

73470. LEWIS, CHARLES ROSCOE. Icing mound on Sadlerochit River, Alaska. (Arctic, June 1962. v.15, no.2, p.145-50, illus., maps.) 7 refs.

Describes an upward arch of soil and ice and its associated aufeis field, examined on the Arctic Slope in northeast Alaska on June 25, 1959. The icing mound consisted of a sinuous ridge about 250 ft. long which terminated in a low dome about 20 ft. high at the north end and in a lower pointed "tail" at the south end. Part of the "tail" had collasped and revealed an underlying layer of ice about 4 ft. thick characterized by a vertical columnar structure and overlain by 2 ft. of organic silt and fine sand. The probable cause of uplift of the icing mound was cryostatic pressures accompanying growth of a ground-ice lens and hydrostatic pressures occurring, probably, when water backed-up by the formation of aufeis became trapped between the ground-ice lens and permafrost. (DGS.)

LEWIS, CHARLES ROSCOE, *see also* Holmes, G.W., & C.R. Lewis. Glacial geol. Mt. Chamberlin . . . 1961. No. 72217

73471. LEWIS, FLOYD JOHN, 1916– . Prolonged hypothermia. (U.S. Air Force. School of Aviation Medicine. Report no. 61-45, April 1961, p.1-5, table.) 15 refs.

In dogs kept hypothermic below 25°C. for 20 hrs., blood pressure and pulse stayed low, and, with time, hematocrit rose, but plasma volume, pH and venous oxygen saturation fell. Of the cooled animals, about one third survived rewarming. Several agents used to increase survival produced inconsiderable results. (DNLM.)

LEWIS, FLOYD JOHN, 1916– , *see also* Connaughton, P.J., & F.J. Lewis. Hypothermia . . . 1962. No. 70804

Connaughton, P.J., & *others.* Prolonged hypothermia . . . survival. 1961. No. 70805

Connaughton, P.J., & F.J. Lewis. Use of glycerol and chloroform in heart . . . freezing. 1961. No. 70806

73472. LEWIS, HAROLD E., 1921– , *and others.* Stability of basal metabolic rate on a polar expedition. (Journal of experimental physiology, May 1961. v.16, no.3, p.397-400, illus., table.) 11 refs. *Other authors:* J.P. Masterton *and* S. Rosenbaum.

Reports on one-two years' study of 29 young adults during the British North Greenland Expedition 1952-1954. Basal metabolism was "well within the normal British standards." Its variations showed no nexus to seasons. Exposure to cold was small. (DLC.)

LEWIS, HAROLD E., 1921– , *see also* Goldsmith, R., & H.E. Lewis. Polar expeditions . . . 1960. No. 71737

73473. LEWIS, MARION, *and* **B. CHOWN.** The blood groups of the Eskimo: an analysis and a tentative hypothesis. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.10-19, diagrs.) Refs.

Contains an analysis of the Eskimos according to the B gene, the MN system and the Diego system; the Rh system; possible relation of the Eskimos to the Polynesians and to the seminal population of East Asia; theory of two population stocks within the Eskimos. (CaMAI.)

73474. LEWIS, MARION, *and others.* The blood groups of the Kutchin Indians at Old Crow, Yukon Territory. (American journal of physical anthro-

pology, Dec. 1961. v.19, no.4, p.383-89, illus. tables.) 13 refs. *Other authors:* J.A. Hildes, H. Kaita *and* B. Chown.

Account of study of 114 persons, 92 of them considered pure-blood, with an introductory section on intermarriage with white men. The population was found essentially to represent a breeding isolate with evidence of genetic drift in three or four blood groups. The strength of the D antigen seems to be greater than in Caucasoids. (DLC.)

LEWIS, MARION, *see also*

Chown, B., & M. Lewis. Blood group & secretor genes Eskimo . . . 1962. No. 70735

Pacific Science Congress. 1961. No. 74619

LEWIS, RICHARD QUINTIN, 1919– , *see* Coats, R.R., & *others*. Geol. reconn. Kiska I. . . . 1961. No. 70774

LEWIS, ROGER W., *see* Mohr, J.L., & *others*. Marine nature of Nuwuk Lake . . . 1961. No. 74076

LEWIS, WILLIAM O., *see* Alaska. Statutes 1962 . . . 1962. No. 69625

73475. LEWY, ERNST, 1881– . Zur Betonung des Ostyakischen. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.285-87.) Refs. in text. Text in German. **Title tr.:** Stress in Ostyak.

Discusses rythmicity in the interchange of accentuated and non-accentuated syllables in Ostyak sentence structure. Stress follows phonetic laws and depends on the position of the given word within the sentence. (DSI.)

73476. LIAKHOV, M. E. O mussonnosti klimata Kamchatki. (Akademiia nauk SSSR. Izvestiia, ser. geograficheskaia, May-June 1961, no.3, p.47-49, chart.) 5 refs. Text in Russian. **Title tr.:** The monsoon climate of Kamchatka.

Notes wind directions, precipitations and other features of Kamchatka climate; compares these features with prevailing patterns of monsoon climate; considers a monsoon-type climate in Kamchatka not substantiated. (DLC.)

73477. LIAKHOVA, L. N. Izmenenie s shirotoĭ ustoĭchivosti kriticheskikh chastot sloia F2 vo vremia vozmushcheniĭ. (Akademiia nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniia radiovoln. Trudy 1961. vyp.19(29), p.48-51, tables.) 4 refs. Text in Russian. **Title tr.:** Stability variation with latitude of critical frequencies of the F2 layer during disturbances.

Considers the change in stability of Δ *fo* F2 with latitude, using the data of the Fletcher's Ice Island, Resolute Bay, Baker Lake, Churchill and Winnipeg stations for September, 1957. The correlation coefficients, r, between the values of Δ *fo* F2 separated from each other by different intervals of time, and their mean square errors are calculated. Δ *fo* F2 stability was found to have a tendency to decrease with higher latitudes. (DLC.)

73478. LIAKHOVA, L. N. Kratkosrochnyĭ prognoz sostoianiia ionosfery. (Akademiia nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniia radiovoln. Trudy 1960. vyp.17(27), p.240-81, graphs, tables, maps.) 57 refs. Text in Russian. **Title tr.:** Short-range forecast of the state of the ionosphere.

Analyzes the possibility of errors in prognoses of critical radio-frequencies *fo* F2 for the ionospheric layer F2, from the mean regularities of variations in the geomagnetic field and upper atmosphere during magnetic disturbances. The feasibility of the temporal extrapolation of *fo* F2 during disturbed periods is considered. The variations of *fo* F2 during an interval of several hours is discussed for ten observation points, Bukhta Tiksi and Fairbanks, Alaska included. It was found that Δ *fo* F2 is not subject to unusual variation during disturbed periods, except during strong magnetic storms when reflections from F2 disappear completely. The prognosis of radio reflections from the F2 layer by the method of extrapolation for several hours in advance was found superior to the method based on mean characteristics. (DLC.)

73479. LIALIKOVA, N. N. Rol' bakteriĭ v okislenii sul'fidnykh rud medno-nikelevykh mestorozhdeniĭ Kol'skogo poluostrova. (Mikrobiologiia, 1961, t.30, vyp.1, p.135-39, tables.) 10 refs. Text in Russian. Summary in English. **Title tr.:** Role of bacteria in oxidation of sulfide ores of copper-nickel deposits on the Kola Peninsula.

Reports study of four deposits showing a very slow rate of oxidation. Very few *Thiobacillus thiooxidans* and *Th. ferrooxidans* were found in them, and the small number, 10-100 cells/gm., is assumed to be due to the alkaline reaction of the waters of the deposit. (DLC.)

LIAN, HAROLD MAYNARD, *see* Hazzard, J.C., & *others*. Search oil Alaska . . . 1962. No. 72078

73480. LIBBY, DOROTHY, 1923– . Ethnohistory in the U.S.S.R. (Arctic anthropology, 1962. v.1, no.1, p.68-75.) 25 refs.

Reviews the present trend of Soviet historical and cultural studies as reflected in some Russian publications of 1949-1961, including several on the North: M.E. Foss's on the ancient history of northern USSR, No. 29078; V.A. Aleksandrov's on Russian dwellings in eastern Siberia, No. 62991; and four ethnographic papers of B.O. Dolgikh: No. 21501, 39571, 50589, 50590. (DSI.)

73481. LIBO, M. KH. Kartofel' kak istochnik vitamina C na Severe. (Voprosy pitaniia, 1961. t.20, no.4, p.78-80, tables.) Text in Russian. **Title tr.:** Potatoes as vitamin C source in the North.

Discusses sources, and consumption of potatoes in the Pechora area, and presents the results of vitamin-C assay of local and imported varieties. The vitamin content decreased with time, from a high just after harvest. (DLC.)

LIBROVICH, V. L., *see* Dominikovskiĭ, V.N., & *others*. Fatsial'nye osobennosti . . . 1962. No. 71072

73482. LID, JOHANNES, 1886– , *and others*. Orienterende forsøk med dyrking av molter. (Norske myrselskap. Meddelelser, Feb. 1961. årg. 59, nr.1, p.1-26, illus., tables, graphs.) 16 refs. Text in Norwegian. *Other authors:* O. Lie, *and* AA. Løddesøl. **Title tr.:** Preliminary experiments in cloudberry cultivation.

Describes work of the Norwegian Bog Society in South Norway (60° 15′ N.) since 1951: the results, together with those from similar experiments in the North on Andøya and Vesterålen, in Finnmark and Trøndelag, showed that phosphorus and potassium fertilizing increased the yield; ditching and

spreading of the dug-out material resulted in new shoots. Eliminating the competitive vegetation was advantageous in some cases. Sowing and spreading of plants had no practical results. (DA.)

73483. LID, NILS, 1890–1958. Samisk og narrøn attergang-tru. (Norske Videnskaps - akademi, *Oslo*, Årbok, 1954 *pub.* 1955, p.20.) Text in Norwegian. **Title tr.**: Lappish and Old Norse belief in afterlife.

Discusses a group of Lappish and Old Norse words connected with belief in traditional burial, and in danger from the soul or ghost of the deceased who lacked such ceremony. (DLC.)

73484. LIDEGAARD, MADS. Den eskimoiske kultur og teknikken. (Grønland, Feb. 1961, nr.2, p.64-74, illus.) Text in Danish. **Title tr.**: Eskimo culture and technology.

Discusses present conditions in Greenland in terms of conflict between the Eskimo mentality and modern development. The traditional Eskimo tendency to live in the present with no urge to plan for the future is a handicap in adaptation to the changing social and economic conditions. (CaMAI.)

73485. LIDEGAARD, MADS. Grønlands kirke gennem tiderne. (Atuagagdliutit: Grønlandsposten, Jan. 1, 1961. Ukiut 101-iat, nr.1, p.28-31, illus.) Text in Danish and Eskimo. **Title tr.**: The Church in Greenland through the ages.

Contains an historical account of progress with intermittent periods of defeat, competition with the Moravian Brethren, varying support from the state. Gradually, the entire population was converted. In 1905, new school and church laws were passed, which established the Greenland Church in its present form, the missionaries replaced by state-salaried priests. (CaMAI.)

73486. LIDEGAARD, MADS. Kulturelle forhold blandt Alaskas eskimoer. (Grønland, Nov. 1961, nr.11, p.430-40, illus.) Text in Danish. **Title tr.**: Cultural conditions among Alaska Eskimos.

Outlines church and school conditions, pointing out main differences with Greenland. The latter has a state church with little competition; in the educational field, the aim is to equip the children for conditions of their community, where it is assumed that they will remain. In Alaska, the emphasis is on assimilation. In the Aug. 1961 issue of this journal, p.302-306, author gives a brief survey of the geography, history, population and administration of Alaska. In the Jan. 1962 issue, p.8-10, he compares policy in Alaska and in Greenland, to show the greater emphasis on the teaching of Eskimo and the preservation of native culture in Greenland. (DLC.)

73487. LIDEGAARD, MADS. Landet hvor eskimoer flyver i deres private flyvemaskiner. (Atuagagdliutit: Grønlandsposten, Oct. 27, Nov. 10, 1960. Ukiut 100-at, nr.22, p.10-11, nr. 23, p.12, +, illus., map.) Text in Danish. **Title tr.**: The country where the Eskimos fly their own planes.

Offers impressions from a 1960 study tour in Alaska, stressing differences from Greenland, especially in language policy, and in economic planning. The transition from a primitive civilization is more rapid in Alaska. (DLC.)

73488. LIDER, V. A. K stratigrafii lednikovykh otlozheniĭ Zaural'ia i granitsa neogena i antropogena. (*In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.75-76.) Text in Russian. **Title tr.**: On the stratigraphy of glacial deposits of Trans-Ural and the boundary of the Neogene and Anthropogene.

Describes glacial deposits in the lower Ob and Severnaya Sos'va basins north of 62°N., two moraines, separated by lacustrine and alluvial deposits, are distinguished; and their composition, thickness, color and other features reported. Difficulties in establishing the limit of the Neogene and the Quaternary are indicated. (DLC.)

LIE, OLE, *see* Lid, J., *& others*. Orienterende forsøk . . . 1961. No. 73482

73489. LIE, ULF. Rapport fra et tokt med fransk forskningsfartøy "Thalassa" på norske kystbanker og ved Bjørnøya i tiden 31. oktober til 16. november 1961. (Fiskets gang, Jan. 11, 1962. årg. 48, nr.2, p.17-18, illus.) Text in Norwegian. **Title tr.**: Report from a cruise of the French R/V *Thalassa* on Norwegian coastal banks and in Bjørnøya waters October 31 to November 16, 1961.

Reports as a participating Norwegian scientist, cruise to find cod-fishing grounds in the period when fish prices are high in France. The results were poor in both areas. The research vessel and French equipment are described. (DA.)

73490. LIE, ULF. Rapport om tokt med "Peder Rønnestad" 6 - 29 april 1961 i norske kyst og bankfarvann. (Fiskets gang, June 8, 1961. årg. 47, nr. 23, p.438, sketch map.) Text in Norwegian. **Title tr.**: Report of the *Peder Rønnestad* cruise in Norwegian coastal and bank waters April 6-29, 1961.

Reports on the investigation of herring and cod larvae occurrence along the Norwegian coast 60-70°N. A new spoon net was used in addition to the Clarke-Bumpus plankton collector. Herring larvae occurred in plankton samples 60° - 65°30'N. but not further north. Large concentrations of cod eggs were found in Vestfjord but few in the outer Lofoten area. (DA.)

73491. LIE, ULF. Zooplankton in relation to herring in the Norwegian Sea, June 1959. (Norway. Fiskeridirektoratet. Skrifter, ser. havundersøkelser. Report on Norwegian fishery and marine investigations, 1961. v.13, no.1, p.1-13, table, maps.) 17 refs.

Reports on a survey from 121 stations and vertical hauls of 50 and 100 m. depth. Areas of most abundant zooplankton are outlined; leading forms and their stages are determined. The relation between herring, phyto- , and zoo-plankton is discussed. (DI.)

73492. LIEBOW, ELLIOT, *and* **J. TRUDEAU.** A preliminary study of acculturation among the Cree Indians of Winisk, Ontario. (Arctic, Sept. 1962. v.15, no.3, p.190-204, maps.)

Reports a study in summer 1958 of cultural changes resulting from establishment of a radar base in the Hudson Bay area of northern Ontario. The Indians' former life and contacts with whites as hunters and trappers are described, also their experiences as wage earners at the base. Among the changes are year-round residence in Winisk village, displacement of the family as the basic unit of production, and disappearance of hunting skills as the main factor in social prestige. De-

spite certain undesirable aspects, as substitution of canned food for fresh meat, loss of parental control over children, deterioration of public morality, etc., the new way of life is preferred by the Indians because of the greater economic security and the stimulation of community living. (DI.)

LIED, F., *see*
Holt, O., & *others*. Electron density & collision frequency. 1962. No. 72222

Holt, O., & *others*. Riometer observ. during blackouts. 1962. No. 72220

73493. LIESTØL, OLAV, 1922– . Discovery of a tree stump in front of Engabreen, Svartisen. (Norway, Norsk Polarinstitutt. Årbok 1960, *pub.* 1962, p.64-65.)

Reports a number of stumps found in 1951 in a ground moraine approx. 66°38′N. 14°E. in Nordland, North Norway. The trees fell during an advance of the glacier but the stumps stand at their place of growth. One identified from sample as birch, *Betula odorata*, had over 60 years' growth. Carbon-14 dating was determined as 350 ± 100 yrs. and the glacier advance about 1600 A.D. is in good agreement with the previously formed picture of glacier variations. (CaMAI.)

73494. LIETUVOS TSR MOKSLŲ AKADEMIJA. *Geologijos ir geografijos institutas*. Aktinometrijos, atmosferos optikos ir branduolinės meteorologijos klausimams skirtos konferencijos darbai; sąs.1, aktinometrija, radiacinis balansas. Vilnius, 1962. 416 p. illus., tables, charts, diagrs., graphs. (*Its:* Moksliniai pranešimai, t.13.) Refs. Text in Russian. Summary in Lithuanian and English. **Title, etc. tr.**: Academy of Sciences of the Lithuanian SSR, Institute of Geology and Geography, Proceedings of the Conference on the study of actinometry, atmospheric optics and nuclear meteorology; no.1 actinometry, radiation balance.

Contains 43 papers presented; six dealing with the arctic regions are abstracted in this Bibliography under their authors' names, viz (titles tr.):

MUKHENBERG, V.V. The albedo of land surface of the Northern Hemisphere.

CHERNIGOVSKIĬ, N.T. Albedo of the land and sea surfaces in the Arctic.

PIVOVAROVA, Z.I. A characteristic of the radiation regime in the USSR territory during the IGY period, 1957-1959.

KOPTEV, A.P. Actinometric investigations by aircraft in the Arctic.

CHERNIGOVSKIĬ, N.T. Main characteristics of the radiation climate in the Central Arctic.

GALANIN, N.R. Ultraviolet climate in the northern regions of the USSR. (DLC.)

LIGUORI, G., *see* Guiso, G.F., & G. Liguori. Ricerche sul meccanismo dell'effetto aumentatore adrenalinico, 1 . . . 1960. No. 71904

73495. LIIMOLA, MATTI E. Etymologisches aus den ugrischen Sprachen. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . p.289-316.) Refs. in text. Text in German. **Title tr.**: Etymologies in Ugric languages.

Linguistic analysis of eight Vogul words: derivatives, dialectal forms, and relationship to Ostyak, Zyryan, etc. (DSI.)

73496. LIKHANOV, B. N., *and* **M. N. KHAUSTOVA.** Fiziko-geograficheskie razlichiia Krasnoiarskogo kraia. (*In:* Krasnoiarskaia . . . ėkspeditsiia. Prirodnye usloviia . . . 1961, p.24-52, illus., fold. map.) 10 refs. Text in Russian. **Title tr.**: The physical-geographic diversity of Krasnoyarsk Province.

This province is divided into several natural zones: arctic desert, tundra, forest tundra, northern taiga, middle and southern taiga; forest-steppe and steppe. Each is characterized, noting distribution, climatic conditions, rivers and lakes, vegetation cover, etc. The mountains of Taymyr Peninsula, Byrranga, Putorana are also described. (DLC.)

LIKHOTA, V. N., *see* Gubler, E.V., & *others*. O posledstviiakh . . . 1960. No. 71894

73497. LIKHTER, IA. I. Issledovaniia atmosferikov v SSSR v 1957-1959 gg. (Geomagnetizm i aėronomiia, 1961. t.1, no.2, p.228-31, table.) 20 refs. Text in Russian. **Title tr.**: Research on atmospherics in the USSR in 1957-1959.

Describes work on: atmospheric radio-interference, sferics' effect on propagation of ultralong radiowaves, and whistlers, as carried on since 1958-59 at ten research stations throughout the country including Murmansk. A possibility of determination of maximum electron concentration in solar corpuscular streams during corpuscular disturbances of the atmosphere, and from the trajectories of whistlers is suggested. (DLC.)

73498. LIKHTER, IA. I. Metod opredeleniia funktsii raspredeleniia atmosfernykh radiopomekh. (Akademiia nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniia radiovoln. Trudy 1957. vyp.13, p.31-62, illus., tables, diagrs., graphs.) 23 refs. Text in Russian. **Title tr.**: Determination method of the distribution function of atmospheric radio interference.

Discusses the two common methods of measuring interference: the measurement of the minimum field intensity of the signal, necessary to overcome the interference, and the objective method of measurement of a certain parameter which characterizes the field intensity of the interference. The second method was applied (cf. No. 29246) at six Canadian stations, Baker Lake, Norman Wells, and Churchill included, during Jan.-July 1947 on 150 kc. with "Hammarlund" (BC779-A) receivers; and it was shown to be self-contradictory and inadequate to satisfy the requirements of practice. An apparatus for the experimental determination of the first order distribution function of the voltage produced by the atmospheric interference on the loading of the "linear" detector of the receiver is described. A statistical analyzer of the apparatus permits a simultaneous measurement of ten values of the intensity distribution function. (DLC.)

73499. LILJEQUIST, GÖSTA H. Arktisk utpost; berättelsen om den svensk-finsk-schweiziska expeditionen till Nordostlandet 1957-1958. Med bidrag av Eric Dyring, Sveneric Molander och Carl-Axel Bäckstedt. Stockholm, Forum, 1960. 232 p. illus., col. plates, tables, diagrs., maps. Text in Swedish. **Title tr.**: Arctic outpost; account of the Swedish-Finnish-Swiss Expedition to Nordaustlandet, 1957-1958. With contributions by

E. Dyring, S.E. Molander, and C.A. Bäckstedt.

Semi-popular account of this 14-man IGY-party's activities during two years' soujorn at Kinnvika on Murchisonfjorden. In some twenty chapters, the organization of the expedition, logistics, carrying out of the scientific tasks, daily life at the station, field trips, laboratories and accommodations are outlined; effects of darkness, food, plant life, avifauna, etc. are dealt with. The establishment of an under-snow/ice station on Vestisen is described in some detail. Some preliminary meteorological data are tabulated. (SPRI.)

LILLEHEI, C. W., *see* Gott, V.L., & *others*. Myocardial energy substances . . . P & hypothermic arrest. 1962. No. 71806

73500. LILLY, JOHN C., *and* **A. M. MILLER.** Vocal exchanges between dolphins. (Science, Dec. 8, 1961. v.134, no.3493, p.1873-76, illus., table.) 6 refs.

Study of vocalization in bottlenose dolphins under various conditions. These consist of clicks, whistles, squawks, blats, etc. alone and in combination "solos" or in "duets". Ultrasonic clicks are also recorded. Some tentative general meanings, as "distress", "attention", etc. are inferred. (DLC.)

73501. LIM, RICHARD, *and others*. Circulatory arrest during profound hypothermia induced by direct blood-stream cooling: an experimental study. (Surgery, Mar. 1961. v.49, no.3, p.367-74, illus., tables.) 28 refs. *Other authors:* K. Rehder, R.A. Harp, B. Dawson *and* J.W. Kirklin.

Reports experiments with dogs cooled to 20 or 15°C. and circulation arrested for 20 or 30 minutes. In a standardized series: 15°C. with 30 min. circulatory arrest, nine out of ten animals were long-term survivors and the tenth died due to a technical error. (DLC.)

73502. LIM, THOMAS PYUNG KEE, 1924– . Central and peripheral mechanisms in temperature regulation. (*In:* Symposia on arctic biology and medicine, 1960. Proceedings 1; neural aspects of temperature regulation, *pub.* 1961, p.79-111, illus., tables.) 8 refs.

Study of differential heating or cooling the anesthetized dog. Shivering was produced by cooling the head or the trunk alone or the whole body. "Peripheral" or "central" shivering can be produced; it is inhibited by raising the skin temperature in "central shivering" or the brain temperature in "peripheral shivering." The results suggest that onset of shivering depends both on central and peripheral temperature, the latter being the more potent factor. Appended, p.102-110, is discussion of the paper. (CaMAI.)

73503. LIM, THOMAS PYUNG KEE, 1924– , *and* **U. C. LUFT.** Influence of hypoxia on thermal homeosthasis in man. Fort Wainwright, Alaska, June 1962. 4, 20 p., illus., tables. (U.S. Air Force. Arctic Aeromedical Labotatory, Technical documentary report 61-55.) 12 refs.

Reports a study of the effects of hypoxia (tracheal PO_2 = 65 mm Hg) on core and shell temperatures, metabolic rate, etc. of six healthy subjects in a neutral, warm, and cold (4°C.) environment. Mean skin temperatures in all three environments were not different from those in similar thermal environments with room air. (CaMAI.)

LIND, ESKO A., *see* Kalela, O., & *others*. Seasonal change in habitat . . . 1961. No. 72618

LIND, N. C., *see* Gold, L.W., & *others*. Bearing capacity . . 1961. No. 71729

73504. LINDBERG, K. Om gödsling av torvmarker. (Norrlands skogsvårdsförbund. Tidskrift, 1961. nr.2, p.135-58, illus., tables, sketch map.) Text in Swedish. **Title tr.:** Fertilizing of peat land.

Describes experiments by the Swedish Forest Service on 111 drained but previously unfertilized peat-land forest plots in areas with different climatic conditions, including 15 in Västerbotten and 17 in Norrbotten. Phosphate, potassium sulfate and nitrogens were used in various quantities. Findings are inconclusive as yet, but the general reaction to fertilizers varies in apparently similar plots. No increase in natural regeneration took place, but more cones on young trees, a higher quality classification, and higher resistance were evident. A higher percentage of low quality trees was observed in the four northern counties, especially at altitudes above 200 m. Spruce was easily damaged by frost and should not be planted on peat land. (DA.)

LINDBERG, KAI, 1899– , *see* Denmark. Billet til Grønland . . . 1960. No. 70967

73505. LINDBERG, LARS. Djurlivet i Muddus' nationalpark efter 15 års fridlysning. (Fauna och flora 1960, hft. 1-2, p.1-30, illus., map.) 34 refs. Text in Swedish. **Title tr.:** Animal life in Muddus National Park after 15 years' protection.

Reports spring 1957 and summer 1958 observations in this nature preserve in north Sweden: 18 mammals, 110 birds, 3 reptiles and amphibians and 8 fishes were studied. They are divided into three groups: those in which a definite increase is evident, as bear, marten, elk; those whose breeding and nests are undisturbed as a result of protection but whose numbers do not necessarily increase, as the wolverine, golden eagle, whooper swan; and those, the majority, unaffected by protection, as they had not been previously disturbed to any extent. (DA.)

73506. LINDE, I. F. O prirodnykh gazakh v gornykh porodakh khibinskogo shchelochnogo massiva. (Izvestiĭa vysshikh uchebnykh zavedeniĭ. Geologiĭa i razvedka, Sept. 1961, no.9, p.78-93, tables, map, diagrs.) Text in Russian. **Title tr.:** On natural gases in the rocks of the Khibiny alkaline massif.

Reports extensive studies on genesis and distribution of combustible gases at four sites of apatite-nepheline deposits. Nitrogen, methane and heavy hydrocarbons are identified. The rocks vary substantially, according to content of gases. The Khibiny urtites have the highest saturation, and apatite-nepheline ores the lowest. All gases are of inorganic origin. (DLC.)

73507. LINDEN, N. A. Seĭsmichnost' Sovetskoĭ Arktiki. (*In:* Akademiĭa nauk SSSR. Sovet po seĭsmologii. Zemletriaseniĭa v SSSR, 1961, p. 387-92, table, charts, diagr.) Text in Russian. **Title tr.:** The seismicity of the Soviet Arctic.

Reports observations for this area where instrumentation was introduced in 1911-1912, and the establishment of new seismic stations at

Magadan, Tiksi and Apatity (Kola Peninsula). For 92 epicenters determined for the 1908-1958 period, intensity and distribution are reported. The quake registered by the Tiksi station on June 8, 1956 and some others are briefly described. Current seismic investigations are insufficient and all earthquakes are being registered. (DLC.)

73508. LINDEN, N. A. Zemletriaseniia Dal'nevostochnoĭ zony. (*In:* Akademiia nauk SSSR. Sovet po seismologii. Zemletriaseniia v SSSR, 1961, p. 362-69, maps, tables, charts, diagr.) Text in Russian. **Title tr.:** Earthquakes of the Far East.

Delineates this earthquake zone: the northeastern part of the continent, the Okhotsk and Bering Seas, Kamchatka Peninsula, the Commander Islands, and adjacent areas. Investigations, methods and results of instrumental observations, are reviewed. The number of earthquakes, their intensity, depths and distribution are stated and data for 1911-1953 presented. Earthquakes associated with tsunamis during 1918-1952 are reported. (DLC.)

73509. LINDGARD, ELMER W. Records of the office of the Governor of Alaska. (Pacific northwest quarterly, April 1962. v.53, no.2, p.76.)

Describes briefly the content of records recently opened for research purposes by the United States Archivist. They cover the years 1884-1933, from the establishment of Alaska as a civil and judicial district to the early New Deal, and represent most of the period when the Governor was responsible to the Secretary of the Interior. Organization and arrangement of these papers is mentioned as are other collections of Alaskan research materials. (DGS.)

73510. LINDGREN, STIG, *and* **F. LINDHOLM.** Atmospheric effects on the meson intensity recorded by the international standard cube at a high latitude station. (Tellus, May 1961. v.13, no.2, p.280-90, tables, graphs.) 11 refs.

Uses cosmic ray and upper air data recorded at Murchison Bay, Svalbard, during the IGY, to estimate atmospheric effects on sea level meson intensity. The pressure-corrected nucleonic intensity is used to eliminate variations due to fluctuations in primary intensity. The regression equations proposed by A. Duperier and L.I. Dorman lead to practically identical corrections for the atmospheric effects. –From authors' abstract. (DLC.)

73511. LINDGREN, STIG. On the pressure dependence of the cosmic ray intensity recorded by the standard neutron monitor. (Tellus, Feb. 1962. v.14, no.1, p.44-48, table, graph, diagrs.) 11 refs.

Determines pressure coefficients for some high-latitude neutron monitors for 1957-1959, viz: Murchison Bay, Svalbard, and Uppsala, Sweden, -0.710 ± 0.006%/mb; Resolute, Churchill, and Ottawa, Canada, -0.725 ± 0.005; Mawson and Mt. Wellington, Australia, -0.736 ± 0.004%/mb. The differences are presumed to reflect dissimilarities in monitors and pressure, recording devices. (DLC.)

LINDGREN, STIG, *see also* Sandström, A.E., & *others*. Direction cosmic ray anisotropy. 1962. No. 75368

LINDHOLM, FERDINAND, 1883– , *see* Lindgren, S., & F. Lindholm. Atmospheric effects . . . 1961. No. 73510

73512. LINDMAN, ERICK LE ROY, 1909– . A foundation for Alaska's public schools, report of a survey for the Alaska State Board of Education. Juneau, Sept., 1961. 2 pts: 17, 186 p. tables. Refs.

Reports a cooperative study of public school organization and finance by a staff of consultants and an appointed Advisory Council of 15 Alaskans. Recommendations of the Advisory Council, based on the study, are presented in pt. 1. Pt. 2 contains the consultants' analyses on: school enrollment trends and teachers' satisfaction, by W.C. Gordon *and* L.M. Adler; organization of local school systems, by W.D. McClurkin; state organization and administration, by E.L. Morphet; state and local finance, by H.T. James *and* J.A. Thomas; and federal participation in public school support, by E.L. Lindman. Unique problems are posed by certain provisions in the Alaska Constitution, the dependence of many schools on federal contributions, and the large area without established local government. (DLC.)

73513. LINDROTH, CARL HILDEBRAND, 1905– . Is Davis Strait, between Greenland and Baffin Island, a floristic barrier? (Botaniska notiser, June 1960. v.113, fasc. 2, p.129-40, 4 tables.) 16 refs.

Discusses North American and European elements in flora of Greenland, and attempts to analyze floral occurrence on basis of the survival and transport capabilities of seeds and spores. Davis Strait appears to be an important barrier to migration of flora of arctic regions. Comparisons are made with flora of the Aleutian region. (DLC.)

LINDROTH, CARL HILDEBRAND, 1905– , *see also* Pacific Science Congress. 1961. No. 74619

73514. LINDSEY, C. C. Distinctions between the broad whitefish, *Coregonus nasus*, and other North American whitefishes. (Canada. Fisheries Research Board. Journal, 1962. v.19, no.4, p.687-714, illus. tables, map.) 40 refs.

Comparative study of 176 specimens of this form with 121 sympatric "humpback" whitefish, allied to *C. clupea-formis*. No known criteria were effective in separating the two kinds of this highly variable genus. But combinations of certain pairs of measurements, apt to compensate for non-isometric growth allowed identification of all specimens. The material came from northern Canada and Alaska. (DLC.)

73515. LINDSTRÖM, MAURITS. On the significance of β intersections in superposed deformation fabrics. (Geological magazine, Jan.-Feb. 1961. v.98, no.1, p.33-40, diagrs.) 5 refs.

Deals with the significance of orientation data, especially β, as tectonic evidence, from observations during structural geology studies of the Scandinavian Caledonides. "The uncertainty of the most frequent orientations of β and fold axes relative to tectonic co-ordinates has possibly been overemphasized. The β concentrations of obliquely deformed folds will be spread along

characteristic paths. The superposed deformation would in most cases of flexural slip appear as folds in certain predominant directions and on suitably oriented surfaces. In tectonites with a single, nearly horizontal mode for the orientations of the lamination, maxima formed by flexural slip should mostly be parallel to the axes of rotation." —Author's abstract. (DGS.)

73516. LINDSTRÖM, MAURITS. Tectonic fabric of a sequence of areas in the Scandinavian Caledonides. (Geologiska Föreningen i Stockholm. Förhandlingar, Jan.-Feb. 1961. bd. 83, häfte 1, p.15-64, plates, illus., maps, diagrs.) 40 refs. *Reprinted as:* Lund. Universitet. Mineralogisk-och-paleontologisk-geologiska Institutionerna. Skrifter, nr.98.

Considers different deformation phases in the same orogeny as explanation for divergent axial trends. The consideration is based on tectonic evidence collected from 12 areas along a 200 km. NE-SW line from northwestern Torneträsk in Sweden (68°28′N. 18°36′E.) to northern Balvatnet lake (66°59′N. 15°56′E.) in Norway. "Throughout the areas, lineations that are known to be relatively old differ constantly as regards orientation from lineations that are certainly younger"; and "different kinds of fabric have divergent modes for axial strikes that cannot most easily be explained as due to one and the same plan of movement." (DGS.)

73517. LINKEVICH, M. A. Opyt raboty po uluchsheniiu organizatsii truda, tekhnicheskogo normirovaniia i uporiadocheniiu zarabotnoĭ platy v Severoural'skoĭ boksitovoĭ ėkspeditsii. (Razvedka i okhrana nedr, Jan. 1961. god 27, no.1, p.50-52, tables.) Text in Russian. **Title tr.:** Efforts toward improving the organization of labor, the work norms, and regulation of wages in the North Ural bauxite expedition.

Reports on changes made in working conditions among bauxite prospecting parties during 1945-1959. Rotating shifts of workers were set up, a new method introduced for better determination of rock resistance to drilling, improvements in working conditions, complex and collective remuneration for the entire drill team and other problems are discussed. (DLC.)

73518. LINSCOTT, WILLIAM D., *and* R. A. BOAK. Protective action of glycerol in the freezing of *Leptospirae.* (Journal of bacteriology, Oct. 1960. v.80, no.4, p.573-74, table.)

Report on experiments with 20 species of *Leptospira.* Since higher concentrations of glycerol were toxic to many strains, 2.5% solutions were used. A marked increase in survival of -25°, or -50°C. was achieved by addition of glycerol. (DLC.)

LINSLEY, EARLE GORTON, 1910– , *see* Pacific Science Congress. 1961. No. 74619

73519. LIPANOV, V. G., *and* P. I. SHESTOPALOV. Beringovomorskaia sel'd' i perspektivy ee promysla. (Rybnoe khoziaĭstvo, 1961. god 37, no.11, p.45-47, table.) Text in Russian. **Title tr.:** Bering Sea herring and prospects of its fishery.

Outlines the exploratory fishery in this area since 1957, and commercial herring fishery since 1959; races and accumulations; fishing areas and periods; migrations; fishing methods; catches. (DLC.)

LIPETS, R. S., *see* Arnol'di, V.S., & R.S. Lipets. O peredachi fonda Ėtnograficheskogo otdela . . . 1962. No. 69876

LIPKOV, L. Z., *see* Grigorenko, IU.N., & L.Z. Lipkov. Osobennosti . . . kollektorskikh svoĭstv . . . 1961. No. 71855

73520. LIPOVICH, E. V glukhikh ugolkakh taĭgi. (Grazhdanskaia aviatsiia, Dec. 1961. god 18, no. 12, p.25.) Text in Russian. **Title tr.:** In remote parts of the taiga.

Notes rescue, after three-day helicopter search, of lumberjacks lost in the Berezovo region. (DLC.)

73521. LIPS, EVA. Die gegenwärtige Akkulturationssituation der Montagnais-Naskapi-Indianer von Lake St. John, Kanada. (International Congress of Americanists, 34th, *Vienna,* 1960. Proceedings *pub.* 1962, p.514-21.) 17 refs. Text in German. **Title tr.:** Present acculturation phase of the Montagnais-Nascopi Indians of Lake St. John, Canada.

Study of the changed socio-economic pattern of the Pointe Bleue Reservation Indians, similar in scope to report *infra.* (DSI.)

73522. LIPS, EVA. Zum Wirtschaftswandel der Montagnais-Naskapi-Indianer am Lake St. John, Kanada. (Dresden. Staatliches Museum für Völkerkunde. Abhandlungen und Berichte 1962. Bd. 21, p.41-56, illus. on plates.) 13 refs. Text in German. **Title tr.:** Changes in the economy of the Montagnais-Nascopi Indians of Lake St. John, Canada.

Describes present living conditions of Indian bands of the Pointe Bleu Reservation nomadizing in the Lake St. John-Lake Mistassini region of Quebec Province. Recent economic changes and acculturation, choice of residence on or off the reservation, free education and health services, welfare, reversal of the traditional seasonal migration cycle from winter to summer months, etc. are discussed. The 1952-1956 decline in price for beaver changed the basic economic pattern from fur hunting to blueberry picking. The abundant crops on burned-over areas has increased the hazard of forest fires set deliberately to increase berry yield. (DSI.)

LIPSON, JOSEPH I., *see*

Baadsgaard, H., & *others.* Caledonian granites . . . Yukon. 1961. No. 69941

Baadsgaard, H., & *others.* Potassium-argon dates Cordilleran. 1961. No. 69942

73523. LISICHKIN, B. Vse za odnogo, odin za vsekh. (Okhrana truda i sotsial'noe strakhovanie, Mar. 1962. god 5, no.3, p.22, illus.) Text in Russian. **Title tr.:** All for one, each for all.

Sketches safety measures introduced at the Orotukan machinery-construction plant: goggles and other protective equipment, dust control devices, safety instruction for personnel, placing newcomers in custody of seasoned workers, etc. Illus. shows a children's sanitarium at Veselaya

Bay, near Magadan city. Author is the technology inspector of the Magadan Province labor union. (DLC.)

73524. LISIN, N. Stroim dorogi kruglyĭ god. (Avtomobil'nye dorogi, Nov. 1962. god 25, no.11, p.20-21, illus.) Text in Russian. **Title tr.:** We build roads the year round.

Describes foreman's experience on various road-building assignments of the Murmansk Economic Council in the Pechenga District. All work: blasting in permafrost, road-bed construction, surfacing, etc. was continued without break through the winter months. Foundations were assembled from pre-cast blocks, but during mild frost (to -15° C.) they were poured using a mixture of cement and calcium chloride. (DLC.)

73525. LISITSYN, A. P. Soveshchanie po sovremennym morskim osadkam. (Sovetskaĭa geologiia, Feb. 1962, no.2, p.151-55.) Text in Russian. **Title tr.:** Conference on present marine sediments.

Reports the conference of May 24-27, 1960 in Moscow with over two hundred participants representing 60 scientific organizations. The 26 papers delivered dealt mainly with sedimentation of the oceans and seas, sources of sediments and diagenesis of marine sediments; the Arctic Ocean and arctic seas were included. Conference proceedings are to be published. (DLC.)

LISITSYN, A. P., *see also*

Bezrukov, P.L., & A.P. Lisitsyn. Osnovnye cherty osadkoobrazovaniia . . . 1961. No. 70194

Saidova, Kh.M., & A.P. Lisitsyn. Stratigrafiia osadkov . . . 1961. No. 75333

73526. LISITSYNA, N. K. Arkheologicheskie issledovaniia v RSFSR v 1957-1958 godakh. (Akademiia nauk SSSR. Institut arkheologii. Kratkie soobshcheniia, 1961. vyp.86, p.117-38.) Refs. Text in Russian. **Title tr.:** Archeological explorations in the RSFSR in 1957-1958.

Summarizes field activities including the expedition headed by G.A. Pankrushev which excavated neolithic and early metal age sites in Belomorsk, Kem', Loukhi, and other localities in Karelia. G.M. Burov of the Academy of Sciences' Komi Branch discovered 15 stone and metal age sites in the Vychegda River basin, seven with microlithic inventory. P.P. Khoroshikh of the Irkutsk State University surveyed paleolithic, neolithic and iron age sites in the vicinity of Buret', along the upper Angara River, and in the Trans-Baykal area. The Angara Expedition continued its work in Mal'ta. N.N. Dikov of the Chukchi Local History Museum investigated in 1957 neolithic sites along the Anadyr and Mayn Rivers which yielded evidence of a new continental culture slightly younger than those reported in No. 64188. A skull discovered in an Ust'-Belaya burial showed features of the Arctic race and, to a lesser extent, the Baykal type. Twenty-two burials were uncovered at Uelen; twenty-three more were excavated there in 1958 by a party under M.G. Levin. R. Vasil'evskiĭ of the Magadan Regional History Museum explored old Koryak sites in the coastal area of Ola District. (DLC.)

73527. LISITSYNA, N. K. Arkheologicheskie issledovaniia v RSFSR v 1959 g. (Akademiia nauk SSSR. Institut arkheologii. Kratkie soobshcheniia, 1962. vyp.90, p.77-96.) Refs. Text in Russian. **Title tr.:** Archeological investigations in the RSFSR in 1959.

Reports on expeditionary activities, among others: G.M. Burov's survey of the Vychegda basin in Komi ASSR; R.V. Nikolaev's discovery of new neolithic sites on the Ket' and Podkamennaya Tunguska Rivers; field work on the Angara by two parties working independently, one under P.P. Khoroshikh, the other M.M. Gerasimov. Twenty-three burials, including five multiple, were excavated in the Uelen cemetery by M.G. Levin and D.A. Sergeev. N.N. Dikov explored several habitation and burial sites on the lower Anadyr, Lake Chirovo, and Ayon Island. Four new camp sites were found on the island, their inventory showing affinities to the lower Lena cultures of the late neolithic and early bronze ages. (DLC.)

73528. LISITSYNA, N. K. Polevye arkheologicheskie issledovaniia v RSFSR v 1960 g. (Sovetskaia arkheologiia, 1962. god 6, no.4, p.291-303.) Text in Russian. **Title tr.:** Archeological field investigations in the RSFSR in 1960.

Reports briefly:

An expeditionary party of the Institute of Language, Literature, and History of the Karelian Branch of the Academy of Sciences discovered eleven neolithic and early metal age settlement sites in the White Sea District.

Traces of human habitation in paleolithic times were discovered in the Medvezh'ya cave, Pechoro-Ilychskiy Preserve, by the Pechora team of the Academy of Sciences' Komi Branch expedition. The site is claimed to be the northernmost known paleolithic settlement. This expedition's Vychegda team excavated two neolithic houses and several pits with bronze and early iron age artifacts.

Several expeditions continued salvage work at the construction sites of the Angara (Bratsk) and Ilim River power stations.

Several neolithic settlement and burial sites, including a dog burial were surveyed in 1959-1960 on the Vilyuy and Chona Rivers by a field party of the Academy of Sciences' Yakut Branch.

The Chukchi team of the Northern Ethnographic Expedition completed the excavation of the Uelen cemetery: its last five burials, one of them multi-layer, were disinterred. (DLC.)

73529. LISITZIN, EUGENIE. Determination of mean sea level in the northern part of the Baltic. (International hydrographic review, July 1962. v.39, no.2, p.91-97, map, tables.) 9 refs.

Discusses three main and three secondary factors affecting mean sea level in these waters; elimination of the effect of the meteorological factors is probably most difficult, because of shallow water of the Baltic and its bordering gulfs. Earlier attempts to determine mean sea level are summarized; meteorological and hydrographic effects on water height differences in the Gulf of Bothnia are tabulated by seasons. Land uplift

along the Finnish coast near Kemi ranges 6.4-8.5 cm. per 10 yrs. (DLC.)

73530. LISOVSKIĬ, KAZIMIR. Taĭga Birilīusskaīa. (Ogonëk, Feb. 1962. god 40, no.8, p.24-25, inserted col. plates.) Text in Russian. **Title tr.:** Birilyusskiy Taiga.

Journalist's sketch of construction on the Achinsk (56°17′N. 90°30′E.) - Abalakhovo (58° 06′N. 92°94′E.) railroad, crossing the marshy taiga; and his encounter with Vladimir Il'ich Meshkov, noted for his engravings depicting life in the far North, several reproduced in color. (DLC.)

73531. LISOVSKIĬ, KAZIMIR. V kraīu sobolinom. (Ogonëk, Sept. 1962. god 40, no.37, p.32 and back cover, illus.) Text in Russian. **Title tr.:** In sable country.

Sketches a journalist's trip in May 1962 from Krasnoyarsk down the Yenisey to the Evenki National District on a refrigerated river boat; the crew, fellow-travelers, etc. (DLC.)

LISSÁK, K., *see* Yang, T.L., & K. Lissák. Influence of the environmental temperature . . . 1960. No. 76602

73532. LIST, ROBERT J., *and others.* Fallout from the 1961 Soviet test series. (Weatherwise, Dec. 1961. v.14, no.6, p.219-23, illus., map, graph, table.) 5 refs. *Other authors:* L. Machta *and* K. Telegadas.

Estimates where and when the radioactive debris from the Russian test series of 1961 will fall, provided test conditions are similar to those of 1958, and total fission yield is known. Greatest Sr-90 deposition from the Russian Oct. 1958 series is believed to have occurred in the heavy precipitation of the Icelandic and Aleutian Lows. Of the 31 tests recorded during Sept. 1-Nov. 2, 1961, 24 were detonated on or near Novaya Zemlya. (DWB.)

LIST, ROBERT J., *see also* Machta, L., & *others.* Survey of radioactive fallout . . . 1962. No. 73700

73533. LISTER, H. Accumulation and firnification in North Greenland. *(In:* International Geographical Congress 1960. Physical geography . . . 1961. p.163-74, map, graphs, tables.) 11 refs.

Summarizes observations made by the British North Greenland Expedition 1952-54. Snow stratification was examined in 40 surface pits across two-thirds of the Inland Ice, approx. on the 78th parallel. Detailed investigations of snow hardness, density, grain size, stratification, and firnification were made at Northice the inland station; procedures are noted; results are summarized with graphs and tables. (DGS.)

73534. LISTER, H. Heat and mass balance at the surface of the Ward Hunt Ice Shelf, 1960. Montreal, Mar. 1962. vii, 54 p. map, diagr. graphs, tables. (Arctic Institute of North America. Research paper no.19.) 26 refs. *Also issued as:* U.S. Air Force. Cambridge Research Laboratories, Contract AF 19(604)-8343, scientific report no.1, AFCRL-62-219.

Discusses results of a field study of heat and vapor transfer at two stations, on the Ice Rise and Shelf near this island in early, middle, and late phases of the ablation season. Source of heat for ablation is: net radiation 96%; turbulent convection 3%; and condensation <1%. The heat used by convection to the air is 6%; by conduction into ice 14%; by melting 79%; and by evaporation <1%. Mean snow accumulation over the Shelf in 1959-60 is given at 28 gm./cm² in troughs and 17 gm./cm² over the Ice Rise. Melting removes all this, also 20 gm./cm² of ice from ridges and 30 gm./cm² from troughs. Progression of the melt through the summer is outlined; migration of ridges and troughs is briefly described. Analysis of ridge-trough profiles as well as morphological evidence indicate the existence of three E-W zones across the Shelf; formation is perhaps by accretion of pack ice with parallel pressure ridges added seawards. This series of observations, begun in 1959 and continued in 1960, is the second on the Ellesmere Ice Shelf Expedition 1953-1954 (cf. No. 45469). (DGS.)

73535. LISTER, MURRAY D. The evolution and current status of NORAD. (Roundel, June 1962. v.14, no.5, p.2-8, illus., map.)

Outlines development of the North American Air Defence Command: the Canada/United States Permanent Joint Board on Defence in World War II, the building of three radar nets, Pine Tree, Mid-Canada, and DEW Lines 1954-1957, and the formation of NORAD in Sept. 1957. The surveillance network includes the Ballistic Missile Early Warning System (BMEWS) operating sites at Thule in Greenland, and Clear in Alaska. The DEW Line net in Canada ties into the Alaska radar coverage and extends across the Pacific to Midway Island; eastward the line crosses Greenland, Iceland and ties into the NATO warning system. Weapons, communications and control, operations, training and the defensive character of NORAD are noted. (DLC.)

73536. LISTOV, A. N. Pribor dlīa izmereniīa moduleĭ uprugosti ledīanogo pokrova seĭsmicheskim metodom. (Problemy Arktiki i Antarktiki. Sbornik stateĭ. 1962. vyp.10, p.91-92, illus., table.) 2 refs. Text in Russian. **Title tr.:** Device for measurement of the modulus of elasticity of an ice cover using seismic methods.

Describes the so-called seismic modulometer, constructed by the Ice Study Laboratory of the Arctic Institute and tested successfully in June 1960 for investigation of ice in Yenisey Bay. (DLC.)

73537. LISZKA, LUDWIK. Local electron densities deduced from the Faraday fading of satellite transmissions using measurements during two consecutive transits. (Planetary and space science, July 1961. v.5, no.3, p.213-19, diagrs.) 4 refs.

Presents a method for analyzing Faraday fading measurements. It permits calculation of total electron content as well as local electron density as a function of satellite altitude. The method is applied to daytime observations of 1958 δ 2 at Kiruna (67°51′N. 20°13′E.) on Sept. 12 and 29, 1959. (DLC.)

73538. LITINSKIĬ, V. A. O soderzhanii v kimberlitakh Ni, Cr, Ti, Nb i nekotorykh drugikh ėlementov i o vozmozhnosti primeneniīa geokhimicheskikh metodov dlīa poiskov kimberlitovykh tel. (Geokhimiīa, 1961, no.9, p.742-49, table, graphs.) 7 refs. Text in Russian. Summary in English. **Title tr.:** On the content of Ni, Cr, Ti, Nb and some other elements in kimberlites and the possibility

of using geochemical methods in search for kimberlite bodies.

Reports spectrum analysis of 459 samples of kimberlites and their enclosing sedimentary rocks, collected in the Olenek - Bol'shaya Kuonamka River basin in northwestern Yakutia. The content of the most typical elements is 10-20 times greater in kimberlites than in the enclosing rocks, and some elements are present only in the kimberlites. Geochemical methods are considered suitable for prospecting of kimberlite bodies. (DLC.)

73539. LITINSKIĬ, V. A. Primenenie kappametrii dlīā poiskov kimberlitovykh tel. (Geologiīā i geofizika, 1962, no.3, p.89-101, graphs, diagrs.) 29 refs. Text in Russian. Summary in English. **Title tr.:** Use of the *K* metric method for prospecting kimberlite bodies.

Describes this type of geophysical survey, based mainly on measuring of magnetic susceptibility of ferromagnetic minerals. It has been used independently in prospecting for primary diamond deposits in the Anabar and Olenek basins and other areas of northwestern Yakutiā since 1957, and the results are reported. Magnetic properties of kimberlites and enclosed rocks are characterized. Applicability, limitations, etc. of this method are considered, and comparisons made with others. (DLC.)

LITSAREV, M. A., *see* Shabynin, L.I., *& others.* Shpinelevo-piroksenovye porody . . . 1961. No. 75515

73540. LITTLE, C. GORDON, 1924– , *and others.* An experimental investigation of the scintillation of radio stars observed at frequencies of 223 and 456 Megacycles per second from a location close to the auroral zone. (Journal of geophysical research, May 1962. v.67, no.5, p.1763-84, illus., tables, graphs, diagrs.) 26 refs. *Other authors:* G.C. Reid, E. Stiltner, *and* R.P. Merritt.

Describes a one-year study of the amplitude and angular scintillations of Cygnus and Cassiopeia sources at College, Alaska, using phase-switch and phase-sweep interferometers. The scintillation effects were of much greater magnitude and the polar time dependence considerably less than at temperate latitudes; the scintillation effects showed clear evidence of geomagnetic and auroral control. The zenith-angle dependence of amplitude was different for the two sources but was much less for both than would be predicted for the case of spherical diffracting irregularities. The relative absence of a zenith-angle effect is attributed to the compensating effect of magnetic field alignment of anisotropic irregularities. Occasional occurrence of long (to one hour) fades on the interferometer records is interpreted in terms of irregularities that on these occasions subtended less than the solid angle of the source and resulted in a diffraction pattern on the ground having autocorrelation distance less than 100 m. –From authors' abstract. (DLC.)

73541. LITTLE, C. GORDON, 1924– , *and others.* Some observations of 2.89 Mc/s equivalent antenna temperatures at the auroral zone. *(In:* NATO. Radio wave absorption . . . *pub.* in Journal of atmospheric and terrestrial physics, Dec. 1961, *pub.* 1962. v.23, p.275-86, diagrs.) 12 refs. *Other authors:* G.M. Lerfald *and* R. Parthasarathy.

Reports observations of the noise level on a dipole antenna near College, Alaska, during Nov. 1959 and Jan. - Feb. 1960. During noon hours, the signal has the characteristics of thermal noise. Equivalent midday antenna temperatures are in the range 200-1000°K., and show a negative correlation with K_p. It is believed that the lowest values are reasonably accurate measurements of the *D*-region electron temperatures, and that the *D*-region electrons therefore have temperatures comparable with the ambient gas temperatures. The higher values observed during magnetically quiet periods are attributed to reception of oblique incidence cosmic noise, which has penetrated the ionosphere on the night side of the winter polar cap. Occasionally nighttime observations have been made during auroras; the resultant effective electron kinetic temperatures, 200-250°K., indicate that the mean kinetic energy of the electrons in the lower part of the absorbing region is not markedly affected by the presence of aurora. –From the authors' abstract. (DLC.)

LITTLE, C. GORDON, 1924– ,*see also* Ortner. J., *& others.* SCNA & geomag. storm. 1962. No. 74545

73542. LITTLE, JAMES V. Arctic tunnels. (Military engineer, Mar. - Apr. 1961. v.53, no.352, p.101.) Ref.

Describes the 1,100 ft. long, 18 ft. wide, and 15 ft. high ice tunnel near Camp Tuto, North Greenland. It provides troop quarters, recreation and mess halls, water reservoir, and a fuel oil storage pit. Numerous 200-235 ft. long corridors branch off the main tunnel. Another is being built in permafrost, and the excavation had advanced 600 ft. by July 1960. This tunnel is more stable than the ice tunnel and may be adaptable to long-term (25-100 years) use. (DLC.)

73543. LITVIN, V. M. Pervyĭ reĭs ė/s "Sevastopol' " v 1959 g. po programme MGS. (Akademiīā nauk SSSR. Okeanograficheskaīā komissiīā. Biūlleten' 1961, no.8, p.21-23.) Text in Russian. **Title tr.:** First cruise of the expeditionary vessel *Sevastopol'* in 1959 under the IGC program.

Reports a 5990 - mi. cruise during Apr. 26 - June 13, 1959 along 69°20′, 67°30′, 65°45′, and 63°N. lat. in the North Atlantic Ocean. Hydrological, hydrochemical, and meteorological observations were carried out, plankton and bottom sediment samples collected, 183 oceanographic stations made. The collected materials, mainly from the Norwegian Sea, are under study. (DLC.)

73544. LITVINENKO, I. V., *and* **K. A. NEKRASOVA.** Osobennosti glubinnogo seĭsmicheskogo zondirovaniīā na Baltiĭskom shchite. *(In:* Soveshchanie po glubinnomu seĭsmicheskomu zondirovaniīū zemnoĭ kory. . . v SSSR, *pub.* 1962, p.187-206, graphs, diagrs.) 9 refs. Text in Russian. **Title tr.:** Features of deep seismic soundings on the Baltic Shield.

Reports work of 1958-1959 in northern Karelia and 1960 in Kola Peninsula, giving results for the former, along more than 200 km. of the profile Kem'-Ukhta. Explosion points were selected at water bodies 8-25 m. deep and at 45-80 km. intervals. $P°$, $P*$, and P waves are distinguished and divided into six groups. Each group is character-

ized. Interpretation of the seismic structure of the crust of the Baltic shield in the light of waves velocities in rocks is given. Two boundaries are especially clearly distinguished: at 34-40 km. depth where elastic waves have speed of 8100 m./sec. and at 10-15 km. with wave speed of 6650 m./sec. (DLC.)

73545. **LITVINENKO, O. K.** O stroenii Priverkhoĭanskogo progiba po gravimetricheskim dannym. (Geologiia nefti i gaza, Feb. 1962. god 6, no.2, p.52-54, diagrs., graph.) 4 refs. Text in Russian. **Title tr.:** Structure of the Verkhoyansk downwarp according to gravimetric data.

Reports gravimetric survey in the Tukulan area of the lower Aldan basin, and the Kitchan-Sangar area of the lower Vilyuy-Lena. Three large structural levels are distinguished: the basement of Paleozoic or Precambrian age, the Permian-Triassic complex, and the Tertiary-Lower Cretaceous-Lower Jurassic rocks. The various types of local anomalies detected are interpreted and compared with the geologic survey. The structure and development of Verkhoyansk downwarp is interpreted. (DLC.)

73546. **LITVINOVA, T. A.** Vliianie ul'traporistosti i udel'noĭ poverkhnosti na soderzhanie nezamerzsheĭ vody v merzlykh gruntakh. (Merzlotnye issledovaniia. Sbornik statei 1961. vyp.1, p.178-83, tables, graphs,) 7 refs. Text in Russian. **Title tr.:** The influence of ultra-porosity and specific surface on the liquid water content of frozen ground.

Reviews investigations and presents test results for several types of clay and loam, most of them from the Salekhard region. The data indicate that the freezing of water in such soils is a function of the radius of the ultrapores which contain the water in the case of negative soil temperatures above the range -8°to -12°C., but below this range, the material composition and the structure of the soil surface is the decisive factor. —From CRREL. (DLC.)

LIUBARSKAIA, M. A., *see* Novikov, B.G., & M.A. Liubarskaia. Ustoĭchivost' gonad ptits . . . 1962. No. 74432

73547. **LIUBIMOV, I. M.** Dal'nevostochnyĭ ėkonomicheskiĭ raĭon. (Geografiia v shkole, Sept.-Oct. 1962. god 25, no.5, p.15-26, maps.) Text in Russian. **Title tr.:** The Far Eastern economic region.

Deals with the resource-development aspects of this region made up of six administrative provinces, including Magadan and Kamchatka. The geomorphology, population, climate, mineral resources (coal, gold, tin, etc.), forests, fisheries and agriculture are considered for the entire region and individual provinces, Kamchatka and Magadan. Of major importance are the fisheries which represent one-third of the All-Union catch of fish and marine mammals, and nearly 100% of the crab catch; wood industry also is discussed. Text maps show distribution of industry and mineral resources, and of agriculture, reindeer raising, fur industry and fisheries. (DLC.)

73548. **LIUBIMOV, O.** Lastochka v vos'mideshiatykh shirotakh. (Priroda, Aug. 1962. god 51, no.8, p.120-21.) Text in Russian. **Title tr.:** A swallow at 80° latitude.

Reports capture of a swallow on Vize Island, apparently windborne far beyond its normal range, though these birds are occasionally recorded on the Barents Sea coast. (DLC.)

73549. **LIUBIMOVA, E. D.** K probleme slovesnykh i chuvstvennykh obobshcheniĭ; na materiale nazvaniĭ tsveta v ėvenkiĭskom iazyke. (Akademiia pedagogicheskikh nauk RSFSR. Izvestiia, 1960. vyp. 113, Trudy instituta psikhologii. Myshlenie i rech', p.62-71.) 16 refs. Text in Russian. **Title tr.:** The problem of verbal and sensory generalizations; based on the names for colors in the Evenki language. In sequence with papers by F.M. Shemiakin, q.v.

Evenki (considered the most representative of the Tungus-Manchu family) has words for three distinct colors: white, black, red; and two color groups: yellow-grey, green-blue. It has no separate names for orange and purple. Mixed colors and hues are expressed by combining names for basic colors. Evenki has few specific words denoting degrees of color in animal pelage. (DLC.)

73550. **LIUBIMOVA, ELENA L'VOVNA.** Kamchatka, fiziko-geograficheskiĭ ocherk. Moskva, Gos. izd-vo geograficheskoĭ lit-ry, 1961. 190 p. illus.. fold. maps. Approx. 200 refs. Text in Russian. **Title tr.:** Kamchatka, outline of the physical geography.

Reviews investigations of this region and describes the geologic structure, relief, climate, seas, rivers, lakes, the hot springs and geysers, soils, vegetation and wildlife. The peninsula is divided into several physical geographic regions: Sredinnyy Range, Vostochnyy Range, the central Kamchatka depression, eastern volcanic province, etc. and each region is characterized in turn. Lists of flora and fauna, both Russian and Latin names, are appended. (DLC.)

73551. **LIUBIMOVA, T. G.** O morskom okune zaliva Aliaska. (Rybnoe khoziaĭstvo, 1961. god 37, no.9, p.27-30, illus., map.) Text in Russian. **Title tr.:** The redfish of the Gulf of Alaska.

Outlines Soviet fishery research in the Gulf during 1959-1960. American activities are reviewed. Distribution of redfish horizontal and vertical, concentrations and areas worthy of exploitation, size distribution with depth, etc. are reported. (DLC.)

73552. **LIUBIMOVA, T. G.** Rezul'taty ikhtiologicheskikh issledovaniĭ v zalive Aliaska; dve ėkspeditsii na i/s "Ametist" v 1960-1961 gg. (Okeanologiia, 1962. t.2, vyp.5, p.935-37, map.) Text in Russian. **Title tr.:** The results of ichthyological investigations in the Gulf of Alaska; two expeditions of R/V *Ametist* in 1960-1961.

Reports results of the July-Sept. 1960 and March-June 1961 cruises in western and northwestern Gulf of Alaska between Unalaska Island and Yakutat Bay, shelf and continental slope from 60 to 500 m. depth were studied, and various areas are characterized as to their suitability for fishing purposes. The Pacific Ocean perch *Sebastodes alutus* is the main catch in this region and July-October the best time. Areas of concentration of *S. alutus* and preferred depths are described. The Gulf of Alaska is considered good fishing and four large trawlers started work there in the fall of 1961. (DLC.)

LĬUBOMIROV, B. N., *see* Il'ina, E.V., & *others*. Podzemnye vody . . . 1962. No. 72344

73553. LĬUBOMIROVA, K. S. O radiatsionnykh svoĭstvakh l'da. (Issledovaniĭa lednikov i lednikovykh raĭonov, 1962. vyp. 2, p.200-209, graphs.) 18 refs. Text in Russian. Summary in English. **Title tr.**: On the radiation properties of ice.

Reports his 1960 study on the Moskovskiy Gosudarstvennyy Universitet (Moscow State University) Glacier in the Polar Ural. Albedo, absorption and reflection of solar radiation in different types of ice are stated and discussed. (DLC.)

73554. LIUNGMAN, WALDEMAR. Das Rå und der Herr der Tiere. *(In:* Nordic Symposium on the religious conceptions . . . 1961, p.72-90.) Approx. 20 refs. Text in German. **Title tr.**: The rå and the ruler of animals.

Analyzes the manifold aspects of the supernatural power *rå* and the various functions attributed to animal guardians and nature spirits associated with this name in Fennoscandia. The similarity of *rå*-cults to the Scandinavian and Finno-Ugric worship of the ruler or owner of animals is discussed, especially the bear cult of the Lapps. (DLC.)

73555. LĬUSH, D. V. Sredstva sviazi, nabliudeniĭa i upravleniĭa atomnogo ledokola "Lenin." (Sudostroenie, 1961. god 27, no.8, p.18-21, diagrs.) Text in Russian. **Title tr.**: Means of communication, observation and control of the atomic icebreaker *Lenin*.

Describes the electrical systems, equipment and function: intra-ship communications, ship controls, measuring and signaling, fire alarms; measurement of the level of liquids, electric clocks, navigational equipment, automatic calculator, radio direction finder, echo sounder, means of observation, radio communication and television. (DLC.)

73556. LIVCHAK, G. B. Materialy k ėkologo-fiziologicheskoĭ kharakteristike mlekopitaĭushchikh Zapoliar'ia, soobshchenie 2; Termotakticheskiĭ optimum, khimicheskaia termoregulĭatsiia i soderzhanie glikogena v pecheni polĭarnykh polevok. (Akademiia nauk SSSR. Ural'skiĭ filial. Institut biologii. Trudy 1960. vyp.14, p.179-91, illus., tables.) 13 refs. Text in Russian. **Title tr.**: Materials for an ecologic-physiological characteristic of arctic mammals, 2; thermal optimum, chemical thermoregulation and liver-glycogen content of polar voles. In sequence to No. 66336.

Reports a study of three arctic rodents with a non-arctic species for comparison. Results indicate that the northern forms have a lower O_2-consumption in the cold, the lowest being shown in lemmings and in *Microtus middendorffi*. The third, least adapted form shows a greater tendency to choosing suitable microclimatic habitats. (DLC.)

LIVEROVSKIĬ, ĬURIĬ ALEKSEEVICH, *see* Akademiia nauk SSSR. *Institut geografii*. Dal'niĭ Vostok . . . 1961. No. 69546

73557. LIVSHITS, ĬU. IA. O stroenii fokinskoĭ struktury, iugo-zapadnaia okonechnost' Noril'skogo plato. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ sbornik, 1962. vyp. 27, p.5-14, text map.) 5 refs. Text in Russian. **Title tr.**: On the construction of the Fokina structure; southwestern extremity of the Noril'sk plateau.

Reports field study in 1960 to determine stratigraphy of Middle and Upper Paleozoic deposits, tectonic disturbances, morphology and composition of intrusive bodies. Marine and lagoon formations of Devonian and Carboniferous age, lagoon-continental of the Tungusskiy series, and volcanic formations of upper Permian and Lower Triassic age are described. Tectonic construction of Fokina structure is analyzed and considered to be of hemi-anticlinal type. (DGS.)

LIVSHITS, ĬU. IA., *see also* Len'kin, E.N., & ĬU. IA. Livshits. Novye dannye o rudoproiavlenii . . . 1962. No. 73418

LI-ZHEN', U, *see* Polkanov, A.A., & U Li-zhen'. O genezise . . . Khibinskogo subvulkana. 1961. No. 74858

73558. LJØEN, RIKARD. The waters of the western and northern coasts of Norway in July-August 1957. (Norway. Fiskeridirektoratet. Skritter, ser. havundersøkelser. Report on Norwegian fishery and marine investigations. 1962. v.13, no.2, p.1-39, illus., table, maps.) 17 refs.

Presents a study of conditions at 0, 50, 100, and 1000m., with temperature, salinity and density considered in both horizontal and vertical distribution. The movement of water masses in the Barents Sea and in the deep sea is computed. Effects of the hydrographic conditions on zooplankton distribution are discussed. (DI.)

73559. LJUNGNER, ERIK. Massupphöjningens betydelse för höjdgränser i Skanderna och Alperna. *(In:* Uppsala. Universitet. Geografiska Institutionen. Geografiska studier . . . 1944, *pub.* 1944 in Geographica. Skrifter nr.15, p.119-51.) 87 refs. Text in Swedish. Summary in German. **Title tr.**: The significance of mass upheaval for geographic limits in Scandinavia and the Alps.

Discusses changes in treeline in mountain regions related by various investigators to land elevation, changes in temperature, and in limits of snow cover and local glaciation. Pertinent studies on the Alps and the highland areas and arctic mountains of Scandinavia are reviewed. From comparisons made, these factors vary in importance in different places. In any case, continental or maritime location, influence of relief on solar effects, and local variations in relief and altitude are considered to be of main significance. (DLC.)

73560. LLIBOUTRY, LOUIS. L'érosion glaciaire. (International Association of Scientific Hydrology, Pub. 59, Symposium of Bari 1962, p.219-25, graphs.) 21 refs. Text in French. Summary in English. **Title tr.**: Glacial erosion.

Considers, as do many French geomorphologists, that glacial erosion takes place mainly at the glacial front: the bare ground, loosened by freeze-thaw action, is pushed away by the front or, more likely, lumps of frozen ground are caught by the glacier bottom. Strength of proglacial erosion depends on frontal fluctuations; these occur even on stationary glaciers, and are greater on level areas than on slopes. Other mechanisms, probably climatic, are involved in cirque erosion. Basal erosion includes abrasion by ground moraine and plucking by glacial protrusions. Author postulates

an important diurnal oscillation of hydrostatic pressure in relation to the glacier's slipping over its bed. This oscillation may produce fatigue failure of the rock. (DGS.)

73561. LLIBOUTRY, LOUIS. Terminologie glaciologique et nivologique proposée par le Comité de terminologie des sciences de la terre du B.R.G.M. Paris, et présentée à la Section de glaciologie au cours de sa réunion du 24 février 1960. Paris, Société hydrotechnique de France, 1960. 5 l. Mimeo. Text in French. **Title tr.:** Glaciology and snow science terminology proposed by the Committee on Terminology of the Earth Sciences of the Bureau de recherches géologiques et minières, Paris, and presented to the Section on Glaciology during its meeting on Feb. 24, 1960.

Defines 18 terms; for some, derivative forms and synonyms are given, occasionally also the etymology of the term is discussed and its history traced. (ExPF.)

LLOYD, M. A., *see*

Alaskan Science Conference 1961. 1962. No. 69644

Farrell, R.K., & M.A. Lloyd. The life cycle of the . . . fluke. 1962. No. 71344

73562. LLOYD, TREVOR, 1906- . The future colonization of northern Canada. *(In:* Royal Society of Canada. Canadian population . . . , symposium, 1962, p.148-58.) Refs.

Discusses possibilities, problems, and policies of development and settlement in this region. Its physical characteristics, transportation routes, population, development in comparison with other arctic areas, and resources are described. In the next decade, no large-scale permanent settlement is in prospect; on the contrary, surplus labor and insufficient employment for resident Eskimos and Indians are the expected problems. Development based on mineral resources is probable in the more distant future; a large-scale scientific stock-taking is suggested in preparation. Some public control over private industrial development is considered desirable. (DLC.)

73563. LLOYD, TREVOR, 1906- Northern research review and forecast. *(In:* Resources for Tomorrow Conference . . . 1961. v.1, p.607-622.) 14 refs.

Reviews the status of northern research in Canada, most of it started during or since World War II, and still unbalanced, lacking in coordination and planning, and inadequate in relation to need and to work in other countries' far North. Objectives should be formulated, and their implementation arranged by a centralized coordinating body working through government, universities, private organizations and industry. Too few Canadians are trained for northern work, too little Canadian funds invested in it, and diffusion of knowledge gained is poor. Current research by various agencies is surveyed; universities and independent bodies should be utilized more in such work. (CaONA.)

73564. LOBACZ, EDWARD F. Experience with a pier-supported building over permafrost. (American Society of Civil Engineers. Soil Mechanics and Foundations Division. Journal, June 1961. v.87, no.SM3, p.119-22, illus., graph, diagr.)

Discusses No. 64175 on the basis of a ten-year building foundation study on permafrost at Fairbanks, Alaska. Test buildings were constructed with various ground exposures and insulators, and recordings were made of ground temperature and vertical movements of the foundations. Many of the foundation types are satisfactory only for temporary buildings. For permanent buildings, two types are acceptable: one combining an air space and an underlying non-frost-susceptible fill, and one with piles bonded into the permafrost. Observation of a building of the former type indicated that the air space effectively dissipates heat and prevents serious permafrost degradation, and that the fill reduces seasonal heave and prevents vertical movements from damaging the structure. Similar success was achieved with a pier-mounted communications center built at Bethel, Alaska, in 1957.—From CRREL. (DLC.)

73565. LOBANOV, I. F. Platina v korennykh porodakh basseĭna r. Vilʹuĭ. (Sovetskaîa geologiîa, May 1961, no.5, p.142.) Text in Russian. **Title tr.:** Platinum in the bedrocks of the Vilyuy River basin.

Reports geologic mapping and study of diamonds in 1952. Spectra of collected samples were analyzed. The green rock, enclosing a xenolith, was found to be platinum-bearing. The site of this bedrock is described and further prospecting suggested. (DLC.)

73566. LOBANOV, I. N. ÎAtuliĭskie kvarcevye konglomeraty Karelii i ikh proiskhozhdenie. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, May 1962, no.5, p.63-75, illus., cross-sections.) 35 refs. Text in Russian. **Title tr.:** The Jatulian quartz conglomerates of Karelia and their origin.

Describes the stratigraphic position, mineralogic composition and origin of these conglomerates studied by the author in 1957-1960, including the Yangozero and Segozero (63°18′N. 33°45′E.) regions of northern Karelia. Cross-bedding and their other structural features are described and their connection with coastal deposits noted. These conglomerates are considered distinctive fossil placers of river and coastal types. (DLC.)

73567. LOBANOV, M. F. Metallogeniîa Poliîarnoural'skoĭ-Novozemel'skoĭ skladchatoĭ oblasti. (Sovetskaîa geologiîa, Mar. 1962, no.3, p.46-54, map.) 10 refs. Text in Russian. **Title tr.:** Metallogeny of the Polar Ural-Novaya Zemlya folded province.

Outlines the development and growth of the Polar Ural-Novaya Zemlya geosyncline. Structural analysis is given of the entire tectonic province; endogenic and exogenic mineralization of various minerals is analyzed. Molybdenum, copper, lead, zinc, fluorite, mountain crystal and other mineral occurrences are reported, citing localities and rocks involved. The mountain crystal of Novaya Zemlya, and the Pay-Khoy fluorite are especially noted. (DLC.)

73568. LOBBAN, MARY C., *and* **H. W. SIMPSON.** Diurnal excretory rhythms in man at high latitudes. (Journal of physiology, Feb. 1961. v.155, no.2, p.64P-65P.) 2 refs.

Three subjects traveling in northern Norway showed disturbance of water excretion when approaching the latitudes of continuous summer daylight. After three weeks in such environment, the excretion pattern returned to normal. The pattern of

potassium excretion remained normal throughout. (DLC.)

73569. LOBBAN, MARY C. Excretory rhythms in indigenous arctic peoples. (Journal of physiology, Sept. 1958. v.143, no.2, p.69P.) 6 refs.

Recordings of excretion during midsummer and midwinter, made on Indians in Yukon Territory and on whites, also limited observations on Eskimos of the North Alaska coast, indicate that in about 50% of cases, rhythms normal in temperate zones were absent or much reduced in amplitude. (DLC.)

73570. LOBOVIKOVA, A. A. Nablīudeniīa za skatom lichinok sigovykh ryb, Coregoninae, v rechkakh Noril'skoĭ ozerno-rechnoĭ sistemy. (Voprosy ikhtiologii, 1962. t.2, vyp.3 (24), p.462-66, tables, map.) 5 refs. Text in Russian. **Title tr.:** Observations on the descent of whitefish, *Coregonus*, larvae in the rivulets of the Noril'sk lake and river system.

Reports on catches of these larvae and of plankton, made during June 6-July 1, 1959, with description of the Noril'sk River, its lakes and tributaries, temperatures and ice conditions. Dates and locations of the catches, numbers caught (maximum on June 12), size and weight are stated, and behavior, etc. dealt with. (DLC.)

LODOCHNIKOVA, N. V., *see* Sobolev, N.V., & N.V. Lodochnikova. K mineralogii . . . 1962. No. 75782

73571. LOEBLICH, HELEN NINA (TAPPAN), 1917- . Foraminifera from the Arctic Slope of Alaska, part 3, Cretaceous foraminifers. Washington, D.C., 1962. 91-201p., plates 29-58, maps, diagr., section, tables. (U.S. Geological Survey. Professional paper 236-C.) 116 refs. In sequence to No. 41101.

Outlines the stratigraphy, including the Nanushuk group of six formations and overlying Colville group of three. A fauna of 155 species of Foraminifera obtained from surface samples, cores, etc. is reported; 58 genera are represented, mostly long ranging and environmentally tolerant. Distinct microfaunal facies characterize each of the intertonguing marine and near-shore and nonmarine Cretaceous strata. Both the faunal and lithologic facies cross time lines, similar assemblages appearing in the same facies of different ages, and different assemblages in contemporaneous beds of distinct facies. Some of the more tolerant species are sufficiently widely distributed to be useful in inter-regional correlation. Correlation of northern Alaska Cretaceous strata with those of Canada and the United States is shown graphically. Photo-micrographs illustrate numerous specimens. (DLC.)

LØDDESØL, AASULV; *see* Lid, J., & *others*. Orienterende forsøk . . . 1961. No. 73482

73572. LÖFGREN, L. Histochemical investigation of succinic dehydrogenase in experimental hypothermia and parallel histo-pathological observations. (Acta pathologica et microbiologica scandinavica 1961. v.51, fasc. 4, p.331-41, illus., table.) 34 refs.

Reports an histochemical and histological investigation of the heart of rabbits cooled to about 25 °C. Changes in succinic dehydrogenase were always found, its activity apparently decreasing in some areas. The reduced formozan granules aggregated more than normally. Routine histological methods gave inconsistent results. (DNLM.)

73573. LØKEN, JOHAN. Nansen og Det Norske Geografiske Selskab. (Norsk geografisk tidsskrift, 1961, bd. 18, hft. 1-2, p.29-32.) Text in Norwegian. **Title tr.:** Nansen and Det Norske Geografiske Selskab.

Reviews Nansen's association with the Norwegian Geographical Society, as lecturer: at its first meeting in 1889, he reported his Greenland icecap traverse of 1888; as president 1903-1905; as first recipient of its gold medal in 1902. (SPRI.)

73574. LØKEN, OLAV. The late-glacial and postglacial emergence and the deglaciation of northernmost Labrador. (Geographical bulletin, May 1962. no.17, p.23-56, illus., diagrs., table, maps.) 35 refs.

Discusses the emergence of this area and its relation to the final retreat of the ice sheet. Three specific strandlines are identified; each apparently related to a readvance phase of the ice; they tilt down north-northeast; and are in turn cut by a fourth, younger, horizontal strandline about 15 m. above sea level. Isobases are drawn for the sea levels represented by two of the strandlines; emergence of about 60 m. is shown at Ryans Bay; 100 km. south of Killinek Island. A relative chronology for the late-glacial and postglacial emergence of northern Labrador is proposed; dating of a transgression associated with one strandline is given as 9000 ± 200 yrs, B.P. Scandinavian studies on this specialized field of glacial geology are compared with similar work in Canada; field and laboratory methods used in this study are described. (DGS.)

73575. LØKEN, OLAV. On the vertical extent of glaciation in northeastern Labrador-Ungava. (Canadian geographer, winter 1962. v.6, no.3-4, p.106-119, illus., maps, profile, table.) 33 refs.

Describes the three mountain-slope zones delimited in the Torngat mts., from glacial-morphological observations in 1959-1960. Abundant evidence of glacial action was seen in the lowest zone, frequent rock exposures and less evidence of glaciation appeared in the middle zone; mountain-top detritus and almost complete absence of glacial action characterized the uppermost zone. Similar zones in other Labrador areas are cited as reported by Daly (No. 3636) and Ives (No. 52022). The lowest is believed to have been glaciated during the Wisconsin period, and at least one outlet glacier to have reached the coast less than 9000 B.P. In discussion appended (p.115-19) Ives takes issue on evidence of glaciation of these mountain tops during the Pleistocene, and suggests a different interpretation of the Torngat data, by extrapolating southern Torngat data to the Kaumajet Mts.; and Løken replies. (DGS.)

73576. LØKEN, OLAV. A study of glacial geomorphology in the northern Torngat Mountains, Labrador. (Arctic. Mar. 1961. v.14, no.1, p.75-76.) Ref.

Describes the 1959-1960 field investigations of late- and post-glacial features on the northern Labrador coast. Well developed strandlines were found at 40-56, 26-36, and 15.5 meters above sea level; prior to formation of the lowest, and latest, a major transgression of the sea occurred. Fossil marine molluscs belonging to a boreal-arctic fauna were found up to 32 m. The several terminal mo-

raines located, can be correlated from the study of the strandlines. The upper trim-line and kame-terrace levels are similar to those farther south. (DGS.)

73577. LØNØ, ODD, *and* **P. ØYNES.** Hvithvalfangsten vod Spitsbergen. White whale fishery at Spitzbergen. (Norsk hvalfangst-tidende, July 1961. årg. 50, nr.7, p.267-80, 282-87, illus., diagrs., map, tables.) 7 refs. Text in Norwegian and English.

Gives a detailed day-by-day account of a whaling trip of the M/C *Noris* in 1958, and cites some statistics for the post-war years. Total catch for 1945-1960 was 3,408, 1952 being the best year, though the official statistics (pub. in *Årsberetning vedkommende Norges fiskerier)* are substantially lower. The beluga, *Delphinapterus leucas,* appears in Spitsbergen waters from the end of April through October. It is usually near the drift ice or, when the sea is ice-free, along the coast and in the fjords. Prior to 1940, it was hunted in June-September; but earlier since 1945 with May the principal catching month. In the spring, the belugas appear in shoals of males, and in shoals consisting of males, females and young. The bachelor shoals usually the larger may number up to several thousand; they break up and the bachelors mingle with the mixed shoals at the end of June. (DI.)

73578. LØPPENTHIN, BERNT HARTWIG OVE FABRICIUS, 1904- . Some isolated bird-populations and their possible origin. (International Ornithological Congress. 11th, 1954. Proceedings *pub.* 1955, p.394-98.) 21 refs.

Discusses relicts, like the ptarmigan in the Alps or Pyrenees and possibly recent colonizers, like the dotterel in the Carpathians; the invasion of Greenland by the fieldfare; the Baltic guillemot, and isolated populations of temperate Europe. (DLC.)

73579. LØVENSKIOLD, HERMAN L., *and* **P. VALEUR.** Notes on birds of Skjervøy and Nordreisa in Troms and of Ballangen in Nordland during the summer of 1957. Bergen, Oslo, Norwegian Universities Press, 1960. 27 p. maps. (Bergen. Universitet. Årsbok, matematisk-naturvitenskapelig serie, no. 8.)

Reports observation of 91 species in these localities (approx. 69°46′N. 21°E. and 68°21′N. 16°50′E.) hitherto almost unstudied. Species new to the area were recorded, as well as some with more southerly distribution patterns. The locality in Nordland probably has the largest concentration of the horned grebe, *Podiceps auritus,* in Norway. (NPOslo.)

LØVENSKIOLD, HERMAN L., *see also* Norske turistforening. Årbok 1961. 1961. No. 74389

LÖVGREN, ESSE, *see* Hannerberg, D., & *others.* Migration in Sweden . . . 1957. No. 71987

73580. LOEWE, FRITZ, *and others.* Reconnaissance of Sukkertoppen Ice Cap and adjacent Tasersiaq area, southwest Greenland. Columbus, Ohio, Oct. 1962. iii, 36 1. maps, section, table. (Ohio State University. Institute of Polar Studies, Report no.4.) Prepared for U.S. Quartermaster Research and Engineering Center, Natick, Mass. under Contract no. DA 19-129-QM-2094), 13 refs. Mimeographed. *Other authors:* C. Bull, J. McCormick, *and* S.B. Treves.

Presents preliminary results of a five-man reconnaissance study of these West Greenland areas in summer 1962, in order to determine suitability for an extended field program. Course of the expedition and weather conditions in August are outlined by senior author, and air temperature observations at selected sites in Tasersiaq, reported by McCormick. Gravity studies by Bull indicate that the Sukkertoppen Icecap is about 400 m. thick; the annual snow accumulation increases westward from about 13 g./cm.^{2} near its eastern edge to about 34 g./cm.^{2} near Mt. Atter, in the southwest. McCormick reports the general vegetation pattern of the Tasersiaq area to consist of arctic steppe, shrub tundra, wet-meadow tundra, and lichen-encrusted rock fields. Selected sites (15) are described in detail; 68 of the 80 floral species are listed; suggestions are made for further natural history studies. Treves outlines the bedrock geology of the Tasersiaq area, notes the general course of geologic events, and indicates the complexity of glacial geology. Small scale maps show station locations and general geology. (DGS.)

LOGACHEVA, A. A., *see* Chermenskiĭ, M.P., & *others.* Osnovnye napravleniia . . . transportno-ėkonomicheskikh svîazeĭ . . . 1960. No. 70698

LOGAN, W. A., *see* Hammerschmid, L.J. Rearward communications BMEWS. 1961. No. 71977

73581. LOGINOV, G. A., *and others.* Sutochnyĭ khod intensivnosti polîarnykh siîanii i S_D-variatsiia. (Geomagnetizm i aèronomiia, 1962, v.2, no.5, p.855-60, graphs.) 20 refs. Text in Russian. *Other authors:* M.I. Pudovkin *and* R.G. Skrynnikov. **Title tr.:** Daily variation of auroral intensity and the S_D variation.

Presents an analysis and interprets electrophotometric data on integral luminosity of auroras and their intensity distribution during 24 hours. Simultaneous observations carried out at the Lovozero station in 1961-1962 on geomagnetic variations of H, D, and Z components of the field confirm previous conclusions that S_D variation of the geomagnetic field is due to the averaging of baylike and irregular disturbances. Auroral intensity has a single broad maximum, its peak value near the local midnight; and the daily variation of the horizontal component δH, calculated on the basis of the dynamo theory agrees well with the observed value of δH. The anticipated evening (16-17h GMT) and morning (03-04h GMT) maxima are confirmed. (DLC.)

73582. LOGINOV, VIKTOR PETROVICH. Puti povysheniia ėffektivnosti razvitiia gornoĭ promyshlennosti Severo-Vostoka SSSR. Moskva, Izd-vo Akademii nauk SSSR, 1962. 184p. tables, fold. map. (Akademiia nauk SSSR. Komissiia po problemam Severa.) 33 refs. Text in Russian. **Title tr.:** Ways for increasing the effectiveness of mining industry development in northeastern USSR.

Reviews development of mining in Yakutia, Magadan and Kamchatka. Discovery and exploration of gold, mica, diamonds, tin and other resources are summarized. Factors which increase costs in the North are considered: severe climate, great distances, inadequate road net, and others. Use of modern techniques in mining of gold placers is discussed; and surface and underground operations are reviewed. Ways of lowering actual mining costs also are dealt with. (DLC.)

73583. LOMAKKA, LENNART. Norra Fennoskandias lantbruk, II; lantbrukets utveckling, omfattning och inriktning i det nordfennoskandiska området. (Nordisk jordbrugsforskning, Suppl. 3, 1960, p.1-172, tables, graphs.) Approx. 140 refs. Text in Swedish. Title tr.: Agriculture of northern Fennoscandia, 2; development, scope and trends of agriculture in the northern Fennoscandian area. In sequence to No. 59861.

Presents a survey of past and present trends north of 62°N., emphasizing the natural and other features characteristic of various areas in Norway, Sweden and Finland. A chapter on agricultural structure deals with population development, areas of tilled land 1867-1956, number and size of agricultural units, development of drainage, etc. Agricultural methods and types of crops, gardening, and animal husbandry are treated in turn, and a final chapter deals with productivity, increase of self-sufficiency in food production, and the relationship between animal husbandry and forage production. (DA.)

LOMONOSOV, G. G., *see* Gordeev, V.P., & G.G. Lomonosov. Mnogorîadnoe . . . vzryvanie . . . 1961. No. 71765

LOMPREY, NELL, *see* Alaska. Division of Health. The McGrath project . . . 1962. No. 69622

73584. LONEY, ROBERT AHLBERG. Structure and stratigraphy of the Rybus-Gambier area, Alaska. Washington, D.C., June 1961. xi, 200 l. illus. tables, maps & diagrs. incl. fold. (U.S. Geological Survey. Reports, open file series no. 618.) 63 refs.

Presents results of detailed study of this Southeast Alaska area, comprising the Sitka B-1 and the Sumdum B-6 quandrangles, 57°15′-57°30′N. 133°30′-134°24′W., containing about 215 sq. mi. of land surface. Mapping was carried out largely in 1958-1959 by boat and foot traverses, with helicopter support in 1959. The area has complete and well-exposed stratigraphic sections, a valuable preliminary to the reconnaissance mapping of Admiralty Island. Shoreline outcrops, many exposed only at low tide, are shown on the map, scale 1 in.: 0.75 mi., as are the other geologic features. The composite stratigraphic section on p.10 ranges from Devonian and Silurian? fine-grained sedimentaries to Tertiary volcanics. Glacial clay and gravel, also recent alluvial gravel are scattered in small deposits. Four generalized units are shown: a dark green hornfels possibly including the metamorphic equivalents of Silurian to Tertiary formations; and a green schist, a marble and a phyllite, possibly the equivalents of the Gambier Bay formation. Two structural provinces are characterized by intense deformation, mainly folding; the third structural province, in the southwest, composed of Tertiary rocks, underwent mild deformation, largely faulting. Known geologic history of the area includes Silurian? and Devonian deposition; pre-Permian folding and uplift; Permian deposition and post-Permian emergence and erosion; Triassic deposition followed by uplift and erosion; then Jurassic and Cretaceous deposition, terminated by more deformation followed by plutonism; Tertiary deposition and fissure eruptions; then faulting and mild warping; Pleistocene deposition at various levels up to 475 ft. Petrographic details, fossil lists and localities are given, p.134-96. Structural details are supplemented by photomicrographs and diagrams. (DGS.)

LONG, D. M., *see* Gott, V.L., & *others*. Myocardial energy substances . . . P & hypothermic arrest. 1962. No. 71806

LONG, ERWIN L., *see*

Alaskan Science Conference 1961. 1962. No. 69644

Pacific builder. Alaska engineer . . . 1961. No. 74603

73585. LONGLEY, RICHMOND WILBERFORCE, 1907- . Super-adiabatic lapse rates in the Canadian Arctic. (Canadian geographer, winter 1962. v.6, no.3-4, p.143-50, graphs, tables.) 9 refs.

Discusses the surprising occurrence of an adiabatic or super-adiabatic temperature lapse rate near the surface, revealed by data from the six joint Canadian-United States arctic stations for 1958-1959. Computation of lapse rates was calculated in degrees C. per millibar; a value considered positive when there is a drop of temperature with height (pressure), i.e. when dT/dp is positive. Situations where dT/dp was greater than 0.080°C. per mb. are of most interest, and for all such, a maximum in June and July and minimum in Dec.-Mar. are shown by table of occurrence and graph of percentage distribution throughout the year. Greatest lapse rate occurred at Resolute on May 28, 1959: 0.54°C. per mb. with surface temp. -9.5°C. and the temp. 7 mb. above the surface -13.3°C. Wind velocity, its distribution with height nearness to the sea, and low clouds are among the factors affecting these situations. Their persistence can not be explained, though difficulty of initiating convection within the surface layer may be a contributing factor. (DGS.)

73586. LOOMER, E. I., *and* F. ANDERSEN. Record of observations at Baker Lake Magnetic Observatory 1957-1958, with a summary of earlier observations. Ottawa, Queen's Printer, 1961. p.131-226, tables. (Canada. Dominion Observatories. Publications v.26, no.3.) 10 refs.

Similar in scope and format to senior author's record of observations at Resolute Bay, *infra*. Baker Lake Observatory is located at 64.3°N. 96.0°W. (DLC.)

73587. LOOMER, E. I. Record of observations at Resolute Bay Magnetic observatory 1957-1958, with a summary of earlier observations. Ottawa, Queen's Printer, 1961. p.25-31, tables. (Canada. Dominion Observatories. Publications v.26, no.2.) 11 refs.

Mean hourly value of X, Y, and Z for each hour of the day and the mean daily value for each day of the month, Jan. 1957-Dec. 1958 are given in tables 1-36, 46-81. Mean diurnal inequalities of the components of X, Y, and Z, not corrected for non-cyclic changes, on all days, and on international quiet and disturbed days are added, tables 37-45, 82-90. Monthly mean hourly values of X, Y, and Z for all days and the international quiet days, Nov. 1953-Dec. 1956, and hourly range in Y component are also given. Station and instruments are briefly described. (DLC.)

73588. LOPATIN, IVAN ALEXIS, 1888- . Animal style among the Tungus on the Amur. (Anthropos, 1961. v.56, fasc. 5-6, p.856-68, illus.) 25 refs.

Study of the traditional cock-and-scroll design

of the Golds in elucidation of their ethnic history and time of expansion to the Amur region. The migration routes from a common Altay-Sayan homeland are traced for the Tungus, Mongolian, and Turkic tribes. The bifurcate movement of the Tungus is discussed and substantiated by physical anthropological and linguistic data. The Evenki, or Tungus proper, departed early, probably before 1,000 B.C. expanding north and northeast. Under Hun pressure, the southern Tungus including the Golds spread to the Trans-Baykal and Amur regions during the second half of the first millennium B.C. The cock-and-scroll design, an ornamental motive unknown to northern Tungus, was borrowed by the proto-Golds from the Altayan Pazaryk people in the 5th-4th centuries B.C. and introduced into the Amur area about 300 B.C. (DLC.)

73589. LOPATINA, G. B. *and* **ÎA. I. FEL'DSHTEĬN.** Geomagnitnye éffekty v ionosfere. (Geomagnetizm i aéronomiîa, 1961. t.1, no.4, p.548-51, graphs.) 12 refs. Text in Russian. **Title tr.:** Geomagnetic effects in the ionosphere.

Investigates the relationship between the geomagnetic disturbance intensity, and the value and position of the auxiliary maximum, f_0F2 at 40°-60° N. and S lat. of the ionosphere. The f_0F2 maximum was found to have the value of 14-15 Mhz independent of the geomagnetic disturbance intensity, and shows no variations due to the change of position in geomagnetic coordinates. (DLC.)

LOPATINA, S. K., *see* Berson, G.L., & S.K. Lopatina. Kollektorskie svoĭstva . . . 1961. No. 70175

73590. LOPUKHOV, EVGENIĬ IOSIFOVICH. Osvaivat' i berech' bogatstva taĭgi. (Lesnaîa promyshlennost', June 1961. god 39, no.6, p.3-4.) Text in Russian. **Title tr.:** Resources of the taiga must be utilized and protected.

By 1965, nine-tenths of the Soviet wood industry will be based on exploitation of the taiga. Reforestation must accompany logging; clear cutting should be reduced and replaced in part by selective cutting, young trees conserved, silvicultrual work extended in the taiga, forestry personnel increased, etc. Taiga forests in northern areas are included in the discussion; the deforested area in Komi ASSR covers 1.5 million hectares. (DLC.)

LORANGER, DIANE M., *see* McGill, P.C., & D.M. Loranger. Micropalaeontol. Mackenzie. 1961. No. 73687.

73591. LORD, CLIFFORD SYMINGTON, 1908- , *and* **S. E. JENNESS.** Field work, 1960. Ottawa, Mar. 1961. 53p. (Canada Geological Survey. Information circular no.4.) Refs.

Included are notes on mapping of southern Baffin Island, southeast Ellesmere, and northwest Keewatin, northern Ontario, northern Quebec-Labrador, etc.; seismic surveys, submarine geology on the Polar Continental Shelf Project in the north-central Arctic Islands area, etc.; groundwater surveys of settlements in Mackenzie District; regional study of Precambrian rocks within mapped areas of Mackenzie District; surficial geology and geomorphology of Klondike placer mining district, etc.; field work completed for a report on Canadian iron deposits. (DGS.)

73592. LORKOVIĆ, H. Inhibition by potassium of the mechanical responses of frog muscles at low temperature. (Nature, Sept. 2, 1961. v.191, no.4792, p.1011-12, illus.) 4 refs.

Application of potassium chloride or potassium sulfate reduced the twitch, or phasic contracture-like responses of sartorius and rectus muscles. Cold of 0°C. prolonged these responses by several times. Effects of warm washing, cold Ringer washing, etc. upon the cold reactions are also noted. (DLC.)

LOSEV, K. S., *see* Kotlîakov, V.M., & K.S. Losev. Issledovaniîa snezhnogo pokrova . . . 1962. No. 73028.

LOSH, M. B., *see* Levine, N.D., & *others*. Survival *Trichomonas* . . . -28 and -95° C. . . . 1962. No. 73465

73593. LOSHCHAKOV, A. I. K voprosu ob interpretatsii aéromagnitnykh nablîudeniĭ, provedennykh v almazonosnykh raĭonakh zapadnoĭ ÎAkutii. (*In:* Akademiîa nauk SSSR. Laboratoriîa aérometodov. Primenenie aérometodov pri poiskakh . . . almazov, 1960, p.85-100, tables, graphs.) 5 refs. Text in Russian. **Title tr.:** Interpretation of aerial magnetic observations in the diamond-bearing regions of western Yakutia.

Reports aerial magnetic-survey in the Daldyn and other regions and discusses the possibilities and methods of using this survey for detection of pipe-like, diamond-bearing kimberlite bodies. There are serious difficulties because local magnetic anomalies are displayed not only by kimberlites, but also by traps and other bodies of no interest for prospecting purposes. Procedures of interpretation of some types of local anomalous magnetic fields are described. Average magnetization of 17 kimberlite pipes of Daldyn region is characterized. Despite difficulties, aerial magnetic survey is found of value in search for kimberlites. (DLC.)

73594. LOSHCHAKOV, A. I. Opyt interpretatsii regional'nogo magnitnogo polîa i sviaz' namagnichennykh tel s tektonikoĭ v almazonosnykh raĭonakh zapadnoĭ ÎAkutii. (*In:* Akademiîa nauk SSSR. Laboratoriîa aérometodov. Primenenie aérometodov pri poiskakh . . . almazov, 1960, p.101-114, text maps, graphs.) 7 refs. Text in Russian. **Title tr.:** Interpretation of a regional magnetic field, and the connection of magnetized bodies with tectonics in the diamond-bearing regions of western Yakutia.

Analyzes the regional magnetic field in the Daldyn, Uulaakh-Muna and Ygyatta River regions, from an air-geophysical survey at 1:25,000 scale. On the basis of this analysis, some distribution patterns of kimberlite bodies are established, and the connection of these bodies with visible tectonic elements: dikes, fractures, etc. is outlined. Patterns thus established may serve in prospecting kimberlite bodies. (DLC.)

73595. LOTZ, JAMES ROBERT. Analysis of meteorological and micrometeorological observations, northern Ellesmere Island, 1959. Washington, D.C., May 1961. ix, 81 p. graphs, tables. (Arctic Institute of North America, Research paper no.12.) 22 refs. *Also issued as:* U.S. Air Force. Cambridge Research Laboratories, Contract AF19(604)-3073, scientific report no.12.

Discusses preliminary results of the 1959 Ellesmere Ice Shelf Project observations, partic-

ularly on Ward Hunt Island Ice Rise. Temperatures are compared with those at Alert and Eureka. The summer weather (unusually cool) is described for the Ice Shelf and the Ice Rise; events of the ablation season are explained; little ice was lost from either study area. Data are tabulated in No. 73597A. (DWB.)

73596. LOTZ, JAMES ROBERT. Dawson City, Yukon Territory, a study of the planning and community needs involved in the 1962 Dawson City Festival. Ottawa. Dept. of Northern Affairs. Industrial Division, 1962. 56 p.

Reports on a field study, Nov.-Dec. 1961, to appraise the needs for this festival (p.9-15): tourist attractions, accommodations, catering, sanitary and parking facilities, communications, and change in attitude of people in Dawson toward the event; 25 recommendations are given. The festival was founded in 1960 to promote knowledge of the area, and to stimulate the local economy, in decline because based on the non-renewable resource gold. Dawson is a center for servicing nearby mining areas, and for administration. Development of tourism, air transportation (to serve Alaska and the Mackenzie delta), salmon fishing, agriculture, moosehide and handicraft industries is recommended. Data are included on population, the economy, community attitudes, local government and finances, town-planning services, utilities, and institutions. Appended (p.46-56) is information on preservation of historic buildings and areas; planning and sanitation measures in a "tent city," by Dr. John S. Willis; also notes on Bear Creek, Forty Mile, and Klondike City, settlements in the Dawson area. (CaOGB.)

73597. LOTZ, JAMES ROBERT. Hornchurch, Engelbrecht and some others. (North, Jan.-Feb. 1962, v.9, no.1, p.36-38, illus.)

Describes characteristics of Greenland huskies used as sled and pack dogs on northern Ellesmere Island by the glacier party of Operation Hazen during summer 1957. (CaMAI.)

73597A. LOTZ, JAMES ROBERT. Meteorological observations in northern Ellesmere Island 1959. Washington, D. C., Feb. 1961. 74 p., 64 tables. (Arctic Institute of North America. Research paper no.7.) *Also issued as:* U.S. Air Force. Cambridge Research Laboratories. Contract AF 19(604)-3073, scientific report no.11.

Contains the meteorological and micrometeorological data from the Ice Rise and Ice Shelf stations established by the 1959 Ellesmere Island Shelf project; the Ice Rise station about three miles north of Ward Hunt Island was operated by two observers; the Ice Shelf station one mile north of Ice Rise was visited daily at first, weekly from June 1 to Sept. 7. Comparative data are included from Alert and Eureka. Transportation and housing, also instrumentation, are described. Records of temperature, temperature gradients, wind direction and speed, relative humidity, pressure, clouds and cloudiness, visibility, sunshine, precipitation, accumulation and ablation are tabulated. This portion of the Ellesmere Island Ice Shelf is located at 83°09′N. 74°00′W., and is named the Ward Hunt Ice Shelf. (DWB.)

73598. LOTZ, JAMES ROBERT. Northern Ellesmere Island: a study in the history of geographical discovery. (Canadian geographer, 1962. v.6, no.3-4, p.151-61, maps.) 26 refs.

Traces the main events and discoveries in this region from the 1616 voyage of the *Discovery* (Capt. Bylot) with Wm. Baffin, to Operation Hazen in 1957-58, and the Polar Continental Shelf Project in progress. First coastal charts of northern Ellesmere were made by sledge parties of Nares' British Arctic Expedition of 1875-76; Greely in 1882 made extensive inland journeys in the Lake Hazen area, not repeated till the IGY; but during the last decade, seven small and three large scientific expeditions have worked in the region. (CaMAI.)

73599. LOTZ, JAMES ROBERT, *and* **R. B. SAGAR.** Northern Ellesmere Island, an arctic desert. (Geografiska annaler, 1962. v.44, p.366-77, illus., maps, graphs, tables.) 12 refs.

Summarizes the meteorological and glaciological conditions during the ablation seasons of 1957 and 1958, on the Gilman Glacier, in connection with Operation Hazen, 1957-1958. Gilman and the other southeast-flowing glaciers in northern Ellesmere apparently are losing volume. Mass balance of Gilman in 1958 is calculated as (5684+3045-5430) $\times 10^{-5}$ km^3 = 33 million m^3 of water, or 61% of the total accumulation; its regime was probably more strongly negative in 1957. Low precipitation and warm summer temperatures combined with other factors cause the negative regime throughout northern Ellesmere. Water equivalent of the snow accumulated at Gilman Glacier during the budget years 1957 and 1958 was about 6.0-7.0 cm. per year, hence the term "arctic desert." (DLC.)

73600. LOTZ, JAMES ROBERT. Northern settlements and the squatter problem. (Habitat, Nov.-Dec. 1962, v.5, no.6, p.2-7, illus.)

Discusses the problem of squatters with no legal land title living in substandard housing on the fringes of frontier towns in northern Canada. Whitehorse, in the Yukon, is outstanding with 287 households of squatters, the adults with low sporadic employment as unskilled labor. The squatter problem is considered inevitable in towns where employment is seasonal or otherwise periodic and the economic outlook uncertain. Uranium City in Saskatchewan, Fort Smith and Inuvik in Mackenzie District, have a problem similar to Whitehorse, though less scabrous; but not so Thompson in Manitoba, which has rigid controls, but which also has no low-income housing as substitute for squatters dwellings. (CaOCU.)

73601. LOTZ, JAMES ROBERT. Operation Hazen. (Canadian geographical journal, Aug., Sept., 1961. v.63, no.2, p.40-51; no.3, p.100-111, illus. maps.)

Outlines this Canadian expedition to northern Ellesmere Island in its three phases: reconnaissance studies during summer 1957, the winter party, and the main studies in summer 1958. Expedition logistics and field trips (mapped) are described; the studies in meteorology, glaciology, geophysics, geology, archeology, botany, and zoology are summarized, and the scientific results noted to have been reported in more than fifty papers so far. Author was meteorologist on the expedition. (DGS.)

73602. **LOTZ, JAMES ROBERT.** Operation Hazen: Meteorological observations on Gilman Glacier, 1960. Ottawa, Apr. 1961. iii, 12 p. illus., graph, 2 tables. (Canada. Defence Research Board. Operation Hazen, Hazen 17.) 2 refs. Mimeographed.

Deals briefly with weather conditions on this glacier in northern Ellesmere Island, based on limited data obtained May 22 - June 12, 1960, supplementing Operation Hazen of the IGY. Observations of standard and maximum temperatures, wind speed and direction, sky cover and visibility were made. Comparison with the 1957 and 1958 records indicates an abnormally warm season in 1960. Early melting was also aided by strong winds, lack of precipitation, and low cloud cover. (DWB.)

73603. **LOTZ, JAMES ROBERT.** Pelts to parkas. (Beaver, Autumn 1962. outfit 293, p.16-19, illus.)

Describes growth of the Aklavik Fur Garment Project initiated by the federal government in Feb. 1959 to train Indian and Eskimo women of this Mackenzie District settlement to make fur clothing on a commercial basis. The instructor, E. Latour's efforts accustom the women to conditions of industrial employment are sketched. (DI.)

73604. **LOTZ, JAMES ROBERT.** Some notes on a journey from Whitehorse to Juneau, Alaska, via Skagway and Haines, July 25-26th, 1962. Ottawa, Aug. 1962. 9 p. illus.

Reports observations on this trip over the White Pass and Yukon Route to Skagway, by ferry 15 mi. to Port Chilkoot, then Haines, and 56 mi. down the Lynn Canal to Tee Harbor; and 19 mi. by bus, into Juneau. The towns are described, and some problems of regional planning in Alaska are discussed; comments are offered on the ferry system under development to cut transport costs for Southeast Alaska. The narrative is accompanied by 94 black-and-white photographs mounted, and 15 travel folders, etc. on the area. (CaONA.)

73605. **LOTZ, JAMES ROBERT.** The squatters of Whitehorse, Yukon Territory. Ottawa, Aug. 1961. 82 p. illus., tables. (Canada. Dept. of Northern Affairs and National Resources. Industrial Division.)

Presents factual information on Indians, metis, and whites (Canadian and recent European immigrants) around Whitehorse, occupants without right or title to their land. Types and conditions of their buildings, utilities, if any, etc. are described. Author, the federal community-planning officer, considers the squatters as a group, the family makeup, ethnic origins, incomes if any, social and physical mobility, length of occupance, and attitudes toward relocation. Resettlement of the entire group in accordance with individual requirements is recommended, and some of the problems involved, mainly financial, are considered. Data on dwellings, size and ethnic affiliation of families, employment, etc. are tabulated. A preliminary report (74 p., process print) of data gathered in the field was issued in Jan. 1961. (CaMAI.)

LOTZ, JAMES ROBERT, *see*

Canada. Settlement handbook. 1962. No. 70545

Harwood, T.A., & J.R. Lotz. The McGill Ice Research Project, 1955-60. 1962. No. 72061

Hattersley-Smith, G.F., & *others.* Ablation season Gilman Glacier . . . 1961. No. 72065

Hattersley-Smith, G.F., & J.R. Lotz. Transport, equipment . . . 1961. No. 72072

73606. **LOUGHEED, W. M.** The central nervous system in hypothermia. (British medical bulletin, Jan. 1961. v.17, no.1, p.61-65.) About 75 refs.

Reviews recent advances in this field, specifically: levels of reflex and consciousness disappearance; ECG responses; cerebral metabolism; hypothermia as protection from anoxia; cerebral blood flow, blood brain barrier, cerebrospinal fluid, etc. Cold-tolerance of the nervous system, local cooling of the brain, and hypothermia as protection against brain injury, also are covered. (DNLM.)

73607. **LOUGHREY, ALAN G.** The economic importance of wildlife in the Northwest Territories. (*In:* Canada. Wildlife Service. Wildlife management papers delivered at the 21st-24th federal-provincial wildlife conferences, Ottawa, 1958-62, p.92-108.)

Reviews the role of wildlife in the exploration and development of the area, and its value to the aboriginal inhabitants. Its present status in the economy is discussed; two thirds of the 19,313 population depend upon wildlife for a livelihood through fur trade, game hunting, commercial fishing, and the reindeer industry. Research and the tourist industry enhance the potential value of fish and wildlife resources. Their importance as livelihood is expected to decline, and that for recreational purposes to increase. (CaONA.)

73608. **LOUGHREY, ALAN G.** The economics of the fur industry in Canada. (*In:* Resources for Tomorrow Conference . . . 1961. v.2, p.845-56, tables.) 33 refs.

Reviews the history and status of the industry. Biological factors affecting production of wild fur, and socio-economic factors affecting the supply of trappers are discussed. Research on wild fur species by government and university agencies, management of this fauna, and the need for research on applied trapping and fur-handling techniques are considered. Economic factors (demand) influencing production of ranch fur, research on it, and management of these species are dealt with. Economic aspects of the industry, marketing of raw furs, fur processing and manufacturing are outlined, as are consumer demand, and retailing. From appraisal of the industry in relation to the decline in production and export of Canadian furs, author concludes that an aggressive program of market research must be undertaken together with product development and promotion. (CaONA.)

73609. **LOURIE, HERBERT,** *and others.* Effect of hypothermia upon vital staining of the brain. (Journal of nervous and mental disease, Jan. 1960. v.130, no.1, p.1-5.) 23 refs. *Other authors:* W.J. Weinstein *and* J.L. O'Leary.

Reports on experiments with dogs and cats. The blood-brain barrier to trypan blue remained efficient at 16°C. brain temperature and above in cats, and at 13° and higher in the newborn dogs. The barrier is partially disrupted at 9°C. and below. (DNLM.)

LOVE, SAMUEL KENNETH, 1903– , *see* Hendricks, E.L., & S.K. Love. Surface waters Alaska 1960. 1962. No. 72116

LOVE, SAMUEL KENNETH, 1903– , *see* Wells, J.V.B., & S.K. Love. Surface waters Alaska 1959. 1961. No. 76524

73610. LOWDON, J. A., *and others.* Age determinations by the Geological Survey of Canada, report 1: isotopic ages. Ottawa, Queen's Printer, 1960. 51 p. tables. (Canada. Geological Survey, Paper 60-17.) 5 refs. *Other authors:* S.C. Robinson *and* G.M. Wright.

Presents potassium-argon age measurements completed to Dec. 31, 1959. About forty of the samples examined were from northern Canada, generally from the Canadian Shield. Pertinent experimental data, the geological setting, etc. are stated, p.5-40; and the application of age measurements to specific, geologic problems discussed: the concentration of 1600-1700 million-year-old granitic gneisses in the Churchill Province, the boundary between the Churchill and Slave Provinces, etc. Results of these determinations are inconclusive. (DGS.)

73611. LOWDON, J. A., *and others.* Age determinations by the Geological Survey of Canada, report 2: isotopic ages. Ottawa, Queen's Printer, 1961. vi, 127 p. maps & graphs incl. fold. in pocket, tables. (Canada. Geological Survey. Paper 61-17.) 37 refs. *Other authors:* J.E. Reesor, J.E. Muller, C.H. Stockwell, *and* R.K. Wanless.

Presents 152 potassium-argon age measurements completed in 1960, including 70 from arctic samples. Pertinent data for the age calculation, mineral and rock type, precise location, and possible significance of results are stated, p.5-86. Field officers' preliminary reports on specific problems follow, including p.108-118, Stockwell's division of the Canadian Precambrian Shield into six main structural provinces, distinguishing three main Precambrian orogenic periods with peaks at about 2500, 1700 and 900 million years; these orogenies when considered with major unconformities, indicate a four-fold time-classification of the sedimentary volcanic, and intrusive rocks. The two-fold classification into Archean and Proterozoic is divided at the 2,500 million-year orogeny and the Proterozoic is subdivided into Lower, Middle, and Upper parts with correlation table. (DGS.)

73612. LOWTHER, GORDON R. An account of an archaeological site on Cape Sparbo, Devon Island. (Canada. National Museum. Bulletin, 1962. no.180, Anthropological series no.57, Contributions to anthropology, 1960, pt. 1, p.1-19, illus., sketch map.) 20 refs.

Describes the pre-Dorset part of the artifactual material collected in 1960 by the Devon Island Expedition (No. 63106) at Inavik Site, 75°50′N. 83°55′W., on Skogn Bay (tentative name). The local physiography and general aspect of nine house ruins are outlined. 84 artifacts and fragments were found, unassociated with the houses, in the eastern section of the site: points, knives, side and end blades, microblades, burins, and burin spalls. The implements are mainly Arctic Small-Tool, with a few specimens of Dorset character; some Thule material is present. Affinities with other pre-Dorset sites are discussed. (DLC.)

73613. LOZINA-LOZINSKIĬ, LEV KONSTANTINOVICH. Mnogokolenchatye, Pantopoda, dal'nevostochnykh morei SSSR. (Akademiia nauk SSSR. Zoologicheskiĭ institut. Issledovaniia dal'nevostochnykh morei SSSR, 1961. vyp.7, p.47-117, illus., tables.) 39 refs. Text in Russian. **Title tr.:** Pantopoda from the Far-Eastern seas of the USSR.

Study of these crustaceans from a number of Russian expeditions, including the Bering and Okhotsk Seas, 1932-1954. Over 70 species are described about one third of them new. In addition to morphology and morphometry of males and females, geographic and depth distribution are mainly considered. Two principal groups were detected north of 40°N.: an endemic group, and one of wide distribution, including the northern Atlantic, and the Arctic Ocean. (DLC.)

LOZINA-LOZINSKIĬ, LEV KONSTANTINOVICH, *see also* Bal'dysh, G. Na grani zhizni i smerti. 1962. No. 69981

73614. LUCHINETSKIĬ, EVGENIĬ. Chelovek idet k solntsu. (Sibirskie ogni, Jan. 1962. god 41, no.1, p.107-138, illus.) Text in Russian. **Title tr.:** Road toward the sun.

Describes impressions from visits to the Khanty-Mansi National District in 1956-1961: the rapid growth of lumbering, construction of subsidiary roads, narrow-gauge branch railway line, and settlements. (DLC.)

73615. LUCHINETSKIĬ, EVGENIĬ. V kraiu Polĭarnoĭ Zvezdy; putevaia povest'. (Sibirskie ogni, July 1961. god 40, no.7, p.141-74.) Text in Russian. **Title tr.:** In the land of the North Star; account of a journey.

Describes a visit to the Yamal-Nenets National District: the trip by steam-launch down the Poluy and Ob, stopping at Salekhard, Askarka, Panayevsk, and Yar-Sale. Technological development of the kolkhoz economy is indicated in the traditional fishing, fur hunting and reindeer herding and the introduced dairy farming, horticulture. Cultural and social changes among the Nenets Samoyeds are sketched in the growth of new settlements with permanent housing, hospitals, nurseries, schools and recreational facilities; the increase of boarding-schools; electrification, etc. (DLC.)

LUCIER, CHARLES V., *see* Pruitt, W.O., & *others.* Small mammal bioclimate . . . 1961. No. 74982

73616. LUDWIG, GEORGE H., *and* **W. E. SCULL.** The orbiting geophysical observatory, a new tool for space research. Washington, D.C., Aug. 1962. iii, 15 p. illus., diagrs., table. (U.S. National Aeronautics and Space Administration, Technical note D-1450.)

Describes this spacecraft, 20 experiments planned prior to and during performance, also operation in orbit of the 1000 lb. OGO, planned for launching in mid-1963. In mid-1964 a Polar Orbiting Geophysical Observatory (POGO), is to be launched into a polar orbit by a Thor-Agena B vehicle from the Pacific Missile Range, the orbit to have a nominal inclination of 90°, perigee of 140 naut. mi., apogee of 500 naut. mi., and a period of about 96 min. (DWB.)

LUFT, ULRICH C., *see* Lim, T.P.K., & U.C. Luft. . . . hypoxia & thermal homeostasis. 1962. No. 73503

73617. LUGOV, S. F. Itogi nauchno-tekhnicheskogo soveshchaniĭa o geologicheskikh rabotakh na nikel' v Krasnoĭarskom krae. (Sovetskaĭa geologiĭa, Jan. 1962, no.1, p.181-84.) Text in Russian. **Title tr.:** Results of the scientific-technical conference on geologic prospecting for nickel in Krasnoyarsk Province.

Reports an interdepartmental conference held in June 1961 at Noril'sk, with 190 participants and 19 papers delivered, of which the main ones are reviewed. Attention is directed to the northwestern Siberian platform and the Noril'sk and Kureyka regions. The geologic-geophysical work, structure of the regions, methods and prospects in search for nickel and copper are summarized; plans for further studies are stated. (DLC.)

LUGOV, S. F., *see also*

Atamanov, A.V., & *others*. Novye dannye po geologii . . . 1961. No. 69904

Erofeev, B.N., & S.F. Lugov. Okhotsko-Chukotskiĭ vulkanogennyĭ . . . 1962. No. 71293

73618. LUGOVOĬ, E. V. Puti povysheniĭa produktivnosti molochnogo skota IAkutskoĭ ASSR. (Yakutsk. Universitet. Uchenye zapiski 1959, vyp. 6, seriĭa sel'sko-khozĭaĭstvennykh nauk, p.5-18.) Text in Russian. **Title tr.:** Ways to increase the productivity of dairy cattle in Yakut ASSR.

The dairy stock of collective and state farms of Yakutia is of mixed breed and its average yield of milk and meat is quite low. Means for raising productivity are discussed and the following recommended: increase the amount and quality of fodder, individual study of each cow; careful selection of sires, artificial insemination, elimination of weak and unproductive animals, etc. (DLC.)

LUKE, M., *see* Morris, R.B., & *others*. Neonatal cold injury . . . 1961. No. 74116

LUKE, W. K., *see*

Orahood, R.C., & *others*. Physiologic effects of gastric hypothermia . . . 1961. No. 74527

Wangensteen, S.L., & *others*. Physiologic effects of gastric hypothermia, 1 . . . 1961. No. 76483

73619. LUK'IANCHENKO, T. V. Obsuzhdenie raboty IUkagirskoĭ ėkspeditsii. (Sovetskaĭa ėtnografiia, Jan.-Feb. 1961, no.1, p.169-70.) Text in Russian. **Title tr.:** Discussion of the field work of the Yukaghir expedition.

Synopsizes seven reports to the Institute of Ethnography Council, Oct. 7, 1960. This summer 1959 expedition under Z.V. Gogolev and I.S. Gurvich, went to the Lower Kolyma, Allaykha (lower Indigirka), and Upper Kolyma Districts of Yakutia and the Srednekanskiy (upper Kolyma) District of Magadan Province; its purpose was study of the material and spiritual culture, ethnography, physical anthropology, etc. of the Yukaghirs. (DLC.)

73620. LUMBY, J. R., *and* **O. H. SAELEN.** Report on oceanographical work from ocean weather ships. Göteborg, 1957. 30 p. maps. (International Union of Geodesy and Geophysics. Association of Physical Oceanography. Publication scientifique no.16.) Refs.

Outlines development of the current (1957) weather-ship network, including Station A at 62°N. 33°W. since 1947, Station B at 56°30′N. 51°W. since 1947, and Station M at 66°N. 2°E. since 1948, in the Atlantic sector. Description is given of equipment, procedures, publications and administration of the service. Recommendations for bathythermograph observations during the IGY are given. (DN-HO.)

LUNAS, T., *see* Kristoffersen, J., & *others*. Identification 20β hydroxy-pregn-4-ene-3-one . . . whales. 1961. No. 73136

73621. LUND, HJALMAR MUNTHE-KAAS, 1913–
Elgtaksering fra fly, god metode i glissen skog. (Skogeieren, Oslo, Dec. 15, 1960. årg. 47, nr. 12, p.483-84, illus., tables, graph.) Text in Norwegian. **Title tr.:** Elk inventory from aircraft, a good method in thin forests.

Reviews an article by B.T. Semenov, published in Moscow in 1956 and dealing with inventories of the elk population in the Arkhangel'sk area, which has thin coniferous forests similar to northern Scandinavia, and the same elk species. The method is described: the numbers of tracks observed 10 a.m.-2 p.m. on a new-fallen snow during February-April are set upon a sketch map and later calculated in the laboratory. Preliminary study was made of an elk herd on the ground, its day-to-day movements mapped, number of head/herd determined; the map and the terrain to be inventoried, also were studied. A suitable area per flight is a strip 1 km. wide and 300 km. long. (DA.)

73622. LUND, HJALMAR MUNTHE-KAAS, 1913–
To notiser om sjøfugl. (Naturen, 1961. årg. 85, nr.1, p.16-23, 5 illus.) Text in Norwegian. **Title tr.:** Two notes on sea birds.

Reports on eider and sea-eagle as observed along the Nordland coast in northern Norway. The birds nest in low-lying spots close to shore, accessible to shellfish, mussels, and perhaps some algae, on which they feed. (DGS.)

73623. LUND-DROSVAD, ANDR. En gammel udstedsbestyrer fortaeller. (Grønland, May 1961, nr.5, p.169-76, illus.) Text in Danish. **Title tr.:** An old trading-post manager reminisces.

Recounts childhood memories of Hans Nielsen, born in 1891, former manager at Tasiussaq (73°21′ N. 56°W.), West Greenland. He dwelt there from 1898, his father then manager, and their home was often visited by Knud Rasmussen, Peter Freuchen and others on their way to Thule. Details are given on everyday life, hunting, and on a visit by Scottish whalers in 1906. (CaMAI.)

73624. LUND-DROSVAD, ANDR. Nogle traek fra en grønlandsk kredsdommers virke. (Grønland, Oct. 1961, nr.10, p.381-92, port.) Text in Danish. **Title tr.:** Some glimpses of the work of a Greenland district judge.

Reviews his tour of duty in Upernavik district, West Greenland in 1954-55. Theft and paternity cases are cited, Greenlanders' reactions described. (DLC.)

73625. LUNDBERG, STIG. Bidrag till kännedom om svenska Coleoptera, 4. (Entomologisk tidskrift, 1961. årg. 82, häfte 1-2, p.64-68, illus.) Text in Swedish. **Title tr.:** Contribution to the knowledge of

Swedish Coleoptera, 4. In sequence to No. 66413.

Describes finds of 12 beetles, three in the North: *Lomechusa mariae* near Arvidsjaur; *Cryptocephalus coerulescens* Sahlb. near Haparanda; and *Pityogenes saalasi* Egg. in the Lycksele region. (DLC.)

LUNDBERG, STIG, *see also* Markgren, G., & S. Lundberg. Om tallbit . . . 1959. No. 73815

73626. LUNDBERGH, HOLGER. Swedish "Operation Ice Tunnel." (American Geophysical Union. Transactions, June 1962. v.43, no.2, p.175-76, illus.)

Notes resumption of work on a 300-450 ft. tunnel in a glacier on the Kebnekajse Mountain, 3,300 ft. above sea level. Chief scientists are G. Hoppe and V. Schytt. (DLC.)

LUNDEMARK, ERIK, *see* Näslund, M., & *others.* Samernas skolgång; betänkande . . . 1960. No. 74203

73627. LUNDQVIST, GÖSTA, 1894– Geological radiocarbon datings from the Stockholm station. Stockholm, 1962. 23 p., illus., maps, diagrs., sections. (Sweden. Geologiska undersökning, Avhandlingar och uppsatser, ser. C, no.589.) 48 refs.

Summarizes the geological datings carried out 1955-1962 at the Stockholm Natural Radiocarbon Station, including an outline of author's unpublished results. Pine stumps are generally younger in northern than in southern Sweden; four finds near Abisko are dated from 3900 ± 80 to 6130 ± 115 B.P. Northernmost stump in author's material is from Kelottijärvi, northwest of Karesuando, dated 5000 B.P. C-14 determination of the northward extent of forests in Sweden during Alleröd time (approx. 11,000 B.P.) is suggested. Unpublished datings from Mt. Ruoutevare, north of Kvikkjokk, may be extended by the appearance of abundant birch forest where almost none existed 50 yrs. ago. Immediate problems include: oscillations of tree limits in the mountains, "recurrence surfaces" in peat bogs, and regional dating of iron workings. (DLC.)

73628. LUNDQVIST, GÖSTA, 1894– The interglacial ooze at Porsi in Lapland. Stockholm, 1960. 26 p. illus., maps, graphs, tables. (Sweden, Geologiska undersökning. Avhandlingar och uppsatser, ser. C, no.575.) 35 refs.

During construction of a large dam at Porsi, approx. 66°N. 20°45′E. and nearly two mi. southeast of the confluence of the Stora and Lilla Lule Rivers, an organic layer 30 cm. thick was found between layers of moraine. Examination and analyses of a complete core disclosed large amounts of pollen, diatoms, two definable plants viz.: *Betula nana* and *Empetrum,* abundant mosses, etc. This deposit is C-14-dated at 40,000 B.P. A dozen other Swedish interglacial or possible interstadial organic deposits are discussed, one of them in Norrbotten. (DLC.)

73629. LUNDQVIST, JAN. Patterned ground and related frost phenomena in Sweden. Stockholm, 1962. 101 p. illus., maps, diagrs., graphs, tables. (Sweden. Geologiska undersökning. Avhandlingar och uppsatser, ser. C, No. 583; *also* Årsbok 55, no.7.) 162 refs.

Summarizes Swedish studies (considered to have started from J.G. Andersson's lectures in 1906) mainly on the distribution and interpretation of the different types of patterned ground. Most (15) of the examples are given from the Caledonides, where sporadic permafrost, strongest frost action and greatest number of patterned-ground types are found. Regional and vertical distribution is shown by maps and profiles; formation processes are summarized in tabular form, combining geomorphic origin with procedure or process. The complex relation between climate and patterned ground is discussed in general, with examples from the Lule, Torne and Sarek regions. Swedish equivalents of 24 patterned ground terms used in the paper are given. Descriptions are based on A.L. Washburn's classification (No. 48863) with some additions. (DLC.)

73630. LUNDSTEEN, POUL HUGO, 1910– Tanker om udviklingen i Grønland i tiåret 1950-60. (Grønland, Sept. 1961, nr.9, p.321-50, illus.) Text in Danish. **Title tr.:** Thoughts on the development in Greenland during the decade 1950-60.

Former governor reviews some basic problems and appraises efforts to deal with them: resettlement to concentrate population, housing, the general economy, education, etc. The new Greenland Commission of 1960 and its functions are noted. (DLC.)

73631. LUNGERSGAUZEN, G. F. Geologicheskaĭa istoriĭa srednei Leny i nekotorye voprosy stratigrafii chetvertichnykh otlozheniĭ Vostochnoĭ Sibiri. (*In:* Vsesoĭuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.209-217, fold. table.) Text in Russian. **Title tr.:** Geologic history of the middle Lena and some problems of Quaternary deposit stratigraphy in Eastern Siberia

Distinguishes Mesozoic, Tertiary and Quaternary periods in Lena development. The Quaternary history is evaluated from study of terraces. A stratigraphic scale for Cenozoic deposits of the lower and middle Lena is worked out with correlation of tectonic movements and physical-geographic environments. Lower, Middle, Upper and Recent Quaternary deposits are recognized and described. (DLC.)

73632. LUNGERSGAUZEN, G. F. Nekotorye osobennosti proĭavleniĭa noveĭsheĭ tektoniki na vostoke Sibirskoĭ platformy. (*In:* International Association for Quaternary Research. Neotektonika SSSR . . . 1961, p.165-72, map.) Text in Russian. **Title tr.:** Some features of the manifestation of recent tectonics in the east of the Siberian platform.

Reviews the structural development of the broad Lena region beginning with the Oligocene. Attention is given to the development of the Lena river terraces and that of the Verkhoyansk Mountain Range and other structures. The rise and subsidence of areas are noted. Development of block-type structures is indicated. Variation of tectonic movements in space and time is characterized. (DLC.)

73633. **LUR'E, I. S.,** *and* **V. I. MASLOV.** K voprosu uvelicheniia dlitel'nosti ėkspluatatsii zimnikh sezonnykh dorog; na materiale sobrannom v Komi ASSR. (Merzlotnye issledovaniia. Sbornik statei, 1961. vyp. 1, p.318-29.) 3 refs. Text in Russian. **Title tr.:** On extending the time winter roads are in use according to materials collected in Komi ASSR.

Notes that winter roads afford the only way of exploiting the timber resources in Komi ASSR, and reports a study of conditions of two forest roads near Syktyvkar. Climate, relief, seasonal ground freezing, snow cover and thawing are analyzed. It was found that the period of winter-use could be extended 20-30 days at the end by keeping the roads cleared during the heavy snow falls of November and December to enable deeper frost penetration, and by intensive spraying in the spring. Recommendations are given for the preparation and maintenance of winter roads. (DLC.)

73634. **LUR'E, M. L.,** *and others.* Intruzivnye trappy zapadnoi okrainy Sibirskoi platformy. (*In:* Akademiia nauk SSSR. Otdelenie geologo-geograficheskikh nauk. Petrografiia Vostochnoi Sibiri, t. 1, 1962, p.5-70, illus., tables, diagrs.) 47 refs. Text in Russian. *Other authors:* V.L. Masaitis *and* L.A. Polunina. **Title tr.:** Intrusive traps in the western margin of the Siberian platform.

Presents a composite summary of intrusive traps in the Noril'sk, Kureyka, Nizhnyaya Tunguska and other areas. In the western part of the Siberian platform, trap magmatism lasted from the upper Paleozoic to the Lower Mesozoic, and five phases are distinguished. The intrusive complexes of each are analyzed, noting the position of the intrusions in the geologic structure of region, their form, mineral and chemical composition of the rocks, etc. The petrochemical features are discussed in connection with the mineralization. The sulfide copper-nickel mineralization of the Noril'sk complex, and the magnetite mineralization of the Letninsky complex are outlined among others. (DLC.)

LURIE, NANCY O., *see* Helm, J., & N.O. Lurie. Subsistence econ. Dogribs. 1961. No. 72108

LUSHCHIKHIN, G. M., *see* Bochkovskii, F.A., & G.M. Lushchikhin. Perspektivy . . . koksuiushchikhsia ugolei . . . 1962. No. 70270

73635. **LUSHCHITSKII, M. A.** Liuminestsentnyi metod rannego opredeleniia nekroza tkanei pri otmorozheniiakh. (Voenno-meditsinskii zhurnal, Jan. 1961. no.1, p.41-43, illus.) Text in Russian. **Title tr.:** Luminescence method of early diagnosis of tissue necrosis in frostbite.

Discusses earlier work on tissue luminescence and his own study, with ultraviolet light, on rabbits having severe frostbite. His method (described) permits necrosis from frostbite to be outlined as early as 2-3 days after injury. (DNLM.)

73636. **LUTSET, V.** Budni Arktiki. (Enisei, 1961, no.4(32) p.88-94.) Text in Russian. **Title tr.:** Everyday life in the Arctic.

Sketches exploits of rank and file workers in the North: hardships and hazards of scientific and routine work problems of navigation by sea and by air, rescue and mercy missions, resupply of expedition bases and polar stations, etc. Individuals are cited, their contributions described. (DLC.)

73637. **LUTSET, V.** Nastuplenie na merzlotu. (Enisei, 1961, no.2(30), p.63-66, illus.) Text in Russian. **Title tr.:** Attack on permafrost.

Describes the planning of Noril'sk and the initial construction phase beset by permafrost engineering problems. Two photos show views of present city. (DLC.)

73638. **LUTSKII, S. L.** Dmitrii IAkovlevich i Khariton Prokop'evich Laptevy, XVIII v. (*In:* Kuznetsov, I.V., *ed.* Liudi . . . 1962, p.366-72, map.) 15 refs. Text in Russian. **Title tr.:** Dmitrii IAkovlevich and Khariton Prokop'evich Laptev, 18th century.

Describes the travels of these first cousins, outstanding participants in the Great Northern expedition of 1733-1743. D.IA. Laptev commander of the *Irkutsk* after P. Lasinius' death, navigated the coast from the Lena delta to the Yana, Indigirka and Kolyma deltas and reached Cape Baranova. Oh land, using dogs he penetrated to the Anadyr River. Kh.P. Laptev sailed aboard the *IAkutsk,* explored Nordvik and Khatanga Bays, and discovered Preobrazheniya Island. After the *IAkutsk* was abandoned, explorations were continued on the Taymyr Peninsula. (DLC.)

73639. **LUTTS, B. G.** Granity Anabarskogo massiva. (*In:* Akademiia nauk SSSR. IAkutskii filial . . . Trudy, 1962. ser. geologicheskaia, sbornik no.11, p.30-39, tables, diagrs.) 7 refs. Text in Russian. **Title tr.:** Granites of the Anabar massif.

Reports his 1957-1958 study, distinguishing granodiorite-granosyenite and alaskite type granites and outlining their petrography and geochemistry. The two types are independent groups of the massif, differing in position of geologic structure, texture, mineralogic composition, character of development, potassium-feldspar, composition of plagioclase, origin, and other features. (DLC.)

73640. **LUTTS, B. G.** Ksenolity porod Anabarskogo shchita v kimberlitovykh trubkakh. (*In:* Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskii filial. Petrografiia i mineralogiia . . . almazov, 1962. Trudy, sbornik no.8, p.87-109, tables, graphs, map.) 10 refs. Text in Russian. **Title tr.:** Xenoliths of Anabar shield rocks in kimberlite pipes.

Reports geologic, petrographic, mineralogic and chemical studies of Anabar crystalline shield xenoliths distributed in kimberlite pipes. From these studies, the structure of Archean rocks of the shield is outlined and their material composition characterized. The Daldyn series of the Anabar shield extends through the Daldyn kimberlite pipe region, the Anabar-Lomuyka series through the Alakit and Muna kimberlite pipe region, and the Khapchan series into the Ukukit-Omonos region. (DLC.)

73641. **LUTTS, B. G.,** *and others.* O sostave i stroenii fundamenta vostochnoi chasti Sibirskoi platformy. (Geologiia i geofizika, 1962, no.8, p. 41-50, maps.) 12 refs. Text in Russian. *Other authors:* K.B. Mokshantsev *and* A.A. Nikolaevskii. **Title tr.:** On composition and structure of the

basement in the eastern part of the Siberian platform.

Reviews composition from recent drillings and geophysical investigations in the Anabar and Aldan shields, Vilyuy syncline, etc., the structure and development of basement. It is a complicated, heterogeneous formation of deep, metamorphosed Archean and Proterozoic crystalline rocks. Two large Archean blocks, the Aldan and Anabar, are characterized. Two lithologic complexes and two corresponding tectonic-magmatic cycles are recognized and described. Proterozoic folding and other events are interpreted. (DLC.)

73642. LUTTS, B. G. Opredelenie zhelezistosti rogovykh obmanok v porodakh granulitovoĭ fatsii. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniia, 1962. vyp. 7, geologiia, p.107-111, tables, diagrs.) 7 refs. Text in Russian. **Title tr.:** Determination of ferrugination of hornblendes in rocks of granulite facies.

Reports that ferrugination of hornblende from these rocks in the Anabar shield does not correspond with any established curves for its determination. Comparison is made with the process in other rocks of granulite facies elsewhere. Results of chemical analyses are diagrammed, to show that ferrugination of hornblende is independent of that of granulite facies rocks. (DLC.)

73643. LUTTS, B. G. Psevdotakhility Anabarskogo massiva i voprosy ikh genezisa. (Geologiia i geofizika, 1962, no.11, p.98-102, illus., table, diagrs.) 8 refs. Text in Russian. **Title tr.:** Pseudotachylytes of the Anabar massif and problems of their genesis.

Describes this black vein rock of glassy aspect in the eastern half of the Anabar massif, occurring always in tectonic zones of breccias, mylonites and cataclasites. Four samples were studied in detail and chemically analyzed together with the enclosing rocks. Pseudotachylytes differ in composition, and are of tectonic origin. (DLC.)

73644. LUTZ, HAROLD JOHN, 1900– . Aboriginal man and white man as historical causes of fires in the boreal forest, with particular reference to Alaska. New Haven, Conn., 1959. v, 49 p. (Yale University. School of Forestry. Bulletin no. 65.) 127 refs.

Examines the use and abuse of fire in the North American boreal forest. Aboriginal man used fire in camping, signaling, gumming canoes, in hunting and warfare, and to combat insect pests. White man has used fire for some similar purposes, also to dry fuel and to promote grass for livestock; both natives and whites, careless with fire, have had their role in forest burning; and evidence shows many fires purposely set. Early fires of unknown origin in the boreal forest of Alaska are chronicled briefly, the more numerous and extensive fires recorded for the period 1897-1915. (DI.)

LUTZ, J., *see* Harth, O., *&* *others.* Der Einfluss der Bluttemperatur . . . 1960. No. 72055

73645. LUYET, BASILE JOSEPH, 1897– , *and* **R. J. WILLIAMS.** Observations on the extent of the injury caused by the formation of ice in the feet of mice. Fort Wainwright, Alaska, June 1962. 18 p. illus. table. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 62-8.) 4 refs.

Study of the damage suffered by feet of mice frozen to -4°, -6°, -8°, or -10°C. and kept at these temperatures for 10, 30, or 60 minutes. The damage is evaluated after a recovery period of 7-10 days. Exposure to -10° or -8°C. for 30-60 min. destroyed the toes and often part of the paw. At the other end, exposure for one hour to -4°C. (or 10 min. to -10° or -8°) did not exclude complete recovery. When the amount of ice reached ca. 48% by weight, the paw was destroyed. (CaMAI.)

73646. LUYET, BASILE JOSEPH, 1897– , *and* **R. J. WILLIAMS.** Pseudo freeze-drying as studied in muscle tissue. (Biodynamica, Dec. 1962. v.9, no.175, p.71-76, illus.) 5 refs.

Explains the term pseudo freeze-drying, the importance and extent of it, and the results obtained with this technique on frog muscle. The decrease in volume of the muscle fibers is illus. by photographs taken *in vacuo.* (DLC.)

73647. LUYET, BASILE JOSEPH, 1897– , *and others.* X-ray diffraction study of the structure of rapidly frozen gelatin solutions. (Biodynamica, Dec. 1962. v.9, no.175, p.21-46, illus.) 17 refs. *Other authors:* J. Tanner *and* G.L. Rapatz.

Study of crystalline structure of ice in gelatine gels of various concentrations frozen at different speeds. Concentrations of 70% or above prevented crystal formation at all cooling rates; those of 50-70% at cooling rates of 2000°C./sec., all resulting in amorphous ice. At concentrations of 10% and less, crystallization was practically unimpeded when cooling rates were several degrees per second, and resulted in well-formed hexagonal ice. The main steps in the passage from amorphous to fully crystalline state are illus. by diffraction diagrams. (DLC.)

LUYET, BASILE JOSEPH, 1897– , *see also*

MacKenzie, A.P., & B.J. Luyet. Electron microscope study . . . gelatin. 1962. No. 73710

Mentz, L., & B.J. Luyet. Structure rapidly frozen gelatin . . . 1962. No. 73938

73648. LYKKE, LEIF. Elgen i Nord-Trøndelag. (Skogen, 1960. årg. 25, hefte 8, p.87-90.) Text in Norwegian. **Title tr.:** The elk in Nord Trøndelag.

Reviews the recent increase in elk population, 30% annually in Nord Trøndelag, the ensuing scarcity of natural winter feed, the damage to forests and cultivated fields, etc., and the possibility of deficiency diseases in these animals. A planned 30-40% reduction of the stock for some years, then a 25% annual reduction is required to keep the elk population stable and sound. Hence, the hunting season should be extended and protection of yearlings abolished. (DA.)

73649. LYMAN, CHARLES PEIRSON, 1912– , *and* **D. C. BLINKS.** The effect of temperature on the isolated hearts of closely related hibernators and non-hibernators. (Journal of cellular and comparative physiology, Aug. 1959. v.54, no.1, p.53-63, illus.) 24 refs.

Progressive cooling of hearts from four hibernators and four non-hibernators, showed that the

hearts of the former continued "an organized beat" at temperatures much lower than the latter, with that of the ground squirrel still active at -1°C. Phylogenetic affinity of the animals (all rodents) showed no relation to the temperature : rate curves, but cold tolerance showed correlation with the known habits. The EKG is also analyzed and discussed. (DNLM.)

73650. LYMAN, CHARLES PEIRSON, 1912– . Hibernation in mammals. Fort Wainwright, Alaska, Oct. 1961. 23 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-5.) 25 refs.

Presents a study of contrasts between natural hibernation and induced hypothermia. The major differences reviewed are: hibernation is a physiologically controlled and regulated process while hypothermia represents a breakdown of thermoregulation causing in turn a collapse of other homeostatic functions. Hibernation is a passive process with drop in respiratory and heart rate, and in O_2-consumption preceding the drop in temperature; while in hypothermia the organism resists cooling. Prevention of lethal cooling, and the process of arousal are also contrasted with conditions in induced hypothermia. (CaMAI.)

73651. LYMAN, CHARLES PEIRSON, 1912– . Homeostasis in hibernation. Fort Wainwright, Alaska, Oct. 1961. 8 p. (U.S. Air Force. Arctic Aeromedical Laboratory, Technical report 61-10.) 19 refs.

Presents a brief review of the general physiological phenomena accompanying hibernation and their precise coordination. Preparations for hibernation, reduction of metabolism, respiratory and heart rate, hypothermia and rewarming are dealt with. Response to very low temperature, or O_2 and high CO_2, arousal and its physiology, are considered. (CaMAI.)

LYMAN, CHARLES PEIRSON, 1912– , *see also* Chaffee, R.R.J., *& others*. Mitochondrial oxidative enzymes . . . 1961. No. 70638

LYMAN, ROBERT F., *see* Malone, K. Mercury Alaska. 1962. No. 73772

LYNCH, JOHN F., *see* National Northern Development Conference. 1961. No. 74224

73652. LYNGE, KRISTOFFER. Tilbageblik i anledning af Atuagagdliutits 100 årsdag. (Atuagagdliutit: Grønlandsposten, Jan. 1, 1961. Ukiut 101-iat, nr. 1, p.20-21, 44-45, illus., ports.) Text in Danish and Eskimo. Title tr.: Looking backward at the centenary of *Atuagagdliutit*.

Offers glimpses into the history of this Greenland paper, author having been its editor during 1922–1952. The paper was started by H.J. Rink in 1861, and in 1950 (i.e. 1952) it became a bilingual publication through amalgamation with the Danish-language paper *Grønlandsposten*. (CaMAI.)

LYNN, R.B., *see* Padhi, R.K., *& others*. Deep hypothermia & extracorporeal circ. 1961. No. 74621

73653. LYON, R. DONALD. Mount McKinley via Pioneer Ridge. (Canadian alpine journal, May 1962. v.45, p.75-88, illus., diagr.) 7 refs.

Relates experiences of the five-man Ottawa Expedition to the North Peak of this mountain June-July, 1961; equipment is listed, improvements suggested. Theory on surges of Muldrow Glacier is discussed; excess snowfall or rainfall, or an earthquake shock may bring about movement. (DGS.)

73654. LYONS, JOHN BARTHOLOMEW, 1916– , *and* **R. E. STOIBER.** Orientation fabrics in lake ice. (Journal of glaciology, Oct. 1962. v.4, no.33, p.367-70, illus., diagr.) 10 refs. Summary in French and German.

"Laboratory experiments and field observations permit an explanation of the varying crystallographic orientation observed in lake ice in terms of four factors: *1* coincidence of the plane of most rapid growth in ice (the basal plane) with the vector of thermal flux; *2* mechanical fragmentation of early-formed dendrites and plates by winds above a critical velocity (approx. 2.7 m./sec.); *3* the presence of a sufficiently thick layer of supercooled water to permit vertical crystal growth, and *4* the operation of geometric factors, first pointed out by Perey and Pounder, which result in the gradual elimination of the flatter plates of growing ice by the steeper ones." –Authors' abstract. (DLC.)

73655. LYONS, JOHN BARTHOLOMEW, 1916– , *and* **F. G. LEAVITT.** Structural-stratigraphic studies on the Ward Hunt Ice Shelf. Bedford, Mass., Jan. 15, 1961. 37 p. maps, graphs, tables. (U.S. Air Force. Cambridge Research Laboratories. Final report, Contract AF 19(604)-6188, with Dartmouth College. AFCRL-442.) 17 refs.

Reports the uppermost iced-firn and lake ice unit of this ice shelf off northern Ellesmere, may overlie two different types of "basement:" one older and inner, four to five mi. wide, with a large proportion of sea or fresh-water ice; the other outer and younger, up to seven mi. wide, consisting of sea ice. The younger is probably less than 1600 yrs. old; the older 1600-3000 yrs. Two stages of deformation have been distinguished; an earlier period of folding, and a later period of differential ablation. Structural features and bedrock geology are further dealt with. (DWB.)

73656. LYONS, JOHN BARTHOLOMEW, 1916– , *and* **R. H. RAGLE.** Thermal history and growth of the Ward Hunt Shelf. *(In:* International Association of Scientific Hydrology. Pub. 58, Symposium of Obergurgl 1962, p.88-97, map, graphs, tables.) 13 refs. Summary in French.

This 2000-sq. km. ice shelf in northern Ellesmere Island consists of an inner segment composed of a glacial and sea ice basement overlain unconformably by a blanket of ice firn and lake ice, and an outer segment of sea ice overlain conformably by iced firn and lake ice. The outermost 1.5 km. of the shelf is sea ice, according to seismic data. Times of growth for the outer shelf are calculated assuming combined freezing from below and iced firn accumulation above, but results are inconsistent with known stratigraphic thickness of the sea ice and of the iced firn. The preferred model for the growth of the outer shelf is: development of a shelf of sea ice for 45-50 yrs., and accumulation of iced firn and lake ice upon it, for another 600 yrs, during which melting and freezing at the bottom of the shelf roughly cancel one another. Data were obtained from 1960 drill-cores and 1961 seismic profiles, also temperature observations at Alert 1951-1956. (DGS.)

73657. LYSENKO, T. I., *and* A. I. VASINA. Neopublikovannye pis'ma Frit'ofa Nansena k russkim uchenym. (Sibirskie ogni, Nov. 1962. god 41, no.11, p.146-51.) Refs. in text. Text in Russian. **Title tr.:** Fridtjof Nansen's unpublished letters to Russian scientists.

Cites and discusses four letters, and one reply, in the Academy of Sciences archives. Written during 1903-1921, all are of a personal nature except one to N.M. Knipovich, dealing with the construction and use of thermometers and some hydrographic equipment. (DLC.)

73658. LYSKOV, A. V. Predvaritel'noe soobshchenie o dvukh ne opisannykh zabolevaniiakh severnykh olenei v Nizhne-Kolymskom raione. (Akademiia nauk SSSR. IAkutskii filial. Doklady 1957. v.8, p.270-84, illus.) 9 refs. Text in Russian. **Title tr.:** Preliminary report on two unrecorded diseases of reindeer in the lower Kolyma District.

Describes these diseases, both affecting the reproductive organs and causing a high incidence of sterility. One is caused by a slightly acid-resistant coccus, affects the whole organism; the other caused by *Fibrocistis rangiferi tarandi*, infects the sex organs of males, producing sterility. Symptoms and pathological histology of affected organs are described in detail. (DLC.)

73659. LYTKIN, VASILIĬ IL'ICH. D. R. Fokosh-Fuks; k 75-letiiu so dnia rozhdeniia. *(In:* (Akademiia nauk SSSR. Institut iazykoznaniia. Voprosy finno-ugorskogo . . . 1962, p.270-74.) 10 refs. Text in Russian. **Title tr.:** D.R. Fokos-Fuchs; on his 75th birthday.

Reviews the scientific career of this prominant Hungarian philologist, whose works on Finno-Ugric linguistics include studies of Zyryan, Ostyak and Vogul. His thirteen main publications are listed and the contents summarized. (DLC.)

73660. LYTKIN, VASILIĬ IL'ICH, *and* K. E. MAĬTINSKAIA. Dmitriĭ Vladimirovich Bubrikh. *(In:* Akademiia nauk SSSR. Institut iazykoznaniia. Voprosy finno-ugorskogo . . . 1962, p.5-8.) 8 refs. Text in Russian.

Biographical sketch of this prominent Soviet philologist, 1890-1949, and review of his publications which include some Zyryan grammars. (DLC.)

73661. LYTKIN, VASILIĬ IL'ICH. Etymologien aus den permischen Sprachen. *(In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.329-32.) 8 refs. Text in German. **Title tr.:** Etymologies in Permian languages.

Comparative analysis of seven Zyryan words and their dialectal forms. (DSI.)

73662. LYTKIN, VASILIĬ IL'ICH. Komi-permiatskii iazyk; vvedenie, fonetika, leksika i morfologiia. Kudymkar, Komi-permiatskoe knizhnoe izd-vo, 1962. 340 p. illus., graphs, tables, map. 30 refs. Text in Russian. **Title tr.:** Komi-Permiak language; introduction, phonetics, vocabulary, and morphology.

The place of Permiak within the Finno-Ugric family is discussed and a comparative analysis of Zyryan is given in the introduction. The 1959 census lists 431,000 Komis, including 280,000 Zyryans. (DLC.)

73663. LYTKIN, VASILIĬ IL'ICH. Nekotorye voprosy vokalizma finno-ugorskikh iazykov. *(In:* Akademiia nauk SSSR. Institut iazykoznaniia. Voprosy finno-ugorskogo . . . 1962, p.33-64.) 23 refs. Text in Russian. **Title tr.:** Certain problems of vocalism in Finno-Ugric languages.

Comparative phonetic analysis including Zyryan, Ostyak, Vogul and Lappish. Some 150 sound-correspondences are discussed. A list of Finno-Ugric languages, dialects, and ancestral tongues (65 in all, 26 northern) is appended. (DLC.)

73664. LYTKIN, VASILIĬ IL'ICH. O nekotorykh tiurkskikh zaimstvovaniiakh v komi iazyke. (Nyelvtudományi közlemények, 1958. kötet 60, p.109-112.) 16 refs. Text in Russian. **Title tr.:** Some Turkic borrowings in Zyryan.

Etymological analysis of some 30 loanwords of Turkic-Tatar origin. (DLC.)

LYTKIN, VASILIĬ IL'ICH, *see also* Akademiia nauk SSSR. Komi-russkiĭ slovar'. 1961. No. 69581

Kálman, B. Die russischen Lehnwörter im Wogulischen. 1961. No. 72632

Sidorov, A.S. Novye pamiatniki drevnekomi pis'mennosti . . . 1962. No. 75650

73665. M., N. Norrlandslagstiftningens tillkomst och ikraftträdande. (Skogen, Feb. 17, 1961. årg. 48, nr.4, p.71, 79.) Text in Swedish. **Title tr.:** Origin and enforcement of the Norrland laws.

Reviews work of the so-called Norrland Committee of 1901, and the resultant laws, which have served as model for other parts of Sweden and for other countries. They forestalled control of the northern counties by land speculators and lumber companies. The laws prohibited purchase of farm land by companies in Norrbotten, Västerbotten, Jämtland and Västernorrland, restricted such purchase in other areas, provided for regulation of certain Norrland farm properties, and for establishment of the Agricultural Commission to control sale of farms. The first of a series of forest laws, passed in 1905, is also noted. The basic issues, still debated, are: division of the land into many small private holdings or into a few large company-owned properties; and utilization of the land for farming or lumbering. (DA.)

M-N. STAFFAN, *see* Hofsten, E., & *others*. . . . statsbidragen. 1961. No. 72193

73666. McALESTER, A. LEE. A new Devonian pelecypod from Alaska and its bearing on pteroid phylogeny. (Postilla, 1962. no.58, p.1-13, illus., diagr.) 8 refs.

Reports: Actinopteria taberi, n. sp. found among fossils collected by Bond Taber of the U.S. Geological Survey, in the course of stratigraphic investigations near Livengood in medium-bedded shale and siltstone. Its form is morphologically intermediate between *C. chemungensis* and *A. boydi,* suggesting that the upper Devonian *"Cornellites" chemungensis* may not be related to the Lower and Middle Devonian *Pterinea-Cornellites* stock as hitherto assumed, but may have had an independent origin from an *Actinopteria* stock. Probable morphologic changes and time relations in this suggested phylogeny are shown schematically and supported by detailed discussion. (CaOG.)

73667. McALLISTER, C. D. Zooplankton studies at Ocean Weather Station "P" in the northeast Pacific Ocean. (Canada. Fisheries Research Board.

Journal, Jan. 1961. vol. 18, no.1, p.1-29, illus., tables, maps.) 33 refs.

Reports conditions at "P" (50°N. 145°W.) and adjacent areas, as studied Aug. 1956 - Jan. 1958. Concentrations were less than those in the northwest Pacific, Bering and Labrador Seas and about equal to Station M in the Norwegian Sea. Maximal concentrations of zooplankton were observed at 0 - 100 and 200-500 meters. Diurnal and seasonal cycles in quantitative, qualitative and vertical distribution are also described. The hydrography of the northeast Pacific is outlined as introduction. (DI.)

73668. McALLISTER, D. E. Northward range extension of the flathead-chub and trout-perch, to Aklavik, N.W.T. (Canada. Fisheries Research Board. Journal, Jan. 1961. v.18, no.1, p.141.)

Record of *Platygobio gracilis* and *Percopsis omniscomaycus* caught in July, with other fish only once reported from this area. Northward range extension amounts to some 200 miles for the first and 35 miles for the second species. (DI.)

73669. McALLISTER, D. E. The origin and status of the deepwater sculpin, *Myoxocephalus thompsonii,* a nearctic glacial relict. (Canada. National Museum. Bulletin no.172, Biological ser. no.65, Contributions to zoology, 1959, *pub.* 1961, p.44-65, graph, tables, diagr., map.) 86 refs.

Comparative morphological and ecological study of this form with its presumed marine, high-arctic ancester *M. quadricornis.* Synonymy, relationship to European relicts and evolution of the deep-water sculpin from *M. quadricornis* are also discussed. The two are considered to be distinct, valid species. (DI.)

73670. McALLISTER, D. E., *and* **R. J. KREJSA.** Placement of the prowfishes, Zaproridae, in the superfamily Stichaeoidae. Ottawa, Dept. of Northern Affairs and National Resources, July 24, 1961. 4 p. (Canada. National Museum. Natural history papers, no.11.) 11 refs.

Suggests a taxonomic position for this North Pacific family of fish, from examination of specimens mostly collected in Alaskan waters 56°49′N. 136°52′W. and in Thomas Bay, Frederick Sound. On the basis of cranial, axial, and caudal skeletal characters, and of internal and external soft anatomy, the Zaproridae are placed in suborder Blennicoidei, order Perciformes (Percomorphi) of expanded superfam. Stichaeoidae. (DI.)

McALLISTER, D. E., *see also* Vladykov, V.D., & D.E. McAllister. Marine fishes Quebec. 1961. No. 76401

73671. McALPINE, J. F. Preliminary report on the insects of the Isachsen area, Ellef Ringnes Island, 1960. (Arctic circular 1961, *pub.* Sept. 1962. v.14, no.4, p.71-72.)

Notes collection of 28 species in eight families made July 7 - Aug. 5; some spiders, mites, springtails, and earthworms also were found. Some 90-95% of the insect species in the Sverdrup Islands, are considered represented. (CaMAI.)

73672. McALPINE, ROBERT. Kablunait and Innuit: the effect of the white man upon the Eskimo minority in Canada. (North, Jan.-Feb. 1961. v.8, no.1, p.26-32, illus.) Refs.

Reviews the contact period, white explorers, missionaries, and traders; introduction of disease, firearms, etc.; recent programs to improve the economy, health, education. (DLC.)

73673. MacCANON, D. M., *and others.* Effect of oxygen inhalation on manual performance in the cold. (Journal of applied physiology, May 1962. v.17, no.3, p.441-43.) 12 refs. *Other authors:* D.E. Eitzman *and* J.E. Abbott.

Study of block-stringing performance at normal temperatures and in a cold (5°C.) environment with the hands cooled to 16°C. Oxygen inhalation produced a small improvement of manual performance under both conditions. The implications of these results are discussed. (DLC.)

73674. MacCANON, D. M., *and* **D. D. EITZMAN.** Effects of oxygen inhalation on responses to cold exposure. (Journal of applied physiology, July 1961. v.16, no.4, p.627-32, tables.) 12 refs.

Reports study of ten healthy males exposed to 10°C. Oxygen breathing reduced shivering and increased the feeling of comfort; it lowered the ventilatory response to cold and later the O_2-consumption. CO_2-production was reduced and nitrogen mobilized early during cold exposure. Body temperatures were not significantly altered. (DLC.)

MacCARTY, C. S., *see* Albin, M.S., & *others.* Hypothermia . . . spinal cord . . . 1961. No. 69667

73675. McCASLIN, JOHN C. Alaskan push awaits discovery of a new oil field. (Oil and gas journal, Mar. 26, 1962. v.60, no.13, p.115-21, illus., maps, tables.) Refs.

Summarizes 1959-1961 activity; lists 31 exploratory wells in 1961; also 20 deep wells (12,000 ft.) drilled since 1950. Growth of the Alaskan petroleum industry is outlined from the Katalla discovery in 1903, through U.S. Naval Petroleum Reserve No. 4, 1944-53, to the Swanson River field in 1957; major exploratory events of 1949-1962 are cited. Prospects for 1962 depend upon discovery of a new field; companies plan only five oil-field development wells, but 25 wildcats are expected. A 20,000 bbl./day refinery on the Kenai Peninsula is to be completed in early 1963. (DLC.)

73676. McCLAIN, E. PAUL. A contribution to the climatology of the arctic stratosphere. (Journal of applied meteorology, Mar. 1962. v.1, no.1, p.107-117, maps, graphs, tables.) 28 refs.

Extends a previous study (No. 59934) of January temperatures in the mid-stratosphere at several arctic stations, to include stations in other sectors of the Arctic also the months of December and February. Distinctly bimodal temperature frequency distributions are evidently confined to the general area of the Canadian Arctic Islands and North Greenland, and are characteristic of this region throughout the winter. Mean 25-mb. charts of Jan. & Feb. 1958 and mean cross sections, Feb. 1958, Feb. 1959, are used to illustrate two quite dissimilar thermal and circulation regimes that tend to dominate the arctic stratosphere for long periods during the polar night. Available arctic temperature data for the 200-mb. level and higher, 1950-1959 are summarized; the stations are Barrow, Resolute, Alert, Tromsø, Nord, Cape Chelyuskin, and Cape Shmidt.—From author's summary. (DLC.)

73677. McCLAIN, K. M. Medical men of the frozen North. (Today's health, Dec. 1962. v.40, no.12, p.32-35, 61-62, illus.)

Describes organization, operations, and methods of the Eye, Ear, Nose, and Throat Foundation of Alaska (EENT). Founded in 1954 by Dr. M.H. Fritz at Anchorage, it has treated over 34 thousand patients. Its airborne clinic, prevalent diseases, etc. are noted. (DLC.)

73678. McCLELLAN, CATHARINE, 1921– . Avoidance between siblings of the same sex in northwestern North America. (Southwestern journal of anthropology, Summer 1961. v.17, no.2, p.103-123.) 33 refs.

Comparative discussion of the reasons for fraternal and sororal avoidance in the Atna (Ahtena), Athapaskans of the middle Copper River and the Teslin band (fraternal only) of the inland Tlingit, based on 1948-1958 field work in Alaska and Yukon. The like-sex behavior pattern may be an extension of cross-sex avoidance characteristic of many marginal subarctic groups. Social status, questions of primogeniture, property rights, and sexual rivalry are considered some of the prime causes of this phenomenon, also noted among the Yukaghirs of Siberia. (DSI.)

McCLURKIN, W. D., *see* Lindman, E.L. Foundation for Alaska's public schools . . . 1961. No. 73512

73679. McCOMBIE, HORACE. We trailered the big road. (Alaska sportsman, May-July, 1961. v.27, no.5, p.14-15, +; no.6, p.29, +; no.7, p.29, +, illus.)

Comments on an auto trip with house trailer through Yukon Territory and Alaska in Aug. 1960: road conditions, landscape, camping facilities, etc. on the Alaskan Highway and in Alaska. (DI.)

McCORMICK, JACK, *see* Loewe, F., & *others.* Reconn. Sukkertoppen Tasersiaq. 1962. No. 73580

73680. McCUE, RONALD J., *Jr., and* **G. P. WEBER.** Weather note: squall line passage at Barrow, Alaska, June 21, 1960. (U.S. Weather Bureau. Monthly weather review, Oct. 1961. v.89, no.10, p.411-13, illus., maps.)

Describes with photo a single roll cloud accompanied by a gust of wind which moved southwest to northeast at about 800 ft. A 5° jump in temperature followed the thunderstorm. The synoptic situation is illus. by surface and 850-mb. maps. The controlling circulation feature was a large low pressure system centered 600-700 mi. north-northwest of Barrow; the cloud formation was associated with a well-defined trough in the controlling flow around this system. (DGS.)

McCUTCHEON, STEVE, *see Alaska sportsman.* Requiem Akutan. 1961. No. 69640

73681. McDADE, HARRY C. Frostbite, a review. (Appalachia, Dec. 1962. v.34, no.2, p.233-41.) 26 refs.

A surgeon-mountaineer summarizes selected items from this extensive literature, emphasizing maintenance of body temperature and the far-reaching aspects of cold injury. (DLC.)

73682. McDIARMID, I. B., *and others.* Direct measurement of charged particles associated with auroral zone radio absorption. (Canadian journal of physics, Dec. 1961. v.39, no.12, p.1888-1900, graphs.) 5 refs. *Other authors:* D.C. Rose *and* E. Budzinski.

Presents results of measurement during a rocket flight from Ft. Churchill, Manitoba, on Oct. 28, 1960. A primary electron flux, probably in the form of beams or columns, with a maximum intensity of 2×10^6 particles $cm.^{-2}$ $sec.^{-1}$ was observed. The integral electron energy spectrum could be represented by exp $(-E/22$ kev.) at energies above 30 kev. The angular distribution of the incident electrons was approximately isotropic over the upper hemisphere. Two other types of angular distributions, involving large intensities of upward-moving particles, were observed. The measured electron flux was sufficient to account for the absorbed radio absorption. Protons in the energy range greater than 500 kev. were recorded with a maximum intensity of 6×10^2 particles $cm.^{-2}$ $sec.^{-1}$ $sterad.^{-1}$ The proton intensity was relatively steady and was not correlated with the electron flux either in space or time. Most of the protons appeared to enter the atmosphere to the south of Ft. Churchill.—From authors' abstract. (DLC.)

MacDONALD, D. I., *see* Spratt, C.A., & D.L. MacDonald. Whitehorse metropolitan area transport. 1962. No. 75881

73683. MacDONALD, S. D. Biological investigations at Isachsen, Ellef Ringnes Island, N.W.T. (Canada. National Museum. Bulletin no.172, Biological ser. no.65, Contributions to zoology, 1959, *pub.* 1961, p.90-97.)

Notes mainly on mammals and birds collected during the field season 1954, with an introductory description of this barren area and its climate. Observations on occurrence, food, reproduction, etc. of these animals, as well as on some common plants and invertebrates are included. (DI.)

McDONALD, WILLIAM L., *see Western miner.* Beryllium NWT. 1961. No. 76532

McEWEN, D. J., *see*

Montalbetti, R., & D.J. McEwen. H β . . . Nov. 9-16, 1960. 1961. No. 74103

Montalbetti, R., & D.J. McEwen. Hydrogen emissions . . . 1962. No. 74102

73684. MacFARLANE, IVAN C. Corrosion of concrete structures by muskeg waters. (*In:* National Research Council of Canada . . . Proceedings of the Seventh Muskeg Research Conference . . . 1961. p.54-77, graphs, table.) 24 refs.

Presents some conclusions based on earlier research in other areas, considered applicable to the muskeg areas of Canada. Results are tabulated of analyses of eight water samples from various muskeg types at Flin Flon and Lynn Lake, Man., Knob Lake, Que., etc. Muskeg waters are usually acidic, thus potentially aggressive to concrete and to metals. Hydrogen-ion concentration (pH) and amount of dissolved salts also contribute to this aggressiveness. Running water is more dangerous than stagnant water. Fresh concrete is more susceptible to attack than is the old hardened type; thus pre-cast concrete is more resistant than concrete cast-in-place. Thin-walled concrete structures, such as drain tile, are much more susceptible to aggressive action than are mass

concrete structures. Muskeg waters can ordinarily be used for mixing of concrete, however. Use of high quality materials and good workmanship should produce a fairly impermeable concrete, resistant to aggressive action. (DLC.)

MacFARLANE, IVAN C., *see also*

National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

National Research Council of Canada. . . . 7th Muskeg Conf. 1961. No. 74229

National Research Council of Canada. . . . 8th Muskeg Conf. 1962. No. 74230

MacFARLANE, M. A., *see* Boville, B.W., *& others.* An atlas . . . 1961. No. 70343

MACFARLANE, W. V., *see* Kozak, W., *& others.* Long-lasting reversible changes . . . cold. 1962. No. 73053

73685. McFEAT, TOM F. S. Museum ethnology and the Algonkian project. Ottawa, Dept. of Northern Affairs and National Resources, 1962. 80 p. map. (Canada. National Museum. Anthropology papers, no.2.) Approx. 80 refs.

Evaluates the ethnographic importance of museum collections and describes the scope and special aspects of the Canadian National Museum's Algonkian Project which includes the study of the Nascopi and Montagnais Indians in Labrador and Quebec in 1960. The effect of ecological and economic factors on the spatial orientation and social organization of Montagnais bands since the mid-19th century is discussed: behavioral traits, witchcraft and public opinion, leadership pattern, etc. Recent changes from the territorial (hunting and trapping) to the reserve pattern with emphasis on wage earning or remunerative self-employment are sketched and the acculturative, stabilizing processes at Pointe Bleue reserve characterized. Canadian ethnographic research programs of 1960-1961 are outlined. (DLC.)

73686. McGARITY, J. W. Effect of freezing of soil on denitrification. (Nature, Dec. 29, 1962. v.196, no.4861, p.1342-43, table.) 4 refs.

Study on effects of various freezing methods upon the denitrifying activity in soil. All five methods applied increased the denitrifying activity as measured by gas production. The possible role of the organic matter and microbes, and the implications to freezing and drying of soil in nature, are discussed. (DLC.)

McGEE, J. W., *see* Yonce, L.R., *& others.* Vascular resistance . . . 1962. No. 76609

73687. McGILL, PETER CORBETT, *and* **D. M. LORANGER.** Micropalaeontological (Foraminifera) zonation of the Sans Sault group, lower Mackenzie River area. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.515-31, illus., (microphotos), map, table, section.) 8 refs.

Presents four zones of this group in the Norman Wells area, also similar zones in Lower Cretaceous sediments along the lower Anderson River. The more diagnostic foraminifers are described and illus. These Mackenzie district fossils are compared with related North American species. Collections and equipment were provided by Imperial Oil Ltd.; microphotographs by H. Turnbull. (DLC.)

73688. McGILL UNIVERSITY. *Arctic Meteorology Research Group.* An atlas of stratospheric circulation April 1959-May 1960. Montreal, Mar. 1962. 60 col. maps, 9 sections, 30 tables & approx. 10 p. of text. (*Its:* Publication in meteorology no.49.) 2 refs. *Also issued as:* Canada. Defence Research Board, D Phys R (G), Misc. G10.

Continues analysis by Boville, q.v. Small-scale reproductions of 25-mb. synoptic charts at ten-day intervals from Apr.-Sept. 1959 show the stable summer polar anticyclone and its decay. Similar charts at five-day intervals from Oct. 1959 to Mar. 1960 reveal the oscillations of the winter polar vortex. Charts for Apr. and May 1960, at a ten-day interval, show the transition to summer conditions. Data coverage is generally adequate over Alaska, Canada and Western Europe; but over most of the USSR there are few reports above 100 mb. Three periods of transpolar cross sections are reproduced to show the vertical structure in characteristic winter situations, viz: an eccentric, bi-polar phase Dec. 4, 1959; a warming phase Jan. 23, 1960; and a late spring cold circumpolar vortex Mar. 18, 1960. Tables of Fourier coefficients are presented for comparison of the data by latitude and zonal wave number. (DWB.)

73689. McGILL UNIVERSITY. *Arctic Meteorology Research Group.* Contributions to the Seminar on the Stratosphere and Mesosphere, July 6-20, 1961, at Stanstead College, Stanstead, Quebec Province, Canada. F.K. Hare, chairman. Montreal, Mar. 1962. vii, 135 p. maps, graphs, tables. (*Its:* Publication in meteorology no.47.) Refs. *Also issued as:* U.S. Air Force, Cambridge Research Laboratories, Contract no. AF19(604)-8431, Scientific report no.4; AFCRL 62-429.

Contains summaries of 23 papers presented at this fourth seminar, the first not restricted to arctic meteorology; most papers to be published in full elsewhere; nine deal with north polar meteorology or aeronomy, viz:

The polar-night vortex, by B.W. Boville, p.9-18.

Energy changes and transformations in the sudden warmings of late January 1957 and 1958 by R.J. Reed, p.19-21.

Studies performed by the Stratospheric Meteorology Research Project, U.S.W.B., by Sidney Teweles, p.23-28.

Antarctic winter stratosphere, by W.L. Godson, p.37-40.

Abstract of mesospheric wind analysis from meteorological rocket data, by T.J. Keegan, p. 41-47.

Regression equations for vertical extrapolation of height and temperature to 100 mb, 50 mb, and 30 mb, by D.A. Lea, p.49-55.

Canadian ozone studies, by W.L. Godson, p.71-76.

The radiation budget of the stratosphere, by Walter Hitschfeld, p.107-115.

Radioactive tracers for stratospheric meteorology, by R.J. List, p.127-35. Introductory

remarks by the chairman and a list of the 44 participants are also included. (CaMAI.)

McGILL UNIVERSITY. *Arctic Meteorology Research Group, see also*

Hare, F.K. Stratosphere. 1962. No. 72023

Rayner, J.N. Index . . . data. 1961. No. 75070

73690. McGILL UNIVERSITY. *Committee on Physical Planning.* A study of northern settlement. Montreal, 1957. 32 p.

Reviews various aspects of Churchill in Northern Manitoba, Fort Smith and Pine Point in Mackenzie District, and Schefferville in Northern Quebec. Orgin, planning, settling, purposes of the settlement, its administration, geographic factors, etc., are considered. Matters of concern to government are discussed, such need for revision of housing, lack of geographical data in the planning, and sociological problems created through faulty planning. Several investigations necessary to successful town planning are suggested. The committee formed in 1956 under H. Spence-Sales made this study as part of the University's Physical Planning course, for the Dept. of Public Works, Ottawa. (CaOGB.)

73691. McGILL UNIVERSITY. *MacDonald Physics Laboratory.* Ice research project, annual report 1959. Montreal, Jan. 15, 1960. 19 p. table. *(Its:* Project D45-95-10-09.) 9 refs.

Reports the 1959 laboratory and field work in this project initiated in 1955. Feasibility of the airborne seismic method of determining ice thickness has been established. Results are given of Operation Palcabar studies of sound transmission in arctic waters under ice cover. Sea ice studies have resulted in a set of data on the ultimate tensile strength of ice. Satisfactory methods have been developed for the quantitative analysis of sea-ice melts. Work continued on the study of micro-profiles of temperature above a freezing surface. A study was started of the relative rate of growth of ice crystals whose C-axes have different orientations. (CaOG.)

73692. McGILL UNIVERSITY. *MacDonald Physics Laboratory,* Ice research project, annual report 1960. Montreal, Jan. 15, 1961. 28 p. illus., diagr. *(Its:* Project D45-95-10-09.) 8 refs.

Reports continued tests on the seismic method of determining ice thickness. A method of carrying out depth measurements with an echo sounder located on an ice cover was developed in conjunction with the Arctic Institute of North America, a major advance in bathymetry techniques. A study of the heat budget of an ice cover is underway at a test site on Hudson Bay near Churchill. In all ten basic and five applied research projects underway are reported. (CaOG.)

73693. McGILL UNIVERSITY. *MacDonald Physics Laboratory.* Ice research project, annual report 1961. Montreal, Jan. 27, 1962. 27 p. diagrs., tables. *(Its:* Project D45-95-10-09.) 8 refs.

Reports on three applied and six basic research projects. A feasibility study of the use of air-coupled flexural waves to measure ice thickness was completed: determination should be successful in 90% of cases, and give thickness with an accuracy of better than 10%. Measurements on the ultimate tensile strength of sea ice are reported. Three northern expeditions were sent to measure the elastic parameters of sea ice by sonic means. Continuing programs briefly reviewed include heat budget studies, measurement of the electrical parameters of sea ice, and investigation of the mechanism of crystal growth. (CaOG.)

73694. McGILL UNIVERSITY. *Sub-Arctic Research Laboratory.* Field research in Labrador-Ungava; annual report, 1960-61. Montreal, Apr. 1962. viii, 137 p. illus., maps, graphs, tables. *(Its:* McGill Sub-arctic research papers no.12.) Refs.

Records research carried on from the Laboratory at Schefferville during the academic year 1960-61 and summer 1961; summarizes preliminary results of field projects and indicates possibilities for future work. The first nine reports listed below are described in this Bibliography under the author's name:

DAVIES, J.A. Radiation measurements over vegetation covers of Labrador-Ungava.

MATTHEWS, B. Glacial and post-glacial geomorphology of the Sugluk-Wolstenholme area.

McCLOUGHAN, C.H. Comparative windchill data in the Schefferville region.

FLETCHER, D.J. Ice-thickness report for the winter of 1960-1961.

MATTHEWS, B. Snow conditions at Schefferville, winter 1960-61.

DAVIES, J.A. A survey of two years' weather records in the Ferriman mine area, June 1959-June 1961.

DAVIES, J.S. A collection of plants for the McGill Laboratory.

ANNERSTEN, L. Permafrost investigations.

MATTHEWS, B. Frost-heave cycles at Schefferville, October 1960-June 1961.

Mattox, W.G. Research at the Laboratory, p.126-30. *Analyzes* scope of earlier work from 117 resulting papers: emphasis was on glacial geomorphology because of Ives' program (cf. No. 59956). Current permafrost studies, and need for regional and natural resource studies in the Labrador Trough are noted, also winter field research on ice and snow at Schefferville. Greater diversity of studies and participation of scientists from other universities are desirable.

Shaw, J.B. Climatological summary for 1961, Schefferville (Knob Lake), P.Q., p.131-33. *Reviews* the year's weather showing max. and min. temperatures, and the temperature, snow, rain, days with precipitation, hours of sun, average wind speed, and snow depth by month; with 1959-1960 averages given for comparison. (DWB.)

McGINNIS, G.A., *see* Gustafson, P.F., *& others.* Fission-product radioactivity . . . stratosphere. 1962. No. 71934

73695. McGLYNN, J. C., *and* **J. V. ROSS.** Geology, Basler Lake, District of Mackenzie. Ottawa, 1962. Map sheet 26.5 x 23 in., with descriptive notes. (Canada. Geological Survey. Map 18-1962, preliminary series, base map sheet 85$\frac{O}{13}$.)

Describes briefly and shows distribution of eight Precambrian rock units, structural and other geologic features in this area 63°45'-64°N. 115° 30'-116°W., between Great Slave and Great Bear Lakes. Oldest rocks are the greywacke and subgreywacke and mica schists of the Yellowknife

group. Sediments of the Snare group overlie the Yellowknife group and some granitic rocks unconformably. No mineral occurrence of economic interest was observed. Scale of map is 1 in.:1 mi. (DGS.)

73696. McGRAW, JEAN YVES, *and* **D. R. WEBSTER.** Use of contact cooling technique in studies on the physiopathology of frostbite. (Canadian Medical Services Journal, Nov. 1962. v.18, no.10, p.723-35, illus.) 27 refs.

Description of apparatus and method for production, on denudated skin, of local, standard, controllable and reproducible frostbite lesions. All grades of injury may be produced by the technique, which is useful for the study of the variables involved in frostbite. (DNLM.)

McGREGOR, D.C., *see* McLaren, D.J., & *others.* Illus. Can fossils Devonian . . . 1962. No. 73716

73697. MacHATTIE, LORNE, *and others.* Eskimo metabolism as measured by the technique of 24-hour indirect calorimetry and graphic analysis. Fort Wainwright, Alaska, October 1961. 35 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-43.) 16 refs. *Other authors:* P. Haab *and* D.W. Rennie.

Reports the method applied in this pilot study, investigations of five Eskimo males in village life at Anaktuvuk Pass in Aug. 1959. Mean 24-hr. metabolism, S.E.M., fuel energy fractions, night ("basal") metabolism, and night fuel energy fractions were determined. The advantages of the method for studies during active life, etc. are stressed. (CaMAI.)

MACHETANZ, FREDERICK, 1908– , *see* Machetanz, S. Howl malemute . . . 1961. No. 73698

73698. MACHETANZ, SARA. The howl of the malemute: the story of an Alaskan winter. New York, W. Sloane Associates, 1961. 204 p. plates.

Recounts experiences while making a documentary film on sled dogs at the Eskimo village of Unalakleet. Characteristics and habits of the dogs are described. Daily life of the villagers is sketched; problems of transition to white culture are indicated. Photographs are by Frederick Machetanz. (DLC.)

73699. MACHISAK, JOHN C., *and others.* Injury experience in coal mining, 1960; analysis of mine safety factors, related employment, and production data. Washington, D.C., 1962. 76 p. tables, graphs. (U.S. Bureau of Mines. Information circular 8141.) *Other authors:* V.E. Wrenn, N.L. Jones, *and* D.D. Rice.

Presents, according to states, data on number, causes, and severity of injuries. Alaska had no fatal injuries in coal mining in 1960, its non-fatal injury rate was 104.79 per million man-hours, second highest among the 30 reporting states and considerably above the national rate of 42.28. Number and kinds (underground, strip) of mines, are given, also data on employees, man-days and man-hrs., production, and tons/man-hr. Similar compilations are issued annually. (DGS.)

73700. MACHTA, LESTER, *and others.* A survey of radioactive fallout from nuclear tests. (Journal of geophysical research, Apr. 1962. v.67, no.4, p.1389-1400, tables, graphs, maps.) 9 refs. *Other authors:* R.J. List *and* K. Telegadas.

Traces the passage through the atmosphere of radioactive debris from the 1961 Soviet nuclear test series. The 31 detonations are cited with date, yield, and location; 24 of them took place in the Novaya Zemlya area. (DLC.)

MACHTA, LESTER, *see also* List, R.J., & *others.* Fallout . . . 1961. No. 73532

73701. McHUGH, WILLIAM P. Aleut Konyag prehistory and ecology, 1961. Archaeological investigations on Kodiak Island. (Arctic anthropology, 1962. v.1, no.1, p.113-15.)

Summarizes archeological surveys of about half-a-dozen habitation sites on southern Kodiak and adjacent Sitkalidak Islands and describes test diggings at Saatag, an approx. 16,000 m² site on Rolling Bay, west coast of Sitkalidak. Hundreds of artifacts, pottery fragments, faunal remains, and twelve burials (probably Neo-Konyag Eskimo), also a slab-lined fire-pit were discovered. (DSI.)

McHUGH, WILLIAM P., *see also* Alaskan Science Conference 1961. 1962. No. 69644

McILROY, M.B., *see* Keatinge, W.R., & M.B. McIlroy. Changes in arterial pressure . . . sudden exposure. 1962. No. 72707

73702. MACINNES, CHARLES D. Nesting of small Canada geese near Eskimo Point, Northwest Territories. (Journal of wildlife management, July 1962. v.26, no.3, p.247-56, illus., tables, maps.) 21 refs.

Reports a study of 119 nests (6.5 per sq. mi.) on coastal sedge marshes near the McConnell River on the west coast of Hudson Bay. Nesting period approached the minimum possible (30 days); normal clutch was five; incubation lasted 24 or 25 days; jaegers and herring gulls caused egg losses of 20% in 1959 and 5% in 1960. Production was 64% of maximum in 1959 and 81% in 1960. (DLC.)

73703. MACK, A. R. Low-temperature research on nitrate release from soil. (Nature, Feb. 24, 1962. v.193, no.4817, p.803-804, tables.) Ref.

Reports an experiment in deep freezing, single or repeated, as compared with warming or chilling. The results show that the amount of N transformed to NO_3-N on incubation is much increased in soil previously deep frozen. (DLC.)

73704. MacKAY, D. K. River-ice conditions in Nelson River drainage system. Ottawa, Queen's Printer, 1962. 29 p. tables, & 13 p. of graphs, maps. (Canada. Dept. of Mines and Technical Surveys. Geographical Branch. Geographical paper no.34.) 11 refs.

Presents a statistical treatment of breakup and freeze-up data 1921-1950, in which hydrological and meteorological observations are related to river-ice conditions. The Wilcoxon matched-pairs signed-ranks test was used; results indicate that the first ice affecting discharge generally appears in a north-to-south progression, with no apparent systematic progress along tributaries in either an upstream or downstream direction. Ice-cover disintegration on major tributaries begins in the upper reaches, progresses downstream. Latitudinally, disintegration proceeds from south to north, except for the southeasterly flowing portion of the Assiniboine River. The Nelson proper

drains Lake Winnipeg and discharges into Hudson Bay at York Factory. Its basin, including tributaries, covers about 414,000 sq. mi.; it extends eastward from the Rockies to the Steep Rock area of Ontario, and southward from the Mackenzie and Churchill River drainage to the Mississippi basin. Climate is severe enough to cause ice conditions in rivers and lakes throughout the Nelson drainage system for variable periods; greatest variability of first-ice (14-20 days) and of last-ice (12-14 days) is found near the Rockies; the ice-free season ranges from 196 to 232 days. (DGS.)

73705. MacKAY, D. K. Trends and factors affecting break-up and freeze-up dates in the Nelson River drainage system. Ottawa, Queen's Printer, 1962. 23 p. maps, tables, & 13 p. of graphs. (Canada. Dept of Mines and Technical Surveys. Geographical Branch. Geographical paper no.35.) 13 refs.

Deals with the data presented *supra* from two other points of view: the fluctuations and trends in ice condition dates recorded at several sites along the major tributaries; and the meteorological and hydrologic data related to ice formation and disintegration at these sites. Graphs of last-ice records indicate a trend towards earlier dates during 1920-mid-1940's, subsequently toward later dates. First-ice series indicate no marked secular movement. Basic climatic controls and weather systems appear to influence dates of first-ice more strongly than dates of last-ice, as illus. by the highly variable weather in the North and South Saskatchewan River headwaters at breakup time. The ice-free season was shorter than average during 1921-early 1930's, and longer during the latter half of record; no relation could be found between variations in length of ice-free season and those in mean annual air temperatures. River discharge appears to be the most important single measurable factor involved in ice disintegration; breakup predicition is also dependent upon such local conditions as the strength and thickness of the ice cover. (DGS.)

McKAY, F.L., *see* Canada. Settlement handbook. 1962. No. 70545

73706. MACKAY, JOHN ROSS, 1915– . Freeze-up and break-up of the lower Mackenzie River, Northwest Territories. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.1119-34, map, graphs, tables.) 24 refs.

Reviews the records (of varying length, continuity, etc.) for this river between Fort Good Hope and the sea, and discusses mainly conditions at Fort Good Hope. Analysis by standard statistical procedures shows long-term fluctuations in the open season from 1876-1955. Cumulated degree days, summed for the site, were of no statistical significance in study of freeze-up; good correlations were obtained between freeze-up and weighted air temperatures. Breakup in the lower Mackenzie valley can be correlated with temperatures in the Fort Simpson area; by using four weighted mean ten-day Fort Simpson temperatures, from Apr. 1 to May 10, estimates can be made of breakup at Fort Good Hope; it occurs 10-20 days later at Reindeer Depot on the East Channel in the delta. (DGS.)

73707. MACKAY, JOHN ROSS, 1915– , *and others*. Geology of the Engigstciak archaeological site, Yukon Territory. (Arctic, Mar. 1961. v.14, no.1, p.25-52, illus., maps, diagrs., tables.) 37 refs. *Other authors:* W.H. Mathews *and* R.S. MacNeish.

Reports geological investigations in 1956-1957 to aid in dating the archeological finds. Quaternary sediments in a clay and a sand sequence are described; their stratigraphic relationships have been disrupted by soil movements resulting from freezing and thawing and from downslope creep. These soil movements, their mechanisms and rates postulated, apparently buried an organic layer containing artifacts progressively between two layers of marine clay. Due to overturning and mixing of layers of different ages, further complicated by a possible upthrust of the marine clay by glacier ice, the artifacts cannot be dated by geological means. From evidence indicating only one marine invasion coincident with glacial advance however, the archeological material is concluded to postdate the last Pleistocene glaciation. (DGS.)

73708. MACKAY, JOHN ROSS, 1915– . Pingos of the Pleistocene Mackenzie delta area. (Geographical bulletin, Nov. 1962. no.18, p.21-63, illus., fold. map, diagrs., graphs.) 40 refs.

These stable intrapermafrost ice-cored hills, called in English by the Eskimo word pingo, and in Russian *bulguniakh,* are of two generic types: open or East Greenland, and closed or Mackenzie. The older and larger pingos of the Pleistocene area east of the Mackenzie delta are dealt with: their distribution and characteristics, theoretical and practical aspects of their origin, their estimated age. More than 1350 are found in a belt extending east from Richards Island to Cape Dalhousie; they occur in low, flat areas, mostly present or former lake basins or channels with poor drainage. All are believed to have developed in Pleistocene interglacial sands and silts locally veneered with glacial drift and post-glacial material. Porsild's generally accepted theory of their origin (No. 13804) in a local upheaval due to expansion, also Müller's detailed analysis (No. 60345) depicting their growth in six steps, are reviewed. Most of these pingos are hundreds or thousands of years old; their growth was slow, probably involving tens of years. Diagrams and graphs summarize theoretical and actual features; stereo pairs illustrate representative types. (DGS.)

MACKAY, JOHN ROSS, 1915– , *see also* Pacific Science Congress. 1961. No. 74619

73709. McKEE, HERBERT C. Deterioration of rubber in northern Greenland. (Institute of Environmental Sciences. Proceedings, 1962. p.335-43, port., illus., graphs, table.) 8 refs.

Notes excessive cracking of rubber tires, etc. in storage at Camp Tuto, and outlines ozone measurements made during the 24-hr. daylight period: concentrations ranged from zero when the sun was low or obscured to 1.3 parts per hundred million with maximum sunlight intensity: enough to affect rubber, but only in combination with other undetermined factors. Instruments and procedures are outlined; damage to tires and weasel tread is illus. (DWB.)

McKELVIE, CHARLES, *see* National Northern Development Conference. 1961. No. 74224

73710. MacKENZIE, A. P., *and* B. J. LUYET. Electron microscope study of the structure of very rapidly frozen gelatin solutions. (Biodynamica, Dec. 1962. v.9, no.174, p.47-69, illus.) 9 refs.

Study of very thin layers freeze-dried at low temperature and examined without further treatment. The freezing patterns observed resemble the spherulitic patterns seen in thicker, less rapidly frozen preparations with the light microscope. In some, indications of dendritic growth, or of recrystallization of ice were noted. The absence of observable structure and the appearance of the spherulites are discussed. (DLC.)

73711. MACKENZIE, W. D. C. Oil and gas in the far North. (Western miner and oil review, May 1961. v.34, no.5, p.28-33, maps.)

Oilman discusses exploration and development of the sedimentary basin on the northwestern Canadian mainland. Communication and transportation are stressed as factors in such activity. Most of the exploratory drilling has taken place in the subarctic area, south of Fort Wrigley (63°16′N.), Mackenzie District, where communication lines are established. Northern conditions with psychological stress require a special type of individual for resource development work. (DGS.)

73712. MacKEVETT, EDWARD MALCOLM, *Jr.*, *and* R. W. IMLAY. Jurassic stratigraphy in the McCarthy C-5 quadrangle, Alaska. (U.S. Geological Survey, Geological Survey research 1962, *pub.* 1962. Professional paper 450-D, p.49-51, maps, section.) 3 refs.

Summarizes results of 1961 field mapping in this area about 200 mi. east of Anchorage, also paleontological studies, which determined the presence of a conformable sequence of five Jurassic units: a brown silty limestone and shale; a sandy and silty limestone; a reddish-brown shale and limestone; a widespread, mostly shale, unit; and a pebble or cobble conglomerate. This sequence appears to overlie the Late Triassic McCarthy shale conformably, but an angular unconformity marks the contact with the Cretaceous or Tertiary rocks. (DGS.)

73713. McKILLOP, JOHN H. Limestone potentials of Newfoundland. (Canadian mining journal, Apr. 1962. v.83, no.4, p.80-83, illus., maps.)

Surveys the limestone resources, noting occurrences (mapped) of Precambrian and Cambrian age in Labrador. Included are: extensive dolomites in the Menihek Lakes area; reef limestones at Forteau on the Strait of Belle Isle; carbonate rocks in the Nain and Ramah Bay areas; white, translucent, recrystallized limestone at Winokapau Lake; and siliceous-argillaceous limestones at Croteau Lake. (DGS.)

McKNIGHT, DONALD E., *see* Alaskan Science Conference 1961. 1962. No. 69644

73714. MACKSOOD, ALBERT J., *and others*. The maintenance by cold perfusion of the viability of the devascularized canine kidney. (Surgical forum 1961. v.12, p.190-91, table.) *Other authors:* D.E. Szilagyi *and* R.F. Smith.

Thirteen animals who had 2.5-3.5 hrs. devascularized kidneys perfused with cold, oxygenated blood, survived and returned to normal in 12-25 days. Of 16 controls with saline or no perfusion, two survived and showed severe renal damage. (DNLM.)

MacLAREN, ALEXANDER STEWART, *see*

Canada. Aeromag. map Beaverhill . . . 1962. No. 70561

Canada. Aeromag. map Wholdaia . . . 1962. No. 70562

73715. McLAREN, ANNE. Some causes of variation of body temperature in mice. (Quarterly journal of experimental physiology, Jan. 1961. v.46, no.1, p.38-45, illus., tables.) 7 refs.

Comparative study of two inbred strains of mice (C3H, C57BL) showed differences in consistency of colon temperature and in the effects of age and lactation upon the latter. Both strains showed temperature difference between the sexes, but in opposite directions. Genetic aspects of the problem are also considered (DNLM.)

73716. McLAREN, DIGBY JOHNS, 1919– , *and others*. Illustrations of Canadian fossils, Devonian of western Canada. Ottawa, Queen's Printer, 1962. 35 p. 237 illus. on 16 plates. (Canada. Geological Survey, Paper 62-4.) *Other authors:* A.W. Norris *and* D.C. McGregor.

Presents the first in a series of illustrations of Canadian fossils, designed to assist the general geologist not specially trained in paleontology. Invertebrates are by McLaren and Norris; the few plants are by McGregor. Many of the coral and brachiopod specimens shown are from Mackenzie District and Yukon. Species are grouped by formation or by geographic region, e.g. upper Mackenzie basin. (DI.)

73717. McLAREN, DIGBY JOHNS, 1919– . Middle and early Upper Devonian rhynchonelloid brachiopods from Western Canada. Ottawa, Queen's Printer, 1962. ix, 122 p. 18 plates, maps, diagrs., tables. (Canada. Geological Survey. Bulletin 86.) 118 refs.

Detailed stratigraphic study of these beaked brachiopods, including their distribution in Mackenzie District: in the Great Slave Lake to Trout River, North and South Nahanni Rivers and central Mackenzie River region. The three faunal stages, Eifelian, Givetian, and Frasnian, are outlined, and a summary correlation chart for the stratigraphy is given. Species of five genera are described, including *Calvinaria* Stainbrook, *Cassidirostrum* McLaren, *Hadrorhynchia* McLaren, *Ladogioides* McLaren, and *Leiorhynchus* Hall. Known occurrences of each species and subspecies are listed in an appendix. The plates show a large number of specimens, many at natural size. (DI.)

McLAREN, DIGBY JOHNS, 1919– , *see also* Belyea, H.R., & D.J. McLaren. Upper Devonian . . . 1962. No. 70126

73718. McLAREN, IAN A. A biennial copepod from Lake Hazen, Ellesmere Island. (Nature, Mar. 4, 1961. v.189, no.4766, p.774, illus.) 3 refs.

Describes the lake at 81°45′N. 71°W. and the population composition of *Cyclops scutifer* Sars,

based on summer 1958 field work with the Canadian IGY party. The bimodality of this population indicates that it has a biennial life cycle, apparently the only copepod with such record. (DLC.)

73719. McLAREN, IAN A. Methods of determining the numbers and availability of ringed seals in the Eastern Canadian Arctic. (Arctic, Sept. 1961. v.14, no.3, p.162-75, graphs, diagrs.) 11 refs.

Discusses procedures for making local estimates of population density and prospective catch of the Eskimo hunters. A method is outlined for counting seals from ships in open water; and for determining population density by the amount and quality of fast ice, with regard to complexity of the coastline. From hunting trips in various parts of the Eastern Arctic, average daily catch to be expected is estimated at 3.6 seals from a boat in summer on a complex coast and 1.4 on an open coast, 2.8 on the ice before the peak of the spring basking season, and 6.8 at the peak. From these and other calculable variables, such as loss of kill by sinking, weather conditions, etc., an equation is formulated for predicting the potential annual catch of a hunter in a given region. (DI.)

MacLEAN, D. W., *see* Baldwin, W.K.W., & *others*. Botanical excursion . . . 1959. No. 69979

McLEOD, N. W., *see* Royal Society of Canada. Soils . . . 1961. No. 75236

73720. McCLOUGHAN, C. H. Comparative windchill data in the Schefferville region. (*In:* McGill University. McGill Sub-arctic Research Lab. Field research . . . 1960-61, *pub.* 1962. p.47-52, illus., tables.)

Compares instrumentation, exposure, and windchill values resulting from use of daily and monthly data from the Laboratory area in Schefferville and from Dolly Ridge (1980 ft.) 2.2 mi. to the northeast. Though mean monthly townsite and ridge values show considerable similarities, daily values indicate ridge conditions to be marginally more severe; the less extreme minimum temperatures from the ridge are counterbalanced by the stronger wind. (DWB.)

McMAHAN, E. A., *see* Wilbur, K.M., & E.A. McMahan. Low temperature studies . . . 1958. No. 76554

McMANUS, DEAN A., *see*

Creager, J.S., & D.A. McManus. . . . marine geology . . . 1961. No. 70852

Pacific Science Congress. 1961. No. 74619

McMURTRIE, N. J., *see* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

73721. McNAIR, ANDREW HAMILTON, 1909– . Relations of the Parry Islands fold belt and the Cornwallis folds, eastern Bathurst Island, Canadian archipelago. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.421-26, maps.) 7 refs.

Outlines the unusual relation of these two intersecting structural systems which extend almost the full length of Bathurst Island, based on geologic mapping carried out 1959 by Dominion Explorers Ltd. The older (Silurian-Devonian), north-trending Cornwallis folds are characterized by vertical movement and appear to be of cratonic origin; they range from narrow, steep-flanked anticlines to broad synclines and anticlines. Conglomerates and two unconformities indicate intermittent development; during short periods of stability in the Silurian, many small reefs grew along the margins of some anticlines. The east-west Parry Islands miogeosynclinal fold belt consists of long parallel folds which decrease in amplitude eastward towards the Cornwallis folds. Fairly highly deformed in several places, this belt underwent folding in the latest Devonian or during the Mississippian. A final phase of deformation produced persistent north-south post-orogenic faults; in southeastern Bathurst Island, these faults controlled the emplacement of small sills, dikes, etc. (DLC.)

McNAUGHT-DAVIS, IAN, *see* Jackson, J.A., & *others*. 1960 exped. . . . Staunings . . . 1961. No. 72504

73722. MacNEIL, FRANCIS STEARNS, 1909– , *and others*. Correlation of Tertiary formations of Alaska. (American Association of Petroleum Geologists. Bulletin, Nov. 1961. v.45, no.11, p.1801-1809, map, diagr.) 55 refs. *Other authors:* J.A. Wolfe, D.J. Miller, *and* D.M. Hopkins.

Presents a revised correlation chart together with supplemental information, references to the literature, and index map showing regions of the 21 stratigraphic columns. This chart is based on recent stratigraphic and paleontologic studies, and further revisions are expected. (DLC.)

73723. MacNEIL, FRANCIS STEARNS, 1909– , *Lituyapecten,* new subgenus of *Patinopecten* from Alaska and California. Washington, D.C., U.S. Govt. Print. Office, 1961. p.225-39, plates 35-46. (U.S. Geological Survey, Professional paper 354-J, Shorter contributions to general geology.) 17 refs.

Proposes this new subgeneric name, for a small but characteristic group of mollusc having, usually, frill-like lamellae on the ribs of the left valve. Study is based on D.J. Miller's collection in 1958 of some well-preserved material from the Yakataga district, and from Cenotaph Island in Lituya Bay. Older Alaskan collections were restudied, also related forms in California. This subgenus inhabited Alaska throughout Miocene and into Pliocene time, spreading southward into California in the Pliocene. Three previously described species are included in *Lituyapecten;* three new species are described; an unnamed possible subspecies is also recognized. Most of the material from Alaska occurs as soft shell in fine-grained hard rock, with fracture taking place in the shell material. Good molds were obtained by dissolving away the shells in acid, and making casts with liquid latex. Stratigraphic occurrence of these fossils is treated by Miller himself, q.v. (DGS.)

73724. MacNEISH, JUNE HELM. The Lynx Point people: the dynamics of a northern Athapaskan band. Ottawa, 1961. 193 p. diagrs., tables, sketch maps. (Canada. National Museum. Bulletin no.176, Anthropological series no.53.) Over 50 refs.

Case study in socio-cultural change and small group interaction in this Slave Indian community of 56 (22 adults) in 1951, based primarily on field work of 1951-1955, in the Fort Simpson area, upper Mackenzie River. The so-called Lynx Point Venture, a socio-economic project with unusual group coordination is discussed in detail, and its traditional cultural motive factors analyzed. It involved cooperative purchase of a power boat and barge in 1943-1944, which they used for fishing and log transport to such good effect that they were able to set up their own saw mill in 1958. Background data are provided on ecology, traditional fur economy, mode and standard of living, family and community structure, kinship pattern and terminology, church, and aboriginal religious survivals, etc. Gradual incorporation of Euro-Canadian cultural elements is evident, particularly in technology, material benefits, and social activities. *See also* No. 72108. (DLC.)

73725. MacNEISH, RICHARD STOCKTON, 1918 – , Archaeological activities in the southwest Yukon. (Arctic circular, 1960, *pub.* Jan. 1961 v.13, no.2, p.22-25.)

Describes an archeological sequence excavated in this area since 1959. Seven cultures have been found, from very early to late: Kluane Lake, Champagne, Little Arm, Gladstone, Taye Lake, Aishihik, and Bennett Lake. The earliest may date to the period immediately after glacial retreat. Relationships between these and other early sites in North America and Asia are discussed. (CaMAI.)

73726. MacNEISH, RICHARD STOCKTON, 1918– . Buried history, recent archaeological endeavours in the Yukon Territory. (North, July-Aug. 1961. v.8, no.4, p.1-2, illus.)

Summarizes work for the National Museum of Canada in southwest Yukon: 121 archeological sites found, five stratified sites excavated in 1959-1960, and a sequence of cultures outlined. (DLC.)

MacNEISH, RICHARD STOCKTON, 1918– , *see also* Mackay, J.R., *& others.* Geology . . . 1961. No. 73707

73727. McPHEE, J. A. Training Eskimo mechanics. (Beaver, summer 1962. outfit 293, p.50-51, illus.)

Describes a four-month course for Eskimo school caretakers (mostly) on the operation and maintenance of diesel engines in lighting and heating plants. The course under auspices of the Dept. of Northern Affairs, is given at the Royal Canadian Electrical and Mechanical Engineers School at Kingston, Ontario. (DI.)

73728. MacPHERSON, ANDREW H. Notes on abundance and distribution of mammals on Banks Island and Victoria Island, N.W.T. in the summer of 1959. Ottawa, Canadian Wildlife Service, Mar. 1960. 16 p. maps. 9 refs.

Reports a field trip by Piper Super Cub aircraft with a Geological Survey party, illus. by maps on which the aerial observations made mostly by nine geologists incidentally to other work, are plotted. For each physiographic region, flight and faunal data are tabulated and discussed. The musk-ox population is estimated at 1114 on Banks, and 901 on Victoria; the caribou 2351 on Banks and 669 on Victoria. Many bird species were noticed and negligible numbers of other mammals. Protection is recommended for musk oxen and caribou, and further study of the caribou. (CaONA.)

73729. MacPHERSON, ANDREW H. Observations on Canadian arctic *Larus* gulls, and on the taxonomy of *L. thayeri* Brooks. Montreal, Oct. 1961. 40 p. illus., maps, tables. (Arctic Institute of North America. Technical paper no.7.) 82 refs. Summary in Russian.

Reviews earlier studies, presents breeding records for northern Canada from various, incl. unpub., sources, and reports own observations on Baffin Island 1955, and in the Pelly Bay region 1956, followed by systematic discussion. Morphological investigations indicate that *L. thayeri* is more closely related to *L. glaucoides kumlieni* than to *L. argentatus smithsonianus*. The form is therefore assigned to the species *L. glaucoides*. The common characteristics of the races of the latter species are noted. An appendix deals comparatively with natal and juvenal plumage of *L.h. hyperboreus, L.g. kumlieni, L.g. thayeri,* and *L.a. smithsonianus*. (CaMAI.)

73730. MacPHERSON, ANDREW H. On the abundance and distribution of certain mammals in the Western Canadian Arctic Islands in 1958-9. (Arctic circular, Aug. 1961. v.14, no.1, p.1-17; map, tables.) 18 refs.

Discusses numbers and distribution of arctic hares, arctic foxes, polar bears, wolves, caribou and musk oxen, mostly from airborne surveys in 1958 and 1959. The area comprises Victoria, Banks, Melville, Prince Patrick, Mackenzie King, Borden, and some other smaller islands. Data are tabulated on caribou, musk oxen and hares as sighted (from aircraft) on nine islands, some divided into physiographic regions. Number of arctic fox skins traded at four posts from 1949-50 to 1959-60 also are shown. Comparisons are made with various other, mostly earlier observations, and some population fluctuations and changes in distribution are indicated, particularly for caribou, the most ubiquitous of the mammals considered, and muskoxen. (CaMAI.)

73731. MacPHERSON, ANDREW H., *and* T. H. MANNING. Pack dogs in the Canadian Arctic. (Polar record, May 1961. v.10, no.68, p.509-512, illus, plate.) 4 refs.

Describes the use of dogs on summer trips. The Eastern Arctic Eskimo dogs carried 25-30 lb. packs, but some breeds carry more; eight hours' travel was usually their limit, especially over stony terrain. Suggestions are given for making and packing the packs, selecting dogs, dog food, etc. (DI.)

73732. MacPHERSON, ANDREW H. A preliminary survey of arctic wildlife resources. Ottawa, 1959. 51 p. tables, fold. map. 13 refs. Photostat of typescript.

Assesses the quantity and availability of wildlife in Canadian Arctic areas otherwise suitable for habitation by Eskimos. The survey was undertaken by the Canadian Wildlife Service to aid selection of one or more sites for relocating

native groups. Factors influencing settlement potential, such as wildlife availability, geography, relocation policy, and social considerations are discussed. Most species, e.g. right whale, musk ox, caribou, are found as abundant as ever, but wildlife in general is scarce and useful only to a scattered population. Dispersion of population, therefore seems necessary for maintenance of a hunting economy, and this is contrary to plans for education and social services in concentrated settlements. The mainland coasts of Yukon Territory, Mackenzie District, and Keewatin District, the Queen Elizabeth Islands and Ellesmere, except Devon Island at Maxwell Bay, are generally unsuitable for resettlement. Eastern Banks Island and northwestern Victoria Island have excellent wildlife resources and re-establishment of trading posts at Walker Bay and Fort Ross is recommended. Baffin Island at Hamilton Bay could support settlements. Map at 1 in: 200 mi. shows settlements. Further studies are recommended. (CaONA.)

73733. MacPHERSON, ANDREW H. Research on arctic fox cycles in the District of Keewatin. (Arctic circular, 1960, *pub.* Mar. 1961. v.13, no.3, p.31-34.)

Describes investigations of the breeding success and food habits of foxes and the lemming availability in the Aberdeen Lake area during summers 1959 and 1960. During the first year, both foxes and lemmings were scarce; foxes mated but failed to rear their young. In 1960, lemmings were very numerous, and the few foxes who remained were able to breed and raise their pups. The investigations are part of a long-term study by the Canadian Wildlife Service on short-term fluctuations by the fox population. (CaMAI.)

MacPHERSON, ANDREW H., *see also* Choquette, L.P.E., & *others*. . . . *E. multilocularis* . . . fox. 1962. No. 70734

Harrington, C. R., & *others*. Barren Ground grizzly . . . 1962. No. 72025

73734. McTAGGART, KENNETH CUNNINGHAM, 1919– . The geology of Keno and Galena Hills, Yukon Territory, 105 M. Ottawa, Queen's Printer, 1960. ix, 37 p. illus., maps incl. col. fold., diagrs., graphs. (Canada. Geological Survey. Bulletin 58.) 31 refs.

Presents a detailed geological map, the field mapping carried out in 1948-1950, with brief outline of general and structural geologic features of this 60 sq. mi. area, 63°53′-63°59′N. 135°03′-135°36′W., site of the most important lode deposits (silver-lead-zinc) so far developed in the Yukon. It includes 6,065 ft. Keno Hill, 4,740 ft. Galena Hill, and Sourdough Hill approx. 4700 ft. Evidence of one-two episodes of glaciation is outlined. The hills are underlain by a series of metamorphosed and unfossiliferous sedimentary rocks, largely quartzite, phyllite, schist, and limestone, which Bostock included in the Yukon group: Precambrian/Paleozoic. These rocks have been intruded by metamorphosed greenstone sills. Structure is very complex; most folds are small, tight, and recumbent. After this folding, the faults that contain the rich silver-lead veins were probably formed. Map on scale of 1 in. = 2000 ft. shows the geology, also location of 65 mining properties. (DGS.)

MADILL, R. GLENN, *see* Alaskan Science Conference 1961. 1962. No. 69644

MADSEN, ALF, *see* Ameigh, G.C., & Y.M. Chaffin. Alaska's Kodiak Island . . . 1962. No. 69738

MADSEN, CHARLES, 1884– , *see* Ameigh, G.C., & Y.M. Chaffin. Alaska's Kodiak Island . . . 1962. No. 69738

73735. MADSEN, HOLGER. The distribution of *Trichinella spiralis* in sledge dogs and wild mammals in Greenland under a global aspect. København, 1961. 124 p. illus., maps, graphs, tables. (Meddelelser om Grønland, bd. 159, nr.7.) 485 refs.

Study based on the material and investigation of the late Hans and Ursula Roth concerning the Greenland epidemic of 1947. Consecutive sections deal with hosts known in the Arctic: dog and fox, polar bear, walrus, ringed seal, whales, several carnivores, insectivores, and rodents; distribution of *T. spiralis* in carnivores of subarctic and temperate regions of Eurasia and the U.S.; occurrence in insectivores, voles, mice and rats; distribution in man and pig; occurrence in other areas, Asia, Africa, Australia, etc.; occurrence in fur-farm and zoo animals. Highest rate of infection was found in dogs: 70%. (DGS.)

73736. MAEDA, H., *and others*. Solar-terrestrial relationships during the IGY and IGC. *(In:* International Conference on Cosmic Rays and the Earth Storm, 1961. Proceedings *pub.* 1962, v.1, p.45-49, graphs.) 4 refs. *Other authors:* K. Sakurai, T. Ondoh *and* M. Yamamoto.

Reports on the studies of the relations between solar phenomena and their terrestrial effects, on the basis of solar-geophysical data during a high solar activity period: geomagnetic storms, ionospheric storms, sudden ionospheric disturbances, and the polar-cap ionospheric disturbances, of which about 28 were observed during the IGY and IGC, and attributed to the low-energy cosmic rays of solar origin effect. These rays were found to have two types of travel-time from the sun, and a close correlation is indicated between the early-type events and solar radio emission of centimeter-wavelengths, and between the late-type events and meter-wavelengths radio emission. (DLC.)

73737. MAEDA, H., *and others*. A study of solar-terrestrial relationships during the IGY and IGC. (Annales de géophysique, Oct.-Dec. 1962. t.18, fasc. 4, p.305-33, diagrs., graphs, tables.) 105 refs. Summary in French & Russian. *Other authors:* K. Sakurai, T. Ondoh, *and* M. Yamamoto.

Presents results of extensive study of IGY and IGC solar-terrestrial disturbance data including such for 28 polar cap disturbances. Radio emission associated with solar flares plays an important part in the occurrence of all types of earth storms. Polar cap disturbances are mainly associated with Type IV bursts and partly by continuous storms C(S), but not with Type II bursts. Two types of low-energy solar cosmic rays are found responsible for polar cap disturbances; events of the early type are closely associated with micro-wavelength radio emission; those of the late type, with meter wavelength radio emission. Auroral zone stations providing data include: Big Delta and College, Alaska;

Churchill and Resolute, Canada; Uelen, Dikson, Murmansk, Srednikan, Tiksi and Yakutsk, USSR; Thule, Greenland. (DWB.)

73738. MAEDA, K., *and* **V. L. PATEL.** A note on solar flare cosmic rays. (Journal of geophysical research, Apr. 1961. v.66, no.4, p.1288-89, graphs.) 9 refs.

Presents results of Cree analyses of IGY data on cosmic rays from Thule, North Greenland, and Wilkes, Antarctica. Enhancement of intensity following solar flares is found at both stations (cf. graphs); increases earlier than two hours before flare-onset are ascribed to tails of preceding events. The results suggest that all solar flares produce cosmic-ray particles to some extent and that, due to the disturbed nature of the magnetic field in the solar system during solar maximum, many of the emitted solar cosmic rays do not follow the simple orbits on which the calculation of impact zone is based. (DLC.)

73739. MAEDA, K., *and* **V. L. PATEL.** Seasonal variations of cosmic-ray intensity in polar regions. (Journal of geophysical research, May 1961. v.66, no.5, p.1389-93, tables, graphs.) 10 refs.

Discusses a seasonal variation of intensity, with maximum in local winter, as observed at Thule in northwest Greenland, and Wilkes in Antarctica. Atmospheric effects can account for it almost completely, but a small extraterrestrial contribution can not be excluded as yet. Abnormally large values for the atmospheric temperature effects were found: the coefficient was -8.3 ±0.9% km. for the reference level of 300 mb. at Thule, -12.5±2.1% km. at Wilkes. This phenomenon is ascribed to the low altitude of the effective muon-production level in polar regions. –From authors' abstract. (DLC.)

MAEDA, K., *see also* Patel, V.L., & K. Maeda. . . . Variation meson/nucleon component . . . 1961. No. 74669

73740. MÄLZER, HERMANN, *and* **D. MÖLLER.** Das Nivellement bei der Expedition Glaciologique Internationale au Groenland EGIG, Sommer-Kampagne 1959. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.474-83, illus., map, diagrs.) 4 refs. *Also pub.* with discussion, in International Geographical Congress 1960. Physical geography of Greenland. Text in German. Summary in English. **Title tr.:** Levelling by the International Glaciological Expedition to Greenland, EGIG, summer campaign 1959.

Describes earlier surveys, also the preparations, instruments, procedures, and results of this four-man project of the expedition. Levelling was carried out on parallel west-east profiles nearly 700 km. long, across the Inland Ice, in addition to a north-south survey. The 65 km. wide crevasse area in the west was traversed on foot, the remainder by Weasel. "Zeiss Ni 2 arctic" type automatic levelling instruments and invar (an iron-nickel alloy) staffs were used. The geometrical levelling produced a mean error of ±1.5 cm./km., and the altitude differences between bench marks, about 12 km. apart, were determined within 4-6 cm. Different methods of barometric levelling were used for comparison. Small-scale map shows route; diagrams and photograph show foot and Weasel procedure. (DWB.)

MAGAZINOVIĆ, V., *see* Pantelić, D., & *others.* E.C.G. changes . . . 1960. No. 74640

MAGER, M., *see* Iampietro, P.F., & *others.* . . . weight loss . . . cold. 1961. No. 72301

MAGNI, EINAR, *see* Hofsten, E., & *others.* . . . statsbidragen. 1961. No. 72193

MAGNITSKIĬ, V.A., *see* Pacific Science Congress. 1961. No. 74619

73741. MAGNÚSSON, JAKOB. Sex ratio of catches of redfish and migration. (International Council for the Exploration of the Sea. Rapports et procès verbaux des réunions 1961. v.150, ICES/IC NAF Redfish Symposium, p.251-52.) 16 refs.

Tentative outline of migrations in East Greenland, Icelandic and Canadian waters based on sex ratio of trawl catches, at different times and localities, Feeding, spawning and other migrations, their routes, locations, durations, etc. are reconstructed. (DI.)

MAHER, F. P., *see* Alaskan Science Conference 1960. 1961. No. 69643

MAHER, WILLIAM J., *see* Alaskan Science Conference 1960. 1961. No. 69643

MAĬLE, G. G., *see* Glemboťskiĭ, È.B., & G.G. Maĭle. Spusk lesa v shakhtu . . . 1961. No. 71711

73742. MAILLARD, CLAUDE. Expédition Française 1956 au Groenland-Sud: Cap Farewell, Prince Christian Sound. Paris, 1961. 65 l. 14 sketch maps incl. 1 fold. Mimeo. Text in French. **Title tr.:** French Expedition of 1956 to South Greenland: Kap Farvel, Prince Christian Sund.

Reports on a 12-man expedition sponsored by Expéditions Polaires Françaises and three French alpine organizations. General descriptions are presented of the mountain massifs of Greenland also aspects of geography, geology, climate, etc. Ascents were made to 16 summits in southernmost Greenland, each is described in turn and altitudes recorded. (ExPF.)

73743. MAIN, J. R. K. Transportation as a factor in northern development. (*In:* Resources for Tomorrow Conference . . . 1961. v.1, p.579-96, tables, graphs, map.) 18 refs.

Describes existing systems for northern Canada in general terms, and speculates on possible future facilities, relating them to the over-all problem of northern transportation. Rail, sea, river, highway, pipeline, airplane, helicopter and Hovercraft systems are evaluated and the relevance of each to known resources is discussed. Appended (p.590-96) are a map showing minerals and transportation, a list of communications (telephone, telegraph, radio) existing in northern Canada, economic aspects of the Canadair CL-44D4 cargo transport aircraft in northern Canada operations, typical transportation costs and volumes, and performance tables of helicopter and Hovercraft systems. (CaONA.)

73744. MAĬTINSKAIA, K. E. Funktsiia mestoimennogo suffiksa *-n* v lichnykh i vopositel'nykh mestoimeniiakh finno-ugorskikh iazykov. *(In:* Akademiia nauk SSSR. Institut iazykoznaniia. Voprosy finno-ugorskogo . . . 1962, p.65-80, tables.) 22 refs. Text in Russian. **Title tr.:** Function of the

pronominal suffix *-n* in the personal and interrogative pronouns of Finno-Ugric languages.

Discusses the not fully developed function of the suffix *-n* to differentiate pronouns referring to people from those representing animate or inanimate objects. This tendency, observed in ancestral and modern Finno-Ugric (Ostyak, Vogul, Zyryan, Lappish, etc.), is also found in Samoyed languages. (DLC.)

MAĬTINSKAIA, K. E., *see also*, Lytkin V.I., & K.E. Maĭtinskaia . . . Bubrikh. 1962. No. 73660

73745. MAKAROV, A. A. Materialy k izucheniiu alkaloidonosnosti rastenii tsentral'noĭ IAkutii; sem. liutikovye, Ranunculaceae L. (Yakutsk. Universitet. Uchenye zapiski 1959, vyp.6, seriia sel'skokhozĭaĭstvennykh nauk, p.15-34, tables.) 26 refs. Text in Russian. **Title tr.**: Contribution to the study of the alkaloid-yielding properties of plants in central Yakutia; the crowfoot family, Ranunculaceae L.

Reports on field and laboratory studies in 1956-1959 on the 22 most common species (in 12 genera) from the area which includes the Lena, Vilyuy and Aldan valleys and their interfluves. The plants are cited with Russian, Latin and Yakut names, and notes on occurrence; the alkaloid content of stems, leaves, and blossoms is given for each. Half of the species produce alkaloid 0.02-0.26% of their dry weight. The negative effect of crowfoot on the nutritional quality of meadows is stressed. (DLC.)

73746. MAKAROV, P. Po puti perestroĭki. (Russkiĭ ĭazyk v natsional'noĭ shkole, 1961, no.6, p.7-15.) Refs. Text in Russian. **Title tr.**: The road of reconstruction.

Discusses the reorganization of the school system decreed for 1959/1960, to be completed by 1962/1963: redistribution of the schools to facilitate day-student attendance, extension of compulsory education through the 8th grade; curricular changes include special provisions for peoples of the far North. (DLC.)

MAKEDONOV, A. V., *see* Danilov I.D., & *others*. Konkretsii . . . 1962. No. 73745

MAKHAEVA, L. V., *see* Michurin, L.N., & L.V. Makhaeva. Pitanie dikogo . . . 1962. No. 73971

73747. MAKHOTKIN, L. G. Prozrachnost' atmosfery v Arktike i Antarktike. (Leningrad. Glavnaia geofizicheskaia observatoriia. Trudy 1960. vyp. 100, p.173-74, tables.) 5 refs. Text in Russian. **Title tr.**: Transparency of the atmosphere in the Arctic and the Antarctic.

Reports transparency data from the drifting stations North Pole 2-5, and from Mawson in Antarctica. By measurements of direct solar radiation, the values of index *N* (diffuse solar radiation reaching the earth through clouds) are established, characterizing the transparency of the atmosphere. Altitude of the stations, period and number of observations, average, maximal and minimal values of *N* are reported. Some *N* values are given also for the Tikhaya Bay, Matochkin Shar, Barentsburg and other polar stations. Atmospheric transparency is higher in the Antarctic than the Arctic. (DLC.)

73748. MAKIEVSKIĬ, S. I. Osnovnye zakonomernosti razmeshcheniia slīudonosnykh pegmatitov v Enskom i Strel'ninskom slīudonosnykh raionakh na Kol'skom poluostrove. *(In:* Akademiia nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniia . . . 1962, p.109-195, tables, maps incl. fold., cross-sections.) 57 refs. Text in Russian. **Title tr.**: Main laws in the distribution of mica-bearing pegmatites in the Yena and Strel'na mica-bearing regions on the Kola Peninsula.

Reports on search for productive muscovite deposits during the last ten years. Structural, magmatic, stratigraphic and lithologic factors controlling distribution of micaceous pegmatites are distinguished and described. Practical recommendations are given for prognosis and prospecting. (DLC.)

73749. MAKIEVSKIĬ, S. I. Zakonomernosti razmeshcheniia promyshlenno-slīudonosnykh pegmatitov na Kol'skom poluostrove. (Vsesoīuznaia ob"edinennaia sessiia po zakonomernostiam razmeshcheniia poleznykh iskopaemykh i prognoznym kartam, 2d, *Kiyev*, 1960. Doklady sessii, chast' 1, p.150-57.) 2 refs. Text in Russian. **Title tr.**: Distribution laws of industrial mica-bearing pegmatites on the Kola Peninsula.

Reviews mica-bearing pegmatites mostly connected with White Sea area gneisses. Factors: structural-geologic, magmatic, lithologic and stratigraphic, affecting their distribution are summarized. (DLC.)

MAKIK *(Eskimo), see* Thibert, A. Journal . . . 1961. No. 76111

73750. MAKKAVEEV, NIKOLAĬ IVANOVICH, *and others*. Geomorfologicheskie issledovaniia dlia obosnovaniia proektov uluchsheniia sudokhodnykh uslovii rek; opyt Severo-Dvinskoĭ ėkspeditsii geograficheskogo fakul'teta MGU. (Voprosy geografii, 1961, sbornik 52, Prikladnaia geomorfologiia, p.100-104.) Text in Russian. *Other authors:* V.E. Ostanin *and* E.I. Sakharova. **Title tr.**: Geomorphic investigations as a basis for projects to improve navigation conditions on rivers; the Severnaya Dvina Expedition by the Moscow University Geography Faculty.

Reports a 1957-1958 study of the wide bed of the Severnaya Dvina, between Kotlas and the mouth of the Vaga River (62°48′N. 41°56′E.). Transport of sediment, seasonal variation in discharge, flood effects, channel formation, and other features are described. A river-improvement plan is worked out to aid navigation. (DLC.)

73751. MAKRIDIN, VASILIĬ PLATONOVICH. Aviatsiia v bor'be s volkami na Taĭmyre. (Sel'skoe khoziaĭstvo Sibiri, Nov. 1961. god 6, no.11, p.76.) Text in Russian. **Title tr.**: Aviation in wolf control in Taymyr.

Reports results of experimental hunting by the Far North Agricultural Research Institute: in the Avam District Feb. 15-Apr. 25 1960, 74 wolves were killed from a IAK aircraft based at the Kresty Taymyrskiye polar station, 70°52′N. 89°53′E.; two planes operated in the Dudinka, Avam and Khatanga Districts in 1961. The best time is Mar. 15-May 15, when the wolves are trailing the migrating reindeer herds. (DLC.)

73752. MAKRIDIN, VASILIĬ PLATONOVICH. Na samoletakh za khishchnikami. (Okhota i okhotnich'e khoziaĭstvo, Feb. 1962. god 8, no.2, p.9-10, illus.) Text in Russian. **Title tr.**: Predator control by airplane.

Notes the effort to combat wolves since 1951 in the Nenets, 1956 in the Yamal-Nenets, and since 1960 in the Taymyr National Districts. Half of those destroyed, on the average, are killed from aircraft, and the toll of kill averages one per 4 hrs. 22 min. flying time. Wolf predation of reindeer is rapidly decreasing, e.g. in the Nenets District from 2248 in 1954 to 799 in 1959. (DLC.)

73753. MAKRIDIN, VASILIĬ PLATONOVICH. O putiākh i srokakh migratsiĭ dikogo severnogo oleniā v Taĭmyrskom natsional'nom okruge. (Zoologicheskiĭ zhurnal, June 1962. t.41, vyp.6, p.927-34, illus., map.) 4 refs. Text in Russian. Summary in English. **Title tr.:** Routes and periods of reindeer migration in the Taymyr National District.

Reports on aerial observations of the spring migrations of 1960 and 1961. Size of the herds, distance of diurnal migration, and routes are given. Conservation measures are suggested. (DLC.)

73754. MAKRIDIN, VASILIĬ PLATONOVICH. O severnoĭ granitse rasprostraneniia losia. (Zoologicheskiĭ zhurnal, July 1962. t.41, vyp.7, p.1090-94, illus.) 10 refs. Text in Russian. Summary in English. **Title tr.:** The northern limit of elk distribution.

Reports results of an extensive air reconnaissance during 1951-1962 over the Nenets, Yamalo-Nenets and Taymyr National Districts. A northward expansion of the elk's range and its occupation of the forest tundra, and tundra, were recognized. Death from wolves and wolverines also was noted. (DLC.)

73755. MAKRIDIN, VASILIĬ PLATONOVICH. Volk na IAmal'skom severe. (Zoologicheskiĭ zhurnal, Sept. 1962. t.41, vyp.9, p.1413-17, tables.) 5 refs. Text in Russian. Summary in English. **Title tr.:** The wolf in the Yamal North.

Reports a 1956-1959 study in the Yamalo-Nenets National District, concerning distribution including seasonal changes; reindeer killed by wolves (approx. 3000/yr.) and wolves killed (120/yr.) Color, size and weight, the sexual composition of the population, morphometry; food, reproduction, and growth are considered in turn. Control measures are discussed. (DLC.)

MAKSIMOV, E. G., *see* Alekhichev, S.P. & E.G. Maksimov. Bor'ba s pyl'iu . . . 1962. No. 69672

73756. MAKSIMOV, G. M. Dvizhenie i sostav naseleniia SSSR. (Istoriia SSSR, Jan.-Feb. 1961. god 5, no.1, p.28-48, tables.) Refs. Text in Russian. **Title tr.:** Population fluctuation and composition in the USSR.

Statistical account based on the 1959 census. Includes data on urban population growth in 1939-1959 for Murmansk Province: 245 to 523 thousand, Karelian ASSR: 150 to 409, Arkhangel'sk Province: 434 to 675, Komi ASSR: 29 to 475, Yakut ASSR: 112 to 240, and Magadan Province: 31 to 191; Vorkuta: 55,000 inhabitants. A general trend from rural to urban areas is noted for the entire RSFSR: 52% urban as compared with 18% in 1926. Population density is lowest, three or less inhabitants/km.^{2}, in the USSR North, the Far East, and East Siberia. (DLC.)

73757. MAKSIMOVA, L. N. O sezonnom promerzanii gruntov v raione stroitel'stva Bratskoĭ GÉS. (Merzlotnye issledovaniia. Sbornik statei, 1961. vyp.2, p.33-44.) 9 refs. Text in Russian. **Title tr.:** Seasonal freezing of ground in the Bratsk hydroelectric station construction area.

Reports 1956-1957 determinations of the depth of the active layer at this site on the Angara River. The climatic features are stated and detailed descriptions given of the geography, geology, soil composition and moisture content, surface cover, and drainage of several typical microregions. The depth of seasonal freezing was found to differ considerably within small areas due to differences in the genesis of the Quaternary deposits, soil moisture, drainage, etc. The Kudriavtsev method was found effective for predicting freezing-depth changes from construction work.—From CRREL. (DLC.)

73758. MAKSUTOV, D. D. Vysokoshirotnaia ékspeditsiia 1961 g. na a/l "Lenin." (Problemy Arktiki i Antarktiki. Sbornik statei, 1962. vyp.11, p.107-109.) Text in Russian. **Title tr.:** The high-latitude expedition of 1961 on the atomic icebreaker *Lenin.*

Reports on autumn cruise in the area 74°-75° N. 185°-190°E. to find suitable ice and put off personnel and equipment for drifting station North Pole-10, to deploy 15 drifting automatic radio weather stations, and to give the *Lenin* a trial run in high latitudes under conditions of approaching winter and polar night. All objectives were achieved, and the procedures, navigation conditions, etc. are described. (DLC.)

MALAKHOVA, N. P., *see* Sultanaev, A.A. O knige N.P. Malakhovoĭ . . . 1962. No. 75996

73759. MALAKHOVA, V. V. Giperbazity Volch'ikh tundr. *(In:* Akademiia nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniia . . . 1962, p.74-80, tables, diagr.) 2 refs. Text in Russian. **Title tr.:** Ultrabasites of the Volch'i Tundras.

Describes three groups of ultrabasites in the Volch'i differentiated intrusion in Kola Peninsula: those connected with hypersthene diorites, those syngenetic with gabbro and gabbro-norites, and vein ultrabasites. Their mineral composition and chemical analyses are reported; petrogenesis is analyzed: they are results of magmatic differentiation. (DLC.)

73760. MALAKHOVSKIĬ, D. B. Soveshchanie po paleogeografii, geomorfologii i chetvertichnoĭ stratigrafii severo-zapada Evropeĭskoĭ chasti SSSR. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda. Biulleten' 1960. no.24, p.145-48.) Text in Russian. **Title tr.:** Conference on the paleogeography, geomorphology and Quaternary stratigraphy of northwestern European USSR.

Describes this conference in Leningrad. Mar. 24-25, 1958, with 155 representatives of 25 scientific organizations participating. Papers were delivered on the Kola Peninsula, Karelia, Arkhangel'sk Province, among other regions of the area. (DLC.)

73761. MALANDIN, M. M. Stratigrafiia verkhnemezozoĭskikh otlozheniĭ Zapadnogo Verkhoian'ia. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.121, vyp.18, Sbornik statei po geologii i neftegazonosnosti Arktiki, p.3-28, tables incl. fold., charts.) 21 refs. Text in Russian. **Title tr.:** Stratigraphy of the upper Mesozoic deposits of the western Verkhoyansk region.

Reports study of these coal-bearing deposits in the Sangar, Chechuma and Lepiske areas in 1954-1959. General characteristics of the region are given and stratigraphy of the deposits described, based on the coal-bearing properties, lithologic features, flora and fauna. The Baykal, Chechuma, Sangar and Vilyuy series are distinguished and divided into subseries. Correlation is outlined. (DLC.)

73762. MALASHEVSKIĬ, V. N., *and* **N. I. POPOVICH.** Strukturno-fatsial'nye zony Pripolīarnogo i Polīarnogo Urala v kembriĭskom periode. (Leningrad. Vsesoīuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy, nov. ser. 1961. t.67. Materialy po geologii Urala, sbornik statei, p.81-94, tables, map.) 14 refs. Text in Russian. **Title tr.:** Structural-facies zones of the Subpolar and Polar Ural in the Cambrian period.

Presents a stratigraphic division and correlation of these deposits. Three structural-facies zones are recognized: a western with predominant downwarp, a central predominantly uplift, and an eastern with downwarp predominant. Distribution of each zone, rock composition and thickness are characterized. (DLC.)

73763. MALAURIE, JEAN NOËL. Terre de Washington (côte sud) et Terre d'Inglefield, Groenland N.W. Paris, Centre d'Études arctiques de l'École pratique des hautes Études, July 1958. 2 colored map sheets 38 x 25 in. (Mission géographique française à Thule, 1950-1951.) Refs. Text in French. **Title tr.:** Washington Land (south coast) and Inglefield Land, Northwest Greenland.

Annotated map, the north sheet on a scale of 1 in.: 10 km., south sheet 1 in.: 5 km.; based on author's 1950-51 survey of these areas facing Kane Basin and Kennedy Channel, roughly 78°-80°N. and 64°-73° W. Index inset map shows setting in the Northwest Greenland-Ellesmere Island region, also the mean state of sea ice Apr.-Oct. The north sheet shows geologic and geomorphic features, also hydrologic and glaciological features of Washington Land; insets give details of five selected areas. Inglefield Land is similarly treated on the south sheet with insets for nine selected areas. Graphic summaries of climatic elements are given for Rensselaer Bugt, Etah, and Thule. Official Danish place names are given as of May 22, 1957. Cartographic results of this mission were summarized in 1953, cf. No. 30654. (CaMAI.)

73764. MALETTE, WILLIAM G., *and others.* Hypercapnia, a means of increasing oxygen availability during hypothermic perfusion. (Surgical forum 1961. v.12, p.184-86, illus., table.) *Other authors:* J.B. Fitzgerald *and* B. Eiseman.

Account of *in vitro* studies of dog's blood and *in vivo* studies of animals perfused at 20°C. on a pump oxygenator. Both methods indicate that tissue oxygen utilization in perfusion hypothermia is enhanced by raising the CO_2-concentration. (DNLM.)

MALEVSKIĬ, A. IŪ., *see* Smirnov, A.S., *& others.* Konvertirovanie nikel'soderzhashchikh . . . 1962. No. 75743

73765. MALIK, L. K. Kharakteristika snezhnogo pokrova kak odnogo iz faktorov formirovaniīa pavodkov v basseine r. Obi. (Akademiīa nauk SSSR. Sibirskoe otdelenie. Izvestiīa 1961, no.9, p.37-43, 2 maps.) 12 refs. Text in Russian. **Title tr.:** Characteristics of the snow cover as one of the factors in the rise of floods in the Ob River basin.

Outlines the formation, distribution and thawing of the snow cover and the physical properties (density, water content) of snow in various, including lower areas of the Ob basin; based on data, partly unpublished, of 1936-1956. Snow, it is stressed, is a significant part of atmospheric precipitation, and detailed studies of the snow cover are needed. Isolines of average density (0.25, 0.30 and 0.35) and of water content (60-300 mm.) before the thawing are shown. (DLC.)

73766. MALISHEVSKIĬ, V. E. Osobennosti raboty grebnykh ėlektricheskikh ustanovok ledokolov pri udarakh vinta o led i zaklinivaniīakh. (Sudostroenie, 1961. god 27, no.5, p.30-33, graphs, tables.) 2 refs. Text in Russian. **Title tr.:** Specific features in the performance of the electric propelling equipment of icebreakers when the propeller strikes ice or is jammed in it.

Calculates the regimes of electric motors installed in icebreakers for propelling the vessel through ice. Motor performance was experimentally investigated under conditions of jammed propeller, of sharp shock against ice, and in clear water. The effectiveness of motor performance was found to be improved by introducing a flexible feedback in the main, and a stable feedback in the rapid-action exciter system. Tests were made on the *Kapitan Melekhov* in 1958. (DLC.)

MALLICK, N. P., *see* Bernhard, W.F., *& others.* Elective hypothermic cardiac arrest . . . 1961. No. 70169

73767. MALLOY, ARTHUR E. Arctic science and the nuclear submarine. (Arctic, June 1962. v.15, no.2, p.87-91, illus.) 7 refs.

Discusses advantages of nuclear submarines for investigating the Arctic Ocean, and suggests a large, long-range research program utilizing such vessels. Although drifting stations and ships frozen in the ice are useful for research, they have limitations (cited) not shared by the submarine. The latter can travel in various directions over broad areas in all seasons. They are protected by the overlying ice pack from weather, rough seas, etc., and are uniquely equipped for observing the ocean floor and the ice pack. The proposed program would include survey mapping of all parameters, basic and applied research in oceanography, marine geology, geophysics, and meteorology. (DI.)

73768. MALLOY, ARTHUR E. Exploratory bathymetric surveys in the Arctic Ocean. (Surveying and mapping, Dec. 1961. v.21, no.4, p.451-57, illus.)

Notes the recording of continuous sounding profiles of the Ocean floor by the nuclear-powered submarines *Nautilus, Skate, Sargo,* and *Seadragon.* Methods and instruments used to obtain bathymetric data are discussed as is the navigational equipment, including the inertial system, bubble and periscope sextants. Previous studies by means of icebreakers, drifting stations, and aircraft are sketched. A typical day aboard a submarine in the Arctic is described. The future use of nuclear-powered submarines in oceanographic research is discussed. (DLC.)

73769. MALMBERG, K. G. Den flyttande folkhögskolan. (Norrbotten 1962, p.67-70, illus.) Text in

Swedish. **Title tr.:** The traveling folk high school.

Reviews the background and development of classes in Swedish and Swedish culture for adults in the Torne valley area approx. 65°45′-69°N. in north Sweden along the Finnish border. The Matarengi folk high school, founded in 1899, in 1912 held the first of these classes, designed to tie the Finnish-speaking frontier population closer to Sweden. The courses still fill a need; some ten thousand individuals are estimated to have attended them. (SPRI.)

MALMÉJAC, CLAUDE, *see* Malméjac, J., *& others.* . . . rythme cardiaque en hypothermie . . . 1962. No. 73771

73770. MALMÉJAC, JEAN, 1905- , *and others.* Sur la reprise de l'activité des centres respiratoires après ischémie prolongée sous hypothermie contrôlée à 16-18°C. (Société de Biologie, *Paris.* Comptes rendus 1962. t.156, p.618-20.) 8 refs. Text in French. *Other authors:* D. Bonnet, M. Rognon, *and* G. Bijaoui. **Title tr.:** Resumption of activity by the respiratory centers, after prolonged ischemia under controlled hypothermia of 16-18°C.

Respiratory movements suspended under these conditions, resemble a bulbar automatism limited initially by the inspiration center. This indicates a suspension of interrelation between diverse nervous structures concerned, during normothermia, with inspiration, expiration and pneumotaxia. (DLC.)

73771. MALMEJAC, JEAN, 1905- , *and others.* Sur l'entretien artificiel du rythme cardiaque en hypothermie provoquée. (Société de Biologie, *Paris.* Comptes rendus 1962. t.156, p.616-17.) 9 refs. Text in French. *Other authors:* G. Neverre, C. Malméjac, *and* J. Syreigeol. **Title tr.:** Artificial maintenance of the cardiac rhythm during induced hypothermia.

In hypothermic dogs and monkeys, cardiac rhythm could be, within limits, accelerated by rhythmic electric stimulation. Similar results were obtained, after circulatory arfests of 30-35 min. (DLC.)

73772. MALONE, KEVIN. Mercury occurrences in Alaska. Washington, D.C., U.S. Dept. of the Interior, 1962. 57 p. diagrs., tables, maps, incl. 3 fold. (U.S. Bureau of Mines. Information circular 8131.) Refs.

Surveys the mercury resource and the potentialities for industrial development. Red Devil Mine on the south bank of the Kuskokwim, the most important producer, is described in detail; geology (by G. Herreid), geometry, ore deposits, mining methods and costs (from an engineering report by R.A. Markle), and metallurgy (by R.F. Lyman). Eleven other lode occurrences in the Kuskokwim area and three in the Yukon River region are also described, and a few more are noted. Placer occurrences, approx. 40, in the Yukon River region are listed. (DGS.)

73773. MALONEY, RAYMOND P. Investigation of mercury-antimony deposits near Flat, Yukon River region, Alaska. Washington, D.C., 1962. 44 p., maps, tables, diagrs. (U.S. Dept. of the Interior. Bureau of Mines. Report of investigations, 5991.) Refs.

Reports search in 1955 and 1956 for lode-mercury deposits in this area, approx. 62°27′N. 158°01′W., of southwestern Alaska. Bulldozer trenching and soil sampling were undertaken in localities with the greatest concentrations of placer cinnabar. The only mercury in place was found in some monzonite where a small quartz vein contained visible cinnabar. Samples from several trench exposures contained gold and/or antimony, but the ore-bearing structures were not followed because of the highly erratic nature of the mineralization and the absence of mercury. Soil sampling for antimony in overburden covering known stibnite veins may be of use in discovering gold-bearing stibnite. (DGS.)

73774. MALONEY, RAYMOND P. Trenching and sampling of the rhyolite mercury prospect, Kuskokwim River Basin, Alaska. Washington, D.C., U.S. Dept. of the Interior, 1962. 43p. maps, diagrs., tables. (U.S. Bureau of Mines. Report of investigations 6141.) 9 refs.

Reports investigations in 1959 on a segment of the Juninggulra Mt. rhyolite intrusive at 61°56′ N. 158°26′W. In the limited (2000 x 3000 ft.) area exposed, some of the silica-carbonate dikes and sills were mercury-bearing; but few, if any, had recognizable surface expression. The geologic relationships are similar to those associated with mineralization in other parts of the Kuskokwim region. Permafrost impeded the operations, and may have caused poor location of the trenches. (DGS.)

MALOY, W. C., *see* Ellison, R.G., *& others.* Further studies . . . hypothermia. 1960. No. 71247

73775. MALVILLE, J. M. Excitation of helium in the aurora. (Journal of atmospheric and terrestrial physics, Apr. 1961. v.21, no.1, p.54-64, tables, graphs.) 25 refs.

Calculates the populations of the excited levels of a helium atom traversing the atmosphere with an original energy of 256 kev., using the method of statistical equilibrium. It is estimated that each 256 kev. helium particle produces 450 photons of λ 10830 and 40 of λ 5876 during its passage. The profile and luminosity curve of λ5876 and λ10830 are predicted. Observational data on helium emissions are discussed.—From author's abstract. (DLC.)

MALYGIN, A. M., *see* Murskiĭ, L.I., & A.M. Malygin. Izmenenie temperaturnoĭ . . . 1961. No. 74172

73776. MAMAEV, IŪRIĬ LEONIDOVICH, 1929- , *and others.* Gel'mintofauna dal'nevostochnyk lososevykh v sviāzi s voprosom o lokal'nykh stadakh i putiākh migratsiĭ ėtikh ryb. Vladivostok, Primorskoe knizhnoe izd-vo, 1959. 74 p. illus. tables. (Akademiia nauk SSSR. Sibirskoe otdelenie. Dal'nevostochnyĭ filial.) 38 refs. Text in Russian. *Other authors:* A.M. Parukhin, O.M. Baeva, *and* P.G. Oshmarin. **Title tr.:** The helminth fauna of Far-Eastern salmonoids as related to the problems of local shoals and migration routes of these fish.

Reports a survey made in 1958 and covering nine species of fish and forty worms. Previous studies are reviewed, as is the material: from Bering Sea, east of Kamchatka, and two stations on its west coast. The parasites, their hosts, rates of infections, geographic distribution, etc. are dealt with. The hosts and their parasites are treated (the record: pink salmon with 23 kinds of parasites), origin of migratory salmon as indicated

by their parasites, geographic distribution of the worms, and that of *Oncorhynchus gorbuscha.* (DLC.)

MAMAEVA, R. B., *see* Azhazha, V.G., & R.B. Mamaeva. Ob"edinenie . . . 1961. No. 69938

73777. MAMEN, CHRIS. Iron Ore Company of Canada, Carol Project. (Canadian mining journal, Nov. 1962. v.83, no.11, p.45-57, illus., map, diagrs.) Refs.

Describes, in detail, the equipment and operations at this development in the Wabush Lake area of western Labrador. Production, to reach 7,000,000 tons annually of concentrate (66% iron), began in summer 1962. Facilities include the Smallwood mine, an automatic railway system, a concentrator, a pelletizing plant under construction for summer 1963 production, the Labrador City townsite, a 42-mi. railroad spur, etc. Production costs have been kept down by extensive use of automation. (DGS.)

MAMEN, CHRIS, *see also Canadian mining manual.* 1962. No. 70601

73778. MAMKAEV, ÎU. V. Novyĭ predstavitel' gnatostomulid, *Gnathostomula murmanica* sp. n. (Akademiîa nauk SSSR. Doklady 1961. t.141, no.6, p.1501-1504, illus.) 3 refs. Text in Russian. **Title tr.:** A new representative of the gnathostomulids, *Gnathostomula murmanica* n. sp.

Describes a new form of this primitive worm, from Dal'ne-Zelenetskaya Bay on the Barents Sea. Ecology, anatomy, taxonomy, etc. are considered. (DLC.)

73779. MAMONOVA, N. N. Kochevniki Zabaĭkal'îa ix-xiii vv. po dannym paleoantropologii. (Akademiîa nauk SSSR. Institut ėtnografii. Trudy 1961. t.71, Antropologicheskiĭ sbornik 3, p.207-241, illus., tables.) 4 refs. Text in Russian. **Title tr.:** Trans-Baykal nomads of the 9th-13th centuries A.D. according to paleoanthropological data.

Discusses and tabulates measurements of 75 skulls collected in 1953-1956 by the Buryat-Mongolian archeological expedition headed by A.P. Okladnikov. All belong to the greater Mongoloid race without Europoid admixture. The Baykal type predominates over the central Asiatic. (DSI.)

MAMRUKOV, A. P., *see* Kuz'min, A.L., & *others.* Iĭul' 1959 g . . . 1962. No. 73250

73780. MANAKOV, K. N. Pogloshchenie rastitel'nost'îu mineral'nykh ėlementov i azota iz pochvy v lesakh Kol'skogo poluostrova. (Pochvovedenie, Aug. 1961, no.8, p.34-41, tables.) 13 refs. Text in Russian. Summary in English. **Title tr.:** Absorption of mineral elements and nitrogen from the soil by the vegetation of Kola Peninsula forests.

Reports the coniferous forests of Kola Peninsula to accumulate less nitrogen and ash elements than do forests of more southerly latitudes. Fir forests with blueberry bushes contain 474.7 kg/ha hectare of ash elements, and 170.6 kg/ha of N; pine forest with blueberry: 686.2 kg/ha of ash elements and 301.6 kg/ha of N. The main elements of biomass are: N, Ca, K_2O and SiO_2. Shrubs have an important role in the absorption of N and mineral elements. (DLC.)

73781. MANAKOV, K. N. Postuplenie azota i zol'nykh ėlementov s opadom v lesakh Kol'skogo poluostrova. (Pochvovedenie, 1962. no.4, p.55-61, tables.) 10 refs. Text in Russian. Summary in English. **Title tr.:** Penetration of nitrogen and ashy elements from forest litter in Kola Peninsula.

Reports a quantitative study of the litter-fall in 1958 and 1959 in two selected types of forest: a young fir stand and a pine forest with green moss cover, to determine how nitrogen ashy elements get into their soil. The pine forest was found to get substantially less of the mineral elements than does the fir stand. Leaves, etc., from the underbrush and dead parts shed from mosses and lichens form an appreciable part of the total litter fall. In the mineralization of the litter, iron, aluminum and silicic acid accumulate; other, ashy elements like phosphorus, sulfur, etc. are leached out. (DLC.)

MANGUS, MARVIN D., *see* Brosgé, W.P., & *others.* Paleozoic sequence . . . 1962. No. 70394

MANITOBA. DEPT. OF AGRICULTURE, *see* Ehrlich, W.A., & *others.* Soil . . . Nelson R. . . . 1959. No. 71213

73782. MANITOBA. DEPT. OF MINES AND NATURAL RESOURCES. Annual report for period ending Mar. 31st 1960, 1961. Winnipeg, 1960-1961. 2 v.: 150, 151 p. illus., tables, graphs. Refs. In sequence to No. 66539.

Include Branch reports of Mines, Lands, Forestry, Fisheries, Game, Surveys, Accounts, and the Air Service. Activities reported for northern Manitoba include the Thompson nickel mine opening in Mar. 1961; mineral explorations in the Thompson, Sherridon, Lynn Lake, and Gods Lake areas; barren-ground caribou tagging at lake crossings during summer migrations; river otter and woodland caribou status; Manitoba-Northwest Territories boundary survey, completed in 1960, and another started in 1961 along the Manitoba-Saskatchewan line north of 56°20′N. New concepts of mineral exploration in the Precambrian Shield, such as geophysical surveys, interest in sedimentary areas, etc. are described in the 1961 report. (DLC.)

MANITOBA. DEPT. OF MINES AND NATURAL RESOURCES, *see also* Ehrlich, W.A., & *others.* Soil . . . Nelson R. . . . 1959. No. 71213

MANITOBA. UNIVERSITY, *see* Ehrlich, W.A., & *others.* Soil . . . Nelson R. . . . 1959. No. 71213

73783. ***MANITOBA INDUSTRY AND COMMERCE BULLETIN.*** The DEW Line re-supply base and Manitoba. (Manitoba industry and commerce bulletin, July-Aug. 1961, v.13, no.4, p.1, +, map.)

Describes the supply transportation system initiated in July 1961. TransAir Ltd. of Winnipeg operates the airlifts originating at Winnipeg or Churchill, and servicing main DEW Line stations at Cape Dyer, Hall Beach, Cambridge Bay, and Cape Perry. Nordair Ltd. of Montreal continues to operate the inter-station airlifts between the main and the smaller stations. The bulk of the supplies is moved by annual sealift from Montreal, Seattle, and from Waterways, Alberta. Transfer of the main base and supply route to originate in Winnipeg, rather than Montreal and Edmonton, is considered an impetus to the Manitoba economy, and to forecast use of Winnipeg as a distribution point for the markets of northern Manitoba and Northwest Territories. (CaOGB.)

73784. MANKER, ERNEST MAURITZ, 1893- . Lappmarksgravar, dödsföreställningar och gravs-

kick i lappmarkerna. Stockholm, Almqvist & Wiksell, 1961. 325p. illus., 100 photographs, tables, map, fold. map. (Acta Lapponica 17.) About 275 refs. Text in Swedish. Summary in English. **Title tr.:** Lappmark graves, ideas on death and burial customs in the Lappmarks.

Lists about 250 burial sites in the USSR, Finland, Norway and Sweden with detailed descriptions of about 30 in Swedish Lapland. Small islands, mounds and dry slopes were favored sites; earth (most common), stone, and cave burials were used. Each type is described in detail, also provisional summer graves of the Christian era. Orientation (in Christian times west-east, but earlier according to local conditions), coffins (of planks, hollowed-out logs, boat-shaped sledges called *akia),* practice of euthanasia with the sick or senile, burial garments and gifts are treated in turn. Pre-Christian beliefs and Christian practices are discussed. No original, pre-Christian Lappish grave monument is known. "Realm of the dead" motifs on Lapp shamanistic drums are reviewed. Literary sources are quoted on burial customs among the Lapps. A chapter on living traditions based on a 1943 questionnaire, also a place-name index are appended. (SPRI.)

73785. MANLEY, GORDON, 1902- . Late and postglacial climatic fluctuations and their relationship to those shown by the instrumental record of the past 300 years. (New York Academy of Sciences. Annals, Oct. 1961. v.95, art. 1, p.162-72, maps, graph, table.) 22 refs. Paper resulting from a conference on Solar variations, climatic change, and related geophysical problems, New York, Jan. 24-28, 1961.

Compares evidence on the smaller climatic fluctuations of recent centuries with that on the larger changes connected with the ice age. Vast accumulation and extension of ice sheets that probably began in Greenland in the Miocene, is the most significant result of large-scale climatic change of the ice age period. Recent climatic ameliorations and diminution of the arctic sea ice, are associated with increased meridional transport of warmth into the Arctic Basin, mainly through the atmosphere, but partly by means of ocean surface water. Author concludes that significant climatic fluctuation in the past required "persistence of circulation patterns" over periods up to many decades long; North Atlantic climate has become rather unstable during the past three-four centuries, perhaps because of the changes in the arctic ice; the marked climatic "oscillation" near the northeast Atlantic in 1688-1739 shows no close relation to either vulcanicity or sunspots, suggesting an oceanographic factor as explanation of such short-period changes. (DLC.)

MANLY, BRENDA M., *see* Barnett, S.A., & *others.* Mortality growth . . . 1960. No. 70036

MANN, E.L., *see* Brummer, J.J., & E.L. Mann. Geology . . . 1961. No. 70416

73786. MANNING, THOMAS HENRY, 1911- . Comments on "Carnivorous walrus and some arctic zoonoses." (Arctic, Mar. 1961. v.14, no.1, p.76-77.) 9 refs.

Discusses Fay's article, No. 64474, on the sources of *Trichinella* infection in polar bears and walrus, agreeing that seals are the main source of the infection, but suggesting that other sources were unduly discounted. Evidence from the Canadian Arctic is presented of infection from foxes, and of a probable bear-walrus-bear cycle. Comprehensive studies of the food habits of northern animals are needed. (DI.)

73787. MANNING, THOMAS HENRY, 1911- . Notes on Winter Harbour, Bridport Inlet, and Skene Bay. Ottawa, June 1961. 24 p. illus., maps incl. 3 fold. (Canada. Dept. of Northern Affairs and National Resources. Northern Co-ordination and Research Centre 61-6.) Refs.

Discusses the ice, hydrographic, and terrain conditions in these three areas of Melville Island in the western Canadian Arctic; based on explorers' records (cited), air photos, and hydrographic charts. Access to each harbor, and the suitability for anchorage, landing operations, and construction of shore installations and air strips are considered. Approaches to most of the beaches in the area are shoal; ice conditions improve northwards; Bridport Inlet is the best harbor, and is recommended for permanent coastal settlement. A description of the Inlet from a report made by L. Prior in 1946 is appended. (CaMAI.)

MANNING, THOMAS HENRY, 1911- , *see also* MacPherson, A.H., & T.H. Manning. Pack dogs . . . 1961. No. 73731

73788. MANSUROVA, L. G. Uroven' geomagnitnogo standarta SSSR. (Geomagnetizm i aėronomiia, 1961. t. 1, no.2, p.267-73, tables, graphs.) 6 refs. Text in Russian. **Title tr.:** Geomagnetic standard level of the USSR.

The levels of H of 55 world magnetic observatories, Yakutsk included, are given, tying them to the standards of the USSR and Denmark. (DLC.)

73789. MANUĬLENKO, V. K. Iz opyta rekognostsirovki v tundre. (Geodeziia i kartografiia, Aug. 1962. no.8, p.28-34, illus.) Text in Russian. **Title tr.:** From reconnaissance in the tundra.

Describes a reconnaissance survey in the forest tundra of Yakutia Jan. 14-Sept. 3, 1961, when some 1300 km. were covered by boat, horse, and reindeer. Relief forms, ground, seacoasts, vegetation, climate, permafrost, pingos and other features are characterized. Use of airplane, helicopter and other transportation means is described. Setting up survey markers, use of the TM-1 theodolite and other instruments, camping procedure and equipment, etc. are outlined. (DLC.)

73790. MANUĬLOV, PAVEL. Razumno ispol'zovat' bogatstva Severa. (Okhota i okhotnich'e khoziaĭstvo, May 1962. god 8, no.5, p.5-9, illus.) Text in Russian. **Title tr.:** Sound resource development in the North.

Reports on a northern economic development conference held in Magadan and attended by representatives of the northern provinces, including Murmansk, Arkhangel'sk, Tyumen, Krasnoyarsk, Magadan, Kamchatka, and Yakutia. Reindeer raising and fur farming were mainly discussed. Magadan reported reindeer herds amounting to 610,000 head, to be raised to one million by 1965. In Yakut ASSR, hunting and fur farming had a 7,612,000 ruble output in 1961. Working conditions and means of developing these industries were outlined. (DLC.)

73791. **MANUM, SVEIN.** Studies in the Tertiary flora of Spitsbergen, with notes on Tertiary floras of Ellesmere Island, Greenland, and Iceland; a palynological investigation. Oslo, Oslo University Press, 1962. 127 p. illus., maps, tables, 22 plates (Norway. Norsk Polarinstitutt. Skrifter nr.125.) 104 refs.

Reports on the pollen and spore content of late Paleocene to Eocene beds in Vestspitsbergen. The microfossil preservation is generally poor. In all, 70 types are described, 15 of them new species, four referred to, and nine compared with previously described species; 42 types have been provisionally designated and described. Macro- and microfossils of coniferous origins are abundant, particularly *Metasequoia occidentalis;* of the angiospermous macrofossils, *Cercidiphyllum arcticum* is the most abundant and conspicuous; fossil records of monocotyledons are poor. The climate is indicated. The Spitsbergen material is compared with results from a few lower Tertiary samples from Ellesmere Island, Greenland and Iceland, and the preponderance of coniferous pollen noted as a common feature of all, and the inaperturate grains usually the most abundant. Triporate grains are a characteristic component of the assemblages except that from Greenland. Although not identical, the Lower Tertiary floras in all these regions have substantially the same families and genera. (DGS.)

MAPLESON, W. W., *see* Waters, D.J., & W.W. Mapleson. Mechanism of heat loss . . . 1961. No. 76501

MAR, P. G., *see* Canada. Annual report . . . Radioactive Fallout . . . 1960-61. No. 70535

73792. **MARAKOV, S. V.** Na dalekikh ostrovakh. (Okhota i okhotnich'e khozĭaĭstvo, Nov. 1961. god 7, no.11, p.10-13, illus.) Text in Russian. **Title tr.:** On faraway islands.

Since discovery of the Commander Islands in 1741, their fauna, represented by 183 species of birds and 15 mammals, has attracted attention. Sea otter, fur seal, sea lion, common seal, killer and beaked whales, arctic fox, various birds, ptarmigan, cormorant, wild ducks, etc. and bird colonies are noted. In 1927, reindeer were introduced and the present herd is estimated at 2500 head. Only the sea otter and fur seal are protected, but protection should be extended to cover other species also. (DLC.)

73793. **MARAKOV, S. V.** Pestsy Komandorskikh ostrovov. (Okhota i okhotnich'e khozĭaĭstvo, Dec. 1961. god 7, no.12, p.25-26, illus.) Text in Russian. **Title tr.:** The arctic fox of the Commander Islands.

The blue arctic fox, *Alopex lagopus beringensis,* occurring only on these islands, is a valuable fur-bearer; with hunting unrestricted, the stock has been periodically depleted and restored. Only since 1923, has this fox been protected and its breeding controlled, at first by additional feeding from fur seal waste and since 1953 by keeping the animals penned in a fur farm at Nikol'skoye. The stock was estimated at 3000 on Bering Island and 1200 on Mednyy in 1951-52, but the number on both islands has greatly declined. (DLC.)

73794. **MARAKOV, S. V.** Uchet morskikh mlekopitaĭushchikh Komandor v svete ikh ėkologicheskikh osobennosteĭ. (Voprosy ėkologii, 1962. t.4, p.130-31.) Text in Russian. **Title tr.:** Stock of marine mammals of the Commanders in the light of their ecological pecularities.

Notes problems of stock-taking of seals, sea otters and sea lions; dates of sojourn on the Commander Islands; course of behavior; size of groups; habitats; chances of counting, etc. (DLC.)

73795. **MARAKULIN, I.** Snizhat' sebestoimost' perevozok lesa. (Lesnaĭa promyshlennost', Feb. 1961. god 39, no.2, p.29-30, table.) Text in Russian. **Title tr.:** Timber transportation costs must be lowered.

Cost analyses in Karelia shows trucking to be cheaper and more reliable than floating. Transportation from Rugozero (64°05′N. 32°47′E.) to Kochkoma station (64°02′N. 34°14′E.) by floating on the Kem' River costs 9.75 rubles/m^3; by truck, the same distance costs only 8.03 rubles/m^3. (DLC.)

73796. **MARAKUSHEV, ALEKSEĬ ALEKSANDROVICH.** Paragenezisy peresyshchennykh glinozemov arkheĭskikh kristallicheskikh slantsev Aldanskogo shchita. *(In:* Akademiia nauk SSSR. Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii. Fiziko-khimicheskie problemy . . . 1961, t.1, p.265-82, tables, diagrs.) 16 refs. Text in Russian. Summary in English. **Title tr.:** Paragenesis of alumina in the oversaturated clays of Archean crystalline schists of the Aldan shield.

Notes that the distribution of iron and magnesium in rock minerals corresponds to Ramberg's theory concerning the influence of the structure of silicates on the distribution of cations. The replacement of silica by aluminum structure causes increase in the chemical potential of magnesium and a decrease in the chemical potential of ferrous iron. This determines the relations of biotite iron content in paragenesis with other iron-magnesian minerals. Two temperature stages of metamorphism are distinguished: cordierite-almandine and biotite-sillimanite. A diagram is compiled showing a number of regularities in mineral association, which can be used in mapping metamorphic facies in regions where Archean rocks oversaturated in alumina develop. —From author's abstract. (DLC.)

73797. **MARAMZIN, ALEKSANDR VASIL'EVICH,** *and others.* K voprosu o temperaturnom rezhime stvola skvazhiny pri burenii s produvkoĭ vozdukhom v usloviiakh mnogoletneĭ merzloty. (Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut metodiki i tekhniki razvedki. Trudy 1961, sbornik 3, p.70-84, tables, graphs.) 3 refs. Text in Russian. *Other authors:* A.I. Kirsanov, T.M. Illarionova, *and* Z.N. Efimova. **Title tr.:** On the temperature regime in the borehole with air-flush drilling under permafrost conditions.

Reports drillings in the Mir and Udachnaya kimberlite pipes in Yakutia, where permafrost conditions persist, and air was used as drilling fluid instead of mud. Disturbing complications observed to cause "greasing" of the drill stem and core pipe were attributed to improper temperature of the air pumped from the compressor into the hole. The temperature regime in the borehole to 200 m. and more is analyzed; regulation of air temperature in the compressor is treated in detail. Some methods are worked out and directions given for avoiding moisture accumulation in such boreholes. (DLC.)

73798. **MARAMZIN, ALEKSANDR VASIL'EVICH.** Osnovy tekhnologii bureniia razvedochnykh skvazhin v usloviiakh mnogoletnei merzloty. (Vsesoiuznyi nauchno-issledovatel'skii institut metodiki i tekhniki razvedki. Trudy 1962, sbornik 5, p.5-31, graphs, diagrs., tables, maps.) Text in Russian. **Title tr.:** Fundamentals of the technology of exploratory drilling in permafrost.

Describes the conditions and the methods of drilling work in permafrost areas of the USSR, the regions above 63°N. included. The heat regime of wash in the holes is considered, and the deterioration of their frozen walls by thawing effect of wash water during drilling, is evaluated. The cementing of drillholes in media of constant negative temperature is discussed. The complications of drilling in permafrost are analyzed and suggestions made for avoiding them. The optimal parameters for such drilling in permafrost, and coring methods are recommended. (DLC.)

MARATHE, S. B., *see* Kumar, M.A., & *others.* Effect of cold . . . 1959. No. 73208

MARCHEGIANI, CARLO, *see* Parentela, A., & *others.* Influenza dell' ipotermia . . . 1961. No. 74648

73799. **MARCHENKO, A. F.** Stratigrafiia mezozoiskikh otlozhenii Kamchatki. *(In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.58-61.) Text in Russian. **Title tr.:** Stratigraphy of the Kamchatka Mesozoic deposits.

Reviews these terrigenous and siliceous-volcanic deposits, and discusses their stratigraphic separation. A stratigraphic scheme consisting of three series is recommended. (DLC.)

73800. **MARCHENKO, A. I.,** *and* **E. M. KARLOV.** Mineral'nyi obmen v elovykh lesakh severnoi taigi i lesotundry Arkhangel'skoi oblasti. (Pochvovedenie, 1962, no.7, p.52-66, tables.) 19 refs. Text in Russian. Summary in English. **Title tr.:** Mineral exchange in fir forests of the northern taiga and forest-tundra of Arkhangel'sk Province.

Reports a study of litter-fall and mineral exchange in fir forests with green moss cover, on a selected taiga site on the left bank of the Vaga River (61°48′N. 42°56′E.) and a tundra site in the Kanin-Timan near Pesha, (66°54′N. 47°33′E.) Despite somewhat similar mechanical and chemical composition of the soils on the two sites, the reserves of biomass in the northern taiga are 2.5 times greater than in the forest-tundra soil. The accumulation of minerals in the biomass of taiga soil is thrice that in the tundra. The mineral elements exchanged between vegetation and soil are N, Ca, K, Si, and some others. (DLC.)

MARCUS, SIDNEY O., *see* Perchal, R.J., & S.O. Marcus. U.S. . . . forecasting program. 1961. No. 74720

73801. **MARCUS, STANLEY,** *and others.* Effect of acute and chronic exposure to low temperatures on survival of mice challenged with *Klebsiella pneumoniae.* Fort Wainwright, Alaska, Oct. 1961. 8 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-37.) 8 refs. *Other authors:* F. Miya, L.G.J. Phelps *and* L.V. Spencer.

Reports investigations of normal and immunized mice exposed to 2°C. Singly caged animals were adversely affected by acute cold stress; but mice chronically cold stressed were markedly protected by the immunization, whether caged singly or in groups. Chronic cold exposure did not reduce formation of agglutinin antibody. (CaMAI.)

73802. **MARCUS, STANLEY,** *and others.* Effect of acute and chronic low temperature stress on survival of mice challenged with *Staphylococcus aurens.* Fort Wainwright, Alaska, Oct. 1961. 10 p. tables. (U.S. Air Force. Arctic Aeromedical Laboratory, Technical report 61-42.) 17 refs. *Other authors:* as *supra.*

Immunization offered significant protection to challenged mice, both kept at room temperature or acutely exposed to 2°C. in groups. No protection was noted in similar mice exposed to cold individually. Chronically exposed mice were not protected against subsequent challenge. (CaMAI.)

73803. **MARCUS, STANLEY,** *and others.* Effect of exposure to low temperature on development of *Spirochaeta pallida* in the rabbit. Fort Wainwright, Alaska, Oct. 1961. 5p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-43.) 7 refs. *Other authors:* as *supra.*

Adult male rabbits challenged intratesticularly with viable Spirochaetae developed syphilomata at identical rates when kept at 3°or 21°C.. Neither were there gross differences in their rectal temperatures. (CaMAI.)

73804. **MARCUS, STANLEY,** *and others.* Effect of low ambient temperatures on specific and non-specific resistance of mice to bacterial disease. Fort Wainwright, Alaska, Aug. 1962. 23p. tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 62-5.) 33 refs. *Other authors:* as *supra.*

Account of experiments indicating that specific resistance "afforded the maximal protection possible," whereas the non-specific kinds were of low extent. Cold (2°C.) did not interfere with protection gained from specific immunization when the mice were caged in groups, in contrast to individually caged mice. The differences in results were not due to heat loss of the separately caged mice, but rather due to isolation (psychological). (CaMAI.)

73805. **MARCUS, STANLEY,** *and others.* The influence of low ambient temperatures in cold-acclimatized mice challenged with Ehrlich ascites tumor cells. Fort Wainwright, Alaska, Oct. 1961. 10p. illus., table. (U.S. Air Force. Arctic Aeromedical Laboratory. Report 61-38.) *Other authors:* as *supra.*

Mice acclimatized to near freezing temperatures were inoculated with these cells and kept in the cold environment. The viability of the tumor cells was not affected, but there was a significant delay in mortality. Final mortalities however, were similar in this group and in controls kept at room temperature. (CaMAI.)

73806. **MARCUS, STANLEY,** *and others.* Studies on *Klebsiella pneumoniae* passed through mice maintained at low ambient temperature. Fort Wainwright, Alaska, Oct. 1961. 14p. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-7.) 13 refs. *Other authors:* as *supra.*

Reports a study of oxygen uptake, growth, ability, and virulence of bacteria isolated from

mice kept at 2°or 21°C. Of the three aspects studied, only one differed in the two groups: growth ability of the organisms isolated from the cold-stressed mice was temperature-independent between 32° and 37°C. The control groups showed no such independence. (CaMAI.)

73807. MARFUNIN, A. S., *and* **S. V. RYKOVA.** Opticheskie i strukturnye osobennosti promezhutochnogo-maksimal'nogo mikroklin-pertita iz pegmatitov Taĭmyra. (Akademiĭa nauk SSSR. Mineralogicheskiĭ muzeĭ. Trudy 1961. vyp. 12, p.230-34, illus., table, graphs.) 5 refs. Text in Russian. **Title tr.:** Optical and structural features of intermediate-maximal microcline-perthite from pegmatites of Taymyr.

Reports crystallographic and mineralogic study of potash feldspar; optical and X-ray measurements are reported. Large perthite-like intergrowths of albite in feldspar sample are described, noting the triclinic orientation of crystals and its development. (DLC.)

73808. MARGOLIN, A. B. Osnovnye problemy razvitiĭa narodnogo khozĭaĭstva Dal'nego Vostoka. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geograficheskaĭa, May-June 1961, no.3, p.37-46, table.) 7 refs. Text in Russian. **Title tr.:** Main development problems of the Far East economy.

Divides this 3.1 million km.^{2} area into southern, northeastern (Magadan and Kamchatka provinces), and Sakhalin regions. Population density, railroad and river transportation, mineral, forest and fisheries resources are briefly summarized. Main attention is given to the southern part of the area, and links of the Far East with Japan, Australia, Burma and other countries are noted. An expanding economy and its planning are stressed. (DLC.)

73809. MARĬAGIN, GEORGIĬ ALEKSANDROVICH, *Compiler.* Goroda, kotorykh ne bylo na karte. Moskva, Izd-vo "Sovetskaĭa Rossiĭa", 1960. 372 p. illus. Text in Russian. **Title tr.:** Towns which did not used to appear on the map.

Presents 13 articles by various authors on towns developed in the course of recent economic and industrial expansion; four of them relating at least in part to the far North, are described under their authors' names, viz (titles tr.):

TYCHININ, V. The polytechnical town on the Angara.

ELISEEV, L. In the Divnyy Mts.

SMOLĬANITSKIĬ, S. The town of great science.

KOSTĬUKOVSKIĬ, B. By the rocks of the Padun rapids. (DLC.)

73810. *MARINERS WEATHER LOG.* Russian ice floe station drifts into Canadian Arctic. (Mariners weather log, Jan. 1962. v.6, no.1, p.12-13, map.)

Reports drifting station North Pole-7 in Clyde Inlet on the east coast of Baffin Island in May 1961. This station had been abandoned in Mar. 1959 midway between northernmost Greenland and the North Pole. Its subsequent course is unexplained; the weather buildings were found intact; one contained a food supply. (DLC.)

73811. MARION, P., *and others.* Données hémodynamiques, thermodynamiques et hématologiques en hypothermie profonde. (Académie de Chirurgie, *Paris.* Mémoires 1960. t.84, no.14-15, p.462-68.) 2 refs. Text in French. *Other authors:* J. Gounot, S. Estanove, J.F. Estanove, *and* R. Gounot. **Title tr.:** Hemodynamic, thermodynamic and hematologic data from deep hypothermia.

Review of records with brief illustrations from case reports of hypothermia, with esophageal and cardiac temperatures of 12°-8°, and rectal readings of 22°-16°C. General conclusions for each of the three aspects of deep hypothermia are drawn and in some cases mathematically formulated. Conditions during rewarming or circulatory interruption are also considered. (DNLM.)

73812. MARK, VERNON H., *and others.* Localized cooling in the brain. (Science, Nov. 10, 1961, v.134, no.3489, p.1520-21.) 5 refs. *Other authors:* J.C. Chato, F.G. Eastman, S. Aronow *and* F.R. Ervin.

Describes a thin refrigeration probe for use in the central nervous system of animals and man. Cooling the region of the third nerve nucleus of the cat with this device produced pupillary dilatation, which promptly reversed when temperature became normal. (DLC.)

73813. MARKENZON, Ê. I., *and others.* Vremennoe soprotivlenie razdavlivaniiu kak kriterii burimosti gornykh porod vrashchatel'nym sposobom. *(In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.143-47, diagr., tables.) Ref. Text in Russian. *Other authors;* M.D. Fugzan *and* L.I. Baron. **Title tr.:** Temporary resistance to crushing as indicator of rock resistance to rotary drilling.

Reports 13 kinds of ore and rock in deposits of S.M. Kirov apatite mine in Kola Peninsula tested by drilling holes 66 mm. wide and 4-5 m. deep, parallel and perpendicular to lamination of the tested specimens. Data on drilling speed and its relation to the resistance to crushing by pressure are diagrammed, tabulated and discussed. The specimens included various types of apatite ores and the following rocks: ijolite-urtite, ristschorrite, sphene-ijolite, lujavrite and monchiquite. (DLC.)

MARKENZON, Ê. I., *see also* Baron, L.I., & *others.* Issledovanie . . . 1961. No. 70038

73814. MARKEVICH, V. P., *and* **M. I. KOZLOVA.** Nekotorye osobennosti tektoniki i gazonosnosti severo-zapadnoĭ chasti Zapadno-Sibirskoĭ nizmennosti. (Akademiĭa nauk SSSR. Mezhvedomstvennaĭa komissiĭa po probleme "Zakonomernosti razmeshcheniĭa neftĭanykh i gazovykh mestorozhdeniĭ kak osnova dlĭa ikh prognoza na territorii SSSR." Soveshchanie, *Moskva,* 1960, *pub.* 1962. Voprosy tektoniki neftegazonosnykh oblasteĭ, p.179-88, maps, profiles.) Text in Russian. **Title tr.:** Some features of tectonics and gas-bearing properties in the northwestern part of the West Siberian plain.

Outlines features of geologic structure of Berezovo and Alyasovo gas-bearing areas. In the former, three local structures are recognized; in the latter, two. Productive accumulation of gas in Berezovo horizon is recognized. Formation conditions, tectonic movements, character and distribution of rupture dislocations and other features of this part of West Siberian plain are characterized. (DLC.)

73815. MARKGREN, GUNNAR, *and* **S. LUNDBERG.** Om tallbit *Pinicola enucleator* och bändelkorsnäbb *Loxia leucoptera* i Sverige under invasionsperioden 1956-57. (Vår fågelvärld, 1959. årg. 18, nr.3, p.185-205, 3 illus., 3 text maps.) 13 refs. Text in Swedish. Summary in English. **Title tr.:** Irruptions of the pine grosbeak *Pinicola enucleator* and the two-barred crossbill *Loxia leucoptera* in Sweden 1956-57.

Reports the invasion of several birds in unusual numbers during the 1956-57 winter. The pine grosbeaks are believed to have come from Siberia and to have interrupted westward migration because of the rich supply of rowan berries. The two-barred crossbills, whose main breeding area is the larch forests of eastern Siberia, were generally seen in small groups or as individuals in flocks of other crossbills and pine grosbeaks. Observations in Lapland among others are noted for both species. Differences between irruptions and migrations are considered. (DLC.)

73816. MARKGREN, MARTIN. Detaljmorfologiska studier i fast berg och blockmaterial; 1, vittringsprocesser. (Svensk geografisk årsbok 1962. årg. 38, p.123-69, illus., maps.) Text in Swedish. **Title tr.:** Detailed morphological studies of rocks and boulders; 1, weathering processes.

Contains morphogenetic analyses of the surface forms of rocks and boulders with emphasis on the correlation between characteristics of the material and form, as dependent on external disintegration processes, probably varying with climatological factors. The different weathering processes are illustrated from extensive field material collected during 1947-1960 in northern Fennoscandia, around Skåne in southern Sweden, and to a lesser extent in other parts of Scandinavia. The volume of the material precludes a complete inventory of the localities but of numerous examples cited many are from the northern region. (SPRI.)

73817. MARKGREN, MARTIN. Om rönnen och aspen på de yttre skären i Bottenviken samt vid gränsen för fjällbjörk i Lappland. (Fauna och flora 1961. årg. 56, häfte 6, p.260-66, illus.) 14 refs. Text in Swedish. Summary in English. **Title tr.:** On mountain ash and aspen on the outer skerries in the Gulf of Bothnia at the birch limit in Lapland.

Discusses colonization of young islands in the Gulf and of northern Scandinavian mountain slopes by *Sorbus aucuparia, Populus tremula* and *Betula.* Mountain ash spreads quickly on the emerging islands; it also attempts colonization of mountain slopes above the birch limit. *Betula tortuosa* shows more activity in the mountains than *Betula alba* on the coast; both are influenced negatively by reindeer and elk. *Populus tremula* depends on existing vegetation for shelter and never appears as a pioneer. (DLC.)

MARKHAM, THOMAS P., *see* Fastie, W.G., & *others.* Far ultra-violet auroral spectra . . . 1961. No. 71345

73818. MARKHAM, W. E. Forecasting sea ice conditions. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.1112-18.)

Describes major categories of ice, noting terminology developed by the World Meteorological Organization. Seasonal ice conditions in the North American Arctic are outlined, especially navigable periods in the various waterways. Ice movement is described; on-shore from Greenland to western Ellesmere, roughly parallel to the coastline from Axel Heiberg Island to Point Barrow; also a large anti-cyclonic eddy centered near 80°N. 150°W. The Canadian Ice Reconnaissance and Forecasting program maintained by the Meteorological Branch is summarized, its activities now cover nearly all Canadian coastal waters in which shipping operates. (DGS.)

73819. MARKHININ, E. K. *and others.* Izuchenie sostoĭaniiā vulkanov Klīuchevskoĭ gruppy i vulkana Sheveluch v 1958-1959 g. (Akademiiā nauk SSSR. Vulkanologicheskaiā stanţsiiā. Bīulleten' 1961. no.31, p.3-16, illus., tables.) Text in Russian. *Other authors:* L.A. Basharina, O.G. Borisov, V.N. Borisova, V.B. Pugach, K.M. Timerbaeva, *and* P.I. Tokarev. **Title tr.:** Study of the state of the Klyuchevskaya group of volcanoes and of Sheveluch Volcano in 1958-1959.

Presents work of the volcanological station at Klyuchi, headed by E.K. Markhinin: temperature and gas composition of fumaroles on lateral vents of Klyuchevskiy and other volcanoes, reported by L.A. Basharina; phenomena of the secondary heating of the surface of an agglomeratic stream on Bezymyannyy Volcano, O.G. Borisov; growth of a new cupola of Bezymyannyy, air observations of the group of volcanoes Oct. 12, 1959 and visit to Bezymyannyy, V.N. Borisova; data on gas ejection by Bezymyannyy in March 1958, E.K. Markhinin; geomagnetic and gravimetric investigations, V.B. Pugach; visual observations of Klyuchevskiy and other volcanoes, K.M. Timerbaeva; and seismic observations, P.I. Tokarev. In general, activities were limited to fumarolic and solfataric discharges and to ejection of ash by Bezymyannyy. The slow growth of the new Bezymyannyy cupola is noted. Permanent magnetometric determinations are stressed in work of the Klyuchi station. (DLC.)

73820. MARKHININ, E. K., *and others.* Izuchenie sostoĭaniiā vulkanov Klīuchevskoĭ gruppy i vulkana Sheveluch v 1960 g. (Akademiiā nauk SSSR. Vulkanologicheskaiā stanţsiiā. Bīulleten' 1962. no. 32, p.3-13, diagrs., table.) Text in Russian. *Other authors:* O.M. Alypova, I.B. Nikitina, V.B. Pugach, *and* P.I. Tokarev. **Title tr.:** Study of the state of the Klyuchevskaya group of volcanoes and of Sheveluch Volcano in 1960.

Presents data on the 1960 activity of Klyuchevskiy, Bezymyannyy, Ploskiy Tolbachik and Sheveluch volcanoes in Kamchatka; based on visual observations from the Klyuchi station, fumarole gas analysis, seismic observations at the Klyuchi, Kozyrevsk and Apakhonchik seismic stations, and geomagnetic measurements. The volcanic activity was limited to a weak eruption of Bezymyannyy in April 1960, vapor emanations from the Klyuchevskiy crater, to fumarolic activities, strongest in the Bezymyannyy area, and seismic tremors, expecially in the Ploskiy Tolbachik area. (DLC.)

73821. MARKHININ, E. K., *and* **A. M. SAPOZHNIKOVA.** O soderzhanii Ni, Co, Cr, V i Cu v vulkanicheskikh porodakh Kamchatki i Kuril'skikh ostrovov. (Geokhimiiā, 1962, no.4, p.372-76,

table, diagrs.) 10 refs. Text in Russian. Summary in English. **Title tr.:** On the Ni, Co, Cr, V, and Cu content in the volcanic rocks of Kamchatka and the Kuril Islands.

Reports from 69 chemical analyses, the nickel, cobalt, chromium, vanadium and copper content in basalt, andesite-basalt, andesite, dacite and rhyolite rocks. A regular increase from basic to acid rocks is established. The volcanic rocks are characterized by relatively low values of Ni, the usual Cu and Cr, and high Co and V content. (DLC.)

73822. MARKHININ, E. K., *and* **A. M. SAPOZHNIKOVA.** O soderzhanii Zr v vulkanicheskikh porodakh Kamchatki i Kuril'skikh ostrovov. (Geokhimiĭa, 1962, no.9, p.838-39, graphs.) Ref. Text in Russian. **Title tr.:** On the zirconium content in volcanic rocks of Kamchatka and the Kuril Islands.

Reports the Zr content of basalt, andesite, dacite and rhyolite as determined by spectrum analysis. (DLC.)

73823. MARKHININ, E. K., *and others.* Opyt vulkano-geograficheskogo raĭonirovaniĭa Kamchatki i Kuril skikh ostrovov. (Akademiĭa nauk SSSR. Vulkanologicheskaĭa stantsiĭa, Biŭlleten' 1962. no.32, p.52-70, diagrs., tables, fold. maps.) 36 refs. Text in Russian. *Other authors:* A.N. Sirin, K.M. Timerbaeva, *and* P.I. Tokarev. **Title tr.:** A tentative volcanological-geographic zoning of Kamchatka and the Kuril Islands.

Presents data on the activity of 33 Kamchatka volcanoes: 20 eruptive, 7 solfataric and 6 "potential", and 47 in the Kurils. Their distribution is discussed and illus.; probability and violence of new eruptions indicated. Known eruptions of active volcanoes in Kamchatka are tabulated; of the 154, 48 have occurred in the last 30 years. (DLC.)

73824. MARKIN, N. M. Perspektivy neftenosnosti zapadnogo poberezh'ia Kamchatki. *(In:* Akademiĭa nauk SSSR. Komissiĭa po problemam Severa. Syr'evye resursy . . . 1961, p.64-74.) Text in Russian. **Title tr.:** Prospects for oil on the west coast of Kamchatka.

Describes stratigraphic sections of Tertiary deposits of western Kamchatka, from the Momichilskiy Peninsula south to the Ozernaya River. Lower, Middle and Upper Tertiary complexes are recognized and each described. Indications for oil, such as bitumen, gases, porosity of rocks, are characterized. Structures favorable for oil accumulation are noted and further investigations urged. (DLC.)

73825. MARKIN, N. M. Stratigrafiĭa tretichnykh otlozheniĭ zapadnogo poberezh'ia Kamchatki. *(In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.136-50.) Text in Russian. **Title tr.:** Stratigraphy of Tertiary deposits on the west coast of Kamchatka.

Presents a stratigraphic division of western Kamchatka, based on many years' study. Insufficient investigation of fauna precludes application of the European stratigraphic scale. Tertiary deposits vary from 9 to 11 km. in thickness and include all series. They are divided by Markin into only five series with several subseries of local type, and accordingly described. (DLC.)

73826. MARKIN, V. A. Aktinometricheskie nabliŭdeniĭa na lednikovom kupole Zemli Frantsa-Iosifa. (Issledovaniĭa lednikov i lednikovykh raĭonov, 1961. vyp.1, p.85-93, illus., tables, graph.) Text in Russian. Summary in English. **Title tr.:** Actinometric observations on an ice dome on Franz Joseph Land.

Reports results of preliminary analysis of data obtained on the Churlyanisa ice dome on Hooker Island, during the 1957-1959 Institute of Geography expedition. Observations were made of the intensity of direct, diffuse, total, and reflected radiation, also the radiation balance and albedo. Monthly means and yearly variations are presented and discussed. The radiation balance in the year observed (1958) was negative by about two Cal./cm^2., surface reflection being high and incoming radiation reduced by the presence of fog. (CaMAI.)

73827. MARKIN, V. A. Ob osobennostiakh radiatsionnogo rezhima lednikovogo kupola. *(In:* Akademiĭa nauk SSSR. Institut geografii . . . Materialy gliatsiologicheskikh . . . 1961. vyp.2, p.31-32, illus., table.) Text in Russian. **Title tr.:** On radiation regime features of the ice dome.

Reports actinometric observations made on Churlyanisa ice dome on Gukera Island of Franz Joseph Land. Monthly values of total and absorbed radiation, and radiation balance are tabulated for 1958. These data are compared with similar observations of the same year on Kheysa Island where the surface is not glacier covered. Substantial differences in various components of radiation balance are disclosed. The annual sum of hours with sunshine on Churlyanisa dome is 1.5 times less than on Kheysa Island and cloud occurrence four times greater. Differences in albedo, etc. are also noted. (DLC.)

MARKLE, ROGER A., *see* Malone, K. Mercury Alaska. 1962. No. 73772

73828. MARKLUND, GUNNAR, 1892– , *and* A. ROUSI. Outlines of evolution in the pseudogamous *Ranunculus auricomus* group in Finland. (Evolution, Dec. 1961. v.15, no.4, p.510-22, illus., maps.) 32 refs.

Reports the taxonomy, phytogeography, and cytology of this buttercup group and considers the evolutionary mechanisms responsible for its diversity. Among the forms described is *R. auricomus* subsp. *calvescens* H. Smith, distributed widely in Finland north of 68°N. A diploid parent, *R. lyngei,* is suggested for this pentaploid. Interspecific hybridization accounts mainly for the *R. auricomus* group's polymorphism. (DI.)

73829. MARKOV, F. G. Geologicheskoe stroenie i metallogeniĭa Taĭmyrskoĭ skladchatoĭ oblasti. *(In:* Krasnoĭarskaĭa . . . ėkspeditsiĭa. Prirodnye usloviĭa . . . 1961, p.53-70.) Text in Russian. **Title tr.:** The geologic structure and metallogeny of the Taymyr folded zone.

Describes the stratigraphy of Proterozoic, Sinian and Paleozoic deposits mainly distributed in the Taymyr folded zone and Severnaya Zemlya. The magmatism is treated, its stages are characterized in respect to the rocks. Tectonic structure is evaluated. Mineral resources are reported. An

independent coal basin is noted with great reserves of various types of coal. Occurrence of metallic ores, fluorite, micas and other useful resources are summarized. (DLC.)

73830. MARKOV, F. G. Geologicheskoe stroenie Taĭmyrskoĭ nizmennosti. (*In:* Krasnoĭarskaĭa . . . ėkspeditsiia. Prirodnye usloviia . . . 1961, p.71-85.) Text in Russian. **Title tr.:** Geologic structure of the Taymyr lowland.

Reviews the stratigraphy of Silurian, Devonian, Carboniferous, Permian, Triassic, Jurassic and Cretaceous deposits. The magmatism and tectonics of this lowland are characterized. In the Yenisey and Khatanga depressions, oil has been discovered of possible productive capacity; coal and salt have also been found. The ore deposits so far found are few and without practical interest. The search for oil and coal is treated in greater detail. (DLC.)

73831. MARKOV, F. G., *and* **B. V. TKACHENKO.** Paleozoĭ Sovetskoĭ Arktiki. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t.117, Geologiia . . . 1961, p.18-32, fold. tables.) 7 refs. Text in Russian. Pub. in English in International Symposium on Arctic Geology, q.v. **Title tr.:** The Paleozoic of the Soviet Arctic.

Reports the distribution, stratigraphy (up to stages), and faunal characteristics of the Cambrian, Ordovician, Silurian, Devonian, Carboniferous and Permian deposits of the area. Each system is treated in turn with a stratigraphic correlation table appended. All Soviet arctic regions approx. from the Polar Ural to Chukotka are included, as well as the arctic islands: Novaya Zemlya, Severnaya Zemlya, New Siberian Islands, and others. (DLC.)

73832. MARKOV, I. Uchebno-opytnyĭ uchastok v teplitse. (Shkola i proizvodstvo, Nov. 1962. god 6, no.11, p.92.) Text in Russian. **Title tr.:** An experiment-plot under glass.

Describes a school hothouse project in the upper Nizhnyaya Tunguska region, growing maize, cucumbers, tomatoes, and onions (succesfully), also melons and watermelons. (DLC.)

73833. MARKOV, KONSTANTIN KONSTANTINOVICH, *and others.* Osnovnye zakonomernosti razvitiia prirody territorii SSSR v techenie chetvertichnogo perioda; lednikovogo perioda-antropogena. (Akademiia nauk SSSR. Izvestiia, ser. geograficheskaia, July-Aug. 1961, no.4, p.10-13, diagr., fold. map & table.) Text in Russian. *Other authors:* G.I. Lazukov *and* M.P. Grichuk. **Title tr.:** The main lines of development of nature in the territory of the USSR during the Quaternary period; Glacial-Anthropogene.

Presents a stratigraphic correlation of Quaternary deposits in the Russian plain, the Urals, Eastern Siberia and the Far East in a tabular summary. Chronological sequences and spatial distribution of the Quaternary deposits are outlined. Direction and rhythmic character of variation of nature in the Quaternary are noted. Map indicates present and previous glaciations including arctic areas in the USSR. (DLC.)

73834. MARKOV, M. S. Obosobennostiakh razvitiia zemnoĭ kory v rannem dokembrii, na primere Kanadskogo shchita. (Akademiia nauk SSSR. Sibirskoe otdelenie. Vostochno-Sibirskiĭ geologicheskiĭ institut. Trudy, ser. geologicheskaia, 1962. vyp.5, p.70-76.) 22 refs. Text in Russian. **Title tr.:** On features of development of the earth's crust in the early Precambrian, as exemplified by the Canadian Shield.

Presents an analysis based on the literature: work of J.E. Gill and others. The Keewatin recognized as the oldest known rocks and other Precambrian series are discussed. Tectonic structure and mountain-building processes in the Shield are reviewed. (DLC.)

73835. MARKOVIN, V. I., *and* **L. IA. KRIZHEVSKAIA.** Rabota sektorov IA AN SSSR. (Akademiia nauk SSSR. Institut arkheologii. Kratkie soobshcheniia, 1962, vyp.92, p.105-112.) Refs. Text in Russian. **Title tr.:** Section activities of the Academy of Sciences' Institute of Archeology.

Summarizes papers read at conferences in 1961, including two of arctic interest. V.I. Moshinskaia described bone and antler combs from Ust'-Poluy, lower Ob region, dated to the 2nd millennium B.C. and later; their ritual use is noted. R.V. Kozyreva discussed affinities to Eskimo cultures observed in the oldest neolithic stage (1st millennium B.C.) of Hokkaido shell mound sites. (DSI.)

MARKOVIN, V. I., *see also* Krizhevskaia, L.IA., & *others.* Rabota sektorov Instituta arkheologii . . . 1962. No. 73149

MARKOWSKY, M., *see* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

73836. MARMO, VLADI, *and* **H. STIGZELIUS.** Bergshanteringen i Finland. (Tidsskrift for kjemi, bergvesen og metallurgi, Mar. 20, 1962. bd.22, nr.3, p.59-63, illus., graph, text map.) Text in Norwegian. Summary in English. **Title tr.:** The mining industry in Finland.

Reviews briefly this industry and describes the active mines and more important quarries. Because of the increased iron-ore production expected during the 1960's, a new steel plant in northern Finland is planned. A railway is to be built for development of the Kolari region magnetite and hematite deposits, with production possibly in 1967. From the Kärväsvaara magnetite mine in southern Lapland, over 50% ore is being taken; it is enriched to ca. 70% at a plant one km. from the mine on the railway between Rovaniemi and Kemijärvi. Production figures are included. (DLC.)

73837. MARMO, VLADI. Kallioperämme ikä. (Terra, 1962. årg. 74, nr.3, p.114-23, maps, graph, tables.) 7 refs. Text in Finnish. Summary in English. **Title tr.:** On the age of the Finnish basement rocks.

Discusses recent absolute age determinations of the Carolinide and Svecofennide formations; they both have about 1800×10^6 yrs., and the discontinuity between them is questionable, therefore they should not be considered separate formations. The Svecofennides are probably remnants of an extensive ancient mountain chain. (DGS.)

73838. MARMO, VLADI. On the sulphide and sulphide-graphite schists of Finland, with an especial reference to the sulphide-graphite schists of Cen-

tral Pohjanmaa. Helsinki, 1960. 80 p. 3 plates, illus., maps, tables. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finlande no.190) 76 refs.

Reviews the available information on distribution and mineralogy of these Precambrian rocks, collectively called "black schists" in Scandinavia. Detailed discussion of their minor consitutents and of the sulfides is given, including about a hundred partial chemical analyses. Copper, nickel, zinc, vanadium and molybdenum, typical minor constituents of the sulfide-graphite schists, are typical also of sapropels. A possible genetical relationship between these schists and formation of economic or semi-economic ores is discussed. Black schists of Lapland vary considerably in composition and are widely scattered; some occur near Sodankylä and Kittilä; sulfide-graphite schists are noted in the large Pechenga (Petsamo) nickel deposit. (DLC.)

73839. MARMO, VLADI. Serpentinite of Pahta-Autsi, Finnish Lapland. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finlande. Mar. 1960. no.188, p.67-76, illus., maps, diagrs., table.) 5 refs.

Outlines general geology of this gorge at the southern end of Lake Pahta near the source of the Repo River, approx. 69°N. 21°E. Petrology of the ultrabasic rocks, with its magnetite veinlets associated in places with serpentine is described and the results of chemical analysis reported. No evidence is found regarding the source of this widespread intrusive material. (DLC.)

MARMO, VLADI, *see also*

Finland. Geologinen Tutkimuslaitos. 1960-62, *in progress.* No. 71397

Paarma, H., & V. Marmo. Eräistä suurrakenteista . . . 1961. No. 74600

73840. MARMORSHTEĬN, L. M., *and* **V. S. ANDREEV.** Izmerenie vyzvannoĭ polĭarizatsii gornykh porod dlĭa izucheniĭa ikh kollektornykh svoĭstv na ustanovke UVP-NIIGA-1. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.121, vyp.18, sbornik statei po geologii i neftegazonosnosti, p.132-38, illus., diagrs.) 4 refs. Text in Russian. **Title tr.:** Measurement of induced polarization of rocks for investigation of their reservoir properties with a UVP-NIIGA-1.

Describes the use of this electrical prospecting method, which helps to determine the coefficient of permeability, specific surface and other characteristics of reservoir rocks. The logging apparatus is described and illus. The UVP-NIIGA-1 is compared with another device developed earlier by V.N. Dakhnov and others, and the new one considered more advantageous. (DLC.)

73841. MARQUARD, RICHARD E. Identification of age classes of Canada geese in field flocks. (Journal of wildlife management, Jan. 1962. v.26, no.1, p.96-97.) 8 refs.

Describes a number of minor differences between immature and mature birds, enabling distinction with the unaided eye from as far as 50 ft. Evaluation also indicated the most reliable of these methods. (DLC.)

73842. MARSDEN, MICHAEL, 1929– . Submarine topographical studies in the Queen Elizabeth Islands, 1960. (Polar record, Jan. 1961. v.10, no.67, p.388-90.)

Reports tests, from April to June, of a Kelvin and Hughes type MS29M echo sounder to obtain, through sea ice, soundings needed for geomorphological investigations in the Canadian Arctic. The equipment was tested at various locations, some covered by heavy sea ice or loose floes. The machine uses a brick-shaped magnetostriction bar type transducer, which functions both as transmitter and receiver, and has a range of 880 m. The tests showed identical readings through ice and water; response was stronger through ice; and good responses were obtained through all types of ice. Tests in the Antarctic described by N.M. Ridgeway in No.72, p.298-99, were unsuccessful. The failure is attributed to the somewhat weaker echo sounder used and the near critical transmission conditions. (DGS.)

MARSDEN, MICHAEL, 1929– . *see also*

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

MARSEL, CHARLES J., *see Western miner.* Beryllium NWT. 1961. No. 76532

MARSH, CHARLES F., *see* Gazaway, H.P., & C.F. Marsh. . . . Anchorage Fairbanks households . . . 1960. No. 71619

MARSH, RALPH EASTMAN, 1903– , *see* U.S. Geol. Survey. Surface waters Alaska. 1962. No. 76271

MARSHALL, B. VAUGHN, *see* Kachadoorian, R., & *others.* Geologic investigations . . . Project Chariot . . . 1961. No. 72604

73843. MARSHALL, ERNEST W. Structure and stratigraphy of T-3 and the Ellesmere Ice Shelf. (U.S. Air Force. Cambridge Research Center. Geophysical research papers no.63, v.3, Apr. 1960. p.45-57, illus., map, diagrs.) 4 refs. Text of paper read by title at Symposium SD2, Physical Geography of Greenland, Copenhagen, July-Aug. 1960, in connection with the 19th International Geographical Congress, Norden.

Discusses structural and stratigraphic similarity of these two ice masses, based on field studies in 1953-1954 and laboratory analysis of ice cores. Major stratigraphic units are: a basement unit of brine-soaked, fine-grained, sheared ice of possible glacial origin and coarse-grained glacier ice; also an upper unit of dense, granular iced firn interbedded with lake ice. Varying thicknesses of these two units combine to a total of 160-170 ft. A dirt horizon between the two units represents material concentrated by a long period of ablation about 3000-3500 yrs. B.P. Evidence from various types of studies permits the reconstruction of four stages of development: formation (post-7200 yrs. B.P.) and brine diffusion; ablation (3560 yrs. B.P. on Ellesmere, and 3050 yrs. B.P. on T-3); accumulation over a period of 185-200 yrs; and a present stage of ablation probably beginning a few years prior to 1954. Summarized in *Folia geographica danica,* 1961, v.9, p.177-78. (DGS.)

73844. MARSHUNOVA, M. S. Balans dlinnovolnovoĭ radiatsii troposfery v Arktike; tezisy. (Mezh-

vedomstvennoe soveshchanie po aktinometrii i atmosfernoĭ optike, 2d, *Leningrad,* 1959 *pub.* 1961. Aktinometriia i atmosfernaia optika, p.79.) Text in Russian. **Title tr.:** Longwave radiation balance in the troposphere of the Arctic; summary.

Summarizes procedures and methods for calculating infrared radiation in the atmosphere and troposphere of the Arctic, on the basis of work at several polar and drifting stations; no data are included. (DLC.)

73845. MARSHUNOVA, M. S. Osnovnye zakonomernosti radiatsionnogo balansa podstilaiushcheĭ poverkhnosti i atmosfery v Arktike. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.229, Radiatsionnyĭ i teplovoĭ balans Arktiki, p.5-53, tables, graphs.) 53 refs. Text in Russian. **Title tr.:** Basic regularities of radiation balance of the atmosphere and its subjacent layer in the Arctic.

Reports a study based on the actinometric and aerological data from Tikhaya Bay, Amderma, Cape Zhelaniya, Dikson and Uyedineniya Islands, Cape Chelyuskin, Tiksi Bay, Mostakh and Kotel'nyy Islands, Kresty-Kolymskiye, Chetyrekhstolbovoy Island, Cape Shmidta, Provideniya Bay and Uelen, during various periods from 1933 to 1957. Longwave radiation diagrams are constructed from which the characteristic components of the radiation balance are obtained as functions of temperature and moisture distribution in the air. Certain regularities which explain the physical nature of the relationship between radiation characteristics and meteorological elements are disclosed, and new coefficients in the formulas used in determination of total and effective radiations. Components of the radiation balance obtained for all the regions of the Arctic by using one and the same method throughout, and the mean values of the balance for a many-year period are calculated. The radiation balance of the earth-atmosphere system in the Arctic is found to be negative during the entire year, resulting in an advection of heat from lower latitudes through the year. (CaMAI.)

73846. MARTHINUSSEN, MARIUS. Brerandstadier og avsmeltningsforhold i Repparfjord-Stabbursdalområdet, Finnmark; et deglaciasjonsprofil fra fjord til vidde. (Norway. Geologiske undersøkelse, Årbok 1960, *pub.* 1961, nr.213, p.118-69, 15 illus., 6 maps incl. fold.) 9 refs. Text in Norwegian. Summary in English. **Title tr.:** Glacier margin stages and deglaciation conditions in the Repparfjord-Stabbursdal region, Finnmark; a deglaciation profile from fjord to plateau.

Describes the glacial geology of two small areas in northern Norway, where two active substages in the deglaciation are in evidence. The older substage was surveyed in the Repparfjord valley where topography is irregular. The younger marked by a pronounced marginal zone on the inland plateau, is believed to coincide with the so-called Younger Dryas time in Fennoscandia. Between the two was the warmer Alleröd period. Much of the drainage of active ice was subglacial, and that accounts for the large amounts of sand and gravel. The later stage can be correlated with other Scandinavian locations and world-wide stages. Some of the correlations are based on Carbon-14 tests of materials in raised shorelines. (DGS.)

73847. MARTI, IULIĬ IUL'EVICH, *and others.* Prichiny umen'sheniia zapasov atlanticheskо-skandinavskikh sel'deĭ. (Rybnoe khoziaĭstvo, 1961. god 37, no.12, p.12-17, illus., tables.) Ref. Text in Russian. *Other authors:* S.S. Fedorov *and* I.G. IUdanov. **Title tr.:** Causes of reduced stocks of Atlanto-Scandinavian herring.

Discusses the symptoms indicating reduced reserves. Distribution and biology of herring are outlined, its exploitation and overexploitation, especially in the past decade. Recruitment and prospects (poor) are considered, with recommendation that the industry be shifted to the North Sea and the northwest Atlantic. (DLC.)

73848. MARTI, IULIĬ IUL'EVICH. Sostoianie zapasa vzrosloĭ arkticheskoĭ treski. (Rybnoe khoziaĭstvo, 1961. god 37, no.7, p.7-9, illus.) Text in Russian. **Title tr.:** Condition of reserves of adult arctic cod.

Reports on the drop of catches in the Barents Sea since 1956, and its causes; reduction in year-classes and its effects; result of the war years' standstill in fishing; present stock and immediate prospects. (DLC.)

MARTIN, C. M., *see* Chaffee, R.R.J., & C.M. Martin. Immune response . . . 1962. No. 70636

73849. MARTIN, L. JOHN. Tectonic framework of northern Canada. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.442-57, maps, sections.) 72 refs.

Outlines the long and complex geologic history from late Precambrian time. Three major structural elements are noted: the North American continental craton (shield), the Franklinian geosyncline along the entire northern margin of the continent, and the Cordilleran geosyncline on the west. Evidence for Precambrian Caledonian, Hercynian (Variscan), Laramide, and possibly Nevadan orogenic movements has been observed. Periods of orogeny and of regional uplift have been separated and in part overlapped, by periods of basinal and shelf sedimentation. Maps and sections illus. the tectonic pattern and its variation through time. (DLC.)

73850. MARTIN, PETER. Prosperous Eskimo print-makers. (Canadian banker, autumn 1962. v.69, no.3, p.32-41, illus.)

Discusses the art business developed by the West Baffin Eskimo Cooperative at Cape Dorset, Baffin Island. Prints are made from incised drawings on stone and bone, a traditional Eskimo art, and by stenciling designs drawn on seal skin, a new process for these people. Approx. 50 prints of each design are made, shipped south once a year, and sold through approved dealers in Canada, United States and Europe. Sales of 1960-1962 brought a net return of $175,000; the entire community benefits through the cooperative. James A. Houston, formerly of Canadian Handicrafts Guild and later Northern Service Officer at Cape Dorset suggested this enterprise, and as secretary and artistic advisor to the cooperative, guides its development. (CaOCU.)

MARTIN, W. R., *see* Clark, G.R., & *others.* International Fisheries . . . 1961. No. 70763

73851. MARTINOVICH, A. Razvedka morskogo zveria. (Grazhdanskaia aviatsiia, July 1961. god

18, no.7, p.24, port., illus.) Text in Russian. **Title tr.:** Sea-mammal survey.

Notes use of helicopter on a recent cruise of the *Indigirka,* which can carry two. Special pilot training is required for ship-landings. Author describes (*ibid.* p.21) a wolf chase by helicopter in the reindeer kolkhoz on Lake Umbozero, Kola Peninsula. (DLC.)

73852. MARTYNOV, V. F., *and* **A. A. SALAZKIN.** O rasprostranenii mollīūska *Bithynia leachi* v zapadnoĭ Sibiri. (Zoologicheskiĭ zhurnal, Jan. 1962. t.41, vyp.1, p.135-38.) 8 refs. Text in Russian. Summary in English. **Title tr.:** Distribution of the mollusc *Bithynia leachi* in western Siberia.

Reports observations in the far North in the Tyumen, Khanty-Mansi and Yamalo-Nenets areas. The mollusc was found only in flooded bottomlands of the Ob and Irtysh, in alkaline or neutral water. (DLC.)

73853. MARTYNOVA, G. P. Ostrakody iz pogranichnykh sloev devona i karbona Verkhne-Pechorskogo raĭona. (*In:* Soveshchanie po utochneniīū unifitsīirovannykh stratigraficheskikh skhem paleozoīā . . . Karbon, 1962, t.3, p.103-104.) Text in Russian. **Title tr.:** Ostracods of the Devonian and Carboniferous bordering layers in the upper Pechora region.

Reports identification of ostracod fauna found in the Dzhebolskaya stratum on the boundary between Devonian and Carboniferous deposits. Its lower part contains *Selebratina* aff. *gibbozita* Pol., *Bairdia quarziana* Eg. and others, fam. Entomozoidae predominating. The upper part also contains Entomozoidae represented by gen. *Richterina.* (DLC.)

73854. MASAĬTIS, V. L. Trappovaīā formatsīiā basseĭna r. Vilīūĭ. (*In:* Akademiīā nauk SSSR. Otdelenie geologo-geograficheskikh nauk. Petrografiīā Vostochnoĭ Sibiri, t.1, 1962, p.208-255, tables, fold. maps, diagrs.) 35 refs. Text in Russian. **Title tr.:** Trap formation of the Vilyuy River basin.

Outlines the trap magmatism as studied by the author and others during 1950-1956. The geologic structure of the region is reviewed. Tuffaceous and lava strata are described. The intrusive traps are treated in detail, petrographic description is given. Vilyuy complex of trap intrusions is distinguished and described. Mineral resources connected with later phases of intrusions are considered, their genesis varies: magmatic, contact-metasomatic, and hydrothermal. (DLC.)

MASAĬTIS, V. L., *see also* Lur'e, M.L., *&* *others.* Intruzivnye trappy . . . 1962. No. 73634

73855. MASIRONI, ROBERTO, *and* **F. DEPOCAS.** Effect of cold exposure on respiratory $C^{14}O_2$ production during infusion of albumin-bound palmitate-1-C^{14} in white rats. (Canadian journal of biochemistry and physiology, Feb. 1961. v.39, no.2, p.219-24; illus., table.) 17 refs.

At 6°C., both cold- and warm-acclimated rats exhaled similarly a larger proportion of the injected C^{14}, and gave lower terminal amounts of C^{14} in the extracted free fatty acids (F.F.A.), than at 30°C. This indicates that plasma F.F.A. serve as substrate for cold-thermogenesis. The relation of C^{14} oxidation to carbohydrate and glucose utilization, is also elucidated. (DLC.)

73856. MASLENIKOV, VLADIMIR ALEKSEEVICH, *and others.* Drevneĭshie gornye porody Kol'skogo poluostrova. (Akademiīā nauk SSSR. Laboratoriīā geologii dokembriīā. Trudy 1961, vyp.12, Voprosy geokhronologii i geologii, p.133-55, illus., tables, maps.) 6 refs. Text in Russian. *Other authors:* L.P. Bondarenko *and* V.B. Dagelaĭskiĭ. **Title tr.:** The oldest rocks of Kola Peninsula.

Presents a detailed geologic-petrographic description of rocks in northeastern Kola, their absolute age more than 2700 million years. These rocks are divided into two groups, one consisting of gneiss-granites, granites, migmatites and pegmatites, of 3600 - 3060 million years absolute age (according to data of the potassium-argon method); the other comprises gneisses, granites, pegmatites, amphibolites and pyroxenites, having an absolute age of 2880-2700 million years (same method). Both groups belong to the so-called Kat (pre)-Archean, which is divided into lower and upper. (DLC.)

MASLENIKOV, VLADIMIR ALEKSEEVICH, *see also* Eliseev, N.A., *&* *others.* Ul'traosnovnye i osnovnye intruzii Pechengi . . . 1961. No. 71238

73857. MASLOV, N. A. Cod; Arcto-Norwegian stock; Soviet investigations in the Barents Sea. (International Council for the Exploration of the Sea. Annales biologiques 1958, *pub.* 1960. v.15, p.99-103, illus., tables, maps.)

Discusses decline in cod catches in the southern Barents Sea, since 1956; size composition of cod from this sea for 1955-58; per-hour catches, since 1924; age composition of cod from various parts of the sea and size composition for the same areas and period (1958); hydrographic conditions. (DI.)

73858. MASLOV, N. A. Izmeneniīā v geograficheskom razmeshchenii promysla i ozhidaemyĭ ėffekt regulirovaniīā. (Murmansk. Polīārnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozīāĭstva i okeanografii. Nauchno-tekhnicheskiĭ bīūlleten', 1961, no.1 (15) p.39-44, illus., tables, maps.) Text in Russian. **Title tr.:** Changes in the geographic distribution of fisheries and the anticipated effect of regulation.

Reports a study based on 25-30 years' records of bottom-fish catches primarily of cod and haddock, from the Barents Sea. Long-term fluctuations on the main areas and banks, and their causative factors are considered. Distribution of the benthic biomass, and the monthly distribution of catches for the period are evaluated. Fishing was found to be the main factor in changes of population distribution. (DLC.)

73859. MASLOV, N. A. Soviet haddock investigations. (International Council for the Exploration of the Sea. Annales biologiques 1958, *pub.* 1960. v.15, p.111-13, illus., tables.)

Report on the Barents Sea research as from 1955. Size distribution on the various fishing grounds, age composition, catch per unit of effort (low since 1956), dominant year-classes. (DI.)

73860. MASLOV, S. P. Izmenenie tipa dykhaniīā kak sposob akklimatizatsīii gomoĭotermnykh zhivotnykh k temperature sredy. (Voprosy ėkologii, 1962. t.4, p.51-53.) Refs. in text. Text in Russian. **Title tr.:** Change in the type of respiration as

means of acclimatization in homeotherms to ambient temperature.

Discusses intracellular oxidation through phosphorylation; direct oxidation during cold stress; own experiments with pigeons and mice indicating that direct oxidation is instrumental in raising the resistance to cold and in acclimatization. (DLC.)

MASLOV, S. P., *see also* Severin, S.E., & *others*. Razobshchenie okisleniĭa i fosforilirovaniĭa . . . 1962. No. 75512

MASLOV, V.I., *see* Lur'e, I.S., & V.I. Maslov. K voprosu . . . dorog. 1961. No. 73633

73861. MASON, B. J. The nucleation and growth of ice crystals. (American Geophysical Union. Physics of precipitation, 1960. Geophysical monograph no.5, p.226-32, illus. incl. col., table.) 4 refs. Presented at the Second Woods Hole Conference on Cloud Physics, June 3-5, 1959.

Experiments at Imperial College, London, suggest kaolinite as main source of atmospheric ice nuclei, and a number of silicate nuclei possibly preactivated. Nucleating properties of artificial ice nuclei, mainly inorganic compounds, are discussed in relation to solubility, crystal structure, and surface structure. Critical temperature of a nucleating substance is defined; examples are given of 15 natural and 10 artificial nuclei. New information on the mechanism of crystal growth is provided by measurement of colored growth layers spreading across the crystal surface. Growth of snow crystals in a diffusion-cloud chamber shows that their shape undergoes five changes in the temperature range 0° to -50°C., changes controlled mainly by temperature, not supersaturation of the vapor. Changes are not affected by the pressure and nature of the surrounding gas, or by the presence of aerosols, as reported by Japanese workers. Discussion included remarks on growth changes by U. Nakaya. (DGS.)

73862. MASORO, EDWARD JOSEPH, 1924– . Biochemical mechanisms related to the homeostatic regulation of lipogenesis in animals. Fort Wainwright, Alaska, June 1962. 4, 46 p., illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 61-47.) 161 refs.

Presents broad review of the problem, including a section on the effect of cold-exposure upon lipogenesis (p.18-21.) In it the author stresses and describes the physiological differences between cold-exposure and cold-acclimation: weight, survival, liver glycogen and lipogenesis. Especially, the causes of reduced lipogenesis in the liver and its persistence in the fat tissue of animals exposed or acclimatized to cold are analyzed. (CaMAI.)

73863. MASORO, EDWARD JOSEPH, 1924– , *and others*. Effect of cold stress on lipogenesis by adipose tissue. Fort Wainwright, Alaska, Apr. 1961. 7 p. table. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-20.) 14 refs. *Other authors:* E. Porter *and* J. Patkin.

Reports on the effects of cold stress upon the acetate metabolism by isolated adipose tissue of rats. In the presence of unlabelled glucose at concentrations of 100, or 400 mg/100 ml, lipogenic activity was equal in tissue from cold-stressed and control animals. This is in striking contrast to hepatic lipogenesis which is nearly abolished by cold-stress. (CaMAI.)

73864. MASORO, EDWARD JOSEPH, 1924– , *and* **E. PORTER**. Fatty acid oxidation by mitochondria from cold-fasted rats. Fort Wainwright, Alaska, Apr. 1961. 11 p. illus., table. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-23.) 15 refs.

Mitochondria from cold-fasted rats oxidized as much acetate-1-$C^{14}O_2$ as did these elements from controls, calculating on the dry weight of the mitochondria. Oxidation of palmitate-1-C^{14} to $C^{14}O_2$ also showed no difference between experiment and control. The differences of this behavior from that in liver homogenates and slices, are discussed. (CaMAI.)

73865. MASORO, EDWARD JOSEPH, 1924– . A mechanistic study of the failure in lipogenesis induced by cold-stress. Fort Wainwright, Alaska, Apr. 1961. 12 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-22.) 11 refs.

Account of experiments aiming to elucidate the failure of liver slices from cold-fed rats to synthesize fatty acids. Results indicate that this failure (which contrasts with conditions in homogenates) is due to depressed TPNH over the hexose monophosphate pathway of carbohydrate metabolism. Differences of acetate-1-C^{14} conversion to fatty acid in homogenates from cold-fasted and cold-fed or control rats, are also determined. (CaMAI.)

73866. MASORO, EDWARD JOSEPH, 1924– , *and others*. The role of inhibitory mechanisms in the physiological regulation of lipogenesis. Fort Wainwright, Alaska, Oct. 1961. 12 p. tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-25.) 16 refs. *Other authors:* E. Porter *and* H. Korchak.

Reports on investigation of liver homogenates from rats fasted 24 hours at 0° to 2°C. As fatty acid synthesizing enzymes were found to be at nearly normal levels, and the reduced levels of stimulators and coenzymes of fat formation accounted only for part in latters' depression, it is concluded that inhibitors of lipogenesis appear in the liver of cold-fasted rats. They are located primarily in the microsomes. (CaMAI.)

MASORO, EDWARD JOSEPH, 1924– , *see also*

Porter, E., & E.J. Masoro . . . Cold acclim. & vitamin A. 1962. No. 74912

Patkin, J.K., & E.J. Masoro. Cold acclimation . . . adipose tissue. 1961. No. 74670

Patkin, J.K., & E.J. Masoro. Cold & mitochondrial oxidation, phosphorylation. 1961. No. 74671

MASSON-SMITH, D., *see*

Harland, W.B., & D. Masson-Smith. Cambridge survey . . . 1962. No. 72031

Royal Geog. Soc. Spitsbergen . . . 1962. No. 75233

MASTERTON, JOHN POTTER, *see* Lewis, H.E., & *others*. Stability of BMR . . . 1961. No. 73472

MATEER, C. L., *see* Sullivan, H.M., & *others*. . . . Ozone Resolute . . . 1957-59. 1961. No. 75994

MATEOS, MANUEL, *see* Alaskan Science Conference 1961. 1962. No. 69644

73867. MATERIALY PO ARKHEOLOGII EVROPEĬSKOGO SEVERO-VOSTOKA, vyp.1. Syktyvkar, Komi knizhnoe izd-vo, 1962. 176 p. illus., maps. Refs. Text in Russian. **Title tr.:** Materials on the archeology of the European northeast, no.1. Pub. jointly by the Komi Branch of the Academy of Sciences USSR and the Komi Republic Local History Museum.

New, continuing publication for reporting current archeological, ethnographic, etc. work in the Pechora, Vychegda, Mezen', and adjacent Barents Sea regions. This first issue has six papers as listed below with titles translated and abstracted under the authors' names; they deal mainly with 1959 field work, and are fully illus. with drawings (only) of artifacts.

BUROV, G.M. Semi-permanent settlements on the Vis River, Vychegda basin.

BUROV, G.M. Camp sites on Lake Sindorskoye.

CHERNOV, G.A. Camp sites in the Adz'va River basin, Bol'shezemel'skaya Tundra.

KANIVETS, V.I. Initial results of excavations in the Un'inskaya cave.

KANIVETS, V.I. Central Asian and Germanic coins in the northern Ural.

SAVEL'EVA, E.A. Certain materials on medieval archeology of the Vychegda region. (DLC.)

73868. MATERIALY PO GEOLOGII I POLEZNYM ISKOPAEMYM SEVERO-VOSTOKA EVROPEĬSKOĬ CHASTI SSSR, sbornik statei, vyp.1. Moskva, Gosgeoltekhizdat, 1961. 112 p. tables, maps & cross-sections incl. fold. (Ukhtinskoe geologicheskoe upravlenie.) Refs. Text in Russian. **Title tr.:** Materials on the geology and mineral resources of northeastern European USSR, a collection of papers, no.1.

Contains 12 papers dealing with the geology, petrology, paleontology and mineral resources of the Komi ASSR, Polar Ural, Timan, and adjacent regions. All the papers are abstracted in this Bibliography under their authors' names, viz (titles tr.):

AFANAS'EV, B.L., *and others.* On development conditions of coal-bearing deposits in troughs as exemplified in the Pechora basin.

KNIAZEV, S.A., *and* B.I. TARBAEV. New data on the geology of Chernysheva Ridge.

ENOKIAN, V.S. Carboniferous deposits in the Pechora coal basin territory.

ABRAMOV, V.P., *and* G.I. DEMBSKAIA. New data on Mesozoic deposits in the northern part of the Pechora depression.

MIKLUKHO-MAKLAĬ, A.D. Manifestation of volcanism in the area of the Pechora coal basin and the western slope of the Polar Ural.

BELIAKOV, L.N., *and* L.T. BELIAKOVA. Some features of the geologic structure in the region of the Ural - Pay-Khoy joint.

GESSE, V.N. Preliminary results of geologic mapping in the Paga River basin; Subpolar Ural.

GRIBANOV, B.V. On the stratigraphy of the Sablya Ridge.

VOLLOSOVICH, K.K. On the stratigraphy of the Quaternary deposits of the European North.

KALETSKAIA, M.S. On the stratigraphy of Quaternary deposits of the Pechora basin.

AFANAS'EV, B.L. Recent tectonics of the Pechora coal basin and adjacent regions of the Northern Ural.

DOMBROVSKAIA, KH.R. Some *Samaropsis* in the Vorkuta series of the Pechora basin and their stratigraphic significance. (DLC.)

73869. MATERIALY PO LABORATORNYM ISSLEDOVANIIAM MERZLYKH GRUNTOV, sbornik 4. Moskva, Izd-vo Akademii nauk SSSR, 1961. 251 p. illus., tables, graphs, diagrs. (Akademiia nauk SSSR. Institut merzlotovedeniia.) Text in Russian. **Title tr.:** Data on laboratory studies of frozen ground, collection 4. In sequence to No. 53180.

This collection of 15 papers is issued under a title different from that of the preceding three, namely *Issledovaniia po fizike i mekhanike merzlykh gruntov* (Studies of the physics and mechanics of frozen ground). The main subjects dealt with are the physics of cryogenic processes, and the mechanics of frozen ground and ice. The papers are abstracted in this Bibliography under their authors' names, viz (titles translated):

TIUTIUNOV, I.A. Migration of water in the ground.

NERSESOVA, Z.A. Effect of exchange cations on the migration of water and the heaving of soils during freezing.

KONNOVA, O.S. Effect of exchange cations on the cryogenic texture of rocks and the structure of segregated ice.

D'IAKOV, K.N. Results of experimental studies of moisture migration in freezing soils by means of radioactive emissions.

TIUTIUNOV, I.A., *and* M.M. DERBENEVA. Some physical, chemical, and morphological properties of soils and permanently frozen ground in the far North.

PORKHAEV, G.V. Some data on the filtration coefficient of thawed ground.

IABLONSKAIA, V.P. Study of heat transfer in freezing soils by means of the momentary source method.

TSYTOVICH, N.A. Origin, development, and practical applications of the mechanics of frozen ground.

SHUMSKIĬ, P.A. Mechanism of the deformation and recrystallization of ice.

VIALOV, S.S. Viscoplastic flow of ice sheets and features of ice deformation.

EGEREV, K.E. Adfreezing strength of ground to foundations.

PEKARSKAIA, N.K. Shear strength of permafrost of different texture and ice content.

GRIGOR'EVA, V.G. Investigation of the thixotropic, structural and mechanical properties of Vorkuta silt-loams.

TIUTIUNOV, I.A. Engineering and geological characteristics of permanently frozen rock in the region of the "Mir" pipe.

PEKARSKAIA, N.K. On the strength of frozen ground. (DLC.)

MATHER, A. L., *see* Reece, A., & A.L. Mather. . . . prospecting . . . NE. Greenland. 1961. No. 75084

73870. MATHER, KEITH B., *and* **E. M. WESCOTT.** Telluric currents at geomagnetically conjugate stations in the Aleutian Islands and New Zealand.

(Journal of geophysical research, Nov. 1962. v.67, no.12, p.4825-31, charts, map.) 12 refs.

Records telluric currents for several months at the geomagnetically conjugate points: Cold Bay in the Aleutians, its geog. coord. 55°16′N. 162° 52′W. and Oamaru in the south island of New Zealand with geog. coord. 44°59½′S. 170°58′E. Major disturbances are found to occur simultaneously, have the same duration and usually show peak-for-peak correspondence at the two stations. Other Alaskan stations, e.g. College and Pt. Barrow, generally experience the same disturbances but the detailed variations fail to correlate with Oamaru. Disturbances at Cold Bay and Oamaru show elliptical polarization with opposite directions in the two hemispheres. The amplitude of 1 min. period fluctuations relative to longer periods of 10 min. is greater at Oamaru than Cold Bay, probably because of different electric conductivities at the two sites. The conjugate pair stations, Kotzebue-Macquarie Island, and the Alaskan stations College and Pt. Barrow served as controls in the investigation conducted. (DLC.)

MATHEWS, TED C., *see* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

73871. MATHEWS, WILLIAM HENRY, 1919– . Glaciological research in Canada, 1961. (Canadian alpine journal, May 1962. v.45, p.144-47.)

Summarizes work in the Icefield Ranges of Yukon Territory, that of four parties on Baffin Island, also expeditions to Devon, Axel Heiberg Ellesmere, and Meighen Islands, etc., with laboratory and compilation work in Ottawa. Special qualifications of mountaineers for glaciological research are noted. (DGS.)

MATHEWS, WILLIAM HENRY, 1919– , *see also* Mackay, J.R., & *others*. Geology . . . 1961. No. 73707

73872. MATHIESEN, FRIEDRICH JENS, 1886– . On two specimens of fossil wood with adhering bark from the Nûgssuaq Peninsula. København, 1961. 54 p., 15 plates, diagr. sections. (Meddelelser om Grønland, bd. 167, nr.2.) 41 refs.

Describes in detail and discusses affinities of *Cedroxylon saviarqatense* and *Aphloioxylon groenlandicum* n. spp., collected on this West Greenland peninsula in 1938 during the Danish Nûgssuaq Expeditions under A. Rosenkrantz. Both fossils are of Danian age and excellently preserved. *C. saviarqatense* is the root wood of a conifer with adhering patches of well preserved cortex, and *A. groenlandicum,* the root wood of a dicotyledonous plant with adhering cortex. (DGS.)

73873. MATHISEN, EDV. Skogreising i forsert temp i Vevelstad. (Norden, Nov. 15, 1960. årg. 64, nr.22, p.613.) Text in Norwegian. **Title tr.**: Forest planting at forced tempo in Vevelstad.

Reports a demonstration on the replacement of birch with more valuable spruce: spruce seedlings were cultivated from 1956 and planted, as lifted, among birch for shelter; by Oct. 1960 some 520,000 seedlings were established on 1,700 decares of land. The birch will be gradually eliminated by thinning or by cutting of old trees. (DA.)

73874. MATHISEN, OLE A. The effect of altered sex ratios on the spawning of red salmon. (*In:* Koo, T.S.Y., Studies of Alaska red salmon . . . 1962, p.137-245, illus., tables, maps.) 33 refs.

Reports a study motivated by the disturbed sex ratio, caused by the fishing method applied in Bristol Bay which is very selective of males. Observations in pens showed that unattended females delayed spawning up to ten days before depositing unfertilized eggs. If the sex ratio was about equal most males attended their females during egg deposition, before associating with another female; but some were constantly on the move, fighting with stationary males in attempts to take their females. In pens with a great female surplus, there was no fighting, and the males left their partners shortly after each spawning to associate with a new female. This continued as long as there remained unspawned or partly spent females. (DI.)

73875. MATHISEN, OLE A. Photographic enumeration of red salmon escapement. (*In:* Koo, T.S.Y., Studies of Alaska red salmon . . . 1962, p.349-72, illus., tables, map.) 3 refs.

Describes equipment and operation of a method for automatic, inexpensive counting of salmon escapement. The unit was developed by the Fishery Research Institute, University of Washington. Results obtained with it in Nushagak, Bristol Bay are discussed. (DI.)

73876. MATHISEN, OLE A. Stravnitel'naîa kharakteristika vozrasta i rosta krasnoĭ *Oncorhynchus nerka* Walb. Kuril'skogo ozera, Kamchatki i Bristol'skogo zaliva Aliăski. (Voprosy ikhtiologii, 1962. t.2, vyp.1 (22), p.42-54, illus., tables.) 18 refs. Text in Russian. **Title tr.**: Comparative characteristics concerning age and growth of the sockeye salmon *Oncorhynchus nerka* Walb. in Lake Kuril of Kamchatka and Bristol Bay of Alaska.

Presents results of size and weight analysis, and age determinations of the population in Lake Kuril (51°27′N. 157°E.), and of the fish entering and leaving it. Findings are compared with such of Kamchatka waters and of Bristol Bay and some general conclusions suggested. (DLC.)

MATÎĂKIN, G., *see* Bîălobzheskiĭ, G.V., & G. Matîăkin. Razmeshchenie . . . 1962. No. 70197

73877. MATÎUSHINETS, ÎA. Na kitoboĭnoĭ flotilii; ocherk. (Dal'niĭ Vostok, May-June 1961. god 29, no.3, p.138-44, illus.) Text in Russian. **Title tr.**: With the whaling fleet, a sketch.

Describes activities of the fleet based at Vladivostok and operating in the North Pacific, the Okhotsk and Bering Seas, April-October. The mother ship is the floating factory *Aleut;* the *Avangard, Entuziast, Del'fin* are the most successful whalers, spotting whales from the masthead, the harpooners, behavior of the whales, damage to vessels, returns, etc. (DLC.)

73878. MATLIN, GRIGORIĬ MARKOVICH. Edinaîa glubokovodnaîa sistema Evropeĭskoĭ chasti SSSR. (Rechnoĭ transport, Oct. 1961. god 20, no.10, p. 39-41, map.) Text in Russian. **Title tr.**: The unified deep-water system of European USSR.

Describes and maps the existing and planned canal net navigable by sea-going and river vessels; it is to link the Barents and White Sea ports with

central and southern river systems and seas. Excavation and dredging operations costs are discussed. Projects for Siberian waterways are mentioned including hydraulic engineering work in the Ob, Yenisey, and Lena basins. (DLC.)

MATSON, L., *see* Everett, N.B., & L. Matson, Red cell and plasma volumes . . . 1961. No. 71313

73879. MATSON, RUTH O. Gustavus. (Alaska sportsman, Sept. 1960. v.26, no.9, p.42-46, illus., map.)

Describes this community of approx. 60 persons at the entrance to Glacier Bay National Monument in Southeast Alaska. It is a farming center, site of an airfield since World War II, and has a potential tourist industry with planned development of the National Monument. (DI.)

73880. MATSOV, M. M. Svarochnye raboty pri postroĭke atomnogo ledokola "Lenin." (Sudostroenie, 1961. god 27, no.8, p.53-56, illus., diagrs.) Text in Russian. **Title tr.:** Welding work in the construction of the atomic icebreaker *Lenin.*

Describes in some detail the several types of welding used on the hull, the stem, forefoot and sternpost, as well as those used on the pipes of the power plant assembly of the *Lenin.* (DLC.)

73881. MATSUSHITA, SADAMI. Increase of ionization associated with geomagnetic sudden commencements. (Journal of geophysical research, Nov. 1961. v.66, no.11, p.3958-61, diagrs., tables.) 5 refs.

Analyzes riometer records of cosmic noise from Ft. Yukon and Barrow, Alaska, and Thule, Greenland. Evidence is found that charged particles from outside the earth's atmosphere penetrate into the lower ionosphere at high latitudes and cause ionization at the moment of sudden commencements. The amount of increased ionization is estimated. (DLC.)

MATSUSHITA, SADAMI, *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Campbell, W.H., & S. Matsushita. Auroral-zone geomagnetic micropulsations . . . 1962. No. 70511

MATTHEW, E. M., *see* Andrews, J.T., & E.M. Matthew. Geomorphological studies . . . 1961. No. 69790

MATTHEWS, A. G., *see*

Collins, C., & *others.* HF blackouts. 1961. No. 70782

Jelly, D.H., & *others.* Polar cap & auroral absorption. 1962. No. 72535

73882. MATTHEWS, B. Frost-heave cycles at Schefferville, October 1960-June 1961 with a critical examination of methods used to determine them. (*In:* McGill University. McGill Sub-arctic Research Lab. Field research . . . 1960-61, *pub.* 1962. p.112-25, illus., graphs.) 8 refs.

Equipment, and site on the east site of the airstrip, methods and the recording device used at the main Schefferville station are described and illus. One major and one minor frost-heave cycle during the period were shown, also diurnal frost-heave cycles during the spring and possibly the fall, especially on frost-susceptible soils. If meteorological records are used instead of direct frost-heave instrumental readings, the presence of snow, ground temperature, and insolation must be considered as well as air temperature, to obtain a realistic picture of frost-heave cycles. (DWB.)

73883. MATTHEWS, B. Glacial and post-glacial geomorphology of the Sugluk-Wolstenholme area, northern Ungava. (*In:* McGill University. McGill Sub-arctic Research Lab. Field research . . . 1960-61, *pub.* 1962. p.17-46, illus., maps, table.) 29 refs.

Presents preliminary results of a 1961 survey of four sample areas near the Hudson Strait coast of Northern Quebec, dealing with the ice cover, ice movement, ice divide, evidence of more than one glacial advance and retreat, glacial-dammed lakes, post-glacial marine submergence, also isostatic and eustatic readjustments in this sparsely examined region. Conditions during the older ice advances were probably similar to those of the last glaciation, almost all of Northern Quebec-Labrador being covered by ice mainly originating south of the Povungnituk Trough (approx. 61°N.). The pattern of ice retreat appears to include exposure of much of the plateau surface while ice remained to the south of the east-west watershed and in the deeper valleys near the coast. The pro-glacial lakes were smaller than those in central Labrador Peninsula. New strandline evidence taken with Nichols' foraminifera evidence suggests a postglacial marine submergence of 550-580 ft. (compared to over 700 ft. postulated by Low near Cape Wolstenholme). Isostatic recovery is considered to have been less in the Sugluk, Deception Bay, and Wakeham Bay areas than at Cape Wolstenholme. Present evidence also indicates an equal amount of uplift along the coast during the past few thousand years. (DWB.)

73884. MATTHEWS, B. Snow conditions at Schefferville, winter 1960-61: with special reference to the effects of wind on the pattern of snow accumulation in a muskeg area. (*In:* McGill University. McGill Sub-arctic Research Lab. Field research . . . 1960-61, *pub.* 1962. p.65-75, graphs, tables.) 4 refs.

Analyzes snow data obtained at two sites, one exposed, the other tree-sheltered, where daily measurements of total depth and depth of fresh snow were recorded, Nov. 18-Apr. 7. In addition, a survey of snow accumulation patterns across a muskeg and adjacent woodland east of the airstrip was made during Nov.-Mar. Stronger-than-average winds carried on effective erosion in exposed areas, much of the removed snow being trapped in the woods, whereas the exceptional 1959-60 winter, had lighter winds and heavier than average snowfall at the exposed site. Future surveys should include measurement of density as well as depth at different sites across the muskeg; the possible reversal of wind direction and channelling of the wind by trees should also be considered. (DWB.)

73885. MATTHEWS, L. HARRISON. Hibernation in mammals and birds. (British medical bulletin, Jan. 1961. v.17, no.1, p.9-13.) 50 refs.

Discusses fundamental differences between torpidity, hibernation and hypothermia; activity during hibernation; physiology of mammalian hibernation and of its onset and arousal; hibernation in birds. The relationship between ambient temperature is considered throughout the study. (DNLM.)

MATTOX, WILLIAM G., *Jr.*, *see*
McGill Univ. Sub-arctic Research Lab. field report. 1962. No. 73694

Walker, P.W., & W.G. Mattox. Glaciological observations . . . 1961. No. 76470

73886. MATTSSON, R., *and* P. RAPELI. The total radiation at Sodankylä observatory, 1953-1957. Helsinki, 1960. 21 p. graphs, tables. (Finland. Ilmatieteellinen keskuslaitos. Toimituksia, no.50.) Ref.

Discusses possible sources of error, also reliability of the total (sun & sky) radiation records made (by Rapeli) at this observatory, 67° 22′N. 26°39′E. Instrumentation and methods are noted. Summer values are considered (by Mattsson) good, winter values fair, with occasional errors in winter morning values caused by snow and hoarfrost. Daily, and hourly values for 10-day periods, are tabulated for the five years of record. (DWB.)

MATUSEVICH, M. I., *see* Kert, G.M., & M.I. Matusevich. K voprosu . . . saamskogo iazyka. 1962. No. 72749

73887. MATVEENKOV, I. I. O perspektivnom plane razvitiia obshchestvennykh nauk v Sibirskom otdelenii AN SSSR na 1960-1975 gg. (*In:* Nauchnaia konferentsiia po istorii Sibiri i Dal'nego Vostoka. Voprosy istorii . . . *pub.* 1961, p.53-60.) Text in Russian. **Title tr.**: Long-range plan for study in the social sciences at the Siberian Division of the Academy of Sciences, USSR, in 1960-1975.

Reviews current work and planned research goals in the fields of history and ethnography, philosophy (i.e. Marxist education), economy, folklore, and linguistics; all within the jurisdiction of the Siberian Division, including its Yakut and Far East branches. (DLC.)

73888. MATVEEV, A. K. Novye dannye o finno-ugorskikh zaimstvovaniiakh v russkikh govorakh Urala i Zapadnoĭ Sibiri. (*In:* Akademiia nauk SSSR. Institut iazykoznaniia. Voprosy finno-ugorskogo . . . 1962, p.127-42.) 36 refs. Text in Russian. **Title tr.**: New data on borrowings from Finno-Ugric in Russian speech of the Ural and West Siberia.

Analyzes the Zyryan, Lappish, Ostyak, Vogul, also Samoyed origin of 39 loan words used in Russian patois of Komi ASSR, Arkhangel'sk and Tyumen Provinces. (DLC.)

73889. MATVEEV, B. M. Magnitnye nabliudeniia na shkhune "Zaria", ėkspeditsiia 1960-1961 gg. (Akademiia nauk SSSR. Vestnik, June 1962. god 32, no.6, p.37-40, illus., map.) Text in Russian. **Title tr.**: Geomagnetic observations on the schooner *Zaria*, the 1960-1961 expedition.

Reports on the Oct. 1960-Oct. 1961 cruise in the Pacific including its northern part and the Bering Sea, and the geomagnetic anomaly found in a 300 mi.² bottom area off the Pribilofs. (DLC.)

73890. MATVEEVA, G. V. Novye dannye po stratigrafii chetvertichnykh otlozheniĭ Srednego Timana. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyĭ sbornik 52, Materialy po chetvertichnoĭ geologii i geomorfologii, 1962, p.5-22, fold. table, diagr.) 7 refs. Text in Russian. **Title tr.**: New data on the stratigraphy of Quaternary deposits in the Middle Timan.

Reports his field study of 1955-1960 on the Pechorskaya Pizhma, Tsil'ma, and Pizhma, tributary to the Mezen. Distribution, age, composition, and genetic type of Quaternary deposits are analyzed. It is concluded that there were two independent glaciations, their centers: Scandinavia and Novaya Zemlya. Interglacial deposits also are analyzed and their flora noted. (DLC.)

MATVEEVA, I. I., *see* Gerling, Ė.K., & *others*. Opredelenie vozrasta . . . 1962. No. 71658

73891. MATVIEVSKAIA, N. D. Osnovnye cherty tektoniki osadochnogo chekhla iūzhnoĭ chasti Pechorskoĭ depressii. (Akademiia nauk SSSR. Doklady, Jan. 1, 1961. t.136, no.1, p.179-82, map.) 3 refs. Text in Russian. **Title tr.**: Main tectonic features of the sedimentary cover in the southern part of the Pechora depression.

Notes that recent geologic and seismic work has substantially increased knowledge of the structure of the upper part of this sedimentary cover. A structural map of the southern part of the depression is presented and interpreted. The large tectonic zones of the Lower Permian and some small local structures as well are indicated and briefly characterized. (DLC.)

MAUVAIS, P., *see* Justin-Besançon, L., & *others*. . . . hypothermie accidentelle . . . 1960. No. 72601

73892. MAXWELL, MOREAU S., 1918– . The house on the Ruggles. (Beaver, Autumn 1962. outfit 293, p.20-27, illus., map, diagr.)

Recounts experiences as archeologist with Operation Hazen on northern Ellesmere Island in summer 1958. The search (unsuccessful) for remains of early Dorset and Thule Eskimo migrations is described, also excavation of an Eskimo house on the Ruggles River south of Lake Hazen. It had been built and occupied by 13-14th century hunters from Greenland. (DI.)

73893. MAXWELL, MOREAU S., 1918– . Pre-Dorset and Dorset sites in the vicinity of Lake Harbour, Baffin Island, N.W.T.; a preliminary report. (Canada. National Museum. Bulletin 1962. no.180, Anthropological series no.57, Contributions to anthropology 1960, pt.1, p.20-55, illus., tables, graph, sketch maps.) 19 refs.

Describes the lithic material recovered at five sites (62°36′N. 69°31′W.) on Juet Island and three on a low neck of land (62°44′N. 69°40′W.), called Okalivialuk by the Eskimos. Author's 1960 field work assisted by his son, Moreau Sandy Maxwell, Jr., yielded 473 implements: burins and burin spalls, blades and microblades, perforators, scrapers, retouched flakes, etc. The artifacts belong to five different time periods forming an unbroken cultural continuum from Cape Denbigh-like pre-Dorset to the beginning of Dorset culture: approx. 2,000 to second-first century B.C. (DLC.)

MAYER, H. J., *see* Goldsmith, E.I., & H.J. Mayer. Myocardial blood supply. 1960. No. 71736

MAYER, M., *see* Iampietro, P.F., & *others*. . . . weight loss . . . cold. 1961. No. 72301

73894. MAYNARD, JAMES E. Influenza B at Fort Yukon; report of an outbreak, 1961. (Alaska medicine, Mar. 1962. v.4, no.1, p.1-6, illus., tables.) 5 refs.

Reports epidemiologic and laboratory studies of the April 1961 outbreak. The abruptness of onset, high attack rates and time compression of

the epidemic curve are noted. Differences in attack rates between Indians and whites are discussed. (DLC.)

MAYNARD, JAMES E., *see also* Alaskan Science Conference 1961. 1962. No. 69644

73895. MAYNARD, L. A. Propagation of meteor burst signals during the polar disturbance of November 12-16, 1960. (Canadian journal of physics, Apr. 1961. v.39, no.4, p.628-30, graphs.)

Shows variations in the 104.1 and 44.3 Mc./s. duty cycles also mid-path absorption at 30 Mc./s. on a circuit between Goose Bay and Ottawa, Canada. During the four days, the signal duty cycle dropped below normal range for three intervals, in fair coincidence with peaks in absorption at the mid-path station. The 41.3 Mc./s. signal was affected most. The data indicate that absorption was located mainly below the meteoric region of 80-100 km. (DLC.)

73896. MAYNC, WOLF. The Permian of Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.214-23, 2 fold. maps in v.3, table.) 52 refs.

Marine deposits of late Permian age are widely distributed along the East Greenland coast. Their contact with the underlying older Paleozoic or Caledonian basement is an angular unconformity; the series reveals a complex facies pattern, consisting of eight members, closely interlinked and representing contemporaneous deposits laid down under different ecological conditions. The abundant faunas (table) establish the age of this variegated series as Upper Permian (Zechstein). (DLC.)

73897. MAZEPOVA, G. F. Morfologiia *Cyclops kolensis* Lill. iz raznykh mestoobitanii. (Zoologicheskii zhurnal, Oct. 1961. t.40, vyp. 10, p.1465-69, illus., map.) 15 refs. Text in Russian. Summary in English. **Title tr.**: Morphology of *Cyclops kolensis* Lill. from different habitats.

Presents a study of the distribution, which extends through the Arctic and northern Boreal, and the morphology. This fresh-water crustacean was found to be morphologically homogeneous all over its range, except for a form inhabiting the far North: *C. kolensis alaskaensis* Lind. (DLC.)

73898. MAZIIA, L. V., *and* **F. SH. SAKAEV.** Modelirovanie elektroprivoda grebnoi ustanovki atomnogo ledokola "Lenin." (Elektrichestvo, 1959, no.10, p.56-62, diagrs., graphs.) 4 refs. Text in Russian. **Title tr.**: Modeling of the electric propulsion drive of the atomic icebreaker *Lenin*.

Reports on the results of an engineering mathematical investigation of performance of the *Lenin*'s automatic electric propulsion drive by using a universal electronic model type MH-8. Electric-mathematical analysis was made of 23 initial equations, and they were used on the model of the electromotive system by introducing into the equations scale factors, and numerical values of coefficients. The results obtained permitted a preliminary adjustment of the circuit system on the icebreaker. (DLC.)

73899. MAZINA, E. G. Khimioprofilaktika tuberkuleza u detei pervogo goda zhizni v IAkutskoi ASSR. (Problemy tuberkuleza, 1961. god 39, no.6, p.10-13.) 3 refs. Text in Russian. Summary in French. **Title tr.**: Chemo-prophylaxis of tuberculosis in children in the first year of life in the Yakut ASSR.

Reports on 29 infants, 12 of them having received conventional preventive treatment. During two years' additional observation, one of this group contracted TB, while five of the untreated group became ill of it, two of them fatally. (DNLM.)

73900. MAZO, I. L. Vliianie okhlazhdeniia organizma na mikrofonnyi effekt ulitki. (Biulleten' eksperimental'noi biologii i meditsiny, May 1961. t.51, no.5, p.22-26, illus.) 7 refs. Text in Russian. Summary in English. **Title tr.**: Influence of body cooling upon the microphone effect of the cochlea.

Study of the effects of general and local (external meatus, lympanum and labyrinth) cooling in rabbits. The auditory function of the internal ear was depressed after cooling, the nature of the change depending on the type of cooling and to some extent on the reflex mechanism. (DLC.)

73901. MAZUR, PETER. Physical and temporal factors involved in the death of yeast at subzero temperatures. (Biophysical journal, Jan. 1961. v.1, no.3, p.247-64, illus., tables.) 42 refs.

Reports experiments with a diploid strain of *Saccharomyces cerevisiae*. Survival of the cells was affected by cooling and warming velocity, the physical state of the surrounding water, and temperature itself, mortality increasing sharply from -10 to -30°C., irrespective of the nature of the suspension fluid. Survival at -30°C. and below increased with slow cooling and quick rewarming. Intracellular ice formation is indicated as cause of death. (DNLM.)

MAZUROV, M. K., *see*

Begunova, T.G., & *others*. K voprosu . . . apatito-nefelinovykh rud. 1961. No. 70090

Istomin, A.V., & M.K. Mazurov. Ekonomicheskaia effektivnost' obogashcheniia . . . 1961. No. 72427

MEADOR, JIMMIE G., *see* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

73902. MÉDARD, JEAN. Narvik et la route du fer. (Géographia-histoire, Dec. 1962. no.135, p.57-68, illus., map.) Text in French. **Title tr.**: Narvik and the route of the iron.

Outlines the developments in Norway from the German invasion on Apr. 9, 1940, to the Allies' withdrawal on June 7 from their raid on Narvik, the port for shipping iron ore from Kiruna; casualties, destruction of the port facilities. (DGS.)

73903. MEDIANTSEV, A. I. Chetvertichnye lednikovye otlozheniia v doline r. Leny okolo Zhiganska. (*In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.138-43.) 12 refs. Text in Russian. **Title tr.**: Quaternary glacial deposits in the Lena River valley near Zhigansk.

Reports a 1956-1958 study in the Lena valley between 65° and 67°30′N., and along its right tributaries: the Lyanyshka, Oruchan, Begidzhyan, Sobolokh and Khoronkho. Composition and distribution of the glacial deposits are described. They originated from valley glaciers, which moved down from the mountains and flowed along surface

of river terraces. The age of this type of glaciation, at present undetermined, is discussed. (DLC.)

73904. MEDIANTSEV, A. I. Vetrogranniki v chetvertichnykh otlozheniiakh v nizov'iakh reki Leny. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda. Biulleten' 1962. vyp.27, p.146-51.) 11 refs. Text in Russian. **Title tr.:** Ventifacts in Quaternary deposits of the lower Lena River.

Describes pebbles and boulders, shaped by the abrasive action of wind-blown sand, found on both banks of the Lena, between the Vilyuy River and Zhigansk. These ventifacts ranging from 2 to 10 cm. in diameter, are mostly on the second terrace of the Lena, some found *in situ*. Abrasive action is most evident on one side of the pebble, the other side, rounded by river erosion. Petrographic composition, wind direction, age and other features of the ventifacts are described. They were formed in an area near a glacier possibly by southeast and east-southeast winds. (DLC.)

MEDIANTSEV, A. I., *see also* Alekseev, M.N., & *others*. Chetvertichnye otlozheniia . . . 1961. No. 69697

73905. MEDNIKOV, B. M. Terpugi. (Rybnoe khoziaistvo, 1962. god 38, no.5, p.14-18, illus., map.) Text in Russian. **Title tr.:** The greenlings.

Discusses distribution of these North Pacific fishes (up to Bering Strait); morphology and taxonomy, economically promising species, their biology and ecology, spawning and growth, stocks, exploitation, etc. (DLC.)

73906. MEDVEDEV, G. P. Avtomatizatsiia drobil'no-sortirovochnoi fabriki rudnika im. Kirova. (Gornyi zhurnal, Mar. 1961, no.3, p.60-63, illus.) Text in Russian. **Title tr.:** Automation at the crushing and sorting plant of the Kirov mines.

Describes equipment and procedures of ore processing at the Apatit Combine in Kola Peninsula. Automation has increased output, diminished the accident rate and enabled reduction of the labor force by nine workers. (DLC.)

73907. MEDVEDEV, P. M. O vynuzhdennom pokoe u rastenii Khibin. (Botanicheskii zhurnal, Jan. 1961. t.46, no.1, p.61-69, illus., tables.) 11 refs. Text in Russian. Summary in English. **Title tr.:** Enforced dormancy in Khibiny plants.

Reports on 63 species of wild plants, including herbs, shrubs, and trees grown indoors at temperatures of 5 to 20°C. The majority showed organic dormancy during the greatest part of the eight-month winter. Characteristics of this dormant state are described. (DLC.)

73908. MEDVEDEV, V. M., *and* **V. G. BATRAKOV.** Morozostoikost' betona dlia sbornogo zhelezobetonnogo sudostroeniia. (Sudostroenie, Feb. 1962. god 28, no.2, p.56-57, table.) 3 refs. Text in Russian. **Title tr.:** Frost resistant concrete for reinforced concrete used in the assembly-type ship construction.

Discusses and tabulates results of testing various mixtures. Concrete with poly-hydro-siloxane liquid (GKZh-94) admixture was found to have the highest frost-resistance and is recommended for ships operating in northern and Far-Eastern seas. (DLC.)

MEDVEDEV, V. S., *see*

Budanov, V.I., & *others*. O priznakakh . . . moreĭ. 1961. No. 70431

Budanov, V.I., & *others*. Present-day vertical movements . . . 1961. No. 70432

Ionin, A.S., & *others*. Karta . . . 1961. No. 72403

Pacific Science Congress. 1961. No. 74619

73909. MEDVEDEVA, V. M. Lesovodstvennaia otsenka lesoosushenii v Karelii. (Lesnoe khoziaistvo, July 1961. god 14, no.7, p.19-21, tables.) Text in Russian. **Title tr.:** Silvicultural appraisal of forest drainage in Karelia.

Notes over 5 million hectares of Karelian forests are on marshy soil, which reduces considerably their value. 500,000 hectares are to be drained in the next years. Marsh soil drained 25-45 years ago now has 1.5-2 times the growth of trees and considerably better quality of forest. Drainage ditches are effective only for 30-60 m. distance, and should be laid at 150 m. intervals. (DLC.)

73910. MEDVEDKOV, V. I. Zheleznye rudy. (*In:* Krasnoiarskaia . . . ėkspeditsiia. Poleznye iskopaemye . . . 1962, p.87-106, tables, map.) Text in Russian. **Title tr.:** Iron ores.

Reviews iron ores of Krasnoyarsk Province in the Siberian platform, Yenisey Ridge, Kuznetskiy Alatau, and in western and eastern Sayan. The most northerly deposits indicated are in the Podkamennaya and Nizhnyaya Tunguska basins, where the Severnaya and Letnyaya River areas have been most investigated. The largest deposits are on the lower Angara with 4500-5000 million tons of reserves. These deposits are treated in greater detail, noting chemical composition and categories of some. (DLC.)

MEEHAN, JOHN PATRICK, *see* Helmendach, R.H., & J.P. Meehan. Thermoregulatory responses . . . 1962. No. 72109

MEFFERD, ROY B., *Jr., see* Hale, H.B., & R.B. Mefferd. Metabolic effects of somatotropin . . . 1961. No. 71951

MEHRA, K. N., *see* Levine, N.D., & *others*. Survival *Trichomonas* . . . -28 and -95°C. . . . 1962. No. 73465

73911. MEĬEN, S. V. Materialy k poznaniiu morfologii vegetativnogo pobega angarskikh kordaitov. (Paleontologicheskii zhurnal, 1962. no.2, p.133-44, illus., plates.) 29 refs. Text in Russian. **Title tr.:** Contribution to the morphology of vegetative shoots of the Angara cordaites.

Reports a stratigraphic-paleobotanic study in 1959-1960 of the coal-bearing upper Paleozoic deposits in the Nizhnyaya Tunguska basin. Prints of old plants were examined, especially gen. *Cordaicladus*. Systematic description is given of several new species: *C. neuburgae, C. gibbosus, C. rugosus, C. subidoneus, C. suchovi,* and *C. lentiformis*. Morphology of the Angara and the European *Cordaicladus* is compared, and evaluated. (DLC.)

73912. MEIER, MARK FREDERICK, 1925– , *and* **A. S. POST.** Recent variations in mass net budgets of glaciers in western North America. (*In:* International Association of Scientific Hydrology. Pub. no. 58, Symposium of Obergurgl 1962, p.63-

77, illus., maps, graphs, tables.) 21 refs. Summary in French.

Discusses quantitative data from specific glaciers including five in Alaska; then extends conclusions to cover many hundreds of glaciers. These data show large but generally synchronous variations above and below equilibrium until 1958, mainly negative values 1958-1961. Extrapolation indicates recent increases in activity from the northern Cascade Range to Southeast Alaska, notably for small, high altitude glaciers. In the Alaska Range however, net budgets have been strongly negative for the last few years. Glacier equilibrium lines are lowest in the Coast Range of Southeast Alaska and British Columbia, and occur at higher elevations to the north, east, and south. A new method was tested of extracting quantitative glacier regime data by use of low-level oblique aerial photography; this supplements ground-based reconnaissance in southern Alaska as reported in No. 57983. (DGS.)

MEIER, MARK FREDERICK, 1925– , *see also* Crary, A.P., & *others*. U.S. glaciol. researches . . . IGY. 1962. No. 70849

MELAMED, A., *see* Levitin, K., & A. Melamed. Vermikulit . . . 1962. No. 73466

MELAMED, V. G., *see*

Kudrīavtsev, V.A., & *others*. Metodika rascheta . . . 1961. No. 73186

Kudrīavtsev, V.A., & V.G. Melamed. Novaīa formula . . . 1961. No. 73187

73913. MELDGAARD, JØRGEN. Eskimoen og hans kunst. (Atuagagdliutit: Grønlandsposten, Jan. 1, 1961. Ukiut 101-iat, nr.1, p.4-7, illus.) Text in Danish and Eskimo. **Title tr.**: The Eskimo and his art.

Offers a general characterization of Eskimo art. (CaMAI.)

73914. MELDGAARD, JØRGEN. Om de gamle nordboer og deres skaebne; betragtninger over Helge Ingstads bog "Landet under polarstjernen." (Grønland, Mar. 1961, nr.3, p.93-102, illus.) Text in Danish. **Title tr.**: On the old Norsemen and their fate; comments on Helge Ingstad's book *Landet under polarstjernen.*

Presents considerations against Helge Ingstad's theory that the Norsemen of Vesterbygden on West Greenland emigrated to continental North America. A deterioration of climate has been proved; legends and traditions refer to conflict with the Eskimos; it seems improbable, in case of emigration that none of the inhabitants should have chosen to go to Østerbygden, or at least to have given some indication of their intentions. (CaMAI.)

73915. MELDGAARD, JØRGEN. Sarqaq-folket ved Itivnera; Nationalmuseets undersøgelser i sommeren 1960. (Grønland, Jan. 1961, nr.1, p.15-23, illus.) Text in Danish. **Title tr.**: The Sarqaq people at Itivnera; the summer 1960 investigations of the Nationalmuseet.

Describes excavations of his 11-man team at Itivnera (64°30′N. 51°20′W.), West Greenland. About a thousand stone implements were found as well as bone artifacts well preserved in the peat. The dwellings differ from those of later cultures in having a large stone hearth in the middle of the floor; wood fuel was abundant because of the milder climate, and blubber lamps were unknown. Reindeer meat was the most important food, and of some nine thousand pieces of bone found, more than 90% are from reindeer, which were hunted with bow and arrow or spear. The Sarqaq people are thought to have come to Greenland about three thousand years ago from Alaska or northeast Siberia, and they remained a comparatively short time, possibly because of a deterioration in the climate. (CaMAI.)

73916. MELEKHOV, IVAN STEPANOVICH. Razvitie lesnoĭ nauki na Severe. (Lesnoe khoziaĭstvo, Jan. 1961. god 14, no.1, p.7.) Text in Russian. **Title tr.**: Development of forest science in the North.

Notes activities of the Academy of Sciences' Institute of Forestry and Wood Chemistry in Arkhangel'sk: its 120-man staff, new laboratories and the Murmansk Field Station set up in 1960, problems for explorations in 1961 program, etc. (DLC.)

73917. MELEKHOVA, K. D. Geologicheskoe stroenie iūgo-zapadnoĭ chasti Viliūĭskoĭ sineklizy. (Leningrad. Vsesoiūznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp.186, geologicheskiĭ sbornik no.6, p.53-63, map, diagrs.)6 refs. Text in Russian. **Title tr.**: Geologic structure of the southwestern part of the Vilyuy syncline.

Describes the stratigraphy of Cretaceous deposits as studied in 1958-1960 along the Tonguo, Byrakan, Chybyda, and Tangnary Rivers and their tributary streams. Mineralogic composition, flora and other features of the deposits are outlined and their sections correlated. Geomorphic and geophysical studies have been made, and some of the structures are briefly characterized. (DLC.)

73918. MELLERUD, OLE TH. Fundamenteringsarbeider på Svalbard. (Teknisk ukeblad, Mar. 9, 1961. årg. 108, nr.10, p.215-19, diagrs.) Text in Norwegian. Summary in English. **Title tr.**: Foundation construction in Svalbard.

Describes construction methods in Vestspitsbergen where the depth of the permafrost reaches about 300 m. Buildings are usually raised on piles of wood or concrete to permit air circulation between floor and ground; heavy structures are anchored 2-4 m. deep in the permafrost by means of cam-edged steel bolts. The 10 km. long main road between Longyearbyen and the Endalen coal mines is described as a typical example of road and airfield construction practices. It rests on a seven m. wide and one m. high embankment placed directly on the ground and as far as possible from terrain obstacles. Drainage ditches were not used except over a 1.5 km. stretch where the road follows the slope of a mountain. Snow screens are required. Early spring is the best time for foundation work. (DLC.)

73919. MELLOR, MALCOLM. Building on polar ice caps. (Polar notes, Nov. 1961. no.3, p.1-19, maps.)

Discusses the background, problems, and principles of construction on the Greenland and antarctic icecaps. Construction of the undersnow camps Fistclench and Century in northern Greenland and the radar stations on stilts, Dye-2 and Dye-3 in southern Greenland, is described, as are

buildings of French expeditions, and studies by the U.S. Army Engineers Snow, Ice and Permafrost Research Establishment. Structures on skids, stilts, in undersnow cavities, and load-resistant shells are discussed, as technique for coping with problem of snow accumulation and drifting. Engineering properties and uses of snow as a foundation material and in structures and excavations are outlined. Icecap water supply, sewage, heating, and ventilation systems, also future construction methods, are noted. (CaMAI.)

73920. MEL'NIKOVA, MARGARITA NIKOLAEVNA, 1926– . Biologiia semgi r. Varzugi. (Leningrad. Vsesoiuznyi nauchno-issledovatel'skii institut ozernogo i rechnogo rybnogo khoziaistva. Izvestiia 1959. t.48, p.80-93, illus., tables.) 21 refs. Text in Russian. **Title tr.:** The biology of salmon in the Varzuga River.

Presents data on the sex, age, size and weight composition of descending fish in the river near its mouth, and nearby in the White Sea during, and several weeks after migration. Character of ascending shoals is analyzed as to size, age, sexual condition, etc. Periods of up-river migrations, and growth rates in the sea are reported. Fisheries also are discussed. (DLC.)

MEL'NIKOVA, MARGARITA NIKOLAEVNA, 1926– . *see also* Lagunov, I.I., & *others*. N. salmon. 1960. No. 73278

MELOCHE, B. R., *see* Sayen, A., & *others*. Immersion foot . . . 1960. No. 75399

73921. MENAKER, MICHAEL. Hibernation-hypothermia: an annual cycle of response to low temperature in the bat *Myotis lucifugus*. (Journal of cellular and comparative physiology, Apr. 1962. v.59, no.2, p.163-73, illus.) 22 refs.

Bats collected from the field during the year were exposed to 3°C. After becoming hypothermic they were submitted to a continuous tactile stimulus. In winter bats, this produced rapid increase of body temperature to 35° but not in summer bats. Spring and fall animals raised their body temperature much slower than winter animals. This study demonstrates a fundamental difference between winter and summer thermoregulation and contradicts the long held belief that in bats hypothermia in summer is identical with hibernation. (DLC.)

MENDENHALL, WILLIAM W., *Jr., see* Alaskan Science Conference 1961. 1962. No. 69644

73922. MENGES, KARL HEINRICH, 1908– . Altajische Lehnwörter im Slavischen. (Zeitschrift für slavische Philologie, 1955. Bd.23, Heft 2, p. 327-34.) Refs. in text. Text in German. **Title tr.:** Altaic loanwords in Slavic languages.

Linguistic study including several words, Gold or Tungus (Evenki) in origin. (DLC.)

73923. MENÎAÏLOV, A. A. Kimberlitovaia i trappovaia magmy, ikh kontaktovyi metamorfizm i vzaimootnosheniia. (Yakutsk. Universitet. Uchenye zapiski 1961. vyp.9, ser. geologo-mineralogicheskikh i tekhnicheskikh nauk, p.5-10, tables.) 15 refs. Text in Russian. **Title tr.:** Kimberlite and trap magmas, their contact metamorphism and interrelation.

Analyzes the manifestation of kimberlite pipes in the Daldyn, Malaya Botuobuya, Muna and other regions of Yakutia. The interrelation of kimberlites with trap formation is noted and a paragenetic relationship between trap and kimberlite magnetism disclosed by petrographic investigations is discussed. There are areas in the Siberian platform with development of traps without kimberlites, but not kimberlites without traps. This criterion is pertinent to study of kimberlites and diamonds. (DLC.)

73924. MENÎAÏLOV, A. A. O nekotorykh zakonomernostiakh razmeshcheniia, stroeniia i formirovaniia almaznykh korennykh mestorozhdenii Îakutii. (*In:* Akademiia nauk SSSR. Sibirskoe otdelenie. Îakutskii filial. Petrografiia i mineralogiia . . . almazov, 1962. Trudy, sbornik no.8, p.5-18, tables, diagrs.) 23 refs. Text in Russian. **Title tr.:** On some laws in the distribution, structure and formation of the primary diamond deposits of Yakutia.

Outlines the spatial distribution of kimberlites as confined to the northwestern and western flanges of the Vilyuy depression in the region of jointing with respectively, the Anabar and the Aldan crystalline massifs. The Daldyn, Alakit, Muna, Olenek, Malaya Botuobuya, and Chompolo regions of kimberlite bodies are distinguished and characterized. Interrelation between trap and kimberlite magmatism is analyzed, and the kimberlite of the Siberian platform considered to be younger than the traps. Mode of crystallization of kimberlite magma is interpreted. (DLC.)

73925. MENÎAÏLOV, A. A. O rogovykh obmankakh v kimberlitakh, ikh vmeshchaiushchikh porodakh i kristallicheskikh porodakh. (Akademiia nauk SSSR. Sibirskoe otdelenie. Îakutskii filial. Nauchnye soobshcheniia 1959. vyp.2, p.42-45, tables.) 2 refs. Text in Russian. **Title tr.:** On hornblendes from kimberlites, their enclosing rocks and crystalline rocks.

Presents comparison of hornblendes taken from kimberlites, their enclosing rocks and rocks of the Anabar crystalline massif; occurrence conditions, mineralogic composition, optical properties, form of crystals, and other features are considered. (DLC.)

73926. MENÎAÏLOV, A. A. Reomorficheskie zhily v ksenolite izvestniaka iz kimberlita trubki "Mir." (Akademiia nauk SSSR. Doklady, Aug. 21, 1962. t.145, no.6, p.1375-76, illus.) 4 refs. Text in Russian. **Title tr.:** Rheomorphic veins in the limestone xenolith from the Mir kimberlite pipe.

Reports discovery of sandstone veins 30-40 cm. thick, in a xenolith of limestone. These veins, features of rheomorphism, are observed for first time in kimberlites. The sandstone consists of quartz, microcline grains, and acid plagioclase. It is evident that the limestone xenolith and sandstone veins have been altered under influence of kimberlite magma. (DLC.)

73927. MENÎAÏLOV, A. A. Sostoianie i zadachi issledovanii almaznykh mestorozhdenii Îakutskoi ASSR. (*In:* Akademiia nauk SSSR. Îakutskii filial. Almazy Îakutii . . . 1961, p.5-14.) 25 refs. Text in Russian. **Title tr.:** The status and tasks of diamond deposit investigations in the Yakut ASSR.

Reviews the investigation of Siberian trap formations and diamond deposits, and evaluates foreign and Soviet trends in prospecting. Exploration and research objectives are summarized. (DLC.)

73928. MENÏAÏLOV, A. A., *and* V. B. VOSKRESENSKAÏA. Trubchatye tela s mnogoïarusnymi trappovymi sillami v Botuobinskom raĭone. (*In:* Akademiïa nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Petrografiïa i mineralogiïa . . . almazov, 1962. Trudy, sbornik no.8, p.121-32, tables, diagrs., map.) 11 refs. Text in Russian. **Title tr.:** Pipe-like bodies with multi-layered trap sills in the Botuobuya region.

Reports a study of the composition and structure of bodies showing pipe-type magnetic anomalies, and considered (by others) to be kimberlite pipes; one of them known as Kollektivnaya. The ecologic position of the Malaya Botuobuya region is outlined, the petrography of the rocks of such pipe-like bodies described, and the latter compared with similar bodies elsewhere. These bodies are disclosed to be not kimberlite pipes, but to resemble the multi-layered dolerite complex of laccolithic form, described by O. Jones and W. Pugh as near Llandrindod Wells in Radnorshire, Wales. (DLC.)

73929. MENÏAÏLOV, A. A. Tufy i kimberlity Sibirskoĭ platformy i ikh proiskhozhdenie. Moskva, Izd-vo Akademii nauk SSSR, 1962. 228 p., illus., tables, maps, diagrs., plates. (Akademiïa nauk SSSR. IAkutskiĭ filial. Trudy, ser. geologicheskaïa, sbornik no.10.) Approx. 220 refs. Text in Russian. **Title tr.:** Tuffs and kimberlites of the Siberian platform and their origin.

Outlines tuffaceous rocks of the Siberian platform from own study since 1950 in the Nizhnyaya Tunguska, Chuna, and Angara River regions, etc., the first part giving a geologic and petrographic description, the second discussing problems of rock genesis. The main types of tuffaceous rock: breccias, sandstones, tuffites, etc., and the various types of kimberlite are analyzed. Clastic veins, sills and pipes are described. Trap formation of the Siberian platform is treated in detail, noting its geologic and petrographic features. Various opinions on the origin are evaluated, with conclusion that tuffs of trap formation are not volcanic rocks, but deep-seated, intrusive and partly metasomatic rocks. Manifestation of old volcanism in the Siberian platform should be reconsidered. (DLC.)

73930. MENÏAÏLOV, A. A. Vzaimootnoshenie diabazovoĭ daĭki i kimberlitovoĭ trubki "Leningradskaïa." (*In:* Akademiïa nauk SSSR. IAkutskiĭ filial. Almazy IAkutii . . . 1961, p.49-52, illus.) 4 refs. Text in Russian. **Title tr.:** The relationship between a diabasic dike and the Leningradskaya kimberlite pipe.

Cites two opposing views on the relative age of trap (diabasic dike) and kimberlites of the Leningradskaya pipe in the Daldyn region: one that the diabasic dike is older, the other that the kimberlites are. The petrography of trap and kimberlite is described, contact alteration, xenoliths in kimberlite bodies and other aspects of the phenomenon are pointed out for study to solve the disputed problem. (DLC.)

73931. MENÏAÏLOVA, G. A., *and* V. G. IVANOVA. Kontaktovo-metamorficheskaïa poroda vblizi diabazovoĭ daĭki v raĭone trubki "Leningradskoĭ." (*In:* Akademiïa nauk SSSR. IAkutskiĭ filial. Almazy IAkutii . . . 1961, p.67-70, tables.) 3 refs. Text in Russian. **Title tr.:** Contact-metamorphic rock near a diabasic dike in the Leningradskaya pipe region.

Reports mineralogic investigation of limestone 30 m. from the side of this kimberlite pipe and near contact of a diabasic dike. Garnet, olivine, pyroxene, quartz and other minerals are distinguished and described. Optical constants of trap, kimberlite and limestone minerals are compared. Chemical composition of the limestones of the Leningradskaya and Zarnitsa pipes is given and compared. Effects of contact metamorphism are evaluated. (DLC.)

73932. MENNER, V. V., *and* V. N. KULIKOVA. K voprosu o vozmozhnosti detalizatsii stratigrafii pliotsenovykh otlozheniĭ Kamchatki. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.235-37.) Text in Russian. **Title tr.:** On the possibility of a detailed stratigraphy of the Pliocene deposits of Kamchatka.

Reports results from using a paleoecologic or paleogeographic method to establish a detailed stratigraphic division of Upper Tertiary - Pliocene deposits in Kamchatka. The Kovran series is analyzed and a division into subseries made. (DLC.)

MENNER, V. V., *see also* Boruchinkina, A.A., & *others*. Stratigrafiïa . . . 1961. No. 70339

MENNER, V. V., *see* Krylova, A.K., & V.V. Menner. O vozraste ĭuktinskoĭ svity . . . 1962. No. 73169

73933. MENNER, VL. VL. Skhema stratigrafii devonskikh otlozheniĭ severo-zapadnoĭ chasti Sibirskoĭ platformy. (Akademiïa nauk SSSR. Doklady, Dec. 21, 1961. t.141, no.6, p.1441-44, table.) 8 refs. Text in Russian. **Title tr.:** Stratigraphic diagram of Devonian deposits in the northwestern part of the Siberian platform.

Distinguishes eight horizons of these deposits in the area from Noril'sk and the Podkamennaya Tunguska east to the Kotuy and Nizhniy Vilyuykan Rivers. Each is briefly characterized and correlated with stages of the international stratigraphic-time rocks-units table. (DLC.)

73934. MENOVSHCHIKOV, GEORGIĬ ALEKSEEVICH. IAzyk sirenikskikh èskimosov; predvaritel'noe soobshchenie. (Voprosy ĭazykoznaniïa, May-June 1962. god 11, no.3, p.107-114, tables.) 8 refs. Text in Russian. **Title tr.:** Language of the Sireniki Eskimos; a preliminary report.

Comparative linguistic analysis of this most divergent Asiatic Eskimo dialect, based on field trips of 1948-1961. The Sireniki or Vuteen dialect, still used by about 20 people (60-70 in 1930) of the Sig'ynygmit tribe, differs from all Eskimo languages in its grammatical structure and vocabulary. Its maritime terminology has clearly traceable Eskimo roots; words relating to terrestrial life are of alien origin. Lexic and morphological elements of Aleut stock are identical with those encountered in Eskimo spoken on Nunivak Island. Linguistic peculiarities suggest an early break from the main Eskimo population of the Asiatic coast followed by close contacts with ethnically unrelated inland bands or with Eskimoid groups akin to the Aleut type. (DLC.)

73935. MENOVSHCHIKOV, GEORGIĬ ALEKSEEVICH. O perezhitochnykh ĭavleniïakh rodovoĭ organizatsii u aziatskikh èskimosov; iz polevykh nabliudeniĭ. (Sovetskaïa ètnografiïa, Nov.-Dec.

1962, no.6, p.29-34, diagrs.) 4 refs. Text in Russian. Summary in English. **Title tr.**: Surviving elements of clan organization among Asiatic Eskimos; field investigations.

Discusses vestiges of traditional social structure as observed on five field trips during 1940-1961, to Chaplino, Naukan, Sireniki, etc. Traces of unilinear exogamy, group marriage, patrilineal descent, etc. survived to the 1940's. A clan-clustering pattern within settlements is diagrammed for Chaplino and Naukan. Similarities between the social organization of the St. Lawrence Island (No. 51842) and Asiatic coast Eskimos is ascribed to their close ethnic, economic, and cultural contacts to the 1920's. (DLC.)

73936. MEN'SHIKOV, P. N. Primenenie geofizicheskikh metodov pri izuchenii kimberlitov i trappov. (*In:* Akademiia nauk SSSR. IAkutskii filial . . . Trudy, 1962. ser. geologicheskaia, sbornik 11, p.115-20, graphs.) Text in Russian. **Title tr.**: Application of geophysical methods in kimberlite and trap studies.

Reviews geophysical investigations since 1955 in western Yakutia, including the aerial magnetic survey at 1:200,000 and 1:25,000 scales, surface magnetic survey at 1:1000 to 1:10,000 scale, and other current work. Magnetic susceptibility of traps and kimberlites is characterized. Density of kimberlites, traps and carbonate rocks is reported. Magnetic anomalies are interpreted. Geophysical methods are found effective in search for kimberlite pipes. Gravity investigations also are mentioned. Combination of geophysical methods is discussed. (DLC.)

73937. MEN'SHIKOVA, E. Obuchenie soglasovaniiu v period dobukvarnykh zaniatii. (Russkii iazyk v natsional'noi shkole, 1962, no.2, p.40-44, table.) Ref. Text in Russian. **Title tr.**: The teaching of grammatical agreement in pre-primer instruction.

Discusses methods of oral instruction of Russian grammar with pre-school Zyryan children without the aid of primers: repetition, translation, group work, etc. (DLC.)

73938. MENTZ, L., *and* B. J. LUYET. Structure of rapidly frozen gelatin solutions studied after vacuum sublimation of the ice. (Biodynamica, Dec. 1962. v.9, no.172, p.1-20, illus.) 3 refs.

Study of 30% gelatin films cooled to -30°, -60°, or -100°C., and submitted to sublimation. Three principal structures are distinguished and described in the remaining matrix of dry gelatin. The kind of structure was found to be determined by the speed of cooling and ultimately by the rate of heat dissipation. (DLC.)

73939. MERBS, CHARLES F., *and* W. H. WILSON. Anomalies and pathologies of the Sadlermiut Eskimo vertebral column. (Canada. National Museum. Bulletin no. 180, Anthropological ser. no. 57, Contributions to anthropology 1960, pt. 1, *pub.* 1962. p.154-80, plates, graphs, tables.) 57 refs.

Report on study of 72 complete vertebral columns of this recently (1902-03) extinct group. Spina bifida, malformation of the centrum, spondylolysis, vertebral fusion, compression fractures, laminal spurs, osteoarthritis, and degenerative disc disease were among the conditions found. Role of age, sex and pathology are considered and conditions compared with those of other Eskimos. (DLC.)

73940. MERBS, CHARLES F. A case of osteological thievery. (Arctic circular, Sept. 1962. v.14, no.4, p.73-74.)

Describes depredations of the brown lemming, in Sadlermiut Eskimo graves on Southampton Island in the Canadian Arctic: skulls used for nesting, some skeletons in disarray with small bones (specified) disturbed or carried away, etc. The lemmings and results of their activities were discovered by an archeological party excavating the graves during summer 1959. (CaMAI.)

MERCANTON, PAUL LOUIS, 1876– , *see* IUGG . . . Snow & Ice Comm. 1961. No. 72396

73941. MERCER, JOHN HAINSWORTH, 1922– . Outline of the glacier study program in the USSR during the IGY. (Glaciological notes, Oct. 1960, no.4, p.20-42, map.) 132 refs.

Surveys the historical background of Russian glaciology, and describes the organization of the Institute of Geography of the Academy of Sciences. Its and other glaciological activities in the IGY are outlined. Notes are given on 14 major, mostly Russian, sources of information. (DGS.)

73942. MEREDITH, WILLIAM F. Study seeks ways and means to combat juvenile delinquency. (Alaska's health and welfare, Oct. 1962. v.19, p.4-5, illus.)

Reports an exploratory study made by the Dept. of Health and Welfare, and the University of Alaska, in the northwestern part of the state. The findings of this, the Nome study, indicate as factors in delinquency: alcohol, and in one town also narcotics; poor housing, lack of recreational facilities, and job discrimination. (DLC.)

73943. MERIKALLIO, EINARI. Der Einfluss der letzten Wärmeperiode, 1939-49, auf die Vogelfauna Nordfinnlands. (International Ornithological Congress. 10th, 1950. Proceedings *pub.* 1951. p.484-93, illus., table, maps.) Ref. Text in German with explanations to illus. table, maps also in English. **Title tr.**: The effect of the recent warm period 1939-1949, upon the avifauna of northern Finland.

Discusses the recent warming trend especially during May - July, and reports its effects upon two species of finches and several other birds. Increase, or decrease in numbers, due apparently to food factors and to a northward extension of occupied area by two degrees (= 120 miles) are the main changes noted. (DLC.)

73944. MERIKALLIO, EINARI. Über die Anwendung der quantitativen Untersuchungsmethode zur Ermittlung der regionalen Verbreitung und der Zahl der Vögel in Finnland. (International Ornithological Congress. 11th, 1954. Proceedings *pub.* 1955, p.485-94, tables, maps.) 10 refs. Text in German. **Title tr.**: On the use of quantitative research methods for establishing regional distribution and number of birds in Finland.

Reviews earlier attempts at quantitative evaluation of faunas, and presents the results of own work during 1941-1953 on the density, dominance - values and number of birds in Finland. The avifauna in general is dealt with as well as com-

mon species. The estimated number of breeding pairs is listed for some 200 species. (DLC.)

73945. MERILÄINEN, KAUKO. Albite diabases and albitites in Enontekiö and Kittilä, Finland. Helsinki, 1961. 75 p., illus., map, graphs, tables. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finlande, no.195.) 72 refs.

Describes field relations, structures, textures, and compositions of these two iron-bearing rocks at approx. 68°30′N. 28°30′E., and 68°N. 25°E. Albite diabases commonly occur as sills, composed of two or three different, regularly arranged zones; the five varieties found differ in mineral content, grain size, amount of albite, and color. Differentiation from the parent olivine-basaltic magma was aided by the flow of the magma and finally by the presence of gaseous CO_2 and water. The albite of these rocks is either primary or produced by the epidotization of plagioclase. Albitites appear in the same areas as the albite diabases; they are very rich in albite, and crystallize from magmatic liquids or solutions after the formation of the albite diabases. Mineral veins, some with magnetite and hematite, were observed in association with these two rocks. Results of chemical analyses and physical data are tabulated. (DLC.)

73946. MERKEL', S. A. O nekotorykh ėkonomicheskikh voprosakh ispol'zovaniia mashinnogo oborudovaniia pri nizkikh temperaturakh. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1962, no.7, p.3-10, diagr., tables.) Text in Russian. **Title tr.:** Some economic problems in the use of mechanical equipment at low temperature.

Reports a study carried out in 1960 and 1961 at Bratsk, on losses due to idleness and frost damage on construction equipment used for the hydroelectric station, viz: 194 excavators, 321 cranes, 769 tractors and bulldozers and 155 scrapers. They amounted to 3.7 million rubles in 1960 and 0.9 million r. in the first half of 1961. On the same scale, a total loss is estimated for the northern and eastern areas of RSFSR at 19.5 million rubles in 1960 and to 7.3 million in the first half of 1961. The problems of raising low-temperature resistance in mechanical equipment and of increasing its use in winter are discussed, and further pertinent investigations outlined. (DLC.)

73947. MERKLIN, ROMAN L'VOVICH, *and others.* Atlas-opredelitel' mollīuskov chetvertichnykh otlozhenii Chukotskogo poluostrova. Moskva, Izd-vo Akademii nauk SSSR, 1962. 60 p. illus., diagrs., map, 12 plates. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda.) 58 refs. Text in Russian. *Other authors:* O.M. Petrov *and* O.V. Amitrov. **Title tr.:** Atlas-key to molluscs of the Quaternary deposits of the Chukotsk Peninsula.

Outlines in pt. 1, the stratigraphic distribution of molluscs and stratigraphic division of Quaternary deposits. In pt. 2, systematic description of 51 molluscs (pelecypods and gastropods) is given, from collections made in the course of geologic investigations in 1953-1958. Diagnosis, locality, age, distribution, and illus. of each form are included. (DLC.)

73948. MERRILL, D. F. Lumbering in the Yukon Territory. Whitehorse, Y.T., 1961. 3 p. Mimeo.

Presents a short comprehensive review of this, one of the more important secondary industries in the Territory. For 30 years after the 1898 Gold Rush it supplied local needs; after 1930 the Dawson area timber was exhausted and lumber imported from British Columbia; since 1940 local production has increased. White spruce is the most important commercial species, lodgepole pine, and black spruce next. Six major sawmills are in operation, with lumber and mining timbers the chief products. The most important commercial timber area is the upper Liard valley in southeast Yukon. Accessible or potentially accessible timber is sufficient to supply the Territory, and production is expected to increase as mining activity increases. Present market conditions are poor, though under improvement. Data on production and potential are included. Author is Superintendent of Forestry, Dept. of Northern Affairs and National Resources, at Whitehorse. (CaOGB.)

73949. MERRILL, THEODORE R. Survival of pink salmon at Little Port Walter research station. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.99-102.)

Describes the station, on Baranof Island about 60 miles south of Sitka, and its activities. Research of the past five years had shown that salmon survival is greater when spawning is early and temperatures more favorable for development prevail. The bottom gradient has also some effect on survival. (CaMAI.)

MERRITT, R. P., *see* Little, C.G., & *others.* Scintillation . . . radio stars. 1962. No. 73540

MERTEN, D., *see* Paakkola, O., & *others.* Sr 90 Finnish grass . . . 1960. No. 74599

73950. MESCH, BORG, *and* **B. SOMMARSTROM.** Lapska fjällbor. (Norrbotten 1962, p.185-94, illus.) Text in Swedish. **Title tr.:** Mountain Lapps.

Contains photographs, with brief text. The pictures were taken during 1911-1930 by Mesch, a photographer active in Kiruna between 1900 and 1956, whose work has documentary value. (SPRI.)

73951. MESEZHNIKOV, M. S., *and* **S. G. GALERKINA.** Materialy po stratigrafii īurskikh otlozhenii Polīarnogo Urala. (Leningrad. Vsesoīuznyĭ neftīanoĭ nauchno-issledovatel'skii geologorazvedochnyĭ institut. Trudy 1962, vyp. 190, geologicheskiĭ sbornik no.7, p.421-36, table, cross-sections, map.) 4 refs. Text in Russian. **Title tr.:** Materials on the stratigraphy of the Jurassic deposits of the Polar Ural.

Describes the stratigraphy of these deposits from drillings in the Salekhard, Labytnangi and other areas of the lower Ob. Coal-bearing deposits and the marine stratum are distinguished and divided into Jurassic stages and smaller time-rock units. For marine Jurassic deposits, fauna and flora are characterized. (DLC.)

MESEZHNIKOV, M. S., *see also* Basov, V.A., & *others.* Novye dannye . . . Khatangskoĭ vpadiny. 1962. No. 70061

73952. MESHCHANINOV, IVAN IVANOVICH, 1883– . Agglīutinatsiia i inkorporirovanie. (Voprosy īazykoznaniia, Sept.-Oct. 1962. god 11, no.5, p.24-31.) 5 refs. Text in Russian. **Title tr.:** Agglutination and incorporation.

Linguistic analysis of these grammatical and

syntactic structures with examples from Chukchi and Koryak. (DLC.)

MESSINETTI, S., *see* Parentela, A., & *others*. Influenza dell' ipotermia . . . 1961. No. 74648

73953. MESTYÁN, GYULA, *and* **F. VARGA.** Chemical thermoregulation of full-term and premature newborn infants. (Journal of pediatrics, May 1960. v.56, no.5, p.623-29, illus.) 16 refs.

Study of O_2-consumption and rectal temperature in 1-10 day-old infants. In a cool environment (20°-22°C.) the increased O_2-consumption was always associated with intense muscular activity; during rest in the same environment, O_2-consumption fell to the basal level. Nonetheless increased heat production in other organs is not excluded. (DNLM.)

73954. MESTYÁN, GYULA, *and others*. The effect of local thalamic heating in the cat on heat production and body temperature. (Acta physiologica, Budapest 1960. t.17, fasc. 1, p.69-73, illus.) 8 refs. *Other authors:* I. Járai, G. Szegvary *and* M. Farkas.

Heating the pre- and supra-optic area in an environment of 17-20°C. suppressed thermoregulation. This in turn lowered O_2-consumption and body temperature, and usually increased the respiratory rate. No counterregulatory responses were noted. (DNLM.)

73955. METCALF, THEODORE G., *and* **J. P. SCHMIDT.** Immunological study on respiratory viruses isolated in Alaska. Fort Wainwright, Alaska, Oct. 1961. 12 p. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-37.) 12 refs.

Reports on 1210 clinical specimens from the military population of Ladd Air Force Base, examined during 1957-1959 inclusive. Laboratory findings, including immunological analysis of sera and viral isolation attempts are correlated with clinical and epidemiological data. On the basis of all these, incidence and types of infections and effect of vaccination are appraised. (CaMAI.)

73956. METCALF, THEODORE G., *and* **J. P. SCHMIDT.** A study of upper respiratory disease of personnel stationed at 18 remote radar sites in Alaska. Fort Wainwright, Alaska, Oct. 1961. 14 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-42.) 4 refs.

Reports a study of 898 individuals, aged 18-46. Virus isolation, antibody analysis of serum and results of vaccination repeatedly demonstrated the presence of A_2 influenza in them during the winter of 1959-60. The protective quality of three new respiratory vaccines was demonstrated. (CaMAI.)

73957. METZ, B. L'évaluation physique des effets du milieu thermique. (France. Centre national de la Recherche scientifique. Colloques nationaux 1955, p.C113-C126, tables.) 10 refs. Text in French. **Title tr.:** Physical evaluation of the effects of the thermal environment.

Reviews briefly the forms of heat exchange, and presents a series of equations and mathematical formulas covering the subject. Radiation, convection, evaporation, and conduction are considered in a rather summary way, with "evaluation of global effect of thermal environment" treated in detail. (DLC.)

METZGER, M. E., *see* Hodgson, J.H., & *others*. Direction faulting . . . earthquakes 1956-57. 1962. No. 72175

73958. MEUSEL, H. Die Möglichkeiten einer kurzen Beschreibung der Pflanzenareale für die Flora Europaea. (Repertorium specierum novarum regni vegetabilis, 1960. Bd. 63, Heft 2, p.149-55.) 3 refs. Text in German. **Title tr.:** Possibilities for a brief description of plant areas for the *Flora Europaea*.

For brief biogeographic references, author proposes abbreviations for latitude, including arctic (arkt); for elevation above sea level, as alpine (alpin); and for areas, as circumpolar (Zirkpol). A discussion of the proposal is appended. This is one of 17 papers presented at a round table conference in Vienna 1959, of botanists associated in preparation of *Flora Europaea*. All the papers together with pertinent discussion are pub. in this issue (*Problems of taxonomy and distribution in the European Flora*) of this journal. (DLC.)

73959. MEYER, ARNO. Gute Kabeljaufangaussichten für Südgrönland? (Informationen für die Fischwirtschaft, 1960. Jahrg. 7, Nr. 5/6, p.131-35, table, graphs, diagrs.) Text in German. **Title tr.:** Good prospects for the South Greenland cod fisheries?

Presents statistics on the volume and composition of (German) catch since 1952, and discusses prospects for 1960-1961. (SPRI.)

73960. MEYER, GEORGE H., *and others*. Viable micro-organisms in a fifty-year-old yeast preparation in Antarctica. (Nature, Nov. 10, 1962. v.196, no.4854, p.598.) 2 refs. *Other authors:* M.B. Morrow, *and* O. Wyss.

Describes a glass container with dehydrated bakers' yeast left on Ross Island by Capt. Robt. F. Scott prior to his journey to the South Pole in 1911. Bacteriological methods used in determining viability are outlined and a list is presented of the yeasts, moulds and bacteria that survived in the preparation. (DLC.)

73961. MEYER, PETER, *and* **R. VOGT.** Electrons in the primary cosmic radiation. (Physical review letters, Feb. 15, 1961. v.6, no.4, p.193-96, table, graphs, diagr.) 5 refs.

Presents results of three balloon flights from Ft. Churchill, Manitoba, during Aug.-Sept. 1960, showing the existence of a flux of primary electrons which enters the top of the atmosphere. Upper and lower limits of the flux are deduced. (DLC.)

73962. MEYER, PETER, *and* **R. VOGT,** The primary cosmic-ray electron flux during a Forbush-type decrease. (Journal of geophysical research, Nov. 1961. v.66, no.11, p.3950-52, diagr., graphs.) 5 refs.

Discusses the origin of these particles on the basis of balloon measurements at Ft. Churchill on Aug. 22, Sept. 8 and 15, 1960. Altitude dependence of the electron events is shown for the three flights together with daily averages of neutron monitor data at Deep River, Canada. Behavior during the Forbush decrease suggests that the primary electrons were of galactic origin. (DLC.)

73963. **MEYERHOF, G. G.** Bearing capacity of floating ice sheets. (American Society of Civil Engineers. Engineering Mechanics Division. Journal, Dec. 1961. v.87, no.EM6, p.161-66, diagrs.) 3 refs.

Answers criticism of No. 66700 presented by H.G. Hopkins, L.W. Gold and A. Assur, q.q.v.; and offers some additional data, in particular on collapse of ice under circular and rectangular loads. (DLC.)

73964. **MEYERS, H.F.** Physical observations on *Echinococcus* eggs, 2; a simple method for determination of viability. (Journal of parasitology, June 1957. v.43, no.3, p.322-23.) 2 refs. In sequence to No. 41376.

Describes a fast, relatively simple means for determining viability of *E. multilocularis* eggs, a tapeworm which infects animals and men in Alaska. (DA.)

73965. **MEZHVILK, A. A.** Chetvertichnye otlozheniia Severnogo Kharaulakha. *In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t.117, Geologiia . . . 1961, p.113-25, illus., tables.) 10 refs. Text in Russian. Title tr.: Quaternary deposits of the northern Kharaulakh.

Describes preglacial, glacial and postglacial deposits of this mountain range of northern Yakutia, as studied in 1950-1952. Preglacial deposits are represented by old alluvial and marine deposits. Action of glacial erosion, boulders, and other signs of glaciation are reported. Some sections of the glacial deposits are described. Buried ice is also described. Postglacial deposits are characterized. A stratigraphic time table of Quaternary deposits is included. (DLC.)

73966. **MEZHVILK, A. A.** Markiruiushchie gorizonty sredi effuzivnykh trappov Sibirskoĭ platformy. (Geologiia i geofizika, 1962, no.4, p.68-75, illus., tables, diagrs.) Text in Russian. Summary in English. Title tr.: Key horizons among effusive traps of the Siberian platform.

Reports his geologic mapping of effusive formations in 1955 in the Kotuy, Ayan and Kureyka River regions. Sheets of porphyric basalts up to 100 m. thick, of homogeneous textural and structural features, and wide extent over the area, are described and used for establishing the stratigraphic position of effusive formations. Basaltic magma is believed to have erupted here into a large shallow-water basin in an area predominantly under submergence. (DLC.)

73967. **MICHAEL, HENRY N.,** *Editor.* Studies in Siberian ethnogenesis. Toronto, Univ. of Toronto Press, 1962. 313 p. illus. tables, maps. (Arctic Institute of North America. Anthropology of the North: Translations from Russian sources, no.2.) Refs.

Translations of 17 papers pub. during 1950-1960, nine* of them on northern peoples abstracted in earlier volumes of this Bibliography as indicated by number.

*GURVICH, I.S. The ethnic affiliation in the northwest of the Yakut ASSR. No. 22292.

*DOLGIKH, B.O. The population of the Olenek and upper Anabar River basins. No. 21496.

*SUSLOV, I.M. The national affiliation of the present population of northwestern Yakutia. No. 26545.

*GURVICH, I.S. A propos the ethnic affiliation of the population of the Olenek and Anabar River basins. No. 22270.

*DOLGIKH, B.O. On the population of the Olenek and Anabar River basins. No. 21498.

*OKLADNIKOV, A.P. Ancient petroglyphs in modern decorative art in the Amur region. No. 60654.

Smoliak, A.V. Certain questions on the early history of the ethnic groups inhabiting the Amur River valley and the Maritime Province.

Dolgikh, B.O. Contributions to the history of the Buryat people.

Tokarev, S.A. On the origin of the Buryat nation.

Bernshtam, A. On the origin of the Kirgiz people.

Debets, G.F. The origin of the Kirgiz people in the light of physical anthropological findings.

Potapov, L.P. The origins and ethnic composition of the Koybals.

Potapov, L.P. The origin of the Altayans.

Tret'iakov, P.N. Volga-Oka place names and some problems of the ethnogenesis of the Finno-Ugric peoples of the Volga region.

*CHEBOKSAROV, N.N. Questions concerning the origins of the Finno-Ugrian language group. No. 21158.

*DOLGIKH, B.O. On the origin of the Nganasans; preliminary remarks. No. 21500.

*DOLGIKH, B.O., *and* M.G. LEVIN. Transition from kinship to territorial relationship in the history of the peoples of northern Siberia. No. 21499. (CaMAI.)

MICHAEL, HENRY N., *see also* Rudenko, S.I. Ancient culture . . . 1961. No. 75253

MICHAELSON, NEIL E., *see* Alaskan Science Conference 1960. 1961. No. 69643

MICHELSON, RONALD WAYNE, *see* Hussey, K.M., & R.W. Michelson. Tundra relief features Pt. Barrow. 1961. No. 72275

73968. **MICHIE, GEORGE H.** The Leaf Bay sector of the Ungava Trough; a geography of western Ungava Bay. Toronto, May 1958. 87 l., maps, diagr., graphs, table. Reprint of thesis presented to the University of Toronto, 1954. 35 refs.

Presents a detailed account of the sector, 57°15'-59°N. 68°-71°W., from five 4-month periods of field work 1951-1956, together with literature studies. A north-south alignment of the lakes and escarpments is the most distinctive physical characteristic of the Trough, in contrast to the irregular pattern of lakes and hills to the west. The ancient igneous basement rocks are overlain by sediments which include the iron formation, and by glacial drift. Iron sulfides occur to the east and iron oxides to the west of a series of intrusions along the middle of the Trough. Glaciation has rounded the escarpments and filled the depressions with coarse drift, leaving a fairly smooth surface. Drainage is mainly eastward, in the Larch-Koksoak and Leaf rivers. Vegetation, travel routes, the native population of Indians and Eskimos are dealt with in turn. At present a main route to the interior for man and wildlife, the Trough is a potential route for transport of minerals. Better utilization of natural including human resources is discussed. (DGS.)

73969. **MICHIE, GEORGE H.** Valijoki and Lisma: new planned settlements in Finnish Lapland. (Canadian geographer, Spring 1961. v.5, no. 1, p.24-36, 3 maps, table.) 22 refs.

Describes an experiment in state-planned agricultural and forestry settlements, and compares these two with settlements in similiar areas in Ontario and Quebec. Valijoki 35 mi. southeast, and Lisma 60 mi. north-northeast, of Rovaniemi, were organized in 1954. Physical geography of the sites, land-use surveys, pattern of land division, of selection of settlers, planning of crops, marketing arrangements, and community morale, are dealt with in turn; two successful farms and their families are described. Benefits, also shortcomings of well-planned, nucleated, and economically integrated frontier settlement are exemplified. (DGS.)

73970. **MICHURIN, L. N.** Dikiĭ severnyĭ olen' na Taĭmyrskom poluostrove. (Sel'skoe khozĭaĭstvo Sibiri, Nov. 1962. god 7, no.11, p.79-81.) Text in Russian. **Title tr.:** Wild reindeer on the Taymyr Peninsula.

Reports this reindeer population as a hundred thousand from aerial survey estimates, with an annual increase of 6.5-7 thousand. It is in two herds, western and eastern, and their seasonal migration routes are noted. Guidelines for hunting organization, herd conservation and management etc. are discussed. (DLC.)

73971. **MICHURIN, L. N.,** *and* **L. V. MAKHAEVA.** Pitanie dikogo severnogo olenĭa na Taĭmyre. (Zoologicheskiĭ zhurnal, 1962. t.41, vyp.12, p.1883-88, tables.) 6 refs. Text in Russian. Summary in English. **Title tr.:** Diet of wild reindeer on Taymyr.

Reports on the food composition according to seasons, with comparisons to the diet of domesticated animals. The wild form was found to consume less Iceland moss all the year round than does the domesticated. During the snowy period, its food is 60-80% herbaceous plants; during the summer, grasses and leaves of bushes. (DLC.)

73972. **MICK, ALLAN H.,** *and* **H. P. GAZAWAY,** *Editors.* Alaska farm facts, a compilation of agricultural statistics for the years 1953 through 1957. College, Feb. 1961. 34 p. tables, graphs, map. (Alaska. University. Agricultural Experiment Station. Bulletin 27.) 10 refs.

Tabulates and discusses statistics on agricultural land use, crops, livestock, and prices paid and received by farmers. The information was compiled by J.R. Parks from joint annual reports, 1953-1957, of the Alaska Dept. of Agriculture and the Experiment Station, together with price data supplied by the Matanuska Valley Farmers Cooperating Association and military purchasers. Comparisons are made with the 1950 Census of Agriculture and between the five agricultural regions: Southeast Alaska, Tanana Valley, Matanuska Valley, Anchorage area, and the Kenai Peninsula. Problems of marketing are described; these, rather than climate, limit agricultural expansion. (CaMAI.)

MICK, ALLAN H., *see also* Alaskan Science Conference 1961. 1962. No. 69644

MIDDLETON, WILLIAM EDWARD KNOWLES, 1902– , *see* Canada. Nipher shielded snow gauge. 1961. No. 70583

73973. **MIDTTUN, LARS.** The distribution of cod-haddock in the central and southeastern Barents Sea, September/October 1958. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v.149, Contributions to special IGY meeting 1959, p.210-11, map.)

Reports on echo-survey (which cannot distinguish between cod and haddock) in the Polar Front area, with isotherms. Best concentrations were found in the warm-water tongues bending eastward. (DI.)

73974. **MIDTTUN, LARS.** Norwegian hydrographical investigations in the Barents Sea during the International Geophysical Year. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v.149, Contributions to special IGY meeting 1959. p.25-30, illus., maps.)

Reports observations of temperature, salinity, oxygen and phosphate at standard depths made in spring and autumn 1958 by the R/V *G.O. Sars*. The material is presented in a series of vertical section and horizontal charts. The area covered extends between 15° and 45°E. long., and from the mainland to about 79°N. (DI.)

73975. **MIDTTUN, LARS.** Rapport om tokt med "G.O. Sars" til Barentshavet. 28. mars til 29. april 1961. (Fiskets gang, June 22, 1961. årgr. 47, nr.25, p.460-62, graphs, sketch map.) Text in Norwegian. **Title tr.:** Report of the *G.O. Sars* cruise to the Barents Sea, March 28 - April 29, 1961.

Reports on the mapping of capelin distribution off the Finnmark coast, and that of cod and haddock in the southeast Barents Sea and Bjørnøya waters; also collecting of samples for fish analysis, and cod tagging. (DA.)

MIDTTUN, LARS, *see also* Hylen, A., & *others*. Torskeundersøkelsene . . . 1961. No. 72285

MIDTTUN, MAGNE, *see* Laerum, O.D., & G.S. Pedersen. Svalbardveg 1959 . . . 1962. No. 73273

MIETTINEN, JORMA K., *see*

Paakkola, O., & *others*. Sr 90 Finnish grass . . . 1960. No. 74599

Vuorinen, A.P.U., & J.K. Miettinen. Caesium 137 . . . 1960. No. 76455

73976. **MIGIRENKO, G.** Nauka i zhizn'. (Sibirskie ogni, Oct. 1962. god 41, no.10, p.3-13.) Text in Russian. **Title tr.:** Science and life.

Deals with the planned scientific activities of the Academy of Sciences' Siberian Division. Its general fields of study, some thirty in earth sciences, physics, technology, etc., and its 96 special research projects, mainly in natural and social sciences, are discussed. The practical applications of basic research to industrial and economic objectives are stressed. (DLC.)

73977. **MIHOLITS, ERNEST M.** Research and development of a new method of waste disposal for isolated sites in the Arctic, 1; fundamentals of human waste incineration. Fort Wainwright, Alaska, May 1961. 112 p. illus. tables. (U.S. Air Force.

Arctic Aeromedical Laboratory. Technical report 61-9.) 57 refs.

Reports a study aimed at developing a system for the complete destruction and disposal of human wastes. Methods of disposal in the Arctic, problems and conclusions are outlined. Incineration toilets are examined, the chemistry of combustion, physiological effects of combustion products, combustion-theory in relation to incinerator design are considered. Experiments with a fuel-fired incinerator toilet, and the design of such a toilet are reported, with recommendation that the study be continued. (CaMAI.)

73978. MIKHAĬLOV, A. F. K poznaniiu stratigrafii Koriaksko-Kamchatskoĭ skladchatoĭ oblasti. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.285-86.) Text in Russian. **Title tr.:** On knowledge of the stratigraphy of the Koryak-Kamchatka folded zone.

Notes assemblage of material in recent years on the Paleozoic and lower Mesozoic deposits in the Penzhinskiy Range and Khatyrka River basin. Stratigraphy of middle Paleozoic deposits of Koryak Range, Cretaceous deposits of the Koryak-Kamchatka folded zone, Paleogene and Neogene deposits of Penzhinskaya Bay are briefly discussed. (DLC.)

73979. MIKHAĬLOV, A. F. Khromshpinelidy Penzhinskogo raĭona. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy 1961. n. ser. t.60, Materialy po geologii i mineralogii rudnykh mestorozhdeniĭ SSSR, p.153-58, table, map.) 4 refs. Text in Russian. **Title tr.:** Chrome-spinellids of the Penzhinskaya Bay region.

Describes their mineralization in the Talovskiye Mts., Kuyul massif, and other parts of this region. Chemical and spectral analyses of chrome-spinel are reported and evaluated. Some platinum is found in them and its grains are analyzed. Exploration of the ultrabasites with which chrome-spinellids are connected, though incomplete, offers hope for discovery of platinum. (DLC.)

73980. MIKHAĬLOV, A. F. Paleozoĭskie i srednenizhnemezozoĭskie otlozheniia Penzhinskogo kraĭa. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.33-42.) Text in Russian. **Title tr.:** Paleozoic and middle-lower Mesozoic deposits of the Penzhinskiy Range.

Describes the stratigraphy of Devonian, Carboniferous, Permian, Triassic and Jurassic deposits of this mountain range and the Khatyrka River basin at the upper end of the Kamchatka Peninsula. The distribution, composition and floral and faunal characteristics of the deposits are reported. (DLC.)

MIKHAĬLOV, D. A., *see* Sudovikov, N.G., *& others.* Petrografiia . . . 1962. No. 75977

73981. MIKHAĬLOV, I. S. Pochvennye issledovaniia na severe Aliaski. (Pochvovedenie, Feb. 1961, no.2, p.103-108, tables, diagrs.) 12 refs. Text in Russian. Summary in English. **Title tr.:** Soil studies in northern Alaska.

Analyzes investigations near Point Barrow by J.V. Drew, J.C.F. Tedrow and others (cf. No. 42772, 50626, 55363, 55364). Comment is made that these authors have united into the type "arctic brown," several genetically different soils: podsolized, calcareous, and other. "Arctic brown" soil cannot be considered typical for tundra. (DLC.)

73982. MIKHAĬLOV, I. S. Pochvy poliarnykh pustyn' i rol' B.N. Gorodkova v ikh izuchenii. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Nov.-Dec. 1962. t.94, vyp.6, p.520-23.) 21 refs. Text in Russian. **Title tr.:** Soils of arctic deserts and the role of B.N. Gorodkov in their investigation.

Reviews this noted botanist's work on arctic soils, their classification and properties, soil-forming factors and other features. Frost action, vegetation cover, biochemical processes, humus content, and other characteristics of such soils are discussed, and the literature of the field is reviewed. (DLC.)

73983. MIKHAĬLOV, I. S., *and* **L. S. GOVORUKHA.** Pochvy Zemli Frantsa-Iosifa. (Moskva. Universitet. Vestnik, ser. 5, geografiia, Nov.-Dec. 1962. no.6, p.42-48, tables.) 6 refs. Text in Russian. **Title tr.:** Soils of Franz Joseph Land.

Describes climatic conditions, vegetation, and rocks of the archipelago as factors in soil formation. Physical and chemical properties of the soils are analyzed and the data reported. Typical soil sections are described. The organic matter is determined. Franz Joseph Land soils are of arctic type; two zones are distinguished: desert-arctic in the northern part of the archipelago, and typical arctic in the southern part. (DLC.)

73984. MIKHAĬLOV, N. P. *Pavlovia* i rodstvennye gruppy ammonitov. (Moskovskoe obshchestvo ispytateleĭ prirody. Biulleten', nov. ser., t.67, otdel geologicheskiĭ, Nov.-Dec. 1962. t.37, vyp.6, p.3-30, illus.) 31 refs. Text in Russian. **Title tr.:** *Pavlovia* and related groups of ammonites.

Describes systematically about twenty species of gen. *Pavlovia, Strajevskya* and *Dorsoplanites* collected by D.I. Ilovaiskiĭ and the author in the eastern slope of the Northern Ural (Severnaya Sos'va basin) and the Russian platform. *Strajevskya* nov. gen. is represented by four species, of which one is also new, and the others emended by the author or described by others. (DLC.)

73985. MIKHAĬLOV, S. Belyĭ medved'. (Okhota i okhotnich'e khoziaĭstvo, July 1961. god 7, no.7, p.24.) Text in Russian. **Title tr.:** Polar bear.

Discusses the threatened extinction of this bear, due to excessive hunting, disease (especially trichinosis), and encroaching settlement which has reduced the breeding grounds to a few arctic islands. The total population in the Arctic does not exceed four to eight thousand. The importance of the Vrangel Island breeding ground is stressed, also the need to make it a polar bear preserve. (DLC.)

73986. MIKHAĬLOV, S. V. Resursy mirovogo okeana. (Priroda, Sept. 1961. god 50, no.9, p.32-40, illus.) Text in Russian. **Title tr.:** Resources of the sea.

Discusses the not unlimited nature of marine resources, and the over-exploitation of seals and fishes in the North Pacific during the 18th-19th centuries; protective measures and international agreements; new fishing resources and grounds: redfish, flounder, tuna; arctic seas. International cooperation in fisheries, sealing and whaling is

outlined. Research and exploitation, fresh-water resources, river pollution, etc. are also reviewed., (DLC.)

73987. **MIKHAĬLOV, V. M.** Opyt raboty kombaĭna "Ural-2m" v Pechorskom basseĭne. (Ugol', Sept. 1961. god 36, no.9, p.26-28, illus., diagrs., table.) Text in Russian. **Title tr.:** Working of the Ural-2m cutting-loading machine in the Pechora coal basin.

Presents performance data on this combine for March-December 1960 at Vorkuta pit No. 32: output rose from 6,236 t. in April to over 12,000 t. in September and October, coal production per man/day from 5.2 t. to 8.7 t. Planning and operational details are discussed; successful tests of the same type of machine in the Inta coal mines are noted. (DLC.)

MIKHAĬLOVA, A. F., *see* Leningrad. N.-i. Institut geologii Arktiki. Gulinskaĭa intruziĭa . . . 1961. No. 73413

73988. **MIKHAĬLOVA, I. G.,** *and* **E. V. PRAZDNIKOV.** Morfologicheskie izmeneniĭa tkaneĭ platsenty beloĭ krysy posle lokal'nogo obmorazhivaniĭa. (Akademiĭa nauk SSSR. Doklady 1961. t.136, no.3, p.709-711.) 13 refs. Text in Russian. **Title tr.:** Morphological changes in placental tissues of the white rat after local freezing.

Describes without illustrating, cellular changes in the placental wall, five minutes to five days after a short freezing. The fate of the embryos is also noted. (DLC.)

73989. **MIKHAĬLOVA, Z. P.** Novye vidy foraminifer iz semeĭstva Lasiodiscidae Pechorskogo kraĭa. (*In:* Akademiĭa nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.395-401, plate.) 4 refs. Text in Russian. **Title tr.:** New species of foraminifers of fam. Lasiodiscidae in the Pechora region.

Presents a taxonomic description of six species of Carboniferous and Permian forams of gen. *Lasiodiscus* and *Lasiotrochus,* all but one new. (DLC.)

MIKHAĬLOVA, Z. P., *see also* Eliseev, A.I., & Z.P. Mikhaĭlova. Novye dannye . . . Chernysheva. 1962. No. 71235

73990. **MIKHALEV, G. P.,** *and* **N. D. ARZHAKOV.** Nekotorye geologicheskie osobennosti nizhneĭurskikh almazonosnykh otlozheniĭ raĭona kimberlitovoĭ trubki "Mir." (Akademiĭa nauk SSSR. Sibirskoe otdelenie. ĬAkutskiĭ filial. Nauchnye soobshcheniĭa 1962. vyp.7, geologiĭa, p.113-19.) 4 refs. Text in Russian. **Title tr.:** Some geologic features of Lower Jurassic deposits in the Mir kimberlite pipe region.

Reports a lithologic and mineralogic study in 1958 and 1959, by which two genetic types of deposits are distinguished: lacustrine-marshy and proluvium-lacustrine. Rich diamond-bearing placers are connected with the latter group. Existence of original sources, good climatic conditions, character of weathering, oscillating movements and other conditions for developing of diamond placers are analyzed. The accumulation of such deposits in various depressions is treated in greater detail. (DLC.)

MIKHALEVSKAĬA, A. D., *see* Komlev, L.V., & *others.* O vozraste shchelochnykh intruziĭ . . . 1961. No. 72912

73991. **MIKHEENKO, V. I.,** *and* **N. I. NENASHEV.** Absoliūtnyĭ vozrast obrazovaniĭa i otnositel'nyĭ vozrast vnedreniĭa kimberlitov ĬAkutii. (Akademiĭa nauk SSSR. Komissiĭa po opredeleniĭu absoliūtnogo vozrasta geologicheskikh formatsiĭ. Trudy sessii 9, 1960 *pub.* 1961, p.146-64, illus., tables, diagrs.) 20 refs. Text in Russian. **Title tr.:** Absolute age of the formation and relative age of the intrusion of Yakutia kimberlites.

Reports absolute age determination by the potassium-argon method of phlogopite in the Chomur and Flogopitovaya kimberlite pipes of the Olenek basin, in the eastern Anabar shield. Its age ranges from 608 to 661 million years; geologically, it belongs to the Upper Cambrian. Relative age of the injection of kimberlite pipes is distinguished as post-Jurassic and its absolute age is estimated as 140 million years. Hence the absolute age of the phlogopite indicates the time of its own origin, not that of the kimberlite. The conditions for emplacement of kimberlite pipes are described. (DLC.)

73992. **MIKHEENKO, V. I.** Novye dannye o vozraste kimberlitovoĭ trubki "Sytykanskaĭa." (Geologiĭa i geofizika, 1962, no.2, p.109-112, illus., cross-section.) 3 refs. Text in Russian. **Title tr.:** New data on the age of the Sytykanskaya kimberlite pipe.

Presents a vertical cross section of this pipe in the northeastern edge of the Tungusskiy syncline, Yakut ASSR, hitherto considered pre-Permian or Permian. Its fabric contact with country rocks, print of trilobites in xenolith, and other conditions of kimberlite occurrence are evaluated, with conclusion that the pipe is of post-Permian age. (DLC.)

73993. **MIKHEENKO, V. I.** O vozrastnom vzaimootnoshenii doleritovoĭ daĭki i kimberlitovoĭ trubki "Leningradskaĭa." (Geologiĭa i geofizika, 1961, no.8, p.95-98, illus.) 2 refs. Text in Russian. **Title tr.:** On age interrelation of a dolerite dike and the Leningradskaya kimberlite pipe.

Refers to L.N. Zveder's study (No. 56271) and his conclusion that the dike was formed earlier than the pipe. From examination of the same material, a vertical section of the dike, and dike contacts with the kimberlite pipe, the present author comes to the opposite conclusion, i.e. that the dike was formed after pipe formation. (DLC.)

73994. **MIKHEENKO, V. I.,** *and* **N. I. NENASHEV.** Razdelenie trappov severo-vostoka Tungusskoĭ sineklizy po vozrastu. (Akademiĭa nauk SSSR. Komissiĭa po opredeleniĭu absoliūtnogo vozrasta geologicheskikh formatsiĭ. Trudy sessii 10, 1961 *pub.* 1962, p.267-78, tables, map.) 20 refs. Text in Russian. **Title tr.:** Division of traps in the northeastern Tungusskiy synclise according to age.

Reports 1957-1960 study of traps in the Morkoka and Markha River basins. Relative and absolute age data obtained disclose that the formation of the traps and genetically associated dikes of northwestern strike proceeded during the upper Permian and the beginning of the Lower Triassic, and the traps of northeastern strike were formed during the Cretaceous period. Dikes of differentiated traps of the Vilyuy-Markha flexure also were formed during the Cretaceous. (DLC.)

MIKHEEV, V. V., *see* International Conference on soil mechanics . . . 1961. No. 72383

73995. MIKHIN, VIKTOR SERGEEVICH, 1897– . Promysel semgi v r. Varzuge. (Leningrad. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khozĭaĭstva. Izvestiĭa 1959. t.48, p.11-17, tables.) 4 refs. Text in Russian. **Title tr.**: The salmon fishery in the Varzuga River.

Reviews catches since 1881, indicating this river to be the main salmon source, on the Kola Peninsula. Fishing areas and recent development are outlined, fishing seasons stated. Dominant sizes and weights of these fish are reported, also size of catches, water level, etc. (DLC.)

73996. MIKHIN, VIKTOR SERGEEVICH, 1897– . Ryby r. Varzugi i ikh vzaimootnosheniĭa s molod'iu semgi. (Leningrad. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khozĭaĭstva. Izvestiĭa 1959. t.48, p.101-107, tables.) 6 refs. Text in Russian. **Title tr.**: The fishes of the Varzuga River and their interrelations with young salmon.

Presents a list of these fishes of south-central Kola Peninsula, with notes on their occurrence, biology, food, economic value, size, migrations, etc. Three species are considered as food competitors of salmon: *T. thymallus* L., *L. leuciscus* L. and *P. phoxinus* L. (DLC.)

73997. MIKHIREV, P. A., *and* V. D. PONOMAREV. Rezervy povysheniĭa proizvoditel'nosti porodopogruzochnykh mashin PPM-4. (Gornyĭ zhurnal, July 1962. no.7, p.63-64, tables.) Text in Russian. **Title tr.**: Possibilities for increasing the efficiency of PPM-4 rock loaders.

Describes the methods developed at the Zapolyarnyy mine at Noril'sk of using this machine to load rock, chiefly Labrador porphyrite, on cars of 1.0, 2.65 and 5.0 m^3 capacity. Data on performance of the loader under various conditions and methods are tabulated and discussed. (DLC.)

MIKHOTA, G. G., *see* Aver'ianov, A.G., *& others.* Deep seismic sounding . . . 1961. No. 69921

73998. MIKKELSEN, EJNAR, 1880– . Johan Petersen. (Grønland, Feb. 1961, nr.2, p.79-80, port.) Text in Danish.

Obituary of the first factor at Angmagssalik. Petersen, 1867-1960, took part in Holm's expedition to East Greenland in 1883-1885 as interpreter, and he played a decisive part in the settlement's struggle for survival during his time of service, 1894-1915. He later returned to the post for shorter periods and was also in charge of Scoresbysund for a year after its foundation in 1924 and again in 1934-35. (CaMAI.)

MIKKELSEN, EJNAR, 1880– , *see also* Denmark. Greenland. 1961. No. 70974

73999. MIKKOLA, TOIVO. Sediment groups, particularly flysch, of the Precambrian in Finland. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finland, 1961. no. 196, p.51-65, map, tables.) 36 refs. *Also issued as:* Comptes rendus de la Société Géologique de Finlande 33, Mémoires du 75e anniversaire.

Summarizes the re-division of the Finnish Precambrian, based on the sedimentation cycle concept of Wegmann: a change in the stratigraphic interpretation of these rocks from the three-orogenies (Jotnian, Karelian, and Svecofennian) of Eskola, 1921, to the current single cycle called Fennian, composed of seven groups of facies. The former Karelian formation becomes the Jatulian and Kalevian groups, widely distributed in northern Finland; the youngest Precambrian sediments, also in the north, are the Kumpu-Jotnian sandstones and slates, slightly deformed. Discard of the Svecofennian formation name also is recommended. Comparison of six earlier stratigraphic concepts with the current Fennian cycle is shown in a table. (DLC.)

74000. MIKLUKHO-MAKLAĬ, ARTEM DMITRIEVICH. Proiavlenie vulkanizma na ploshchadi Pechorskogo ugol'nogo basseĭna i zapadnogo sklona Poliarnogo Urala. (*In:* Materialy po geologii . . . Evropeĭskoĭ chasti SSSR, sbornik statei 1961, vyp. 1, p.49-54.) 5 refs. Text in Russian. **Title tr.**: Manifestation of volcanism in the area of the Pechora coal basin and the western slope of the Polar Ural.

Notes the geologic mapping, drillings and geophysical studies carried on in the Pechora coal basin since 1953. In the Vorga-Shor deposits, a new region of igneous rocks has been detected, Permian-Triassic in age. Their position and composition are described and comparisons made with previously known igneous rocks. Those of the western Polar Ural, in the Paga, Kara and Malaya Usa River regions, pre-Ordovician in age, are also described. The petrography of igneous rocks is analyzed. Copper-sulfide mineralization is noted in the Kara and Paga regions, and further studies are suggested. (DLC.)

MIKLUKHO-MAKLAĬ, ARTEM DMITRIEVICH, *see also* Kaletskaia, M.S., & A.D. Miklukho-Maklaĭ. O mezozoĭskoĭ kore vyvetrivaniia . . . 1961. No. 72622

74001. MIKOLA, PEITSA UNTAMA, 1915– . Temperature and tree growth near the northern timber line. (*In:* Kozlowski, T.T. Tree growth, 1962, p.265-74, map, graphs.) 17 refs.

Reviews studies of annual and long-term variations of tree growth in Finland. Correlations were found between annual radial growth of Scots pine *(Pinus silvestris)* and the mean July temperature and of Norway spruce *(Picea abies)* and the June temperature. Radial growth of both species is also influenced by temperatures of the preceding summer, and the annual height growth of Scots pine is determined (mostly) by this factor. The length of the pine needles, however, depends mainly on temperatures during their growth. A sharp retreat of the Finnish timber line in 1902-1911, was followed by northward advance during warmer temperatures until the late 1930's. (DLC.)

74002. MIKUSHEV, A. K. Iz istorii russkoĭ nauki o komi narodnoĭ poèzii, po materialam A.M. Shëgrena i P.I. Savvaitova. (Russkiĭ fol'klor, materialy i issledovaniia, 1959. t.4, p.230-39.) 15 refs. Text in Russian. **Title tr.**: From the history of Russian studies of Komi national poetry, based on the archives of A.J. Sjögren and P.I. Savvaitov.

Discusses unpublished folklore materials collected by these 19th century scholars and deposited with the Academy of Sciences (Sjögren), the State Public Library and the Russian Geogra-

phical Society (Savvaitov). Some five hundred Zyryan songs, tales, proverbs, riddles, etc. are included. (DLC.)

74003. MIKUSHEV, A. K. Izuchenie fol'klora v Komi ASSR. (Russkiĭ fol'klor, materialy i issledovaniĭa, 1956. t.1, p.300-302.) Text in Russian. **Title tr.:** The study of folklore in Komi ASSR.

Reviews 19-20th century investigations of Zyryan oral lore. The linguistic, ethnographic, and folkloristic expeditions of 1946-1956 are sketched, their scope, research, and main publications noted. Over 1200 texts were collected by the Folkloristic expedition of the Komi Branch of the Academy of Sciences USSR in 1956. (DLC.)

74004. MIKUSHEV, A. K. Narodno-pesennoe tvorchestvo verkhov'ev Vychegdy i Pechory; po materialam fol'klornykh poezdok. (Russkiĭ fol'klor, materialy i issledovaniĭa, 1959. t.4, p.435-39.) Text in Russian. **Title tr.:** Folk songs of the upper Vychegda and Pechora River regions; from materials gathered on folkloristic trips.

Reports on field trips of 1956-1957, sponsored by the Komi Branch of the Academy of Sciences. A couple of thousand Zyryan and Russian songs, tales, proverbs, etc. were collected in the Ust'-Kuloma and Troitsko-Pechora Districts of Komi ASSR. Subject matter, musical rendering, improvisation, etc. are discussed. (DLC.)

74005. MIKUSHEV, A. K. O vneobriadovykh improvizatsiiakh; na materiale trudovykh improvizatsiĭ naroda komi. (Russkiĭ fol'klor, materialy i issledovaniĭa, 1960. t.5, p.146-56.) 27 refs. Text in Russian. **Title tr.:** Non-ritual improvisations; based on work-song improvisations of the Komi people.

Reports study of some sixty Zyryan genre songs collected in 1958-1959 by the Komi folklore expedition in the Izhma and Pechora River regions. Content, mood and style are discussed, as well as the character of these songs composed by individuals or groups at work: boat-hauling, reindeer-herding, hunting, fishing, doing farm chores, crafts, etc. The songs often descriptive tell of the daily life, needs and hardships, fears, hopes, etc. Though still familiar to the older people, they are not sung nowadays among the young. (DLC.)

74006. MILAN, FREDERICK A., *and* **K. RODAHL.** Caloric requirements of man in the Antarctic. (Journal of nutrition, Oct. 1961. v.75, no.2, p.152-56, illus., table.) 24 refs.

Report on dietary surveys with estimates of energy expenditure of a small sample of IGY scientists and naval personnel. The caloric intakes were found to be in excess of requirements and not different from those of U.S. troops on garrison ration in the Arctic or in temperate climates. (DLC.)

74007. MILAN, FREDERICK A., *and others.* The effect of a year in the Antarctic on human thermal and metabolic responses to an acute standardized cold stress. Fort Wainwright, Alaska. Mar. 1961. 21 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-9.) 14 refs. *Other authors:* R.W. Elsner and K. Rodahl.

Eight subjects tested in the fall, winter and spring showed increased mean body, and average skin and foot temperatures. Basal metabolism was unchanged. Heat production, to meet the same thermal demands, decreased. Shivering observed in all subjects in the fall, was nearly absent in winter and spring. These changes are assumed to represent adaptation to the cold environment. (CaMAI.)

74008. MILAN, FREDERICK A. An evaluation of winter survival shelters used by the U.S. Air Force in Alaska. Fort Wainwright, Alaska, Jan. 1961. ii, 31 p. illus., table, diagrs., graphs. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-8.)

The thermal environments of six winter survival shelters with wood-burning fires were studied at Ladd Air Force Base in winter 1954, at ambient temperatures of 0° to -41°F. A one- and a six-man lean-to, two types of paratepees, a willow shelter, and a moss-covered shelter were tested. A glass-cloth fireplace used in the tests proved to be a light-weight and portable substitute for a Yukon stove and enabled a fire to be kindled in an enclosed shelter. The willow shelter, paratepees, and moss-covered house provided adequate and similar thermal environments. The lean-tos were inadequate and it is recommended that teaching of their construction be discontinued in the Arctic Survival School; instead, consideration should be given to the construction of moss-covered shelters, moss mats being abundant in the arctic taiga. -From author's abstract. (CaMAI.)

74009. MILAN, FREDERICK A., *and* **K. RODAHL.** Nutrition and energy expenditure at Little America V in the Antarctic. Fort Wainwright Alaska, Mar. 1961. 17 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-11.) 14 refs.

Reports a study of scientists and sailors during the antarctic fall, winter, and spring. Caloric intake and expenditure, percentage of calories from protein, fat and carbohydrates, gain in weight, etc. are considered. The high caloric intake noticed in some subjects is attributed in part to "the tedium of long isolation." (CaMAI.)

74010. MILAN, FREDERICK A. Racial variations in human response to low temperature. (*In:* Symposia on arctic biology and medicine. Proceedings 1962, p.335-88, illus. tables.) 72 refs.

Reviews recent studies in races affected by cold environment, including American Negroes, and author's study of (six each) whites, Eskimos and Athapaskan Indians. The Eskimos were characterized by a greater energy flow through the system. In addition a greater amount of their peripheral tissue participates in cooling which results in their exhibiting smaller "cores" and larger "shells." (CaMAI.)

74011. MILAN, FREDERICK A. Thermal stress in the Antarctic. Fort Wainwright, Alaska, Mar. 1961. 19 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-10.) 18 refs.

Reports on investigations of thermal balance in two clothed men exposed to temperatures of -32° to -47°C. and winds of 2-7 knots. Notwithstanding seemingly adequate clothing and a heat production of 3 and 4.8 mets, total heat debt

ranged between 105 and 126 kilocalories for exposure of 40-165 minutes. Despite high rectal temperature it is presumed that the subjects were moderately cold stressed. (CaMAI.)

MILAN, FREDERICK A., *see also*
Alaskan Science Conference 1960. 1961. No. 69643
Alaskan Science Conference 1961. 1962. No. 69644

MILANOWSKI, PAUL G., *see* Alaskan Science Conference 1961. 1962. No. 69644

74012. MILASHEV, V. A. Vtorichnye izmeneniia kimberlitov. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.121, vyp.18, Sbornik statei po geologii i neftegazonosnosti Arktiki, p.165-85, illus., diagrs.) 33 refs. Text in Russian. **Title tr.**: The secondary alteration of kimberlites.

Describes the secondary, postmagmatic processes exemplified mostly in the kimberlite pipes of the Anabar-Olenek region. Autometamorphism in kimberlite bodies is considered, and processes of phlogopitization, serpentinization, and carbonatization are described. Origin of calcium in kimberlites is discussed. (DLC.)

MILASHEV, V. A., *see also*
Rabkin, M.I., & V.A. Milashev. Kimberlitovyĭ vulkanizm . . . 1962. No. 75011
Rabkin, M.I., & *others*. Klassifikatsiia kimberlitovykh porod . . . 1962. No. 75012

74013. MILEĬKOVSKIĬ, S. A. O kharaktere i prirode glubokovodnykh populiatsiĭ ėvribatnykh benticheskikh vidov bespozvonochnykh s pelagicheskim razvitiem na primere polikhety *Euphrosyne borealis* Oersted, 1843 iz Severnoĭ Atlantiki. (Okeanologiia, 1961. t.1, vyp.4, p.679-87, map, diagr.) 26 refs. Text in Russian. **Title tr.**: Character and nature of abyssal populations of eurybathic benthic invertebrate species with pelagic development, as exemplified by the polychaete *Euphrosyne borealis* Oersted 1843 from the North Atlantic.

Reports a study of planktonic forms of this worm, from the Barents and Norwegian Seas and the Faroe-Shetland area. Spawning migration and process, and development are reconstructed; the wide vertical and horizontal distribution of the form is explained. (DLC.)

74014. MILEĬKOVSKIĬ, S. A. Polikheta *Nereis virens* Sars v Kol'skom zalive. (Zoologicheskiĭ zhurnal, Sept. 1961. t.40, vyp.9, p.1421-23.) 14 refs. Text in Russian. Summary in English. **Title tr.**: The polychaete *Nereis virens* Sars in Kola Bay.

Records two swarming specimens caught in midsummer 1960. This boreal species apparently penetrated farther north because of the warming of the Arctic. (DLC.)

74015. MILEĬKOVSKIĬ, S. A. Polikhety *Sphaerosyllis erinaceus* Claparede i *Phalacrophorus pictus* Greeff v planktone Barentseva moria. (Zoologicheskiĭ zhurnal, July 1961. t.40, vyp.7, p.1099-1102, illus., maps.) 13 refs. Text in Russian. Summary in English. **Title tr.**: The polychaetes *Sphaerosyllis erinaceus* Claparede and *Phalacrophorus pictus* Greeff, in the Barents Sea plankton.

Describes these worms with data on locations and water temperatures. The first species is found also in Alaskan waters, the second is a first record from the Barents Sea and for the Russian marine fauna. (DLC.)

74016. MILEĬKOVSKIĬ, S. A. Rasprostranenie pelagicheskikh polikhet v Norvezhskom i Barentsevom moriakh. (Okeanologiia 1962. t.2, vyp.6, p. 1060-74, tables, maps.) 29 refs. Text in Russian. **Title tr.**: Distribution of pelagic polychaetes in the Norwegian and Barents Seas.

Reports on the composition, and the horizontal and vertical distribution of pelagic polychaetes from materials collected by R/V *Sevastopol'*, *Tunets*, *A. Otkupshchikov*, and *Persei-2* during 1958-1960. For nine species of fam. Phyllodocidae, Polynoidae, Alciopidae, Tomopteridae and Typhloscolecidae, distribution to 500 m. depths is outlined, charted, and tabulated. This marine worm population is attributed to the inflow of water from the North Atlantic, their spawning in these seas, and their distribution by local currents. (DLC.)

74017. MILES, M. K. Factors associated with the formation and persistence of anticyclones over Scandinavia in the winter half of the year. London, H.M. Stationery office, 1961. 19 p. maps, tables. (Great Britain. Meteorological Office. Scientific paper no.8.) 11 refs.

Formation of winter anticyclones over Scandinavia usually occurs in association with a large thermal ridge which first forms over or west of Iceland and then extends north-northeastwards. The cold, snow-covered terrain of Scandinavia has secondary role, if any. Several factors in further growth or persistence of the anticyclone are discussed. (DLC.)

74018. MILIAEV, NIKOLAĬ ALEKSEEVICH. Shirotnye peremeshcheniia zony obrashcheniia sutochnykh variatsiĭ magnitnogo polia v Arktike. (Problemy Arktiki i Antarktiki. Sbornik statei 1962. no.11, p.75-79, table, graphs.) 2 refs. Text in Russian. **Title tr.**: Latitude shift of the reversal zone of diurnal variations of the earth's magnetic field in the Arctic.

Determines the average geographical position of the reversal zone of diurnal geomagnetic variations in the Arctic during periods of varying magnetic and solar activity. Data recorded at the drifting stations North Pole-6 and -7, and the polar observatories on the monthly mean diurnal variations of H of different years, and those during the international quiet and stormy days were used. The reversal zone was found to have an average latitude of $\Phi=85^\circ$ during 1955-1956, years of weak solar activity, and it shifted to $\Phi=80^\circ.3$ during the high solar activity year of 1957, and on magnetically stormy days. The diurnal variations of H for the active and quiet periods on Dikson Island and at Tikhaya Bay are discussed. The shift of the reversal zone of diurnal magnetic variations should be taken into account in accurate geomagnetic measurements in the Arctic, to avoid the wrong ordinate value, up to several hundred gammas. (DLC.)

74019. MILIAEV, NIKOLAĬ ALEKSEEVICH. Variatsii magnitnogo polia v raĭone dreĭfa stantsiĭ "Severnyĭ poliūs-4" i "Severnyĭ poliūs-5" 1955-56 g. (Leningrad. Arkticheskiĭ i antarkticheskiĭ

nauchno-issledovatel'skiĭ institut. Trudy 1962. t. 241, Geofizicheskie issledovaniĭa . . . vyp.4, p. 65-80, graphs, tables, map.) 5 refs. Text in Russian. **Title tr.**: Variations of the magnetic field in the region of the drift of the North Pole-4 and North Pole-5 stations, 1955/56.

Presents geomagnetic data for a meridianal profile across the entire Arctic Basin using records of the drifting stations North Pole-3 and -4 in 1954-1955, and North Pole-4 and -5 in 1955-1956. Large gradients of declination *D*, (up to 15-20° per 100 km.), reduced values of the horizontal component *H*, and the zone of reversal of its daily variation were noted in the region of the drift. Analysis of the data showed that daily variations of magnetic elements have a simple wave form north of the 84th parallel, and south of it, a form of double wave. The existence of a correlation between magnetic declination and magnetic disturbance intensity at high latitudes is confirmed. The isochrones of the morning disturbances are displaced in latitude as the disturbance intensity changes. The mean monthly intensity of magnetic activity changes not more than 25% from year to year. The intensity of magnetic disturbance in the Arctic has a direct correlation with solar activity during its minimum, and a reversed correlation during the periods of high solar activity. (DLC.)

MILĬAEV, NIKOLAĬ ALEKSEEVICH, *see also* Ignatov, V.S., & *others*. Rezul'taty . . . Arktike. 1962. No. 72333

74020. ***MILITARY ENGINEER***. Polar engineering; a summary. (Military engineer, July-Aug. 1961. v.53, no.354, p.274-78, illus., map.) 15 refs.

Presents three papers (two in summary) given in Washington on May 15, 1961, at a symposium of the Society of American Military Engineers, representatives of the Navy, Army, and Air Force participating. The papers described research and experimental structures of the services, and explained conditions found in polar regions and methods used to combat them, viz:

Polar engineering in the Air Force (summary), by R. Pastor. The construction of the BMEWS station at Thule and DEW Line stations on the Greenland icecap was dealt with.

Subsurface structures and foundations (summary), by J.D. Cole. Work of the Cold Regions Research and Engineering Laboratory, in particular in Greenland, was outlined and reference made to papers (14) in previous issues of *Military engineer* for greater detail.

Polar construction at Antarctica, by H. Stevens. "Permanent" housing and storage facilities at four American bases are described. The standard building is a prefabricated panel structure known as the Deep-freeze building. An undersnow camp for 60 men similar to the one at Camp Century, Greenland, is being constructed at the Byrd station on the icecap. Work has begun on the first of four projected nuclear power plants. (DLC.)

74021. MILĬUKOVA, N. N. O nekotorykh spornykh voprosakh stratigrafii chetvertichnykh otlozheniĭ severo-zapadnoĭ chasti Zapadno-Sibirskoĭ nizmennosti. (*In:* Leningrad. Vsesoĭuznyĭ n.-i. geologicheskiĭ institut. Trudy 1961, t.64, Problemy chetvertichnogo . . . p.87-96, diagr.) Text in Russian. **Title tr.**: Some disputed problems of Quaternary stratigraphy in the northwestern part of the West Siberian plain.

Discusses certain problems of the lower Ob basin and adjacent areas of Siberia: the existence of an independent covering glaciation between the Samarovo and Zyryanka glaciations, the concurrence of glaciations and marine transgressions, etc. Special attention is given to the so-called Taz glaciation, deposits of which are not known, either in watershed cross-sections or in the structure of river terraces. (DLC.)

MILLER, A. M., *see* Lilly, J.C., & A.M. Miller. Vocal exchanges . . . dolphins. 1961. No. 73500

74022. MILLER, DAVID, *and* **D. R. BJORNSON.** An investigation of cold injured soldiers in Alaska. (Military medicine, Mar. 1962. v.127, no.3, p.247-52, illus., tables, map.) 19 refs.

Study of 98 soldiers with cold injuries sustained in 1959-1961 compared to controls showed that excessive smoking and sweating, and previous cold injury were greater in the injured group. The number of Negroes and men raised in the South (below 35°N. lat.) was also greater among the injured. Frostbite of the toe dropped radically in the last 12 winters as foot-gear was improved. (DLC.)

74023. MILLER, DAVID. The relation of the "S" hemoglobin to cold injury. (Military medicine, Dec. 1962. v.127, no.12, p.1027-28, table.) 8 refs.

Reports a study of a small series of Negroes which showed that mild frost injuries failed to confirm the assumption that hemoglobin S is a factor in the greater susceptibility of that race to cold injury. (DLC.)

MILLER, DAVID, *see also* Alaskan Science Conference 1961. 1962. No. 69644

74024. MILLER, DON JOHN, 1919–1961. Stratigraphic occurrence of *Lituyapecten* in Alaska. Washington, D.C., U.S. Govt. Print. Office, 1961. p.240-49, graph, map. (U.S. Geological Survey. Professional paper 354-K, Shorter contributions to general geology.) 17 refs.

Discusses the three main Tertiary units containing these fossil pectinid pelecypods exposed in the Katalla, Yakataga, Malaspina, and Lituya districts, bordering the northeast shore of the Gulf of Alaska; four formations are treated in some detail. On a generalized correlation chart and a map of the Gulf of Alaska Tertiary province, fossil localities are located stratigraphically and geographically. Significant changes in the environment of deposition during the Tertiary period are shown by the distinctive lithologic character and organic content in the three major divisions of this sequence. (DGS.)

MILLER, DON JOHN, 1919–1961, *see also*

Brabb, E.E., & D.J. Miller. Reconn. . . . E. Chugach Mts. 1960. No. 70359

MacNeil, F.S., & *others*. Correlation Tertiary . . . 1961. No. 73722

74025. MILLER, JOHN CHARLES. Geology of waterpower sites on Crater Lake, Long Lake and Speel River near Juneau Alaska. Washington, D.C., U.S. Govt. Print. Office, 1962. p.71-101, maps incl. fold., sections. (U.S. Geological Survey. Bulletin

1031-D, Geology of waterpower sites in Alaska.) 6 refs.

Describes conditions at the locations of structures proposed for the development of hydroelectric power from these water bodies, based on field mapping June 20-Aug. 27, 1952. Areas investigated are within the Tongass National Forest on the Alaska mainland about 42 mi. southeast of Juneau. All three damsites are found geologically suitable for the structures proposed. Sediment in the Speel River and the depth to bedrock in its Saddle damsite area however, may deter development of that site. (DLC.)

74026. MILLER, JOHN CHARLES. Geology of waterpower sites on Scenery, Cascade, and Delta Creeks near Petersburg, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1962. p.103-125, maps. (U.S. Geological Survey. Bulletin 1031-E, Geology of waterpower sites in Alaska.) 6 refs.

Preliminary report on geologic feasibility of sites for hydroelectric power development from Scenery, Swan, and Ruth Lakes, on the three creeks noted; based on field examination July - Aug. 1951, of this area about 20 mi. northeast of Petersburg. Damsites at lake outlets and reservoir sites above the damsites were investigated, as well as tentative tunnel routes from the lakes to powerhouse sites at or near tidewater. Bedrock at the damsites is suitable for dam construction. No appreciable leakage from the reservoirs is anticipated. Geologic conditions along the tunnel routes are also satisfactory for power development. A reconnaissance geologic map of the area, 56°57′ - 57°07′N. 132°35′ - 132°50′W., also maps and sections of the three power sites are included. (DLC.)

74027. MILLER, L. KEITH, *and* **L. IRVING.** Local reactions to air cooling in an Eskimo population. (Journal of applied physiology, May 1962. v.17, no.3, p.449-55, illus. tables.) 15 refs.

Study of bare-hand and face temperatures in well clad Eskimo men, women and children exposed to air of -3 to -7°C. In contrast to cold-adapted and non-adapted whites, Eskimo adults showed higher minimum finger temperatures during cooling and smaller temperature fluctuations. Eskimo children cooled as quickly as non-adapted whites. Eskimo and white adults reacted similarly to facial cooling but Eskimo minors cooled more quickly. (DLC.)

MILLER, L. KEITH, *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

74028. MILLER, LOYE. Nesting of the golden eagle in the central Brooks Range of arctic Alaska. (Condor 1960. v.62, no.4, p.298.)

Notes earlier reports on the occurrence of this bird in the area and own observations in late summer 1959, of a nest with a fledged and an adult bird. (DLC.)

74029. MILLER, MAYNARD MALCOLM, 1921– . A distribution study of abandoned cirques in the Alaska-Canada Boundary Range. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.833-47, illus., maps, graph, tables.) 15 refs. Associated with Juneau Ice Field Research Project.

Attempts to outline in reverse order the glacial chronology of this range inland from Lynn Canal to 60°N., based on the present position and activity of existing glaciers, and extending back through the Wisconsin Cordilleran glaciation. Analysis of 218 cirques in the northern Boundary Range reveals the mean elevation of the lowest ice-filled basins to be 3500 ft.; in valleys not formerly glaciated from the Wisconsin ice-sheet, abandoned cirques occur in a repeated five-fold sequence at 350, 1100, 1750, 2450, and 3150 ft. Lithology, bedrock structure, or pre-Glacial topography had no apparent control on distribution. The frequency distribution suggests that the cirque levels relate to former névé lines. Also suggested is the unusual sensitivity of these glaciers to climatic change during the last major glaciation. (DGS.)

74030. MILLER, MAYNARD MALCOLM, 1921– . North to Camp 8, an account of recent activities of the Juneau Icefield Research Program. (Appalachia, Dec. 1961. v.33, no.4, p.440-51, illus., map.) Refs.

Outlines field investigations during 1954-1960 in glaciology and related disciplines, particularly study of these glaciers as recorders of climatic change. Severe weather, airplane and helicopter supply, are noted. (DLC.)

MILLETT, MARION T., *see* Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

74031. MILLS, WILLIAM J., *Jr.*, *and* D. B. KETTELKAMP. Kuskokwim medicine; when the minor leagues flourished. (Alaska medicine, Dec. 1961. v.3, no.4, p.73-76, illus.)

Sketch of Eskimo shamanistic medical practices presented in the form of an interview with an old Eskimo woman: TB, eye diseases, frostbite, fractures, intestinal troubles, obstetrics, etc. are discussed. (DNLM.)

74032. MILLS, WILLIAM J., *Jr.* President's page. (Alaska medicine, Sept. 1962. v.4, no.3, p.70-71, illus.)

Discusses relations between urban and provincial doctors and those between physicians and the state or federal authority; revision of the Medical Practice Act; etc. (CaMAI.)

MILLS, WILLIAM J., *Jr.*, *see also* Alaskan Science Conference 1960. 1961. No. 69643

74033. MILOSERDOVA, R. I. Nakhodka okamenelykh derev'ev v lavovoĭ tolshche Sibirskoĭ platformy. (*In:* Vsesoĭuznyĭ aėrogeologicheskiĭ trest. Materialy po regional'noĭ geologii . . . 1961, p.127-29, illus.) Text in Russian. **Title tr.:** Find of petrified wood in the lava stratum of the Siberian platform.

In block-lava in the Tutonchana River basin (64° 14′N. 93°47′E.) in Krasnoyarsk province, parts of tree trunks up to 1.5 m. long and 10-40 cm. in diameter have been found petrified. Their position and conditions of their occurrence are discussed. This lava has previously yielded fern and horsetail flora; the vegetation serves to indicate the age of the stratum. (DLC.)

74034. MILOVANOVA, I. B., *and others.* Ėkstraktsionnyĭ sposob ochistki nikelevogo ėlektrolita ot

primeseĭ. (TSvetnye metally, Mar. 1962. god 35, no.3, p.38-42, diagrs., table.) 2 refs. Text in Russian. *Other authors:* S.E. Kreĭmer *and* V.N. Rozov. **Title tr.:** Extraction method for purifying nickel electrolyte of admixtures.

Describes the method used at the Severonikel' Combine's plant on Kola Peninsula, and improvements developed by engineers at Noril'sk. Advances in method are stressed. (DLC.)

MILOVIDOV, E. D., *see* Plotnikov, I.I., & E.D. Milovidov. O genezise . . . 1961. No. 74824

MILTENBERGER, FRED W., *see* Alaskan Science Conference 1960. 1961. No. 69643

74035. MINA, M. V. Dannye po ėkologii i sistematike ozernykh gol'tsov roda *Salvelinus* del'ty r. Leny. (Voprosy ikhtiologii, 1962. t.2, vyp.2 (23), p.230-41, illus., tables.) 20 refs. Text in Russian. **Title tr.:** Data on the ecology and taxonomy of lake chars of the genus *Salvelinus* from the Lena River delta.

Reports a study of these fish in two lakes on the Olenek area of the delta. General appearance and color, food, reproduction and growth are described. Morphology of the two populations is outlined and compared. Except for some meristematic traits, no significant difference was found between the two populations. (DLC.)

MINAEVA, IU. I., *see*

Bidzhiev, R.A., & IU.I. Minaeva. K voprosu ob istochnikakh snosa . . . 1961. No. 70204

Bidzhiev, R.A., & IU.I. Minaeva. Stratigrafiia . . . 1961. No. 70205

74036. MINASIAN, G. M. Ionosfernye i geomagnitnye ėffekty bol'shikh khromosfernykh vspyshek. (Geomagnetizm i aėronomiia, 1961. t.1, no.5, p. 766-71, tables, graphs.) 13 refs. Text in Russian. **Title tr.:** Ionospheric and geomagnetic effects of large chromospheric flares.

Investigates the speeds of solar corpuscles emitted during large flares by analyzing IGY (1957-1959) data of 64 ionospheric stations in lat. 12-90°N. These data are on anomalous absorption of radio signals in the polar cap and the auroral zones and the behavior of the particles during geomagnetic storms of SC type. Experimental and theoretical curves are established to express the relationship between the displacement of the southern boundary of the anomalous absorption region, and the depression degree of the geomagnetic field during the storm. (DLC.)

74037. MINATO, MASAO. Eine permische Koralle von König Oscarsland im nordwestlichen Ellesmereland. (Stockholm. Universitet. Stockholm contributions in geology, 1960. v.6, no.3, p.25-36, plate, map, table.) 34 refs. Text in German. Summary in English. **Title tr.:** A Permian coral from King Oscar's Land in northwestern Ellesmere Land.

Proposes: Ipciphyllum tschernyschewi nom. nov. for a massive coral hitherto called *Lithostrotion borealis*, from Lincoln Land, southwest Ellesmere. Resemblance to two Permian species of *Ipciphyllum*, and correlation of strata with another Permian fusilinid zone indicate the Permian age of this specimen, rather than Upper Carboniferous, as presumed by Stepanov in No. 3102, 12543. (DGS.)

74038. MINDER, L. P. Khimicheskiĭ sostav miasa gorbushi, poimannoĭ v Barentsevom more. (Rybnoe khoziaĭstvo, 1961. god 37, no.1, p.58-59, table.) Ref. Text in Russian. **Title tr.:** Chemical composition of the meat of pink salmon caught in the Barents Sea.

Basic chemical analysis of this species acclimatized in the NW Atlantic shows a higher content of fat, when compared with original Pacific forms. (DLC.)

74039. MINELLI, R. Proprietà dinamiche del cuore studiate nel preparato cuore-polmoni del ratto in condizioni di ipotermia. (Archivio di fisiologia, 1961. v.60, fasc. 3-4, p.395-403, illus.) 9 refs. Text in Italian. Summary in English. **Title tr.:** Dynamic properties of the heart, studied in the heart-lung preparation of the rat in hypothermia.

Systolic output, at equal filling pressure, was similar in 28°C. and in normothermic H-L preparations. Filling pressure was much greater, maximum working power was much smaller in hypothermia; and maximal cardiac output was the same, provided that arterial pressure was the same. (DNLM.)

74040. MINER, MALCOLM H. So you want to live in Alaska? (Alaska sportsman, Aug. 1962. v.28, no.8, p.28-29, +, illus.)

Discusses job and business opportunities for newcomers to the state. Prospects are poor for unskilled workers with little money and no contacts; employment should be arranged in advance of arrival; as should immediate living costs, which are 40% higher than in Seattle. Author is clergyman at Anchorage. (DI.)

MINERALOGICAL ASSOCIATION OF CANADA, *see Canadian mining and metallurgical bulletin.* Abstracts papers . . . 1962. No. 70598

74041. MINGHI, JULIAN V. The conflict of salmon fishing policies in the North Pacific. (Pacific viewpoint, Mar. 1961, v.2, no.1, p.59-84, map, graphs.) 18 refs.

Reviews American and Japanese interests: a political-geographic study. The Japanese pelagic fishery is based on the principle of freedom of the seas. The United States claims property rights of the coastal state in which the salmon spawn, and the historical right of exploitation; also the need for conservation. The decline in Bristol Bay red salmon runs is attributed to Japanese overfishing and the United States requests a westward shift of the abstention line (175°W.) set by the International North Pacific Fisheries Convention. Marking the eastern limit of Japanese fishing, it is intended to represent a line between North American- and Asian-spawned salmon. Ecologic and economic factors pertinent to the problem are considered. (DLC.)

MININA, L. D., *see* Kontorovich, A.Ė., *and others.* Nekotorye cherty geokhimii . . . 1961. No. 72946

74042. *MINING ENGINEERING.* Alaska: regional report. (Mining engineering, Dec. 1961. v.13, no.12, p.1315-56, illus., maps, diagr., graphs, tables.) Refs.

Brief statement on mining introduces 14 articles on its various aspects:

Geology and ore deposits of Alaska by G.

Herreid, p.1316-25, traces the evolution of present-day geology, stressing tectonics and structure; outlines geologic setting of a score of ore deposits, some being worked.

Prospecting and politics, p.1326-28, C.F. Herbert states that all prospecting methods can be used in Alaska, evaluating several and noting Government assistance and controls which affect prospecting.

Alaska Division of Mines and Minerals presents a list, p.1329, of 16 companies engaged in exploration, 12 in mining and development, six in coal mining in 1960.

Evan Jones coal operation is reported by C.E. McFarland, p.1330-32: the geology, underground mining from 1920 to 1953 and subsequent open-pit operations, preparation, markets etc. of these only-known workable deposits of bituminous coal in the Alaska "railbelt."

Usibelli coal stripping operations, p.1333-34: W.I. Waugaman presents the main facts concerning this largest Alaskan producer, in the Nenana coal field, 110 mi. south of Fairbanks.

Principal Alaskan dredging operations, p.1335-36, covers the major, gold and platinum activities and methods used.

The Red Devil mercury mine. R.F. Lyman, p.1337-39, summarizes salient facts on this important producer 251 mi. west of Anchorage on the Kuskokwim River: 4600 flasks/yr. are flown to Anchorage and transferred to Seattle-bound ships. A unique metallurgical process solves problems caused by gangue minerals.

Alaska's new mineral law for state lands is outlined, p.1340-42, by J.A. Williams: its basic framework in the Alaska Constitution and the Statehood Act, the 1959 law, the 1960-61 hearings and main provisions of Chap.123, Session Laws of Alaska 1961.

Economic aspects of Alaska mining, by A. Kaufman, p.1343-46. Petroleum and natural gas constitute the brightest aspect of the industry, though offset by high costs of labor, transport, taxes, etc., also continued need for Federal assistance.

Federal, state activities, U.S. Bureau of Mines program in Alaska are outlined by J.A. Herdlick, p.1347-49: mineral resource appraisals and economic studies carried out by the Bureau, including laboratory services; supplementary work performed by the State Division of Mines and Minerals, e.g., analysis of current costs and marketing of mineral products.

University of Alaska, p.1350. E.H. Beistline cites facilities provided by the College of Earth Science and Mineral Industry, and by mining extension courses offered.

Future of Alaskan mineral industry, p.1351-55. R.J. Lund describes nine potential mineral operations for development in the next 20 years, and summarizes promising occurrences of minerals, coal, oil and gas. Future depends in part on discovery of larger or higher grade deposits as well as on development of transportation, technical progress, and market conditions.

J.A. Williams states an Alaskan's viewpoint, p.1356, that mining progress depends largely on marketing conditions and demand, as well as early planning. (DGS.)

74043. *MINING MAGAZINE.* Iron ore from Labrador. (Mining magazine, Dec. 1961. v.105, no.6, 338-39, illus.)

Reports first shipments of iron-ore concentrates from Port Cartier, newly constructed harbor of the Quebec Cartier Mining Co. at Shelter Bay on the North Shore above Seven Islands. Ore is supplied by the Gagnon concentrator, 200 mi. to the north, delivering about 6,000 tons of concentrate per day. (DGS.)

74044. *MINING MAGAZINE.* Ore-dressing notes 13, control; sample reduction at Kiruna. (Mining magazine, Nov. 1961. v.105, no.5, p.281-82.) Ref.

Describes method used at this North Sweden iron mine, of assaying samples of ore to meet blast-furnace or open-hearth specifications. The present plant was brought into use in 1959; it assays about 1000 samples daily, with provision for increased capacity. (DGS.)

74045. *MINING MAGAZINE.* Ore-dressing notes 15, testing; an iron ore pilot plant. (Mining magazine, Nov. 1961. v.105, no.5, p.283.) Ref.

Describes operation of a pilot plant, started Feb. 1960, at the Wabush Lake iron ore project in Labrador. Tests are being made of the concentrating characteristics of the ore-body; over 40,000 tons of concentrate were shipped during 1960 for sintering and blast-furnace tests. Wet grinding was found preferable to dry. (DGS.)

74046. MINTER, ROY. The steel went North. (North, May-June 1962, v.9, no.3, p.14-21, illus., map.)

Recounts development since 1898, of the White Pass and Yukon Route: the 110 mi. narrow-gauge railroad built from Skagway, Alaska through the St. Elias Range to Whitehorse, Yukon Territory; the river boat and winter stage service between Whitehorse and Dawson from 1801; and air service from 1937. Role of the Route during World War II in construction of the Alaska Highway and facilities of the Northwest Staging Route are sketched. The present integrated ship-train-truck Route carries freight under temperature-controlled conditions to any point in the Yukon. (CaMAI.)

74047. MIRKIN, G. R. Dannye tektonicheskoĭ makrotreshchinovatosti gornykh porod v sviāzi so strukturnym analizom lokal'nykh podniātiĭ Tungusskoĭ sineklizy. (Leningrad. Vsesoiūznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp.186, geologicheskiĭ sbornik no.6, p.143-51, charts, diagrs.) Ref. Text in Russian. Title tr.: Data on tectonic macro-jointing of rocks in connection with structural analysis of local uplifts of the Tungusskiy syncline.

Reports a study by E.N. Permiākov's method, of jointing in four local structures in the Nizhnyaya Tunguska basin and other parts of the syncline: 240 measurements of fractures were made and the data plotted to show the strikes of the joints. Application of such study to structural analysis of the tectonic province to detect localities favorable for oil prospecting is pointed out. (DLC.)

74048. MIRONOV, A. V. Issledovaniia izlucheniia nochnogo neba i poliārnykh siāniĭ. (Akademiia nauk SSSR. Vestnik, Aug. 1961. god 31, no.8, p.116-18.) Text in Russian. Title tr.: Airglow and aurora investigations.

Reports an interdepartmental conference at the Institute of Atmospheric Physics of the Academy, April 25-27, 1961, on IGY investigations. Papers are summarized, including A.I. Lebedinskiĭ on determination of the extent of auroras, L.S. Evlagin on spectral studies of auroras at the Polar Geophysical Institute, V.I. Krasovskiĭ on results of airglow study at Loparskaya and some other stations. Several other papers dealt with station observations, including the network in Yakutia. (DLC.)

74049. MIRONOV, P. A. Kulinarnye izdeliĭa iz zubatki. (Rybnoe khozĭaĭstvo, 1962. god 38, no.3, p.53-56.) Text in Russian. **Title tr.:** Culinary products from wolffish.

Describes the present methods of processing this arctic fish: by salting or freezing; and gives instructions for preparation of high quality products from fresh or frozen material. These methods are presented on a semi-industrial scale. (DLC.)

74050. MIRONOVA, M. G. Novye vidy rannekamennougol'nykh brakhiopod Prikolym'ĭa. (Paleontologicheskiĭ zhurnal 1962, no.2, p.80-86, illus., plate at p.36-37.) 10 refs. Text in Russian. **Title tr.:** New species of early Carboniferous brachiopods from the Kolyma basin.

Presents systematic description of four species belonging to four genera collected in the Yasachnaya basin, 62°52′N. 150°35′E., on the middle Kolyma in Magadan Province: *Krotovia yasachnensis, Gigantoproductus tulensiformis, Rhynchotetra(?) rhomboidea,* and *Neospirifer sinuatoplicatus* n. spp.; diagnosis, comparison, geologic and geographic distribution, and other features are given. (DLC.)

74051. MIRONOVA, NATALIĬA VLADIMIROVNA, 1918– . Migratsii nepolovozreloĭ treski i prichiny ikh izmenchivosti. (Akademiĭa nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1961. vyp.3(7), p.198-219.) Approx. 100 refs. Text in Russian. **Title tr.:** Migration of immature cod and causes of its variability.

Attempts to elucidate the causes of, and a regularity in the feeding, spring migrations of cod in the Barents Sea, from own observations on the Murman coast in 1953-1959, and from literature sources. Water temperature, its distribution and changes, was found to be the main factor affecting migration, both directly and indirectly by influencing the movements of its prey, capelin and herring. Accordingly, two main types of migration towards the coast are distinguishable, depending whether the year is "cold" or "warm." (DLC.)

74052. MIRONOVA, NATALIĬA VLADIMIROVNA, 1918– , *and others*. Raspredelenie i nekotorye cherty biologii promyslovykh ryb v pribrezhnoĭ zone Murmana v 1957 g. (Akademiĭa nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp.4(8), p.162-73, illus., tables, maps.) 7 refs. Text in Russian. *Other authors:* R. IA. TSeeb, V.V. Gerasimov, IŬ. F. Pozdniakov, A.D. Chinarina, and A.V. Belova. **Title tr.:** Distribution and some biological traits of commercial fishes of the Murman coastal zone in 1957.

Included are observations of 1947 on herring, capelin, cod, and haddock, as compared with the years 1953-1956, size of shoals, and concentrations, their age distribution, periods and localities of appearance are considered, as well as governing factors, especially plankton. (DLC.)

74053. MIRONOVA, NATALIĬA VLADIMIROVNA, 1918– , *and others*. Raspredelenie i nekotorye cherty biologii promyslovykh ryb v pribrezhnoĭ zone Murmana v 1958 g. (Akademiĭa nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp.4(8), p.174-84, illus., tables, maps.) 15 refs. Text in Russian. *Other authors:* R. IA. TSeeb, V.V. Gerasimov, IŬ. F. Pozdniakov, A.D. Chinarina, M.I. Tarverdieva, *and* A.V. Belova. **Title tr.:** Distribution and some biological traits of commercial fishes of the Murman coastal zone in 1958.

Observations include herring, capelin, cod and haddock. Coastal migrations, and concentrations, distribution, feeding and food, fisheries, age and size composition, plankton, etc. are described and compared with three preceding years. In the main, 1958 proved similar to the year 1957. (DLC.)

74054. MIROSHNIKOV, L. D. "Bedlend" na severe Taĭmyrskogo poluostrova. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geograficheskaĭa, May-June, 1961, no.3, p.86-88, illus.) 3 refs. Text in Russian. **Title tr.:** The badlands of the northern Taymyr Peninsula.

Reports development of a badlands type of relief in southern Chelyuskina Peninsula on Taymyr as observed on a flight in 1950, and confirmed by others' observations as well. The Ust'-Taymyr depression is described geologically, and the relief, seamed and lined with innumerable deep gullies is depicted and illus. The main role in forming this type of relief is played by permafrost through lithification of loose sandy rocks and elimination of their water permeability. (DLC.)

74055. MIROSHNIKOV, L. D. K poznaniiu struktury prieniseĭskoĭ chasti severa Sibirskoĭ platformy v sviazi s voprosami neftenosnosti. (Leningrad. Vsesoiuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1962. vyp.190, geologicheskiĭ sbornik no.7, p.437-53, text maps, cross-sections.) 16 refs. Text in Russian. **Title tr.:** On knowledge of the structure of the northern part of the Siberian platform west of the Yenisey in relation to problems of its oil-bearing properties.

Correlates Cambrian, Ordovician and Silurian deposits of the Noril'sk region with those of the Gorbiachin, Kulyumbe, Kureyka, Moyero and other areas. Development of the Noril'sk region and Yenisey syncline is analyzed. The structures of the latter are evaluated. The finding of bitumen and other signs of oil is reviewed, with conclusion that the Yenisey syncline has prospects for oil and gas. (DLC.)

74056. MIROSHNIKOV, L. D. Karst arkticheskoĭ chasti Sibirskoĭ platformy. (Sovetskaĭa geologiĭa, July 1962, no.7, p.145-48.) 12 refs. Text in Russian. **Title tr.:** Karst in arctic part of the Siberian platform.

Describes karst phenomena in the Taymyr Peninsula, Noril'sk and Putorana plateaus, Khatanga Bay area, Alakit River basin, Vilyuy Mts. and elsewhere in the north of the Siberian platform. Permafrost is not a factor hindering karst formation, on the contrary it plays a role in the collection and preservation of water, main agent in karst development. Karst occurs on carbonate and

gypsum rocks and in zones of large tectonic fractures. (DLC.)

74057. MIROSHNIKOV, L. D. O gomologii korvunchanskoĭ i ilemorovskoĭ svit i o konvergentsii osadochnykh tolshch. (Leningrad, Vsesoīūznyĭ neftīānoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1962. vyp.190, geologicheskiĭ sbornik no.7, p.244-51.) 12 refs. Text in Russian. **Title tr.:** On the homology of the Korvunchana and Ilemorovo series and the convergence of sedimentary strata.

Describes the lithology, fauna and flora of the Lower Triassic Korvunchana series in the Nizhnyaya Tunguska basin, and the Middle Devonian Ilemorovo in the Minusinsk and Tuva depressions. The two series are compared and found identical in features of facies and structure; not fully homologous, but hemi-homologous. Convergence of the sedimentary strata is noted. (DLC.)

74058. MIROSHNIKOV, L. D. Struktura fundamenta severnoĭ chasti Zapadno-Sibirskoĭ nizmennosti i vozmozhnost' ego neftenosnosti. (Geologiīa nefti i gaza, Jan. 1961. god 5, no.1, p.34-39.) 14 refs. Text in Russian. **Title tr.:** Structure and oil possibilities of the basement of the northern part of the West Siberian plain.

Summarizes geophysical investigation and deep drilling data on the basement of the lower Yenisey and adjacent areas. Composing rocks, basement depths, angles of dips, formation conditions and other features are characterized. In oil search, attention should be directed to undisturbed structures of the basement and its Mesozoic cover. (DLC.)

74059. MIROSHNIKOV, L. D. Zakonomernosti raspredeleniīa fosforitov v paleozoe Sibirskoĭ platformy. (Vsesoīūznoe mineralogicheskoe obshchestvo. Zapiski 1962. ser.2, chast' 91, vyp.3, p.291-98, map.) 23 refs. Text in Russian. **Title tr.:** Distribution laws of Paleozoic phosphorites in the Siberian platform.

Describes platform phosphorites, the content of P_2O_5 of the Siberian platform. Three belts of Paleozoic phosphorites are distinguished: Angara-Yenisey, Lena-Aldan, and Anabar. All phosphorites are considered to have been formed in shallow waters of marine basins. Occurrences, paleogeographic conditions and tectonic movements are discussed in respect to platform phosphorite accumulation. Genetic connection between phosphorite and graptolite facies is noted. (DLC.)

MIROSHNIKOV, L. D., *see also* Dibner, V.D., & L.D. Miroshnikov. IŪrskie otlozheniīa . . . 1962. No. 71009

74060. MIRSKIĬ, M. Kak uberech'sīa ot obmorozheniīa. (Master lesa, Jan. 1961, no.1, p.27.) Text in Russian. **Title tr.:** How to prevent frostbite.

Popular advice given by a physician: vodka, thought to warm the subject and prevent frostbite is in fact a hazard, as alcoholic beverages and intoxication lower the sensibility of skin in cold weather. (DLC.)

74061. MISHIN, V. M., *and others.* Godovoĭ khod magnitnoĭ aktivnosti po dannym MGG. (Geomagnetizm i aèronomiīa, 1961. t.1, no.3, p.387-94, tables, graphs.) 8 refs. Text in Russian. *Other authors:* G.P. Kalinovskaīa *and* N.A. Mishina. **Title tr.:** Annual variation of magnetic activity according to IGY data.

Describes the analysis of the annual variations, Ga, of the mean monthly values of K-indexes from the 1958 data of 66 geomagnetic stations throughout the world, including four arctic and 23 other high north-latitude stations. (DLC.)

74062. MISHIN, V. M., *and* **Ė. I. NEMTSOVA.** Nekotorye rezul'taty sravneniīa magnitnykh vozmushcheniĭ v severnom i īūzhnom polushariīākh. (Geomagnetizm i aèronomiīa, 1961. t.1, no.3, p.404-407, table, graph.) 9 refs. Text in Russian. **Title tr.:** Some conclusions from a comparison of magnetic disturbances in the Northern and Southern Hemispheres.

Compares simultaneous magnetic observation data at Baker Lake ($\Phi = +73°7'$, $\varphi = 64°18'$, $\lambda = 263°55'$) and Little America ($\Phi = -74°02'$, $\varphi = -78°11'$, $\lambda = 197°50'$) on the amplitudes of 32 geomagnetic fluctuations. The intensity of magnetic activity is found to vary in proportion to $\sqrt{\cos Z}$, where Z is the zenith angle of the sun. This leads to the conclusion that geomagnetic disturbances are caused by the radiant, and not corpuscular, energy of the sun. (DLC.)

MISHINA, N. A., *see* Mishin, V.M., & *others.* Godovoĭ khod magnitnoĭ aktivnosti . . . 1961. No. 74061

MISHUSTINA, I. E., *see* Kriss, A.E., & *others.* Micro-organisms as hydrological indicators . . . 1961. No. 73134

MITCHELL, MERRITT, *see* Alaskan Science Conference 1960. 1961. No. 69643

MITCHEM, R. A., *see* Craig, R.A., & *others.* Stratospheric warming . . . 1957. 1961. No. 70847

74063. MITIN, V. Puti sovershenstvovaniīa splava lesa v Severo-Dvinskom basseĭne. (Rechnoĭ transport, Sept. 1961. god 20, no.9, p.20-22, illus., tables, graph.) Text in Russian. **Title tr.:** Methods of improving lumber floating in the Severnaya Dvina basin.

Reports more than 20 million m^3 of timber a a year, floated down streams of the Severnaya Dvina system; 20% of that rafted in 1960 was handled by the Severnaya Dvina River shipping line. The techniques of floating, rafting, and towing are described. Causes of the high rate of loss are analyzed: most of it (72%) comes from running aground, 20% from storms, 5.4% from poor visibility, and 2.6% miscellaneous accidents. Ways of reducing the hazards are discussed: sturdier raft construction, balanced distribution of the logs, installation of mechanized steering gear on rafts, and modern navigational equipment on towing vessels, etc. (DLC.)

MITSKEVICH, I. N., *see* Kriss, A.E., & *others.* Micro-organisms as hydrological indicators . . . 1961. No. 73134

74064. MITT, K. L. Predvaritel'nye rezul'taty issledovaniīa chetvertichnykh otlozheniĭ i geomorfologicheskogo stroeniīa Anabaro-Olenekskogo mezhdurech'īa severnee 71°s.sh. (Materrialy po geologii i poleznym iskopaemym IAkutskoĭ ASSR. IAkutskoe geologicheskoe upravlenie, 1961. vyp.5, p.106-109.) 3 refs. Text in Russian. **Title tr.:** Preliminary results of an investigation of the Quaternary deposits and geomorphic struc-

ture of the Anabar-Olenek interfluve, north of 71°N.

Reports a study of this region in 1959 and 1960 by a party of the Amakinskaĭa expedition. Their data which supplement or amend those of Puminov (No. 61055) are briefly stated. A new interpretation is offered on tectonic movements of the region; the stratigraphic importance of fossil ice is stressed, etc. (DLC.)

MITT, K. L., *see also*

Boĭarskiĭ, O.G., & K.L. Mitt. K voprosu o nalichii form rel'efa . . . 1961. No. 70303

Boĭarskiĭ, O.G., & K.L. Mitt. Novye dannye . . . 1961. No. 70304

MIYA, F., *see*

Marcus, S., & *others*. Acute & chronic exposure low tem. & survival. 1961. No. 73801

Marcus, S., & *others*. Effect of low ambient temperatures . . . 1962. No. 73804

Marcus, S., & *others*. *K. pneumoniae* passed mice low temp. 1961. No. 73806

Marcus, S., & *others*. Low ambient temp. mice tumor. 1961. No. 73805

Marcus, S., & *others*. . . . Low temp. & develop. *S. pallida* . . . 1961. No. 73803

Marcus, S., & *others*. Low temp. stress & challenged mice. 1961. No. 73802

MIZONY, PAUL T., *see Alaska sportsman*. Snowslide Chilkoot Pass. 1962. No. 69641

74065. MOBERG, ARVID. Kaisaniemi stenkolsfyndighet. (Norrbotten 1962. p.197-204.) 4 refs. Text in Swedish. **Title tr.**: The coal deposit at Kaisaniemi.

Contains account of abortive plans to start a company to develop this deposit near the south shore of Torneträsk in 1906-1909; claims numbered 135 in 1896, rose to a thousand a year in 1899, 1900 and 1901. The presence of coal was never established. The project was symptomatic of the interest in mining stimulated by the iron development at Kiruna, the projected railway, and gold finds in Alaska. (SPRI.)

74066. MODZALEVSKAĬA, E. A. Mshanki srednego ordovika basseĭna r. Leny. (Leningrad. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyĭ sbornik, 1961. no.47, Paleontologiĭa i stratigrafiĭa, p.51-74, illus.) 16 refs. Text in Russian. **Title tr.**: Bryozoans of the Middle Ordovician in the Lena River basin.

Reviews previous studies, including those of the Nizhnyaya and Podkamennaya Tunguska, Moyero, Vilyuy, Lena and other regions. Paleontologic-stratigraphic division of the Ordovician is briefly reported. Systematic description is given for 12 bryozoans, noting geologic distribution, characteristic features, age, and comparison with other forms. Some species are identified by the author in her previous work, No. 46792. (DLC.)

74067. MØLGAARD, H., *and* **V. PRYTZ.** Flyoningen på Grønland er i voldsom udvikling. (Ingeniørens ugeblad, Mar. 10, 1962. årg. 6, nr.10, p.24-25, tables.) Text in Danish. **Title tr.**: Greenland air traffic grows fast.

Summarizes two speeches dealing with the development and status of air traffic. Types of aircraft and their relative merits are discussed. Principal airports and navigational aids are described. Costs of dog-sled and air transport are compared. (DLC.)

74068. MØLLER, DAG, *and* **S. OLSEN.** Lodda og loddefisket. (Fiskets gang, Jan. 18, 1962. årg. 48, nr.3, p.27-36, graphs, sketch maps.) Text in Norwegian. Summary in English. **Title tr.**: Capelin and capelin fishery.

Reports on investigations in 1960 and 1961, noting the characteristics, life history, particularly the high post-spawning mortality, and the arctic distribution of this fish; and analyzing the Norwegian purse seine fishing, which had marked development during the decade, and a record 220,000 tons landed in 1961. The fishery is based on spawning and pre-spawning concentrations during late winter and early spring: except for the years 1938-1942, capelin has spawned in Finnmark waters for at least a century. Annual records since 1868 show great fluctuations in the size of the schools and time of arrival, the latter probably influenced by westerly or easterly distribution and tides. In 1961 there were three influxes: in February along west Nordkapp, March westward along Varanger Peninsula, and April along northern Varanger. Distribution in Sept. 1960 was along the cold/warm water front in northeast Barents Sea; in Aug. 1961: widely scattered farther north and east. (DA.)

74069. MØLLER, DAG, *and others*. Loddeundersøkelser med F/F "Johan Hjort" 22. februar - 18. mars 1961. (Fiskets gang, Apr. 27, 1961. årg. 47, nr.17, p.347-50, graphs, sketch maps.) Text in Norwegian. *Other authors:* S. Olsen, K. Palmork and G. Vestnes. **Title tr.**: Capelin investigations by the R/V *Johan Hjort*, 22 February - 18 March, 1961.

Reports a survey in waters north of Norway to 73°10′N. 32°20′E.: a western influx of capelin was reported already near land; another approaching from the northeast was studied and most of the fish were four years old; 2,000 were tagged. Capelin occurs within the temperature range 2°-4.5°C., chiefly at 3°-4°C. (DA.)

MÖLLER, DIETRICH, *see* Mälzer, H., & D. Möller. Das Nivellement . . . 1961. No. 73740

74070. MØLLER, VILHELMINE. Af Knud Rasmussens oplevelser i Grønland maj 1907 - februar 1908. (Grønland, June 1961, nr.6, p.237-40, illus.) Text in Danish. **Title tr.**: Note on Knud Rasmussen's experiences in Greenland May 1907 - February 1908.

Presents an account, written in the summer of 1908 by his sister, of Rasmussen's sled journey with a Greenlander companion from Kap York to Umanak and return in the winter of 1907-1908. (CaMAI.)

74071. MØLLER, VILHELMINE. Julen i Knud Rasmussens fødehjem. (Atuagagdliutit: Grønlandsposten, Dec. 14, 1961. Ukiut 101-iat, nr.26, p.36-37, illus., port.) Text in Danish and Eskimo. **Title tr.**: Christmas in Knud Rasmussen's childhood home.

Presents an account by the Danish explorer's sister, of their childhood in the vicarage at Jakobshavn, West Greenland, towards the end of the last century. (CaMAI.)

74072. MØLLER, VILHELMINE. På vej til polareskimoerne, min sidste slaederejse med min bror

Knud Rasmussen i 1907. (Grønland, Feb. 1961, nr.2, p.57-63, illus.). Text in Danish. **Title tr.**: On our way to the Polar Eskimo; my last sledge with my brother Knud Rasmussen in 1907.

Recounts experiences of a trip in the Umanak and Upernavik districts, meeting with Polar Eskimos from Kap York, etc. (CaMAI.)

74073. MOEN, HERMAN. Frø og plantepriser, tilgang pa frø og planter m.v. i 1962. (Norway. Skogdirektoratet. Årsskrift for norske skogplanteskoler, 1961 *pub.* 1962. p.17-24, tables.) Text in Norwegian. **Title tr.**: Seed and plant prices, supply of seed and plants, etc. in 1962.

Reports seed on hand as of Jan. 1962, was 18,222 kg. spruce, 6,757 kg. pine, 416 kg. other conifer, and 43 kg. deciduous. For this supply are shown: station, provenance, native or imported, species and locality where collected. Seed suitable for higher elevations was in short supply; 1961 was a poor cone year for spruce and Sitka spruce, but good for pine. Plant supply data are given by species and province. (DA.)

74074. MOEN, HERMAN. Skogreisningen i fjellbygdene sinkes av frømangel. (Norske myrselskap. Meddelelser, Aug. 1961. årgr. 59, nr.4, p.139-40.) Text in Norwegian. **Title tr.**: Forest planting in high altitude areas delayed by seed shortage.

Pine and especially spruce seed for forest planting in high elevations is short in Norway, because it must derive from localities with climatic conditions similar to those of the planting area, and good seed years are rare in high and northern areas. Plans are underway to establish seed plantations in areas with a climate satisfactory for seed ripening. Plants will be grafted with cuttings from elite trees in areas which need seed. Although 15-20 yrs. are required to produce usable plants, plans for forestation have been made, including the conversion of 700,000 decares of birch forests to spruce over a 35-yr. period. Experiments by the Forest Research Institute show that natural regeneration possibilities are negligible in mountain forests and that artificial regeneration will be necessary in the new forests. (DA.)

74075. MOEV, VIT. Noril'sk; polîarnaîa noch' na dolgote Kal'kutty. (Soyetskiĭ soĭuz, 1962, no.3 (145), p.5-11, illus.) Text in Russian. **Title tr.**: Noril'sk; polar night on the Calcutta meridian.

Photo-reportage of a winter visit: street scenes, indoor life, recreation, mining activities, etc. Problems of climate and permafrost are discussed. Wages and fringe benefits, housing, food supply and nutrition, health and educational facilities, etc., are described, with some statistics; e.g. diet averages 4,214 cal./day/in restaurants which feed 70% of the population. Some sixty thousand children and adults attend educational classes, etc. Comparisons are drawn with conditions abroad, mainly Alaska. (DLC.)

MOGHUL, TASSADDUK H., *see* Jacob, S.W., & *others*. Experimental . . . cryobiology. 1961. No. 72506

74076. MOHR, JOHN LUTHER, 1911– , *and others*. The marine nature of Nuwuk Lake and small ponds of the peninsula of Point Barrow, Alaska. (Arctic, Dec. 1961. v.14, no.4, p.211-23, illus., maps, graphs, tables.) 21 refs. *Other authors:* D.J. Reish, J.L. Barnard, R.W. Lewis, *and* S.R. Geiger.

Discusses a score or more ponds, some transient, some persistent, on this narrow gravel spit, their location, nature, salinity and temperature; their biotas, marine and fresh-water, are outlined. Nuwuk Lake, the largest water body of the locality, approx. 600 ft. long, max. depth 18.5 ft., is treated in some detail: its bottom, its formation by converging currents of the Bering and Chukchi Seas, ice conditions, temperature, salinity and O_2-content. The biotas: euryhaline, reduced shallow-sea fauna are dealt with and the organisms collected during 1952-1960 are tabulated. Comparison is made with the few halocline lakes known in northern Russia and Scandinavia, notably Mogil'noye on Kil'din Island. (DI.)

74077. MOISEEV, PETR ALEKSEEVICH, 1913– , *and* **I. A. PARAKETSOV.** Nekotorye dannye ob ékologii morskikh ershei, sem. Scorpaenidae Severnoĭ chasti Tikhogo okeana. (Voprosy ikhtiologii, 1961. t.1, vyp.1(18), p.39-45, illus., tables, map.) 5 refs. Text in Russian. **Title tr.**: Some data on the ecology of fishes of the family Scorpaenidae from the North Pacific.

Describes the geographic and arctic distribution of these fishes, their ecology in the Bering Sea. The latter is based upon periodic fishing since 1932, by reconnaissance and commercial trawlers. Depth of operations, quantity of catches and their seasonal distribution, location of fish accumulations worthy of exploitation, age and size of fishes, etc. are dealt with. Earlier studies are noted. (DLC.)

74078. MOISEEV, PETR ALEKSEEVICH, 1913– . Nekotorye zakonomernosti dinamiki chislennosti promyslovykh ryb severo-zapadnoĭ chasti Tikhogo okeana. (Akademiîa nauk SSSR. Ikhtiologicheskaîa komissiîa. Trudy soveshchaniĭ, 1961. vyp.13, p.130-31.) Text in Russian. **Title tr.**: Some regularities in numerical dynamics of commercial fish of the northwestern Pacific.

Summarizes a paper enumerating factors instrumental in the great number of fish, and in the considerable fluctuations in these numbers, especially among migratory forms. Practical guidelines for fisheries of both the migrant and more sedentary species, are offered. (DLC.)

74079. MOISEEV, PETR ALEKSEEVICH, 1913– . On the biological basis of fishery in the western Pacific. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Proceedings, pub. 1961. v.10, fisheries, p.64-69.) 44 refs.

Discusses characteristics of the Far Eastern marginal seas, including Bering and Okhotsk, and their effects on fish distribution, abundance, and biology. The narrow continental shelf, island chains, variations in current regimes, etc. necessitate various adaptations: high fecundity, isolation of stocks, spawning in coastal areas, etc. As a result, the fishes are highly susceptible to environmental changes. Biological and zoogeographical characteristics of the most abundant commercial species are outlined. Pertinence to fisheries planning is indicated. (DI.)

74080. MOKEEV, G. A. Pozharo-opasnye polîasa i vremîa naibolee sil'nogo razvitiîa lesnykh pozharov. (Lesnoe khozîaĭstvo, Aug. 1961. god 14,

no.8, p.53-57, diagrs., tables, map.) Text in Russian. **Title tr.**: Fire hazard belts and the maximum frequency periods of forest fire.

Distinguishes four climatic belts prone to forest fire including the northern forests above 59°N. as the fourth belt. In its southern part, fires occur chiefly in May-Sept., north of 63°N. June-Aug. are the hazardous months. Counter-measures should be planned according to this zoning. In Arkhangel'sk Province, forest fires of the last 30 years averaged 15.6% in May, 33.0 June, 32.8 July, 17.0 Aug. and 1.6% in Sept. The effect of air temperature and humidity and soil conditions on fire occurrence is discussed. (DLC.)

74081. MOKIEVSKIĬ, OLEG BORISOVICH, 1921– . Shirotnye izmeneniia nekotorykh ėkologicheskikh kharakteristik naseleniia litorali severo-zapadnoĭ chasti Tikhogo okeana. (Voprosy ėkologii, 1962. t.4, p.55-57.) Refs. in text. Text in Russian. **Title tr.**: Latitudinal changes of some ecological characteristics in the littoral population of the Northwest Pacific.

Summarizes general aspects of comparative geographical and ecological studies of the coasts south of Shelekhova Bay conducted in 1948 and 1958. Green, brown and red seaweeds, and among animals, crabs and sea-urchins are primarily considered. Changes towards the south are characterized as: descent into depth of northern forms, increase in number of forms, and decrease in biomass. (DLC.)

74082. MOKROUSOV, V. P., *and* N. D. SADOVSKIĬ. Osnovnye dannye po stratigrafii chetvertichnykh otlozheniĭ Kamchatki. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.258-70, tables.) 39 refs. Text in Russian. **Title tr.**: Basic data on the stratigraphy of the Quaternary deposits of Kamchatka.

Presents a new stratigraphic time scale of these deposits and a correlation with other proposed scales. Lower, Middle, Upper and Recent Quaternary are distinguished and each division is described noting type of deposit, distribution, fauna and flora. (DLC.)

74083. MOKROUSOV, V. P. Stratigrafiia domelovykh otlozheniĭ Kamchatki. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.16-27, tables.) Text in Russian. **Title tr.**: Stratigraphy of the pre-Cretaceous deposits of Kamchatka.

Outlines the stratigraphy of Archean (?), Proterozoic, lower Paleozoic and middle Paleozoic-Mesozoic deposits distributed south of 60°N. These deposits occupy about 16,000 km² of the Sredinnyy and Ganal'skiye Vostryaki (53°45'N. 158°E.) Ranges. They are divided into series and subseries and their composition, sedimentation, thickness and organic remains are briefly described. Correlation is made with Chukotka, the Koryak Range, Alaska, and other regions. (DLC.)

MOKSHANTSEV, K. B., *see* Lutts, B.G., & *others*. O sostave i stroenii . . . 1962. No. 73641

MOLANDER, SVEN ERIC, *see* Liljequist, G.H. Arktisk utpost . . . 1960. No. 73499

74084. MOLDAVANTSEV, IU. E., *and* A. S. PERFIL'EV. Proiavleniia metamorfizma v sviazi s glubinnym razlomom na Poliarnom Urale. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Apr. 1962. no.4, p.50-55, maps.) 18 refs. Text in Russian. **Title tr.**: Manifestation of metamorphism connected with a deep fault in the Polar Ural.

Describes an ultrabasite belt extending about 350 km. from Khulga to the Shchuch'ya. Dunites and harzburgites predominate among the rocks of this massif; others are pyroxenites, wehrlite, gabbros, etc. Tectonic-structural maps of the Polar Ural are presented and structural conditions for development of metamorphism are interpreted. The age, intensity, facies, and types of metamorphism are characterized. (DLC.)

MOLEVA, V. A., *see* Stepanov, V.I., & V.A. Moleva. O ral'stonite . . . 1962. No. 75929

74085. MOLIN, V. A. Ob ufimskom iaruse v verkhov'iakh reki Mezeni. (Akademiia nauk SSSR. Doklady, Dec. 1, 1962. t.147, no.4, p.904-905.) 4 refs. Text in Russian. **Title tr.**: The Ufimskiy stage in the upper reaches of the Mezen River.

Describes upper Permian deposits in this region of Komi ASSR. Mineral composition, flora and fauna of the red marls, clays and sandstones are characterized. Existence of the Ufimskiy stage is recognized and comparison is made with the Vychegda basin. (DLC.)

74086. MOLIN, V. A. Sporovo-pyl'tsevye kompleksy beloshchel'skikh sloev tatarskogo iarusa permi basseĭna r. Mezeni. (Akademiia nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp.2, Materialy po geologii Komi ASSR, p.47-49, tables.) 3 refs. Text in Russian. **Title tr.**: Spore-pollen complexes of the Beloshchel'ye layers of the Tartarian stage of the Permian in the Mezen River basin.

Presents tabulated data on spore-pollen from the Beloshchel'ye layers in the Mezen, Peza and Chulas River basins. Main features of the complexes are described. They are poor in spores, and ribbed pollen of conifers is the predominant group, others contain *Vittatina* with different species. Comparison is made between the Mezen and the Nizhnyaya Toyma data. (DLC.)

74087. MOLIN, V. A. Sporovo-pyl'tsevye kompleksy permskikh otlozheniĭ poluostrova Kanin. (*In:* Akademiia nauk SSSR. Komi filial. Geologicheskiĭ institut. Materialy . . . 1961, p.22-43, tables, plates.) 5 refs. Text in Russian. **Title tr.**: Spore-pollen complexes of Permian deposits of the Kanin Peninsula.

Reports spore-analyses, the first, of a hundred samples, representing Kungurian, Kazanian and Tartarian (?) stages of these deposits. Spore-pollen complexes are compared with such of the same age of the Mezen' basin and other areas. Climate and vegetation of the Permian period are interpreted. (DLC.)

74088. MOLINARI, VINCENZO. The action of low temperatures on *Plasmodia*. (Journal of tropical medicine and hygiene, Sept. 1961. v.64, no.9, p.225-32, tables.) 20 refs.

Reports on the blood forms of five species of *Plasmodia* exposed to –70°C. They survived well at this temperature "for at least one year." Sporozoites of two species tested were much more susceptible to cold injury than the blood forms. Addition of glycerol to make a 5% solution gave optimal results with respect to protection and toxicity. (DNLM.)

MOLINEUX, CARLTON E., *see* Needleman, S.M., & *others*. Evaluation of an arctic ice-free land site . . . 1961. No. 74245

74089. MOLL, T. A. Fonemnyĭ sostav i osnovnye foneticheskie zakonomernosti chavchuvenskogo dialekta koriākskogo iāzyka. (Leningrad. Gos. pedagogicheskiĭ institut. Uchenye zapiski 1955. t.111, Materialy Gertsenovskikh chteniĭ, p.152-54, graph.) Text in Russian. **Title tr.**: Phonemic constituents and basic phonetic laws of the Chavchuven dialect of Koryak.

Phonetic analysis of the sixteen consonant phonemes in the dialect of the reindeer-raising Koryaks or Chavchuvens. (DLC.)

MOLLARD, J. D., *see* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

74090. MOLLESTAD, SVERRE. Fiskeflåten 1960. (Fiskets gang, Feb. 23, 1961. årg. 47, nr.8, p.171-76, tables.) Text in Norwegian, **Title tr.**: The fishing fleet, 1960.

Reports 41,636 vessels on the Norwegian registry, July 1960; 12,135 covered vessels of wood, 426 of steel, 28,872 open motor-boats, 203 open boats without motor. The increase in motor-boats was greatest in North Norway. Data are given in detail for each category. (DA.)

74091. MOLLESTAD, SVERRE. Selfangsten 1959. (Fiskets gang, May 5, 1960. årg. 46, nr.18, p.261--64, tables.) Text in Norwegian. **Title tr.**: Sealing in 1959.

Reports on 69 vessels from Finnmark, Troms, Nordland, Møre and Romsdal, with 1,205 personnel, sealing in Newfoundland waters, Vestisen, Denmark Strait, Nordisen and Østisen (Arctic Ocean northwest of Norway and east of 20°E.). The 295,398 catch, an improvement over previous years, consisted of 256,971 Greenland seals, 37,131 hooded, and a few others, also 128 polar bears. Blubber decreased from 1958 because the Newfoundland catch was chiefly young animals. Prices were good. Five vessels operating in Denmark Strait combined Greenland shark fishing with sealing. Each fishing ground is reported in turn. (DA.)

74092. MOLLESTAD, SVERRE. Selfangsten 1960. (Fiskets gang, Mar. 9, 1961. ågr. 47, nr.10, p.208--211, tables, graph.) Text in Norwegian. **Title tr.**: Sealing 1960.

Reports 67 vessels from North Norway (of which three were lost) with 1,293 men in the 1960 expeditions to Newfoundland, Vestisen, Denmark Strait, Nordisen and Østisen. The Newfoundland catch of 216,034 was a decrease from 295,398 in 1959 because of difficult conditions; it included 170,016 harp seals, 45,429 hooded seals, and 11 polar bears. Blubber was less than in 1959 and prices lower. Two vessels operating in Denmark Strait combined Greenland shark fishing with sealing. Each sealing ground is reported separately. (DA.)

74093. MOLLESTAD, SVERRE. Småtrålernes fiske i 1958.(Fiskets gang, Mar. 10, 1960. årg. 46, nr.10, p.146-52, tables, graph, sketch map.) Text in Norwegian. **Title tr.**: Small trawler fisheries in 1958.

Reports kind, amount and value of catch for vessels under 300 gross tons in the Barents and Norwegian Seas, Bjørnøya, and Spitsbergen waters, approx. 64° - 79°N. 5° - 35°E. and on the West Greenland fishing grounds. About 169 vessels took part, though 456 had permits. Prices were lower than in 1957, especially in North Norway; only the Spitsbergen and Bjørnøya fisheries showed better results. The chief catch was cod both salted and fresh, haddock, coalfish and red perch. The 1953-1958 catches are tabulated by species and detailed data given on 1958. (DA.)

74094. MOLLESTAD, SVERRE. Småtrålernes fiske i 1959. (Fiskets gang, Jan. 12, 1961. årg. 47, nr.2, p.29-35, tables, graph, sketch map.) (Melding fra Fiskeridirektoratets kontor for statistikk og etterretningsvesen) Text in Norwegian. **Title tr.**: Small trawler fisheries in 1959.

Present a statistical analysis as in item above. Tables include data on number and size of trawlers, catch per fishing ground, size of trawler and landing area (Nordmøre-Romsdal, Nordland, Troms and Finnmark), as well as trawl pulls/day and number of fishing days. The 26,680 ton catch, larger than in 1958 and 71% landed in Finnmark, was worth 19,961,000 Norw. crowns, including fresh and salted fish and byproducts. (DA.)

74095. MONAGHAN, B. M. Muskeg and the Quebec North Shore and Labrador Railway. (*In:* National Research Council of Canada . . . Proceedings of the Eighth Muskeg Research Conference . . . 1962. p.10-26, illus., map.) 4 refs.

Describes the climate and terrain in the area traversed by this 360-mile railroad built during 1945-1954 at a cost of $350,000 per mile, the first transportation route into the interior of the Labrador-Ungava Peninsula. Also discussed are the three main bog types encountered: string bogs, marshes, and raised bogs, noting the problems they present to railroad builders. The Q, NS & L Ry. hauls 13 million tons per yr. in a 200-day operating season, and may have nine loaded and nine empty trains moving at one time. During the first two years of operation, extensive maintenance was necessary in muskeg areas. Several other railroads and highways built later are noted: 2,000-mi. access road and railroad to serve the Mt. Reed iron ore development of the Quebec Cartier Mining Co. Ltd.; an added 70 mi. of railroad linking mining areas and dock facilities with the Q, NS & L Ry; a 105-mi. all-weather access road between the Railway and a hydroelectric site on the Hamilton River. (DLC.)

74096. MONAHAN, ROBERT LEONARD. The role of transportation in the Fairbanks area. (Association of Pacific Coast Geographers. Yearbook. 1959. v.21, p.7-21, illus., maps, tables.) 25 refs.

Sketches the growth of this central Alaska city, as due mainly to improved and extended transport connections. In the river boat period of 1901-1923, traffic was seasonal because of ice and low water. On completion of the Alaska Railroad in 1923, transportation was fairly dependable the year round, and construction of a local road network expanded the Fairbanks sphere of influence. Jet airplane traffic is served by the new International Airport; Phillips Field on Garden Island accommodates the bush pilots, private plane owners, etc. Improvement of the Alaska Highway

and rehabilitation of the railroad accelerated economic development in the Fairbanks area after World War II.; but the petroleum products pipeline built from Haines to Fairbanks in 1954, reduced Alaska Railroad revenues. Freight rates from Seattle by several carriers are tabulated. (DGS.)

74097. MONAKHOV, FEDOR IVANOVICH, *and others.* Seĭsmicheskie i mikroseĭsmicheskie nablŭdeniĭa na sovetskikh stantsiiakh v period MGG. Moskva, Izd-vo Akademii nauk SSSR, 1959. 39 p. illus., tables, graphs, diagrs., maps. 16 refs. Text in Russian. Summary in English. *Other authors:* I.P. Pasechnik *and* N.V. Shebalin. **Title tr.:** Seismic and microseismic observations at Soviet stations during the IGY.

Reviews instruments, methods, results. Five arctic and two antarctic seismic stations were established during the IGY, also six microseismic stations to determine directions to sources of disturbances; 19 seismic stations perform regular observations of amplitudes and periods of microseisms. Those in the North include Barentsburg, Hayes Island, Murmansk, Apatity, Tiksi, Yakutsk, Magadan, Petropavlovsk-on-Kamchatka. Some improvements in the layout of the recording network are suggested on the basis of the data analysis. (SPRI.)

74098. MONK, DONALD, *and* **G. WALLERSTEIN.** The first ascent of Mount McArthur. (American alpine journal, 1962. v.13, no.1, p.43-48.)

Reports conquest of this 14,400-ft. peak just north of the Logan massif in the St. Elias Range of Yukon Territory. After one unsuccessful attempt, the party of five reached the summit on Aug. 4, 1961; airdrops of food and equipment, a 90-mi. walk in from the Alaska Highway, etc. are mentioned. (DGS.)

74099. MONSINGER, M. N., *and* **T. B. KILPATRICK.** Ice thickness data for selected Canadian stations, freeze-up 1961 - break-up 1962. Toronto, Aug. 17, 1962. 24 p., map, tables. (Canada. Meteorological Branch, Circular CIR-3711, ICE-6.)

Presents ice thickness and snow depth data during the 1961-62 winter season, for 34 stations, 29 in the area covered by this Bibliography. Freeze-up and breakup dates for each water body are also given as available. Measurements are taken on two sites at Alert, Ellesmere Island, five at Fort Churchill, Man., and two at Knob Lake, Que. Reporting stations are indicated on small-scale map. (DWB.)

MONSINGER, M. N., *see also*

Archibald, D.C., *& others.* Aerial ice observing . . . 1962. No. 69838

Archibald, D.C., *& others.* Aerial sea ice observing . . . Canadian Western Arctic, 1960. 1961. No. 69839

Archibald, D.C., *& others.* Aerial sea ice observ. & reconn. . . . 1959-60. 1960-61. No. 69840

MONSON, MILDRED, *see* Krog, H., & M. Monson. Metabolism mt. goat. 1954. No. 73450

74100. MONSON, RALPH. Gantry carries bucket with deck concrete. (Contractors and engineers, July 1962. v.59, no.7, p.22-24, illus.)

Describes the construction of a new three-span deck bridge over the Eagle River near Anchorage, Alaska. The 6¼-in. concrete deck provides a 28-ft. roadway with 2.25-ft. curbs on either side surmounted by steel railings. A simple gantry, riding on rails at the edges of the deck, carried concrete buckets from transit mixers to forms for the placement of the deck slab. (DLC.)

74101. MONSON, RALPH. Permanent frozen core for a gravel-fill dam. (Contractors and engineers, Dec. 1961. v.58, no.12, p.48-52, diagrs.)

Describes dam to be constructed during 1963-1964 near Fairbanks, Alaska. The gravel structure is to be 145 ft. high and 1,400 ft. long at the crest; the impervious, 30 ft. (minimum) wide central core is to be maintained frozen through a system of heat-exchange units, utilizing the natural surface cold in winter. An earth core is to provide protection against thawing in summer. The freezing elements consist of four-in. steel casings driven at ten-ft. centers; each casing having a one-in. plastic pipe inside to deliver the coolant to the bottom. (DLC.)

74102. MONTALBETTI, R., *and* **D. J. McEWEN.** Hydrogen emissions and sporadic E layer behaviour. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.1, p.212-15, graphs, table.) 7 refs.

Reports on the occurrence and intensity of hydrogen emissions and their relation to auroral luminosity, and on the sporadic E layer (E_S) some particular type of which was thought to affect the precipitation of protons into the upper atmosphere. Observations were carried out for Nov. - Mar. 1958-1959 with a moving plate spectrograph and for Dec. - Mar. 1959-1960 with a scanning photometer. A marked difference was observed between the variations of hydrogen emissions and the zenithal auroral intensities as measured by an all-sky camera. The different behavior indicates protons not being associated with normal visible aurora. The above-mentioned variations compared with those obtained during the similar observations at College showed that type "f" of E_S has a maximum occurrence at the time of maximum auroral occurrence, and that the diurnal curve of the type "r" of E_S was similar to that of the hydrogen emission. (DLC.)

74103. MONTALBETTI, R., *and* **D. J. McEWEN.** Hydrogen emissions during the period November 9-16, 1960. (Canadian journal of physics, Apr. 1961. v.39, no.4, p.617-19, table, diagrs.) 3 refs.

Reports photometric observations of $H\beta$ emission from the night sky at Churchill, Manitoba. Variations in intensity are shown together with simultaneous changes of geomagnetic activity (Z-component). Strongest emission was observed Nov. 12-13 when the intensity reached 600R. Strong rayed auroral forms and type-A aurora also occurred during this night. (DLC.)

MONTANARI, JOHN H., *see* Pressman, A.E., *& others.* Terrain analysis . . . Canada. 1961. No. 74950

MONTGOMERY, H., *see* Sayen, A., *& others.* Immersion foot . . . 1960. No. 75399

MOORE, DAVID D., *see*

National Northern Development Conference. 1961. No. 74224

Pacific Science Congress. 1961. No. 74619

MOORE, GEORGE WILLIAM, 1928– , *see*
Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

Kachadoorian, R., & *others*. Geologic investigations . . . Project Chariot . . . 1961. No. 72604

MOORE, J. M., *Jr., see* Emslie, R.F., & J.M. Moore. Geological studies . . . 1961. No. 71265

74104. MOORE, K. E., *and others*. Tissue catecholamine content of cold-acclimated rats. (Society for Experimental Biology and Medicine. Proceedings, Apr. 1961. v.106, no.4, p.816-18, tables.) 15 refs. *Other authors:* D.N. Calvert *and* T.M. Brody.

Female rats kept for 3-5 weeks at temperatures of 5-7°C. showed hypertrophy of heart, kidney and liver. Catecholamine content remained unchanged in the brain, dropped in the heart, and rose in the adrenal. (DLC.)

74105. MOORE, PERCY ELMER, 1899– , No longer captain; a history of tuberculosis and its control amongst Canadian Indians. (Canadian Medical Association. Journal, May 6, 1961. v.84, no.18, p.1012-16.) 4 refs.

Discusses the "acute epidemic of tuberculosis" among the Indians of western Canada 1874-1926, its causes, epidemiology, effects, etc. Beginnings of organized medical service for the Indians, public and government activities against TB in the 1930's are reviewed including the cultural northern area. Subsequent developments are outlined, especially in the fields of prevention and hospitalization; and the current satisfactory, conditions noted. (DNLM.)

74106. MOORE, R. E., *and* **M. C. UNDERWOOD.** Possible role of noradrenaline in control of heat production in the newborn mammal. (Lancet, June 11, 1960. no.7137, p.1277-78, illus.) 8 refs.

Reports on O_2-consumption and rectal and skin temperatures of newborn kitten, rat, mouse and rabbit at 30° or 35°C. ambient temperature. Responses to hexamethonium and noradrenaline suggest that the latter is secreted by the neonate in response to cold and helps to keep it warm. (DNLM.)

74107. MOORE, S. DONALD. Arctic islands oil to market, where and how? (Oil in Canada, Mar. 15, 1962. v.14, no.20, p.38-42, port., map.)

Feasibility of year-round drilling is shown by the Dome Winter Harbour no.1 on Melville Island which reached the projected depth of around 14,000 ft.; the importance of experienced crews and possibility of keeping costs within estimates were demonstrated, though significant oil and gas was not found. (DGS.)

74108. MOORE, TERRIS, 1908– . Alaska. New York, American Geographical Society, Nov. 1962. 6 p., maps. (Focus, v.13, no.3.) 7 refs. Fold. pamphlet.

Surveys the economic geography, noting need of greater population, abundant mineral, forest, and fishery resources, and high cost of transportation. Six Alaskan regions are distinguished. The Anchorage area has the greatest economic development and almost half the population. Federal government spending is the largest single source of income, others are minerals (particularly oil), fisheries, forestry products, and tourists; income from gold, copper, and furs has declined. Air transport has brought interior Alaska closer to major world centers. (DGS.)

74109. MORALEV, V. M., *and* **A. L. STAVTSEV.** Osnovnye cherty tektoniki vostochnoĭ okrainy Aldanskogo shchita i sopredel'nykh oblasteĭ. (*In:* Vsesoīuznyĭ aérogeologicheskiĭ trest. Materialy po regional'noĭ geologii . . . 1961, p.5-13, map, profile.) 6 refs. Text in Russian. **Title tr.:** The main tectonic features of the eastern margin of the Aldan shield and adjacent areas.

Presents a tectonic map of this wide region based on work with the Aldan expedition in 1956-1958; distinguishes and describes four large structural units: the pre-Sinian platform with Aldan shield and Vilyuy syncline, the eastern Aldan zone of block foldings, the Verkhoyansk-Pacific folded zone, and the Mesozoic-Cenozoic depressions of the Okhotsk volcanic belt. (DLC.)

74110. MORALEV, V. M., *and* **S. V. NUZHNOV.** Perspektivy neftenosnosti pozdnedokembriĭskikh otlozheniĭ v basseĭne srednego techeniīa r. Maīa. (Izvestiīa vysshikh uchebnykh zavedeniĭ. Geologiīa i razvedka, Jan. 1961, no.1, p.20-24, maps.) 5 refs. Text in Russian. **Title tr.:** Prospects of oil-bearing properties of late-Precambrian deposits in the middle Maya River basin.

Presents stratigraphic account of a section of these deposits from studies during 1957-1960. In upper horizon of the Malgin series, combustible shales, bitumens are detected. The favorable position, rocks and structure of this horizon for oil accumulation are discussed, pending further studies. (DLC.)

MORALEV, V. M., *see also* El'īanov, A.A., & V.M. Moralev. Novye dannye o vozraste . . . 1961. No. 71229

MORAN, WILLIAM R., *see* Hazzard, J.C., & *others*. Search oil Alaska . . . 1962. No. 72078

MORANA, NICHOLAS J., *see* Levin, A., & *others*. Systems research . . . 1961. No. 73459

74111. MORAR', S. S. Rezul'taty lecheniīa svezhikh form tuberkuleza legkikh v zapolīar'e. (Problemy tuberkuleza, 1961, god 39, no.2, p.97-98.) 6 refs. Text in Russian. **Title tr.:** Therapeutic results of new cases of pulmonary tuberculosis in the Arctic.

Notes earlier successes with antibacterial preparations, conditions of own cases (218), etiology, therapy and its duration, diet, results. No aspects peculiar to the Arctic were noted and duration of illness was similar to that in milder climes. (DNLM.)

MORAWSKI, TADEUSZ, *see* Birkenmajer, K., & T. Morawski. Dolerite intrusions . . . 1960. No. 70215

MORETZ, W. H., *see* Ellison, R.G., & *others*. Further studies . . . hypothermia. 1960. No. 71247

MORGAN, H. M., *see*
Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

74112. MORGEN, JONATHEN. Duck No. 596-86775. (Alaska sportsman, Nov. 1961. v.27, no.11, p.8-10, illus.)

Describes a duck hunt on the tundra by Eskimos from Shishmaref on Seward Peninsula, Alaska,

in July 1959. Molting ducks, unable to fly, were clubbed to death, among them a female banded in California the previous winter. This annual hunt, an ancient custom, is the only communal effort remaining among these villagers. (DLC.)

74113. **MORLEY, J. P.** Icebreakers, their construction and use. (Polar record, Jan. 1962. v.11, no.70, p.6-12, plates.) 24 refs.

Outlines the uses, historical development, and desirable characteristics of polar icebreakers. The Russian *Moskva* is described: principal dimensions, hull construction, machinery, equipment and accommodations. The 400 ft. long vessel delivered in June 1960 for use on the Northern Sea Route, has a 15,360 metric ton max. displacement, triple propellers, four heeling pumps with a heeling angle of 14°, diesel motors developing 22,000 shp, etc. The powerfully strengthened hull is completely welded and has shell plating of special steel for high impact at low temperatures. General arrangement plan is diagrammed. (DGS.)

MORLEY, L. W., *see*
Gregory, A.F., & *others.* Airborne geophys. recon. Can. Arctic Archipelago. 1961. No. 71840
Gregory, A.F., & *others.* Geological interpretation . . . 1961. No. 71841
Gregory, A.F., & *others.* Geological interpretation . . . 1961. No. 71842

MOROZOV, IU. V., *see* Shubnikova, O.M., & IU. V. Morozov. O nekotorykh geograficheskikh osobennostiakh . . . 1961. No. 75612

74114. **MOROZOV, S. S.,** *and others.* Pochvy tsentral'noĭ chasti Khanty-Mansiĭskogo natsional'nogo okruga. (Pochvovedenie, Dec. 1961, no.12, p.18-28, tables.) 6 refs. Text in Russian. *Other authors:* S.S. Poliakov *and* G.M. Tereshkov. Title tr.: Soil of the central part of Khanty-Mansi National District.

Reports a 1957-1958 study of soils in the Ob valley, between Surgut and Kondinskoye. The watershed plateau and valley with three terraces were investigated. Climate, precipitation, vegetation, and soil-forming rocks are described. Mechanical, mineral and chemical composition of the soils is analyzed. Podsolic, boggy, peaty, and meadow soils are distinguished and described. (DLC.)

74115. **MOROZOV, S. S.,** *and* **V. A. SELIVANOV.** Sostav i svoĭstva produktov vyvetrivaniia effuzivnykh porod v usloviiakh tundrovoĭ zony Severo-Vostoka SSSR. (Moskva. Universitet. Vestnik, ser.4, geologiia, May-June 1961, no.3, p.10-17, tables.) 10 refs. Text in Russian. Title tr.: Composition and properties of the weathering products of effusive rocks under tundra conditions in the northeastern USSR.

Outlines the climatic conditions of the Erguveyem basin tundra in the southeastern part of the Anadyr Range. The composition and properties of basalts and liparites weathering products are reported. The weathering, in an alkaline medium, produces minerals of the montmorillanite group and hydromica. The physical properties are characterized by porosity and hygroscopicity, by very decreased filtration and considerable adhesion. (DLC.)

MORPHET, EDGAR L., *see* Lindman, E.L. Foundation for Alaska's public schools . . . 1961. No. 73512

74116. **MORRIS, ROBERT B.,** *and others.* Neonatal cold injury. (Medical journal of Australia, Aug. 12, 1961. 48th yr., v.2, no.6, p.269-71.) 4 refs. *Other authors:* J. W. Muller *and* M. Luke.

Case histories of six patients with neonatal cold injury are presented, including first aid (rewarming in an incubator), therapy and outcome. Four of the patients were admitted during a ten-day cold snap. The dangers of exposing the newborn to low ambient temperature are stressed. (DNLM.)

MORRIS, ROBERT HAMILTON, 1921– , *see* Keller, A.S., & *others.* Geology of the Shaviovik . . . 1961. No. 72719

74117. **MORRISON, H. F.** Seismic investigations in the Sverdrup Basin, Queen Elizabeth Islands. Montreal, 1961. 77 p., illus., maps, graphs. 14 refs. Typescript. M. Sc. thesis to McGill University.

Presents results of a reconnaissance program carried out by the Geophysics Division of the Geological Survey of Canada, Apr.-Aug. 1960 as part of the Polar Continental Shelf Project: a five-man party under George Hobson measured the thickness of the Sverdrup Basin sediments in several localities as foundation for future detailed investigations. Base camp was at Isachsen on Ellef Ringnes Island. Field methods, equipment, instruments, aircraft and motor toboggan transport are described. Profiles from six localities are reported and discussed; geophysical and geological data are correlated. Other investigations carried out on southern Ellef Ringnes, Meighen and Borden Islands also are noted. (CaMM.)

74118. **MORRISON, PETER.** Body temperatures in some Australian mammals, 3; Cetacea, Megaptera. (Biological bulletin, Aug. 1962. v.123, no.1, p.154-69, illus., tables.) 36 refs.

Account of measurements made with copper-constantan thermocouples on 20 recently killed humpback whales. Highest temperatures were found near the umbilicus and genital opening and at a depth of 3.3 ft. The average was 36.0°C. and there was no correlation with sex, size, or length of time (0.5-18 hrs.) after death. (DLC.)

74119. **MORRISON, PETER REED, 1919– ,** *and* **F. A. RYSER.** Metabolism and body temperature in a small hibernator, the meadow jumping mouse, *Zapus hudsonius.* (Journal of cellular and comparative physiology, Oct. 1962. v.60, no.2, p.169-80, illus., tables.) 24 refs.

Average deep rectal temperature was 37.3°C., with an active night-time value of 38.0° and a daytime value of 36.2°C. Temperature became lower and more variable near 0°C. ambient, but returned to 38°, below 0°C. The great weight increase before hibernation, metabolic levels in fat and starving animals at room- or low-temperatures, thermal conductance, and critical temperature are also described. (DLC.)

74120. **MORRISON, PETER REED, 1919– ,** *and* **W. T. ALLEN.** Temperature response of white mice to implants of brown fat. (Journal of mammalogy, Feb. 1962. v.43., no.1, p.13-17, illus., table.) 6 refs.

Brown adipose tissue from two active or hibernating ground squirrels was implanted into 84 white mice. No drop in body temperature of the mice was observed within a period of 30 days. (DLC.)

74121. MORRISON, PETER REED, 1919– . Thermoregulation in mammals from the Tropics and from high altitudes. (*In:* Symposia on arctic biology and medicine. Proceedings 1962, p.389-419, illus.) 12 refs.

Of the tropical animals, the marsupials, the Chiroptera and primates only are reviewed. All three groups exhibit a diurnal temperature cycle, very considerable in the first two, and often amounting to thermal instability. Cold (or heat) regulation may be present, poor, or absent in the marsupials and primates. Andean rodents showed superior thermoregulation to cold, when measured at low oxygen pressures. (CaMAI.)

MORROW, ANDREW G., *see*

Ebert, P.A., & *others*. Relationship of blood pH . . . 1962. No. 71187

Ebert, P.A., & *others*. Physiologic changes 1961. No. 71186

Greenfield, L.J., & *others*. Cardiac denervation . . . hypothermia . . . 1962. No. 71838

MORROW, M. B., *see* Meyer, G.H., & *others*. Viable micro-organisms in 50 yr. old yeast . . . 1962. No. 73960

MORSKOĬ ATLAS. *See* No. 48515, 55595, 76242.

74122. *MORSKOĬ FLOT.* Slet izobretateleĭ i ratsionalizatorov Murmanskogo basseĭna. (Morskoĭ flot, Sept. 1962. god 22, no.9, p.47.) Text in Russian. **Title tr.:** Meeting of inventors and efficiency experts of the Murmansk basin.

Reports on the first conference of engineers, technologists, labor and production specialists, etc. held recently in Murmansk; ways and means to improve port operations there, repair shops, yards and fleet were discussed. (DLC.)

74123. MOSBY, HÅKON, 1903– . Water, salt and heat balance of the north polar sea and of the Norwegian Sea. (Norske videnskapsakademi i Oslo. Geofysiske publikasjoner, Geophysica norvegica, 1962. v.24, no.11, p.289-313; tables.) 51 refs.

Estimates possible average values of the various factors for these two seas, assuming that water, salt, and heat are simultaneously in balance, and attempting to reconcile divergent sources. For the north polar sea, main heat loss is from conduction through the ice (88%); main heat gain is from currents. For water and for salt balance, the East Greenland Current outflow must approximately equal the total inflow of Atlantic and bottom water. For heat balance the relation between the different factors is established: $3.25 \times A - 0.9 \times B + (1.8 + 0.9xd) \times G = C\text{-}5.06\text{-}0.93xp$, where A is Atlantic water into polar sea, B is bottom water into polar sea, d is average ice thickness East Greenland Current at 80°N., G is arctic water (–1.8°, 34‰) by East Greenland Current at 80°N., C is conduction through ice-cover of polar sea, and p is average percent of ice-free areas of the polar sea. Most probable values are tabulated. For the Norwegian and Barents Seas, evaporation is main cause of heat loss (82%), while radiation balance and the Atlantic current account for most heat gain. Water and salt balance also indicate that Atlantic inflow and East Greenland outflow must be approx. equal, as shown. The approximate relationship is obtained in the equation: $At \approx 1.6 \times (1+r) \times E - 0.8$, where At is Atlantic water into Norwegian Sea, r is the Bowen ratio, and E is evaporation. (DGS.)

74124. MOSHCHANSKIĬ, V. A., *and* **A. V. MULINA.** Nekotorye dannye o stroenii verkhneĭ chasti mnogoletnemerzloĭ tolshchi v predelakh Leno-Vilĭuĭskogo vodorazdela. (Merzlotnye issledovaniĭa. Sbornik statei 1961. vyp.2, p.115-28, table, graph, diagr.) 5 refs. Text in Russian. **Title tr.:** Some data on the structure of the upper part of the permafrost stratum within the Lena-Vilyuy watershed.

Compares data from several recent investigations, borings and visual observations along the path of a power line under construction from Mukhtuya, 230 km. a region in the general permafrost zone, north to Mirnyy, but with some island distribution. The mean annual temperature of the soil surface is 0° to –2°C. This stretch of land is divided into six sectors differentiated geologically and by the frozen condition of the soil. Conditions found in each sector are described in detail. The occurrence of taliks does not follow a regular S. to N. pattern, and this is cited as an example of permafrost instability due to relatively insignificant changes in the heat exchange cycle. (DLC.)

74125. MOSHCHANSKIĬ, V. A., *and* **A. V. MULINA.** O nekotorykh zakonomernostiakh formirovaniia temperaturnogo rezhima v dolinakh rek na territorii IAkutskoĭ ASSR. (Merzlotnye issledovaniia. Sbornik statei 1961, vyp.2, p.96-114, profiles.) 6 refs. Text in Russian. **Title tr.:** On some regularities in formation of the temperature regime in river valleys in Yakut ASSR.

Shows how large rivers crossing permafrost areas influence the temperature regime of rocks of their valleys. Temperature profiles across the Vilyuy, Lena, and Irelyakh are presented. The effects of stream temperature on various rocks of the bed channel are characterized. In the Lena bed, taliks form; in the Irelyakh, stream temperature has little effect. Small rivers often appear to be cooling factors of the valleys. Temperature inversion is the main course of such phenomena. (DLC.)

MOSHER, KENNETH A., *see* French, R., & K.A. Mosher. Mid-winter gillnetting . . . 1962. No. 71497

MOSHINSKAIA, V. I., *see*

Markovin, V.I., & L. IA. Krizhevskaia. Rabota sektorov . . . 1962. No. 73835

Smirnov, A.P. O rabote . . . finno-ugorskoĭ arkheologii. 1961. No. 75744

74126. MOSIENKO, N. Soveshchanie po kompleksnomu ispol'zovaniiu i okhrane vodnykh resursov Zapadnoĭ Sibiri. (Sel'skoe khoziaĭstvo Sibiri, Apr. 1962. god 7, no.4, p.80-82.) Text in Russian. **Title tr.:** Conference on broad development and conservation of water resources in Western Siberia.

Reports work of a conference in Novosibirsk (in 1962?) with 58 organizations represented, 78

papers delivered. The main papers are listed. Construction of a hydroelectric station on the Lower Ob and need for studies on its possible side effects were discussed, also the problem of Siberian river (Ob and Yenisey) diversion southward. (DLC.)

74127. MOSKALENKO, BORIS KONSTANTINOVICH, 1902– . Puti obogashcheniia syr'evoĭ bazy vodoemov Ob'-Irtyshskogo basseĭna. (Rybnoe khoziaĭstvo, 1961. god 37, no.6, p.16-22.) Text in Russian. **Title tr.:** Ways of enriching the stock of the Ob-Irtysh basin.

Discusses the great abundance and variety of fish in this area, especially the northern part. The threat of pollution by hydroelectric stations and of planless exploitation; ways of improvement, including melioration and artificial propagation and stocking, especially with salmonoids; expected increase in yields in 1965. (DLC.)

74128. MOSKALEV, L. I. Pogonofory v Barenŭsevom more. (Akademiia nauk SSSR. Doklady 1961. t.137, no.3, p.730-31, map.) 2 refs. Text in Russian. **Title tr.:** Pogonophora in the Barents Sea.

Reports finds of tubes, a few with the animals in them, of these peculiar invertebrates in the southwestern part of this sea. The finds are identified as belonging to the genus *Diplobrachia*. (DLC.)

MOSKALEVA, R. A., *see* Gershkovich, S.M., & *others*. Kliniko-rentgenologicheskie nabliudeniia . . . 1961. No. 71665

74129. MOSKVA. UNIVERSITET. *Geograficheskiĭ fakul'tet*. Voprosy geograficheskogo merzlotovedeniia i periglîatsial'noĭ morfologii. Moskva, Izd-vo Moskovskogo universiteta, 1962. 196 p. illus., diagrs., tables & maps incl. fold. Refs. Text in Russian. **Title tr.:** Problems of geographical geocryology and periglacial morphology.

Presents 22 papers dealing with two main problems: the investigation of geocryology under various geographic conditions, and periglacial morphology. The studies were carried out during 1957-1960 and represent contributions to the IGY. Thirteen* of the papers are abstracted in this Bibliography under their authors' names (titles tr.):

Shpolîanskaîa, N.A. Relationship of permafrost temperature to heat exchange between the soil surface and atmosphere in Transbaykal.

Karpov, N.N. On maps of elementary landscapes compiled from large-scale permafrost mapping; as exemplified in the Transbaykal region.

Karpov, N.N. Elementary landscape and elementary landscape type and their different significance in respect to frozen ground.

Shpolîanskaîa, N.A. Problem of permafrost mapping.

Voloshina, A.P. On the relationship between microclimatic conditions and depth of the seasonal thawing layer in the Transbaykal mountain-taiga.

*TUMEL', N.V. Influence of microrelief forms on seasonal thawing.

*POPOV, A.I. Map of subsurface glaciation (permafrost) in the territory of northern European USSR and Siberia.

*POPOV, A.I., *and* A.G. KOSTÎAEV. Maps of the periglacial formations of Asia: Recent and Middle Pleistocene.

*SAVICHEV, P.F. Ice veins in friable deposits of Chetyrekhstolbovoy Island; Medvezh'i Islands archipelago.

*CHIGIR, V.G. Relief forms, conditioned by congelation processes, in the Krasnoflotskiye Islands, Severnaya Zemlya.

*SURIKOV, M.M. Some data on ground veins in the Tab-Yakha River valley, southern Taz Peninsula.

*PEROV, V.F. Speed of migration of friable material in stone stripes of the Khibiny Mts.

*IZRAILEV, V.M. On the structure and classification of polygonal relief forms in the Vorkuta region.

*POPOV, A.I. Covering loams and polygonal relief of the Bol'shezemel'skaya Tundra.

*KONISHCHEV, V.N. Some features of covering loams in southeastern Bol'shezemel'skaya Tundra in connection with their genesis.

*DANILOV, I.D. On the genesis of the grey boulder loam stratum of the Vorkuta region.

Mudrov, IÛ. V. On the origin of some forms of structural microrelief in Transbaykal.

Simonov, IÛ. G. On the formation of lake basins under present periglacial conditions in southeastern Transbaykal; as exemplified in the Aginskiy region.

Simonov, IÛ. G. Morpho-lithogenesis of treeless mountain slopes in southeastern Transbaykal.

Mudrov, IÛ. V. Morphology and genesis of naleds in central Transbaykal.

*KONSTANTINOVA, G.S. Determination of soil freezing by the electrical resistance method.

*STOTSENKO, A.V., *and* A.M. CHEKOTILLO. Problems of terminology in geocryology. (DLC.)

MOSKVA. *Vsesoîuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii*. Trudy t.46, Issledovaniia po programme Mezhdunarodnogo geofizicheskogo goda. Moskva, Pishchepromizdat, 1962. 324 p. *Contains* 25 papers from the VNIRO investigations in the IGY-IGC program; for the 17 on arctic problems, see under authors' names: I.K. Avilov, V.P. Androsova, E.A. Akhmet'eva, M.V. Fedosov (2 papers), T.I. Gorshkova, D.E. Gershanovich (2 papers), I.P. Kanaeva, A.I. Kuz'mina, A.F. Plakhotnik (2 papers), S.I. Potaĭchuk, A.P. Sushkina (2 papers), E.V. Soliankin (2 papers), G.N. Zaĭtsev.

74130. MOSKVIN, BORIS VLADIMIROVICH. K ledîanomu serdtsu Urala. Moskva, Izd-vo "Fizkul'tura i sport", 1961. 80 p. Text in Russian. **Title tr.:** Toward the frozen heart of the Urals.

Describes the ascent of Mt. Sablya in the Polar Ural by a group of alpinists, three men and a woman: skiing over trackless terrain, difficult breathing at higher altitude, search for suitable camp sites, etc. The abortive attempt on Sablya by a Russian Geographical Society expedition in 1847 and its success two years later are recapitulated. (DLC.)

74131. MOTOV, D. L. Ispol'zovanie sfena dlîa polucheniia titanovykh pigmentov. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy geologii . . . 1961, p.109-113.) 5 refs. Text in Russian. **Title tr.:** Utilization of sphene for obtaining titanium pigments.

Discusses the technological and chemical processing of sphene, which goes up to 25-28% in some of the apatite-nepheline ore bodies of Yukspor

and Kukisvumchorr Mountains. Various chemical processes, technology and production costs are discussed for obtaining dioxide of titanium and titanium pigments for painting purposes. (DLC.)

74132. MOTOVILOV, P. I., *and* Z. A. KOLESNIK. O mikroflore vod, neftei i porod IAregskogo mestorozhdeniia. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy 1961. vyp.186, Geologicheskii sbornik 6, p.375-80, tables.) Text in Russian. **Title tr.:** On the microflora of water, oil and rocks of the Yarega deposits.

Reports microbiological analyses of 42 samples from the Yarega (63°31'N. 53°57'E.) deposits in Komi ASSR. Microorganisms were found in greatest quantity in stratal waters: in 24 samples, 21 contained sulfate-reducing bacteria and 15 denitrifying bacteria. In the oil and rock samples these bacteria were not present. (DLC.)

MOTT, J. C., *see* Fagan, L.F., & J.C. Mott. Chemoreceptors & shivering. 1961. No. 71331

MOTTRAM, R. F., *see* Downey, J.A., & R.F. Mottram. Regional cooling rabbit & O_2-consumption. 1962. No. 71097

74133. MOURANT, A. E. The relationship between the blood groups of Eskimos and American Indians and those of the peoples of Eastern Asia. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.1-9, tables.) 14 refs.

Discusses general, geographical distribution of the ABO, Rh, and MNSs blood groups; conditions among Eskimos and Indians (high M and R_2 gene), and Central and South American Indians; differences between Eskimos and North American Indians; conditions in East Asia and Polynesia; differences between the Siberian and American Eskimos; Tungus, Chukchis, Lamuts and Lapps. (CaMAI.)

74134. MOVINKEL, HÅVARD. Forsøksgårder og landbruksskoler må nyttes bedre. (Norden, Dec. 1, 1960. årg. 64, nr.23, p.635.) Text in Norwegian. **Title tr.:** Experimental farms and agricultural schools must be better utilized.

Recommends that these facilities in North Norway, which do excellent work in soil and plant cultivation, extend their activities to livestock research: meat-producing capacity of cattle, genetics of bulls, meat production in relation to market demands, etc. (DA.)

74135. MOVINKEL, HÅVARD. Omsetninga av reinsdyrkjøtt i Finnmark "ligger meget tilbake at ønske." (Norden, Dec. 1, 1960. årg. 64, nr.23, p.636-39, illus.) Text in Norwegian. **Title tr.:** Marketing of reindeer meat in Finnmark leaves much to be desired.

Criticizes the persistence of primitive and unsanitary slaughtering by nomadic Lapps despite the modern slaughterhouse facilities in Karasjok and Kautokeino and the mobile units, and veterinary control available. The result is undue waste and poor quality meat which cannot compete on the national market. The Lapps should use up-to-date slaughtering facilities, organize cooperative advertising and wholesale marketing. Good quality reindeer meat and meat products are in demand, and professional meat packers are needed. The future of reindeer raising in Finnmark depends upon whether slaughtering and marketing problems can be solved. (DA.)

MOWAT, FARLEY McGILL, 1921– , *see* Learmonth, L.A. About Ordeal by Ice. 1961. No. 73365

MOWBRAY, WILLIAM H., *see* Fish, M.P., & W.H. Mowbray. Underwater sound beluga. 1962. No. 71416

74136. MOZESON, D. L., *and* I. S. GURVICH. Izuchenie Kamchatki. (*In:* Akademiia nauk SSSR. Komissiia po problemam Severa. Syr'evye resursy . . . 1961, p.5-17.) Approx. 160 refs. Text in Russian. **Title tr.:** The investigation of Kamchatka.

Summarizes various expeditions and other studies of Kamchatka, since the first Bering expedition in 1723. Seven periods are distinguished, four during the tsarist regime, three under the Soviet Union: 1921-1935, 1935-1941, and post-World War II. For the more important studies, the field, dates and personnel are stated and an extensive literature is cited. (DLC.)

74137. MRÁZ, L., *and* M. PRASLIČKA. Influence of hypothermia on the survival of mice after large doses of X-radiation. (Nature, Feb. 25, 1961. v.189, no.4765, p.677-78, table.) 7 refs.

Reports on experiments with mice made hypothermic (20-24°C.) by different methods. Cooling significantly prolonged survival time and reduced the effective dose of radiation from 40,000 to ca 35,000 r. and from 45,000 r. to ca. 38,000 r. The mechanism of this action is elucidated. (DLC.)

74138. MÜLLER, FRITZ. Analysis of some stratigraphic observations and radiocarbon dates from two pingos in the Mackenzie delta area, N.W.T. (Arctic, Dec. 1962. v.15, no.4, p.278-88, illus., map, diagrs.) 13 refs.

Reports investigations of the Ibyuk and Sitiyok pingos near Tuktoyaktuk, in May-July 1955. The former in the center of a former lake is 42 m. high, 900 m. in circumference at base; the latter 10 m. in height, 210 m. in circumference. The internal ice bodies and covering sediments are described and pingo age is estimated as 7-10,000 yrs. for Ibyuk, 4000 yrs. for Sitiyok. Occurrence of a late Wisconsin glaciation is indicated in the Ibyuk area and certain isostatic movements in the Mackenzie Delta. The land rose approx. 40 m. over the last 12,000 yrs., also submergence of about 30 m. with subsequent emergence was initiated by the glaciation. (DI.)

74139. MÜLLER, FRITZ. Glacier mass-budget studies on Axel Heiberg Island, Canadian Arctic Archipelago. (*In:* International Association of Scientific Hydrology. Pub. 58, Symposium of Obergurgl 1962. p.131-42, illus., maps, graphs, tables.) 7 refs. Summary in French.

Describes the four selected areas and the glaciological program of the Jacobsen-McGill Arctic Research Expedition 1959-1961, based near the head of Expedition Fjord in central Axel Heiberg. Detailed work was carried out on White Glacier, as typical of arctic valley glaciers, accessible by foot and helicopter, and with other advantages. Synoptic and micro-meteorological observations were made. The mass-balance for 1960 was strongly negative, 1961 slightly positive. For comparison, approx. budget data were obtained on the Akaioa Ice Cap and on Baby Glacier, a

small remnant. Detailed glacier maps on a scale of 1:25,000 and for selected areas on 1:5,000 have been prepared. (DGS.)

74140. MÜLLER, FRITZ. Jacobsen-McGill University Arctic Research Expedition to Axel Heiberg Island, N.W.T., operation 1960. Montreal, 1961. 12 p.

Reports the first full summer's work of a three-year program to study the evolution of the mountainous and strongly glacierized and glaciated area of the central part of western Axel Heiberg (79°30′N. 98°W.) in the Canadian Arctic Islands. Studies in surveying, glaciology, geophysics, meteorology, geomorphology, geology, permafrost research, and botany are being made and interrelated. The 27-man party, with author as leader, traveled by chartered aircraft, motor toboggans, and Nansen sledges; personnel are listed. (CaOGB.)

74141. MÜLLER, FRITZ. Jacobsen-McGill University Arctic Research Expedition to Axel Heiberg Island, N.W.T. (Arctic, June 1962. v.15, no.2, p.160-61, map.)

Notes activities of the expedition from 1959 to 1961 mostly long-term measurements in glaciology, meteorology, geomorphology, and botany. (DGS.)

74142. MÜLLER, FRITZ. Jacobsen-McGill University Arctic Research Expedition to Axel Heiberg Island, N.W.T., 1959-62; operation 1962. Montreal, Oct. 1962. 7 p. Mimeographed. In sequence to No. 60351.

Outlines investigations, by a nine-man party, in meteorology, botany, geomorphology, and glaciology. This completes fieldwork of this expedition; two more years are to be devoted to working up and publishing the data collected. Appended is list of the 1962 participants and summary data on meteorology 1960-1962, and glaciology 1959/60 to 1961/62. (CaMAI.)

74143. MÜLLER, FRITZ. Jacobsen-McGill Arctic Research Expedition to Axel Heiberg Island, Queen Elizabeth Islands; preliminary report 1959-1960. Montreal, June 1961. x, 219 p. illus., maps, diagrs., graphs, tables. Refs.

Reviews this expedition to study the evolution of the mountainous and strongly glacierized and glaciated area of the central part of western Axel Heiberg Island. It was initiated by G. Jacobsen, had a four-man reconnaissance survey in 1959, a 27-man operation in May-Aug. 1960, an 18-man party to spend four months of 1961 on the island with smaller groups in 1962 and later years. A map survey is reported by T. J. Blachut and D. Haumann; glaciology by F. Müller, W.P. Adams, U. Zysset; seismic operations by B.B. Redpath, gravity measurements by A. Becker; meteorology by J.M. Havens and R.H.G. Andrews; geology is described by E.H. Kranck, P.E. Fricker, and E.W. Hoen; geomorphology is reviewed in French by B. Robitaille; botany by R.E. Beschel, and palynology by O. Hegg; the permafrost program is outlined by G. Jacobsen, and mountaineering by J. Marmet. Base camp was constructed at 79° 25′N. 90°30′W., to serve as a permanent high Arctic Research Station for McGill University. (CaMAI.)

74144. MÜLLER, FRITZ. Zonation in the accumulation area of the glaciers of Axel Heiberg Island, N.W.T., Canada. (Journal of glaciology, Oct. 1962, v.4, no.33, p.302-311, illus., table, graphs, diagrs., maps.) 5 refs. Summary in French and German.

Reports mass budget studies during the summers of 1959-61. Five distinct zones in the accumulation area are recognized: two percolation, a slush, a superimposed ice zone and a dry snow zone. The summer 1961 accumulation measurements from these zones of the main glacier investigated are presented and diagrammed, with implication that long-term changes in size, elevation, and net accumulation can be utilized as climatic indicators. (DLC.)

MÜLLER, FRITZ, *see also Polar record.* Field work. 1961-62. No. 74848

74145. MÜLLER, KARL. Iakttagelser rörande laxöringens vandringar i en lappländsk skogsbäck. (Fauna och flora, 1962. hft.5, p.200-206, illus., map, tables, diagrs.) Text in Swedish. **Title tr.:** Observations of salmon trout migrations in a Lapland forest brook.

Reports on *Salmo trutta* in Kalludd Creek near its confluence with the Stora Lule River, approx. 66°30′N. 20°30′E., in 1956 and 1957. During the spring and summer there was a marked migration from the main river up the brook. A winter migration downstream is assumed because the water in the brook was low and the ice cover heavy. (DA.)

74146. MUELLER, ROBERT F. Oxidation in high temperature petrogenesis. (American journal of science, June 1961. v.259, no.6, p.460-80, diagrs., graphs, tables.) 24 refs.

Reports a study of the effect of oxidation on mineral assemblages in various metamorphic and magmatic rocks, including a regionally metamorphosed iron formation near Mt. Wright, northern Quebec. Responses of ferromagnesian solid solutions to compositional changes of the coupled gas phase are examined, and increases shown by the ratios Fe_2O_3/FeO and MgO/ (MgO+FeO) with increasing Po_2. Consequences of the normally low values of Po_2/PH_2o to gaseous transport by bodily flow and diffusion in regional metamorphism are considered. A thermodynamic unity of response to oxidative processes is shown by the different rock types. –From author's abstract. (DGS.)

74147. MÜLLER, WERNER. Die Religionen der Indianervölker Nordamerikas. (*In:* Die Religionen des alten Amerika, von W. Krickeberg et al., 1961. Die Religionen der Menschheit, Bd. 7, p.171-267, map.) Refs. Text in German. **Title tr.:** The religions of North American Indian tribes.

Includes, p.178-89, a sketch of the religious beliefs and rituals of north Canadian Algonkians and Athapaskans: shamanism, hunting rites, bear festival, deities and guardian spirits, cosmography, mythology, etc. (DLC.)

74148. MUENCH, H. STUART. Atlas of monthly mean stratosphere charts, 1955-1959, pt.1, Jan.-June. Bedford, Mass, May 1962. 3 p. text & 91 maps. (U.S. Air Force Cambridge Research Laboratories, Meteorological Research Laboratory Project 8604, Air Force surveys in geophysics no.141. AFCRL-62-494.) 14 refs.

First of two volumes depicting average temperature and pressure conditions in the stratosphere over the Northern Hemisphere during the period July 1955-July 1959. Monthly mean charts of contours and isotherms are presented for the 100-mb., 50-mb., and 25-mb. levels for Jan.-June of each year. Four-year composite means are also presented for each of the six months at each level. The maps show how the monthly mean pattern for a winter month may vary greatly from year to year, whereas summer month patterns vary little; giving quantitative evidence of features previously known qualitatively. Sources of error, especially at high latitudes, were examined. Reference map shows station distribution; about 75 stations in the Arctic & sub-Arctic. (DWB.)

74149. **MÜNCH, HANS.** Neue Brutvögel der Inselgruppe Spitzbergen. (Stavanger, Norway. Museet. Sterna, May 1962. bd.5, hefte 2, p.80-88, 2 illus.) 5 refs. Text in German. Summary in Norwegian. **Title tr.:** New brooding birds on the Spitsbergen islands.

Reports observations while on the Norsk Polarinstitutt Spitsbergen expedition in 1959: on Bjørnøya, the starling *Sturnus vulgaris* nested at the station, and five fledglings were seen on June 23. It is the northernmost nesting site known for the species, 500 km. from the regular breeding grounds and across open sea. In Longyearbyen, Vestspitsbergen, adult stonechats probably the arctic variety, *Oenante oenante leucorrhoa,* were seen with young on Aug. 4. As possible food for the latter, several species of insects were noted. (DLC.)

MUGURUMA, JIRO, *see*

Kusunoki, K., & *others.* Oceanographic observations . . . 1962. No. 73239

Nakaya, U., & *others.* Glaciol. studies . . . T-3. 1962. No. 74212

Nakaya, U., & J. Muguruma. Phys. properties ice . . . T-3. 1962. No. 74213

MUIR, IAN DOUGLAS, *see* Gay, P., & I.D. Muir. Investigation of the feldspars . . . 1962. No. 71617

MUKHACHEV, B. I., *see* Nauchnaĭa konferentsiia po istorii . . . Dal'nego Vostoka. 1960. No. 74233

74150. **MUKHENBERG, V. V.** Al'bedo poverkhnosti sushi severnogo polushariia. (*In:* Lietuvos TSR Mokslu Akademija. Aktinometrijos . . . 1962, p. 175-79, table, charts.) 14 refs. Text in Russian. Summary in Lithuanian and English. **Title tr.:** The albedo of land surface of the Northern Hemisphere.

On the basis of aerial observations in the Soviet Union, an albedo value table was worked out for various natural surfaces with various vegetation covers. Charts for July and January were compiled of the geographic distribution of the land surface albedo of the Northern Hemisphere. A max. value of 80% is recorded in January in high latitudes where snow cover remains unpolluted and forest cover constitutes 0-5%. The smallest albedo value is in coniferous forests during the snowless period. (DLC.)

MUKHERJEE, S. R., *see* Roy, A., & *others.* Angiographic study hypothermia . . . 1960. No. 75232

74151. **MUKHIN, A. A.,** *and* **F. TRAVEN'.** Lesovedy-puteĭtsy deliatsia opytom. (Lesnoe khoziaĭstvo, July 1961. god 14, no.7, p.13-18.) Text in Russian. **Title tr.:** Railroad workers share their experience as silviculturists.

Reports a conference in Moscow, Mar. 1961, occasioned by the centenary of protective forest cultivation on railroads. Summary is included of a paper by N.S. Rusanovskiĭ on work of the Northern (Pechora) Railroad Experiment Station on shelterbelt plantings in the tundra. (DLC.)

74152. **MUKHIN, A. A.** Vliianie Sibirskoĭ zheleznoĭ dorogi na sotsial'no-ėkonomicheskoe razvitie Vostochnoĭ Sibiri, 1897-1917 gg. (*In:* Nauchnaia konferentsiia po istorii Sibiri i Dal'nego Vostoka. Voprosy istorii . . . *pub.* 1961, p.109-118, table.) Approx. 30 refs. Text in Russian. **Title tr.:** Influence of the Siberian railroad on the social and economic development of East Siberia, 1897-1917.

Discusses the stimulus given by this trunk line to the expansion of agriculture, industry, fur trade, etc. in Siberia. The population increased 40% over all in this 20-yr. period, Yenisey Province 88.6%; Yakutia however, showed a decrease of 4.2%. (DLC.)

MUKHIN, IU. V., *see* Klevits, S.S., & IU.V. Mukhin. Primenenie ėlektrorazvedki . . . 1961. No. 72849

MULINA, A. V., *see*

Moshchanskiĭ, V.A., & A.V. Mulina. . . . temperaturnogo rezhima v dolinakh rek . . . 1961. No. 74125

Moshchanskiĭ, V.A., & A.V. Mulina. Nekotorye dannye . . . 1961. No. 74124

MULLEN, DAVID A., *see* Alaskan Science Conference 1961. 1962. No. 69644

MULLER, J. W., *see* Morris, R.B., & *others.* Neonatal cold injury . . . 1961. No. 74116

MULLER, JAN ENGELBERT, 1917– , *see* Lowdon, J.A., & *others.* Age determinations . . . 2: isotopic ages. 1961. No. 73611

MULLER, O. F., *see* Beyda, E.J., & *others.* Effect of hypothermia . . . 1961. No. 70192

74153. **MULLIGAN, JOHN J.** Lead-silver deposits in the Omilak area, Seward Peninsula, Alaska. Washington, D.C., U.S. Dept. of the Interior, 1962. 44 p. maps, tables, diagrs. (U.S. Bureau of Mines. Report of investigations, 6018.) 6 refs.

Reports investigations in 1953-1954; a geological reconnaissance of the area on the western slopes of the Darby Mts., bulldozer trenching, diamond core drilling, and sampling at a mineral prospect. Galena containing 55-71% lead and 35-88 ounces of silver/ton was picked up on the shaft dump of the abandoned Omilak mine. Lead, silver, and lesser amounts of tin, zinc, antimony, gold, and an unidentified radioactive mineral were found at the Foster prospect. Possible tin deposits, also conditions favorable for the formation of supergene deposits in the area are indicated. (DGS.)

74154. **MULLIN, CHARLES S.,** *Jr.* Some psychological aspects of isolated antarctic living. (American journal of psychiatry, Oct. 1960. v.117, no.4, p.323-25.) 2 refs.

Stressing that physical danger is of minor importance in polar regions nowadays, author enumerates the sources of mental difficulties, as group adjustment. "sameness" of the environment, and lack of sources of emotional satisfaction. (DNLM.)

74155. MUMFORD, WILLIAM W., 1905– . Some technical aspects of microwave radiation hazards. (Institute of Radio Engineers. Proceedings, Feb. 1961. v.49, no.2, p.427-47, illus., tables, diagrs., graphs.) 78 refs.

Reviews the history of the recognition of this potential hazard and the safety measures adopted by the Bell System and others to protect personnel. The problem is common near high-power systems in the Arctic, such as BMEWS, White Alice, and tropospheric scatter antennas. Currently adopted safety limits are outlined and a method of calculating power densities is derived. Some commercially available power density meters and their method of operation are described; their use in surveying a site is discussed. A monograph is presented of the shielding effects of wire mesh fences. (DLC.)

74156. MUMTAZUDDIN, M. Geology of the area between Carol Lake and Wabush Lake, Labrador. Montreal, Apr. 1958. 84 p. illus., 6 maps incl. 3 fold., 7 tables, 4 diagrs., 28 refs. Microfilm. M. Sc. thesis to McGill University.

Describes this 40 sq. mi. area of the Labrador Trough, 52°55′-53°05′N. 66°53′ – 78°01′W., an area of folded, faulted, intruded, Precambrian sedimentary series studied in summer 1957. The Kaniapiskan (Huronian system) upper Precambrian west of Wabush Lake is treated in detail, with emphasis on the iron formation and deposits. Stratigraphy is tabulated; petrology, structure and regional metamorphism are discussed; hypothesis as to origin of the iron formation is offered. Topography, glaciation, climate, flora and fauna of the area are briefly considered. The fold. maps are at 1:12,000 scale. (CaOG.)

74157. MUNCH, JENS STORM. Et østlig importstykke fra Senjas vikingetid. (Ottar, Mar. 1961. nr.27, p.6-8, illus.) Text in Norwegian. **Title tr.:** An eastern import from Senja's Viking age.

Describes a small bronze pendant found in a cave on the island of Senja (69°15′N. 17°20′E.) in 1956. It probably dates from about 1000 A.D. and was brought to Norway from the Ladoga-Onega region in Russia by either the Vikings or Lapps. The latter are favored because of a somewhat similar find at a Lapp sacrificial place in north Sweden, and because Lapp herders are more likely to have used the cave than Norwegians. (DI.)

74158. MUNCH, JENS STORM. Sølvfunnet fra Botnhamn på Senja. (Ottar, Mar. 1961. nr.27, p.15-18, illus.) Text in Norwegian. **Title tr.:** The silver find from Botnhamn on Senja.

Describes four necklets found in 1905 on this island; they probably date from the first half of the eleventh century, and one bears a runic inscription which commemorates a Viking voyage to Friesland. Possible ways by which these objects could have come to north Norway are discussed. (DI.)

74159. MUNCH, JENS STORM. Sølvspennen fra Naevelen i Sørfold. (Ottar, Mar. 1961. nr.27, p.21-23, illus.) Text in Norwegian. **Title tr.:** The silver buckle from Naevelen in Sørfold.

The buckle found about 30 years ago on this farm in Nordland is unique in Norway but the type is well known from the 12-13th century in the Karelian Isthmus and adjacent parts of Finland and Karelia. Probably Lapps dwelt in the Sørfold area during the iron age and Middle Ages and had contacts with Finland by way of the mountains and the Bothnian Gulf. (DI.)

74160. MUNCH, JENS STORM. Vikingesverdet fra Eltoft, Borge i Lofoten. (Ottar, Mar. 1960. nr.23, p.16-18, illus.) Text in Norwegian. **Title tr.:** The Viking sword from Eltoft, Borge, in Lofoten.

Describes a unique sword handle found at Borge (68°15′N. 13°50′E.) about 25 years ago and now in Tromsø Museum. It shows continental influence but was probably made in south Norway in the ninth century. This Lofoten region was well settled during the Viking age, with a farming, hunting and fishing economy as at present. (DI.)

74161. MUNCK, SOLE, *and* **A. NOE-NYGAARD.** Age determination of the various stages of the Tertiary volcanism in the West Greenland basalt province. (*In:* International Geological Congress, 20th, *Mexico City,* 1956. Trabajos . . . sec.I, t.1, *pub.* 1957, p.247-56, map, tables.) 26 refs. *Also issued as:* København, Universitet, Mineralogisk-geologiske Museum, Communications géologiques, no.100.

Summarizes the stratigraphic sequence and geological development during the upper Cretaceous and Tertiary periods in this 7,000 sq. km. area, including Disko Island, the Nugssuaq Peninsula, Ubekjendt Ejland, and the Swartenhuk Peninsula. The basalt series proper overlies a series of Cretaceous-Tertiary sediments, which in turn covers a Precambrian surface of rough relief. In the sediments, four horizons are noted in the fossil floras named the Kome, Atane, Patût, and Atanikerdluk. Exact dating is made possible by the five marine fossiliferous horizons, which consist mainly of black, bituminous shales with limy concretions. The fauna changes from ammonites and crustaceans in the Cretaceous series to echinids, lamellibranchs, and gastropods in the Paleocene and Eocene. Two main tectonic phases are best known in Nugssuaq, the lengthy Laramian, and the post-Eocene. Volcanic manifestations in the form of ash layers in Danian sediments mark the beginning of Cenozoic volcanism in this part of the world. Analyses of 27 rocks from this region are tabulated. (DGS.)

74162. MURAKAMI, TAKIO. Stratospheric wind temperature and isobaric height conditions during the IGY period, part I. Cambridge, Mass., Feb. 15, 1962. 213 p., maps, tables. (Massachusetts Institute of Technology. Dept. of Meteorology, Planetary circulations project. Report no.5.) 8 refs. U.S. Atomic Energy Comm., Contract AT (30-1) 2241, and U.S. Air Force Contract AF 19 (604)-5223.

Describes lower stratosphere conditions for July-Dec. 1957, specifically (maps) geographical distribution of several statistical quantities based

on wind, temperature, and isobaric height data at 100-, 50-, 30-, and 10-mb, from 211 stations, 45 of them in the arctic-subarctic area. Findings include: a belt of westerly winds at 50 mb approx. 65°N.; the greatest Equator-Pole temperature difference (35°C.) at the 100 mb level, the smallest (10°C.) at the 30 mb level, in late summer; much lower temperature near the Pole in early winter than in late summer at this level. Sensible heat transport due to standing and transient eddies is northward except near the Equator and near the Pole. Stations include 13 in Alaska, in Canada 13, Greenland 3, and USSR 16. (DWB.)

74163. MURATOV, I. ĬA. Orositel'noe ustroĭstvo. (Ugol', May 1961. god 36, no.5, p.58-59.) Text in Russian. **Title tr.:** A sprinkler.

Describes a (water) sprayer to control dust produced by the cutting-loading machine in coal pit No. 1 at Inta. It was developed by a local engineer, M. Kurzon. (DLC.)

74164. MURAV'EV, I. S. Stratigrafiia i fat͡sial'noe stroenie verkhnepermskikh otlozheniĭ v basseĭne srednego techeniia r. Pechory. (Akademiia nauk SSSR. Doklady, Jan. 11, 1961. t.136, no.2, p.421-23, illus.) 6 refs. Text in Russian. **Title tr.:** Stratigraphy and the structure of facies of Upper Permian deposits in the middle Pechora basin.

Three facies in deposits between Shchugor and Perebor are distinguished and briefly characterized noting color, thickness, and paleontologic properties. The correlation between facies and stratigraphy is illustrated. (DLC.)

74165. MURAVIN, IŬ. Ėkspediti͡siia na deĭstvuŭshchiĭ Karymskiĭ vulkan. (Grazhdanskai͡a aviat͡siia, Feb. 1961. god 18, no.2, p.11, illus.) Text in Russian. **Title tr.:** Expedition to the active Karymskiy volcano.

Notes first use of a helicopter, a Mi-1, to take a party of scientists to the crater area on one of the most active volcanoes in Kamchatka. (DLC.)

74166. MURCRAY, WALLACE B. Thermal radiation spectrum of the arctic sky. (Journal of geophysical research, Mar. 1961. v.66, no.3, p.987-88, diagr.) 4 refs.

Presents and discusses an emission spectrum taken at Pt. Barrow, Alaska, at 0100 local time on Feb. 12, 1960. The instrument was pointed out over the Arctic Ocean at an elevation angle of 25°; ground-level air temperature was -30°F. The main features of the spectrum are the O_3 emission at 9-10 microns and emission in the region beyond 13 microns probably mainly from CO_2. (DLC.)

MURCRAY, WALLACE B., *see also* Alaskan Science Conference 1960. 1961. No. 69643

74167. MURDAUGH, H. V., *Jr., and others.* Function of the inferior vena cava valve of the harbour seal. (Nature, May 19, 1962. v.194, no.4829, p.700-701, illus.) 6 refs. *Other authors:* J.K. Brennan, W.W. Pyron, *and* J.W. Wood.

Reports a study of five young seals when out of water, submerged, or tilted without water; labelled albumin and Evans blue being used as indicators of circulating blood. It is concluded that the function of the inferior vena cava valve is to restrict blood flow from the abdomen to the thorax and thus prevent pulmonary engorgement with blood when surfacing. (DLC.)

MURDOCH, PETER E., *see* Canada, Northern welfare '62. 1962. No. 70539

74168. MURIE, OLAUS JOHAN, 1899–1963. Wilderness philosophy, science, and the Arctic National Wildlife Range. (Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.58-69.) Refs.

Discusses the potential of this area in northeastern Alaska for ecological observation, conservation, recreation. It should be kept in its natural state, with minimum development. (CaMAI.)

74169. MURMANSK. POLIĂRNYĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT MORSKOGO RYBNOGO KHOZĬAĬSTVA I OKEANOGRAFII. Razvitie nauchno-promyslovykh issledovaniĭ v severnom basseĭne; k 40-letiiŭ podpisaniia V. I. Leninym dekreta SNK RSFSR ob organizat͡sii Plovuchego morskogo instituta. (*Its:* Nauchno-tekhnicheskiĭ biŭlleten', 1961. no.1(15), p.5-21, illus.) Text in Russian. **Title tr.:** The development of scientific fisheries investigations in the Arctic Basin; for the 40th anniversary of V.I. Lenin's signing of the SNK RSFSR decree for the organization of the Floating Marine Institute.

Reviews pre-Revolutionary conditions and effects of the decree of Mar. 16, 1921. Organizational and administration changes as the Institute developed are outlined. Its scientists and their research over the past 40 years, the present staff of 485, and the research vessels are described. Then follows an account of the laboratories, their activities, and staff, as organized in three departments: a laboratory of bottom fish, herring, fisheries, oceanography, food resources (hydrobiology), marine mammals and economics; a laboratory of new reconnaissance methods, of fishing techniques, and of boat-building, utilization, maintenance, etc.; the third laboratory is concerned with the technology of fish products, and of mechanization. (DLC.)

MUROVA, Ė. V., *see* Shmygalev, V.I., & Ė.V. Murova. Intruziia Kivakka. 1962. No. 75604

MURPHREE, W. H., *see* Needleman, S.M., & *others.* . . . Centrum Sø . . . 1962. No. 74244

74170. MURPHY, DANIEL L. The iron-formation of Mt. Wright - Lake Carheil. (Mining engineering, Sept. 1962. v.14, no.9, p.68-70, maps, illus., table.) 8 refs. Abstracted from the AIME Mining Transactions, v.223, 1962; also pub. in the AIME Mining transactions quarterly, Sept. 1962.

Describes the general lithology, structural features, and the two types of ore in the iron formation located in the Labrador Trough of Northern Quebec. Similarity to the metamorphosed ferruginous rocks of northern Michigan and to the units in the Wabush Lake area is noted in the outline of the origin of the Mt. Wright formation. Most promising localities would be where the oxide facies predominates and the formation is thickened by tight folding and faulting, e.g. 250 ft. thick near Mt. Wright. (DGS.)

MURRELL, S. L., *see* Denson, E.P., & S.L. Murrell. Black brant pop. . . . 1962. No. 70975

74171. MURRI, ALFREDO. Il probabile aumento di temperatura media nell'emisfero nordico. (Universo, Jan.-Feb. 1961. anno 41, no.1, p.85-92, illus., tables, graphs.) 3 refs. Text in Italian.

Title tr.: The probable temperature increase in the Northern Hemisphere.

Reviews data on air temperature and glacier regression to illustrate the warming trend, in particular in the Arctic. (DLC.)

74172. MURSKIĬ, L. I., *and* **A. M. MALYGIN.** Izmenenie temperaturnoĭ topografii pri gipotermii. (Nauchnye doklady vysshei shkoly. Biologicheskie nauki, 1961. no.2, p.80-86, illus., tables.) 9 refs. Text in Russian. **Title tr.**: Changes in temperature topography during hypothermia.

Reports experiments on dogs, with the brain cooled by application of ice to the head. Lowering of brain temperature produced temperature changes of internal organs (liver, heart, stomach, etc.). This was followed by a second phase, in which compensatory mechanisms kept temperature at a certain, vitally important level. (DLC.)

74173. MURZAEV, S. P. K voprosu o genezise diopsidovykh porod aldanskikh flogopitovykh mestorozhdeniĭ. (Materialy po geologii i poleznym iskopaemym IAkutskoĭ ASSR. IAkutskoe geologicheskoe upravlenie, 1961. vyp.5, p.86-105, illus., table.) 12 refs. Text in Russian. **Title tr.**: Genesis problem of diopside rocks in the Aldan phlogopite deposits.

Outlines the petrography of diopside-containing rocks, occurring in irregular bodies on the contact zone between carbonate and alumosilicate rocks. Three hypotheses on their origin are reviewed. Three main genetic groups are distinguished: metamorphic, reactional-metasomatic, and metasomatic; and each is described. The metasomatic group is widely distributed in the Emel'dzhak, Legliyer and other phlogopite deposits. (DLC.)

74174. MURZIN, A. I. Uchet vliianiia poleĭ atmosfernogo davleniia na dreĭf l'da v arkticheskikh moriakh. (Problemy Arktiki i Antarktiki. Sbornik stateĭ 1962. vyp.10, p.47-53, table, graphs, map.) 8 refs. Text in Russian. **Title tr.**: Evaluation of the effect of atmospheric pressure fields on the ice drift in the arctic seas.

The non-periodic variations in the characteristics of ice drift are caused mainly by wind, the behavior of which in space and time are difficult to predict. Recognizing the well established correlation between wind and atmospheric pressure, atmospheric pressures over large areas, such as the Laptev Sea, are taken as independent variables, instead of wind characteristics. Using Chebyshev's orthogonal polynomials, mean pressures were calculated at 36 points of the sea, and ten baric vector-gradients determined, and used for an estimate of correlation coefficients. The estimated coefficients were found to be 0.87, 0.86, and 0.80 for, respectively, the northern (81°5′N.), western, and eastern parts of the Laptev Sea. These estimated correlation coefficients were found to facilitate numerical prediction of ice drifts of the investigated area. (DLC.)

74175. MUSACCHIA, XAVIER JOSEPH, 1923–, *and others*. Effect of hibernation and cold torpor on tissue catecholamine content. (Society for Experimental Biology and Medicine. Proceedings, Aug.-Sept. 1962. v.110, no.4, p.856-57, table.) 6 refs. *Other authors:* M. Jellinek *and* T. Cooper.

Hibernating ground-squirrels showed increased liver and kidney catecholamine content, but no change in the heart. Turtles in cold stupor showed no change in these regions. (DLC.)

MUSATOV, D. I., *see* Bogatskiĭ, V.V., & *others*. Osnovnye problemy tektoniki . . . 1962. No. 70281

74176. MUSICH, N. I. O primenenii organo-mineral'nykh smeseĭ v TSentral'noĭ IAkutii. (Akademiia nauk SSSR. IAkutskiĭ filial. Doklady 1957. v.8, p.67-75, tables.) 2 refs. Text in Russian. **Title tr.**: Use of organic-mineral fertilizers in central Yakutia.

Account of experiments with rye, potatoes and wheat. As organic components, humus or compost were used; lime and ashes served as inorganic ingredients. Only mixtures of humus and ash produced significant increase in all crops. With rye, the period of application of the fertilizer had also a considerable influence. (DLC.)

74177. MUSIENKO, LIUBOV' NIKOLAEVNA, 1921–. Opoznavatel'nye priznaki mal'kov dal'nevostochnykh treskovykh, semeĭstvo Gadidae. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.43, p.270-81, illus., tables.) 18 refs. Text in Russian. **Title tr.**: Identification marks of the fry of Far-Eastern codfishes, family Gadidae.

Presents a morphological and morphometric outline intended for quick and easy identification. Four species from the Bering and/or Okhotsk Sea are considered. An identification key is included. (DLC.)

74178. MUSIENKO, LIUBOV' NIKOLAEVNA, 1921–. Rasprostranenie mal'kov kambal, semeĭstvo Pleuronectidae, v Karaginskom i Kamchatskom zalivakh v avguste i sentiabre 1956 g. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.43, p.282-84, tables, map.) Ref. Text in Russian. **Title tr.**: Distribution of the fry of plaice, family Pleuronectidae, in Karaginskiy and Kamchatka Bays, during August and September 1956.

Tabulates and maps the distribution of seven species of these fish, with notes on size of fry, depth, temperature and salinity of water, and nature of bottom. Conditions of distribution in Far Eastern seas are also considered. (DLC.)

74179. MUSINA, A. A., *and* **E. V. BELYSHEVA.** Osobennosti gidrokhimii arkticheskikh moreĭ. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy 1960. t.10, vyp.2, Khimiia moria, p.61-68, tables, diagr.) 7 refs. Text in Russian. **Title tr.**: Hydrochemical features of the arctic seas.

Discusses the main factors controlling hydrochemistry: the ice-formation and thaw processes, powerful river discharge from the Asiatic continent, and water exchange of the central basin with the Pacific and Atlantic. Chemical studies of ice and water, determination of oxygen alkalinity, pH, salinity and other chemical features for Kara, Laptev Seas and other areas of the Arctic Basin are evaluated in respect to these factors. (DLC.)

74180. MUSTAFIN, N. V. Metod predvychisleniia vetrovykh nagonov na bare r. IAny. (Problemy Arktiki i Antarktiki. Sbornik stateĭ 1962. vyp.10, p.87-88.) Text in Russian. **Title tr.**: Method of forecasting the rise of water level due to wind on the bar of Yana River.

The depth of the main navigable channel of the Yana estuary depends chiefly on the water

level rising or falling according to the wind. The 1951-1960 meteorological and hydrological data revealed a relationship between the wind direction at nine polar stations (Dunay, Mostakh, Buor-Khaya, Yuyedey, Svyatoy Nos, Kigilyakh, Sannikovo, Temp, and Kotel'nyy), and the atmospheric pressure gradient between the Preobrazheniya - Kotel'nyy, Dunay-Sannikovo, and Mostakh - Kigilyakh stations. An empirical formula was established, which with these data enables a reliable short-range forecast to be made of the water level in the estuary. (DLC.)

74181. MUUS, BENT J. Cephalopoda. (København, Reitzel, 1962. 23 p. map, diagrs., tables. (Meddelelser om Grønland, bd. 81, nr.5.) 23 refs.

Systematic account of specimens of this molluscan group, collected in West Greenland coastal waters, Baffin Bay, and Davis Strait by the *Godthaab* Expedition in 1928, and others. Three octopod and four decapod species are represented: *Rossia glaucopis* Lovén 1845, *R. mölleri* Steenstrup, *Gonatus fabricii* Lichtenstein, *Desmoteuthis megalops* Prosch, *Cirroteuthis mülleri* Eschricht, *Bathypolypus arcticus* Prosch, and *B. proschi* n. sp. (DGS.)

74182. MUZAFAROV, G.D. Kak izuchat' biografiiu i trudovuiu deiatel'nost' V.A. Obrucheva i A.E. Fersmana v kurse geografii. (Geografiia v shkole, Sept.-Oct. 1962. god 25, no.5, p.73-74.) Refs. Text in Russian. **Title tr.:** How to study the life and work of V.A. Obruchev and A.E. Fersman in the geography course.

Sketches the travels, discoveries and explorations of these two noted scientists, and adds a selective list of publications relating to their achievements in the field of geography. (DLC.)

74183. MUZIUKIN, V.S. Lesnaia promyshlennost' i lesnoe khoziaistvo Karelii dolzhny byt' nepreryvno deistvuiushchim lesopromyshlennym kompleksom. (Lesnoe khoziaistvo, July 1962. god 15, no.7, p.47-50, table.) Text in Russian. **Title tr.:** The wood industry and forestry in Karelia must be a network of concerns operating without interruption.

Karelian timber resources, some 643 million m^3, will be prematurely exhausted at the present output of 17-18 million m^3/yr. Improvement of cutting methods and increased reforestation of cutover areas are discussed. Better utilization of waste is suggested, especially by lumbering and milling concerns with access by the White Sea - Baltic Canal to cellulose-paper plants. (DLC.)

MYKLESTAD, SVERRE, *see* Haug, A., & S. Myklestad. Aktuelle problemer . . . tareforskning. 1960. No. 72073

MYLES, EUGENIE LOUISE, *see* Copeland, D. Mc. Remember nurse. 1960. No. 70822

74184. MYRBERGET, SVEIN. Rugende sangsvaner på Senja. (Stavanger, Norway. Museet. Sterna, May 1962. bd. 5, hefte 2, p.45-48, 2 illus.) Text in Norwegian. Summary in English. **Title tr.:** Nesting whooper swans on Senja.

Reports a June 1960 find of a *Cygnus cygnus* nest with five eggs at 69°13′N. 17°27′E. It is the first nest observed in Norway during this century outside the county of Finnmark. Other swans were in the area, and in 1961 also swans were seen there. Hence it is uncertain whether this is a regular or an accidental breeding ground. (DLC.)

74185. MYRBERGET, SVEIN. Vipas utbredelse i Norge; Norsk Ornitologisk Forenings vipeundersøkelse. (Stavanger, Norway. Museet. Sterna, Mar. 1962. bd. 5, hefte 1, p.1-14, illus., text map.) 21 refs. Text in Norwegian. Summary in English. **Title tr.:** On the geographical distribution of the lapwing *Vanellus vanellus* (L.) in Norway; the Norwegian Ornithological Society Lapwing investigation.

Reports on nesting sites and on transit outside the breeding season as observed in this bird, known to have spread steadily northward and farther inland during this century. The prevalence of lapwings in Norway was determined by questionnaire in 1958. In the North, it is common along the Nordland and Troms coast, nesting in many places; also in Finnmark, but only one nesting site reported: in Måsøy, 71°N. 24°09′E. (DLC.)

MYRLAND, P., *see* Alekseev, A.P., & *others.* International investigations . . . 1961. No. 69692

MYSLIVEČEK, J., *see* Záhlava, J., & *others.* L'élimination du néopallium . . . 1961. No. 76623

74186. N., M. Böndernas skogsskötsel jämförd med bolagens. (Skogen, Oct. 13, 1961. årg. 48, nr. 20, p.359-61, illus.) Text in Swedish. **Title tr.:** Care of forests by farmers compared to that of companies.

Reviews government efforts to foster farm wood lots in Norrland since 1901. The Forest Research Institute report of Jan. 1959 showed their development, except in Västerbotten and Norbotten Lappmarks, equal to or better than that of the lumbering company properties. (DA.)

74187. N., M. Kirkenes-projektet vid Norra Ishavet. (Skogen, Mar. 3, 1961. årg. 48, nr.5, p.95, 97.) Text in Swedish. **Title tr.:** The Kirkenes project on the Arctic Ocean.

Reviews a Norwegian-Finnish development project involving a sulfate factory at Kirkenes with a 60,000 ton/yr. capacity, the construction of a road between the two countries in the Pasvik valley, and free transit of Finnish exports and imports through the port of Kirkenes. Each country is to provide a 50 million crown, state-guaranteed loan, a 12 million crown amortization fund, and 46.5 million crowns in private investment. The plan under discussion since 1952, was approved by Norway in 1960 and subsequently by Finland. Norway has been trying to raise capital on the international market. The project is expected to be operative in 1963. (DA.)

74188. NAAB, J. W., *Jr.* Icebreakers and icebreaking. (U.S. Naval Institute. Proceedings, June 1962. v.88, no.6, p.44-58, illus.)

Captain of the *Eastwind* describes the nine "true" icebreakers in the service, and discusses icebreaking operations under different conditions in the Arctic and Antarctic. The most sucessful methods of ice navigation and convoying are outlined. (DLC.)

NABERSCHNIG, A., *see* Adolph, E.F., & *others.* Ventilation lungs . . . hypothermic rats. 1961. No. 69487

74189. NABOKO, SOF'IA IVANOVNA, 1905– . Aleksandr Nikolaevich Zavaritskii, 1884-1952.

(In: Kuznetsov, I.V., *ed.* Liūdi . . . 1962, p.234-42, port.) Refs. Text in Russian.

Describes his course of life and scientific activity. He became famous for his work in the geology of ore deposits, petrography, volcanology and meteorites. His studies of the Ural and of Kamchatka volcanoes are reported. Zavaritskiĭ published about 200 papers; the principal ones are listed, together with articles about him. (DLC.)

74190. NABOKO, SOF'IÂ IVANOVNA, 1905– .
Change in the fumarole regime of Kliuchevsky volcano. (International Association of Volcanology. Bulletin volcanologique, 1960. sér. 2, t.23, p.135-40, graphs, table.) Paper read at the 1959 symposium.

Reports on a reduction of fumarole activity, decline in gas temperature, and changes in chemical composition of gases, near several lateral craters of this volcano over periods of time, interrupted by renewed crater activity. Data from 300 gas analyses and other observations are summarized and presented as a factor in predicting eruptions. Discussion on the concentration of gases, time factor in results, etc. is appended. (DGS.)

74191. NABOKO, SOF'IÂ IVANOVNA, 1905– .
Formirovanie sovremennykh gidroterm i metamorfizm rastvorov i porod. (Vsesoiūznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.52-62, tables.) Text in Russian. **Title tr.:** The formation of present-day thermal springs and the metamorphism of solutions and rocks.

Reports investigations of thermal springs in Kamchatka and the Kuril Islands. They are grouped into several types according to chemical composition and each type characterized as to its minerals, gases, temperature, and other features. Metamorphism of volcanic rocks under influence of these springs is discussed. Their deposits are analyzed and the chemical composition demonstrated, and ore-bearing properties noted. Conditions for development of hypothermal metamorphism are summarized. (DLC.)

74192. NABOKO, SOF'IÂ IVANOVNA, 1905– .
Usloviia sovremennogo gidrotermal'nogo metamorfizma vulkanicheskikh porod. (Sovetskaia geologiia, Jan. 1962, no.1, p.131-45, tables.) 10 refs. Text in Russian. **Title tr.:** Conditions of present-day hydrothermal metamorphism of volcanic rocks.

Reports hydrogeologic, hydrochemical and thermodynamic conditions of this metamorphism as studied in Kamchatka and the Kuril Islands. Its extent, activity of thermal springs, composition of thermal solutions, manifold influence of water, high temperature, pressure, mineralogic replacement in rocks, and other problems are discussed. (DLC.)

NABOKO, SOF'IÂ IVANOVNA, *see also*

Aver'ev, V.V., & *others.* Sovremennyĭ gidrotermal'nyĭ metamorfizm . . . 1961. No. 69919

Gorshkov, G.S., & S.I. Naboko. Sovremennyĭ vulkanizm . . . 1962. No. 71790

Vlodavets, V.I., & *others.* Zadachi . . . 1962. No. 76407

NADEAU, G., *see* Le Blanc, J.A., & G. Nadeau. Urinary excretion . . . 1961. No. 73380

74193. NADEZHDIN, A. V. Issledovanie zakonomernostei proiāvleniia gornogo davleniia v vertikal'nykh shakhtnykh stvolakh kombinata "Vorkutugol'." *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Severnoe otdelenie. Trudy vyp. 2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.36-40, graphs.) 12 refs. Text in Russian. **Title tr.:** Investigation of the laws of rock pressure in vertical mine shafts of the Vorkutugol' combine.

Reports experiments with a mine-shaft model 8 cm. in diam. and 45 cm. high, equipped with hydraulic pressure meters and surrounded by fine-grained sand. The load on a vertical shaft was found to increase as the thaw area increased. When the radius of the thawed layer exceeded that of the shaft, pressure no longer increased and became identical for shafts in frozen ground and in unfrozen ground. The pressure of the thawed rock on the supports of a vertical shaft may be regarded as the pressure of a granular medium on vertical parallel walls, provided the thickness of the thawed zone does not exceed the radius of the shaft. A formula is derived to express the change of pressure with depth for this case, and another for the case where the thickness of the thawed zone is greater than the shaft radius.—From CRREL. (DLC.)

74194. NADEZHDINA, ELENA DMITRIEVNA. Aktsessornye mineraly trappov raiona nizhnego techeniia reki Podkamennoĭ Tunguski. Moskva, Izdvo Akademii nauk SSSR, 1961. 80 p. illus., tables, fold. map. (Akademiia nauk SSSR. Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii. Trudy vyp. 55.) 31 refs. Text in Russian. **Title tr.:** Accessory minerals of traps in the lower Podkamennaya Tunguska River region.

Describes 19 accessory minerals of normal and hybrid traps collected in 1956 in this valley between Bol'shoy Porog and Sulomay. The mineral-geochemical method used is outlined. Apatite, titanomagnetite, pyrite, zirconium, ilmenite, sphene, garnet, galenite, etc. are distinguished and described. Morphology, composition and character of distribution of accessory minerals are outlined. (DLC.)

74195. NADUBOVICH, IŪ. A. Avtomaticheskaia pokadrovaia fotometriia askafil'mov. (Akademiia nauk SSSR. IAkutskiĭ filial. Trudy, ser. fizicheskaia, 1962. vyp.4, Variatsii intensivnosti kosmicheskikh luchei, p.26-34, illus., diagrs., graphs.) 6 refs. Text in Russian. **Title tr.:** Automatic single-exposure photometry of ascafilms.

Describes the construction, operation, and performance of the APF automatic photometer. In contrast with other microphotometers, APF measures the darkening of the entire film frame, instead of measuring the frame from point to point; and it photometers 720 ascafilm frames per hour. The method of photometric evaluation of light flux from aurora is given. The curve of the earth's surface illumination by the aurora of Jan. 21, 1958, observed at Bukhta Tiksi is given as an example of performance of the instrument described. (DLC.)

74196. NADUBOVICH, IŪ. A. Mgnovennye svetovye kharakteristiki polīarnykh siīanii po nabliūdeniiam na ėlektrofotometre vsego neba. (Geomagnetizm i aėronomiia, 1961, t.1, no.4, p.523-30, table, graphs.) 5 refs. Text in Russian. **Title tr.:** Instantaneous light characteristics of auroras from

electrophotometric observations of the entire sky.

Describes briefly the specific features of a reconstructed electrophotometer of 180° sight angle, capable of giving automatically the record curve "time-light flux." Observational results of measured total light flux from auroras at Tiksi Bay in winter of 1959-1960, are reported. Correlation between the total light flux and the form of auroras is established. In this correlation, three groups of auroras are differentiated: as of smooth, sudden, and pulsating changes in the intensity of the flux. Attempt is made to find a correlation between the integral brightness of sky and geomagnetic variations during auroral displays. (DLC.)

74197. NADUBOVICH, ĬU. A. *and* **I. A. RUDENKO.** O periodicheskikh izmeneniiakh svetovogo potoka polĭarnykh siianiĭ. (Geomagnetizm i aéronomiia, 1962. t.2, no.6, p.1144-46, graphs.) 5 refs. Text in Russian. **Title tr.:** Periodic variations of light flux from auroras.

Analyzes records of the all-sky photometer, and photographic records of auroral brightness at Tiksi during Oct. 1959-Mar. 1960, and Jan.-Apr. 1962 for intervals τ between two flashes in the light flux of aurora. 1429 measurements were made of τ, and 84 of the interval between maxima amplitudes of two subsequent auroras. Two periodic variations in the flux intensity are established: a 12 min. period before and after every flash, and 40-70 min. period in the frequency of auroral display, apparently corresponding to the frequency of vertical movements of high electron concentration regions in the inosphere. (DLC.)

74198. NADUBOVICH, ĬU. A. O razlichnykh indeksakh aktivnosti polĭarnykh siianiĭ. (Geomagnetizm i aéronomiia, 1962. t.2, no.5, p.1008-1010.) 9 refs. Text in Russian. **Title tr.:** On different indexes of auroral activity.

Proposes an index A based on the frequency and brightness of auroras instead of frequency alone. Using a mean-hourly frequency index and a mean-hourly brightness index as arguments of A, more pronounced curves were obtained to characterize the daily auroral activity at Tiksi during the winters of 1957-1958. Brightness varies considerably during the night; it remains constant in homogeneous and diffuse forms. Additional indexes of the mobility and area size of auroras are suggested for a better evaluation of activity. (DLC.)

74199. NADUBOVICH, ĬU. A. Sutochnyĭ khod aktivnosti polĭarnykh siianiĭ po fotoinstrumental'nym nablĭudeniiam v bukhte Tiksi. (Akademiia nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polĭarnye siianiia i svechenie nochnogo neba. Sbornik statei, 1961. no.7, p.27-32, graphs.) 2 refs. Text in Russian. Summary in English. **Title tr.:** Diurnal activity rate of auroras as recorded photographically at Tiksi Bay.

Discusses the diurnal time distribution of auroras according to their brightness and frequency of occurrence. An index of auroral activity that takes account of brightness, and probability of occurrence is proposed. From ascafilms obtained with a C-180 all-sky camera during 47 nights of October, Dec. 1957-April 1958, the diurnal activity index is plotted against the time of the day for each of the five months. It was found that the number and brightness of auroras in Tiksi increase rapidly from the local evening until about midnight, forming a maximum which is subject to slight seasonal variation. Three less distinct maxima appear on the diagrams during which some definite auroral form is predominant. The probability of aurora occurrence is greatest during the approx. two-hour period of the maximum. (CaMAI.)

74200. NADUBOVICH, ĬU. A., *and* **G. V. STARKOV.** Voloknistaia struktura slabykh odnorodnykh dug polĭarnykh siianiĭ. (Geomagnetizm i aéronomiia, 1962. t.2, no.1, p.71-73, diagrs., plates.) 4 refs. Text in Russian. **Title tr.:** Fibrous structure of weak uniform arcs of auroras.

Reports photometric observations made during Jan.-Mar. 1958 at the Tiksi Bay station. In uniform arcs and diffuse bands of auroras, fine structures resembling dark fibers were observed; they had a minimum width of 150 m. and average length of 20 km. They were visible mostly in the latter half of the night, when the daily auroral display was minimal, and are thought likely to be connected with irregular fade-out. (DLC.)

NADUBOVICH, ĬU. A., *see also*

Dziūbenko, I.I., & ĬU.A. Nadubovich. Opyt skorostnogo fotografirovaniia . . . 1962. No. 71174

Dziūbenko, V.I., & ĬU.A. Nadubovich. Rezul'taty . . . nablĭudeniĭ polĭarnykh siianiĭ. 1961. No. 71175

74201. NAERT, PIERRE. Un emprunt chinois archaïque en aléoute? (Anthropos, 1962. v.57, fasc. 1-2, p.192-93.) Refs. in text. Text in French. **Title tr.:** An archaic Chinese borrowing in Aleut?

Traces the Fox Island Aleut word *qumlaḷuq* (iron) to the archaic Chinese kịəm-li̯ŏg (light-colored metal) which is, in turn, the prototype for the old-Turkic *kümül'*, found in a similar form also in Samoyed and Yeniseian. (DSI.)

74202. NAERT, PIERRE. Trois preuves linguistiques des migrations préhistoriques des peuples tchouktches. (Anthropos, 1962. v.57, fasc.1-2, p.190-92.) 7 refs. Text in French. **Title tr.:** Three linguistic proofs of the prehistoric migrations of Chukchi peoples.

Etymological study on three words in an attempt to trace the prehistoric habitat of the Chukchis proper, Koryaks, Kamchadals, and the now extinct Karaginets. The Kamchadals and part of the Koryaks are considered to have resided at one time in the Sea of Japan region; some ancestral Chukchis inhabited the upper Yenisey basin. (DSI.)

NÄSÄNEN, R., *see* Paakkola, O., & *others*. Sr 90 Finnish grass . . . 1960. No. 74599

74203. NÄSLUND, MANFRED, 1899– , and *others*. Samernas skolgång; betänkande avgivet av 1957 års nomadskolutredning. Stockholm, Iduns tryckeriaktiebolag Esselte, 1960. 249 p. tables, diagrs., map. (Statens offentliga utredningar 1960: 41.) Text in Swedish. *Other authors:* H. Larsson, E. Lundemark, I. Ruong, *and* I. Åstot. **Title tr.:** Lapp education; report by the 1957 Committee on Nomad Schools.

Effectiveness of the Swedish system of Lapp education was studied from visits to schools

(including those in Norway and Finland), from questionnaires to principals and Lapps in the various communities, from demographic investigations of the reindeer-herding population, etc. The various Lapp groups are characterized. Earlier educational arrangements are briefly reviewed, and the present system is analyzed in detail. The use of Lappish and/or Swedish for grade school instruction is considered and recommendations are made. The nomad schools should be maintained for the first six years of grade school, and the period of compulsory schooling should be extended to nine years. Special courses for Lapps should be introduced in the high schools at Kiruna and Jokkmokk, with Lapps from all regions admitted. Courses in Lappish for nomad teachers at Uppsala University are recommended, etc. Appendices include details of a demographic study of reindeer herders (by B. Ahlfort), answers to questionnaires, and a UNESCO report (1951) on the use of vernacular languages in education. (AIKøbenhavn.)

NAGASHIMA, KAZUO, *see*

Pomerantz, M.A., & *others*. Observations . . . cosmic rays . . . 1961. No. 74869

Pomerantz, M.A., & *others*. Solar-produced cosmic rays . . . 1961. No. 74870

74204. NAGATA, TAKESI, *and* **E. KANEDA.** A photoelectric analyzer of all-sky auroral photographs. (Journal of geophysical research, July 1961. v.66, no.7, p.2259-61, diagr., graphs.)

Describes a device named ASCA-PA consisting of a projector, electronic amplifiers, and a pen-writing recorder (oscillograph). The projected image of a particular area to be studied and that of the time signal of the all-sky camera photograph fall separately on a phototube and a phototransistor. Average brightness is controlled by means of a diaphragm and sensitivity by means of a variable neutral filter. Sample records are shown. (DLC.)

74205. NAGATA, TAKESI. Polar magnetic storms, especially in the southern polar region. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962. v.1, p.157-64, graphs, maps.) 22 refs.

Discusses the constitution and interrelation of polar elementary storms in the Arctic and Antarctic, quiet-day disturbances in the sunlit polar cap, the main origin of polar elementary storms, and polar cap disturbances. (DLC.)

74206. NAGATA, TAKESI, *and others*. Similarity simultaneity of magnetic disturbance in the Northern and Southern Hemispheres. (*In:* International Conference on Cosmic Rays and the Earth Storm, 1961. Proceedings *pub.* 1962. v.1, p.35-39, graphs, map.) 6 refs. *Other authors:* S. Kokubun *and* N. Fukushima.

Compares the simultaneous magnetic SD disturbances in the Southern Hemisphere with those of the geomagnetically conjugate polar stations in the Northern: Uelen, Lervick (Scotland), Tiksi Bay, Sodankylä, Dikson Island, Fort Churchill, Baker Lake, and College. The correlation of individual geomagnetic disturbances at the conjugate points was found especially high at local night, on both the poleward and equatorial sides of the normal auroral zone. In the daytime and at the time of magnetic storms the correlation became poor for the station pair on the poleward side of the auroral zone, but remained good for the equatorial side pair. An interpretation of the correspondence is given in terms of the solar wind kinetic pressure. (DLC.)

NAGY, J., *see*

Hársing, L., & *others*. Hypothermia . . . 1961. No. 72048

Hársing, L., & *others*. Hypothermia . . . kicserélödésére. 1961. No. 72049

74207. NAKAMURA, MITSURU, *and others*. Protective action of glycerol in the freezing of *Shigella sonnei*. (Nature, Apr. 28, 1962. v.194, no.4826, p.405, tables.) 11 refs. *Other authors:* J.F. Farnum *and* M.A. Oke.

Reports that 10% (and 20%) glycerol solution offered maximal protection in slow freezing to -20°C. of these bacteria; 5, 2, and 1% gave some protection in decreasing order. Storage did not increase mortality significantly but repeated freezing-thawing did. (DLC.)

74208. NAKARÍAKOV, V. D. Stroenie domezozoĭskogo fundamenta Prieniseĭskoĭ polosy Zapadno-Sibirskoĭ platformy. (Geologiĭa i geofizika, 1961, no.3, p.27-34, profiles, maps.) 3 refs. Text in Russian. Summary in English. **Title tr.:** Structure of pre-Mesozoic basement of the Yenisey zone of the West Siberian platform.

Reports geologic investigations along left tributaries of the Yenisey: the Kas, Sym, Yeloguy, Turukhan. From a gravimetric survey approx. 64°-70°N. 82°-88°E., seismic investigations, and drilling, the structure of pre-Mesozoic basement is delineated. Among the various structures described is the broad Yenisey downwarp filled with Sinian and Paleozoic deposits. A structural-tectonic map of the region is included. (DLC.)

74209. NAKARÍAKOV, V. D. Tektonika mezozoĭskikh otlozheniĭ basseĭna r. Turukhana; pechataetsĭa v porĭadke diskussii. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'ĭa. Trudy, ser. neftĭanaĭa geologiĭa, 1961. vyp.14, Materialy po geologii, gidro-geologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.9-14, text map, cross-sections.) 2 refs. Text in Russian. **Title tr.:** Tectonics of Mesozoic deposits in the Turukhan River basin; printed as material for discussion.

Gives a tectonic interpretation of the Mesozoic deposits of this area between two large tectonic structures: the West Siberian and Siberian platforms. The Nizhnyaya Baikha and Makovskaya regions are treated in greater detail and differences in the thickness of Mesozoic deposits are demonstrated. Factors in these differences such as uneven warping, sedimentation and discontinuity of sedimentation are discussed. Tectonic considerations are offered as to where search for oil has to be conducted. (DLC.)

74210. NAKARÍAKOV, V. D. K voprosu o stroenii domezozoĭskogo fundamenta prieniseĭskoĭ polosy Zapadno-Sibirskoĭ platformy. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik stateĭ . . . vyp.16, 1961, *its:* Trudy t.123, p.78-84,

profiles, maps.) 2 refs. Text in Russian. **Title tr.:** On the structure of the pre-Mesozoic basement in the Yenisey belt of the West Siberian platform.

Reports geologic, seismic, gravimetric, and aeromagnetic studies along the left bank of Yenisey from the Turukhan north to Igarka during 1955-1960. Results of drilling and geophysical investigations are analyzed. Basement rocks consist of Sinian and Paleozoic deposits. Their lithology and facies are noted and the plan of basement structures is interpreted and mapped. (DLC.)

74211. NAKAYA, UKICHIRO, 1900–1962. Elastic properties of processed snow with reference to its internal structure. Hanover, N.H., Oct. 1961. v, 25 p. illus., diagr., graphs, table. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Research report 82.) 8 refs.

Relation between Young's modulus E and density ρ of processed snow was studied at Site 2, Greenland Inland Ice in the summer of 1959. The time of aging was taken as a reference parameter, and internal structure was examined by making a thin section using the aniline method. For processed snow, as for naturally compacted snow, the E-ρ relation is linear for densities above 0.5 gm./cm.^{3} and an exponential curve for densities below 0.5. The number and size of bonds determine Young's modulus. Bonding starts a few hours after deposition by the snow miller; in a few days the grain-contact plane grows to about 0.1 mm. in diameter. Decrease in number of minute particles is caused partly by evaporation due to curvature and partly by amalgamation with the larger grain in contact. The report is one of the series from the SIPRE project on elastic and visco-elastic properties of snow and ice, with application to the bearing capacity of floating ice sheets and compacted snow roads and runways. (CaMAI.)

74212. NAKAYA, UKICHIRO, 1900–1962, *and others.* Glaciological studies on Fletcher's Ice Island, T-3. Montreal, Que., Mar. 1962. xi, 60 p. illus., maps, diagrs., graphs, tables. (Arctic Institute of North America. Research paper no.21.) 16 refs. *Other authors:* J. Muguruma *and* K. Higuchi. *Also issued as:* U.S. Air Force. Cambridge Research Laboratories, Contract AF 19 (604)-8343, Scientific report no.3; AFCRL-62-464.

Contains results of field studies, May 1959-Dec. 1960, and laboratory investigations at the Low Temperature Institute of the University of Hokkaido. Ablation phenomena were studied at three stations in relation to rock erosion. The rate of ablation of the stream bed was found to be nearly that of the exposed ice surface or bank; hence deep gorges must be formed by rapid melting caused by warmed stagnant water from ponds upstream. Stream temperature was higher (0.14°C.) in the catchment area, decreased downstream. Good correlation was noted between weather conditions and runoff. Area of T-3 was reduced about 10% by breaks on May 4, and Aug. 27, 1960. Ice candles were longer when the c-axis was nearly vertical. A new kind of crystal orientation with small-angle boundaries was observed in one ice stratum. Cores were drilled through 34.7 m. of ice near camp, 7.5 m. near Colby Bay, and 4-m.-thick old pack ice in the Bay. A heavy dirt layer was observed at 8.4 m. The cores disclosed three strata: iced firn above the heavy dirt layer; a four-unit basement ice below the dirt layer; and a 1.8 m.-thick sea-ice layer at the bottom. Petrographic studies of dirt samples indicate their source was in Precambrian granite or gneiss, found on Ellesmere Island. Formation of T-3 must remain undetermined until origin of the new type of ice is established. (DGS.)

74213. NAKAYA, UKICHIRO, 1900–1962, *and* **J. MUGURUMA.** Physical properties of the ice of Fletcher's Ice Island, T-3. Montreal, Que., Mar. 1962. xi, 34 p. illus., map, diagr., graphs, tables. (Arctic Institute of North America. Research paper no.20.) 3 refs. *Also issued as:* U.S. Air Force. Cambridge Research Laboratories, Contract AF 19 (604)-8343, Scientific report no.2; AFCRL-62-463.

Outlines results of studies made in Sept. 1959-Feb. 1960, of the visco-elastic properties of land- and sea-ice samples taken from 12 sites on T-3: floating station B. Crystallographic investigations also were made using a polarizing microscope. The sonic method used to measure Young's modulus and viscosity is described; test results are given for vertical distribution of these two factors and density; measurements are reported of sea-ice chlorine content, also of Young's modulus as a function of temperature. Generally the viscous nature of sea ice is similar to that of ordinary polycrystalline ice. Sample locations, type, etc. are listed; data tabulated; results graphed. (DGS.)

NAKAYA, UKICHIRO, 1900–1962, *see also* Mason, B.J. Nucleation & growth ice crystals. 1960. No. 73861

74214. NALIVKIN, A. B. O stratigrafii i tektonike metamorficheskoĭ tolshchi Timana. (*In:* Soveshchanie po utochneniiu unifit͡sirovannykh stratigraficheskikh skhem paleozoi͡a . . . Dodevon, 1962, t.1, p.122-23.) Text in Russian. **Title tr.:** On the stratigraphy and tectonics of the Timan metamorphic stratum.

Reports some modifications in the Middle and Northern Timan stratigraphy proposed by O.A. Solnt͡sev (No. 61784): two quartzite series are adjusted; three structural stages in the metamorphic stratum are noted. Absolute age determination is reported for this stratum, which varies between 550 and 1500 million years. (DLC.)

74215. NALIVKIN, DMITRIĬ VASIL'EVICH, 1889– . Feodosiĭ Nikolaevich Chernyshev, 1856-1914. (*In:* Kuznet͡sov, I.V., *ed.* Lĭudi . . . 1962, p.108-114, port.) Refs. Text in Russian.

Describes life and scientific activities of this noted Russian geologist and explorer of the Ural, Timan and other areas of Russia. His expeditions to the Timan Range, Pechora basin, Novaya Zemlya, Spitsbergen, etc. are described. His main published works and articles about him are listed. (DLC.)

74216. NALIVKIN, DMITRIĬ VASIL'EVICH, 1889– . Geologi͡a SSSR. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1962. 813 p. illus., tables incl. fold., maps incl. fold., plates. Approx. 600 refs. Text in Russian. **Title tr.:** Geology of the USSR.

Handbook of regional geology. Precambrian, Paleozoic and Mesozoic-Cenozoic geosynclines are outlined. Orography, stratigraphy, tectonics, magmatism and mineral resources of each region are characterized and well illus. The entire Soviet Arctic is included: the Siberian platform p.192-279, West Siberian plain p.280-299, Ural, Angara, Pacific regions, and others. One chapter (p.375-94) deals specifically with western arctic regions such as Severnaya Zemlya, Novaya Zemlya, Franz Joseph Land, Pay-Khoy, Yamal, Gydan, etc. (DLC.)

NALIVKIN, V. D., *see* Dedeev, V.A., & *others*. Stroenie dosredneĭurskogo fundamenta . . . 1962. No. 70932

74217. **NANCE, BOB.** Caribou airlift. (Alaska sportsman, Aug. 1960. v.26, no.8, p.24-25, +, illus.)

Describes a transplant of ten calves from the Talkeetna Mts. to Adak Island in the Aleutians during summer 1958. The project to establish a big game species on the Island was carried out cooperatively by the U.S. Fish and Wildlife Service and the U.S. Navy which has a station there. The environment appears favorable and an eventual thousand-head herd is anticipated. (DI.)

NANCE, D. K., *see* Seling, T.V., & D.K. Nance. Sensitive microwave radiometer . . . 1961. No. 75454

NANSEN, FRIDTJOF, 1861–1930, *see* Lysenko, T.I., & A.I. Vasina. Neopublikovannye pis'ma . . . 1962. No. 73657

74218. **NAQUET, R.**, *and others*. Ralentissements et accélérations de l'activité corticale obtenus par refroidissement localisé de la formation réticulée mésencéphalique du chat éveillé. (Journal de physiologie, 1962. t.54, no.2, p.386, illus.) 2 refs. Text in French. *Other authors:* M. Denavit *and* D. Albe-Fessard. **Title tr.**: Decrease and increase of cortical activity obtained by local cooling of the mid-brain reticular formation of the awake cat.

Cooling to 14°C. produced, at certain levels, a unilateral slowing of the cortical rhythms, in some cases the slowing was bilateral, with a predominance of the cooled side. (DNLM.)

NARĘBSKI, WOJCIECH, *see* Birkenmajer, K., & W. Narębski. Precambrian amphibolite complex . . . Vestspitsbergen. 1960. No. 70217

74219. **NARJORD, BJ.** Minkholderne i nord tar smulene fra den rikes bord. (Norden, Nov. 1, 1960. årg. 64, nr.21, p.579.) Text in Norwegian. **Title tr.**: Mink farmers in the North get the crumbs from the rich man's table.

Finnmark mink raisers don't prosper because they do not cooperate in their feed supply: 90% of the waste from local fish filleting plants is sold to mink-feed cooperatives in South Norway. Similar coops in the North to obtain the raw materials, prepare, freeze, and store feed, would eliminate freight as well as other costs. (DA.)

74220. **NASH, T.** Prevention of freezing damage to living cells by pyridine N-oxide. (Nature, Oct. 28, 1961. v.192, no.4800, p.360-61, illus.) 3 refs.

PNO, the first aromatic compound used for this purpose, reduced hemolysis of frozen human erythrocytes, when added to the buffered saline suspension fluid. The sharp rise in hemolysis at -40°C. and PNO of 3.2 M. is considered to be due to toxicity of the solute at high levels. (DLC.)

NASIMOVICH, ANDREĬ ALEKSANDROVICH, *see* Geptner, V.G. Mlekopitaĭushchie . . . 1961. No. 71640

74221. **NATAPOV, L. M.** Otlozheniĭa tipa domanikovoĭ formatsii na severo-vostoke Sibirskoĭ platformy. (Sovetskaĭa geologiia, Nov. 1962, no.11, p.110-12.) Text in Russian. **Title tr.**: Domanik type deposits in the northeast of the Siberian platform.

Describes Khatyspyt, Sinian series, the so-called bitumen series of Lower and Middle Cambrian and two Upper Cambrian horizons distributed in the Olenek River region of Yakut ASSR. Genetically these two series are similar to the Upper Devonian Domanik formation of the Russian platform. Some data on bitumen and other organic matter of the deposits are reported. (DLC.)

NATAPOV, L. M., *see also*

Biterman, I.M., & *others*. Nizhne kamennougol'nye otlozheniĭa . . . 1961. No. 70224

Biterman, I.M., & *others*. Novye dannye . . . 1962. No. 70225

Kuteĭnikov, E.S., & L.M. Natapov. Novye dannye o tektonike . . . 1961. No. 73240

NATENZON, KH. M., *see* Ponomarenko, V.P., & *others*. Eksperimental'nyĭ reĭs za saĭkoĭ. 1962. No. 74874

NATHAN, H. A. G., *see*

Buch, D., & H. Ølgård. Building concrete Greenland. 1962. No. 70424

Nielson, J.K., & Rauschenberger. Frost og fundering . . . 1957, 1962. No. 74330

74222. **NATIONAL ACADEMY OF SCIENCES.** *University Committee on Polar Research.* Report of the University Committee on Polar Research. Ann Arbor, Mich., Mar. 1961. 46 p. tables.

Presents results of survey (by questionnaire) covering institutions in the United States. Status of research is summarized for ten major fields: geophysics of the solid earth, by M. Ewing; Physics of the upper atmosphere, by C.T. Elvey; Meteorology and climatology, by P.E. Church; Oceanography, by C.A. Barnes; Geology, by J.C. Craddock; Glaciology, R.P. Goldthwait; Soil science, by M.G. Morgan; Biological sciences, by W.S. Benninghoff; Health sciences, by I.M. Taylor; Anthropology-Archaeology, by V.F. Ray. Recommendations are made for greater and longer-term financial support, flexible logistic aid, establishment of more polar "centers" in universities rather than a single "center" or "institute", and for National Science Foundation financing to include a specific arctic program within each scientific field. The survey questionnaire, note on the Committee meetings 1959-1960, and comments on the Dartmouth Conference of Dec. 18-19, 1958 report are included. (CaMAI.)

74223. **NATIONAL GEOGRAPHIC SOCIETY,** *Washington, D.C.* Canada, atlas plate 19. Washington, D.C., Dec. 1961. Map 25 x 19 in. (*In:* National geographic magazine, Dec. 1961. v.120, no.6; also issued separately, 28th in the Society's Atlas series of folios.)

Map (1 in.: 140 mi.) in ten colors. Natural

and other features are named; settlements, railroads, roads, places with scheduled air service, glaciers, etc. The tree line and the Northwest Passage are marked; sea ice and iceberg conditions are indicated. Discussion of the map is included in the same issue, p.820-21. (DGS.)

74224. NATIONAL NORTHERN DEVELOPMENT CONFERENCE, 2nd, *Edmonton, Alberta,* Sept. 13-15, 1961. Canada's new role in resource development; proceedings. Edmonton, 1961. Sponsored jointly by the Alberta and Northwest Chamber of Mines and Resources, *and* The Edmonton Chamber of Commerce; in sequence to No. 66960. 214 p., illus., ports., tables, map.

Contains conference resolutions, list of participants, and text of 27 papers presented, some* of which, reprinted elsewhere, are abstracted in this volume under their authors' names.

*REED, J. C. Scientific research and northern development, p.7-13.

Parker, J. Canada's northland 1987, p.15-19. *Speculates* on the progress of economic development in the Northwest Territories by 1987.

Robertson, G. Resources, existing northern resources and prospective demand, p.21-26. Brief discussion, introductory to the following papers.

Buck, W.K. Metallic and non-metallic minerals, p.27-52, 21 refs. *Describes* the place of the mineral industry in Northwest Territories and Yukon Territory economy, minerals now in production, discovery possibilities, economic and engineering problems, and incentive to development.

*NICKLE, C.O. Petroleum, p.53-60.

Collinge, H.K. Forest resources, p.61-75. *Discusses* forests of the Prairie Provinces, British Columbia, and the Mackenzie valley.

Stevens, J.D. Power, p.77-83. *Discusses* the hydroelectric potential of the Northwest Territories and Yukon Territory, as their main energy source.

Dinsdale, W.G. Canada from the Atlantic to the Pacific, p.85-89. Keynote address on the future of northward expansion.

Moore, D.D. Transportation, p.91-94. *Reviews* the basic considerations in developing transportation media required for sound, rapid, economic development of the North.

Solandt, O.M. Railways and trucking, p.95-98. *Discusses* the characteristics of rail and highway transportation in the North that must be taken into account in planning a system for a specific purpose.

*DICKENS, C. Airlines, p.99-100.

Dalgleish, P. Shipping, p.101-106, presented by I.L. Davies. *Recounts* thirty years' shipping experience to Churchill via Hudson Bay, and suggests application of experience to development of arctic ports in Canada.

Lynch, J.F. Pipelines, p.107-110. *Describes* how oil and gas pipelines can expedite and enlarge development in the North.

Hughes, S.R. Development of Hovercraft in Great Britain, p.111-13. *Explains* the principle of this vehicle and its unique applicability to northern work conditions.

Smith, H.R. The "Gemini" and the "Big Wheel," p.115-17. An untitled paper describing these two new vehicles under development for transport over rough terrain, muskeg, or water.

Okpik, A.A. The hunter, a changing world, problems of adaptation, p.119-23. *Discusses* the life of the Eskimos in rapid transition from a primitive to a modern way of life.

Winspear, F.G. Finance, p.125-28. *Discusses* the problems of financing pioneer areas.

Smithson, G.A. Canadian bank, p.129-33. *Offers* opinion on financial resources potentially available annually for northern development, and advises on foreign capital investments.

McKelvie, C. Canadian underwriter, p.135-42. *Discusses* the financing of Canada's northern development from an underwriter's point of view.

Heim, R.C. U.S. finance, p.143-47. *Considers* potential American capital investment in Canada, as increasing under favorable conditions.

Eaton, C. The North, keystone of Canada's second century, p.149-53. *Depicts* the country's future in the North.

Reierson, R. Marketing, processing, manufacturing, p.155-57. *Recommends* that northern mineral and timber resources usually exported as raw materials be processed and manufactured increasingly by Canadian industry to increase the market value.

Van Buskirk, J.E. Techniques of market development, p.159-63. *Outlines* the prime requisites for successful marketing of goods abroad.

Forward, F.A. New techniques of metal extraction, p.165-69. *Describes* new processes incorporating desired characteristics.

Grimley, S.S. Petrochemistry of the future, p.171-74. *Discusses* its uses for arctic oil search.

Harries, H. The outlook for Canadian exports, p.175-78. *States* dependence on export trade because of limited domestic markets.

*WANSBROUGH, V.C. The immediate challenge, p.179-84.

Ziegler, W.S. General summary discussion, p.185-94, to crystallize the sense of the conference as basis for the resolutions. (CaOGB.)

NATIONAL NORTHERN DEVELOPMENT CONFERENCE, 2d., *Edmonton, Alta.,* Sept. 1961, *see also*

Connell, F.M. . . . taxation relief . . . exploration in northern Canada. 1961. No. 70808

Dickens, C. Transport. N. 1961. No. 71022

Nickle, C.O. The future of oil and gas . . . 1961. No. 74322

Reed, J.C. Scientific research . . . 1962. No. 75087

74225. NATIONAL RESEARCH COUNCIL OF CANADA. Review of the National Research Council 1961, 1962. Ottawa, Queen's Printer, 1961-1962. 2 v.: 377, 383 p., ports, diagr., tables. (*Its:* NRS no. 6421, 6816.) Refs. *In sequence to:* No. 66962).

Includes research on or in the Canadian Arctic during the periods Dec. 31, 1960 - Mar. 31, 1961 and Apr. 1, 1961 - Mar. 31, 1962, marking a change from the calendar year period of previous reports. Work on seasonal acclimatization of wild rats, muskrats, and white rats is reported by the Division of Applied Biology; cosmic rays and low temperature physics by Pure physics; Building work on materials, services, structures, permafrost, snow and ice, etc., by Building Research; aircraft icing, railway problems by Mechanical Engineering; auroral research by Radio and Electrical Engineering. Also reported is work of the Canadian Com-

mittee on Oceanography; Associate Committee on Soil and Snow Mechanics, and the Sixth and Seventh Muskeg Research Conferences, Apr. 1960, and Apr. 1961. Publications, personnel, etc., are listed. (DI.)

NATIONAL RESEARCH COUNCIL OF CANADA, *see also*

Canada. Govt. activities N. 1961. 1962. No. 70516

Thomas, M.K. A bibliography . . . climate. 1962. No. 76118

74226. NATIONAL RESEARCH COUNCIL OF CANADA. *Associate Committee on Geodesy and Geophysics.* Canadian geophysical bulletin, vol. 14, 15. Ottawa, Dec. 1961, 1962. 188, 117 p., illus., maps, diagrs., graphs. Refs. In sequence to No. 66963.

Summarizes Canadian activities in geophysics during 1961-1962, and lists over 450 publications, 59 of them annotated, in the various fields. The Subcommittee on *Isotopic Studies and Geochronology,* formed Oct. 25, 1961, is included; work of the Geological Survey of Canada and several Canadian universities in geological age determination and the radioactivity of rocks is surveyed. Other subcommittees reported arctic activities, viz:

Geodesy and Gravity, J.E. Lilly, M.J.S. Innes: network of first-order triangulation was extended to Cambridge Bay, N.W.T., and to Schefferville and Nain, Labrador; primary gravity network was extended in Northern Quebec - Labrador, on Baffin Island, DEW Line, Muskox Project in Mackenzie District, and Polar Continental Shelf.

Seismology and physics of the earth's interior, J.H. Hodgson: stations completed include Alert, Mould Bay, Resolute, Schefferville; Polar Continental Shelf Group on Cornwallis Island determined tentative depths to the basic layer and to the Mohorovičić discontinuity as 13.5 ± 1.5 km., and 30 ± 3 km., respectively.

Meteorology, A. Thomson: arctic studies involving radiation, ozone, micrometeorology and stratospheric circulation, also on the Axel Heiberg Island glaciers by the Jacobsen-McGill Expedition, on the heat and mass balance of the Ellesmere (Ward Hunt) Ice Shelf, on Devon Island by the Arctic Inst. of North America, also climatological studies by McGill University.

Hydrology, R.H. Clark: ice thickness data were analyzed to determine dependence of ice thickness on time and region; national hydrometric survey maintained by Water Resources Branch of Dept. of Northern Affairs.

Geomagnetism and aeronomy. P.H. Serson, P.A. Forsyth: magnetic surveys were carried out from the C.C.G. Ships *N.B. McLean* and *d'Iberville* near the north magnetic pole; magnetic observatories at Baker Lake, Resolute Bay, Mould Bay and Alert were in continuous operation; 26 ae. magnetic survey map sheets on Northwest Territories were compiled during the year; large anomalies have been found on the continental shelf and slope northeast of Newfoundland and Labrador; auroral and ionospheric studies were continued by several agencies, including the Defence Research Northern Laboratory of Churchill, Man., in spite of loss of the rocket launching facility by fire.

Oceanography, H.B. Hachey: C.C.G. Ship *John A. Macdonald* reached the end of Tanquarry Fjord, 81°05′N. 79°20′W., probed Nansen Sound, passed through Norwegian Bay, and circumnavigated Devon and Prince of Wales Islands.

Glaciology, G.F. Hattersley-Smith: field glaciological work was carried out in the Icefield Ranges of Yukon Territory, central Labrador, northern and southern Baffin Island, and in five areas of the Queen Elizabeth Islands, by the American Geographical Society, McGill Sub-Arctic Research Station, Dept. of Mines and Technical Surveys, Arctic Institute of North America, Jacobsen-McGill Arctic Research Expedition, Geological Survey of Canada, Defence Research Board, etc. Photogrammetric and laboratory studies were continued; mapping of glacierized areas was in progress. (DGS.)

74227. NATIONAL RESEARCH COUNCIL OF CANADA. *Associate Committee on Geodesy and Geophysics.* Symposium on the International Upper Mantle Project, Ottawa, October 26, 1961. (Canadian geophysical bulletin, Dec. 1961. v.14, p.109-188, maps, diagrs., graphs.) Refs.

Contains nine papers on Canadian participation in this IUGG project of 1962-1964, together with summary of discussion at the symposium. Current research on the structure of the earth's crust and the underlying mantle carried on in arctic Canada was outlined in: Deep drilling, by R.A. Burwash, p.115-19. *Reviews* work toward definition of the various geologic provinces in the buried Precambrian or Canadian Shield.

Recent seismic surveys by the Dominion Observatory, by G.W. Sander, p.149-55. *Reports* two years' seismic surveys indicating the Sverdrup Basin in the Queen Elizabeth Islands to be at least 20,000 ft. deep.

Ultramafic intrusions in Canada and their significance to upper mantle studies, by C.H. Smith, p.157-69. *Deals* with these windows into the earth's interior, e.g. the Muskox intrusion in the Coppermine River area, which may be most representative of present-day mantle material. (DGS.)

74228. NATIONAL RESEARCH COUNCIL OF CANADA. *Associate Committee on Soil and Snow Mechanics.* Proceedings of the Sixth Muskeg Research Conference, April 20 and 21, 1960. Ottawa, Feb. 1961, iii, 155 p., illus., maps, diagrs., graphs, tables. (*Its:* Technical memorandum no.67.) Refs. Prepared by I.C. MacFarlane and J. Butler.

Contains text or abstract and discussion of the 15 papers and the panel discussion which constitute the five sessions of this conference held in Calgary, Alta. In session I, on Highway Construction and Foundations, J.P. Walsh in his: *Muskeg and permafrost in highway development in the Canadian Sub-arctic* p.6-13, offered recommendations for route location and construction, also five methods for maintaining permafrost at its natural level, together with four general suggestions on highway development. M. Markowsky and N.J. McMurtrie in *Transmission line structure foundations in weak soils,* p.32-37D, discussed an approach to special problems anticipated on about 100 mi. of muskeg in the Moose River, Ont., power development planned by the Hydro-Electric Power Commission of Ontario.

Session II, on Classification and Exploration,

opened with a panel discussion on muskeg classification by N.W. Radforth, D.G. Stoneman, and W.C. Bridcut, p.49-60, the first two participants describing the Radforth and the Shell classification systems, respectively; the last speaker discussed techniques of air-photo interpretation and mapping from vertical aerial photographs in muskeg regions. W.G. Campbell in *Operations in muskeg and permafrost in the Eagle Plains area of the Yukon Territory,* p.61-66, summarized oil exploration programs of Western Minerals Ltd. and associates in this basin. J.D. Mollard in *Guides for the interpretation of muskeg and permafrost conditions from aerial photographs,* p.67-87, surveyed the literature, noted the value of experience, background information, and recognition of features commonly associated with muskeg and permafrost. Final paper in this session was N.W. Radforth and K.H. Ashdown's *The procurement of physical and mechanical data from organic terrain,* p.88-104C, which dealt with possible methods of measuring density and water content of the muskeg.

In Session III, D.G. Stoneman presented *The successful use of tracked transporters in Shell's search for oil in the muskeg of northern Canada,* p.105-109, outlining a 1959 exploratory drilling program in northwestern Alberta; B.W. Gillespie in *Timing, logistics and personnel in north country operation,* p.109-112 urged consideration of northern conditions in planning.

Session IV on Permafrost opened with a paper by T.C. Mathews, *Some aspects of the permafrost problem,* p.112-15, discussing the variables involved in the heat budget equation, noting Lachenbruch's solutions (No. 52614). The paper of R.A. Hemstock, *Engineering aspects of permafrost in the petroleum industry,* p.116-18, was pub. also elsewhere and is abstracted, under his name, q.v. R.F. Legget and J.A. Philainen in *Some aspects of muskeg in permafrost studies,* p.118-25, stressed that permafrost is a condition of material, not a material. Its three main properties giving rise to engineering difficulties: ice content, thermal sensitivity and imperviousness to water, are noted. A field description of muskeg in permafrost areas is given, and special construction problems are mentioned. A final paper by T.A. Harwood, *Climate, permafrost and archaeology,* p.125-26, presented evidence of a climatic deterioration beginning in northern Ellesmere Island, in Greenland, and in northern Europe in the early 15th century and continuing until 1740-1760. Value of permafrost data prior to this change is recognized.

Session V was a panel discussion on *Muskeg in relation to northern development,* p.127-44, with contributions by J.E. Savage on economic factors, J. Terasmae on glacial geology, W.B. Dingle on petroleum exploration economics, N.W. Radforth on a broad consideration of muskeg analysis, and R.M. Hardy on the problem of generalization from limited data. A list of the 168 attending the conference is appended. (DLC.)

74229. NATIONAL RESEARCH COUNCIL OF CANADA. *Associate Committee on Soil and Snow Mechanics.* Proceedings of the Seventh Muskeg Research Conference, April 18 and 19, 1961. Ottawa, Dec. 1961. iv, 227 p., illus., maps, diagrs., graphs, tables. (*Its:* Technical memorandum no.71.) Refs. Prepared by I.C. MacFarlane and J. Butler.

General theme of this conference, held at McMaster University, Hamilton, Ont., with 120 persons attending, was muskeg in relation to northern development; most of the papers are abstracted in this volume under their authors' names, viz:

TERASMAE, J. Muskeg: its environment and uses.

RADFORTH, N.W. Distribution of organic terrain in northern Canada, summary.

EYDT, H.R., *and others.* The structural aspect of peat.

ADAMS, J.I. Laboratory compression tests on peat.

MacFARLANE, I.C. Corrosion of concrete structures by muskeg waters.

DAVIS, A.E. Road construction for forestry practice in northern Ontario.

KEELING, L. The organic terrain factor and its interpretation.

CHARLES, J.L. The organic terrain factor in northern railway construction.

WALLACE, J.J. Road construction for transitional permafrost zones as typified by the Hay River area of the Northwest Territories.

Six other papers, not abstracted are:

Healy, J.V. Organic terrain reclamation in Newfoundland. p.78-92.

Lake, J.R. Investigations of the problem of constructing roads on peat in Scotland. p.133-48.

MacFarlane, I.C., and I. Miyakawa. Aspects of research and development of roads over organic terrain in Japan. p.148-54.

Mickleborough, B.W. Embankment construction in muskeg at Prince Albert. p.164-85.

Ripley, C.F., and C.E. Leonoff. Embankment settlement behavior on deep peat. p.185-204.

Radforth, N.W. Field trip to Copetown Bog; demonstration and examination of a confined muskeg, p.227. (DLC.)

74230. NATIONAL RESEARCH COUNCIL OF CANADA. *Associate Committee on Soil and Snow Mechanics.* Proceedings of the Eighth Muskeg Research Conference, 17 and 18 May, 1962. Ottawa, Oct. 1962. iv, 155 p., illus., maps, diagrs., graphs, tables. (*Its:* Technical memorandum no.74.) Refs. Prepared by I.C. MacFarlane.

Contains text of the papers presented at this conference, held at the University of Saskatchewan in Saskatoon, and attended by about 125 persons. Several aspects of muskeg were considered; the extensive discussion is summarized. Four of the papers are abstracted in this Bibliography* under their authors' names, viz:

*DICKSON, W.J., *and* E.G. LEGER. Muskeg trafficability research program, Vehicle Mobility Laboratory, CARDE.

*MONAGHAN, B.M. Muskeg and the Quebec North Shore and Labrador Railway.

Radforth, N.W., and K.H. Ashdown. Density and water measurements in peat by radioactive methods, p.27-31.

Anderson, K.O., *and* R.C. Haas. Construction over muskeg on the Red Deer bypass, p.31-41.

*ENRIGHT, C.T. The muskeg factor in the location and construction of an Ontario Hydro service road in the Moose River basin.

Lea, N.D. Recent experiences in major highway and construction developments over peat lands near Vancouver, B.C. p.59-69.

Wrong, G.A. Construction of the Port Perry Causeway, p.70-83.

Brawner, C.O., & R.O. Darby. Culvert selection in muskeg areas, p.84-99.

Mainland, G. Corrosion in muskeg, p.100-106.

Goodman, L.J., *and* C.N. Lee. Laboratory and field data on engineering characteristics of some peat soils, p.107-129.

Schroeder, J., & N.E. Wilson. The analysis of secondary consolidation of peat, p.130-44.

*RADFORTH, N.W. Conspectus: Why and how does muskeg occur? (DLC.)

74231. NATIONAL RESEARCH COUNCIL OF CANADA. *Associate Committee on Soil and Snow Mechanics.* Proceedings of the Symposium on Air Bubbling, Ottawa, 11 May 1961. Ottawa, Dec. 1961. vi, 99, 20 l. illus., maps, diagrs., graphs, tables. (*Its:* Technical memorandum no.70.) Refs.

Contains eight papers, discussion, etc. and a summary (by L.W. Gold) of this conference of some 70 engineers and scientists; also a summary of 10 reports on pneumatic de-icing installations. The papers are abstracted in this Bibliography under their authors' names, viz:

WILLIAMS, G.P. Thermal regime of lakes and rivers with reference to air bubbling systems.

BAINES, W.D. The principles of operation of bubbling systems.

INCE, S. Recent experimental observations on the use of air bubbling systems.

POUNDER, E.R. Thermodynamic considerations on the use of air bubbling systems in salt water.

SENIOR, C.W. A model describing the physical processes of Project Polynya.

DOTSON, W.A. Operational details of Project Polynya.

DICK, T.M. Description of air bubbling systems at Cambridge Bay and Tuktoyaktuk, N.W.T.

BONISTEEL, W.D., *and* A. BERGS. Investigation of a compressed air bubbler system used for ice melting.

Other contributions and general discussion deal chiefly with air pressure and orifice sizes. (DN-HO.)

74232. NATIONAL RESEARCH COUNCIL OF CANADA. *Associate Committee on Soil and Snow Mechanics.* Summary of current research in Canada on snow and ice compiled by Snow and Ice Subcommittee 1961. Ottawa, 1961. 9 p. Mimeo.

Reviews the research activities of several government agencies, universities and one industry; the research problems of snow data and instrumentation, snow roads, snow surface structure, snow creep, avalanches, frozen ground, micrometeorology over frozen ground, Ellesmere Island glaciers, behavior and structure of sea and lake ice, etc. (CaONA.)

74233. NAUCHNAÏA KONFERENTSIÏA PO ISTORII, ARKHEOLOGII I ÈTNOGRAFII DAL'NEGO VOSTOKA. Tezisy dokladov i soobshcheniĭ. Vladivostok, 1960. 64 p. Text in Russian. **Title, etc., tr.:** Scientific conference on the history, archeology, and ethnography of the Far East. Abstracts of reports and communications.

Presents one-two page summaries of 52 papers read at the Second Conference held by the Far Eastern Branch of the Academy of Sciences' Siberian Division. Four concern northern peoples or areas viz (titles translated):

Mukhachev, B.I. Foreign expansion in the far northeast of the USSR during the Civil War 1918-1923. *Deals* with American and Japanese economic and political intervention in Chukotka (U.S.), Kamchatka (Japan), and the Sea of Okhotsk region (both).

Sem, L.I. Ethnographic and linguistic data on the Ussuri Nanaets. *Discusses* 19th century and present distribution, economy, and dialects of the Golds.

Lar'kin, V.G. Ethnographic research on the Orochi. *Deals* with clan and territorial grouping, economy, genetic ties with other southern Tungus tribes. Based mainly on the author's field work in 1956-1959.

Zibarev, V.A. Prerequisites for the transition to socialism of the small peoples of Siberia and the Far East. *Discusses* evolutionary steps needed by culturally and economically backward peoples to develop from a pre-capitalistic to a socialistic stage. (DLC.)

74234. NAUCHNAÏA KONFERENTSIÏA PO ISTORII SIBIRI I DAL'NEGO VOSTOKA. Voprosy istorii Sibiri i Dal'nego Vostoka. Trudy; materialy plenarnogo zasedaniĭa i sektsii istorii dosovetskogo perioda, arkheologii i ètnografii, mart 1960. Novosibirsk, Izd-vo Sibirskogo otdeleniĭa Akademii nauk SSSR, 1961. 402 p. illus. incl. fold., tables. Refs. Text in Russian. **Title, etc. tr.:** Scientific conference on the History of Siberia and the Far East. Problems of the history of Siberia and the Far East; transactions; materials of the plenary session and of the section for history of the pre-Soviet period, archeology and ethnography, March 1960. cf. No. 64848.

Contains the six main papers and review of others presented in the plenary session at Novosibirsk, also a list of the 95 papers presented in Irkutsk, and text of 36 of them. Those dealing with the North are described in this (*) or earlier volume of *Arctic Bibliography* under the authors' names, viz (titles translated):

*OKLADNIKOV, A.P. Three hundred years of Siberian archeology and its present status.

*POTAPOV, L.P. Aims in ethnographic studies of the peoples of Siberia in accordance with the resolutions of the 21st Congress of the Communist Party of the Soviet Union.

*SHUNKOV, V.I. Studies of Siberian history abroad.

Levin, M.G. Basic results and current problems of the anthropological study of Siberia in the light of ethnogenetic investigations, No. 66261.

*MATVEENKOV, I.I. Long-range plan for study in the social sciences at the Siberian Division of the Academy of Sciences, USSR, in 1960-1975.

*PANKOV, I.P. Review of discussions at the plenary meeting.

*MUKHIN, A.A. Influence of the Siberian railroad on the social and economic development of East Siberia, 1897-1917.

*OVSIANNIKOVA, N.D. Contributions to the

history of the gold mining industry of East Siberia in the era of capitalism, 1861-1914.

Khrolenok, S.F. Formation of the proletariat in the gold mining industry of East Siberia in the second half of the 19th century, 1860-1900. Abstracted under different title as No. 65673.

*KASHIK, O.I. Trade in East Siberia in the 17th-early 18th centuries.

Medvedev, G.I. The place occupied by the Mt. Verkholensk culture in the archeological periodicity of the Cis-Baykal region, No. 66655.

Krizhevskaîa, L.IA. Manufacture of stone tools by neolithic tribes of the Cis-Angara region; use of fire as stone-splitting agent. Abstracted under different title as No. 65956.

Vasil'evskiĭ, R.S. Ancient Koryak culture; archeological sites of the Okhotsk Sea coast, No. 69039.

Smolîak, A.V. Some questions concerning the origin of the peoples of the lower Amur region, No. 68378.

*IVANOV, S.V. Ornament of the peoples of Siberia as historical source.

Dul'zon, A.P. The pre-Russian population of West Siberia, No. 64294.

Kazanfsev, A.I. Anthropological data on the skeletons from neolithic burials on the Angara River, No. 65613. (DLC.)

74235. NAUCHNOE SOVESHCHANIE PO IZUCHENIIŪ KARSTA. *Moskva,* 1956. Obshchie voprosy karstovedeniîa. Moskva, Izd-vo Akademii nauk SSSR, 1962. 248 p. illus., tables, maps, diagrs. (Akademiîa nauk SSSR. Otdelenie geologo-geograficheskikh nauk.) Refs. Text in Russian. **Title, etc. tr.:** Scientific conference on the study of karst, Moscow, 1956. General problems of karst study.

This volume (to be followed by two others dealing with special and regional problems) includes two papers dealing with karsts in permafrost regions of the USSR, which are abstracted in this Bibliography under their authors' names, viz (titles tr.):

KACHURIN, S.P. Karst and thermokarst processes in permafrost regions.

PARMUZIN, IŪ. P. Features of the karst process in permafrost conditions. (DLC.)

74236. NAUMOV, A.N. Kamennougol'nye otlozheniîa zapadnogo sklona khrebta Orulgan; Severnoe Verkhoîan'e. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik statei po paleontologii i biostratigrafii 1961, vyp. 24, p.5-12.) 5 refs. Text in Russian. **Title tr.:** Carboniferous deposits of the western slope of the Orulgan Range; northern Verkhoyansk region.

Presents a stratigraphic description from his studies of 1958-1959 in the Dzhardzhan-Unguokhtakh interfluve. The Lower Carboniferous deposits are divided into three series, the Middle and Upper into two, and each is treated in turn, noting brachiopod, coral, ammonoid and other fauna. Carboniferous deposits of the Orulgan Range are up to 5000 m. thick. (DLC.)

74237. NAUMOV, G.V. Interesnoe îavlenie vechnoĭ merzloty. (Akademiîa nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniîa 1960. vyp.3, p.82-85, illus.) Text in Russian. **Title tr.:** Interesting phenomena of permafrost.

Describes and illus. ice wedges, observed on the second terrace above the flood plain of the Vilyuy River, near Nyurba. The ground ice resembles wedges, transverse dikes and other intrusive bodies, in form. The ice wedges are usually covered with a layer of loam and the ground between them undergoes deformation which is described. The mechanism of ice wedge formation also is described. They grow upward from the layer saturated with ground water. (DLC.)

74238. NAUMOV, SERGEĬ PAVLOVICH, 1905– , *and* IŪ. V. LABUTIN. Materialy po avifaune Verkhoîanskoĭ skladchatoĭ strany, 1; sostav i nekotorye osobennosti rasprostraneniîa vidov avifauny zapadnogo Verkhoîan'îa. (Moskovskoe obshchestvo ispytateleĭ prirody, otdel biologicheskiĭ. Biūlleten' 1961. t.66, vyp.6, p.116-25, table.) 12 refs. Text in Russian. Summary in English. **Title tr.:** Materials on the avifauna of the Verkhoyansk folded country, 1; composition and some peculiarities in distribution of bird species in the western Verkhoyansk area.

Reports a study of the least explored area of East Siberia, conducted in 1954-1959: 118 species (listed) were found, 80 of them nesting or summering. Analysis of the material indicates that the Verkhoyansk Range is a northern and eastern barrier for several common birds. The avifauna shows an impoverished character with many forms not found regularly in the area, a lack of synanthropic forms, and an abundance of predators. (DLC.)

NAUMOV, V.M., *see* Ponomarenko, V.P., & *others.* Éksperimental'nyĭ reĭs za saĭkoĭ. 1962. No. 74874

74239. NAVROT, M.I. Predvaritel'noe soobshchenie o rukopisnoĭ karte Sibiri nachala XVIII veka. (Moskva. Gos. istoricheskiĭ muzeĭ. Ezhegodnik 1958 *pub.* 1960, p.135-46, map.) 10 refs. Text in Russian. **Title tr.:** Preliminary account of an early 18th century hand-drawn map of Siberia.

Describes a 37 x 60 cm. map in water-colors in the Museum collection. Hydrographically more accurate than Remezov's atlas, it shows Siberia including the northern and northeastern coastline, with Chukotka represented as a peninsula. Comparisons with 17-18th century maps suggest it was drawn about 1718 by a younger son or close associate of Semen Remezov. Sections where P. von Stralenberg and D. Messerschmidt's travel routes lay have particularly detailed treatment, suggesting the map may have been prepared for them. (DLC.)

74240. NAZARENKO, IŪ. I., *and* A. V. IABLOKOV. Otsenka metoda ucheta chislennosti belomorskogo lysuna i soobrazheniîa o sostoîanii zapasov ėtogo tiūleniîa. (Zoologicheskiĭ zhurnal, 1962. t.41, vyp.12, p.1875-82, illus., tables.) 8 refs. Text in Russian. Summary in English. **Title tr.:** Evaluation of the method of the White Sea seal census and considerations concerning its stock.

Gives an outline of the massing of *Histriophoca groenlandica* in this area for reproduction or moult. Discrepancies are pointed out between the dates of taking aerial census and the data on population dynamics, age, and sex composition obtained through biological research. The commercial killing of females has reduced the size

of the population from 3-3.5 millions in 1928 to much less than a million at present. (DLC.)

NAZAREVICH, B. P., *see* Lazukov, G.I., & B.P. Nazarevich. Otlozheniia . . . 1962. No. 73363

74241. **NAZINTSEV, IU. L.**, *and* **IU. K. ALEKSEEV.** Gal'vanicheskiĭ ledomer. (Meteorologiia i gidrologiia, Apr. 1961, no.4, p.45-47, illus.) 3 refs. Text in Russian. Title tr.: The galvanic ice meter.

Describes a device for measuring ice-crust thickness and growth rate. It consists of a wooden pole of 35 mm. diam. and 1.5 m. length. Twenty copper strips are fastened around the lower part of the pole at 25 mm. intervals, and a round zinc plate is attached to the butt. Each copper band and the zinc represent a galvanic pair, the current from which measured in microamperes depends on the medium between the zinc plate and a particular copper band. Inasmuch as the ice resistivity is considerably greater than that of water, a particular galvanic pair changes abruptly when its copper element becomes covered with ice instead of water. This change signals the thickness of the ice crust; the time between two consecutive signals provides a measure of the rate of change in the thickness of the crust. (DLC.)

74242. **NEAVE, FERRIS.** Pacific salmon: ocean stocks and fishery developments. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Proceedings, *pub.* 1961. v.10, fisheries, p.59-62.) 3 refs.

Discusses the distribution, abundance, and exploitation of *Oncorhynchus* in the North Pacific. Mature and immature world stocks, by species, are estimated from the ratio of annual catch (averaged for 1936-1939) to the total salmon population. Estimated world stock is 2,860,000 metric tons; present world stock is considerably lower. International competition, treaties, and conservation problems are also considered. (DI.)

NEAVE, FERRIS, *see also* Alaskan Science Conference 1960. 1961. No. 69643

74243. **NEDASHIKOVSKIĬ, P. P.** Modernizatsiia snegouborochnykh mashin. (Put' i putevoe khoziaĭstvo, Dec. 1961. god 5, no.12, p.22-24, illus.) Text in Russian. Title tr.: Modernization of snow-removing machines.

Deficiencies are cited in the Gavrichenko and and TSUMZ snow-removal equipment used on the railroads since the 1930's and ways of increasing their effectiveness are outlined with technical details. Convenience and reliability of the machines are stressed, also extension of their use to summer dirt and waste removal from railroad stations. Hitherto at least 75% of the snow removal around railroad stations is done manually. (DLC.)

74244. **NEEDLEMAN, STANLEY M.**, *and others.* Arctic earth science investigations Centrum Sø, northeast Greenland, 1960. Bedford, Mass., July 1962. xiv, 132 p., illus., maps, diagrs., graphs, tables. (U.S. Air Force. Cambridge Research Laboratories. Air Force surveys in geophysics no. 138. AFCRL-62-695.) 26 refs. *Contributors:* E.A. Blacke, C.L. Blackmon, W.E. Davies, D.B. Krinsley, W.H. Murphree, S.M. Needleman.

Describes field investigations carried out in May-Aug. 1960 near this lake, at approx. 80°08′N. 22°30′W., to locate and test a potential emergency airfield site on a natural sandy surface. Previous work of Operations Defrost 1956 and Groundhog 1957-1959 is reviewed. Geology and other natural features of the area are outlined by W.E. Davies, p.5-12; luxuriant plant growth, also successive abundance and scarcity of fish following ice breakup, are noted. Meteorological observations made May 16 - July 26 at the main camp, and from two auxiliary stations are summarized; they indicate conditions at Centrum Sø, as compared with other North Greenland localities, to be favorable for air operations. Soil tests and measurements are described by S.M. Needleman who is editor of the entire report, and results of laboratory examinations of field samples are given by E.A. Blacke. Permafrost is found 2.5 - 4.5 ft. below the surface. Limnology of Centrum Sø, 12 mi. long, 1.5 mi. wide, max. depth 260 ft., also snow and ice surveys are presented by D.B. Krinsley; the lake contains potable water in quantity throughout the year. The airstrip program is outlined by Needleman, its characteristics, preparation, landing tests, and evaluation are given; the 6000-ft. airstrip is capable of supporting heavy-cargo traffic for over 11 months of the year; it is concluded to be well situated for an emergency alternate for aircraft resupplying Station Nord, and the site suitable for installation of an alternate runway, hangars, etc. Extensive illustrative material is included, p.77-128. Appendices explain measurement of shear strength of soils, and list contents of cache left at the main campsite. (CaMAI.)

74245. **NEEDLEMAN, STANLEY M.**, *and others.* Evaluation of an arctic ice-free land site and results of C-130 aircraft test landings, Polaris Promontory, North Greenland 1958-1959. Bedford, Mass., Mar. 1961. x, 70 p., illus., maps incl. col. fold. in pocket, graphs, tables. (U.S. Air Force. Cambridge Research Laboratories. Air Force surveys in geophysics no. 132.) 20 refs. *Other authors:* D.W. Klick *and* C.E. Molineux.

Describes field investigations by two small parties to determine if the area, 81°15′ - 82°N. 59° - 61°W. could support military aircraft operations. The geology, meteorology, and natural terrain, soil features and bearing strength were investigated; a 5000 x 200 ft. airstrip was prepared at 81°41′N. 59°35′W. and three successful test landings by a C-130 aircraft were made. Three alternate sites are described, none with nearly the length and strength of the main site. (DWB.)

74246. **NEEDLEMAN, STANLEY M.**, *and* **A. E. PRESSMAN.** Site location in the arctic region by airphoto analysis. (Military engineer, May-June 1962. v.54, no.359, p.188-91, illus., maps.)

Presents sample results of a study to locate ice-free landing sites for heavy aircraft. The standardized presentation of the photogeologic work includes annotated oblique and vertical aerial photographs, a surficial geologic map, and a terrain interpretation of the site which describes landforms, bedrock and surficial geology, water resources, construction materials, engineering considerations, obstructions, and accessibility. One of the fifty sites selected in the Canadian Arctic, Wolf Valley (approx. 79°39′N. 82°27′W.) on Ellesmere Island, is described accordingly. Data are presented also of soil studies of a raised

sand terrace at Centrum Sø, northeast Greenland, to determine its suitability as an unpaved airstrip for C-130 aircraft. Soil type and strength also permafrost features are reported. Research is advocated to evaluate advanced aerial sensing methods of use for regional terrain assessment. (DLC.)

74247. **NEEDLEMAN, STANLEY M.** Soil science studies at Centrum Sø, northeast Greenland, 1960. (Polarforschung, 1960, *pub.* Nov. 1961. Bd. 5, Jahrg. 30, Heft 1-2, p.33-41, illus., tables, graph, map.) 15 refs.

Reports study during May-Aug. 1960 of a raised sand terrace at 80°08′N. 22°30′W. Data were obtained on engineering and glacial geology, geomorphology, permafrost, meteorology and electrical resistivity of soils. Drilling, electrical resistivity, and test pitting techniques were used to determine the depth to permafrost; the average was 46 cm. in May, 61 in June, and 97 in July. Permafrost was of the dry variety with the typical arctic frost heaving phenomena absent. A 1440 x 63 m. air strip was prepared; soil strength was increased 50% through compaction, to permit landing of C-119 and C-130 aircraft. Studies were also conducted on snow, ice, lake depth, thermal profile, and ablation. (CaMAI.)

NEEDLER, A. W. H., *see* Clark, G.R., & *others.* International Fisheries . . . 1961. No. 70763

NEERGAARD, HELGE. *See under* Bruun de Neergaard.

NEFEDOV, IU. G., *see* Burnazian, A.I. & *others.* Obespechenie radiatsionnoĭ bezopasnosti . . .1961. No. 70464

74248. **NEGANOV, V. I.,** *and* **B. IA. GNESIN.** Atomnyĭ ledokol "Lenin" v Arktike. (Sudostroenie, 1961. god 27, no.8, p.2-7, illus., diagr.) 3 refs. Text in Russian. **Title tr.:** The atomic ice-breaker *Lenin* in the Arctic.

Describes and presents data on the hull structure, atomic and turbo-electric power installations, automatic piloting and regulating equipment, crew quarters, etc. Maneuverability, operational efficiency in heavy ice, radiation control, etc. are discussed. Cross-section illus. emplacement of power installations. Special design features are noted, and a late-Sept. 1960 trip as escort to the *Ermak* towing a string of river barges is briefly described. (DLC.)

74249. **NÈGRE, CLAUDE.** La fatigue en régions polaires: aspects cliniques, biologiques et psychologiques; étude systematique d'un groupe de sujets lors de l'Expédition Glaciologique Internationale au Groenland, campagne d'été 1959. Paris, 1960. vi, 143 p. illus., tables, graphs, diagr., map. (Expéditions polaires françaises. Missions Paul-Émile Victor. Publication no.213.) 132 refs. Text in French. Summary in English and German. **Title tr.:** Fatigue in polar regions; clinical, biological and psychological aspects; a systematic study of a group of subjects on the Expédition Glaciologique Internationale au Groenland, summer campaign, 1959.

Deals, in pt. 1, p.7-22, with the environmental conditions on the Inland Ice, scope of the study of 55 individuals of 25-57 yrs. of age, its methods: pulse, arterial pressure, pulmonary capacity; body fat, etc., and neuro-muscular excitability as determined with the electronic rheotome. The results and presented p.25-73, and interpreted p.105-31. In pt. 3, p.74-101, general fundamentals of fatigue are discussed under headings of metabolic, endocrine and neuro-electrical. (DLC.)

NEGREEVA, N. N., *see* Smorodov, P. Pamiatka zverovodu. 1961. No. 75776

74250. **NEHER, HENRY VICTOR, 1904– , *and* H. R. ANDERSON.** Cosmic rays at balloon altitudes and the solar cycle. (Journal of geophysical research, Apr. 1962. v.67, no.4, p.1309-15, tables, graphs.) 9 refs.

Analyzes measurements of cosmic-ray intensity at Thule, Greenland, over most of the solar cycle 1951-1961, The energy density of cosmic rays in the vicinity of the earth was found to be 40% less in 1958-1959 than in 1954, and the particles present in 1954 but not in 1951 were almost entirely those absorbed in 200 g.cm.$^{-2}$ of the atmosphere. After the cosmic-ray maximum of 1954, the first particles to disappear were very absorbable; as the solar cycles progressed, the particles removed became increasingly energetic. Those reappearing after the cosmic-ray minimum of 1958-1959 have close to the same rapidity as those removed before the minimum was reached. Cosmic-ray changes appear to lag 9-12 months from being anticorrelated with solar activity.—From authors' abstract. (DLC.)

74251. **NEHLSEN, W. R.** Use of sea water for water supply and waste disposal in arctic coastal areas. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.52-61, diagrs., table.)

Describes the U.S. Naval Civil Engineering Laboratory investigations of the use of sea water for polar-region camps in use 2-3 to 10 years by 25-500 men. Distilled sea water is more expensive than snow-melt water (costs are compared) for drinking and cooking, but can be used where sufficient snow is not available. Sea water can be used economically in water carriage sewer systems. Two distillation methods are described, with diagrams, as are sea water sewage systems for small camps on ice islands and for camps adjacent to the sea. (CaMAI.)

74252. **NEI, TOKIO.** The mechanism of freezing of microorganisms, 2; morphological observations of freeze-dried cells with electron microscope. (Teion kagaku 1962. Ser. B, v.20, p.109-120 illus.) 13 refs. Text in Japanese. Summary in English.

Account of morphological changes in *E. coli* cells following freezing or freeze-drying. Effects of degree and rate of cooling and of air-drying versus freeze-drying are described and compared. It is concluded that *E. coli* cells are more resistant to freezing than yeast cells. (DLC.)

NEI, TOKIO, *see also*

Araki, T., & T. Nei. Mechanism freezing micro-organisms 1 . . . 1962. No. 69837

Souzu, H., & *others.* Water of microorganisms . . . 1961. No. 75845

74253. **NEĬFAKH, S. A.,** *and* **E. P. ZDRODOVSKAIA.** O vyrabotke teploty v zhivotnom organizme pri razobshchenii okislitel'nogo fosforilirovaniia v tkaniakh. (Biokhimiia, 1961. t.26, vyp.6, p.1040-50, illus., tables.) 27 refs. Text in Russian. Sum-

mary in English. **Title tr.:** Heat production in the organism following uncoupling of oxidative phosphorylation in tissues.

Rabbits treated with 2.4-dinitrophenol showed an increase in basal metabolism along with a rise in body temperature by 2°C. Concurrently a decrease in P^{32} uptake by RNA and DNA of the liver, a retention of inorganic P in the blood, and increased elimination of phosphates with urine, were noted. Uncoupling of oxidative phosphorylation, is considered the main mechanism of chemical thermoregulation. (DNLM.)

74254. NEILAND, KENNETH A. Alaskan species of acanthocephalan genus *Corynosoma* Luche, 1904. (Journal of parasitology, Feb. 1962. v.48, no.1, p.69-75, illus.) 4 refs.

Describes: Corynosoma macrosomum sp. n. from the sea otter, and *C. similis,* sp. n. from the beluga, fur seal, and rainbow smelt. A partial life history of the second species is outlined and its similarity to *C. semerme* discussed. Two other species of *C.* are recorded for the first time from the beluga and smelt. (DLC.)

74255. NEILAND, KENNETH A. Suspected role of parasites in non-rookery mortality of fur seals *Callorrhinus ursinus.* (Journal of parasitology, Oct. 1961. v.47, no.5, p.732.)

Reports autopsy of an eight-month old emaciated male which revealed the presence of seven species of helminths in specified loci of the body. Since rookery pups are affected by only one species of worms, it is suggested that since taking to the sea, the animals are prone to infection of half-a-dozen helminths. (DLC.)

74256. NEILAND, KENNETH A. Two new species of *Prosthodendrium* Dollfus, 1931, Trematoda: Lecitodendriidae, from the little brown bat in southeastern Alaska. (Journal of parasitology, June 1962. v.48, no.3, p.400-401, illus.)

Describes: P. duboisi sp. n. and *P. alaskensis* sp. n., from the intestine of this bat. Locality, holotype and closely related forms are noted. (DLC.)

74257. NEĬMAN, A. A. Nekotorye zakonomernosti kolichestvennogo raspredeleniĭa bentosa v Beringovom more. (Okeanologiia, 1961. t.1, vyp.2, p.294-304, tables, charts.) 30 refs. Text in Russian. **Title tr.:** Some general laws in quantitative distribution of benthos in the Bering Sea.

Presents results of collecting done in 1958 and 1959 by the trawlers *Zhemchug* and *Pervenets* in the eastern Bering Sea, off the entrance to Anadyr Bay and northern part of the Koryak coast; the samples were taken from the shelf area and upper continental slope to 500 m. depth. Benthos is charted in gm./m^2 of bottom; horizontal and vertical distributions are characterized. Food materials and organic carbon in the Bering Sea are analyzed and summary is given of the composition of benthic organisms. (DLC.)

74258. NEĬMAN, A. A. O zakonomernostiakh rosta vostochnosibirskogo siga v del'te Eniseia. (Zoologicheskiĭ zhurnal, Feb. 1961. t.40, vyp.2, p.286-88, illus., tables.) 17 refs. Text in Russian. Summary in English. **Title tr.:** Growth patterns of the East Siberian whitefish in the Yenisey delta.

Describes regularities in the ring and sclerite structure of scales from *Coregonus lavaretus* Pidshian. Growth of these structures is related to growth periods of the fish. (DLC.)

74259. NEĬMAN, A. A. Vertikal'noe raspredelenie zoogeograficheskikh kompleksov donnoĭ fauny shel'fa i verkhnikh gorizontov sklona v vostochnoĭ chasti Beringova moria. (Okeanologiia, 1961. t.1, vyp.6, p.1073-78, table, map, diagr.) 9 refs. Text in Russian. **Title tr.:** The vertical distribution of zoogeographic complexes of bottom fauna in the shelf and upper horizons of the slope in the eastern part of the Bering Sea.

Outlines the vertical distribution of benthic fauna on the basis of 265 bottom grab samples taken at 20-500 m. depth in 1958 and 1959. Panarctic, arctic-boreal, lower arctic-boreal, subarctic-boreal and universal zoogeographic complexes are distinguished, charted, and described. (DLC.)

74260. NEĬSHTADT, MARK IL'ICH, 1903– . Nauchnye i narodnokhoziaĭstvennye problemy torfa na Kamchatke. (*In:* Akademiia nauk SSSR. Komissiia po problemam Severa. Syr'evye resursy . . . 1961, p.98-101.) Text in Russian. **Title tr.:** Scientific and economic problems of Kamchtaka peat.

Data on genesis, paleogeographic conditions and pollen analysis are the most urgent requirements in peat exploration. The reserves in Kamchatka are immense, and its utilization for fuel, agriculture, sanitation and other purposes are discussed. (DLC.)

74261. NEKHOROSHEV, VASILIĬ PETROVICH, 1893– . Ordovikskie i siluriĭskie mshanki Sibirskoĭ platformy; otriad Cryptostomata. Moskva, Gosgeoltekhizdat, 1961. 246 p. tables, map, 37 plates. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Trudy, n. ser., t.41, Biostratigrafiia paleozoia Sibirskoĭ platformy, vyp.2.) 90 refs. Text in Russian. **Title tr.:** Ordovician and Silurian Bryozoa of the Siberian platform; order Cryptostomata.

Presents a monographic account of these bryozoans, collected by various institutions and individuals during 1949-1958 in the Lena, Vilyuy, Yenisey, Chuna, Moyero, and other river basins. Their stratigraphic distribution is indicated in the Upper Ordovician and lower Silurian. Seventy species in 16 genera and six families are described; three genera, viz: *Sibiredictya, Phaenoporella, Moyerella,* also many of the species new. They are well illus. on plates, and a systematic list is appended. (DLC.)

74262. NEKHOROSHEVA, L. V., *and* **S. V. CHERKESOVA.** Stratigrafiia i mshanki nizhnedevonskikh otlozheniĭ reki Tarei; TSentral'nyĭ Taĭmyr. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik statei po paleontologii i biostratigrafii, 1961, vyp.26, p.10-34, illus. on plates, tables, diagr.) 56 refs. Text in Russian. **Title tr.:** Stratigraphy and bryozoans of Lower Devonian deposits of the Tareya River, central Taymyr.

Describes the Tareya series of Lower Devonian and Eifelian deposits, divided into five beds according to lithology and fauna, each briefly characterized. About 13 bryozoans of orders Cyclostomata and Cryptostomata are described, mainly new species and forms. (DLC.)

74263. **NEKRASOV, I. A.** Geokriologiĭa, nauka o merzlykh tolshchakh zemli. (Priroda, Feb. 1962, no.2, p.19-26, illus., col. fold. map.) 7 refs. Text in Russian. **Title tr.**: Geocryology, the science of frozen strata of the earth.

Describes the deformation of foundations caused by permafrost. Explains the development of the science of geocryology and main features of permafrost. The geocryological map of the USSR at 1:10,000,000 scale issued in 1956 is discussed and geocryological zonality is outlined. (DLC.)

74264. **NEKRASOV, I. A.** K voprosu o pervonachal'nom zaselenii chelovekom basseĭna r. Anadyr'. (Vsesoĭuznoe geograficheskoe obshchestvo. Izvestiĭa, Jan.-Feb. 1961. t.93, vyp.1, p.81-82.) Text in Russian. **Title tr.**: Contribution to the problem of the original peopling of the Anadyr basin.

Speculates on some chance finds of 1954-1957 on the flat-top hills along the Anadyr: piles of reindeer antlers with traces of ash and coal (ancient places of sacrifice?), symmetrically spaced hollows (remains of pit houses?), retouched obsidian blade (an import? obsidian is not found locally), etc. Author, a geologist, describes physical aspects of the sites and their locations. (DLC.)

74265. **NEKRASOV, I. A.** Novaĭa geokriologicheskaĭa karta Alĭaski. (Vsesoĭuznoe geograficheskoe obshchestvo. Izvestiĭa, Sept.-Oct. 1961. t.93, vyp.5, p.448-50, map.) 3 refs. Text in Russian. **Title tr.**: A new geocryological map of Alaska.

Reviews this map at 1:10,000,000 scale in *Landscapes of Alaska* (No. 56055). Four zones of permafrost are distinguished: continuous, discontinuous, sporadic, and zone without permafrost. Data on thickness and temperature of permafrost however are lacking. (DLC.)

NEKRASOV, I. A., *see also* Okladnikov, A.P., & I.A. Nekrasov. Ancient settlements . . . 1962. No. 74493

74266. **NEKRASOV, IVAN ÎAKOVLEVICH.** K voprosu zolotonosnosti severo-zapadnoĭ chasti Verkhoĭano-Kolymskoĭ skladchatoĭ oblasti. (Akademiia nauk SSSR. Sibirskoe otdelenie. ÎAkutskiĭ filial. Nauchnye soobshcheniĭa 1959. vyp.2, p.10-15, illus., map.) Ref. Text in Russian. **Title tr.**: Gold-bearing properties of the northwestern part of Verkhoyansk-Kolyma folded zone.

Summarizes types of gold mineralization in northeastern Yakutia, in the Selennyakh Ridge, Tas-Khayakhtakh, Polousnyy, Khatynnakh-Sala, and other areas of the Verkhoyansk-Kolyma folded zone. One Paleozoic and two Mesozoic gold mineralizations are distinguished and briefly characterized, the Mesozoic with granitoids of two types, the gold content in both formations negligible, seldom reaching 0.5-4 gr./ton. Gold-bearing properties of Tertiary conglomerates also are mentioned. (DLC.)

74267. **NEKRASOV, IVAN ÎAKOVLEVICH.** Magmatizm i rudonosnost' severo-zapadnoĭ chasti Verkhoĭano-Chukotskoĭ skladchatoĭ oblasti. Moskva, Izd-vo Akademii nauk SSSR, 1962. 334 p.illus., tables, maps incl. fold., diagrs. (Akademiia nauk SSSR. Sibirskoe otdelenie. ÎAkutskiĭ filial. Trudy, ser. geologicheskaĭa, sbornik no.12.) Over 200 refs. Text in Russian. **Title tr.**: Magmatism and ore-bearing properties of the northwestern part of Verkhoyansk-Chukotka folded province.

Deals with a 250,000 km² area of northeastern Yakutia, including the Tas-Khayakhtakh, Polousnyy, Ulakhan-Sis, Selennyakh Ridges. There the author carried out petrographic-geologic studies of various magmatic complexes during 1951-1960 to establish their age, contact with enclosing rocks, morphology of intrusive bodies, petrographic composition and ore properties. Special attention was given to Polousnyy at present considered an independent ore region of Yakutia. Pre-Ordovician, Paleozoic, Triassic-Jurassic and Cretaceous magnetism is outlined. Granitoids of Upper Jurassic-Lower Cretaceous and Upper Cretaceous ages are treated in more detail, as is the metallogeny of the region. The Polousnyy Range is considered to have good tin, tungsten and rare metal prospects. Some appraisal of other areas also is given. (DLC.)

74268. **NEKRASOV, IVAN ÎAKOVLEVICH,** *and* **E. T. SHATALOV.** Metallogeniĭa i metallogenicheskie karty khrebta Polousnogo na severo-vostoke SSSR. (Vsesoĭuznaĭa ob''edinennaĭa sessiĭa po zakonomernostiam razmeshcheniĭa poleznykh iskopaemykh i prognoznym kartam, 2d, *Kiyev,* 1960. Doklady sessii, chast' 3, p.72-83, table.) 4 refs. Text in Russian. **Title tr.**: Metallogeny and metallogenetic maps of the Polousnyy Range in northeastern USSR.

Distinguishes three structural stages in the region corresponding to three cycles of magmatism: pre-Ordovician, Paleozoic and Mesozoic. Each cycle is characterized, noting rocks formed. The genetic type of endogenic deposits and their connection with magmatic complexes of rocks are analyzed. Rare metal, gold, titano-chromite and other mineralization is reported and the zones are discussed. Main principles are outlined for preparing metallogenic maps, only one of which, at one to a million, has been compiled. Prospects for non-ferrous and rare metals are considered extensive. (DLC.)

74269. **NEKRASOV, IVAN ÎAKOVLEVICH,** *and* **I. S. IPAT'EVA.** Mineralogo-geokhimicheskie osobennosti metallonosnykh granitov na primere Omchikandinskogo massiva. (Materialy po geologii i poleznym iskopaemym ÎAkutskoĭ ASSR. ÎAkutskoe geologicheskoe upravlenie., 1961. vyp.5, p.32-50, tables, map, diagr.) 20 refs. Text in Russian. **Title tr.**: Mineralogic-geochemical features of metal-bearing granites as exemplified in the Omchikandya massif.

Describes geologic-structural position of this 200 km² massif, in the central part of the Polousnyy syncline. Three groups of granites are distinguished: biotite medium-grained, biotite fine-grained, and alaskites and alaskite granites. Their mineralogic composition and crystallization features are outlined. Spectrum analysis of some accessory minerals is reported. The geochemical composition of granites is analyzed. Copper and lead are present in all stages of crystallization. Admixture of other elements also is noted. Directions for further studies are given. (DLC.)

74270. **NEKRASOV, IVAN ÎAKOVLEVICH.** Nekotorye osobennosti mezozoĭskogo vulkanizma na severo-vostoke ÎAkutii. (Vsesoĭuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.260-61.) Text in Russian. **Title tr.**: Some

features of Mesozoic volcanism in northeast Yakutia.

Distinguishes four stages of Mesozoic volcanism in the Yana-Indigirka, and Alazeya watersheds, belonging to the Kolyma medial massif. Each is characterized as to age, thickness of stratum, its composition. (DLC.)

74271. NEKRASOV, IVAN ĪAKOVLEVICH. O mezozoĭskom vulkanizme Severo-Vostochnoĭ ĪAkutii. (Akademiīa nauk SSSR. Izvestiīa, ser. geologicheskaīa, Oct. 1961, no.10, p.84-96, tables, maps.) 12 refs. Text in Russian. **Title tr.:** On the Mesozoic volcanism of northeastern Yakutia.

Reports ore-petrographic studies during 1951-1959. Volcanic activity of the Kolyma medial massif and Verkhoyansk-Kolyma folded zone is outlined and development of Mesozoic volcanism in those areas is worked out, noting age of volcanic stages, petrographic composition of rocks, form of their occurrence and main metallogenic elements. In the massif, titanium, iron and gold ore occurrences are noted, as connected with subvolcanic intrusions. In the folded zone ore occurrences of tin, cobalt, arsenic, and others are noted. (DLC.)

74272. NEKRASOV, IVAN ĪAKOVLEVICH, *and* **G. N. GAMĪANIN.** O mineral'nykh assotsiatsiiīakh i usloviīakh obrazovaniīa kobal'tovykh mestorozhdeniĭ severo-vostochnoĭ ĪAkutii. (Geologiīa rudnykh mestorozhdeniĭ, Nov.-Dec. 1962, no.6, p.54-73, illus., tables, graphs.) 40 refs. Text in Russian. **Title tr.:** On mineral associations and formation conditions of the cobalt deposits in northeastern Yakutia.

Reports a systematic study in 1958-1961, of the geologic structure and mineral composition of the ores of the principal cobalt deposits of the area. The Severnoye, Arbatskoye and Kandidatskoye deposits, the cobalt ore manifestations in the Polousnyy and Ulakhan-Sis Ranges and the Ergelyakh gold-cobalt deposits in the Cherskogo Range were investigated in the greatest detail. Two types of cobalt mineralization occur: glaucodot-cobalt glance and safflorite-löllingite. Factors affecting separation of arsenides and sulfo-arsenides are reported. Distribution of Co and Ni in igneous rocks and rock-forming minerals are analyzed. Sources of cobalt are discussed. (DLC.)

74273. NEKRASOV, IVAN ĪAKOVLEVICH. Ob usloviīakh obrazovaniīa nekotorykh olovorudnykh mestorozhdeniĭ severo-vostoka ĪAkutii. (Geologiīa rudnykh mestorozhdeniĭ, May-June 1961, no.3, p.38-50, tables, diagrs.) 22 refs. Text in Russian. **Title tr.:** On formation conditions of some tin ore deposits in northeastern Yakutia.

Reports a study in the Polousnyy (69°50′N. 140°E.) ore region. Structural features and mineral and chemical composition of tin ore deposits of cassiterite-quartz formation are described. Deposits of transitory type, i.e. between cassiterite-quartz and cassiterite-sulfide, are identified and characterized. Some conditions of development of tin-bearing granitoid intrusions are reported. Data are presented on distribution of tin in some rocks and in rock-forming minerals. (DLC.)

74274. NEKRASOV, IVAN ĪAKOVLEVICH, *and* **K. V. ĪABLOKOV.** Osnovnye cherty metallogenii khrebta Ulakhan-Sis na Severo-Vostoke ĪAkutii. (Geologiīa rudnykh mestorozhdeniĭ, Mar.-Apr. 1961, no.2, p.79-89, tables, text maps, diagr.) 5 refs. Text in Russian. **Title tr.:** Main metallogenic features of the Ulakhan-Sis Range in northeast Yakutia.

Reports ore-petrographic investigations of this little known range, approx. 69°30′N. 150°E. Petrographic composition and morphology of the intrusive bodies are described. Genetic types of endogenic ore occurrences are outlined. Mineralization of cobalt, molybdenum, tin-tungsten, and gold-arsenic is evaluated. Laws governing these ore occurrences are summarized. (DLC.)

74275. NEKRASOV, IVAN ĪAKOVLEVICH, *and others.* Zolotonosnost' severo-zapadnoĭ chasti Verkhoĭano-Chukotskoĭ skladchatoĭ oblasti. (Geologiīa i geofizika, 1961, no.4, p.64-73, map.) 2 refs. Text in Russian. Summary in English. *Other authors:* I.S. Rozhkov *and* A.I. Borodīanskiĭ. **Title tr.:** Gold-bearing properties of the northwestern part of the Verkhoyansk-Chukotka folded zone.

Outlines distribution patterns and structure of the Adycha, Kular, Polousnyy, Selennyakh, Moma, and Alazeya gold-ore deposits. Their age and formation are discussed. For first time the presence of gold-ores is indicated in Paleozoic granitoids of the Kolyma medial massif. A tentative and summary appraisal is added of gold-bearing deposits of different areas of this folded zone. (DLC.)

NEKRASOV, IVAN ĪAKOVLEVICH, *see also*

ĪAblokov, K.V., & I. ĪA. Nekrasov. . . . Ulakhan-Sis. 1961. No. 72292

Ozolevskaīa, G.V., & I. ĪA. Nekrasov. Petrografiīa . . . 1962. No. 74597

NEKRASOV, I. N., *see* Grave, N.A., & I.N. Nekrasov. Nekotorye nabliūdeniīa za termokarstom . . . 1961. No. 71824

74276. NEKRASOV, V. I. Izuchenie rosta lesa v raĭone padeniīa Tungusskogo meteorita. (Lesnoe khozīaĭstvo, Jan. 1962. god 15, no.1, p.22-24, illus.) Text in Russian. **Title tr.:** Study of the forest growth in the Tunguska meteorite fall area.

The first explorers of the site reported the forest growth stunted. Observations since 1958 however, indicate accelerated growth after the meteorite's fall (in 1908), the rate higher than that earlier, also higher than that in similar stands elsewhere: the annual tree rings, normally 1-2 mm. thick, had increased to 15-20 mm., after the fall. Timber usually 10-30 m^3/hectare for this type of marshy taiga, rose to 100-150 m^3 in the fall area. This phenomenon is under study by Soviet biologists, silviculturists and bog experts; it is expected to elucidate the genesis of growth acceleration for silviculturists. (DLC.)

74277. NEKRASOV, V. I., *and* **ĪŪ. M. EMEL'ĪANOV.** Povliīala-li Tungusskaīa katastrofa na rost lesa? (Priroda, Feb. 1962. god 51, no.2, p.102-105, illus.) Ref. Text in Russian. **Title tr.:** Did the Tunguska catastrophe affect forest growth?

Describes the extent of damage from the meteorite fall in 1908, and based on tree-ring studies, the accelerated growth in several forms, which took place in trees of the vicinity subse-

quently. A commission studying the problem found indications of forest fires following the fall. These could have improved growth conditions by lowering the permafrost level or changing the hydrological conditions of the area. (DLC.)

NEKRASOVA, K. A., *see* Litvinenko, I.V., & K.A. Nekrasova. Osobennosti glubinnogo seĭsmicheskogo zondirovaniĭa . . . 1962. No. 73544

74278. NEKRASOVA, OL'GA IOSIFOVNA. Litologo-fatsial'nyĭ analiz karbonatnykh tolshch na primere izucheniĭa nizhne- i srednekembriĭskikh otlozheniĭ iŭgo-vostochnoĭ okrainy Sibirskoĭ platformy. Moskva, Gosgeoltekhizdat, 1962. 106 p. illus., tables incl. fold. in pocket, maps, plates. (Leningrad. Vsesoiŭznyĭ n.-i. geologicheskiĭ institut. Trudy, nov. ser. t.71.) 37 refs. Text in Russian. **Title tr.:** Lithologic-facies analysis of carbonaceous strata as exemplified by a study of Lower and Middle Cambrian deposits in the southeastern margin of the Siberian platform.

Outlines the stratigraphy, lithologic properties, analyses of facies of these deposits in the northern slope of the Aldan massif, from own work in the Yudoma valley, and that of other investigators in the Aldan, Chabda and Amga basins. Despite the extensive bitumen occurrences, productive oil has not yet been discovered. Form and conditions of rock occurrences, textural and structural properties, mineral composition of rocks, and other features are analyzed and described in detail. (DLC.)

74279. NEKRASOVA, T. P. Osobennosti lesnogo semenovodstva v Zapoliar'e. (Lesnoe khoziaĭstvo, Aug. 1961. god 14, no.8, p.47-49, table.) Text in Russian. **Title tr.:** Features of forest seed-growing beyond the Arctic Circle.

Discusses the problem of supplying local pine seed for forest regeneration in Murmansk Province. The seed should be collected in forests south of a line from Notozero (68°30′N. 31°10′E.) through the southern slopes of the Khibiny Mts. to Olenitsa (66°29′N. 35°22′E.); protected groves of high-grade pine should be established; seeds grown in the northern part of the peninsula should not be used. Data are tabulated on the germination capacity of seeds collected in southern Kola, 70-92%, as compared with 3.2-16.5% for seeds from the northern part. (DLC.)

74280. NEKRASOVA, V. A., *and* **V. N. STEPANOV.** Tipy izmeneniĭa temperatury vody po vertikali v Mirovom okeane. (Akademiia nauk SSSR. Doklady, 1962. t.143, no.3, p.713-16, illus., table, map.) Text in Russian. **Title tr.:** Types of changes in vertical temperature of the World Ocean.

From station records about equally distributed over this area, authors established five types of temperature distribution in depth. These include a polar type (with North Atlantic and North Pacific sub-types), a subarctic Atlantic and a subarctic Pacific type. (DLC.)

74281. NELLEMANN, GEORGE. Dagligliv som "humanist". (Grønland, Dec. 1961, nr.12, p.455-61, illus.) Text in Danish. **Title tr.:** Daily life as a "humanist".

Recounts experiences as interviewer for the Danish Committee for Community Research in Greenland (Udvalget for Samfundsforskning i Grønland) in 1958-59, visiting most of the West Greenland coast. Transport, accommodation, etc. are described. (DLC.)

74282. NELLEMANN, GEORGE. Imiaq, det hjemmebryggede, grønlandske øl. (Grønland, Nov. 1961. nr.11, p.411-19, illus., diagr.) Text in Danish. **Title tr.:** Imiaq, the home-brewed Greenland beer.

Home-brewing became widespread when malt was made available in 1929, and in 1959 the home-brewed beer accounted for 37% of the total alcohol consumption, 29% in towns and 67% in the outlying settlements. Analyses show it to contain no poisonous metal compounds; it passed the bacteriological tests also. Some common recipes are given. (DLC.)

74283. NELLEMANN, GEORGE. De staerke drikkes historie i Grønland. (Grønland, May 1962, nr.5, p.191-99, illus.) Text in Danish. **Title tr.:** The history of hard liquor in Greenland.

Reviews the regulation of drinking: the native Eskimos were familiar with the use of alcohol before Danish colonization began in 1721. Prohibitive regulations were instituted from 1782 and in general most of the Greenland population had no legal access to alcohol but on some exceptional occasion till 1929, when purchase became permissible and spirits drastically rationed. Liquor sale became completely unrestricted in 1954. (DLC.)

74284. NELLEMANN, GEORGE. Theories on reindeer breeding. (Folk, 1961. v.3, p.91-103, map.) 38 refs.

Discusses various theories as to a hunting or cattle-breeding origin, the relative age, cultural unity or plurality, specialization, etc. of Eurasian reindeer breeding. Features common to reindeer-breeding cultures are noted: marking of ears, castration by biting, decoy animals, use of the lasso, sled-driving. Specialized traits also are discussed: use as riding or pack animals, for milking, etc. are typical of Scandinavian Lapps and the Tungus-Sayan peoples but not of the Finnish and Russian Lapps, the Samoyeds, Chukchis, and Koryaks. This disparity may be ascribed to the first group's proximity to cattle herders or to the second's culture losses. (DSI.)

74285. NELLEMANN, GEORGE. Vinterfiskeriet på Jakobshavns Isfjord. (Geografisk tidsskrift 1961. bd. 60, p.39-53, illus., map, table.) Text in Danish. Summary in English. **Title tr.:** The winter fishery on Jakobshavns Isfjord.

Describes the 20th-century development and techniques of the Greenland halibut fishery, now a major industry in this former sealing district. Summer fishing is by longline from boats, and the winter fishing, which is more important, by longline through holes in the ice one-and-a-half to four hours' sled trip from Jakobshavn. The fishermen spend the night near the icehole despite the hazard of breakup and the fishermen and gear drifting away. The fish is brought to Jakobshavn by dog sled; salted or frozen for export or local consumption. This fishery is dependent on weather conditions, its maximum season from October to April-May. Production is limited because conditions restrict transport to sleds. (DLC.)

74286. NELMS, J. D., *and* **D. J. G. SOPER.** Cold vasodilatation and cold acclimatization in the hands of British fish filleters. (Journal of applied

physiology, May 1962. v.17, no.3, p.444-48, illus., tables.) 11 refs.

Vasodilatation in hands immersed in ice-water appeared earlier, and hand temperatures remained higher among filleters than in controls. Partially similar results were observed with water of 5°C. Several controls fainted and all were distressed, while most of the filleters remained unaffected, having been acclimatized by work in cold water. (DLC.)

74287. **NELSON, J. G.** Drift voyages between eastern Asia and the Americas. (Canadian geographer, summer 1962. v.6, no.2, p.54-59, map.) 25 refs.

Presents evidence for such drifts including 16 Japanese vessels which reached the Aleutians, Kamchatka, or Alaska; and suggests contacts resulting from such voyages during the 17-19th centuries as possibly accounting for cultural similarities between eastern Asian and western North American natives observed upon early contact with Europeans. (DGS.)

74288. **NELSON, JAMES H.,** *and others.* Magnetism of the earth. Washington, D.C., U.S. Govt. Print. Office, 1962. iv, 79 p. illus., maps incl. fold., diagrs., graphs, tables. (U.S. Coast and Geodetic Survey. Publication 40-1.) 66 refs. *Other authors:* L. Hurwitz and D.G. Knapp.

Explains in layman's terms the main aspects of the earth's magnetism. The magnetic poles, isogonic chart of the north polar region for 1955, transient variations with graphical examples from Sitka, Alaska, are included. Magnetic surveys are outlined noting methods and data of land, sea, and airborne surveys. Field and laboratory instruments are compared. Origins of geomagnetic science are outlined by D.G. Knapp, and illus. by historical instruments and charts. Contributions of the International Meteorological Organization, the First and Second Polar Year Commissions, and the International Geophysical Committee, are briefly reviewed. (DI.)

74289. **NELSON, M. G.,** *and* **B. NICHOLL.** Paroxysmal cold haemoglobinuria. (Irish journal of medical science, Feb. 1960. no.410, p.49-57, tables.) 17 refs.

Authors discuss etiology (cold exposure), symptoms, and pathology of this syndrome; its three varieties (with case reports), their nature, symptom and differential diagnosis; therapy. (DNLM.)

NELSON, R. W., *see* Thorsteinson, F.V., & *others.* Experimental harvest . . . sea lion in Alaskan waters. 1961. No. 76128

74290. **NELSON, SAMUEL JAMES.** Horridonid brachiopods as horizon indicators, Permo-Pennsylvanian of the Yukon Territory. (Alberta Society of Petroleum Geologists. Journal, Apr. 1962. v.10, no.4, p.192-97, illus.) 6 refs.

Suggests field methods with which the ?Upper Pennsylvanian Lower Limestone unit of the Yukon Territory can be distinguished from the Lower Permian Tahkandit formation by this type of brachiopod. Specimens from the Lower Limestone probably represent a new genus, described and illus.; two species, also illus., are probably present in the Tahkandit. One, in the lower Tahkandit, is the most abundant horridonid in the Yukon succession, and is closely related to *Horridonia horrida* (Sowerby). The other species, represented by some poorly preserved specimens in the upper Tahkandit, is found only in one section in the Porcupine River area of Yukon Territory; it is larger and has a wider hinge than does the first. Similarity to two known species is suggested. This two-fold faunal division for the Tahkandit may also be represented in northern Ellesmere Island. (DGS.)

74291. **NELSON, SAMUEL JAMES.** Permo-Carboniferous of the northern Yukon Territory. (Alberta Society of Petroleum Geologists. Journal, Jan. 1961. v.9, no.1, p.1-9, illus., diagr.) 3 refs.

Outlines stratigraphy and paleontology of this fossiliferous succession, based mainly on two years' work in the western Ogilvie Range, 64°25′N. 133°40′W. Index brachiopods, twelve in number, diagnostic for certain of the horizons, are described and illus. Tentative stratigraphic succession of four units, Upper Mississippian to Middle Permian, is established. Methods used may serve to identify similar successions in northern Yukon, containing possible oil horizons. (DGS.)

NELSON, SAMUEL JAMES, *see also* Geol. Assoc. of Can. Ref. fossils Can. Mississippian faunas W. Can. 1961. No. 71634

74292. **NELSON, URBAN C.,** *and* **D. L. SPENCER.** The Bureau of Sport Fisheries and Wildlife's position on the Arctic National Wildlife Range. (*In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.69-72.)

Reviews discussion of a scientists' symposium on the potential uses of this 8,900,000 acre area in northeastern Alaska; also interest views of other specialized groups; and the government directives to permit hunting and fishing, oil leasing but not mining, etc. The Range is to be administered by the U.S. Bureau of Sport Fisheries and Wildlife, with headquarters probably in Fairbanks, and one or more field camps in the Range area. (CaMAI.)

NELSON, WILLIS HOWARD, 1920– , *see* Coats, R.R., & *others.* Geol. reconn. Kiska I. . . . 1961. No. 70774

NEMES, G., *see* Hársing, L., & *others.* Hypothermia . . . inulin-térre. 1961. No. 72050

NEMTSOVA, È. I., *see* Mishin, V.M., & È.I. Nemtsova . . . magnitnykh vozmushchenii . . . 1961. No. 74062

74293. **NENASHEV, N. I.** Novye dannye o vozraste izverzhennykh porod zapadnoĭ chasti Verkhoĭano-Kolymskoĭ skladchatoĭ oblasti. (Akademiia nauk SSSR. Doklady, Jan. 21, 1962. t.142, no.3, p.657-60, table, map.) 11 refs. Text in Russian. **Title** tr.: New data on the age of igneous rocks in the western part of the Verkhoyansk - Kolyma folded zone.

Presents and evaluates data on the age of igneous rocks in Cherskogo and Tas-Khayakhtakh Ranges, the Arangas and Derbeke massifs, and other areas of Yakutia and Magadan. Absolute age determinations by the potassium-argon method for 65 samples are tabulated. Magmatic activity in the Verkhoyansk-Kolyma folded zone lasted about a hundred million years, from the beginning

of the middle Jurassic (160 million years ago) to the end of Cretaceous (64 million years ago). (DLC.)

74294. NENASHEV, N. I. Vremia obrazovaniia izverzhennykh porod v "prodol'nykh" i "poperechnykh" zonakh zapadnoi chasti Verkhoiano-Kolymskoi skladchatoi oblasti. (Akademiia nauk SSSR. Komissiia po opredeleniiu absoliutnogo vozrasta geologicheskikh formatsii. Trudy sessii 10, 1961 *pub.* 1962, p.252-67, tables, map, graph.) 10 refs. Text in Russian. **Title tr.:** Time of igneous rock formation in "longitudinal" and "transversal" zones in the western part of the Verkhoyansk-Kolyma folded province.

Discusses the age problem of granitoids found in "longitudinal" and "transversal" zones in respect to folding. For 65 igneous rock samples collected in the Derbeke-Nel'gekhe, Tas-Khayakhtakh and upper Indigirka regions, the absolute age determinations were made by the potassium-argon method. The data are tabulated and interpreted. Intrusions of igneous rocks proceeded from Upper Jurassic to Upper Cretaceous and Paleogene. (DLC.)

NENASHEV, N. I., *see also*
Mikheenko, V.I., & N.I. Nenashev. Absoliutnyi vozrast . . . 1961. No. 73991
Mikheenko, V.I., & N.I. Nenashev. Razdelenie trappov . . . po vozrastu. 1962. No. 73994

NEPOKLONOV, IU. A., *see* Bondarev, G.I., & *others.* Énergeticheskie zatraty . . . 1962. No. 70318

NERGÅRDH, A., *see* Hellström, B., & A. Nergårdh. The influence of hypothermia . . . 1960. No. 72107

NERONOVA, N. N., *see* Dorfman, M.D., & *others.* Del'khaielit . . . 1961. No. 71079

74295. NERSESOVA, Z. A. Teplota smachivaniia i poverkhnost' gruntov pri vzaimodeistvii s vodoi. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Fiziko-khimicheskie protsessy v promerzaiushchikh i merzlykh gornykh porodakh, 1961, p.28-39, tables.) 60 refs. Text in Russian. **Title tr.:** Heat of wetting and the surface of the ground during interaction with water.

Reviews Soviet and foreign research and presents results of measurements of this phenomenon in the temperature range 25° - 2°C. The heat of wetting increases with decreasing temperature and is a function of the surface magnitude and energy, and greatly dependent on the nature of the ions which make up the surface. The practice of using data on heat of wetting to determine the specific surface of the ground is claimed to be wrong in principle. (DLC.)

74296. NERSESOVA, Z. A. Vliianie obmennykh kationov na migratsiiu vody i puchenie gruntov pri promerzanii. (*In:* Materialy po laboratornym issledovaniiam merzlykh gruntov, 1961. sbornik 4, p.22-52, tables, graphs, diagrs.) 68 refs. Text in Russian. **Title tr.:** Effect of exchange cations on the migration of water and the heaving of soils during freezing.

Surveys Soviet and foreign work in this field and reviews experiments with various clays, loams, and sand. The physicochemical properties, particularly exchange cations, of soils are of major importance in the processes of moisture migration, ice segregation and frost heaving, since, to a considerable degree, they determine the magnitude and energy of the active surface and its capillary properties. Under conditions of equal temperature gradients, moisture migration, ice segregation, and heaving increase sharply in the case of saturation with polyvalent exchange cations and H ions as opposed to K and Na ions. When polyvalent cations are introduced into the exchange complex of normally frost-resistant clays, they become frost-susceptible, while very frost-susceptible clays lose their susceptibility to heaving in the presence of univalent exchange cations.—From CRREL. (DLC.)

74297. NESHEIM, ASBJØRN, 1906– . Finnish *hiisi* and Lappish *sii'dâ.* (Finnisch-ugrische Forschungen, 1951. Bd. 30, p.292-302.) Refs. in text.

Etymological study suggesting a genetic relationship between these two words, also the Lappish *sieita,* i.e. sacrificial place, and the Samoyed *tïd:* low willow clump. *Sii'dâ* (village) may have meant originally the wooded hunting or fishing territory of a certain group. (CtY.)

74298. NESHEIM, ASBJØRN, 1906– . The Lappish dialect of Ullsfjord and its relations to other Lappish dialects. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.333-60.) 14 refs.

Comparative analysis of one of several Lappish idioms of the Norwegian coast: phonetic and phonemic features, morphology, derivation. The Ullsfjord dialect is closer to that of Karesuando (Sweden) than Kautokeino (Norway); it is considered to be "a Swedish-Lappish dialect transferred to Norway and having almost completely superseded an old Sea-Lappish dialect." (DSI.)

74299. NESHEIM, ASBJØRN, 1906– . Samene og deres kultur. (Sameliv 1959-1960 *pub.*. 1961, p.48-84, illus.) Text in Norwegian. **Title tr.:** The Lapps and their culture.

Reviews their origins, language, distribution, and economy. Taxation of Lapps in earlier times is outlined, as is their social life, religion, folklore and music. Four groups are distinguished: mountain, forest, river and sea Lapps, and current problems are discussed. (SPRI.)

74300. NESIS, K. N. Donnaia fauna kak pokazatel' gidrologicheskogo rezhima moria; na primere Severo-Tsentral'nogo raiona Barentseva moria. (Murmansk. Poliarnyi nauchno-issledovatel'skii institut morskogo rybnogo khoziaistva i okeanografii. Nauchno-tekhnicheskii biulleten' 1960. no.3 (13), p.34-36, illus.) Text in Russian. **Title tr.:** The bottom fauna as indicator of hydrographic conditions in the sea; as exemplified by the north-central region of the Barents Sea.

Reports on the benthos of a small (6.2 km²), representative area as studied before the war and in 1957-58. Temperature and salinity, geographic origin of forms, benthic complexes (three), and their limits are noted in a general way. (DLC.)

74301. NESIS, K. N. Korally i morskie per'ia, indikatory gidrologicheskogo rezhima. (Okeanologiia, 1962. t.2, vyp.4, p.705-714, table, fold. maps, profile.) 46 refs. Text in Russian. **Title tr.:** Corals

and sea pens as indicators of the hydrological regime.

Contains a description of currents in the northern and arctic Atlantic, followed by records of corals and sea pens collected in these areas by PINRO expeditions during 1954-1960. Depth and distribution of the finds are noted. An attempt is made to correlate the detailed distribution of these benthonic forms with the ambient water temperatures, dependent in their turn on the water masses, their distribution and movements. (DLC.)

74302. NESIS, K. N. Sushchestvuiut li v Belom more tikhookeanskie litorinovye relikty? (Okeanologiia, 1961. t.1, vyp.3, p.498-503.) 45 refs. Text in Russian. **Title tr.:** Are there Pacific littoral relicts in the White Sea?

Refers to Derĭugin's monograph on the White Sea fauna (No. 50516) and his statement that some littoral species migrated thither from the Pacific during postglacial times. Geographic distribution and ecology of the rhizopod *Rhoiconeis bolleana,* lamprey *Lampetra japonica,* herring *Clupea harengus,* and some other forms concerned are considered. Postglacial climate and other data are analyzed to show that there was no possibility of Pacific littoral fauna migrating to the European seas. The places from which these and other species could have migrated were the coasts of Alaska and Canada. (DLC.)

74303. NESTERENKO, I. P., *and* **N. A. GORELIKOV.** Vyiavlenie merzlykh linz v tele nasypi metodami ėlektrorazvedki. (Transportnoe stroitel'stvo, Jan. 1960. god 10, no.1, p.39-40, diagrs.) Text in Russian. **Title tr.:** Detection of frozen lenses in an embankment using electrical methods.

Reports on the degradation of an 18 m. road embankment built in winter of sand with an argillaceous admixture; evidently caused by the thawing. The frozen and non-frozen ground was differentiated by a resistivity method, its application, results, advantages, etc. are described. (DLC.)

74304. NESTEROV, I. I. Genezis i istoriia formirovaniia struktur Berezovskogo raĭona Zapadno-Sibirskoĭ nizmennosti. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaia geologiia, 1961. vyp.17. Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.42-50, diagrs., graphs.) 5 refs. Text in Russian. **Title tr.:** Genesis and formation history of structures in the Berezovo region of the West Siberian plain.

Reports analyses of local structures based on determination of angle of inclination of rocks. Genesis and development of third, second, and first order structures are discussed. Those tectonically active and passive are distinguished. Genesis is considered important for oil and gas prospecting. (DLC.)

74305. NESTEROV, I. I. Tarskaia svita Berezovskogo raĭona Zapadno-Sibirskoĭ nizmennosti. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaia geologiia, 1961. vyp.14, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.33-36, table.) 4 refs. Text in Russian. **Title tr.:** The Tara series of the Berezovo region of the West Siberian plain.

Describes lithologic properties, mineralogic and geochemical composition of the Tara series, Hauterivian-Barremian in age. The age is established by foraminifers of gen. *Haplophragmoides, Nonioninoides,* and others. Data on the authigenous iron and organic carbon content in the rocks are tabulated. (DLC.)

NESTEROV, I. I., *see also* Gurari, F.G., & *others.* O stratifikatsii . . . 1962. No. 71914

74306. NEUBEISER, R. E., *and others.* Magnesium in blood and tissues during cold acclimation. (Journal of applied physiology, Mar. 1961. v.16, no.2, p.247-49, illus., table.) 17 refs. *Other authors:* W.S. Platner *and* J.L. Shields.

Reports on serum, heart, liver and skeletal-muscle Mg in rats exposed for six weeks to cold. Results of these, as well as body temperature determinations suggest that hypothermic peripheral tissues are the source of the transient rise of serum Mg. (DLC.)

NEUGEBAUER, H. E. O., *see* Remick, J.H. Preliminary report . . . 1961. No. 75106

74307. NEUMANN, HENRICH, *and* **K. Ø. BRYN.** X-ray powder patterns for mineral identification, 4; carbonates. Oslo, Aschehoug, 1958. 6p., 9 plates. (Norske videnskaps-akademi. Avhandlinger, Matematisk-naturvidenskapelig klasse, no. 1.)

Describes and discusses data and experimental procedure used in establishing X-ray patterns for about 70 carbonates occurring as minerals. These incluse two specimens collected from Greenland and one from Nordland, Norway. (DGS.)

74308. NEUVONEN, K. J. The apparent age pattern of the crust. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finlande, 1961. no.196, p.445-54, diagr.) 24 refs.

Discusses, p.451-53, the stratigraphy of the Precambrian formations of Finland. Two main cycles of sedimentation have been generally accepted, and the Karelian system in eastern and northern Finland considered younger than the Svecofennian in the south and west. This is not supported by the nuclear (isotopic) datings, and the two systems are said by some to represent simply different sedimentation and tectonic environments during a single cycle; others hold to the existence of two orogenic cycles, but believe the younger Svecofennian intrusives were rejuvenated during the Karelian diastrophism. Mineral datings alone cannot solve the age problem in Finnish geology; the dating of younger orogenic belts however, might give valuable information on metamorphism, mineral equilibrium, and the mechanics of mountain building. (DLC.)

NEVERRE, GEORGES, *see* Malméjac, J., & *others.* . . . rythme cardiaque en hypothermie . . . 1962. No. 73771

74309. NEVIAZHSKIĬ, I. I. Nekotorye voprosy ispol'zovaniia aėrofotosnimkov dlia izucheniia prirodnykh kompleksov Tsentral'noĭ Iakutii. (Moskva. Universitet. Vestnik, ser. 5, geografiia, Jan.-Feb. 1962, no.1, p.43-49, illus.) 5 refs. Text in Russian. **Title tr.:** Some problems in the utilization of air photographs for investigation of the natural complexes of central Yakutia.

Summarizes the applicability of air photographs in distinguishing features of vegetation, landscape forms, settlements, lakes, thermokarst areas, buried ice, etc. Various physical-geographic features of especially the Lena-Vilyuy basin are briefly characterized, noting in a general way, the major assistance of air photography to geologic, geomorphic and geographic studies. (DLC.)

NEVILLE, FLOYD J., *see* Canada. Northern welfare '62. 1962. No. 70539

74310. NEVILLE, WILLIAM E., *and others*. Profound hypothermia and complete circulation interruption. (Archives of surgery, Jan. 1961. v.82, no.1, p.108-119, illus., tables.) 30 refs. *Other authors:* S. Kameya, M. Oz, B. Bloor, *and* G.H.A. Cloves, *Jr.*

Account of conditions in dogs cooled to 10°C., with full, partial or no circulatory arrest. O_2-consumption, including that of the brain; metabolic acidosis, vascular reactivity and resistance, and blood volume, are considered. Experience with 47 patients cooled to 8-30° C. is also reported. (DLC.)

NEVILLE, WILLIAM E., *see also*

Kameya, S., & *others*. A study of oxygen consumption . . . 1960. No. 72636

Oz, M., & *others*. Relationship of blood volume . . . 1960. No. 74596

74311. NEVZOROV, N. V. Voprosy organizatsii territorii v lesakh Vostochnoi Sibiri. (Lesnoe khozyaistvo, June 1961. god 14, no.6, p.49-54, tables.) Text in Russian. **Title tr.:** Problems of territorial organization of the forests in Eastern Siberia.

The 1965 timber production in Siberia is to be 33% above that of 1958, though the national average increase is to be only 11%. Eastern Siberia, with 484 million hectares of forests is to play the leading role. A territorial organization of the industry is discussed for Krasnoyarsk Province, taking into account the forest types, economic factors, population density, etc. A 1-3 km. forest-preserve belt is to be established along the (75) river banks. (DLC.)

74312. NEWFOUNDLAND. DEPT. OF PUBLIC WELFARE. Annual report (10th) for the year ended March 31st, 1960. St. John's, Nfld., Queen's Printer, 1960. 182 p.

Includes list of welfare officers at headquarters and regional offices, p.9-12; and (p.111-17) report of W.G. Rockwood, director of the Division of Northern Labrador Affairs. From seven units north of Cape Harrison, the Division operates general stores, encourages economic rehabilitation through local industries, and directs welfare services, communications, rehousing and resettlement. The closing of Hebron and resettlement of its people at Nain, Hopedale, and Makkovik is reported. The economy of the area is based on codfish production; char fisheries, fur sales, and seal products are declining in value. The Eskimos are progressing well. The local Indians are in poor economic plight due to lack of education, little knowledge of the English language, etc.; they are being encouraged to utilize natural resources as the Eskimos and white settlers do; educational and trapping aids are being provided. (CaONA.)

74313. *NEWFOUNDLAND QUARTERLY*. Twin Falls plant to double capacity. (Newfoundland quarterly, summer 1962. v.61, no.2, p.39.)

Reports plans of the British Newfoundland Corp. Ltd. affiliate, Twin Falls Power Corp. Ltd. to double the capacity of its 120,000 h.p. plant on Unknown River, Labrador. To the initial plant beginning operation in June 1962, two 60,000 h.p. additions are to be made, construction starting in late 1963. They are to supply more power to the Wabush Lake area iron mining operations. Construction of the original plant was reported *ibid.*, fall 1960, v.59, no.3, p.41. (CaONL.)

74314. NEWMAN, MARSHALL THORNTON, 1911- . Ecology and nutritional stress in man. (American anthropologist, Feb. 1962. v.64, no.1, pt. 1, p.22-34.) 37 refs.

Discusses diseases caused by undernutrition and malnutrition. Deficiency diseases attributable to the prevalent use of a single nutrient have strong ecological associations. Rickets, osteomalacia, also scurvy are associated with cold climate. Abandonment of native diet intensifies nutritional diseases especially among acculturated cold-climate peoples: e.g. Labrador Eskimos, Swedish Lapps. Widespread mild anemia of Alaskan Eskimos may derive from heavy fish consumption. (DSI.)

74315. NEWSOM, BERNARD D., *and* **D. J. KIMELDORF.** Tolerance of rats to a cold environment during multiple exposures to a low dose of X-rays. (American journal of physiology, May 1962. v.200, no.5, p.1039-42, illus., table.) 4 refs.

To reduce lethal effects of irradiation, greater intervals were required between exposures at 6° C. than at 23° C. Measurement of food intake showed that cold stress potentiates the effects of reduced food intake caused by irradiation and though the rats were able to increase food consumption in the cold, it was not sufficient for adaptation. (DLC.)

NIBLETT, E. R., *see* Whitham, K., & E.R. Niblett. Diurnal problem aeromag. survey. 1961. No. 76545

NICHOLL, B., *see* Nelson, M.G., & B. Nicholl. Paroxysmal cold haemoglobinuria. 1960. No. 74289

74316. NICHOLS, DONALD RAYMOND, 1927- , *and* **L. A. YEHLE.** Mud volcanoes in the Copper River basin, Alaska. *(In:* International Symposium on Arctic Geology. Proceedings 1961, v.2, p.1063-1087, illus., 2 maps in v.3, tables.) 29 refs.

Describes seven mineralized springs and their related cones, locally called mud volcanoes, near Glennallen (62°08′N. 145°38′W.). Geographic setting and regional geology are outlined. Physical characteristics of the three mud volcanoes in the Drum Group, 150-310 ft. high, and the four (25-60 ft.) in the Tolsona Group are depicted, illus., and compared in a table. Analyses of gas and of water from some of these springs are also tabulated. Differences in composition of gases from the two groups suggest derivation from entirely different sources; that from the Tolsona group from buried marsh or coal deposits; that from the Drum group from volcanic sources. Water in the two groups seems also from different sources. The cones were

formed by quiet intermittent accretion. Formation took place largely before or during the last major glaciation. Postglacial growth has been negligible, except for the Lower Klawasi, in the Drum group. (DGS.)

74317. NICHOLS, ROBERT LESLIE, 1904- . Characteristics of beaches formed in polar climates. (American journal of science, Nov. 1961. v.259, no.9, p.694-708, plates, diagrs.) 23 refs.

Describes features resulting from permafrost and land and sea ice on beaches in tundra, subarctic, and icecap climates. Included are: underlying ice slabs; pits; ice-pushed and ice-deposited ridges; abrupt truncation; ice-rafted fragments; poorly rounded beach stones; frost cracks and mounds, stone circles and polygons, and solifluction deposits; striations; associated ice-contact features and glaciomarine deposits; ventifacts; and cold-water fossils, some with soft parts preserved. (DLC.)

74318. NICHOLSON, JOHN H. The nuclear submarine and the Arctic. (North, Nov.-Dec. 1962. v.9, no.6, p.12-18, illus.) From an address to the Arctic Institute of North America, Montreal, Oct. 26, 1961.

Discusses advantages and potentialities of these vessels for scientific research. Their ability to navigate under the arctic ice pack and to surface through three ft. of ice facilitates collection of oceanographic and ice data. Such capabilities are exemplified from arctic cruises of the USS *Skate* in summer 1958 and the USS *Sargo* in winter 1960. From data obtained by such cruises and air reconnaissance, depth and number of pressure ridges in ice pack areas can be forecast. (CaMAI.)

74319. NICHOLSON, L. H. Address. (Arctic circular, 1960, *pub.* Jan. 1961. v.13, no.2, p.17-22.) Delivered to the Arctic Circle, Ottawa, May 5, 1960.

Discusses problems of employment, preservation of racial pride and identity and the future of Canadian Eskimos. They number about 10,500, some three thousand adult males. An estimated half of this population, mostly on the islands and the central arctic coast, can live from the land by hunting, trapping, fishing, and handicrafts. For the other half, about one thousand jobs, preferably in the North, are needed. Long-term goals for the next generation, by 1990, are suggested. (CaMAI.)

74320. NICHOLSON, NORMAN LEON. Economic regions of Canada. *(In:* Canada. Dominion Bureau of Statistics. Canada year book 1962, p.17-23, map.)

Delimits four regions: ecumene, transitional, subarctic and arctic, on the basis of population distribution. For each, the subdivisions are described in terms of physical aspects, transportation, population and economy. The subarctic zone includes Yukon Territory and northern British Columbia, the Mackenzie River basin, and forested areas of northern Ontario, Quebec, Manitoba, Saskatchewan, and Keewatin District; the economic base is mining, trapping, and subsistence activities of the natives. The arctic zone comprises the remainder of Canada north of the tree line; it is an area of Eskimo hunting and trapping with future mineral development possibilities. (CaOG.)

74321. NICKEL, E. H., *and* **D. J. CHARETTE.** Additional data on barylite from Seal Lake, Labrador. (American mineralogist, May-June 1962. v.47, nos. 5-6, p.764-68, color photomicrograph, tables.) 5 refs. *Supplements* work of E.W. Heinrich and R.W. Deane, q.v.

Reports on a staining method for barylite developed by the senior author and a chemical analysis by the junior. The staining method uses concentrated hydrofluoric acid as an etching reagent, and a 0.2% aqueous solution of sodium rhodizonate or potassium rhodizonate as staining reagent. Effect on a thin section is illus. in color photo. Chemical analysis (tables) shows a small excess of SiO_2 and a deficiency of BeO and BaO in comparison with the theoretical composition of pure barylite. Specific gravity is calculated as 3.98. (DGS.)

74322. NICKLE, CARL O. The future of oil and gas in Canada's far North. (Western miner and oil review, Oct. 1961. v.34, no.10, p.32-42, illus., maps.) Paper presented at the National Northern Development Conference, Sept. 1961. Also pub. in *Oil in Canada,* Sept. 14, 1961, p.36-40.

Discusses potentialities and progress in exploration and development of the territorial part of the Western Canada sedimentary basin. Calculated potential reserves in Mackenzie District, Yukon Territory, and the Arctic Islands range respectively: 8.01-13.36 billion barrels of oil and 48.08-80.14 trillion cu. ft. of gas, 1.93-3.22 billion bbl. and 11.61-19.35 trillion cu. ft., 4.68-7.8 billion bbl. and 28.08-46.8 trillion cu. ft. Exploratory holdings and status of exploration are noted for each area, also the 1960 and 1961 discoveries in northern Yukon and southern Mackenzie District. Large amounts of long-term risk capital are needed. (DGS.)

74323. NIELSEN, EIGIL, 1910- . On the Eotriassic fish faunas of central East Greenland. *(In:* International Symposium on Arctic Geology. Proceedings 1961, v.1, p.255-57, table.) Refs.

Discusses results of geologic and paleontologic investigations of over two thousand Triassic fish fossils taken from the Kap Stosch area since 1929. The collection derives from six well-defined zones within the Eotriassic series of strata. Variation in the percentage composition of the fish fauna from zone to zone is considered the result of environmental changes, rather than evolutionary development. Main trend was from more marine to more continental (fresh-water) conditions. (DLC.)

74324. NIELSEN, EINER STEEMANN, 1907- , *and* **V. K. HANSEN.** The primary production of the waters west of Greenland during July 1958. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v. 149, Contribution to special IGY meeting 1959, p. 158-59, illus., maps.) 2 refs.

Report based on measurements of the photosynthesis/chlorophyll ratio: the production rate for July 1958 was found to be higher than in the previous four years. (DI.)

NIELSEN, FREDERIK, 1881- , *see* Denmark. Greenland. 1961. No. 70974

74325. NIELSEN, G. HARDY. Air service, the key to northern transport. (Oil in Canada, Feb. 2, 1961. v.13, no.13, p.34-38, illus.)

Notes advances and limitations in various methods of transportation in the North. Developments anticipated in air transport include huge helicopters, aircraft capable of lifting large loads in vertical take-off or requiring very short runways. Adjustments are proposed in present-day aircraft such as the DC-4 or the C-82, for transporting drilling equipment. Ways to cut costs are discussed. (DGS.)

74326. NIELSEN, G. HARDY. Economic, physical factors and the arctic future. (Oil in Canada, Feb. 23, 1961. v.13, no.16, p.34-38.)

Examines factors affecting oil and gas development in the Canadian Arctic Islands, as due to government or to physical conditions. Delay in setting up government regulations discourages the oil industry, the incentives it needs are cited. Geological indications are for fantastic prospects, but current transport costs are prohibitive. If/when commercial quantities of oil are discovered, finding markets becomes a major problem; several factors favor England. (DGS.)

74327. NIELSEN, G. HARDY, *Compiler.* Round table no.3: Drilling. (Oil in Canada, Dec. 5, 1960. v.13, no.5, p.26-31, illus., ports.)

Includes a six-man panel discussion on kinds of technical progress of greatest assistance to contractors drilling in the Canadian Arctic and sub-Arctic. Main points made: drilling in significant amount in remote areas is unlikely during the next five-ten years; a light prefabricated rig in easily assembled or disassembled parts would be most useful technical innovation; the contractor cannot buy expensive specialized equipment exclusively for northern work. (DGS.)

74328. NIELSEN, JØRGEN. Contributions to the biology of the Salmonidae in Greenland I-IV. København, 1961. 75p. illus., plates, maps, tables, graphs. (Meddelelser om Grønland, bd. 159, nr.8.) 25 refs.

Study of the two species found in Greenland: *Salmo salar* L. and *Salvelinus alpinus* (L). Distribution, natural and artificial, salmon migration and spawning including marine migrations, spawning seasons and grounds, sex ratio, etc. are dealt with in turn. Tagging experiments with char (*S. alpinus)* are outlined, including its biology, migration areas and distances, etc. Age distribution, age at first migration and growth in West and East Greenland waters are reported. (DGS.)

NIELSEN, MARJORIE METCALF, *see* Jones, J.W., & M.M. Nielsen. . . . counties in Alaska . . . 1959. No. 72587

74329. NIELSEN, NIELS, *Editor.* Atlas over Danmark: Atlas of Denmark. II Befolkningen: the population. København, C.A. Reitzels Forlag, 1961. 13 folio maps, index map. Text in Danish and English.

Includes on map 4, three small-scale (1 in.: 400 km.) inset maps of the Greenland population distribution in 1930, 1945, and 1955; the first two show figures by district, the third by municipality, e.g. Godthåb population 1000, 2000, 4000. (DGS.)

74330. NIELSON, J. K., *and* RAUSCHENBERGER. Frost og fundering; elementaere forudsaetninger for projektering og udførelse of fundamenter til områder med vinterfrost og permafrost. København, 1957. 20 p. diagr. (Groenlandske Tekniske Organisation. Publikation nr.1.) Text in Danish. English translation by H.A.G. Nathan, *pub.* by National Research Council of Canada, Ottawa, 1962, as its Technical translation no. 1021, 32 p., diagr. **Title tr.:** Frost and foundations; elementary conditions for the planning and construction of foundations in areas with winter frost and permafrost.

Presents a general account of the problems affecting foundations constructed on seasonally frozen ground and permafrost, based on a review of the Canadian, Russian and American literature and on recent Danish building experience in Greenland. The importance of site exploration is stressed, stating the information that should be obtained on surface and sub-surface conditions. Fundamental considerations in the design of major building foundations are explained. Simple rules are given as a guide in designing temporary or small permanent buildings for locations where site investigations have been impossible. Eleven diagrams elucidate the text. (CaMAI.)(Danish); (CaONA.) (English).

74331. NIKANDROV, VLADISLAV IAKOVLEVICH. Some data on the water content of fogs in the Arctic. Translated by R.M. Holden. Boston, Mass., May 1961. 4 p. table, graphs. (American Meteorological Society. Translation T-R-359.)

English translation of no. 60490. (CaMAI.)

NIKANOROV, N. G., *see* Solov'eva, N.A., & N.G. Nikanorov. O nakhodke . . . 1961. No. 75830

74332. NIKIFOROV, E. G. K teorii nestatsionarnykh vetrovykh techenii v usloviiakh sil'no peresloennogo morîa. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ. Sbornik statei vyp.1, p.141-63, graphs, diagrs.) 3 refs. Text in Russian. **Title tr.:** A contribution to the theory of non-stationary drift currents under the conditions of strongly layered sea.

Discusses currents in the Kara Sea over a sub-surface layer of density jump in the sea. The wind-induced current never extends below the layer of density jump, where a compensatory current, opposite in direction to the wind-induced surface current, is observed. Analysis of the Kara Sea data obtained by the Arctic Institute in 1957 is given, and the changes in wind velocity distribution and direction are investigated and expressed in terms of the variation of wind parameters with time. It was found that the stabilization time for drift currents in waters of the highly expressed density jump layer is considerably shorter than in the case of a homogeneous sea, and that the current velocity and direction depend significantly on the Coriolis parameter, $\varkappa = 2\omega \sin \varphi$. (CaMAI.)

74333. NIKIFOROV, E. G. Ob opredelenii vida voln konechnoĭ amplitudy po zadannomu davleniiu na ikh poverkhnosti i nekotorye rezul'taty issledovaniia svîazeĭ vetrovykh voln i techenii. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, Sbornik statei vyp.1, p.168-84, graphs.) 30 refs. Text in Russian. **Title tr.:** On determination of the type of waves of finite amplitude from given

pressure at their surface and some results of the study of relations between the drift waves and the currents.

Analyzes the dynamic action of wind on sea waves, and the effect of their development on the potential flow of the wind. A model of these two co-processes is mathematically developed, and the interrelation between the drift-current field and the field of waves is compared with experimental and observational results. It was found that the magnitude of the wind coefficient depends considerably on the wind velocity, and on the degree of wave development. (CaMAI.)

NIKIFOROV, E.G., *see also* Ivanov, V.F., & E.G. Nikiforov. Opyt vycheslenii͡a . . . 1961. No. 72469

74334. **NIKIFOROV, N. D.** Meropriiatii͡a po vosproizvodstvu semgi. (Leningrad. Vsesoi͡uznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khozi͡aĭstva. Izvestii͡a 1959. t.48, p.122-25, tables.) Text in Russian. **Title tr.:** Measures protecting salmon reproduction.

Reports a three-year study aimed at establishing conservation measures for salmon in the arctic waters of European Russia. Fishing control of spawners, river regulation, biological control of the spawning areas, hatcheries, closed seasons, etc. are among the measures initiated or recommended. (DLC.)

74335. **NIKIFOROV, N. D.** Razvitie, rost i vyzhivaemost' ėmbrionov i molodi semgi v estestvennykh usloviiakh. (Leningrad. Vsesoi͡uznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rybnogo khozi͡aĭstva. Izvestii͡a 1959. t.48, p.65-79, illus., tables.) 24 refs. Text in Russian. **Title tr.:** Development, growth and survival of embryonic and young salmon under natural conditions.

Discusses this problem in several rivers of northern European Russia, from own observations and the literature. Survival during embryonic development, growth and development of the larvae and their stages, and survival of the young are dealt with. Dependence of the down-river migration on the rate of growth is treated as well. (DLC.)

74336. **NIKIFOROVA, OL'GA IVANOVNA, 1905–** , *and* **O. N. ANDREEVA.** Stratigrafii͡a ordovika i silura Sibirskoĭ platformy i ee paleontologicheskoe obosnovanie; brachiopody. Leningrad, Gostoptekhizdat, 1961. 412 p. illus., tables, map, diagrs., plates. (Leningrad. Vsesoi͡uznyĭ n. -i. geologicheskiĭ institut. Trudy, nov. ser. t.56, Biostratigrafii͡a paleozoi͡a Sibirskoĭ platformy vyp.1.) Approx. 150 refs. Text in Russian. **Title tr.:** Stratigraphy of Ordovician and Silurian of the Siberian platform and its paleontologic substantiation; brachiopods.

Presents the first monograph treating the Ordovician and Silurian deposits of the Siberian platform together. It is in two parts: stratigraphic and paleontologic. In the former, Ordovician deposits are divided into three series and five stages; Silurian into two series and four stages. For each stratigraphic subdivision, main groups of fauna are given. In the paleontologic part, brachiopods of the Middle and Late Ordovician and early-Silurian are systematically described: 79 species, 9 forms and 5 subspecies, in 41 genera, 25 families and 6 orders. Four genera, two subgenera and 64 species are distinguished as new. Good illus. augment the text. (DLC.)

74337. **NIKITIN, G. P.** K voprosu o vli͡anii termicheskogo gradienta na vodnyĭ rezhim pochvy. (Akademii͡a nauk SSSR. I͡Akutskiĭ filial. Nauchnye soobshcheni͡a 1961. vyp.5, Biologii͡a, p. 13-16, table.) 8 refs. Text in Russian. **Title tr.:** On the influence of the thermal gradient upon the water regimen of soil.

Reports on experiments with soil in glass jars, exposed to various local conditions. There was little vertical movement of water due to the thermal gradient in the summer, and very little in the fall-to-spring cold seasons. The causes of this condition are discussed. (DLC.)

74338. **NIKITIN, G. P.** O zi͡ablevoĭ borozdovoĭ obrabotke pochvy v usloviiakh T͡Sentral'noĭ I͡Akutii. (Akademii͡a nauk SSSR. I͡Akutskiĭ filial. Nauchnye soobshcheni͡a 1961. vyp.5, Biologii͡a, p.17-25, illus., tables.) 4 refs. Text in Russian. **Title tr.:** Autumn plowing in furrows under conditions of central Yakutia.

Discusses aims of this method and adaptations on the plow to produce furrows of required dimensions. Water content of the soil in spring, crops after different autumn-plowings, and water consumption after these plowings are reviewed. Results indicate, that this method deserves consideration where melt-water from snow accumulates and is preserved. (DLC.)

NIKITIN, I͡URIĬ VLADIMIROVICH, *see*

Leonova, V.A., & I͡U.V. Nikitin. K mineralogii monat͡sitov . . . 1962. No. 73428

Shurkin, K.A., & *others.* Belomorskiĭ kompleks . . . 1962. No. 75625

74339. **NIKITIN, MAKAR MAKAROVICH.** Sovetskie nauchno-issledovatel'skie dreĭfui͡ushchie stant͡sii. Otv. red. I.M. Belousov. Moskva, Izd-vo Akademii nauk SSSR, 1961. 42 p. illus., tables, map. (Mezhdunarodnyĭ geofizicheskiĭ god, 1957-1958-1959.) 14 refs. Text in Russian. Summary in English. **Title tr.:** The Soviet research drifting stations. Summarized in *Polar record* Sept. 1962, p.292-93.

General outline based chiefly on activities of North Pole 3-9 during 1954-1960. Purpose of these stations, their logistics, personnel, living and working conditions in camp are described, as are the scientific activities, instruments and equipment, the results and their significance. The Severnyĭ Poli͡us and LO-1 oceanographic winches developed by I͡U.K. Alekseev, and capable of raising 357 cm. bottom cores, the Ėfir ionospheric station constructed by F.I͡A. Zaborshchikov, the G.V. Molochnov apparatus for measurement of sea-ice thickness, the Izvekov drift recorder, etc. are noted among the instrumentation used, p.32-37. As a rule, the station personnel carry out meteorological, actinometric, aerological, oceanological, hydrological, astronomical, geomagnetic, ionospheric and auroral observations; but supplementary investigations and some in other fields are made by visiting scientists. A tabular summary is given, p.30-31, of the participation in drifting station work by 23 expeditions and parties

from the Academy of Sciences' Institutes of Permafrostology, of Microbiology, and of Marine Hydrophysics, from Moscow and Leningrad Universities, from the Institute of Geology of the Arctic, etc. In recent years, each station has been making at least a thousand bathymetric, and 1000-1500 temperature measurements at various depths a year, as well as 2000-2500 series of actinometric observations, 300 geomagnetic determinations, and over 800 radiosonde releases for high-altitude aerological observations. In the last five years, over 120 scientific papers and some 20 volumes of data and reports have been published on the work on the drifting stations; over a hundred new species of bottom organisms and a score or more new species of diatomic algae have been discovered. The basic literature, about the drifting stations, 14 titles, is cited at the end of this informative survey. (DLC.)

NIKITIN, MAKAR MAKAROVICH, *see also Polar record.* News notes. 1961-62. No. 74847

NIKITIN, O. T., *see* Petrov, V.S., & O.T. Nikitin. Issledovanie . . . v kimberlitakh. 1962. No. 74761

NIKITINA, I. B., *see* Markhinin, E.K., & *others.* Izuchenie sostoianiia vulkanov . . . 1962. No. 73820

74340. NIKOLAEV, A. M. O rasprostranenii, chislennosti i biologii kalanov. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchanii 1961. vyp.12, p.214-17, table.) 4 refs. Text in Russian. **Title tr.:** Distribution, number and biology of sea otters.

Discusses earlier distribution, decimation in the 19th century, and number in 1912-1958 on the Kurils, Kamchatka, Commander Islands, Alaska, and California. Temporary habitats, character and quality of habitats, are described as well as diurnal and seasonal behavior, food, reproduction, fur, etc. (DLC.)

NIKOLAEV, A. N., *see* Gutkin, A.IA., & *others.* Polovoe razvitie . . . 1962. No. 71935

NIKOLAEV, R. V., *see* Lisitsyna, N.K. Arkheologicheskie issledovaniia . . . 1962. No. 73527

74341. NIKOLAEV, S. I., Ob etnicheskikh protsessakh na IUgo-Vostochnoi IAkutii. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskii filial. Nauchnye soobshcheniia 1961. vyp.6, p.91-95.) 3 refs. Text in Russian. **Title tr.:** Ethnic processes in southeast Yakutia.

Discusses the trend toward ethnic and cultural mingling among the Yakut, Eveny-Lamut, and Evenki-Tungus population of the upper and middle Aldan River and its tributaries. Despite growing nationalistic tendencies in individual ethnic groups, the mixing process continues though on a reduced scale. It occurs in some 25%-33% of the marriages, and the ethnic affiliation of the mixed-breed is usually determined by that of the father. The use of Yakut as native language predominates among the Evenki who represent 73% of this population, but not among the Eveny, 5%. A general unification of spiritual and material culture is noted except for isolated groups who have little or no contact with Russians and Yakuts. (DLC.)

74342. NIKOLAEV, V. S. Opredelenie granits mnogoletnemerzlykh porod po materialam promyslovo-geofizicheskikh issledovanii. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy 1962. t.19, p.108-112, diagrs.) Text in Russian. **Title tr.:** Determination of permafrost boundaries according to materials from geophysical investigations.

Reports on standard electrical logging and lateral electric sampling to determine permafrost limits in three wells, drilled in the Taz Peninsula and Salekhard region, where two-layer permafrost is present. Comparison of the data obtained indicate the two-way electrical probing method preferable and suitable for the purpose. Results are compared also with geologic data. (DLC.)

74343. NIKOLAEV, VIKTOR ARSEN'EVICH, 1893-1960. Neotektonika Zapadno-Sibirskoi nizmennosti; tezisy. (*In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.42-43.) Text in Russian. **Title tr.:** Recent tectonics of the West Siberian plain; summary.

Reviews recent tectonic movements of this wide area, noting the Ob-Yenisey uplift, middle Ob and middle Irtysh depressions, and other structures. (DLC.)

74344. NIKOLAEV, VIKTOR ARSEN'EVICH, 1893-1960, *and* **L. IA. PROVODNIKOV.** Noveishaia tektonika Zapadno-Sibirskoi nizmennosti. (*In:* International Association for Quaternary Research. Neotektonika SSSR . . . 1961, p.155-56.) Text in Russian. **Title tr.:** Recent tectonics of the West Siberian plain.

Summarizes briefly the late tectonic movements in the Ob-Yenisey regions and other areas of West Siberian plain, noting their reflection in the relief and the hydrographic net. The recent tectonic movements correspond with development of the Mesozoic-Cenozoic cover of the platform and the Paleozoic basement. (DLC.)

74345. NIKOLAEV, VIKTOR ARSEN'EVICH, 1893-1960, *and* **L. IA. PROVODNIKOV.** Verkhnekazymskii svod. (Geologiia i geofizika, 1961, no.5, p.3-8, map.) 10 refs. Text in Russian. Summary in English. **Title tr.:** The upper Kazym arch.

Presents a geologic map and outlines the structure of the arch in upper part of the Kazym River basin, on the basis of recent geologic, geophysical and geomorphic investigations. Tectonic elements of its Paleozoic basement are noted. The arch is considered to have good prospects for oil and gas. (DLC.)

NIKOLAEVA, É. S., *see* Gnevushev, M.A., & É.S. Nikolaeva. Tverdye vkliucheniia v almazakh . . . 1961. No. 71714

NIKOLAEVSKIĬ, A. A., *see* Luts, B.G., & *others.* O sostave i stroenii . . . 1962. No. 73641

74346. NIKOLAEVSKIĬ, L. D. Izuchenie novykh zabolevanii severnykh olenei. (Akademiia nauk SSSR. IAkutskii filial. Doklady 1957. v.8, p.248-62.) Refs. Text in Russian. **Title tr.:** Study of new diseases in reindeer.

Outlines the ecological factors affecting the summer fattening and health of these animals and reviews their infective and parasitic diseases. Symptoms, native remedies, incidence, and losses, pathology, therapy, etc. are considered. The need of more research and of veterinary-technical personnel is stressed. (DLC.)

74347. **NIKOLAEVSKIĬ, L. D.,** *and* **N. V. KUDRIĀVTSEV.** Novye dannye o biologii infuzoriĭ, naselīaīūshchikh rubetś severnykh oleneĭ. (Akademiīa nauk SSSR. ĪAkutskiĭ filial. Doklady 1957. v.8, p.285-97, illus.) 11 refs. Text in Russian. **Title tr.:** New data on the biology of infusorians inhabiting the paunch of reindeer.

Presents a study of the Entodiniomorpha, a suborder of Holotricha, with introductory information on their morphology and physiology, and earlier studies of those in the reindeer. Material collected in 1952-1954, in the lower Kolyma and other regions of Yakutia is reported, and a new avenue of penetration, through the skin, described. Migration through the walls of the digestive tract and into various organs is also demonstrated on histological material and the relevant infusoria identified. (DLC.)

NIKOL'SKAĪA, VERA V., *see* Akademiīa nauk SSSR. *Institut geografii.* Dal'niĭ Vostok . . . 1961. No. 69546

74348. **NIKOL'SKIĬ, A. P.** Ėksperimental'nye dokazatel'stva sushchestvovaniīa vtoroĭ zony magnitnykh vozmushcheniĭ v vostochnoĭ Arktike. (Geomagnetizm i aėronomiīa, 1961. t.1, no.6, p.959-64, table, map.) 19 refs. Text in Russian. **Title tr.:** Experimental proofs of the existence of a second zone of magnetic disturbances in the eastern Arctic.

Considers the possibility of such a zone in 75°-80°N. 0-250°E. The enhanced magnetic and auroral activities observed in this area by the drifting stations North Pole-4, -5, -6, and -7 during 1954-1959, are cited, with statement of the geographical distribution of their occurrence frequency, and intensity during morning hours. Conclusion is drawn that the inner zone actually exists. On this, O.V. Khorosheva, q.v., comments. (DLC.)

74349. **NIKOL'SKIĬ, A. P.** O polozhenii vtoroĭ zony polīarnykh siīaniĭ i svīazi utrennikh siīaniĭ s magnitnymi vozmushcheniīami. (Akademiīa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniīu Mezhdunarodnogo geofizicheskogo goda. IV razdel programmy MGG: Polīarnye siīaniīa i svechenie nochnogo neba. Sbornik stateĭ, 1961. no.7, p.37-42, maps, graphs.) 16 refs. Text in Russian. Summary in English. **Title tr.:** On the position of the second auroral zone, and the correlation between morning auroras and magnetic disturbances.

Discusses the existence of the second auroral zone (cf. No. 53601) proposed in 1954 and confirmed by K. Lassen (q.v.) from his observations on the distribution of morning auroras with respect to the local zenith at Godhavn and other Greenland stations in 1954-1956. A comparison of diurnal changes of the frequency occurrence of auroras and intensity of the geomagnetic disturbances observed at the drifting stations North Pole-6 and -7 shows a good correlation between these two phenomena. (CaMAI.)

74350. **NIKOL'SKIĬ, A. P.** O prichinakh asimmetrii v polozhenii zony polīarnykh siīaniĭ v Arktike i Antarktike. (Akademiīa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniīu Mezhdunarodnogo geofizicheskogo goda. IV razdel programmy MGG: Polīarnye siīaniīa i svechenie nochnogo neba. Sbornik stateĭ 1961. no.7, p.61-64, map.) 10 refs. Text in Russian. Summary in English. **Title tr.:** On the causes of asymmetry in the position of the auroral zones in the Arctic and Antarctic.

Points out that the difference in the position of the auroral zones with respect to the geographic poles in these two areas is due to insufficient observation data in the Antarctic, and to lack of separate observations there of morning and evening zenith auroras. For the former, an internal zone is known to exist in the Arctic; it is likely also in the Antarctic. (CaMAI.)

74351. **NIKOL'SKIĬ, A. P.** O vozmozhnykh prichinakh neregulīarnykh dvizheniĭ oblakov ionizaśii, svīazannykh s polīarnymi siīaniīami. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1962. t.241, Geofizicheskie issledovaniīa . . . vyp. 4, p.28-38, graphs, table, maps.) 11 refs. Text in Russian. **Title tr.:** On possible causes of irregular motions of ionization clouds, as associated with auroras.

Discusses others' studies of motions of ionized clouds in the upper atmosphere, pointing out their extreme irregularity in speed and direction, and analyzing the results with regard to magnetic disturbances, and reflection of radio signals by auroras. It was found that the width of the precipitation of positively charged bunches of plasma on the Størmer spirals during a magnetic storm depends on the difference between maximum and minimum velocities of those protons which can reach the earth at certain hours of universal time. The Størmer regions of condensed proton trajectories at 14-15, 19-20, 2-3, and 8-9 hours, local time, are confirmed. Various geomagnetic and auroral phenomena are interpreted, and the S_D-variation of magnetic disturbance in high latitudes (Bukhta Tikhaya, Mys Chelyuskin, etc.) is shown to be a result of statistical summation of bay disturbances but is not due to some kind of time-extended, regular phenomena. (DLC.)

74352. **NIKOL'SKIĬ, A. P.** On the geographical distribution of the areas of the solar corpuscular impingements in the Arctic. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962. v.1, p.189-97, graphs, tables, map.) 16 refs.

Reviews efforts toward a magnetic storm theory and proposes a second, inner, auroral zone. The Arctic, with highest amplitude of hourly variation of the horizontal component of the magnetic field $\gamma_H{}^s$ is assumed to be the region of the most intensive solar corpuscular impingements; and their space-time distribution in detail was investigated. Data for the period 1957-1959 were used from six stationary magnetic observatories, Tikhaya, Murmansk, Chelyuskin, Dikson, Tiksi, and Uelen, and from the drifting stations North Pole-6, and -7. It was found, in conformity with previous investigations, that solar corpuscular streams arriving at the earth during 1.5-2.5 days are focused by the earth's magnetic field into not less than two spirals lying in high latitudes of the Arctic and Antarctic. These spirals come out of the poles of the homogeneous magnetization, and occupy a wide belt around the entire earth. Such a distribution of solar particles leads to the concept of Störmers spirals of precipitation. (DLC.)

74353. **NIKOL'SKIĬ, A. P.** Sopostavlenie magnitnoĭ vozmushchennosti v vysokikh shirotakh s teorieĭ Shtërmera. (Geomagnetizm i aėronomiīā, 1962. v.2, no.6, p.1122-25, graphs.) 14 refs. Text in Russian. **Title tr.:** Comparison of magnetic disturbances at high latitudes with Størmer's theory.

Analyzes the data on magnetic disturbances at Cape Chelyuskin, drifting stations North Pole-4, and -6 in the summer of 1957, and these data with those that follow from Størmer's theory of the spiral of corpuscular precipitation (No. 42679). The daily distribution curve of geomagnetic disturbances is found to have morning, evening, and night maxima, and the increase and drop in magnetic disturbances occur in agreement with the change of the angle ψ between the geomagnetic equator, and the bearing on the source of corpuscular emission. These findings are considered as additional evidence in support of Størmer's theory. (DLC.)

74354. **NIKOL'SKIĬ, A. P.** Struktura neregulīārnoĭ chasti polīā magnitnykh vozmushcheniĭ na myse Chelīūskina. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1962. t.241, Geofizicheskie issledovaniīā . . . vyp. 4, p.90-98, graphs, table.) 14 refs. Text in Russian. **Title tr.:** Structure of the irregular part of the field of magnetic disturbances at Cape Chelyuskin.

Discusses the three components of the irregular magnetic field from the records of this station. The morning and night irregular magnetic disturbances are interpreted in terms of the Størmer spiral of precipitation of solar protons, the spiral connected with the sun, the earth rotating beneath the spiral. The complicated variations of the component of the irregular geomagnetic field at Mys Chelyuskin can be given a plausible explanation on the basis of the Størmer theory, which will be helpful in clarifying many questions on the geographical distribution of magnetic and ionospheric disturbances, and auroras. (DLC.)

74355. **NIKOL'SKIĬ, A. P.** Teoriīā Stërmera i sovremennaīā aėronomiīā. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1962. t.241, Geofizicheskie issledovaniīā . . . vyp. 4, p.7-19.) 46 refs. Text in Russian. **Title tr.:** Størmer's theory and modern aeronomy.

Presents a well developed review of the theories of aurora and geomagnetic storms. From IGY and other work of recent years on irregular and local phenomena of magnetic and ionospheric disturbances, and on auroras in high latitudes, hitherto unknown facts and regularities have come to attention; in explanation of them, the Birkeland-Størmer theory of aeronomic magnetism and aurora, is drawn upon; according to which the sun ejects corpuscular streams of same sign, the streamers of which reach the earth, and produce magnetic disturbances and auroras in the ionosphere. Nikol'skiĭ proposes to modify Størmer's theory by adopting a hypothesis that the streamers of solar corpuscles reach the earth in form of neutral corpuscular clouds. In this modified version, Størmer's theory is considered able to explain correctly many geophysical phenomena. (DLC.)

NIKOL'SKIĬ, A. P., *see also* Ignatov, V.S., & *others*. Rezul'taty . . . Arktike. 1962. No. 72333

74356. **NIKOL'SKIĬ, GEORGIĬ VASIL'EVICH.** Chastnaīā ikhtiologiīā; izdanie vtoroe, ispravlennoe i dopolnennoe. Moskva, Gos. izd-vo "Sovetskaīā nauka", 1954. 458 p. illus., tables, maps. About 700 refs. Text in Russian. **Title tr.:** Special ichthyology; second revised and enlarged edition.

Handbook, based on lectures at the Moscow University, with emphasis on fishes of economic value to Russia and on forms of general biological interest. The material presented in ascending taxonomic order, includes extinct groups. The taxa are briefly described as to their morphology and anatomy, with further consideration of phylogeny, geographic distribution, ecology, habits, economic value and utilization, development and growth, etc. Very good and accurate black-and-white illus. facilitate the perusal of the text by the student. Subarctic and arctic fishes and fisheries are especially well covered because of their considerable economic value, actual or potential, to Russia. An English-language edition by the Israel Program for Scientific Translations, Jerusalem, 1961, does full justice to the text, but owing to their reduced size, not always to the illus. (Russian & English): (DLC.)

74357. **NIKOL'SKIĬ, GEORGIĬ VASIL'EVICH.** Ėkologiīā ryb. Moskva, Gos. izd-vo "Vysshaīā shkola," 1961. 336 p. illus., tables, graphs, sketch maps. About 350 refs. Text in Russian. **Title tr.:** Ecology of fishes.

Textbook with a pronounced practical slant, covering sea and fresh-water fishes. An introductory chapter deals with factors and elements of their ecology and divisions according to habitat. Part 1 (p.14-142) covers the relationships of fishes to the abiotic and biotic environment: temperature, salinity, chemistry, gases, light, currents, etc.; intra- and interspecific relations, and such to other animals, plants, bacteria, etc. The main biological cycles are dealt with in pt. 2 (p.143-274): reproduction, development and growth; schooling and migration; wintering; food. The value of fish to man is considered in the last section (p.275-96) where, also, the biological principles of fisheries management are outlined. Indexes of Russian terms and names and of Latin names are appended. (DLC.)

74358. **NIKOL'SKIĬ, IGOR' VLADIMIROVICH.** Osnovnye napravleniīā razvitiīā i razmeshcheniīā puteĭ soobshcheniīā SSSR. (Geografiīā v shkole, Sept.-Oct. 1962. god 25, no.5, p.8-14, table, maps.) Text in Russian. **Title tr.:** Basic trends of the development and distribution of transportation in the USSR.

Notes, among others, planned construction of the northern Siberian railroad from Tavda via Abalakovo to Ust'-Kut, thence by one of several alternate routes to the Pacific; further development of the Northern Sea Route chiefly for transportation of timber, coal, and apatite; importance of air transport for areas of the far North. (DLC.)

74359. **NIKONOV, A. A.** O stratigrafii moren i oledeneniīākh v zapadnoĭ chasti Kol'skogo poluostrova. *(In:* Voprosy geomorfologii . . . Kol'skogo poluostrova, 1960. no.1, p.121-35, tables, maps, diagrs.) 38 refs. Text in Russian. **Title tr.:** On the

stratigraphy of moraines and glaciations in the western part of Kola Peninsula.

Reports study of glacial deposits in the Lotta and Nota River basins during 1955-1960. Prospecting pits were made and the three horizons of moraines established are described, noting differences in mode of occurrence, color, mechanical composition and other properties. Granularity, fabric and texture of these three horizons are analyzed and correlated. The lower horizons of moraines are considered to belong to an older glaciation than the last. (DLC.)

74360. NIKONOV, A. A. O vodno-lednikovykh obrazovaniiākh i khode sokrashcheniiā materikovogo oledeneniiā na severo-vostoke Fennoskandii. (Akademiiā nauk SSSR. Doklady, Mar. 1, 1961. t. 137, no.1, p.150-53.) 10 refs. Text in Russian. **Title tr.:** Water-borne glacial formations, and the path of continental glaciation shrinkage in northeast Fennoscandia.

Describes distribution, directions, and topographic features of glacial drift deposited by the last Scandinavian glaciation in Kola Peninsula and northeastern Fennoscandia. Three main groups of glacial drift, local, radial and marginal, are characterized in turn noting the distribution, topography and composition. (DLC.)

74361. NIKONOV, A. A. Razlichiiā v dinamike i ėnergii severnogo i iūzhnogo frontov skandinavskogo lednikovogo pokrova. (Akademiiā nauk SSSR. Doklady, Mar. 11, 1961. t.137, no.2, p.394-96.) 30 refs. Text in Russian. **Title tr.:** The difference in dynamics and energy between the northern and southern fronts of the Scandinavian glacial cover.

Summarizes the distribution of glacial deposits, the extent of ice erosion and its effects, retreat and shrinkage of the ice cover as evidence on the two fronts. The dynamics, and energy of the northern were substantially less than those of the southern front. (DLC.)

74362. NIKONOV, A. A. Stratigrafiiā osadkov i paleogeografiiā pozdnelednikovykh morskikh basseĭnov Lottinskoĭ depressii. *(In:* Voprosy geomorfologii . . . Kol'skogo poluostrova, 1960. no. 1, p.85-120, illus., tables, diagrs.) 36 refs. Text in Russian. **Title tr.:** Stratigraphy of sediments and paleogeography of the late glacial marine basins of the Lotta depression.

Reports a study of the Lotta River preglacial depression in Kola Peninsula, where in late-glacial time sediments were deposited by marine transgressions. Stratigraphy of these sediments is described from diatom and spore-pollen analyses. The analyses are interpreted and the climatic conditions and their changes during the transgression are evaluated. Development history and paleogeography of marine basins in the depression are characterized. The disappearance of the dead continental ice sheet there before the transgressions is also discussed. (DLC.)

74363. NILSEN, ARNE. Aktuelt om oksestasjonen for Nord-Norge. (Norden, Oct. 15, Nov. 1, 1960. årg. 64, nr.20, 21, p.560-61, 576, illus., tables.) Text in Norwegian. **Title tr.:** Current information on the bull station for North Norway.

Presents information on breed, heredity, and progeny of bulls at the artificial insemination station at Narvik; also directions for ordering service, fees, etc. (DA.)

74364. NILSEN, ARNE. Meieriutstilling og meierifolkmøte i Tromsø. (Norden, Oct. 1, 1960. årg. 64, nr.19, p.520-21, illus., tables.) Text in Norwegian. **Title tr.:** Dairy products exhibit and meeting of dairy operators in Tromsø.

Reports the North Norway Dairy Association annual meeting held in connection with the new Tromsøysund Dairy building dedication and the new Tromsø bridge opening. North Swedish and North Finnish dairies participated in exhibits and discussions. Cooperation between dairies in the "northern tip" is stressed. (DA.)

74365. NILSEN, ARNE. Oversikt over utbygginga av det nord-norske meieribruk etter krigen. (Norden, Dec. 1, 1960. årg. 64, nr.23, p.640-44, tables.) Text in Norwegian. **Title tr.:** Survey of North Norway dairy expansion after the war.

Reports in detail the postwar developments in this industry; the new dairies built, the war-damaged facilities repaired and enlarged; the financing through own capital, regular subsidies, and North Norway Development Fund subsidies. Consolidation of small dairies, technical improvements and modernization, production and turnover increases are included. These data are assembled in connection with a pending report and recommendations by the North Norway Development Fund. (DA.)

NISHIMOTO, HIROSHI, *see* Reed, R.J., & *others*. Spectral analysis . . . sudden warmings. 1962. No. 75090

NISSEN, AUGUST, *see* Laerum, O.D., & G.S. Pedersen. Svalbardveg 1959 . . . 1962. No. 73273

74366. NIZOVTSEV, G. P. Pitanie treski v severo-zapadnykh raĭonakh Barentseva moriā; rezul'taty nabliūdeniĭ, provedennykh v 11 i 18 reĭsakh ė/s "Tunets." (Murmansk. Poliārnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziāĭstva i okeanografii. Nauchno-tekhnicheskiĭ biūlleten', 1961. no.1(15), p.50-52, tables.) Text in Russian. **Title tr.:** The cod diet in the northwestern areas of the Barents Sea; results of observations conducted during the 11th and 18th runs of the expeditionary vessel *Tunets*.

Reports on the food of cod of marketable size during Oct.-Nov. 1959 and 1960. Main food components of the stomach during the 24 hr. period, food according to areas, degree of stomach fullness, etc. are considered. (DLC.)

74367. NOBLE, H. R. The biggest igloo in the Arctic. (Roundel, Dec. 1961. v.13, no.10, p.8-10, illus.)

Describes the radome covering the short range radar unit at Fort Churchill, Man. The sphere is 26 ft. across, 3.5 in. thick, light weight, a good insulator, fire resistant, and made clearly visible by special red and white paint. (DN-HO.)

74368. NOBLES, LAURENCE HEWIT, 1927- . Structure of the Ice Cap margin, northwestern Greenland. *(In:* International Geographical Congress

1960. Physical geography . . . 1961. p. 188-204, illus., maps, diagrs.) 20 refs.

Describes the morphology of the main features of the margin near Nunatarssuak and discusses their role in the glaciology of the area. Large and small outlet glaciers, ice cliffs, and ramps are described; metamorphic structures of both tensional and shear origin and of diverse types, are noted. Photos, maps, and diagrams illus. the classification of the features; the origin of foliation and lineation is discussed in detail. (DGS.)

NOBLES, LAURENCE HEWIT, 1927- , *see also*, International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

74369. NOE-NYGAARD, ARNE, 1908- , *and* **H. RAMBERG.** Geological reconnaissance map of the country between latitudes 69°N. and 63°45′ N. West Greenland. København, 1961. 9 p. & 2-sheet fold. col. map. (Meddelelser om Grønland, bd. 123, nr.5.) 21 refs.

Maps at scale 1:500,000, the Precambrian rocks of this area, from investigations in 1946-1956 by the Geological Survey of Greenland. Strike and dip of foliation and trend and plunge of fold axes, stretched inclusions, boudins, etc. are indicated on the map. Geological divisions are described; three complexes in the Nagssugtôqidian fold belt north of approx. 66°30′N., and five complexes in the pre-Nagssugtôqidian fold belt to the south. The Nagssugtôqidian folding was preceded by an earlier orogeny and an intrusion of basic dykes. Axial trend in the northern fold belt varies with the complexes; that in the south is largely north-south to north-east. (DGS.)

NOE-NYGAARD, ARNE, 1908- , *see also* Munck, S., & A. Noe-Nygaard. Age determination, Tertiary volcanism . . . 1957. No. 74161

74370. NØRDUM, BERTHEL. Et blad i en dagbog; slaedepatruljens eneste kamp mod tyskerne i Østgrønland. (Atuagagdliutit: Grønlandsposten, Jan. 1, 1961. Ukiut 101-iat, nr.1, p.52-53, port.) Text in Danish and Eskimo. **Title tr.:** A page in a diary; the sledge patrol's only fight with the Germans in East Greenland.

The Germans, bombed out of their weather station on Sabine Ø, built a new one on Shannon; the Danes encamped on Clavering Ø, attacked them in April 1944, but were driven back by superior numbers. When they returned, the Germans had disappeared, but were later found on Store Koldewey, and 104 of them taken aboard the American icebreaker *Eastwind*. (CaMAI.)

74371. NOGID, L. M., *and* **O.V. DUBROVIN.** O viazkostnom soprotivlenii ledokolov. (Sudostroenie, 1962. god 28, no.6, p.10-14, table, graphs.) 4 refs. Text in Russian. **Title tr.:** On the viscosity resistance of icebreakers.

Frictional drag calculations obtained from tests with scale-models under simulated ice conditions proved inaccurate when applied to actual icebreakers. The negative findings support the hypothesis that icebreaker hulls may not be considered satisfactorily streamlined. (DLC.)

NOGINA, N. A., *see* Bogatyrev, K.P., & N.A. Nogina. Pochvy . . . 1962. No. 70282

74372. *NORDEN*. For eller imot nord-norsk griseavl. (Norden, Sept. 1, 1960. årg. 64, nr.17, p.477-78.) Text in Norwegian. **Title tr.:** For or against hog raising in North Norway.

Pork production would stimulate the economy by utilizing available whey and skimmed milk and increasing production of potatoes and feed grain; it would also increase the fresh meat supply in North Norway. National agricultural organizations and meat packers claim that the South can supply the pork and that the North is not suited to pork production. Swine centers are being planned under local auspices however, at Steigen (67°57′N. 15° E.) and other points as far north as Lakselv (70°03′N. 24°55′E.). (DA.)

74373. NORDFELDT, SAM, *and others*. Smältbarhetsförsök med renar, Öjebyn 1957-60. (Lappväsendet. Renforskningen. Meddelande, 6, 1962, 14 p., tables. Reprint of Statens husjursförsök. Särtryck och förhandsmeddelande, nr.151, 1961.) 7 refs. Text in Swedish. Summary in English. *Other authors:* W. Cagell *and* M. Nordkvist. **Title tr.:** Digestibility experiments with reindeer, Öbjebyn 1957-60.

Reports a study of fodder at the Öjebyn experimental farm near Umeå in northern Sweden. The reindeer lichen *Cladonia alpestris*, hay from the sedge *Carex aquatilis*, from the horsetail *Equisetum fluviatile*, and from sedge mixed with the water clover *Menyanthes trifoliata*, were tested on four reindeer, as was dried beet pulp. The tracer method with Cr_2O_3 was used. The reindeer digested sedge and horsetail hay approximately as well as dairy cows, crude fiber especially well. The reindeer lichen was much better utilized by the reindeer than by sheep, except for the protein, so that the reindeer lost approx. three grams of digestible protein for each kg. dry matter of lichens consumed. (SPRI.)

74374. NORDISKA EXPERTUTSKOTTET FÖR ARKTISK MEDICIN. Nordisk somarbete om arktisk medicin. Stockholm, Kungl. boktr., 1961. 32 p. tables. Text in Swedish. **Title, etc., tr.:** Nordic Committee of Specialists on Arctic Medicine. Nordic cooperation in arctic medicine.

Presents report from a Danish-Swedish-Finnish-Norwegian-Icelandic committee established in 1958 to consider possibilities of joint effort in arctic medical research. The term "arctic medicine" and geographic area of interest (including Greenland) are defined; climate and other conditions in the various regions are compared. Previous research is briefly reviewed. The Committee recommends creation of an inter-Scandinavian research council and a research fund; scope of research and cost are outlined. A bibliography of more than 250 items is appended. (AIKøbenhavn.)

74375. NORDKVIST, MAGNUS, *and* **K. A. KARLSSON.** Epizootiskt förlöpande infektion med *Pasteurella multocida* hos ren. (Lappvasendet. Renforskningen. Meddelande, 6, 1962, 15 p., illus., diagrs., map, table.) Reprinted from Nordisk veterinaermedicin, 1962. bd. 14, p.1-15.) Text in Swedish. **Title tr.:** Epizootics of *Pasteurella multocida* infection in reindeer.

Cites occurrences in Sweden: in 1912 and

1913 around south Lapland, 1924 and 1959 north Jämtland, in July and August each time and especially during periods of unusually dry and warm weather. Mortality was 20-50% of all animals in the affected herds and about 80% of the fawns. Pathological and bacteriological examination of cadavers and individual organs in the 1959 outbreak showed hemorrhagic septicemia, and fibrinoid degeneration in the renal glomerula capillaries. *Pasteurella multocida* was isolated. Its dissemination by clinically healthy carriers or by lemmings could not be demonstrated; transmittal by blood-sucking insects or by contaminated drinking water is discussed as a possibility. Passive immunization with antiserum is suggested for frequent outbreaks, and scattering of herds to limit losses. (SPRI.)

NORDKVIST, MAGNUS, *see also* Nordfeldt, S., & *others*. Smältbarhetsförsök med renar . . . 1962. No. 74373

74376. NORDLAND, ODD, 1919- . Primitive Scandinavian textiles in knotless netting. Oslo, Oslo Univ. Press, 1961. 154 p., illus., maps. (Studia Norvegica, no.10.) 106 refs.

Comparative study of coiling, threading, and lacing techniques since the stone age, based mainly on Scandinavian and Finnish museum collections. Circumpolar areas and peoples are included: Lapps, Indians, Eskimos, etc. (DLC.)

74377. NORDQUIST, MAGNUS, 1890- . Arbetskraftåtgången vid flottningarna; försök till analys med ledning av den officiella flottningsstatistiken. (Svenska skogsvårdsföreningen. Tidskrift, 1961. årg. 59, nr.2, p.133-42, tables.) Text in Swedish. **Title tr.:** The labor force in floating operations; an attempt at analysis through official floating statistics.

Reports a 1% labor decrease for 1928-1951; but for 1951-1959 with consolidation of assembly areas, abandonment of tributaries, and other results of modernization in effect, the overall labor decrease was 3%/yr., 20% in aggregate: 25-30% on floating, and 7% on sorting operations. The statistics are based on man-days however, and a man-hour basis is more efficient. (DA.)

74378. NORDQUIST, MAGNUS, 1890- . Om skogs- och odlingsgränser i lappmarken och Jämtlands län. (Norrlands skogsvårdsförbund. Tidskrift, 1961. nr.2, p.159-68, tables.) Text in Swedish. **Title tr.:** Forest and regeneration boundaries in Lappmark and Jämtland County.

A line between the coastal areas and the so-called Lappmark in Norrbotten and Västerbotten was established in the 1750's, but within Lappmark dividing lines between eastern and western productive and unproductive zones, etc. have changed from time to time: limits were established in 1867-1891 between areas suited for settlement and those (mountain areas) designated as reindeer range. Jämtland had protective-mountain-forest and hard-to-regenerate limits which controlled forest care as well as hunting. General rules for protective, and hard-to-regenerate forest care were based on the state-owned forest regeneration boundary. In 1954 these various limits were coordinated in the national forest law as the hard-to-regenerate boundary. In Norrbotten and Västerbotten considerable productive forest land was located above the cultivation border; and the hard-to-regenerate area was reduced by 343,950 hectares in Norrbotten and 481,000 hectares in Västerbotten. (DA.)

74379. NORDQUIST, NILS. Utbyggnaden av den svenska skogsindustrien. (Skogen, Jan. 6, 1961. årg. 48, nr.2, p.24-26, table, sketch maps.) Text in Swedish. **Title tr.:** Expansion of the Swedish wood industry.

Discusses unprecedented expansion during recent years due to increased forest yield especially in Norrland, industrial use of deciduous trees, larger plant units, further refinement of wood pulp, and good world markets. The sawmill industry expanded 17% in upper and middle Norrland 1948-1953, and 23-40% in southern areas; 1960 was a record year for export. Maps show yearly capacity and location of the wood-pulp industries: sulfite, sulfate, semi-chemical and mechanical pulp, paper and board, and wall board; each is described. (DA.)

74380. NORDSTRÖMS LINBANOR, A. B., *Stockholm.* Narvik, an ore loading port par excellence. (Anglo-Swedish review, Aug. 1960, p.157-59, illus.)

General description of this Norwegian port, based on information from the firm which designed and carried out its reconstruction after World War II. The ore pier and conveyer system are equipped to handle 6,000 t./hr.; much of the operation is automatic, including sampling weighing, and train pushing. (SPRI.)

74381. NOREN, GEORGE, *and others.* Tolerance of human and rat atrial muscle to hypothermia and anoxia. (Circulation research, Nov. 1961. v.9, no.6, p.1229-32, illus.) 14 refs. *Other authors:* D. Goldring *and* W. Slater, Jr.

Reports on experiments indicating preservation of contractility of atrial muscle during hypothermia (of 25 to 31° C. in man) and anoxia. The medical value of the results is noted. (DLC.)

74382. NORFORD, B. SEELEY. Illustrations of Canadian fossils: Cambrian, Ordovician and Silurian of the western Cordillera. Ottawa, Queen's Printer, 1962. 25 p. incl. 10 plates. (Canada. Geological Survey. Paper 62-14.) 21 refs.

Contains documented information on each photograph, dealing with the stratigraphy and geography of the specimen. Seventeen specimens, about half those shown, were obtained in Yukon Territory, Mackenzie District, or Southeast Alaska. The Middle Ordovician Sunblood Formation contains an undescribed fauna in Mackenzie District. An Early or Middle Silurian fauna is widespread in northern British Columbia and adjacent Mackenzie District. Late Silurian molluscs are shown from Southeast Alaska. This is one of a series of reports prepared for use by non-specialists in paleontology. (DI.)

NORFORD, B. SEELEY, *see also* Raasch, G.O., & *others*. Silurian *Aulacopleura* . . . Yukon. 1961. No. 75008

74383. NORIN, B. N. Chto takoe lesotundra? (Botanicheskiĭ zhurnal, Jan. 1961. t.46, no.1, p.21-38,

illus., table, maps.) Approx. 150 refs. Text in Russian. Summary in English. **Title tr.:** What is the forest-tundra?

Reviews the literature and discusses more recent zonations and limits of forest-tundra by various botanists and geographers; its typical plants, the problem of ice formation, effects of climate, forest types of this zone, etc. It is concluded that this north Eurasian zone is characterized "by a specific structure of plant communities, by a definite set of life forms and a definite complex of the elements of their flora." (DLC.)

74384. NORLING, GUNNAR. Abandonment of rural settlement in Västerbotten Lappmark, North Sweden, 1930-1960. (Geografiska annaler, 1960. v.42, no.4, p.232-43, maps, tables.) 30 refs. Paper presented at the Siljan Symposium at the 19th International Geographical Congress, Stockholm, 1960.

Reports on farm abandonment in this region, studied in conjunction with the rural depopulation of Norrland. Since 1930, over a thousand farms were abandoned at a rate which doubled for each five-year period to 1950, then increased more slowly. Areas of heavy abandonment are described, and causes considered. The process is characterized as a thinning out rather than retreat of settlement, as the idea spreads to leave isolated, low-income areas for urban places. (DLC.)

74385. NORMAN, J. N. Micro-climate of man in Antarctica. (Journal of physiology, Feb. 1962. v. 160, no.2, p.27P-28P.) Ref.

Study of four men during one year, the outdoor temperature (mean -18.6° C.), the exposure temperature (over +14.4° C.) and sub-clothing temperature (32-33° C.). Data appear to explain lack of evidence of acclimatization. (DLC.)

NORRIS, A. W., *see*

Belyea, H.R., & A.W. Norris. Middle Devonian . . . 1962. No. 70125

McLaren, D.J., & *others*. Illus. Can fossils Devonian . . . 1962. No. 73716

74386. NORRIS, DONALD KRING. Huge northern mapping project completed. (Oil in Canada, Sept. 27, 1962, v.14, no.48, p.39.)

Summarizes Operation Porcupine, the mapping of 80,000 sq. mi. of Yukon and Northwest Territories, north of 65° N. and west of 132° W.; completed in 109 days in the 1962 field season. (DGS.)

NORRIS, DONALD KRING, 1924- , *see also*

Douglas, R.J.W., & D.K. Norris. Camsell Bend & Root R. map areas . . . 1961. No. 71093

Hale, J.D. Op. Porcupine 1962. 1962. No. 71954

NORRIS, KENNETH S., *see* American Society of Mammalogists. *Committee on Marine Mammals*. No. 69745

74387. *NORRLÄNDSKA SOCIALDEMOKRATEN*. När renar blir dödade vid skogsavverkningar. (Skogs-Norrland, Apr. 1961. nr.2, p.21.) Text in Swedish. **Title tr.:** When reindeer are killed in cutting areas.

Deep snow with hard crust during the 1960-61 winter prevented reindeer access to lichens except in logging areas. They were a great nuisance to loggers, and many were killed. The National Lapp Association petition for the right to claim compensation was denied. Another short article on the reindeer nuisance in cutting areas appears in the same page of this journal. (DA.)

NORSK ORNITOLOGISK FORENING, *see* Myrberget, S. Vipas . . . 1962. No. 74185

74388. NORSK TINDEKLUB. Norsk fjellsport 1958. Oslo, Grøndahl & søn, 1958. 254 p. illus., maps. Text in Norwegian. **Title etc., tr.:** Norwegian Mountain Club. Norwegian mountaineering 1958.

Jubilee (50-year) volume, presenting various information on mountains, mountaineering and mountaineers, together with 18 papers, four of them dealing with polar regions, viz:

Lofoten and the Nordland (in English) by H.P. Spilsburg, p.70-80.

Svalbard, sommeren 1954 (Svalbard, summer 1954) p.132-42, P. Vigerust, describes ascents of some glaciers in Vestspitsbergen.

Grønland kaller! (Greenland calls) p.143-55, Ø. Røed, describes ascents of various summits in the Staunings Alper in 1951 and 1954.

Antarktis, klatretur med lang anmarsj (Antarctic ascent with a long approach) p. 156-67, N. Roer, describes ascents of various summits of a mountain complex in Dronning Maud Land, by the first (1950) wintering party at Maudheim. (NPOslo.)

74389. NORSKE TURISTFORENING. Årbok 1961: Breen. Oslo, 1961? 256 p. illus. Text in Norwegian. **Title etc., tr.:** Norwegian Tourist Association. Yearbook 1961: The glacier.

Contains some 25 papers on glaciers and glacier ascents, mostly in central Norway. One, by H.L. Løvenskiold, deals exclusively with an arctic area: *Fuglene på Spitsbergens nunatakker*, (The birds on Spitsbergen nunataks), p.193-99. (NPOslo.)

74390. *NORTH*. The Canadian Coast Guard. (North, Mar.-Apr. 1962. v.9, no.2, p.40-41.)

Describes the Dept. of Transport fleet, noting its new name, its vessels (241) including 17 for icebreaking, eight for special arctic service, shallow-draft craft for the Mackenzie River, and over 180 steel landing craft for arctic use. Its functions include the annual supply operations to the Arctic. Vessels under construction include several for arctic work. (CaMAI.)

74391. *NORTH*. Eskimo drama on the airwaves. (North, Jan.-Feb. 1962. v.9, no.1, p.33-35, illus.)

Photoreportage of a radio program written and produced by Eskimos at Frobisher Bay, Baffin Island. (CaMAI.)

74392. *NORTH*. How big is northern bureaucracy? (North, Jan.-Feb. 1961. v.8, no.1, p.19.)

Tabulates, by employing agency, the full-time federal government employees (1450) in the Northwest Territories in Jan. 1961; approx. 350 work directly or indirectly with the Eskimos, over 80 of them Eskimo themselves. (DLC.)

74393. *NORTH*. The Mackenzie Delta logging project. (North, Jan.-Feb. 1962. v.9, no.1, p.39.)

Describes the Dept. of Northern Affairs project initiated in 1960 as a work-relief measure

which developed into a lumbering operation with industrial potential. Cutting over an 83-mi. area near Aklavik, log delivery, milling, and lumber yardage are carried on by the local Indians, Eskimos, and others, who were given training in sawing and milling operations. Production in 1961, over 150,000 b.f.m., side-products, and $51,000 sales are noted. (CaMAI.)

74394. *NORTH.* Preserving the past: what to do about explorers' cairns. (North, July-Aug. 1961. v.8, no.4, p.11.)

Records found in stone cairns in the Canadian Arctic should be sent to the Minister of Northern Affairs and National Resources; old Eskimo campsites also should be reported. (DLC.)

74395. *NORTH.* Step toward tomorrow. (North, Mar.-Apr. 1962. v.9, no.2, p.1-5, illus.)

Reports the transition from a hunting to a money economy as disclosed in discussions among members of the Cape Dorset, Baffin Island Eskimo Co-operative. Its money-making projects, stone and ivory carvings, graphic prints, and tourism are described, as is its retail store set up in 1961 to compete with the Hudson's Bay Co. store. (DLC.)

74396. **NORTH ATLANTIC TREATY ORGANIZATION.** *Advisory Group for Aeronautical Research and Development. Ionospheric Research Committee.* Radio wave absorption in the ionosphere; proceedings of the AGARD Ionospheric Committee fifth meeting, Athens, Greece. Edited by N.C. Gerson. Oxford, Pergamon Press, 1962. xiii, 379 p. illus., tables, graphs, diagrs., maps. (Journal of atmospheric and terrestrial physics, Dec. 1961, v.23.)

Contains 32 papers presented, together with the introductory, general and concluding remarks to the meeting, held June 20-23, 1960. High latitude absorption received considerable attention and many papers dealt entirely or in part with conditions in polar regions. Those predominantly arctic in character are abstracted under their authors' names in this Bibliography, two of them (as indicated by number) in an earlier volume and from other sources. A list of station coordinates also name, place, and subject indices are appended, p.367-73.

RUMI, G.C. Preliminary results of Experiment Luxembourg.

YEH, K.C., *and* O.G. VILLARD, *Jr.* Fading and attenuation of high frequency radio waves propagated over long paths crossing the auroral, temperate and equatorial zones. No. 69327.

DAVIES, K.A. A study of 2-Mc/s ionospheric absorption measurements at high latitudes. No. 64092.

PENNDORF, R., *and* G.E. HILL. The absorption effect in the Arctic during a severe ionospheric storm.

AGY, V., *and* K. DAVIES. Worldwide patterns of ionospheric blackout occurrence.

JELLY, D.H., *and others.* Study of polar cap and auroral absorption at HF and VHF frequencies.

REID, G.C., *and* H. LEINBACH. Morphology and interpretation of the great polar cap absorption events of May and July, 1959.

HOLT, O., *and others.* Analysis of riometer observations obtained during polar radio blackouts.

LITTLE, C.G., *and others.* Some observations of 2.89 Mc/s equivalent antenna temperatures at the auroral zone.

HOLT, O., *and others.* Observations of electron density and collision frequency during polar radio blackout conditions.

KANE, J.A. Re-evaluation of ionospheric electron densities and collision frequences derived from rocket measurements of refractive index and attenuation. (DLC.)

74397. **NORTHERN CANADA POWER COMMISSION.** Annual report . . . for the fiscal year ended March 31, 1959-1962. Ottawa, 1959-1962. 4 v., about 25 p. each, illus., maps, tables. *Its:* 11-14th annual report, in sequence to No. 53653.

Summarizes operations of its various projects, which are self-sustaining and provide public utilities on a commercial basis. Four hydro stations and six thermal plants are currently operated, seven in Northwest Territories, two in the Yukon, one in British Columbia. The Snare Falls hydro plant, about 80 mi. northwest of Yellowknife in the Mackenzie District, was placed in service in Dec. 1960, adding 9200 h.p. to the Snare River total. The Fort Resolution diesel plant was completed in 1961. Inuvik utilities plant consists of a 2500 kw generating station combined with a central heating plant, a water pumping and treatment plant, and an above-ground system of utilidors distributing heat, water, and sewerage services to the central part of the townsite. A reconnaissance survey in Feb. 1961 indicated power possibilities on the Taltson River, 35 mi. northeast of Fort Smith, for the Pine Point mining area near Great Slave Lake. Statistical data include: net peak load, gross generation, purchases, consumption, and sales. Financial data are given for each project and for the entire commission. (DLC.)

NORTHERN CANADA POWER COMMISSION, *see also* Canada. Govt. activities N. 1961. 1962. No. 70516

74398. *NORTHERN LIGHT.* Watson Lake, Yukon Territory. May? 1961-April 1962. v.1, no.1–v.2, no.15. pub. weekly in approx. 8 p. mimeo.

Contains short news articles and editorials of mainly local interest, on community activities, development in the area, tourism along the Alaska Highway, also weather reports, advertisements, etc. This paper was incorporated into the *News advertiser,* Whitehorse, as of May 2, 1962. (CaONA.)

74399. *NORTHERN MINER.* Annual review number. Toronto. Usually the last issue in Nov., about a hundred pages with illustrative matter; e.g. Nov. 29, 1962, v.48, no.36, 102 p. illus., maps, diagrs. *in progress.*

Developments during the year, comparison with previous year's production, and expected trends, are discussed by representatives of government, finance and industry. Short articles on factors in northern developments generally are included, as well as such on specific projects,

mining areas, companies, etc. in the Yukon, Northwest Territories, northern Manitoba and northern Quebec-Labrador. (DGS.)

74400. *NORTHERN MINER.* Helicopters do remarkable job; save time, labor in surveying. (Northern miner, Mar. 8, 1962. v.47, no.50, p.24.)

Notes three methods of helicopter-supported surveying on Operation Ogilvie, which used a single Hiller 12E light utility helicopter as its only means of transport. Typical activities involved three mapping methods; landing the geologist atop a ridge to map rock types on foot, depositing the geologist on a high peak to trace formations and rock types through binoculars; and using the stop-and-go ability of the helicopter for direct observation. An eight-man Canadian Geological Survey team surveyed 14,700 sq. mi. of Yukon Territory mountains in the June-Sept. 1961 operation. (DGS.)

74401. *NORTHERN MINER.* Hudson Bay future brightened by new mines' higher grade. (Northern miner, Sept. 8, 1960. v.46, no.24, p.1+.)

Notes the 2.7% copper and 4% zinc content of Hudson Bay Mining and Smelting Co. ore reserves, with the opening of the Chisel Lake mine in Northern Manitoba; the improvement caused by excellent grades and tonnages developed by the company's satellite mines near Flin Flon and Snow Lake. Chisel Lake, found in 1956, has 5.3 million tons in ore reserve, averaging 11% zinc, 1% each of copper and lead. The mine has two shafts; one for development, the other for production. Other satellites, Stall Lake, Osborne Lake and Ghost Lake mines, and a projected mine in the Snow Lake area are also noted. Profits from these mines are cited in the same journal, Mar. 23, 1961, p. 11, +. (DGS.)

74402. *NORTHERN MINER.* Iron Ore Company of Canada's Carol Project. Toronto, July 26, 1962. 98 p. illus., maps, diagrs., graphs. (Northern miner, v.48, magazine supplement.)

Contains articles on various aspects of this iron ore operation at Wabush Lake in Labrador, opened July 10, 1962 after ten years' preparation at $200 million cost. Daily output of 50,000 tons of ore is planned from the nearly 400 million tons available. Auxiliary facilities also are dealt with: the port at Sept Iles served by the Quebec, North Shore and Labrador Railway, the Twin Falls, Labrador, power development, Labrador City townsite being developed for the 2300 Wabush Lake workmen, etc. Effects of the project on the Labrador area, the iron and steel industry, and the Canadian economy generally are discussed. Key personnel are cited with illus. The articles (anonymous except one, *Iron ore industry undergone revolutionary changes past decade,* by E.L. Joppa, p.64) are accompanied by about fifty pertinent advertisements, many of them by participants in the Carol Project. (DGS.)

74403. *NORTHERN MINER.* Long awaited railway to Great Slave Lake will open vast new areas for prospecting. (Northern miner, Mar. 8, 1962. v.47, no.50, p.19.)

Outlines factors favorable to construction of this 430-mi. line, to connect the northern terminus of the Northern Alberta Railways at Roma with the town of Hay River on Great Slave Lake and, by a 50-mi. branch line, with the lead-zinc deposits at Pine Point. Traversing a series of low plateaus between several wide, shallow river valleys, the route roughly parallels the Mackenzie Highway, a ready-made access route. Major problem is crossing the 300-ft. deep, mile-wide Meikle River valley; the planned U-type crossing will have a maximum line gradient of 0.6% as well as a steel-on-concrete bridge 2000-ft. long and 165 ft. above the river. Canadian National Railways is to build and operate the line to be completed in late 1965-1966. Another article *ibid,* Feb. 15, 1962, p.1, +. (DGS.)

74404. *NORTHERN MINER.* New Snare Falls power plant to benefit Yellowknife area. (Northern miner, Dec. 22, 1960. v.46, no.39, p.19, illus.)

Describes the hydroelectric power plant completed in Nov. 1961 on the Snare River, about 100 mi. northwest of Yellowknife, Mackenzie District. It is expected to deliver 9000hp. A ten-mile access road was built to the existing plant at Snare Rapids. (DGS.)

74405. *NORTHERN MINER.* Northwestern area to be serviced by new districts. (Northern miner, Mar. 8, 1962. v.47, no.50, p.33, map.)

Announces establishment of Watson Lake mining district in southeast Yukon, and Nahanni mining district in southwest Mackenzie District, both served by a new mining recorder's office at Watson Lake. Other mining districts in Yukon Territory: Whitehorse, Mayo and Dawson, are shown (map); central office for all Yukon districts remains at Whitehorse. In Mackenzie, the Mackenzie mining district covers the area north and east of Nahanni, also Banks and Victoria Islands. In these districts, road construction by the Federal government has spurred mineral exploration. (DGS.)

74406. *NORTHERN MINER.* Quebec Cartier hurrying to completion. Canada's biggest-ever mining project. (Northern miner, Aug. 18, 1960. v.46, no.21, p.1, +).

Reports on this mining project begun May 1958: the new town of Gagnon, 140 mi. north of the harbor at Port Cartier, 40 mi. west of Seven Islands; the hydroelectric power plant on the Hart-Jaune River, to be operating at 60,000 hp. capacity by Nov. 1960; the concentrator with capacity 60,000 tons/day, the 193-mi.-long railroad, and the port facilities scheduled. Low costs are expected to result from the large, 20,000,000 tons/yr., production, and from the advantages of location, milling, handling, etc. of the Lac Jeannine deposit. Mining plan is outlined; the rail route and harbor are briefly described. (DGS.)

74407. *NORTHERN MINER.* Special method cementing bolts proves best at Swedish mine. (Northern miner, Oct. 27, 1960. v.46, no.31, p.23.)

Describes equipment, procedure, etc. of the "Injekto system" of rock bolting, tested and used on 100,000 bolts at the Kiruna iron mine in northern Sweden. Chief advantage is the thin cement around the bolt, which permits efficient use of the volume of the hole. (DGS.)

74408. *NORTHERN MINER.* The Thompson mine of the International Nickel Company of Canada

Ltd. Toronto, August 17, 1961. 100 p., illus., ports., maps, diagrs. (*Its:* special supplement to v.47, no.21.) Refs.

Portrays development of this large nickel producing plant, the first fully integrated as to mining and processing, opened in March 1961. Detailed accounts are given of the Thompson mine proper, problems of muskeg and mud overcome in construction, the supporting services: hydroelectric power, the new town of Thompson, and air service. Research and development in the nickel industry is outlined. Individuals associated with the project are indicated. It was named after John Fairfield Thompson, Inco board chairman 1951-1960. Major Inco publications are listed. Another article, *ibid.* Mar. 30, 1961, p.1, +. (DGS.)

74409. *NORTHERN REPORT.* Ketchikan, Alaska, Alaska Clipping Service, Sept. 1962- *in progress. Pub.* monthly in approx. 4 p. Mimeo.

Presents a digest and compilation of business news in Alaska and northern Canada, taken from over twenty newspapers and other sources. Significant developments are analyzed; opportunities in the North are indicated by special reports and interviews. (CaONA.)

74410. *NORTHERN STAR.* Fort Chimo, Quebec. v.1, no.1, April? 1961- *in progress.*

Newspaper pub. fortnightly in approx. 6 p., mimeo., with world, Canadian, and local news, and editorials on general subjects. Events in other northern areas, weather, and advertisements are included. (CaONA.)

NORTHERN TRANSPORTATION CO. LTD., *see* Eldorado Mining & Refining Ltd. Annual report . . . 1962. No. 71227

74411. **NORTHWEST TERRITORIES.** *Commissioner.* Annual report fiscal year 1960-1961. Ottawa, Queen's Printer, 1962. 28 p. graphs, tables.

Reports with pertinent statistics, on the year ending Mar. 31: legislation, resources and construction activities, Eskimo cooperatives, tourism, game conservation and management, Workmen's Compensation, health, Hospital Insurance, welfare, education and vocational training, also municipal affairs in six communities, and finances. Among the significant developments are increased oil and gas explorations, decision to build the Great Slave Lake Railway via the western route, extension of school facilities to over 60% of the Eskimo children, decrease in TB incidence among Eskimos, and opening of the Great Slave Highway to Yellowknife. (CaMAI.)

74412. **NORTHWEST TERRITORIES.** *Council.* Votes and proceedings, sessional papers. 20th session, Ottawa, January 16-24, 1961; 21st session, Fort Simpson, July 10-20, 1961. Ottawa, Queen's Printer, 1961. 2 v.: 79 p. & appendices paged variously; 81 & 257 p., maps, tables.

Presents discussion and votes at the January session on five bills, and on 24 sessional papers (text appended), and related topics. At the July session, 17 bills and 46 sessional papers were dealt with. Telephone systems, motor vehicles, municipal districts, appropriations, tourism, wildlife management, welfare, game, insurance, liquor, trapping, fishing, employment, were among the subjects considered. (CaONA.)

74413. **NORTHWEST TERRITORIES.** *Council.* Votes and proceedings, sessional papers, 22nd session, Ottawa, Jan. 15-25; 23rd session, Cape Dorset, July 30-Aug. 4, 1962. Ottawa, Queen's Printer, 1962. 2 v.: 83 & 139, 79 & 223 p., tables.

Presents discussion and votes at the January session on 13 bills passed, together with 30 sessional papers and related topics discussed. Ordinances and papers deal with boundary of the new Mackenzie Territory, fur production, game, transportation, housing, and financial agreements, among other subjects.

The July session dealt with 17 bills (p.31-77), and matters presented in several of the 42 sessional papers appended. Opening address of the Commissioner R.G. Robertson (p.1-7) discusses growth of Frobisher Bay, spectacular development of Eskimo cooperatives, the economic plight of Keewatin District, and the success of the Cape Dorset Eskimo art enterprise. Problems raised earlier are considered (p.20-31) in mining development, accommodation for apprentices, turnover of teachers, grants for teacher accommodation, commercial fishing, welfare, employment of residents, logging projects in the Mackenzie delta, consumption of alcohol by indigents, roads, and cooperatives. The sessional papers comprise: the opening address, Orders and regulations (8 p.), and report of the Commissioner for 1961/62 (20 p.) reviewing the year's work, resources, construction, societies, cooperatives, winter works, tourism, game, workmen's compensation, liquor system, health, hospital insurance, welfare, education, municipal affairs, finances.

Workmen's Compensation Administration, ninth annual report (19 p.) reviews 1961/62 activities with some statistics; 465 employers operating in NWT, as compared to 436 for 1960/61.

Liquor System annual report for 1960 (24 p., tables). In sess. paper no.14 (3 p.) the liquor administration deals with use of liquor by Eskimos at Frobisher Bay, and criteria for granting liquor licenses to motels and fishing camps.

Revenue and expenditure statement (13 p., tables.)

Exemption, business license ordinance (2 p.).

Health conditions 1961 report (11 p., tables.)

Predator control 1961/62 (3 p.)

Labour legislation (9 p.), brief from Yellowknife District Miners' Union, and report from Northland Labour Conference, Yellowknife, June 1-2, 1962.

Moose survey east of Yellowknife 1962 (2 p.).

Future capital of the Mackenzie Territory (39 p., maps) discusses sites at Inuvik, Fort Smith, Yellowknife and Fort Simpson. Briefs for each are included; also a (20 p.) report on the suitability of Fort Simpson, prepared by Central Mortgage and Housing Corporation.

Fitness and amateur sport (3 p.) are discussed.

Choice of a name for the Mackenzie District highway network (2 p.), a name for the new eastern territory (3 p.), Attendance of Roman Catholic children in Akaitcho Hall at the Yellowknife separate high school (8 p.) are discussed.

Fire Marshal 1961 annual report (5 p.)

References for advice on campgrounds in municipal districts (3 p.) are given, and a proposed ten-mill real-property tax for education, (3 p.), and a public utilities board for NWT, (5 p.) dealt with.

Fort Simpson is discussed as the "future capital" (4 p.)

Cape Dorset Eskimos present two petitions (1 p. each) for more community, educational, and medical development.

Memorandum (3 p.) by Andrew Cowan, Director, Northern Service, Canadian Broadcasting Corporation.

Text of 17 bills to be voted on (25 p.) is presented as sess. papers no.26-42. (CaONA.)

NORTHWEST TERRITORIES. COUNCIL, *see also Arctic circular.* Proposed territories. 1962. No. 69850

NORTHWEST TERRITORIES. COUNCIL, *see also* Canada. Govt. activities N.1961. 1962. No. 70516

74414. **NORTHWEST TERRITORIES.** *Game Management Service.* Northwest Territories graphs showing fur take and average prices by species. Ottawa, Apr. 1, 1962. 13 graphs.

Shows number of pelts taken and average value per pelt, 1943-1961; 13 species are reported: beaver, fisher, lynx, marten, mink, muskrat, otter, polar bear, squirrel, weasel, white fox, wolf, and wolverine. (CaMAI.)

74415. **NORTHWEST TERRITORIES.** *Laws, Regulations, etc.* Ordinances of the Northwest Territories, Canada, 1961. Ottawa, 1961. 18, 78 p.

Contains text of 22 ordinances passed by NWT Council, sess. 1, chap. 1-5, assented to Jan. 24, 1961; sess. 2, chap. 1-17 assented to July 20, 1961. They deal with installation of a telephone system in some settlements, amendments to the motor vehicles and municipal district ordinances, public service expenditures, child welfare, and amendments to the electrical protection, game, Hay River Municipal District, insurance, judicature, and liquor ordinances. (CaONA.)

74416. **NORTHWEST TERRITORIES.** *Laws, Regulations, etc.* Ordinances of the Northwest Territories, Canada, 1962. Ottawa, 1962. 38, 34 p.

Contains text of 30 ordinances passed by NWT Council, sess. 1, chap. 1-13 assented to Jan. 25, 1962; sess. 2, chap. 1-17 assented to Aug. 4, 1962. They deal with financial agreements with the federal government, amendments to the fuel-oil tax, fur export, illegitimate children, legal profession, and liquor ordinances, low-cost housing construction, amendments to the motor vehicles, housing, and workmen's compensation ordinances, amendments to the bills of sale and conditional sales ordinances, cornea transplants, disabled persons, electrical installations, amendments to the financial agreement, game, insane persons, judicature, and old age assistance and blind persons allowance ordinances, presumption of death, public health, survivorship, and public service expenditures. (CaONA.)

NORVIK, JOHANNES, *see* Hoel, A., & J. Norvik. Glaciol. bibliog. Norw. 1962. No. 72181

74417. **NORWAY.** *Fiskeridirektoratet.* Fiskefartøyers lønnsomhet i 1959. (Fiskets gang, July 13, 20, 27, 1961. årg. 47, nr.28, 29, 30, p.490-99, 511-16, 527-32, tables, graphs.) Text in Norwegian. Title tr.: Profits of fishing vessels in 1959.

Presents detailed tables and discussion on the Norwegian fisheries economy based on data, annual and seasonal, of 325 vessels over 50 ft. North and South Norway are treated separately. Net returns were greater than the two previous years. About half the fisheries showed profit and provided equitable remuneration for the crews; the rest operated at a loss. (DA.)

74418. **NORWAY.** *Fiskeridirektoratet.* Norges fiskerier 1961; mengde og verdi av de viktigste sorter 1958-1961. (Fiskets gang, Dec. 28, 1961. årg. 47, nr.52, p.806-811, tables.) Text in Norwegian. Title tr.: Norwegian fisheries 1961; quality and value of the chief fish species, 1958-1961.

Presents preliminary data for the Norwegian pelagic fisheries: 1,316,243 tons, gross value 674.6 million crowns. Fish and fish products exports for 1961 are an estimated 875 million crowns as compared with 925 million in 1960. Herring fisheries in North Norway, Iceland waters and the North Sea, are reported in detail, as are cod fisheries with 140 trawlers in Finnmark, Lofoten, Troms, Vesterålen, Salten-Møre and West Greenland waters. Haddock and halibut in Finnmark waters, and porbeagle in the North Atlantic from Newfoundland to the Boston area are also dealt with. (DA.)

74419. **NORWAY.** *Fiskeridirektoratet.* Storträlernes lønnsomhet i 1960. (Fiskets gang, Dec. 21, 1961. årg. 47, nr.51, p.783-800, tables, graphs.) Text in Norwegian. Title tr.: Profits from large trawlers 1960.

Reports on catch and value of this fishery in 1949-1960 with a detailed report for 1960, also on English and West German operations of 1952-1959 in their common fishing grounds: the Barents Sea, Norwegian, Bjørnøya, Spitsbergen and Greenland waters. For all three countries, catch and profit rose from 1949 to 1956, then sharply decreased. Norwegian trawling, reduced in the Barents Sea and Greenland waters, has been best off East Finnmark. The Norwegian and English catch is 80% cod; the West German fleet took chiefly redfish and saithe. Costs and wages are discussed for the three fleets. (DA.)

NORWAY. FISKERIDIREKTORATET, *see also* Mollestad, S. Småtrålernes fiske . . . 1960, 1961. No. 74093-No. 74094

74420. **NORWAY.** *Fiskeridirektoratet. Havforskningsinstituttet.* Oversikt og toktprogram 1961. (Fiskets gang, Jan. 26, 1961. årg. 47, nr.4, p.76-78, table.) Text in Norwegian. Title tr.: Survey and cruise program 1961.

Describes the new building and facilities of the Fishery Directorate's Oceanographic Institute in Bergen, its laboratories, model basins, workshops. Its current projects include: migration and biology of cod, herring and salmon varieties; the reliability of echo soundings; damaged fish in the Lofoten area; mapping of edible molluscs in coastal waters, mapping of the Norwegian Sea bottom, and sunlight as a factor in ocean productivity. The 34 scientific cruises planned for 1961 include 14 in arctic waters. (DA.)

74421. **NORWAY.** *Fiskeridirektoratet. Kontor for statistikk og etterretningsvesen.* Trålernes fiske i 1960. (Fiskets gang, Feb. 15, 1962. årg. 48, nr.7, p.86-92, tables, sketch map.) Text in Norwegian. **Title tr.**: Trawl fisheries in 1960.

Presents catch data for the Norwegian and Barents Seas and the Bjørnøya-Spitsbergen and West Greenland waters: volume of salted and fresh cod, saithe, haddock, redfish, and byproducts, by species, and by number and size of vessels. For large trawlers data are given on catch and prices 1954-1960, number and size of vessels 1959-1960, 1960 landings, catch by fishing ground (25), and the four main fishing areas: Barents Sea 9,588 tons, Bjørnøya-Spitsbergen waters 3,260, Norwegian Sea 3,377, and West Greenland waters 767 tons. (DA.)

74422. **NORWAY.** *Fiskeridirektoratet. Kontoret for driftsøkonomiske undersøkelser.* Lofotfiskets lønnsomhet 1961. (Fiskets gang, Sept. 14, 1961. årg. 47, nr.37, p.638-43, tables.) Text in Norwegian. **Title tr.**: Profits from the Lofoten fisheries 1961.

Presents a statistical analysis of catch, value, cost and income, with separate data for net, longline, and "juksa" fisheries. The 41,664 ton catch was 11% larger than in 1960, prices also were higher. 8,861 fishermen and 2,624 vessels took part. (DA.)

74423. **NORWAY.** *Laws, Regulations, etc.* Lover og bestemmelser gitt i medhold av lov; lokale reguleringer av fisket i Troms, Kgl. resolusjon av 12. februar 1960. (Fiskets gang, Feb. 25, 1960. årg. 46, nr.8, p.113.) Text in Norwegian. **Title tr.**: Laws and regulations passed in accordance with the law; local regulations for fisheries in Troms, edict of Feb. 12, 1960.

Lists changes in regulations, prohibiting trawling in specified fjord areas, except for herring, brisling, mackerel and capelin. (DA.)

NORWAY. METEOROLOGISKE INSTITUTT, *see also* Hoem, V. Utilization of aircraft . . . reports. 1962. No. 72182

74424. **NORWAY.** *Norsk Polarinstitutt.* Årbok 1960. Oslo, Norsk Polarinstitutt, 1962. 146 p. illus. tables, maps. Text in English and Norwegian. **Title tr.**: Yearbook 1960.

First in a planned new series of publications to provide annual reports of the Institute's activities, summarize information on foreign research in polar regions, and to present short scientific papers. The volume contains 15 papers, most of them in English; 12 pertinent to the Arctic are abstracted in this Bibliography under their authors' names, viz:

WINSNES, T.S., *and others.* Activities of Norsk Polarinstitut.

LAPPARENT, A.F.de. Footprints of dinosaur in the Lower Cretaceous of Vestspitsbergen, Svalbard.

HEINTZ, N. *Gigantaspis,* a new genus of fam. Pteraspidae from Spitsbergen.

SUNDING, P. Height limits for vascular plants in Svalbard. (Paper in Norwegian).

LIESTØL, O. Discovery of a tree stump in front of Engabreen, Svartisen.

HEINTZ, N. The Nansen Ridge has become the Nansen Trough.

ASKILDSEN, T. The Peel River Indians. (Paper in Norwegian).

SIGGERUD, T. The iron occurrence at Farmhamna, Vestspitsbergen.

THORÉN, R. The Norwegian Svalbard excursion in connection with the XIXth International Geographical Congress Norden 1960.

HEINTZ, N. Geological excursion to Svalbard in connection with the XXI International Geological Congress in Norden 1960.

HISDAL, V. The weather in Svalbard in 1960.

GJELSVIK, T. The activities of the Norsk Polarinstitutt in 1960; organisation and administration. (Paper in Norwegian). (CaMAI.)

74425. **NORWAY.** *Norsk Polarinstitutt.* List of publications printed before January 1962. Oslo, Norsk Polarinstitutt, 1962. 21 p. maps. (*Its:* Skrifter no.123, supplement.)

Lists: 124 Skrifter, 88 *Meddelelser, Scientific results of the Norwegian-British-Swedish Antarctic Expedition 1949-1952:* 20 papers in five vols., also 32 maps, 15 charts. (CaMAI.)

74426. **NORWAY.** *Norsk Polarinstitutt.* Norge topografisk kart over Jan Mayen. Oslo, 1959. 2 col. map sheets, 23¼ x 24 in. Text in Norwegian. **Title tr.**: Norway topographic map of Jan Mayen.

Maps at 1:50,000 scale and 20 m. contour intervals, this island in the Greenland Sea; glaciers, topographic features, also 10, 20, and 100 m. sea depths and anchorages in the surrounding waters are shown. Insets show the island's position and the local bathymetry, at 1:600,000. For the accompanying roster of place names, see No. 67237. The map is described by W.H. Ward in *Polar record,* no.70, p.84-85. (DNG.)

74427. **NORWAY.** *Skogdirektoratet.* Skogplanteskolene i 1961. (*Its:* Årsskrift for norske skogplanteskoler, 1961, *pub.* 1962. p.5-8, tables.) Text in Norwegian. **Title tr.**: Tree nurseries in 1961.

Presents data on production and supply of plants with breakdown for species and province. Expansion and modernization of nurseries, plant damage and prices are discussed. (DA.)

74428. **NOSOV, N. S.,** *and* **P. P. BEREZIN.** Protivopozharnaîa zashchita atomnogo ledokola "Lenin." (Sudostroenie, 1961. god 27, no.8, p.39-40, table, diagr.) Text in Russian. **Title tr.**: Fire prevention measures on the atomic icebreaker *Lenin.*

Describes walls with mineral wool insulation between the several compartments on each deck of the vessel. (DLC.)

NOSOVA, E. A., *see* Gaevskaîa, M.S., & E.A. Nosova. Vliîanie gipotermii . . . 1961. No. 71538

NOSOVA, L. N., *see* Bars, E.A., & L.N. Nosova. Organicheskoe veshchestvo . . . 1962. No. 70047

NOTZOLD, R. A., *see* Levine, N.D., & *others.* Survival *Trichomonas* . . . -28 and -95°C. . . . 1962. No. 73465

74429. **NOVAK, DERRY.** Siberia, a land of the future? (North, May-June 1961. v.8, no.3, p.15-18.)

Describes the natural resources and their projected development under the Seven Year Plan, 1959-1965. Hydro-electric developments and timber

resources in the Angara and Yenisey basins in Krasnoyarskiy Kray are noted; the town of Noril'sk on the Yenisey is described. (DLC.)

74430. **NOVGORODOVA, E. S.** Narodnye istoki tvorchestva ĭakutskogo pisateliĭa Ėrilik Ėristina. (Leningrad. Gos. pedagogicheskiĭ institut. Uchenye zapiski 1955. t.111, Materialy Gertsenovskikh chteniĭ, p.147-48.) Ref. Text in Russian. **Title tr.:** Folkloristic sources in the works of the Yakut writer Ėrilik Ėristin.

Discusses traditional, especially *olonkho* (Yakut ballad) elements in epic and genre tales and novels of this writer, also known as Semen Stepanovich ĭAkovlev, 1892-1943. (DLC.)

74431. **NOVICHKOV, V. P.** Osobennosti ukladki 25-metrovykh rel'sov v surovykh klimaticheskikh usloviĭakh. (Put' i putevoe khozĭaĭstvo, June 1961. god 5, no.6, p.36-37, tables.) Ref. Text in Russian. **Title tr.:** Features of laying 25 m. rails under severe climatic conditions.

Discusses with technical details, this problem in the Far East, where the temperature ranges 95-100 centigrade degrees between max. and min. Discrepancy between the computed and actual clearance between rails is so serious that shorter rails should be laid at certain intervals in spring and replaced by rails of normal length in the fall. (DLC.)

74432. **NOVIKOV, B. G.,** *and* **M. A. LIUBARSKAIA.** Ustoĭchivost' gonad ptits k deĭstviiu nizkoĭ temperatury. (Akademiia nauk SSSR. Doklady, 1962. t.142, no.4, p.961-64, table.) 11 refs. Text in Russian. **Title tr.:** Resistance of bird gonads to low temperature.

Reports on survival of male gonad of the sparrow exposed to -182°C. The effect of additives such as glycerol, ethylene glycol, etc. is also studied. (DLC.)

74433. **NOVIKOV, FEDOR ĭAKOVLEVICH.** Protaivanie merzlykh gruntov v osnovanii terrikonikov i-kruglykh zdaniĭ. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.41-50, tables, graphs.) 8 refs. Text in Russian. **Title tr.:** Melting of frozen ground beneath slag heaps and circular buildings.

Analyzes the factors of heat conductivity and convection beneath hot slag heaps in the Vorkuta mining area. Various boundary conditions are assumed and corresponding equations derived. Three main problems are created: the relationship between the depth of thawing and the temperature of the ground beneath a slag heap; the contours of the thaw basin, particularly beyond the slag; and the latter's sphere of influence. A hydraulic integrator was used and results are tabulated and graphed. Comparisons with results of corresponding calculations for circular buildings showed that the general form of equation for calculating thaw depth beneath its center can be used to calculate that beneath the center of a conical slag heap.—From CRREL. (DLC.)

74434. **NOVIKOV, M. I.,** *and* **V. A. GOLUTVIN.** Primenenie kamerno-stolbovoĭ i kamernoĭ sistem razrabotki na shakhte No. 11 v Noril'ske. (Ugol', Mar. 1961. god 36, no.3, p.7-10, illus.) Text in Russian. **Title tr.:** Room-and-pillar and square-chamber methods of mining in pit No. 11 at Noril'sk.

Outlines these two methods of mining coal with details on drilling, blasting, loading, transportation, caving-in in the areas worked out by the room-and-pillar method, and timbering where the square-chamber method was used. As a rule, the mining is done by the room-and-pillar and the alternative method used only in exceptional cases. (DLC.)

74435. **NOVIKOV, N. P.** Novye dannye o rasprostranenii paltusov i nekotorykh drugikh promyslovykh ryb v Beringovom more. (Zoologicheskiĭ zhurnal, Oct. 1961. t.40, vyp.10, p.1510-15, maps.) 8 refs. Text in Russian. Summary in English. **Title tr.:** New data on the distribution of halibuts and some other commercial fishes in the Bering Sea.

Reports some results of own research trawling in 1957-1960 on the continental slope of the Bering Sea and adjacent waters. Some representatives of the semi-deep Oregon fish-fauna were found distributed over the slope from America to Asia, and Asiatic forms found reaching America. The Bering Sea slope thus acts as bridge for these fishes, which are listed. (DLC.)

74436. **NOVIKOV, N. P.** O veroĭatnosti ginogeneza u amerikanskogo strelozubogo paltusa, *Atheresthes stomias* Jord. et Gilb., v Beringovom more. (Akademiia nauk SSSR. Doklady 1962. t.147, no.1, p.215-16, table.) 7 refs. Text in Russian. **Title tr.:** The probability of gynogenesis in *Atherestes stomias* Jord. et Gilb., of the Bering Sea.

Points out the absence or low percentage of males among more than 2500 specimens, caught in five years at all depths and biological conditions studied. Reproduction in this fish, the arrow tooth flounder, is assumed to be by gynogenesis, as in some other forms. (DLC.)

74437. **NOVIKOV, N. V.** Sektor narodnogo tvorchestva Instituta russkoĭ literatury (Pushkinskiĭ dom) AN SSSR v 1954-1955 godu. (Russkiĭ fol'klor, materialy i issledovaniia, 1956. t.1, p.282-85.) Text in Russian. **Title tr.:** The Sector of Folk Art of the Institute of Russian Literature (Pushkin House), Academy of Sciences, USSR, in 1954-1955.

Describes, among others, the studies on Russian folklore by the Sector's 1955 expedition to the middle Pechora basin. Over 1,600 texts were recorded and 358 taped in 24 settlements on the Pechora and its tributaries the Tsil'ma and Pizhma. (DLC.)

74438. **NOVIKOV, PETR IGNAT'EVICH, 1902–** . Dinamika ulovov semgi po Sovetskomu Soiuzu. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khozĭaĭstva. Izvestiia 1959. t.48, p.7-10, illus., tables.) 8 refs. Text in Russian. **Title tr.:** Dynamics of salmon catches in the Soviet Union.

Presents an overall review of the Arkhangel'sk and Murman Provinces and Karelia. Earlier findings are confirmed, viz. that in addition to catches, environmental conditions affect the numerical fluctuations of this fish. (DLC.)

NOVIKOV, V. A., *see* Steinitz, W. Iz toponimiki . . . 1962. No. 75924

NOVIKOV, V. F., *see* Aganiants, E.K., & V.F. Novikov. Vosstanovlenie . . . 1960. No. 69503

74439. NOVIKOVA, NATAL'IÂ SERGEEVNA, 1923– . Nekotorye dannye po pishchevym raciônam treski i pikshi Barenceva morâ. (Akademiâ nauk SSSR. Doklady 1962. t.146, no.4, p.960-62, table.) 10 refs. Text in Russian. **Title tr.:** Some data on the food rations of Barents Sea cod and haddock.

From some observation in 1959-1961 and the literature, author calculates the food intake of fixed-size fish, in the spring, fall, and in the summer. The amount of food consumed in 24 hrs. is expressed in kilograms per 100 kg. of cod or haddock. (DLC.)

74440. NOVITSKIĬ, V. P. Postoânnye techeniâ severnoĭ chasti Barenceva morâ. (Moskva. Gosudarstvennyĭ okeanograficheskiĭ institut. Trudy 1961. vyp.64, p.3-32, illus., tables, maps.) 29 refs. Text in Russian. **Title tr.:** Permanent currents of the northern Barents Sea.

Presents a new scheme of conditions on the basis of recent work, and their theoretical aspects. Basic factors affecting the general circulation in this sea are described. Their influence upon the distribution of ice during the warm season is discussed, and the effect of the deep Atlantic water upon winter ice, analyzed. The main Atlantic currents move north and northeast meeting the cold arctic and Kara Sea waters in the northern Barents Sea, where mixing goes on almost all the year round. (DLC.)

74441. NOVOZHILOV, V. N. Gidrologicheskie usloviâ v Komandoro-Kamchatskom raĭone Tikhogo okeana letom 1956 g. (Akademiâ nauk SSSR. Institut okeanologii. Trudy 1961. t.38, p.56-60, map.) 2 refs. Text in Russian. **Title tr.:** Hydrological conditions in the Commanders-Kamchatka area of the Pacific Ocean, summer 1956.

Summarizes the July investigations on temperature and salinity at the surface and several horizons down to 1000 m. depth. Water masses and movements indicate a close connection of this area with the Bering Sea. (DLC.)

74442. NOVYSH-BYLINSKAIÂ, V. N. Proverka nekotorykh metodov rascheta MPCh liniĭ sviâzi po èksperimental'nym dannym. (Akademiâ nauk SSSR. Institut zemnogo magnetizma, ionosfery i rasprostraneniâ radiovoln. Trudy 1961. vyp.19 (29), p.71-84, graphs, tables.) 3 refs. Text in Russian. **Title tr.:** Checking certain methods of appraising MPCh communication lines against experimental data.

Compares the accuracy of MPCh (highest frequencies used) for shortwave radio communication as calculated by the "control points," and the "equal jumps" methods, with the actual values observed on radiolines from Washington to: Berlin 6,600 km., Resolute Bay 4,100 km., Baker Lake 3,000 km., Churchill 2,600 km., Ottawa 700 km., and on Soviet lines of 1,600-6,400 km. in various directions. The differences between calculated and observed MPCh were found to be especially high for winter months, and for night and morning hours. MPCh prediction is thus inadequate by either method, although for the radiolines over 4,000 km., the "control points" method gives relatively better results. (DLC.)

NOWLAN, D. M., *see*
Simpson, R.A., & *others.* Natural gas . . . 1962. No. 75666

Simpson, R.A. & *others.* Petroleum indus. Canada 1960. 1961. No. 75667

74443. NUMELIN, RAGNAR. Voittamaton Ruija. Pohjois-Norjan jälleenrakentaminen. (Terra, 1961. årg. 73, no.2, p.87-99, illus., map.) 12 refs. Text in Finnish. Summary in French. **Title tr.:** Unconquered Finnmark, the reconstruction of arctic Norway.

Recounts the post-war rebuilding of Finnish Lapland, with new villages and roads, and reviews the complete reconstruction of northern Norway, including new dwellings for 60,000 persons, offices, churches, etc., Vardø, Vadsø, and Hammerfest completely rebuilt. Revival of industry is noted, especially a booming tourist trade at a hundred thousand visitors yearly to Finnmark. (DGS.)

74444. NUNN, J. F. Portable anaesthetic apparatus for use in the Antarctic. (British medical journal, Apr. 22, 1961. no.5233, p.1139-43, illus., tables.) 16 refs.

Describes apparatus and techniques "now standard equipment with British and South African parties in Antarctica" and useful in other remote areas. Requirements of general anesthesia in the Antarctic, the anesthetic (halothane), and carrier gas used, and maintenance are discussed. Laboratory and clinical trials also are reviewed. (DNLM.)

NURMINEN, AILI, *see* Finland. Pentades of temperature . . . 1961. No. 71400

74445. NUTT, DAVID CLARK, 1919– , *and others.* Dissolved nitrogen in West Greenland waters. (Journal of marine research, Mar. 15, 1961. v.19, no.1, p.6-11, map, graphs.) 6 refs. *Other authors:* L.K. Coachman, *and* P.F. Scholander.

Presents partial results obtained in 1958 from observations at about a dozen selected stations along the coast from Melville Bugt to Brede Fjord. Dissolved nitrogen content gradually decreased from north to south; glacier fronts and floating icebergs produced higher values in coastal waters. (DGS.)

74446. NUTT, DAVID CLARK, 1919– , *and* **P. F. SCHOLANDER.** Gases in Greenland icebergs. (*In:* International Geographical Congress 1960. Physical geography . . . 1961. p.205-216, map, diagrs., table.) 25 refs.

Summarizes the study of gas inclusions made on the Arctic Institute of North America Greenland Expedition 1958. The shipboard laboratory, prefabricated and set up on deck is described. Ice from 11 West Greenland glaciers from Melville Bugt to Bredefjord, 75°-61°N. was examined for age by C^{14} dating, and for volume and composition of gas inclusions. Gas pressure determinations were made on 26 icebergs. Most samples were relatively young, less than 1000 yrs.; composition of the gas was close to that of air, but some alteration had apparently occurred after it was trapped in the ice. The volume of gas ranged from 3 to 8% of that of the ice. Pressure ranged from two-three to some 20 atmospheres. No correlation was found between bubble dimension and pressure, or between volume of gas trapped and composition or pressure. Results of the oxygen isotope studies were presented by W. Dansgaard, q.v. (DGS.)

NUTT, DAVID CLARK, 1919– , *see also* Scholander, P.F., & *others*. Radio-carbon & O^{18} . . . icebergs. 1962. No. 75421

NUZHNOV, S. V., *see* Moralev, V.M., & S.V. Nuzhnov. Perspektivy neftenosnosti . . . 1961. No. 74110

NYE, JOHN FREDERICK, *see* IUGG . . . Snow & Ice Comm. 1961. No. 72396

74447. NYMO, ROLF. Fruktmarinen frakter billig frukt helt til Aust-Finnmark. (Norden, Nov. 1, 1960. årg. 64, no.21, p.588-89.) Text in Norwegian. **Title tr.:** The fruit fleet transports cheap fruit as far as East Finnmark.

Fruit sorted and packed by experts in the Hardanger area of West Norway is shipped in special vessels, and delivered by the North Norway Cooperative to its local branches and private wholesalers three times weekly from late August to mid-December. The cooperative held fruit-quality and packing demonstrations at Consumers' Advisory Council meetings in North Norway towns in Sept. - Oct. 1960. (DA.)

74448. NYMO, ROLF. Råd for lagring av grønsaker. (Norden, Nov. 15, 1960. årg. 64, nr.22, p.626-28.) Text in Norwegian. **Title tr.:** Advice on vegetable storage.

Notes quality produce, adequate space, near-0°C. temperature and humid air as requisites for vegetables. North Norway could be self-sufficient in vegetables and potatoes most years, by winter storage of carrots, cabbage and turnip. Establishment of cultivation centers, local consumption requirements, marketing, etc., are under study. Greenhouse tomatoes and cucumbers should be possible in many areas of North Norway. (DA.)

74449. OBASHEV, S. O. O geomagnitnom effekte Tunguskogo meteorita. (Meteoritika, 1961. vyp.21, p.49-51.) 5 refs. Text in Russian. **Title tr.:** On geomagnetic effects of the Tunguska meteorite.

Discusses the effects of the magnetic disturbances of this meteorite which fell June 30, 1908, and suggests that they were caused by explosion of the nucleus part of a comet rather than the tail. Explosion in the air is considered. The delay of the magnetic disturbances is pointed out and some explanation given. Disturbances, connected with prolongation of the dipole are noted. (DLC.)

74450. OBAYASHI, TATSUZO. Particle precipitations and geomagnetic storms. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings, *pub.* 1962. v.1, p.201-204, illus., graphs.)

Discusses whether solar particles entering the geomagnetic field behave like single particles or like a conductive plasma, and whether particles of different energy range produce different ionospheric and magnetic effects. Author's conclusion drawn from work of various scientists is that the phenomena of auroral display, auroral radio absorption, and magnetic disturbances and storms vary considerably, depending on behavior of the particles, their energies and polarization. Examples are given of average patterns of polar blackouts before and during geomagnetic storms. (DLC.)

74451. OBAYASHI, TATSUZO, *and* **Y. HAKURA.** Polar ionospheric disturbances and solar corpuscular emissions. (Planetary and space science, Jan. 1961. v.5, no.1, p.59-69, tables, diagrs.) 25 refs.

Polar radio blackouts are classified into polar-cap blackouts, which appear a few hours after a major solar radio outburst of type IV and are confined within 60° - 65° geomagnetic latitude, and auroral zone blackouts, which are accompanied by geomagnetic storms and auroras. The former are produced by particles in the 10-100 Mev. energy range; the auroral zone blackouts may be caused by auroral particles of one Mev. or less. Energy distribution of the solar particles is discussed and conclusions published previously (No. 67157, 67161) are restated. (DLC.)

74452. OBAYASHI, TATSUZO. Solar corpuscular radiation and polar ionospheric disturbances. (Annales de géophysique, July-Sept. 1961. t.17, fasc. 3, p.292-304, maps, graphs, tables.) 27 refs.

Reviews briefly the characteristics of enhanced ionization in the polar ionosphere associated with solar flares. The statistical relationship between solar and terrestrial disturbances is re-examined and major radio outbursts of type IV are confirmed as closely related to the polar-cap blackouts preceding geomagnetic storms. A tentative model of the energy spectrum of solar particles is proposed. The effects of incident solar particles upon the upper atmosphere, also the mechanism of earth storms, are discussed briefly.—From author's abstract. (DGS.)

74453. OBIDIN, N. I. K metodike izucheniia teplovogo rezhima porod i oprobovaniia vodonosnykh gorizontov na territorii Noril'ska. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t.117, Geologiia . . . 1961, p.139-45, tables, graphs.) 8 refs. Text in Russian. **Title tr.:** On methods for investigating the thermal regime of rocks and for sampling water-bearing horizons in the Noril'sk area.

Reports temperature logging in various wells as carried out by the author and others. Curves of temperature variation with depth are drawn, compared, and evaluated. Disagreements and errors in such measurements are noted. Choice of resistance thermometer, site for boring the well, measurement control and duration, and other factors are discussed which condition the results obtained from subsurface temperature observations under conditions of permafrost. Sampling of water-bearing horizons is discussed similarly, errors and their prevention noted. (DLC.)

OBOLENSKAIA, G. A., *see* Krasil'nikova, N.A., & *others*. Prognoznaia otsenka fosforitonosnosti . . . 1961. No. 73081

74454. OBORINA, S. F. K voprosu o stroenii zemnoĭ kory v Arktike. (Akademiia nauk SSSR. Izvestiia, ser. geofizicheskaia, June 1961, no.6, p.818-21, table, graphs.) 10 refs. Text in Russian. **Title tr.:** On the structure of the earth's crust in the Arctic.

Studies the dispersion of the Love and Rayleigh surface waves produced by 18 Alaskan earthquakes during 1925-1958, as recorded by the Pulkovo station near Leningrad. Dispersion curves of group velocities are constructed and the earth's

crust along the line Alaska-Pulkovo (6000-7330 km.) is found to vary between 30 and 40 km. in the continental part, and to be ~ 10 km. thick in the oceanic part of the traverse. (DLC.)

OBOTNIN, N. F., *see* Vtorushin, A.V., & *others*. O khrome . . . 1961. No. 76453

74455. OBOZREVATEL'. Lesnaĭa promyshlennost' v pervom kvartale 1961 goda. (Lesnaĭa promyshlennost', May 1961. god 39, no.5, p.8-9.) Text in Russian. **Title tr.:** Wood industry in the first quarter of 1961.

Reviews logging in the RSFSR: actual production was 1.5 million m^3 short of the planned 77.2 million m^3. Provinces which met their quota, including Karelia, are listed; weaknesses of lumbering concerns in the others are analyzed, including Arkhangel'sk, Komi, Tyumen, and Krasnoyarsk. (DLC.)

74456. O'BRIEN, B. J. Direct observations of dumping of electrons at 1000-kilometer altitude and high latitudes. (Journal of geophysical research, Apr. 1962. v.67, no.4, p.1227-33, table, graphs.) 10 refs.

Reports observations by the Injun I satellite of quiescent dumping of electrons with energy above 40 kev. in intensities of the order of 10^4 particles $(cm^2 \text{ sec. ster.})^{-1}$ around July 1, 1961. The satellite's orbit extends to 67°N. (80° geomagnetic latitude) over North America. In 16 passes between 230°E. and 340°E., the angular distribution of electrons about the magnetic vector B showed there was dumping in every one of eight passes between 1200 and 1500 local time, and only in one of eight passes 1900-2300. The dumping, observed over a wide range of (high) latitudes, was uncorrelated with K_p. The results indicate that acceleration mechanisms occur frequently above 1000 km. altitude. (DLC.)

74457. O'BRIEN, B. J., *and others*. Measurements of the intensity and spectrum of electrons at 1000-kilometer altitude and high latitudes. (Journal of geophysical research, Apr. 1962. v.67, no.4, p.1209-25, tables, graphs, diagrs.) 26 refs. *Other authors:* C.D. Laughlin, J.A. Van Allen, and L.A. Frank.

Reports measurements by means of the Injun I satellite July-Aug. 1961, at 45° - 80°N. geomagmetic latitude. Trapped electrons with energy above 40 kev. were found at 45° - 75° in typical intensities of 10^5-10^6 particles $(cm^2 \text{ sec. ster.})^{-1}$ peak 4×10^5. Intensity above 75° was less than 10^2 particles, occasionally it reached a broad peak around 50° and a second peak near the auroral zone. Assuming that the differential electron spectrum followed a power law of the form $dN = \text{constant } E^{-s}\, dE$, s varied significantly for both trapped and dumped electrons in the 40-120 kev. energy range: 0-2 below 60°, 0-7 above. The spectrum was generally softer at higher latitudes. Evidence is found of auroral-producing electron fluxes in daytime. The data obtained are compared with other satellite, rocket, and balloon measurements, and the significance of the latitude distribution of low-energy electron fluxes is discussed. (DLC.)

OBRUCHEV, DMITRIĬ VLADIMIROVICH, *see* Kossovoĭ, L.S., & D.V. Obruchev. O nizhnem devone . . . 1962. No. 73015

74458. OBRUCHEV, SERGEĬ VLADIMIROVICH, 1891– . Zametki o dokembrii Sibirskoĭ platformy. (Akademiia nauk SSSR. Sibirskoe otdelenie. Vostochno-Sibirskiĭ geologicheskiĭ institut. Trudy, ser. geologicheskaĭa, 1962. vyp.5, p.123-28.) 23 refs. Text in Russian. **Title tr.:** Notes on the Precambrian of the Siberian platform.

Discusses problems of stratigraphy and correlation with special attention to the metamorphic granulite facies, a group of gneisses of highly distinctive fabric. Their distribution and position in the Anabar and Aldan shields and other areas are discussed. Better determination of granulite facies is suggested to help solve some age problems and Siberian platform development in the Precambrian. (DLC.)

74459. OBRUCHEV, VLADIMIR AFANAS'EVICH, 1863–1956. Ivan Dement'evich Cherskiĭ, 1845-1892. (*In:* Kuznetsov, I.V., *ed.* Liudi . . . 1962, p.38-45, port.) Refs. Text in Russian.

Describes the life and scientific activities of Cherskiĭ, investigator of the Baykal and other areas of Siberia. He described Quaternary mammals collected by the expeditions of Bunge and Toll' in northern Yakutia and New Siberian Islands. His expedition to the Kolyma and Indigirka basins in 1891-1892 is described in detail. In the course of it he died, on July 7, 1892, and was buried in permafrost on the bank of the Kolyma. His main works and articles about him are listed. (DLC.)

74460. OBRUCHEV, VLADIMIR VLADIMIROVICH. Vladimir Afanas'evich Obruchev, 1863-1956. (*In:* Kuznetsov, I.V., *ed.* Liudi . . . 1962, p.158-74, port.) Refs. Text in Russian.

Describes the life and scientific activities of Obruchev, the famous geologist and geographer and explorer of Siberia and Asia. His investigations of the Lena gold-bearing basin, Olekma-Vitim region, Lake Baykal region, Krasnoyarsk Province, and other areas are described. His participation in international scientific congresses, his study of permafrost, and his other interests also are noted. His main published works and articles about him are listed. (DLC.)

74461. OBUT, A. M., *and* **R. F. SOBOLEVSKAIA.** Graptolity rannego ordovika na Taĭmyre. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.127, Paleontologiia i biostratigrafiia, vyp.3, p.65-96, illus., tables, plates.) 26 refs. Text in Russian. **Title tr.:** Early Ordovician graptolites in Taymyr.

Presents a monographic account of graptolites from the Tremadocian and Arenigian stages of Ordovician deposits, as studied in the Korallovaya and Lenivaya (75°23'N. 88°55'E.) River basins of eastern Taymyr. Cross-section of the deposits is reported in detail, and about 20 species described, some of them new: *Dictyonema taimyrense, Sagenograptus gagarini, Clonograptus limatus, Didymograptus tenuiramis,* and others. (DLC.)

74462. O'CONNOR, JAMES F. Mean circulation patterns based on 12 years of recent Northern Hemispheric data. (U.S. Weather Bureau. Monthly weather review, July 1961. v.89, no.7, p.211-27, charts, graphs.) 11 refs.

Comparison of means for sea level pressure and 700-mb height for 1947-1958 with circulation data obtained prior to 1950 shows significant

differences at high latitudes. In the newer means, the three cells of the polar vortex at 700 mb are not as deep, the cells over Baffin Island and the Siberian Arctic are farther north, and the Kamchatka cell is primarily over the Bering Sea. New features found in the 700-mb means include troughs near Spitsbergen and Alaska, and a High in northeast Siberia. Height differences in the patterns suggest a long-period trend toward increased blocking during the last decade, particularly in the Baffin Bay area. —From author's abstract. (DGS.)

74463. ODAR, FUAT. Scale factors for simulation of drifting snow. (American Society of Civil Engineers. Engineering Mechanics Division. Journal, Apr. 1962. v. 88, no.EM2, p.1-16.) 14 refs.

Derives theoretical scale factors for simulating drifting (arctic) snow in a wind tunnel, using the equation of vertical transport and the threshold characteristics. It is shown that the scale factors derived from the equation of motion of the particles can be substituted for the scale factor obtained from the vertical-transport equation. These factors are derived for small spherical particles; they give relationships between the size and density of the particles of simulating material. The vertical-transport equation also provides another scale factor that determines the amount of accumulation or change in elevation of the snow surface in the model. The simulation of change in elevation of a snow surface during a long period is examined and the scale factor is modified to allow for settling and compaction under natural conditions.—From author's abstract. (DLC.)

ODELL, T. T., *Jr.*, *see* Gude, W.D., & *others*. . . . radiation-induced intestinal injury . . . chilling. 1959. No. 71895

ODEVING, BRUNO, *see* Hannerberg, D., & *others*. Migration in Sweden . . . 1957. No. 71987

74464. ODINTSOV, MIKHAIL MIKHAĬLOVICH, 1911- . Glavneĭshie epokhi obrazovaniĭa poleznykh iskopaemykh na Sibirskoĭ platforme. (Geologiĭa i geofizika, 1962. no.11, p.3-13, map.) Text in Russian. Summary in English. **Title tr.:** Main epochs of useful-mineral formation in the Siberian platform.

Analyzes structural elements and geologic history of the Siberian platform and considers the main periods of its development: Precambrian, Lower Paleozoic, Upper Paleozoic, Early Mesozoic, Jurassic-Cretaceous, and Cenozoic. For each period, some patterns of useful-mineral deposit formation are outlined, and conclusions drawn for prospecting purposes. (DLC.)

74465. ODINTSOV, MIKHAIL MIKHAĬLOVICH, 1911- . Rannemezozoiskiĭ tektono-magmaticheskiĭ tsikl na Vostochno-Aziatskoĭ platforme. (Geologiĭa i geofizika, 1961, no.1, p.26-33, map.) 21 refs. Text in Russian. Summary in English. **Title tr.:** The Early Mesozoic tectonic magmatic cycle in the East Asian platform.

Compares recent Russian and Chinese geologists' data concerning tectonic and volcanic processes at the end of the Paleozoic and beginning of Mesozoic in the East Asian (including the Siberian) platform. The Tungusskiy structural-volcanic province is treated. Siberian traps are compared with similar rocks of China. The unity of this tectonic-magmatic cycle throughout the entire platform is discussed. (DLC.)

ODINTSOVA, L. I., *see* Sergeev, E.M., & *others*. Osobennosti litologicheskogo sostava . . . 1961. No. 75499

74466. ODINTSOVA, M. M., *and* **G. KH. FAĬNSHTEĬN.** O geologii i vozraste drevnikh almazonosnykh rossypeĭ v basseĭne r. Maloĭ Botuobii. (*In:* Akademiĭa nauk SSSR. IAkutskiĭ filial. Almazy IAkutii . . . 1961, p.154-64, table, diagrs.) 5 refs. Text in Russian. **Title tr.:** On the geology and age of old diamond placers in the Malaya Botuobuya River basin.

Describes a section of the deposits filling a small depression in the region of the Mir kimberlite pipe. Spore and pollen analyses show the deposits to be Lower Jurassic (lower Lias) in age. The Mir pipe formed in pre-Lias time is the source of the diamond placers which are the oldest in western Yakutia. (DLC.)

ODINTSOVA, M., M., *see also*

Faĭnshteĭn, G. Kh., & M.M. Odintsova. Zakonomernosti . . . 1960. No. 71334

Smirnova, O.K., & M.M. Odintsova. Materialy k stratigrafii . . . 1961. No. 75756

ODISHVILI, G. IA., *see* Eristavi, K.D., & *others*. O deĭstvii gibernatsii . . . 1961. No. 71286

ØLGÅRD, HANS, *see* Buch, D., & H. Ølgård. Building concrete Greenland. 1962. No. 70424

74467. ÖSTREM, GUNNAR. A new approach to end moraine chronology, a preliminary report. (Geografiska annaler, 1961. v. 43, no.3-4, p.418-19.) 5 refs.

Describes results of a 1961 study of ice-cored terminal moraine ridges in the Kebnekaise area in northern Sweden and in the Jotunheimen district in central Norway. Pits were dug during the winter; under 1-3 m. of moraine, ice was found. It originated from snow *in situ*, not from glacier ice according to crystallographic studies. Mineral fragments and organic material (mosses, algae, worms) were found by analysis at the radio-carbon laboratory in Trondheim. C-14 dating of a Jotunheimen sample gave the age 2600 ± 100 years B.P. for a moraine ridge hitherto supposed to date from the great 18th century glacier advance. The new dating agrees well with the post-glacial climatic depression identified by Bergström (No. 38804). (DWB.)

74468. ÖSTREM, GUNNAR. Nya metoder för åldersbestämning av ändmoräner. (Ymer 1962. årg. 82, häfte 4, p.241-52, illus., diagrs., map, plate.) Text in Swedish. **Title tr.:** New methods for dating end moraines.

Describes how electric resistance measurements and seismic soundings proved the existence of ice cores in some unusually large end moraines. Ice samples obtained by mechanical drilling and blasting, and very small ice crystals and presence of extraneous material indicated the ice to have been formed directly from a snowdrift subsequently covered by moraine material. Some results of C-14 dating are given for such ice from Kebnekaise in north Sweden, and Jotunheimen in central Norway.

At the latter site, moss on a stone proved to be 600-700 yrs. old, ice beneath about 1,300 yrs., and the oldest ice 2,600 yrs. For Kebnekaise also high ages are found, tentatively. (DLC.)

74469. ØSTVEDT, OLE JOHAN. Length, age, and spawning groups of the Norwegian winter herring in 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v. 16, p.169-70, tables.)

Discusses landings of 1959 as compared to 1958, size and age composition, distribution of spawning groups, frequency and prospects of spawning recruits, etc. (DI.)

74470. ØSTVEDT, OLE JOHAN. Rapport fra sildeundersøkelsene ved Island 1961. (Fiskets gang, Dec. 14, 1961. årg. 47, nr.50, p.771-73, graphs, sketch maps.) Text in Norwegian. **Title tr.:** Report on herring investigations near Iceland, 1961.

Reports the R/V *G.O. Sars* cruise of June 5-July 8, 1961, to waters north of Iceland carrying out herring reconnaissance, hydrographic and plankton investigations in relation to herring distribution and experimental tagging and quality analysis. The ocean ice border was found closer to land than in 1960; temperature at 20 m. depth was higher than normal. Zooplankton concentration was greater than in previous years, young *Calanus finmarchicus* dominating. Herring was registered on the northwest Icelandic coast near the ice border; within 67°-68° N. 11°-17° W., and north of the Faroe Islands 64°-65° N. 7°-9° W. The first herring influx north of Iceland came from both west and east. Plankton occurrence indicates that the herring are to appear north and east of Kolbeinsøya; correlation is indicated between herring occurrence and *Calanus finmarchicus*. (DA.)

74471. ØSTVEDT, OLE JOHAN. Rapport over tokt med F/F "G.O. Sars" 3/12-17/12, 1959; herring investigation in the Norway Sea. (Fiskets gang, Apr. 21, 1960. årg. 46, nr.16, p.230-31, graphs.) Text in Norwegian. **Title tr.:** Report on the *G.O. Sars* cruise Dec. 3-12, 1959; herring investigations in the Norway Sea.

Reports study of hydrographic conditions 63°-65° N. from the Norwegian coast to about 10° W., where herring usually gather for spawning in Norwegian waters. By mid-December the herring were still about 10° W., further west and north than usual, and the schools had not gathered. Migration to Norwegian waters could not be expected until the latter half of January, and none south of Stad (62° 20′ N.) as the cold water area was further north than usual. In the same journal Apr. 26, 1962, årg. 48, nr.17, p.258, author reports the Dec. 5-17, 1961 cruise of R/V *Johan Hjort*, which found the Iceland-Arctic current front further north and west than usual, herring located only off Seydisfjord at 65° N. 11° 10′ W., surface temperature: 3-4° C.; hence the herring shoals (late) to be expected in Norwegian waters in the latter part of February. (DA.)

74472. OETLIKER, O., *and* **D. WALTER.** Die Strukturerhaltungszeit der Vorderhornganglienzellen des Kaninchenrückenmarkes unter hypothermen Bedingungen. (Thoraxchirurgie, Feb. 1961. Bd. 8, Heft 5, p.548-56, illus., table.) 21 refs. Text in German. **Title tr.:** Structure recovery-time in the ganglion cells of the anterior horn of the rabbit spinal cord in hypothermia.

Account of experiments with rabbits indicating that under normothermic conditions recovery-time ischemia lasts 20 min; in hypothermia of 26°-28° C. it is 75 min. and at 22°-23° about 140 min. The last parameter could not be accurately determined, but histological examinations showed that ganglion cells were not completely destroyed. (DNLM.)

74473. ØVREBOTTEN, LEIV. Eit fiskevatn kan og bli ei god inntektskjelde. (Norden, Oct. 1, 1960. årg. 64, nr.20, p.555-56.) 5 refs. Text in Norwegian. **Title tr.:** A fish lake can also be a good source of income.

Notes many small lakes in North Norway with good natural conditions but no, too few, or too many fish. Conditions and fish stock should be rectified by farmers who own such lakes; procedures are discussed. (DA.)

ØYNES, PER, *see* Lønø, O., & P. Øynes. Hvithvalfangsten . . . 1961. No. 73577

74474. ÖZBAYDAR, SABRI. The effects of darkness and light on auditory sensitivity. (British journal of psychology, Aug. 1961. v. 52, pt.3, p. 285-91, illus., tables.) 9 refs.

Account of experiments with 46 subjects, when adapted to darkness or to light. There was a small but consistent and statistically reliable advantage in the light. Possible explanations for the difference are discussed. (DNLM.)

O'FARRELL, THOMAS P., *see* Hensel, R.J., & T.P. O'Farrell. Snowshoe hare. 1961. No. 72121

OFTEDAHL, CHR., *see* Padget, P., & *others*. Geochem. prospecting Norw. 1960. No. 74620

74475. OGAĬ, V. F. O tektonike ĭugo-zapadnoĭ chasti Zyrĭanskoĭ vpadiny. (Akademiĭa nauk SSSR. Doklady, Dec. 11, 1962. t.147, no.5, p.1154-56, map, profile.) 4 refs. Text in Russian. **Title tr.:** Tectonics of the southwestern part of the Zyryanka depression.

Reports his 1961 field study in the Moma basin. The Zyryanka depression is a large tectonic element of the Kolyma medial massif. The Moma depression analyzed in some detail and distinguished from the Zyryanka, is filled with Upper Jurassic and Lower Cretaceous deposits. A tectonic map of southwestern part of Zyryanka depression is presented, its nature and history are interpreted. Three complexes of rocks are distinguished and characterized. It is considered a typical superimposed basin; its beginning age is Upper Jurassic. (DLC.)

74476. OGAĬ, V. F. Stratigrafiĭa verkhneĭurskikh otlozheniĭ Predverkhoĭanskogo kraevogo progiba na shirote r. Begidzhan. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniĭa 1962. vyp.7, geologiĭa, p.5-9, diagr.) 7 refs. Text in Russian. **Title tr.:** Stratigraphy of Upper Jurassic deposits of the Verkhoyansk foredeep at the Begidzhan River latitude.

Describes the lithology and fauna of these deposits in the inner zone of the foredeep, the Dzhaskoyskaya (324 m. thick) and Sytoginskaya (93 m. thick) series. Marine deposits in the latter are identified with fauna of lower Kimeridgian-lower

Volga stages. A more detailed stratigraphic division is offered. Upper Jurassic deposits of the inner zone are characterized by greater thickness and more mobile tectonic movements than those in the fringe zone of the foredeep. (DLC.)

74477. OGILVIE, K. W., *and others.* Rocket observations of solar protons during the November 1960 events, 1. (Journal of geophysical research, Mar. 1962. v. 67, no.3, p.929-37, tables, diagrs.) 14 refs. *Other authors:* D.A. Bryant *and* L.R. Davis.

Presents results of three rocket flights made from Ft. Churchill, Manitoba. Measurements by means of Geiger and scintillation counters extended the proton energy spectrum downward to 0.2 Mev. A group of particles with energy 0.2-1 Mev. was found which may be associated with the plasma in the earth-sun region. The spectrum above one Mev. cannot be represented by simple extrapolation of the spectrum at higher energies as observed, for instance, by means of balloons.—From authors' abstract. (DLC.)

OGILVIE, K. W., *see also*

Davis, L.R., & K.W. Ogilvie. Rocket observations . . . 2. 1962. No. 70902

Davis, L.R., *& others.* Rocket observ. solar protons Sept. 3, 1960. 1961. No. 70903

74478. OHLSON, BIRGER. Observations on recent lake balls and ancient *Corycium* inclusions in Finland. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finlande, 1961. no.196, p.377-90, illus.) 30 refs.

Describes occurrence of small balls of living blue-green algae observed in 1959, on sandy bottom on the western shore of Lake Kivijärvi near Kittila in Finnish Lapland; also seen on the southern shore were about 80 larger globular dark brown peat balls. Originating conditions of these lake balls are compared with other discoveries of similar globular forms. Possible preservation as coal-bearing fossil remains in sandy layers of metamorphosed sediments is considered; author concludes that the coal-bearing sacks of *Corycium enigmaticum* in Precambrian phyllites in Aitolahti parish, Finland, may have originated from ancient ball-like forms of algae and may also be true fossils. (DLC.)

74479. *OIL AND GAS JOURNAL.* Alaskan offshore strike blowing wild. (Oil and gas journal, Sept. 3, 1962. v.60, no.36, p.29, map.) Refs.

Notes blowout on Aug. 21, of a Pan American Petroleum Corp. etc. well about 30 mi. southwest of Anchorage and 6 mi. from the northwest shore of Cook Inlet. It is the first oil found in Alaska since the Swanson River discovery in 1957. The well blew wild through surface casing after the drill string sheared off at the ocean floor in 100 ft. of water. It was ignited by the U.S. Coast Guard on Aug. 24 and a relief well spudded Aug. 27. Oil slick over much of the Inlet may damage salmon eggs. The same journal Dec. 10, 1962, p.51, reports suspension of the relief well on Nov. 30 because of ice floes, pushed back and forth by high tides, ending Pan American's attempt to kill its wild well. Other Cook Inlet operations are noted. (DLC.)

74480. *OIL AND GAS JOURNAL.* Drillers batting 1 for 3 in tricky Cook Inlet. (Oil and gas journal, Oct. 15, 1962. v.60, no.42, p.100-101, illus., graph.) Ref.

Notes the big tidal range, swift currents, and such factors as size and location of high-pressure gas zones which make Inlet drilling difficult and expensive. Shell Oil Co. suspended its wildcat 1 SRS at 14,041 ft. for the winter after two other wildcats blew out; modified equipment is to be used in the spring to control the higher pressures expected near 15,000 ft. (DGS.)

74481. *OIL AND GAS JOURNAL.* Hopes for "big oil" lure explorers. (Oil and gas journal, July 3, 1961. v.59, no.27, p.76-78, map, table.)

Describes Project "Arcticat", first Canadian Arctic Islands wildcat, 17 companies participating probably located on Dome Petroleum Ltd. acreage on Melville Island. Comparative costs of arctic drilling are cited; possible oil and gas reserves are tabulated. (DGS.)

74482. *OIL AND GAS JOURNAL.* Socal floats crude unit for 22,000-bbl. refinery from Washington to Alaska. (Oil and gas journal, Dec. 3, 1962. v.60, no.49, p.94-96, illus.)

Reports coordinated construction of foundations, pipelines, tankage, etc. at Nikishka on the Kenai Peninsula, and the refinery unit at Tacoma, Wash.; the latter was towed 1600 mi. to Nikishka, beached Sept. 27, 1962, then skidded 3/4 mi. to the actual refinery site. Operations are to start in summer 1963, crude oil to be supplied from the Swanson R. field. (DGS.)

74483. *OIL IN CANADA.* Northern air transportation, a market profile. (Oil in Canada, Apr. 26, 1962. v.14, no.26, p.28-36, illus., map, table.)

Surveys 1962 air services from Edmonton to the Canadian Western Arctic, noting features of speed, load, etc. in the DC-4, Super-46, DC-3, Beaver, Otter, and Cessna 180. Passenger, express and freight charges, hotels, communications for regular services, etc. are tabulated. Teamwork between air transport and the oil industry as operations move northward is noted. Nearly a score of air companies serving the North are listed with pertinent data. (DLC.)

74484. *OIL IN CANADA.* A survey of the North. (Oil in Canada, Jan. 12, 1961. v.13, no.10, p.23-38, illus., map.)

Appraises and analyzes information on land holdings, operators' plans, accomplishments and limitations and communications in the Canadian far North, also the exigencies of exploration and drilling. Operators have a cautious approach, emphasizing exploration more than drilling. Short-range radio of 500 mi. radius from Peace River, Alta. is supplemented by higher frequency radio, capable of serving most of the Northwest Territories. Many oil and gas companies use the VHF towers along the Alaska Highway. Seasonal activity, with overloading in winter, increase the communications problems. (DGS.)

74485. *OILWEEK.* Microwave extends phone net to Alaska. (Oilweek, Sept. 18, 1961. v.12, no.31, p.46-48, illus., map.)

The Canadian National Telecommunications operates a 3,800-mi. network in the far northwest consisting of a 1,500-mi. telephone system from Edmonton to the Alaska border, the 1,200-mi.

microwave system between Grand Prairie, Alta. and the Alaska-Yukon border, and a 500-mi. telephone network around Great Slave Lake from Fort Smith to Yellowknife. Features of construction and equipment are noted. Lines to Pine Point, Fort Resolution and Uranium City, also north down the Mackenzie River are planned. (DGS.)

74486. *OILWEEK*. New concepts for transportation. (Oilweek, Sept. 26, 1961. v.12, no.32, p.20-21, illus.)

Describes five vehicle types exhibited or explained at the 1961 National Northern Development conference in Edmonton, including the A.V. Roe Canada Ltd.'s Big Wheel, a 540 ton, 120 x 50 ft. tractor; the Gemini, a combined wheeled vehicle and hovercraft. Hovercraft developments are summarized, aircraft and pipeline developments noted. (DGS.)

74487. *OILWEEK*. Northern seismic costs cut in half by basic operation. (Oilweek, May 1, 1961. v.12, no.11, p.20-22, illus.)

Describes method used in a six-week seismic survey for two oil companies in the Wrigley area, Mackenzie District, completed by Velocity Surveys Ltd. of Calgary in April 1961. The nine-man seismic crew, using minimum equipment and supplies built 4-ft. hand-cut seismic trails, instead of bulldozing them 15 ft.; costs are expected to compare favorably with those of prairie surveys, and year-round operations may be feasible. (DGS.)

74488. *OILWEEK*. Yukon iron ore deposit claims world title. (Oilweek, July 30, 1962. v.13, no.23, p.18-20, map, graph.)

Describes discovery of the deposit near the headwaters of the Snake River, approx. 65°17′N. 132°W. on the Yukon-Mackenzie District boundary. Estimates of 20 billion tons of high-grade hematite are cited. As these reserves are 400 mi. from tidewater, concentration of ore, and preferably conversion to pig iron, is expected to be at the mine. Economic development of this ore may depend upon markets. (DGS.)

74489. OKAKOK, GUY, 1903– . Okakok's Alaska; selections from Pt. Barrow news submitted to the Fairbanks Daily Newsminer, 1955-1959. Fairbanks, P.E.O. Sisterhood, 1959. 31 p. illus.

Despatches by a North Alaskan Eskimo correspondent depicting local daily life. (CaONA.)

OKE, M. A., *see* Nakamura, M., & *others*. Protective action glycerol . . . 1962. No. 74207

74490. *OKHOTA I OKHOTNICH'E KHOZĬAĬSTVO*. Mery po uluchsheniiu rukovodstva pushno-promyslovym khozĭaĭstvom v RSFSR. (Okhota i okhotnich'e khozĭaĭstvo, May 1962. god 8, no.5, p.9.) Text in Russian. **Title tr.:** Measures for improving administration of the fur trade in the RSFSR.

Reports the decision of the Council of Ministers of RSFSR to establish special hunting industry administrations in northern provinces, Arkhangel'sk, Komi, Tyumen, Krasnoyarsk, Yakut, Magadan, Kamchatka, etc. Their functions include control and stimulation of the local state and collective farms and hunting establishments, wildlife conservation, etc. (DLC.)

74491. OKKO, VEIKKO, 1912– Der Mensch als Gestalter der Erdoberfläche des finnischen Festlandes. (*In:* Hustich, I. Symposium on man's influence . . . *pub.* 1961 in Fennia, 85, p.24-41, 5 text maps, table.) 36 refs. Text in German. **Title tr.:** Man as shaper of the earth's surface in Finland.

Discusses the use of Finland's surface deposits, soil, sand, gravel, etc. in man's alteration of the landscape. Post-war increases in agricultural land area are noted. Percentage of workers in various occupations are given by decades to show the gradual change from a primarily agricultural country in 1880, to one almost equally industrial and agricultural in 1957. In the North, significant change has taken place since 1954, due to increase in road building and other industry. (DLC.)

74492. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Ancient cultures in the continental part of north-east Asia. (International Congress of Americanists, 33rd, *San José, Costa Rica,* 1958. Proceedings *pub.* 1959, v.2, p.72-80.)

Discusses the cultural and ethnogenetic development of Chukotka on the basis of recent fieldwork. Two distinct neolithic cultures are recognized: a continental (2nd and 1st millennia B.C.) rooted in the mesolithic and neolithic of sub-Arctic Eurasia; and a coastal (1st millennium B.C.) Eskimo sea-mammal hunting tradition connected with the mesolithic and neolithic of southeast Asia. The Yukaghirs are considered the most probable descendants of the continental population of Chukchi Peninsula. (DSI.)

74493. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– , *and* **I. A. NEKRASOV.** Ancient settlements in the Main River valley, Chukchi Peninsula. (American antiquity, Apr. 1962. v.27, no.4, p.546-57, illus., cross-section, map.) 7 refs.

Translation of No. 67197 by Morgan Usadel, edited by Chester S. Chard. (DSI.)

74494. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Antiguas culturas de Siberia y el problema de las relaciones originarias del Viejo Mundo con el Nuevo. (Revista de cultura, Dec. 1958. v.3, no.3, p.153-58, illus., maps.) Text in Spanish. **Title tr.:** Ancient cultures of Siberia and the problem of the original relations between the Old and the New Worlds.

Sketches the main paleolithic and neolithic culture foci of the Lake Baykal, north Yakutia and Amur River regions, and describes typical artifacts of each culture stage. Despite the originality of certain American implements, others show an affinity to Asian artifacts indicating paleolithic and neolithic ties. Common elements are distinguished in the neolithic of north Yakutia and the Alaskan Denbigh Flint Complex: gravers, prismatic cores, check-stamped pottery, etc. Links are seen also between old Eskimo cultures and the so-called Shell Mound culture of the Siberian Maritime Province. (DLC.)

74495. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Arkheologicheskie nakhodki na velikikh stroĭkakh Vostoka. (Akademiia nauk SSSR. Vestnik, Aug. 1961. god 31, no.8, p.71-77, illus.) Text in Russian. **Title tr.:** Archeological finds at the great construction projects in the East.

Outlines exploration of the sites on the Angara, Yenisey and Ob Rivers and Lake Baykal which are to be flooded or otherwise affected by construction of hydroelectric stations. The institutions involved and the more significant results are noted. (DLC.)

74496. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Paleolit Zabaĭkal'ia; obshchiĭ ocherk. (Arkheologicheskiĭ sbornik, *Ulan-Ude,* 1959. vyp.1, p.5-25, fold. table.) Refs. Text in Russian. **Title tr.:** The Trans-Baykal paleolithic; a general outline.

Describes the stone and bone inventory of 45 sites in Buryat-Mongolia and compares them to coeval remains, including the Angara basin. They are considered contemporary or slightly later than the Mal'ta and Buret' sites and form an important link between Asiatic and Western paleolithic cultures. (DLC.)

74497. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . The paleolithic of Trans-Baikal. (American antiquity, Apr. 1961. v.26, no.4, p.486-97, illus., maps, table.) 9 refs.

Description of upper paleolithic sites, including the upper Angara and Lena basins, translated from Russian and edited by C.S. Chard. A tentative arrangement into five chronological sequences is suggested and correlated with the Angara-Yenisey and North China-Mongolia finds. The Trans-Baykal is considered an early contact area between the Eurafrican prismatic core and blade and the east Asian split pebble-tool traditions. (DSI.)

74498. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . Prehistoric cultures of the Soviet Far East in the light of recent research. Moskva, Izd-vo vostochnoĭ lit-ry, 1960. 15 p. (International Congress of Orientalists, 25th, *Moscow,* 1960. Delegation from the USSR, Papers.) Refs. in text.

Archeological survey including paleolithic, mesolithic, and neolithic finds on the Angara at Mal'ta and Buret', and in the Amur River region. (DLC.)

74499. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . The role of the ancient Baikal region in the cultural relations between East and West. (International Symposium on History of eastern and western cultural contacts, *Tokyo-Kyoto,* 1957. Collection of papers presented, *pub.* 1959, p.141-43.)

Sketches the paleolithic, neolithic and metal age cultures of Siberia and northern Europe. The Lake Baykal region emerges as important area of contact, with evidence of a continuous ethnic and cultural interchange between East and West through the forest zone of Eurasia in addition to the well known steppe route. (DLC.)

74500. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . 300 let sibirskoĭ arkheologii i ee segodniashniĭ den'. (*In:* Nauchnaia konferentsiia po istorii Sibiri i Dal'nego Vostoka. Voprosy istorii . . . *pub.* 1961, p.15-22.) Text in Russian. **Title tr.:** Three hundred years of Siberian archeology and its present status.

Reviews this field of study, beginning with the chance finds of travelers, merchants and curio-seekers of the 17th century, and continuing to the work of specialized expeditions of the present time. Recent ethnographic work in the far North is included. (DLC.)

74501. OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– . U istokov iskusstva Sibiri. (Iskusstvo, 1961. god 24, no.1, p.61-65, illus.) Text in Russian. **Title tr.:** At the sources of Siberian art.

Describes the style, composition, and engraving technique of neolithic (approx. 3,000 B.C.) elk-hunting scenes on the cliffs of Kamennyye Islands, Angara River. (DLC.)

OKLADNIKOV, ALEKSEĬ PAVLOVICH, 1908– , *see also*

Chard, C.S. Northeast Asia. 1961. No. 70666

Mamonova, N.N. Kochevniki Zabaĭkal'ia . . . 1961. No. 73779

Michael, H.N. Studies . . . ethnogenesis. 1962. No. 73967

74502. OKONESHNIKOV, P. Organizatsiia iakutskikh okhotnikov. (Sel'skoe khoziaĭstvo Sibiri, May 1961. god 6, no.5, p.72.) Text in Russian. **Title tr.:** Organization of the hunters in Yakutia.

Notes provisional establishment by the Yakut ASSR Council of Ministers in July 1960 of a non-commercial hunters and fishers organization, joined at once by nearly 6000 members. (DLC.)

74503. OKPIK, ABRAHAM ALLAN, 1930– . What does it mean to be an Eskimo? (North, Mar-Apr. 1962. v.9, no.2, p.26-28, illus.) Translated and reprinted from *Inuktitut,* a Canadian Eskimo magazine, cf. No. 53853.

States the case for preserving the native traditions and culture, while living and working the white man's way. Importance of the Eskimo language in maintenance of cultural identity is stressed. (CaMAI.)

OKPIK, ABRAHAM ALLAN, 1930– , *see also* National Northern Development Conference. 1961. No. 74224

74504. OKSNER, A. N., *and* **K. A. RASSADINA.** Novye predstaviteli roda *Cetraria* v SSSR. (Akademiia nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy 1960. t.13, p.5-14, illus., map.) 9 refs. Text in Russian and Latin. **Title tr.:** New representatives of the genus *Cetraria* in the USSR.

Describes a new species and four varieties of these lichens, all from Yakutia. Anatomy, habitat, distribution, type location, etc. are considered. The genus has a wide distribution in subarctic and arctic Asia. (DLC.)

74505. OKUN', SEMEN BENTSIONOVICH. Rossiisko-amerikanskaia kompaniia. Pod redaktsieĭ i s predisloviem B.D. Grekova. Moskva-Leningrad, Gos. sotsial'no-ėkonomicheskoe izd-vo, 1939. 260 p. illus. (Leningrad. Universitet. Istoricheskiĭ fakul'tet.) Refs. Text in Russian. **Title tr.:** The Russian-American Company. Edited with a preface by B.D. Grekov.

Describes the activities of the company founded in 1799 and dissolved in 1868, in chapters 1-5, 10 and 11, stressing its role in consolidation of Russian possessions in America, Russian policy in Europe, and relations with various countries. The change in structure of the company from a mercantile association to an agency of government administration is outlined in chap. 5. The rise, decline and evacuation of the Russian settlement Fort Ross in California 1812-1841, and attempts to establish sway in Hawaii and Haiti are reported in chap. 6 and 7. Company exploitation and inhumanity to Russian workers and natives of the Aleutian Islands and Alaska are described in chap. 8 and 9. The work is based chiefly on unpublished materials in Russian archives. An English translation by Carl Ginsburg,

with preface by Robert J. Kerner (viii, 311 p.) was pub. by Harvard Univ. in 1951, as the American Council of Learned Societies, Russian translation project, 9. (DLC.)

74506. OL', A. I. Izmenenie intensivnosti kosmicheskikh luchei vo vremia magnitnykh bur' s vnezapnym i postepennym nachalom. (Akademiia nauk SSSR. Mezhduvedomstvennyi komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, VII razdel programmy MGG: kosmicheskie luchi. Sbornik statei 1960. n.2, p.131-36, graphs.) 9 refs. Text in Russian. Summary in English. **Title tr.:** Variation in intensity of cosmic rays during magnetic storms of sudden and gradual commencement.

Discusses the increases in the *I* type of cosmic ray intensity: from study of records of the meson components at Godhavn and other stations in 1937-1946, and at Ostrov Kheysa during 1957-1958, and March-July 1959. Magnetic storms of gradual commencement were found to be followed by an increase in the intensity of cosmic rays, while the sudden commencement storms were followed by a decrease in the intensity. A suggestion is made that the observed increase in the value of *I* during gradual commencement storms may be peculiar to the extraordinary high cycle of solar activity during the years of observations. (DLC.)

74507. OL', A. I. Pulsations during sudden commencements of magnetic storms and long period pulsations in high latitudes. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.2, p.24-26, graphs.)

Discusses the morphology of the long-period giant pulsations (Pgl) of tens to hundreds of gammas in amplitude, and 100-600 seconds period; and of the pulsations during sudden commencements (Psc) which increase with magnetic latitude and have the form of damping oscillations. The standard magnetograph records of 1956-1960 at the Tikhaya Bay, Cape Chelyuskin, Dikson Island, Cape Uelen, Tiksi Bay and the middle latitude Voyeykovo observatories are analyzed. Examples are given of Psc and Pgl magnetograms of high latitude stations, dependence of the period of Pgl and Psc pulsations on geomagnetic latitude, and diurnal variations (1957-1958) of the occurrence frequency of the Pgl pulsations. (DLC.)

74508. OL', A. I. Pul'satsii geomagnitnogo polia v vysokikh shirotakh. (Leningrad. Arkticheskii i antarkticheskii nauchno-issledovatel'skii institut. Trudy 1962. t.241, Geofizicheskie issledovaniia . . . vyp.4, p.39-64, tables, graphs.) 42 refs. Text in Russian. **Title tr.:** Geomagnetic field pulsations in high latitudes.

Reports on short-period variations (KPK) of the geomagnetic field as investigated at the Bukhta Tikhaya, Mys Chelyuskin, Matochkin Shar, Ostrov Dikson, Uelen, Yakutsk, Srednikan, and other stations. The hypothesis of KPK being due to magneto-hydrodynamic waves produced by solar corpuscular streams in the earth's upper atmosphere is tested, and the many results of KPK study in recent years are described. The theories of geomagnetic field pulsations are discussed, and a special class of gigantic pulsations *Pgl*, the long period gigantic pulsations (300-600 pulses/sec.), is singled out. (DLC.)

74509. OL', A. I. Rezul'taty vizual'nykh i fotograficheskikh nabliudenii poliarnykh siianii. (Geomagnetizm i aeronomiia, 1961. t.1, no.6, p.856-71, graphs, maps.) 67 refs. Text in Russian. **Title tr.:** Results of visual and photographic observations of auroras.

Reviews the results of an extensive coordinated investigation of auroras undertaken by IGY and IGC organizations. The following topics are discussed: Forms of auroras, their altitude, geographic distribution, variation of their occurrence frequency with time, their motions, and their relation to magnetic and ionospheric disturbances. The complex relationship of solar, ionospheric and geomagnetic phenomena, as correlated with auroral occurrences of auroras is interpreted in the light of current theories. (DLC.)

O'LEARY, J.L., *see* Lourie, H., & *others.* Effect of hypothermia . . . 1960. No. 73609

74510. OLEGOV, O. Kollektsioner iz Zapoliar'ia. (Ogonek, Sept. 1962. god 40, no.37, p.7, facs.) Text in Russian. **Title tr.:** A polar collector.

Reports on the activities of I.V. Rekhlov, a workman in Noril'sk, who has been collecting reproductions of Russian and foreign paintings for some 25 years. He has nearly sixty thousand such prints from 25 countries and he exhibits parts of the collection in Noril'sk, other Soviet cities, and abroad. (DLC.)

74511. OLEINIKOV, B. V., *and* **V. N. SHARAPOV.** Nekotorye voprosy trappovogo vulkanizma zapadnoi chasti Sibirskoi platformy. (Geologiia i geofizika, 1961, no.6, p.51-60, tables.) 13 refs. Text in Russian. Summary in English. **Title tr.:** Some problems of trap volcanism in the western part of the Siberian platform.

Outlines Triassic trap volcanism in the Bakhta, Kureyka, Nizhnyaya Tunguska River basins and elsewhere. Contact alteration connected with various types of trap intrusion is discussed. Chemical composition of the trap-body rocks is analyzed, and the possible occurrence noted of nickel-bearing trap intrusions south of the Nizhnyaya Tunguska. (DLC.)

74512. OLEINIKOV, B. V. Piroksenit iz raiona nizhnego techeniia r. Kureiki. (Geologiia i geofizika, 1962, no.4, p.129-31, tables.) 5 refs. Text in Russian. **Title tr.:** Pyroxenite from the lower reaches of the Kureyka River.

Describes a black, coarse-grained pyroxenite consisting of 70-85% pyroxene and 3-15% plagioclase; other physical and optical properties are indicated; chemical analysis is presented and evaluated. (DLC.)

74513. OLENIN, A. S. Torfianoi fond Kamchatki, ego izuchennost' i perspektivy promyshlennogo ispol'zovaniia. *(In:* Akademiia nauk SSSR. Komissia po problemam Severa. Syr'evye resursy . . . 1961, p. 102-108.) Text in Russian. **Title tr.:** Peat reserves of Kamchatka, their investigation and development prospects.

Reports reserves of 3.4 million hectares, 8 billion tons: distribution, thickness, properties, and other features are characterized. The Ok-

tyabr'skiy massif, 75,000 hectares, 3 m. thick, represents reserves of 225 million tons. Peat production has been started in some areas. Climatic conditions, harvesting methods, the special technology and other factors in bringing these reserves to commercial use are discussed. (DLC.)

74514. OLESEN, JENS KIRSTEIN, *and* **J. W. WRIGHT.** The relationship of low-height ionosonde echoes to auroral-zone absorption and VHF D scatter. (Journal of geophysical research, Apr. 1961. v.66, no.4, p.1127-34, graphs, diagrs.) 12 refs.

Weak diffuse HF reflections observed at 75-95 km. height at Narssarssuaq, West Greenland, are designated $E_s d$. Diurnally, $E_s d$ occurs most frequently at noon at all seasons, and shows a pronounced minimum of occurrence around 2000 hours local time. For seasonal variation, there is little evidence from a year's observations (Sept. 1958-Aug. 1959). It is suggested that $E_s d$ is related to the anomalies of auroral-zone absorption and that it is the layer responsible for VHF forward scatter.—From authors' abstract. (DLC.)

74515. OLIVER, DONALD RAYMOND. The insects of the Lake Hazen area, Ellesmere Island, 1961. (Arctic circular 1961, *pub.* Sept. 1962. v.14, no.4, p.69-71.) 2 refs.

Reports on the collection of 204 species (numbers tabulated by family) made at 81°49′N. 71°18′W., July 8-Aug. 20; the most common were Diptera, especially the Chironomidae which were studied in detail. This collection increases by 100% the species known from the Queen Elizabeth Islands; and more are thought to occur in the area. (CaMAI.)

74516. OLIVER, DONALD RAYMOND. The Northern Insect Survey, 1957-61. (Arctic circular, 1961, *pub.* 1962. v.14, no.4, p.68-69.)

Reviews this continuing investigation of biting flies by 72 field parties to date. Personnel of twelve and localities studied 1957-1961, are cited, as supplement to No. 50978. (CaMAI.)

OLIVER, DONALD RAYMOND, *see also* Power, G., & D.R. Oliver. Distribution . . . fish in Ungava. 1961. No. 74936

OL'NIANSKAIA, R. P., *see* Isaakian, L.A., & *others*. O vliianii temperaturnykh . . . 1962. No. 72412

74517. OLSEN, EDWARD J. Six-layer ortho-hexagonal serpentine from the Labrador Trough. (American mineralogist, Mar.-Apr. 1961. v.46, no.3/4, p.434-38, tables.) 11 refs.

Describes occurrence, also results of optical, chemical, and powder diffraction analysis, of a sample of this rare serpentine, collected in 1957 east of Thompson Lake which is 45 mi. northeast of Knob Lake at 55°20′N. 66°10′W. Known as Unst-type serpentine, the mineral occurs in veins cutting a serpentinite sill. The vein rock is medium green in thin section, with transmitted light; each crushed fragment consisted of an aggregate of minute grains. Structural formula was calculated, chemical analysis is tabulated and compared with the Unst samples, as are diffraction data. Author suggests that the division between fibrous and platy serpentines may lie around 0.6% R_2O_3 in the analysis, rather than around 4.5% as suggested by Gillery. (DGS.)

74518. OLSEN, JOHANNES, 1894- . Ikke underordnede, men medarbejdere, dansk-grønlandsk samarbejde i praksis.' (Grønland, Sept. 1962, nr.9, p.353-60, illus.) Text in Danish. **Title tr.:** Not subordinates but co-workers, cooperation in practice between Danes and Greenlanders.

Recounts his experience as head of the Godhavn magnetic observatory in the 1920's, training a Greenlander as his assistant with good results. Certain characteristic qualities of the Greenlanders, such as patience, perseverance and capability of sustained effort, qualify them, if properly trained, for many exacting jobs. It is essential that the Greenlanders be regarded not as subordinates but as equals. (DLC.)

OLSEN, STEINAR, *see*
Møller, D., & S. Olsen. Lodda . . . 1962. No. 74068

Møller, D., & *others*. Loddeundersøkelser . . . 1961. No. 74069

74519. OL'SHANSKAIA, OL'GA LAZAREVNA, 1926- . Urodstva u eniseĭskoĭ sterliadi. (Voprosy ikhtiologii, 1960. vyp. 16, p.191-95, illus.) 2 refs. Text in Russian. **Title tr.:** Deformities in the Yenisey sterlet.

Describes six of some ten cases, largely of snout, eyes, and head deformity, found among 3500 of these fish caught in the Urtsev District of Krasnoyarskiy Kray. (DLC.)

OL'SHANSKAIA, OL'GA LAZAREVNA, 1926- , *see also* Krasikova, V.A., & O.L. Ol'shanskaia. Chir kak ob"ekt akklimatizatsii. 1961. No. 73077

74520. OLSON, SIGURD T., 1899- . The polar bear. (Alaska sportsman, July 1960. v.26, no.7, p.10-12, illus.) Alaska wildlife library, no.2.

Describes this mammal's appearance, diet, habits, and adaptation to the water- and ice-environment of arctic seas. The population of 2,000-2,500 off the coast of Alaska have been studied since 1957. Hunting by Eskimos has declined, but that of white sport hunters has increased. The kill of the two groups together was approx. 225 in 1959. Though still plentiful, the bears are protected by state regulations. Regulations of other northern countries are noted, also the need for international cooperation to preserve this species, of which the worldwide kill is 1,020-1,350/year. Good photos. (DI.)

74521. OMBERG, ASBJØRN. Omkring Helge Ingstads siste ekspedisjoner. (Polarboken 1961-62, p.117-21.) Text in Norwegian. **Title tr.:** Helge Ingstad's latest expeditions.

Reviews his archeological work in Newfoundland in 1960, 1961 and 1962, the excavations in the northernmost part at Lance aux Meadows. The many finds similar to objects found in Greenland, the remains from coal-mining, and radio-carbon datings about A.D. 1000, are considered strong evidence of Norsemen having occupied the site. (SPRI.)

74522. **OMHOLT, ANDERS,** *and others.* Hydrogen lines in auroral glow. (Journal of atmospheric and terrestrial physics, Mar. 1962. v.24, no.3, p.203-209, diagrs.) 12 refs. *Other authors:* W. Stoffregen *and* H. Derblom.

Describes observations of auroras over Kiruna, Sweden, and Tromsø, Norway, using a new, fast-scanning photoelectric spectrograph. The auroras consisted of a weak but persistent glow showing an unusually strong H∝ line, and of distinct, brighter forms showing no trace of H∝. A dark area occurred between the brighter forms and the glow. It is possible that the glows were excited purely by proton impact.—From authors' abstract. (DLC.)

74523. **OMHOLT, ANDERS.** Velocities of very active auroral rays. (Planetary and space science, May 1962. v.9, p.285-86, graph.) 3 refs.

Describes a photoelectric technique of measuring the velocity of rapidly-moving auroral rays, and presents results of preliminary measurements at Tromsø, Norway. East-west velocities averaged 24 km./sec. (highest 30, lowest 13 km./sec.); error may be as high as 30%. (DLC.)

OMHOLT, ANDERS, *see also* Holt, O., & A. Omholt. Auroral luminosity & radio absorption. 1962. No. 72221

74524. **ONDOH, T.** Geomagnetic bay-like disturbances before geomagnetic sudden commencements or sudden impulses. (Annales de géophysique, Mar. 1962. t.18, fasc. 1, p.45-61, graphs, tables.) 14 refs. Summary in French and Russian.

Explains a close relationship found between the pre-Sc (sudden commencement) or pre-Si (sudden impulse) geomagnetic bay-like disturbances and the high-energy type solar-terrestrial events. These bay-like disturbances occur several hours before the geomagnetic sudden commencements or the sudden impulses which are preceded by both solar radio outbursts of type IV and polar-cap blackouts; penetration of relatively low-energy solar particles into the ionospheric E-layer is suggested as a possible cause. Based on study of IGY data from 29 stations, including Yellowknife, Resolute and Baker Lake in Canada; Point Barrow, Big Delta, and Sitka in Alaska; Cape Chelyuskin, Murmansk, Dikson Island, Uelen, Tiksi Bay, and Yakutsk in the USSR; and Kiruna in Sweden.(DWB.)

ONDOH, T., *see also*

Maeda, H., & *others.* Solar-terrestrial relationships . . . 1962. No. 73736

Maeda, H., & *others.* Solar-terrestrial relationships IGY, IGC. 1962. No. 73737

ONOKHINA, ZH. F., *see* Vartapetian, S.M., & Zh. F. Onokhina. Sutochnyĭ i sezonnyĭ ritm . . . 1962. No. 76330

74525. **ONTARIO.** *Dept. of Commerce and Development, and others.* Report of Moosonee Harbour investigation; basic field surveys, 1960. Ottawa, 1961. 2 v.: 74 p. & maps in separate vol. Sponsored also by the Ontario Northland Transportation Commission, and the Canadian Depts. of Mines and Technical Surveys, Northern Affairs and National Resources *and* of Public Works.

Reports on surveys in this southern James Bay area with a view to constructing a harbor to aid access by industries in central Canada to the iron ore deposits of the Belcher Islands, the Great Whale River area, and the east shore of James Bay. Hydrographic, topographical, hydrometric, and seismic surveys are presented in detail; results of test borings, and land form analysis are given; and navigation channels delineated. A site 6½ mi. downstream from Moosonee, on Sandy Island, is proposed for the harbor. (CaOGB.)

ONTARIO NORTHLAND TRANSPORTATION COMMISSION, *see* Ontario. Report of Moosonee Harbour . . . 1961. No. 74525

74526. **OPPEDAL, GEORG.** Fiskernes årsinntekter i 1959. (Fiskets gang, May 25, 1961. årg. 47, nr.21, p.402-413, tables, graphs.) Text in Norwegian. **Title tr.:** Annual income of fishermen in 1959.

Presents a statistical study based on income tax returns of 73,861 fishermen (33,569 from North Norway) aged 15-69 yrs. from 31 selected communities. Data are given by age groups, and for full-time fishermen, men whose chief occupation was fishing, and for part-time fishermen. Income from farming, lumbering and other sources is given also. The average income is equivalent to that of farmers and lumbermen but below that of factory workers, retail clerks and office workers. The Nordland and Troms fishermen's income is below the national average. (DA.)

74527. **ORAHOOD, RICHARD C.,** *and others.* Physiologic effects of gastric hypothermia, 2; the effect on renal blood flow, renal plasma flow, and glomerular filtration rate in the normal anesthetized dog. (Surgery, Oct. 1961. v. 50, no.4, p.656-61, illus., tables.) 16 refs. *Other authors:* S.L. Wangensteen *and* W.K. Luke.

Following one hour of gastric cooling (with body temperature kept normal), a significant increase in large-vessel arterial hematocrit was noted. Renal plasma flow, and to a lesser degree renal blood flow decreased, and so did glomerular filtration rate. (DLC.)

ORAHOOD, RICHARD C. *see also* Wangensteen, S.L., & *others.* Physiologic effects of gastric hypothermia, 1 . . . 1961. No. 76483

ORATZ, M., *see* Schreiber, S.S., & *others.* Effect of ouabain . . . 1962. No. 75424

ORCHARD, D. P., *see* Adolph, E.F., & *others.* Ventilation lungs . . . hypothermic rats. 1961. No. 69487

74528. **OREKHOV, I.** Usovershenstvovanie produvki kombinirovannykh parovykh kotlov. (Morskoĭ flot, Nov. 1962. god 22, no.11, p.23-25, diagrs.) Text in Russian. **Title tr.:** The improvement in blowers of composite steam boilers.

New methods of slime control are discussed: residue from antifouling additives, sea water, oil, etc. not eliminated by standard bottom-blowers caused boiler-breakdown in vessels of the Murmansk trawling fleet. It is suggested that the blow-pipe be installed where maximum residue accumulates, and its operation accelerated. (DLC.)

OR'EV, LEONID GRIGOR'EVICH, *see* Kolgina, L.P., & *others.* Litologiia . . . 1961. No. 72898

74529. **ORLOV, BORIS PAVLOVICH,** 1892- . IŪliĭ Mikhaĭlovich Shokal'skiĭ, 1856-1940. *(In:* Kuznet͡sov, I.V., *ed.* Līūdi . . . 1962, p. 525-33, port.) Approx. 25 refs. Text in Russian.

Describes the life and scientific activities of Shokal'skiĭ, outstanding geographer and oceanographer, and authority on polar problems. Several features in the Arctic are named in his honor: Shokal'skogo Island northeast of Vaygach, a glacier on Novaya Zemlya, a strait in Severnaya Zemlya, a lake on Kanin Peninsula, another island in Ob Bay, and the Shokal'skogo Current of Barents Sea. (DLC.)

74530. **ORLOV, IŪ. I.** O probleme akklimatiza͡tsii promyslovykh krabov v Baren͡tsevom more. (Vsesoīūznoe gidrobiologicheskoe obshchestvo. Trudy 1962. t.12, p.400-409, tables, maps.) 21 refs. Text in Russian. **Title tr.:** The problem of acclimatization of edible crabs in the Barents Sea.

Discusses earlier plans and attempts to acclimatize the Kamchatka crab, *Paralithodes camtschatica,* in this sea. Its biology is outlined and conditions in southern Barents Sea, the area of planned introduction, are characterized. Mass transfer of all developmental stages of the crab, into the area is recommended. (DLC.)

74531. **ORLOV, V. P.** Vekovoĭ khod geomagnitnykh ėlementov v Arktike dlīa perioda 1954-1959 gg. (Geomagnetizm i aėronomiīa, 1962, t.2, no.1, p.167-71, maps.) Ref. Text in Russian. **Title tr.:** Secular variation of geomagnetic elements in the Arctic for the period 1954-1959.

Presents isopore (line of equal annual change in variation) maps for declination, horizontal component of magnetic intensity, northern component, vertical component, etc. in the Arctic Basin above 70°N. Equal annual changes of these magnetic elements are based on recent data to Oct. 1961. The line for isopore of D represents a five-year interval, all the others a ten-year interval. (DLC.)

ORLOV, V. P., *see also*

Adam, N.V., & V.P. Orlov. Godovye variat͡sii . . . 1961. No. 69479

Adam, N.V., & V.P. Orlov. Godovye variat͡sii *H* . . . 1961. No. 69478

74532. **ORLOV, VASILIĬ IVANOVICH.** Nekotorye osobennosti bugristykh torfīanikov v raīone Igarki. (Vsesoīūznoe geograficheskoe obshchestvo. Izvestiīa, Jan.-Feb. 1962. t.94, vyp. 1, p.75-79, illus.) 6 refs. Text in Russian. **Title tr.:** Some factors of peat mounds in the Igarka region.

Describes and illustrates peat mounds in the boggy area where forest tundra and taiga meet. Its relief and permafrost conditions are briefly characterized. Mounds of 1.8-2.3 m. height and 10-25 m. diameter are described, their composition, vegetation cover, steep slopes and close formation, etc. Their mineral core, cracks, ice inclusions, disintegration and other features are noted. Their origin is still in dispute, though they developed in earlier times when conditions were favorable for peat. Author agrees with N.I. P'īavchenko (No. 41860) that these mounds originated from the general hydrologic-climatic conditions rather than any single factor. (DLC.)

74533. **ORLOV, VASILIĬ IVANOVICH.** O grivnom rel'efe Zapadnoĭ Sibiri. (Geografiīa v shkole, Nov.-Dec. 1962. god 25, no.12, p.63-66, illus., map.) Text in Russian. **Title tr.:** The ridged relief of Western Siberia.

Discusses the three West-East belts of low hills extending across the West Siberian plain: southern, central and northern, the last from the Severnaya Sos'va estuary to the upper reaches of the Pur and Taz Rivers. The origin of these belts, which were formed in a glaciation period, their significance in relation to the hydrological features of Western Siberia, and the need to take them into account in planning general melioration of natural conditions in this area, are briefly considered. (DLC.)

74534. **ORLOV, VLADIMIR OSIPOVICH.** K voprosu o silovom vozdeĭstvii puchinistykh gruntov na fundamenty. *(In:* Akademiīa nauk SSSR. Institut merzlotovedeniīa. Igarskaīa merzlotnaīa stant͡siīa. Trudy 1961. vyp. 2, p.48-53, tables, graph.) 6 refs. Text in Russian. **Title tr.:** On the force exerted on foundations by frost-heaving ground.

Reports field studies which indicate that tables of tangential forces on foundations for the use of engineers supply values that diverge considerably from values determined by investigations at the Igarka Permafrost Research Station and others. The importance of considering seasonal freezing and thawing and the presence or absence of a permafrost sub-base is discussed. Some information on the amount of heaving as a function of depth of freezing is included. Damage can result from the freezing of the sub-base even when this frozen ground lies 2 m. below the base mark of the foundation.—From CRREL. (DLC.)

74535. **ORLOV, VLADIMIR OSIPOVICH.** Kriogennoe puchenie suglinisto-supeschanykh pylevatykh gruntov i metody ego rascheta. *(In:* Akademiīa nauk SSSR. Institut merzlotovedeniīa. Igarskaīa merzlotnaīa stant͡siīa. Trudy 1961. vyp. 2, p.5-34, tables, graphs, diagrs.) 25 refs. Text in Russian. **Title tr.:** Frost heaving of loamy-sandy, powdery ground and methods for its calculation.

Reports results of several years' study at the Igarka Permafrost Research Station. Character and amount of heaving is established and the relation clarified between cryologic properties of the ground and the temperature regime during period of freezing. Seasonal heaving ranged from 40 to 400 mm. and up to 4.5-4.8 m. for several years. Its basic cause is the migration of moisture to the freezing front. A method is developed for forecasting the amount and rate of heaving. (DLC.)

74536. **ORLOV, VLADIMIR OSIPOVICH.** Kriogennoe puchenie tonkodispersnykh gruntov. Moskva, Izd-vo Akademii nauk SSSR, 1962. 188 p. illus., tables, diagrs., graphs. (Akademiīa nauk SSSR. Sibirskoe otdelenie. Institut merzlotovedeniīa.) Approx. 250 refs. Text in Russian. **Title tr.:** Cryogenic heaving of finely dispersed ground.

Reports results of 1954-1960 investigations at the Igarka Permafrost Research station, on several problems of the theory and calculation of ground freezing and heaving, and their effects upon foundations. The basic cause of heaving was found to be

the migration of moisture to the freezing front. Appraisal is given of existing methods for calculating the amount and rate of frost heaving; and new methods are discussed regarding the freezing, heaving and upwarping of foundations. The effectiveness of the ground surface in controlling frost action, and other aspects of research are also outlined. (DLC.)

74537. ORLOV, VLADIMIR OSIPOVICH. Reshenie zadachi o promerzanii dispersnogo grunta s uchetom pereraspredeleniia v nem vlagi. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Igarskaia merzlotnaia stantsiia. Trudy 1961. vyp. 2, p.35-47, graph, diagr.) 26 refs. Text in Russian. **Title tr.:** Solution of the problem of the freezing of dispersed ground taking into account its moisture redistribution.

Reviews the inadequacies and difficulties of earlier approaches to the solution of the depth of freezing of soils, especially dispersed soils, and proposes a method based on a known heat-balance equation. The solution obtained provides a tool suitable for engineering analysis of the freezing of ground, taking into account changes in moisture content in the process, and shows the effect of the degree and duration of cold penetration on the freezing process. Solution of the problem of moisture accumulation shows that the amount of water drawn to the freezing zone is proportional to the initial moisture content and duration of the freezing period, and inversely proportional to the degree of soil cooling.—From CRREL. (DLC.)

74538. ORLOVA, E. P. U aleutov na Komandorskikh ostrovakh. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia, 1962, no.8, p.3-10.) Text in Russian. **Title tr.:** With the Aleuts on the Commander Islands.

Outlines the geographic features of the four islands: Beringa, Mednyy, Ariy Kamen' and Toporkov, 54°25′-55°20′N. 165°45′-168°07′E.; their flora and fauna etc. Their discovery in 1741, exploration, and colonization are sketched. The present-day population is of Aleut (347 in 1961), Indian, and Russian origin. The former handicraft of the Aleuts, their canoes, fur-seal hunting, blue-fox farming, stock raising (93 head of cattle and 14 horses), and fishing are described. The traditional Aleut culture is stressed as warranting study and preservation. Author's survey was made in 1961 for the History and Philology Section of the Institute of Economics, Academy of Sciences, Siberian Division. (DLC.)

74539. ORLOVA, M. P., *and* **A. A. KUKHARENKO.** Melility iz shchelochno-ul'traosnovnykh massivov Kol'skogo poluostrova. (Leningrad. Universitet. Uchenye zapiski 1962. no.312, ser. geologicheskikh nauk, vyp. 13, Geokhimiia, p.173-89, illus., tables.) 13 refs. Text in Russian. **Title tr.:** Melilites from alkaline-ultrabasic massifs of the Kola Peninsula.

Describes mode of occurrence, distribution and other properties of melilites found in the Afrikanda, Kovdorskiy and other massifs in the Turiy Peninsula and elsewhere. Two genetic types of melilite deposits are recognized, magmatic and metasomatic, and both are treated. Chemical composition, optical properties, X-ray analyses are reported and the crystallography and mineralogy outlined. (DLC.)

74540. ORLOVA, N. I. *Betula callosa* Lindq. v Murmanskoĭ obl. (Akademiia nauk SSSR. Botanicheskiĭ institut. Botanicheskie materialy gerbariia, 1961. t.21, p.104-113, illus., maps.) 18 refs. Text in Russian. **Title tr.:** *Betula callosa* Lindq. in Murmansk Province.

Discusses earlier studies of this species (cf. No. 10162) in Scandinavia; and presents his own records and description based on a north-south trip through the Kola Peninsula. Morphology, differential diagnosis, occurrence, etc. are considered. (DLC.)

74541. ORLOVA, VALENTINA VLADIMIROVNA. Zapadnaia Sibir'. Leningrad, Gimiz, 1962. 360 p. tables, graphs, charts incl. fold. (Leningrad. Glavnaia geofizicheskaia observatoriia. Klimat SSSR, vyp. 4.) Approx. 150 refs. Text in Russian. **Title tr.:** Western Siberia.

Presents a monographic treatment of this two million km.^{2} area, comprising mainly the Ob basin, as part of a series on the climate of the USSR. Climate-forming factors such as solar, total, and absorbed radiation are analyzed and the radiation balance outlined. Influence of elevation and atmospheric circulation are discussed. The thermal and moisture regimes are described. Climate of the natural regions, including tundra and forest-tundra, is characterized. Appended are a list of the climatic stations, data tables and charts. (DLC.)

74542. ORLOVSKIĬ, N. V. Pervaia sibirskaia konferentsiia pochvovedov. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia. 1961, no.6, p.134.) Text in Russian. **Title tr.:** The First Siberian Conference of Soil Scientists. Also reported in *Pochvovedenie,* July 1961, p.125-26.

Reports the conference called by the Krasnoyarsk branch of All-Union Society of Pedologists and the Institute of Forestry and Wood, at Krasnoyarsk, Mar. 10-14, 1961; with 47 papers delivered and resolution for a new journal: *Pochvy Sibiri* (Soils of Siberia). (DLC.)

74543. ORMOND, LOUISE. Giardiasis in Alaska. (Alaska medicine, Dec. 1961. v.3, no.4, p.77-78.) 5 refs.

Introductory notes on incidence, symptoms and therapy of this infective intestinal ailment, followed by two case reports in a man aged 50 and a woman 47. (DNLM.)

74544. ORTNER, JOHANNES, 1933– , *and others*. A new sporadic layer providing VLF propagation. (IRE transactions on antennas and propagation, Nov. 1960. v. AP-8, no.6, p.621-28, table, graphs, map.) 37 refs. *Other authors:* A. Egeland *and* B. Hultqvist.

Reports observations at Kiruna (67°51′N. 20°13′E.), Sweden, of 16 kc./s transmissions from Rugby, England, during two periods following strong solar flares in May and July, 1959. The signal strength of receptions showed no or only slight diurnal variations. It is proposed that the change of the diurnal variation is due to the production by solar protons of an ionized layer very deep in the atmosphere, the electron density of which is sufficient for reflection of very long waves but too low to cause measurable non-deviative absorption in

the HF band at geomagnetic latitudes lower than 60°.—From author's abstract. (DLC.)

74545. ORTNER, JOHANNES, 1933– , *and others.* Sudden cosmic noise absorption at the moment of geomagnetic storm commencements. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v. 1, p.103-105, table, graph.) 2 refs. *Other authors:* T.R. Hartz, O. Holt, B. Hultqvist, R.R. Brown, H. Leinbach, *and* C.G. Little.

Reports on question raised by R.R. Brown, q.v., as to whether the short influx of electrons from the outer radiation belt was brought about by the rapid geomagnetic field change at the time of the sudden commencement of a magnetic storm, or was due to the escape of electrons from the plasma cloud encountering the geomagnetic field. According to data obtained by riometers between 56.4° and 88.0° geomag. N. for 31 of 75 sudden commencements, a definite SCNA (sudden cosmic noise absorption) effect was observed at all stations. In ten cases the effect was visible only on the European side of the earth, and in three cases only on the American side. The remaining 31 SCs were not associated with any SCNA effect at all. Conclusion is reached that the high energetic electrons responsible for the ionizing X-rays come from the main solar plasma cloud reaching the earth's magnetic field at the time of the sudden commencement. (DLC.)

ORTNER, JOHANNES, 1933– , *see also*

Brown, R.R., & *others.* Large-scale electron bombardment . . . 1961. No. 70405

Egeland, A., & *others.* . . . VHF oblique auroral reflections. 1962. No. 71201

Pfotzer, G., & *others.* . . . X-ray bursts in the auroral zone. 1962. No. 74771

74546. ORVIG, SVENN, 1920- . Extrapolation and observation of the 25-mb. surface height over Canada and Alaska. (Journal of applied meteorology, Mar. 1962. v. 1, no.1, p.118-22, map, graphs, tables.) 6 refs.

Discusses computation of thickness and extrapolation methods for obtaining the height of the 25-mb surface over North America north of 50°N. Extrapolation graphs constructed for the 25-mb. level indicated that stations north of 70°N. reached 25 mb. most frequently. Mean and extreme values of 25-mb. heights for different months of 1957-1958 and latitudes were also obtained. The range in height values within latitude belts depends on the season, being maximum in January for all latitudes. —From author's summary. (DLC.)

74547. ORVIG, SVENN, 1920- . Net radiation flux over sub-arctic surfaces. (Journal of meteorology, Apr. 1961. v. 18, no.2, p.199-203, graph, tables.) 9 refs. Paper presented at the Royal Meteorological Society, Canadian Branch meeting, June 1960.

Deals with results of 994 measurements of net radiation carried out June 9-Sept. 7, 1958 near Knob Lake, Que. There were 14 hrs. of positive net radiation flux per day, centered on the time of local noon; zero net flux occurred approx. seven hrs. before and after local noon. Net radiation flux and solar radiation were found not to be correlated with measured evapotranspiration, because of the character of the ground vegetation. Ratio of measured evapotranspiration/latent evaporation is only 0.0018 in./cc., compared to 0.0034 in./cc. at more southerly locations in Canada. Close correlation, 0.795 ± 0.058, was found between latent evaporation and solar radiation; evapotranspiration may be obtained from measurement of the former. Use of the portable "economical net radiometer" is described in measuring net radiation flux. (DA.)

ORVIG, SVENN, 1920– , *see also*

Arctic Institute of N. Am. McCall Glacier . . . meteorol. observ. 1961. No. 69856

Larsson, P., & S. Orvig. Albedo arctic surfaces. 1962. No. 73329

Larsson, P., & S. Orvig. Atlas . . . albedo . . . 1961. No. 73330

Vowinckel, E., & S. Orvig. Insolation absorbed solar radiation at ground. 1962. No. 76442

Vowinckel, E., & S. Orvig. Relation between solar radiation . . . 1962. No. 76443

Vowinckel, E., & S. Orvig. Water balance & heat flux . . . 1961. No. 76444

74548. OSCHINSKY, LAWRENCE, 1921– . Facial flatness and cheekbone morphology in arctic Mongoloids; a case of morphological taxonomy. (Anthropologica, 1962. n. ser. v.4, no.2, p.349-77, illus. & maps on 15 plates, tables.) 137 refs. Summary in French.

Considers arctic Mongoloids i.e. Eskimos, Chukchis, Tungus, etc. as one taxonomic morphological entity characterized by three facial flatness factors: large naso-malar and zygomaxillary angles, and verticality of the malar. The continuity of these traits in the entire Asiatic-American circumpolar area from paleolithic to modern times makes them of important diagnostic value in Mongoloid phylogeny and anthropo-geography. Inconsistencies in other metrical and serological data (blood groups, skull measurements, etc.) are discussed. (DSI.)

74549. OSCHINSKY, LAWRENCE, 1921– , *and* **R. SMITHURST.** A preliminary report on the odontology and occlusion of the Eskimos of the Eastern Canadian Arctic. (International Congress of Anthropological and Ethnological Sciences, 6th, *Paris,* 1960. Comptes rendus, 1962. t.1, p.503-504.)

Summarizes results of dental study (cf. No. 67239): shovel-shaped incisors were found in 99.2% and lingual displacement of lateral maxillary incisors in 22-40% of each sampled group. The data, in agreement with observations throughout the Eskimo area, make these characteristics reliable determinants of racial affinity. In the discussion which followed, R. Gessain concurred in the thesis from observations on Angmagssalik Eskimos in 1934-1935, as did also M. Boesen currently studying dentology of 322 6-16 year olds at Angmagssalik, Greenland. (DSI.)

74550. OSCHINSKY, LAWRENCE, 1921– . A short note on upper later incisor tooth crowding among the Eskimos. (Anthropologica, 1961, n. ser. v.3, no.1, p.90-94, illus., table.) 8 refs.

Considers this condition to be "probably connected with the phylogenetic reduction of alveolar prognathism characteristic of Eskimos." Instanding lateral incisors were found among

Baffin Island Eskimos (in 1959): 22.4% of those at Pangnirtung and 36.6% of those at Frobisher Bay. Among Greenland Eskimos, similar conditions were observed by P.O. Pedersen, and a definite trend of tooth crowding is shown by R. Gessain, q.v. (DSI.)

OSETROV, G. G., *see* Popov, V.A., & G.G. Osetrov. Soderzhanie vitamina C . . . 1962. No. 74901

OSHMARIN, PETR GRIGOR'EVICH, 1918– , *see* Mamaev, ÎU. L., & *others*. Gel'mintofauna . . . 1959. No. 73776

OSHWEETUK, *see* Singittuk, W., & *others*. Letters. 1961. No. 75671

74551. OSIPENKO, L., *and others*. Pod zvuki gorna. (Klub, May 1961. god 10, no.5, p.15-23, illus.) Text in Russian. *Other authors:* T. Vasil'eva *and* M. Konîaeva. **Title tr.**: To the sound of the bugle.

Describes scout ("pioneer") camps in Tyumen Province: educational and recreational activities, sports, field trips, arts and crafts, daily chores, etc. (DLC.)

74552. OSIPOV, A. Pervyĭ komi balet. (Sovetskaîa muzyka, Mar. 1962. god 26, no.3, p.92-93, illus.) Text in Russian. **Title tr.**: The first Komi ballet.

Reviews a recent performance in Syktyvkar of the first Zyryan ballet, *ÎAg-Mort*. Based on a national legend about a forest monster and magician, the ballet was written and produced by Zyryan artists. The music, orchestration, folkloristic theme, choreography, and dancing are discussed. (DLC.)

74553. OSIPOV, I. Razvedchiki sibirskoĭ nefti. (Novyĭ mir, Mar. 1962. god 38, no.3, p.211-30.) Text in Russian. **Title tr.**: Siberian oil prospectors.

Popular account of the Shaimskaîa expedition based on Uray and headed by I.F. Morozov. The successes and failures are described of the geological parties engaged in an oil and gas survey of the upper Konda and Mulym'ya basins in the West Siberian lowland. (DLC.)

74554. OSIPOV, VALERIĬ DMITRIEVICH. Taĭna Sibirskoĭ platformy. Moskva, Izd-vo "Molodaîa gvardiia," 1960. 284 p. illus. Text in Russian. **Title tr.**: Mystery of the Siberian platform.

Popular description of the search for diamentiferous deposits in Yakutia, mainly the work of the Amakinskaîa Expedition culminating in the discovery of the so-called Mir kimberlite pipe in June 1955. (DLC.)

OSLOPOVSKIĬ, A. P., *see* Rudkevich, M. ÎA., & A.P. Oslopovskiĭ. O prirode dislokat͡siĭ . . . 1961. No. 75255

74555. OSMOLOVSKAÎA, V. Sostoîanie chislennosti borovoĭ dichi. (Okhota i okhotnich'e khozîaĭstvo, July 1962. god 8, no.7, p.16-19, maps.) Text in Russian. **Title tr.**: Population status of forest birds.

Presents data on black-, wood- and hazel-grouse in the coniferous forests of the Soviet Union, including Kola Peninsula, Arkhangel'sk Province and Komi ASSR. (DLC.)

74556. OSOKIN, S. D. Dlina beregovoĭ linii SSSR. (Okeanologiia, 1962. t.2, vyp.5, p.943, table.) Text in Russian. **Title tr.**: Length of coast line of the USSR.

Reports recent measurements including such for Russian coasts of all seas belonging to the Atlantic, Pacific and Arctic Oceans. (DLC.)

74557. OSTANIN, V. E. Osobennosti stroeniia i formirovaniia rel'efa poĭmy meandriruîushchikh i razvetvlennykh na rukava rek na primere Irtysha, Severnoĭ Dviny i Vychegdy. (Moskva. Universitet. Vestnik, ser. 5, geografiia, Sept.-Oct. 1961, no.5, p.60-67, maps.) 3 refs. Text in Russian. **Title tr.**: Structure and formation features of floodplain relief due to meandering rivers and rivers which divide into arms, as exemplified by the Irtysh, Severnaya Dvina, and Vychegda.

Describes macro-, meso-, and microrelief elements of floodplains developed by the meanders of the Irtysh, the branching of the Severnaya Dvina and the mixed-type Vychegda. Each type is described and illus. noting its geomorphic features. (DLC.)

OSTANIN, V. E., *see also* Makkaveev, N.I., & *others*. Geomorfologicheskie issledovaniia . . . 1961. No. 73750

74558. OSTAPENKO, V. E. Mineral'noe syr'e dlîa proizvodstva bezobzhigovykh stroitel'nykh materialov v raĭone g. ÎAkutska. (Akademiia nauk SSSR. Sibirskoe otdelenie. ÎAkutskiĭ filial. Nauchnye soobshcheniia 1960. vyp.3, p.40-46, tables.) 3 refs. Text in Russian. **Title tr.**: Mineral raw materials for production of non-kiln construction materials in the vicinity of the town of Yakutsk.

Reports study of limestones, sands and clays as main sources of construction materials. Distribution, composition and qualitative characteristics of these raw materials are described. Technological and physical-chemical properties are reported, and some conclusions offered for production of construction materials. (DLC.)

74559. OSTASHKOV, K. V. Belki syvorotki krovi v usloviîakh iskusstvennoĭ gipotermii. (Biokhimiia, 1961. t.26, vyp.6, p.966-69, table.) 8 refs. Text in Russian. Summary in English. **Title tr.**: Blood serum proteins in artificial hypothermia.

In rabbits, advancing hypothermia is accompanied by progressing hypoproteinemia, with a more drastic drop of globulins than albumins. Among the globulins, the alpha fraction increases while those of beta and gamma decrease both absolutely and relatively. (DNLM.)

74560. OSTASHKOV, K. V. Obmen fosfornykh soedineniĭ v mozgovoĭ tkani v usloviîakh gipotermii. (Biokhimiia, 1961. t.26, vyp.4, p.655-61, table.) 23 refs. Text in Russian. Summary in English. **Title tr.**: Metabolism of phosphorous compounds in the brain tissue during hypothermia.

Moderate hypothermia (26°C.) in rats showed P metabolism and maintained synthesis over catabolism. Deeper temperature (23°C.) increased the number of metabolic reactions. Extreme cold (below 23°C.) deranged the P metabolism, with anaerobic carbohydrate metabolism becoming predominant. (DNLM.)

74561. OSTASHKOV, K. V. Rol' askorbinovoĭ kisloty v mekhanizme razvitiia iskusstvennoĭ gipotermii. (Biulleten' éksperimental'noĭ biologii i medit͡siny, July 1961. t.52, no.7, p.54-57, illus., table.) 21 refs. Text in Russian. Summary in English. **Title tr.**: The role of ascorbic acid in the development of induced hypothermia.

Reports on ascorbic acid content in the blood and adrenal of rabbits at various degrees of hypothermia. In the adrenal there was a drop of vitamin C at mild and moderate hypothermia and an increase at deep temperatures. A reversed condition was found in the blood. Weight of adrenal is also noted. (DLC.)

74562. OSTENSO, NED A. The geophysical and polar research center University of Wisconsin. (U.S. Antarctic Projects Office. Bulletin, Jan. 1963. v.4, no.4, p.2-6.)

Notes organization of this center and facilities provided by the University. Major research programs are cited: nine antarctic, five arctic, and 13 general. (CaMAI.)

74563. OSTENSO, NED A. Geophysical investigations of the Arctic Ocean basin. Madison, Wis., June 1962. xvii, 124 p., maps incl. fold., graphs, tables. (Wisconsin. University. Geophysical & Polar Research Center, Research report no.62-4.) 115 refs.

Reports progress on a research program started in 1960, combining gravity, magnetic, and seismologic work. Earlier investigations are briefly reviewed. Bathymetric charts of 1949, 1955, and 1962, are reproduced to show the current concept of four oceanographic deeps and three ridge systems. The deeps have flat floors and contain large amounts of detritus. Alpha Ridge, composed of highly magnetic rocks, may be a horst structure. Folded sediments form the Lomonosov Ridge. The "Mid-Arctic" (extension of the Mid-Atlantic) Ridge is either poorly developed or deeply buried by sediments. During the 1960 and 1961 field seasons, 120 gravity stations were established on the sea ice and 10 stations on the Alaskan coast. Principal facts on these and 123 other stations are tabulated. Gravity data are described in relation to geologic features; various anomalies are discussed and probable crustal models presented. Map (of R.M. Demenitskaia, q.v.) of crustal thickness under the Arctic Basin is reproduced. Quantitative methods of evaluating magnetic data and a regional magnetic chart for the Basin are given. Conclusions from a two-month aeromagnetic survey are summarized; and the Great Arctic Magnetic Anomaly, cluster of magnetic meridians extending from the Taymyr Peninsula to the North Magnetic Pole, is discussed. The crustal structure of the Arctic Basin appears to contain both continental and oceanic elements. Depressions truly oceanic in depth are underlain by crustal sections about 6 km. thick; in contrast, large volumes of sediments have collected and subsequently undergone "continental" deformation. Arctic "Ocean" might be considered four "oceans": the four deeps; the Basin may represent a transitional phase from ocean to continent. (DGS.)

74564. OSTENSO, NED A., *and others*. Reconnaissance residual and regional magnetic maps of the Arctic Ocean basin, a preliminary report. Madison, Wis., Nov. 1961. 4 l. & 10 l. of tables, maps incl. fold. (Wisconsin. University. Geophysical and Polar Research Center. Research report no.2.) Refs. Mimeo. *Other authors*: R.J. Wold *and* G.P. Woollard.

Outlines the field program of this May-June 1961 aeromagnetic survey, the reduction procedures on the million measurements obtained, also seven major conclusions. Tables give data on observatory network, also K-indices and whole-day characters for aeromagnetic flight periods. Flight lines, location of magnetic observatories, residual magnetic profiles, location and general character of the aeromagnetic profiles obtained by Canadian investigators, magnetic anomalies are mapped; an overall map of total intensity of the earth's magnetic force centered on the North Pole is included. (CaMAI.)

OSTENSO, NED A., *see also*

Alaskan Science Conference 1961. 1962. No. 69644

Black, D.J., & N.A. Ostenso. Gravity observ. Arlis II. 1962. No. 70229

Den Hartog, S.L., & N.A. Ostenso. Gravity & magnetic observ. ARLIS-II. 1962. No. 70958

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

U.S. Geol. Survey research. 1962. No. 76268

74565. OSTROUMOV, A.G. O zimovanii nekotorykh ptits na Kamchatke. (Moskovskoe obshchestvo ispytateleĭ prirody. Otdel biologicheskiĭ. Biŭlleten' 1961. t.66, no.6, p.151-53.) Text in Russian. **Title tr.:** On the wintering of some birds in Kamchatka.

Notes of an ichthyologist on the sea eagles and golden eagles in the Kamchatka River basin. Their mode of catching salmon is described, and damage to fisheries discussed. Swans and ducks and their behavior and diet also are dealt with. (DLC.)

74566. OSTROUMOV, A. G. Opyt ispol'zovaniia aerovizual'nykh nabliudeniĭ dlia ucheta chislennosti i raspredeleniia nekotorykh predstaviteleĭ fauny Kamchatki. (Moskovskoe obshchestvo ispytateleĭ prirody. Otdel biologicheskiĭ. Biŭlleten' 1961. t.66, no.3, p.25-31, table.) Text in Russian. **Title tr.:** Attempt to use aerovisual observations for estimating the number and distribution of some representative Kamchatka fauna.

Describes the aerophotographic reconnaissance used since 1958 for assessing the size of spawning salmon populations. Both helicopters and aeroplanes were used at the peak of the run. Numerous observations on bears feeding upon salmon, and on some birds of prey, are noted. (DLC.)

OSTROUMOV, A. G., *see also* Krogius, F.V., & A.G. Ostroumov. Primenenie aerometodov. . . 1961. No. 73153

74567. OSTRYĬ, G. B. O poiskakh nefti i gaza na severe Krasnoiarskogo kraia. (Geologiia i geofizika, 1962, no.2, p.127-29.) Text in Russian. **Title tr.:** On oil and gas prospecting in northern Krasnoyarsk Province.

Reports special conferences held in Krasnoyarsk Nov. 15-17, 1961 for coordinating and improving the oil and gas search in the lower Yenisey River basin. The present status of prospecting is briefly reviewed, its weaknesses are noted. Mesozoic (Jurassic-Lower Cretaceous) deposits distributed north-northeast of Ust'-Port are considered the most promising. Intensified prospecting with new methods and better coordination are discussed. (DLC.)

74568. OSTRYĬ, G. B. Osobennosti zaleganiia i formirovaniia mnogoletnemerzlykh porod v sviazi s

geologicheskim stroeniem territorii, na primere prieniseĭskoĭ chasti Zapadno-Sibirskoĭ nizmennosti. (Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Trudy 1962. t.19, p.19-24, diagrs.) 21 refs. Text in Russian. **Title tr.**: Occurrence and formation features of permafrost in relation to the geologic structure of an area, as exemplified in the Yenisey part of the West Siberian plain.

Reports a study based on analysis of data from 211 drillings with electrical logging diagrams of 198 of them. Permafrost thickness, depths, boundaries and other features are reviewed for the Yeloguy, Turukhan, and Yermakovo regions. A connection is established between the lower limit of permafrost and the tectonics of the area. Geothermal and hydrogeologic conditions for permafrost development are also considered. Geologic-geophysical methods are suggested for studying permafrost in relation to the structure of the region. (DLC.)

74569. O'SULLIVAN, JOHN BLANDFORD. Quaternary geology of the arctic coastal plain, Northern Alaska. (Dissertation abstracts, Apr. 1962. v.22, no.10, p.3608.) Abstract of Ph.D. dissertation to Iowa State University of Science and Technology, 1961. 204 p.

Describes in some detail the surficial deposits and geomorphology of the Arctic Coastal Plain province and the Northern Foothills section. In the latter, three topographically distinct surfaces are distinguished: Southern, Intermediate, and Northern or Foothill Silt Surface. The inner margin of the coastal plain marks the southern extent of the Sangamon transgression; the coastal plain appears to have emerged subsequent to the early Wisconsin lowering of sea level, while the Recent rise in sea level is responsible for the present estuarine coastline. A calcareous silt deposit, up to 130 ft. thick, underlies the Foothill Silt Surface, but most of the coastal plain is underlain by a thin (about 50 ft.) mantle of noncalcareous, well sorted, well rounded medium-to-fine marine sand; the sediment becomes 110-120 ft. thick near Barrow, where an unconformity separates the near-shore sediments from the finer off-shore facies of the inland sands. Distribution and character of other sediments are also dealt with.—From author's abstract. (DGS.)

74570. OSWALT, WENDELL H., 1927– . Caribou Eskimo without caribou. (Beaver, spring 1961, outfit 291, p.12-17, illus.)

Suggests ways by which the Caribou Eskimos can retain their identity as a people while adapting to a new way of life, from summer 1959 observations at Eskimo Point and Padlei, west of Hudson Bay. Their economy must be reoriented from hunting the declining caribou toward sea-mammal hunting, fishing, and seasonal wage employment. Development of Eskimo leadership and acceptance of Eskimo Point as a permanent home can be fostered by clearly defined living sectors, permanent housing, a community meeting place, and an elected village council. (DI.)

74571. OSWALT, WENDELL H., 1927– . Eskimo ingenuity. (North, Nov.-Dec. 1961. v.8, no.6, p.28-33, illus.)

Discusses the superior inventive ability attributed to the Eskimos, citing the skin incubators for premature babies in Siberia, unusual hunting techniques in Canada and Greenland, mechanical toys in Alaska, soapstone carvings in Canada, ivory carvings and caribou skin masks in Alaska, etc. Ingenious devices are originated of necessity for survival in marginal environments however, and the Eskimos are considered not above average in inventiveness, for peoples in such areas. (DLC.)

74572. OSWALT, WENDELL H., 1927– . The growing season of Alaskan spruce. (Tree-ring bulletin, July 1960. v.23, nos.1-4, p.3-9, graphs, appendix.) 9 refs.

Reports results of tree-ring sampling of white spruce, *Picea glauca,* during summer 1949, in two ecologically contrasting stands near Fairbanks and Cape Denbigh. The localities are described briefly; possible temperature-growth correlation is discussed and graphed. Supplementary data from the 1948, 1953, and 1954 growing seasons in Alaskan and other stands fail to bear out the temperature-growth correlation. (DA.)

74573. OSWALT, WENDELL H., 1927– . Napaskiak, an Eskimo village in western Alaska. Fort Wainwright, Jan. 1961. 130 p. illus., maps. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57-23.) 5 refs.

Reports a study made during Sept. 1955 - Aug. 1956 when author and family dwelt in the 40-household community near Bethel on the Kuskokwim River. His purpose was to provide knowledge of current social conditions for military personnel in contact with indigenous population. His methods are outlined, and his integration (considerable but not complete) into the village life is discussed. The environs, history, fishing, trapping, hunting, and occasional work-for-hire are dealt with in detail. The role of cash in the economy and cash welfare, etc. are considered. The shift from camp to more settled village life, and the nuclear replacing the extended family are noted. Child-rearing, marriage, social activities, the village council and chief, school and health facilities, are described. Major village institutions are the steam bath and Russian Orthodox Church, both treated in detail, and considered along with economic pursuits, the three main but unrelated elements in the cultural system. (CaMAI.)

74574. OSWALT, WENDELL H., 1927– . The new Alaskan Eskimo. (Americas, Sept. 1961. v.13, no.9, p.10-13.)

Discusses problems of the introduced cash economy in an Eskimo hunting community. A typical village on the Bering Sea coast is described. Restraints upon hunting essential to the food supply are discussed: treaty restrictions, compulsory schooling, etc., and some remedies suggested. (CaOGB.)

OSWALT, WENDELL H., 1927- , *see also* Alaskan Science Conference 1961. 1962. No. 69644

OTIS, ARTHUR BROOKS, 1913- , *see*

Fregly, M.J., & *others*. Effect of propylthiouracil treatment . . . 1961. No. 71493

Fregly, M.J., & *others*. Hypothyroidism, heat production & loss, cold. 1961. No. 71492

74575. OUGH, JOHN P. The Polar Continental Shelf Project. (Canadian geographical journal, July 1962. v. 65, no.1, p.2-13, illus., map.)

Reviews the 1959-1961 field work and achievement by this Canadian Government survey of the continental shelf, islands, and waters of the western Queen Elizabeth Islands. Work methods and instruments are described, also experience with aircraft under difficult flying conditions. Plans for the 1962 field season include trial of a new method of hydrographic sounding by helicopter. The continental shelf has been outlined as approx. 70-100 mi. wide and 200-250 fathoms deep; a topographic traverse has been made from Banks to Ellesmere Islands, tying the area into the national geodetic control network; a Decca electronic navigation network has been established. Findings in oceanography and geology are noted. (DGS.)

OVCHINNIKOV, I. M., *see* Kozlianinov, M.V., & I.M. Ovchinnikov. O sviazi prozrachnosti vod . . . 1961. No. 73055

74576. OVCHINNIKOV, L. F. Radiatsionnyi balans Novosibirskikh ostrovov. (Leningrad. Arkticheskii i antarkticheskii nauchno-issledovatel'skii institut. Trudy 1961. t.229, Radiatsionnyi i teplovoi balans Arktiki, p.132-46, tables, graphs.) 10 refs. Text in Russian. **Title tr.:** Radiation balance of the New Siberian Islands.

Analyzes data on actinometric observations and measurements of direct, diffuse, total, and shortwave reflected radiation at Kotel'nyy polar station, and reduces them to the values of the radiation balance of this area for 1955-1957. Using the possible sums of the radiation balance for this period, and applying a new method developed to Kotel'nyy data from 1936, continuous series of the sums for 22 years were obtained. These series of monthly sums of radiation balance, can be used for the calculation of thermal properties of the region, and for ice movement forecasts. (CaMAI.)

74577. OVERBECK, WERNER. Extracorporeal circulation combined with deep hypothermia. (Surgery, June 1961, v. 49, no.6, p.763-67, illus.) 11 refs.

Discusses some mechanisms observed during deep hypothermia (25°C. and less) in dogs. Increase in body temperature after rapid cooling and circulatory arrest, much increased arterial line pressure, and deep hypothermia alone are included in the analysis. (DLC.)

74578. OVSIANNIKOV, M. K. Ispytaniia glavnykh dizelei ledokola "Moskva." (Morskoi flot, July 1961. god 21, no.7, p.23-27, table, graphs.) Text in Russian. **Title tr.:** Testing the main diesel engines of the icebreaker *Moskva*.

Reports trials in Barents and Kara Seas, wind and sea calm. The eight 3250 i.hp. engines were run at 260, 300, and 330 r.p.m. under various load. Fuel and cylinder oil consumption was measured, oil pump and burner efficiency analyzed. The noise level was recorded throughout the ship. Main results of the (satisfactory) trials are tabulated and graphed. (DLC.)

74579. OVSIANNIKOV, M. K. Nekotorye rezul'taty ispytanii glavnykh dvigatelei ledokola "Moskva". (Sudostroenie, 1962. god 28, no.6, p.45-46, graphs.) Ref. Text in Russian. **Title tr.:** Some results of tests on the main engines of the icebreaker *Moskva*.

Reports on the efficiency of the eight main diesels under arctic operational conditions: ice breaker convoy through the Vil'kitskogo Strait in summer 1960. (DLC.)

74580. OVSIANNIKOVA, N. D. Iz istorii zolotopromyshlennosti Vostochnoi Sibiri v epokhu kapitalizma, 1861-1914 gg. (*In:* Nauchnaia konferentsiia po istorii Sibiri i Dal'nego Vostoka. Voprosy istorii . . . *pub.* 1961, p.163-71.) 15 refs. Text in Russian. **Title tr.:** Contributions to the history of the gold mining industry of East Siberia in the era of capitalism, 1861-1914.

Describes the organization and development of stock companies exploiting the Lena, also Vitim, Amur, and other gold fields: Russian and foreign capital investments, mining methods and equipment, production, profits, fluctuations in stock prices, etc. (DLC.)

74581. OWEN, EDWARD BROOKS, 1915– . Five Finger Rapids draw extension, map and preliminary report; Yukon River drainage basin dam site investigation, site no.6. Ottawa, 1959. 8 p., 2 maps incl. 1 fold. (Canada. Geological Survey. Topical report no.12.)

Describes this site, in an area of extremely irregular topography about two mi. northwest of the proposed main power dam site at Five Fingers Rapids on the Yukon River. Geology, soils, engineering considerations of depth and permeability of the overburden, construction materials, and ground water are dealt with. Map at 1:2400 scale shows details. Suggestions are made for further investigations. (CaOG.)

74582. OWEN, EDWARD BROOKS, 1915– . Fort Selkirk dam site, map and preliminary report; Yukon River drainage basin dam site investigation, site no.9. Ottawa, 1959. 12 p., fold. map. (Canada. Geological Survey. Topical report no.15.)

Describes this site on the Yukon River two mi. downstream from the community of Selkirk, and three mi. below the junction of the Pelly and Yukon. The geology, unconsolidated deposits, bedrock, engineering considerations, construction materials and ground water of the site are described and shown on map at 1:2400 scale. Test borings are suggested. (CaOG.)

74583. OWEN, EDWARD BROOKS, 1915– . Fort Selkirk saddle dam site, map and preliminary report; Yukon River drainage basin dam site investigation, site no.10. Ottawa, 1959. 9 p. 2 maps incl. 1 fold. (Canada. Geological Survey. Topical report no.16.)

Describes this site in a small valley about two-and-a-half miles southwest of the proposed site of the main power dam on the Yukon River. The glacial history, unconsolidated deposits, bedrock, engineering considerations, construction materials, and ground water of the site are reported, with map at 1:2400. Test borings for further investigations are suggested. (CaOG.)

74584. OWEN, EDWARD BROOKS, 1915– . Wolverine dam site, map and preliminary report; Yukon River drainage basin dam site investigation, site no.7. Ottawa, 1959. 11 p., fold. map. (Canada. Geological Survey. Topical report no.13.)

Describes this site about five mi. up the Yukon from its junction with the Pelly in terms of

geology, unconsolidated deposits, bedrock, engineering considerations, construction materials, ground water, and frozen ground. Map is at 1:2400 scale. Test borings are suggested. (CaOG.)

74585. OWEN, EDWARD BROOKS, 1915– . Wolverine draw section, map and preliminary report; Yukon River drainage basin dam site investigation, site no.8. Ottawa, 1959. 5 p., fold. map. (Canada. Geological Survey. Topical report no.14.)

Describes this site in a drift-filled valley approx. three mi. north of the proposed power site on the Yukon immediately below Wolverine Creek; its purpose: to contain the water impounded by the main dam. The geology, unconsolidated deposits, engineering considerations, construction materials, and ground water of the site are described, and depicted on map at scale 1:2400. Test borings are suggested. (CaOG.)

74586. OWEN, EDWARD BROOKS, 1915– . Yukon River drainage basin dam site investigation; site no.1, Swift River dam site, map and preliminary report. Ottawa, 1959. 9 p., fold. map. (Canada. Geological Survey. Topical report no.7.)

Presents map on scale 1:2400 and report, the first of several from this Geological Survey investigation for the Water Resources Branch of the Dept. of Northern Affairs and National Resources, to assess the entire power potential of the Yukon River and its main tributaries. The sequence of events in a dam site investigation are outlined. The Swift River site on the Teslin River, 23 mi. downstream from Johnson's Crossing, is described in terms of site, soils, bedrock, bedrock structure, engineering considerations, overburden, construction materials, and ground water. Test bore localities for further investigation are suggested. (CaOG.)

74587. OWEN, EDWARD BROOKS, 1915– . Yukon River drainage basin dam site investigation; site no.2, North West Power Industries dam site, map and preliminary report. Ottawa, 1959. 8 p., fold. map. (Canada. Geological Survey. Topical report no.8.)

Describes this site on the Teslin River, 14 mi. below the Swift River site *(supra)* and 37 mi. downstream from Johnson's Crossing. Soils, bedrock, engineering considerations, construction materials and ground water are dealt with, and further investigations indicated. Comparisons are made with the Swift River dam site, and the latter favored. (CaOG.)

74588. OWEN, EDWARD BROOKS, 1915– . Yukon River drainage basin dam site investigation; site no.3, Hootalinqua dam site, map and preliminary report. Ottawa, 1959. 9 p., fold. map. (Canada. Geological Survey. Topical report no.9.)

Describes this site at the junction of the Teslin and Yukon Rivers, 58 mi. north of Whitehorse. Bedrock, bedrock structures, engineering considerations, construction materials and ground water are dealt with. Test borings are suggested. (CaOG.)

74589. OWEN, EDWARD BROOKS, 1915– . Yukon River drainage basin dam site investigation; site no.4, Big Salmon dam site, map and preliminary report. Ottawa, 1959. 8 p., fold. map. (Canada. Geological Survey. Topical report no.10.)

Describes this site on the Yukon 17 mi. below the confluence of the Big Salmon River; soils, bedrock, engineering aspects, construction materials, and ground water are considered in turn. Test borings are suggested. (CaOG.)

74590. OWEN, EDWARD BROOKS, 1915– . Yukon River drainage basin dam site investigation; site no.5, Five Finger Rapids dam site, map and preliminary report. Ottawa, 1959. 12 p., maps incl. 1 fold. (Canada. Geological Survey. Topical report no.11.)

Describes this site on the Yukon 12 mi. below Carmacks and accessible from the Dawson-Whitehorse highway; soils, bedrock, rock types, engineering considerations, construction materials, and ground water are reported, and test borings suggested. Map at 1:2,534,400 shows locations of all the proposed dam sites in the Yukon River drainage basin. (CaOG.)

74591. OWEN, EDWARD BROOKS, 1915– . Yukon River drainage basin dam site investigation; site no.11, Selwyn dam site; map and preliminary report. Ottawa, 1960. 18 p., graphs, tables, maps incl. 1 fold. (Canada. Geological Survey, Topical report no.18.)

Describes a site on the Yukon one mi. upstream from its junction with the Selwyn, and 31 mi. below Fort Selkirk. Unconsolidated deposits, bedrock, bedrock structures, engineering considerations, construction materials, frozen ground, and ground water are reported, with map at 1:2400 scale. Chemical analyses and grain size curves are given of Yukon water from 26 mi. above this site: the water is medium hard but not highly mineralized. (CaOG.)

74592. OWEN, EDWARD BROOKS, 1915– . Yukon River drainage basin dam site investigation: site no.16, lower Dawson dam site, map and preliminary report. Ottawa, 1960. 24 p., graphs, tables, maps incl. 1 fold. (Canada. Geological Survey. Topical report no.23.)

Describes this site on the Yukon about 9 mi. downstream from Dawson. Unconsolidated deposits, bedrock, engineering considerations, construction materials, ground water, and frozen ground are reported and a map at 1:2400 is included. Test borings for further investigations are suggested. Chemical analyses of Yukon and Klondike river waters and grain size analysis curves are supplied. (CaOG.)

74593. OWEN, EDWARD BROOKS, 1915– . Yukon River drainage basin dam site investigation: site no.17, boundary dam site, map and preliminary report. Ottawa, 1960. 26 p., graphs, maps incl. 1 fold. (Canada. Geological Survey. Topical report no.24.)

Describes this site on the Yukon immediately upstream from the International Canada-Alaska Boundary. Unconsolidated deposits, bedrock, engineering considerations, construction materials, surface water, ground water, and frozen ground are dealt with; map at 1:1200 is included, and further work in the area is suggested. Chemical analyses of Yukon River water at the International Boundary, and above and below the junction of Forty Mile River are given. The water is medium hard but not highly mineralized. Grain size curves are graphed. (CaOG.)

74594. **OWEN, EDWARD BROOKS, 1915–** Yukon River drainage basin dam site investigation; site no.20, Braden's Canyon dam site, map and preliminary report. Ottawa, 1960. 21 p. graphs, maps incl. 1 fold. (Canada. Geological Survey. Topical report no.26.)

Describes this site on the Pelly River, about 14 mi. downstream from the community of Pelly Crossing, where the Whitehorse-Dawson highway crosses the river. Unconsolidated deposits, bedrock, engineering considerations, construction materials, ground water and frozen ground are reported, with map at 1:1800 scale. Test borings are suggested. A grain size analysis curve indicates that none of the materials tested could be used for the impervious core of the saddle dam. (CaOG.)

74595. **OWEN, EDWARD BROOKS, 1915–** Yukon River drainage basin dam site investigation: site no.20, Gerc dam site, map and preliminary report. Ottawa, 1960. 15 p., graphs, maps incl. 1 fold. (Canada. Geological Survey. Topical report no.25.)

Describes this site on Pelly River, as alternative to, and one-half mi. upstream from the Braden's Canyon site. Unconsolidated deposits, bedrock, engineering considerations, construction materials, ground water and frozen ground are reported; the two sites are compared: their geological difference is slight and the choice must rest on other criteria. Further investigations are suggested. Chemical analysis of Pelly River water shows it to be medium hard but not highly mineralized; turbidity is low. (CaOG.)

74596. **OZ, MUSTAFA,** *and others.* The relationship of blood volume, systemic peripheral resistance, and flow rate during profound hypothermia. (American Society for Artificial Internal Organs. Transactions, 1960. v.6, p.204-213, illus., tables.) 13 refs. *Other authors:* S. Kameya, W. Neville, *and* G.H.A. Cloves, *Jr.*

Reports experiments with dogs cooled to 10°C. When body temperature fell below 30°C. a general reduction of vascular motor activity appeared. Arterial blood pressure was maintained during deep cooling by partial compensation due to increased blood viscosity. (DNLM.)

OZ, MUSTAFA, *see also* Kameya, S., *& others.* A study of oxygen consumption . . . 1960. No. 72636

OZ, MUSTAFA, *see also* Neville, W.E., *& others.* Profound hypothermia . . . 1961. No. 74310

74597. **OZOLEVSKAĬA, G. V.,** *and* **I. ĬA. NEKRASOV.** Petrografiĭa i petrokhimiĭa trakhiliparitov, trakhiandezitov i monzonitov gory Polevoĭ, Severo-Vostochnaĭa Iakutiĭa. (*In:* Akademiĭa nauk SSSR . Iakutskiĭ filial . . . Trudy, 1962. ser. geologicheskaĭa, sbornik no.11, p.3-15, tables, map, diagrs.) 8 refs. Text in Russian. **Title tr.:** Petrography and petrochemistry of trachyliparites, trachyandesites and monzonites of Polevaya Mt., northeastern Yakutia.

Analyzes Upper Cretaceous-Paleogene volcanic rocks with attention particularly to Polevaya Mt. near the Ulakhan-Tas Range, 69°30'N. 150°E., where volcanic formations of 25-30 km² area were formed by two cycles. Their petrology is described, noting especially the trachyliparites, trachyandesites and monzonites, their mineralogic composition and other properties. The chemistry of these rocks is also outlined. The effusives and monzonites are genetically connected with mineralization of gold and mercury. Further studies are suggested. (DLC.)

74598. **OZOLIN, V. ĬA.** Modernizatsiĭa sharovykh mel'nits UZTM 3200x3100. (TSvetnye metally, Dec. 1961. god 34, no.12, p.82-84, illus., tables.) Ref. Text in Russian. **Title tr.:** Modernization of the UZTM 3200x3100 ball mills.

Reports mills in the crushing shops of the Noril'sk concentration plant increased in length from 3200 to 3900-4300 mm., raising the production up to 23%. (DLC.)

74599. **PAAKKOLA, O.,** *and others.* Strontium 90 in Finnish grass and cow's milk. Helsinki, 1960. 12 p. maps, tables. (Suomalainen Tiedeakatemia. Toimituksia, ser. A, II, Chemica 101.) 21 refs. *Other authors:* R. Näsänen, D. Merten *and* J.K. Miettinen.

Reports investigation of contamination by radionuclides. The amounts of Sr^{90} were determined in samples of grass and milk taken during Aug.-Sept. 1959 from nine farms, including two in Lapland. Samples from the northernmost farm (69° N.) contain higher amounts of Sr^{90} than those from the others, but this may be due to the very poor soil and low productivity of the pasture. The samples from the other Lapland farm (66° N.) are at or below the average amount. Determinations of the caesium 137 content in the same samples are reported by A.P.U. Vuorinen and J.K. Miettinen, q.v. (DGS.)

74600. **PAARMA, HEIKKI,** *and* **V. MARMO.** Eräistä suurrakenteista Suomen geologiaan sovellettuina. (Terra, 1961. årg. 73, no.2, p.78-86, maps.) 7 refs. Text in Finnish. Summary in English. **Title tr.:** On some large structures with an application to the geology of Finland.

Includes maps of gravity eskers, faults for all of Finland, scale approx. 1 in.: 160 km. (DGS.)

74601. **PAASCHE, E.,** *and* **A. M. ROM.** On the phytoplankton vegetation of the Norwegian Sea in May 1958. (Nytt magasin for botanikk, 1960. v. 9, p. 33-60, illus., tables, maps.) 17 refs.

A study of the upper 20-30 meters, in the central section of this sea, reaching as far as the ice limit of Greenland waters. Three hydrographic areas were discernible: Norwegian-coastal, atlantic and arctic. Of these only the second supported a rich vegetation; typical cold-water forms were lacking in the arctic waters. Vernal blooming apparently started in the coastal waters at the end of April and advanced during May over the atlantic to the arctic waters. (DLC.)

74602. **PAASCHE, E.** Phytoplankton distribution in the Norwegian Sea in June, 1954, related to hydrography and compared with primary production data. (Norway. Fiskeridirektoratet. Skrifter, ser. havundersøkelser. Report on Norwegian fishery and marine investigations 1960. v. 12, no.11, p.1-76, illus., tables, maps.) 39 refs.

Presents a study of quantitative distribution and of primary production in the region roughly between the Norwegian coast, Jan Mayen and Spits-

bergen. Eight vegetation areas, depending largely on hydrographic features, are recognized and described. Location of large biomasses and their main components, seasonal fluctuations, and factors controlling them, year-to-year variations, origin of initial plankton stocks, etc. are considered. Tables (p.53-77) contain the quantitative data. (DI.)

74603. *PACIFIC BUILDER AND ENGINEER.* Alaska engineer develops method of building foundation in permafrost. (Pacific builder and engineer, Dec. 1961. v. 67, no.12, p.43-44, illus., graph.)

Describes the Thermo-Valve, developed and patented by Erwin L. Long for maintaining the frozen state of permafrost footings. It consists of three 12 in. diameter and 24 ft. long steel pipes, connected by shear webs and set on a 5 in. base of 3 in. steel. The sealed tubes contain a medium through which heat in the bearing area is dissipated and surface cold is conducted to the ground. The system has been used for communication tower foundations at Glennallen and Aurora, Alaska. Other systems in use are discussed briefly. (DLC.)

74604. *PACIFIC BUILDER AND ENGINEER.* Operation Snowball, deep freeze at Rampart Canyon. (Pacific builder and engineer, May 1961. v. 67, no.5, p.88-89, illus.)

Describes problems of establishing a base camp for ice drilling at this proposed dam site on the Yukon River. Attempts (the last one successful) were made in Jan. 1961 to reach the site from Fairbanks by mechanized sled, snow tractor, and tractor train. A sled trip was made from Rampart village to test the bearing strength of the river ice for aircraft landing purposes. A 4,000 x 150 ft. runway was prepared, and 210,000 lb. of equipment and supplies also a churn drill were brought in by air. (DLC.)

74605. *PACIFIC FISHERMAN.* Artificial refrigeration stimulates fisheries on subarctic Bering Sea. (Pacific fisherman, Mar. 1962. v. 60, no.4, p.11.)

Notes fishery developments north of Bristol Bay, especially in the Yukon and Kuskokwim Rivers. With the liberalized regulations of 1961, mild-cured king salmon production increased; a refrigerated barge and floating freezers are planned for 1962. The development is expected to aid the local, mostly Eskimo, economy. (DI.)

74606. *PACIFIC FISHERMAN.* Built to an ideal of safe capability in fishing Alaska salmon and crab around Kodiak I. (Pacific fisherman, Sept. 1961. v. 59, no.19, p.16, +, illus.)

Describes the *Brant* and *Falcon,* 46 ft. diesel-powered boats added to the Alaska Packers Association fleet in summer 1961. They combine salmon seining in summer with king crab fishing in winter; specifications and equipment are noted, also the special features to prevent icing in winter: steel construction, elimination of shrouds, and discharge of overflow water from the crab holds before it reaches the decks; the non-flammable styrofoam insulation is sheathed with plywood. (DI.)

74607. *PACIFIC FISHERMAN.* Eskimo gillnetters, a new element in Alaska industrial fishing. (Pacific fisherman, Nov. 1961. v. 59, no.12, p.23, illus.)

Notes first use of Eskimos as fishermen during the 1961 red salmon run on Bristol Bay. Mostly from the Bethel area on the Kuskokwim River, their experience was in cannery work, but their performance with the gill nets was creditable. (DI.)

74608. *PACIFIC FISHERMAN.* 40,000 tons halibut is Japan's target in Bering Sea operation. (Pacific fisherman, July 1961. v. 59, no.8, p.5, +, map, table.)

Notes the Japanese Bering Sea Bottom Fishing Policy, initiated in summer 1961: the Sea is divided into six areas for trawling, long-line and gillnet fishing for bottomfish; operations and catch objectives are designated for each area. A fleet of 325 catcher vessels and 26 motherships are used, and an aggregate catch of 647,480 metric tons is expected, the species and area breakdowns given. (DI.)

74609. *PACIFIC FISHERMAN.* INPFC Conference report. (Pacific fisherman, Dec. 1962. v.60, no. 13, p.7-10, +, illus.)

Comments on actions taken during the ninth annual meeting of the International North Pacific Fisheries Commission at Seattle, Nov. 12-17, 1962, and their significance to U.S. mainly Alaskan, fisheries. Among topics discussed are the removal of the halibut banks in eastern Bering Sea from the fishing area prohibited to Japan; and a Japanese proposal to regulate the experimental commercial trawling planned for 1963 in waters south of the Aleutians and the Gulf of Alaska. Admission of Japan to the Bering Sea halibut fisheries will cause hardship to U.S. fishermen, but it may facilitate negotiations to protect halibut elsewhere, etc. Negative view of two of the U.S. advisors is noted; their statements in part are quoted in *Fish boat* Dec. 1962, v.7, no.13, p.22-23, +, together with note of possible adverse effects of Japanese halibut fishing in Bering Sea, and comments by the Russian observer, N.N. Andreev, on Soviet fishery plans and policies. (DI.)

74610. *PACIFIC FISHERMAN.* Japanese Bering Sea longlining gear and methods. (Pacific fisherman, June 1962. v.60, no.7, p.25-26, map.)

Describes, with measurements, the equipment used in fishing for cod, halibut, rockfish, and sablefish in northwestern Bering Sea. Included are mainlines (generally synthetic), gangions or branch lines, hooks, bait, strings of gear, and buoy lines. Average sizes of fish taken in 1961 were smaller than those of the 1960 catches. (DI.)

74611. *PACIFIC FISHERMAN. Kathy B.* marks a trend among Alaska salmon brine scows. (Pacific fisherman, Jan. 1962. v. 60, no.1, p.11-12, illus.)

Notes increased use by canneries of refrigerated power scows, e.g. the *Kathy B.,* a 105-ft. steel craft with a 55,000-60,000 red salmon capacity, which began operating in Bristol Bay during the 1961 season. Her refrigerating system, including chilled sea water facilities for holding the fish, is described. (DI.)

74612. *PACIFIC FISHERMAN.* King crab fishing comes to SE Alaska. (Pacific fisherman, Mar. 1961. v.59, no.4, p.35, illus.)

Notes initiation of this commercial fishing in Feb. 1961, with the two-boat operation of N.

Holm in Juneau. King crabs average 10 lbs., their extent in Southeast Alaskan waters is still unknown. Utilization of the Tanner crab population is discussed. Use of King crab wringers for extracting the meat of Tanner crabs is dealt with in the same journal, May 1962, p.21-22. (DI.)

74613. *PACIFIC FISHERMAN.* 1962 operations. (Pacific fisherman yearbook, Jan. 25, 1962. v.60, no.2, p.27+, tables.)

Reviews 1961 activities and production of the U.S. fish industry in the Pacific, and prospects for 1962. Northern operations are included in: sections on salmon p.27-46, halibut p.167-74, frozen fish p.177-83, mild cure of salmon p.184-86, crab p.189-94, clams p.199-201. For each as pertinent, the production, value, and catch data are given; activities of American, Canadian, Japanese and Russian fishermen, and fishing areas are noted, canning etc. output is indicated according to company. (DI.)

74614. *PACIFIC FISHERMAN.* Norway, overfishing menaces. (Pacific fisherman yearbook, Jan. 25, 1962. v.60, no.2, p.121-25, illus., tables.)

Reviews 1961 Norwegian fisheries: production decline due to depletion of the winter herring fishery and overfishing of cod, enforcement of the 12-mile fishery limit, the mesh size of trawl nets used in cod fisheries north of 66°N. was extended from 110 mm. to 130-140 mm. Cod were in good supply off West Greenland and Finnmark, halibut declined, capelin reached a new record of 217,168 metric tons. (DI.)

74615. *PACIFIC FISHERMAN.* Tallying the trends in the world's fisheries 1961, 1962. (Pacific fisherman yearbook, Jan. 25, 1962. v.60, no.2, p.19, +.)

Reviews new fishing methods, areas, equipment etc., and 1962 possibilities. Of northern interest are the Japanese halibut and sablefish production in Bering Sea, their use of monofilament nylon gillnets for high seas salmon fishing, mid-water trawls for herring, and shrimp fishing in Bering Sea; salmon supply and forecasts, etc. (DI.)

74616. *PACIFIC FISHERMAN.* USSR aggressive expansion. (Pacific fisherman yearbook, Jan. 25, 1962. v.60, no.2, p.127-28.)

Reviews Soviet fishing activities in 1961: expansion of operations in the Bering Sea and northwest Atlantic, exploratory fishing in Aleutian waters and the Gulf of Alaska, new ship construction, use of electronic computers on factory-trawlers, etc. Production increased from 1,755,000 to 3,175,000 metric tons in 1950-1960, 75% of the total from mothership fleets and factory-trawlers. The 1960 northwest Atlantic catch of 258,074 metric tons is given by species. (DI.)

74617. *PACIFIC FISHERMAN.* USSR Bering Sea catch up 122%. (Pacific fisherman, Mar. 1962. v.60, no.4, p.9.)

Notes the 1961 catch of 329,441 metric tons mostly in eastern Bering Sea, a 122% increase over 1960. Catches are tabulated by species, also of frozen and salted fish production. (DI.)

74618. *PACIFIC FISHERMAN.* Wards Cover cannery: 3,078,000 cases of salmon in 50 consecutive seasons. (Pacific fisherman, Aug. 1962. v. 60, no.9, p.7-8, illus.)

Describes facilities of this salmon canning plant near Ketchekan, Southeast Alaska, its operations and growth since 1912. (DI.)

PACIFIC SCIENCE CONGRESS. 8th, *Quezon City, Philippines,* Nov. 16-28, 1953, *see* Cooper, W.S. Vegetation . . . 1957. No. 70820

PACIFIC SCIENCE CONGRESS. 9th, *Bangkok, Thailand,* Nov. 18-Dec. 9, 1957, *see*

Budanov, V.I., & *others.* Present-day vertical movements . . . 1961. No. 70432

Church, J.F. Climatology . . . 1959. No. 70759

Durham, J.W., & Y. Sasa. Comparison of the fauna . . . 1961. No. 71154

Gorshkov, G.S., & I.I. Tovarova. Geochem. Bezymianny eruption. 1961. No. 71783

Gorshkov, G.S. Kamchatka Valley Ten Thousand Smokes. 1961. No. 71785

Gorshkov, G.S. Seismic & volcanic energy Bezymianny. 1961. No. 71787

Gorshkov, G.S. Volcanic zone Kurile. 1961. No. 71791

Kropotkin, P.N. . . . tectonics Amur-Kamchatka. 1961. No. 73160

Moiseev, P.A. On the biological basis of fishery . . . 1961. No. 74079

Neave, F. Pacific salmon stocks . . . 1961. No. 74242

St. Amand, P. . . . Pacific Basin rotating? 1961. No. 75337

Thompson, W.C. Continental shelves. 1961. No. 76123

Yeŭsman, P.S., & *others.* On research of the earth's crust . . . 1961. No. 76367

Warren, P.S., & C.R. Stelck. Pacific floodings Rocky Mts. 1961. No. 76490

Wheeler, J.O. Mesozoic tectonics . . . Cordillera. 1961. No. 76540

74619. PACIFIC SCIENCE CONGRESS. 10th, *Honolulu, Hawaii,* 1961. Abstracts of symposium papers. Honolulu, Pacific Science Association, 1961. 487 p.

Contains abstracts, averaging six-eight paragraphs, of papers presented to various symposia on the Pacific Basin. About sixty of them, in ten fields of science, concern the North Pacific area, viz:

Anthropology, social sciences

Chard, C.S. Maritime culture in prehistoric northeast Asia, p.76.

Botany

Savile, D.B.O. Evolution of Saxifragaceae in the North Pacific region, p.135.

Koreneva, E.V. Distribution of spores and pollen of terrestrial plants in bottom sediments of the Pacific Ocean, p. 145-46.

Zoology and entomology

Ball, G.E. The ground beetle, subgenus *Cryobius,* and the Bering land bridge, p.216.

Gilʹarov, M.S. Resemblance of the biocoenoses of Eastern Europe and North America as a sign of recent biogeographic connections between the Palearctic and the Nearctic, p.217-18.

Holland, G.P. Faunal affinities of the fleas of Alaska, with an annotated list of species, p.218.

Hultén, E. The distributional conditions of the flora of Beringia, p.218-19.

Lindroth, C.H. The Aleutian Islands as a route for dispersal across the North Pacific, p.219-20.

Linsley, E.G. Bering Arc relationships of Cerambycidae and their host plants, p.220.

Portenko, L.A. The problem of the Bering landbridge from the zoogeographical point of view, p.221-22.

Rausch, R.L. Notes on the distribution of Holarctic Recent mammals, p.222.

Shtegman, B.K. An ornithogeographical elucidation of the problem of the Beringian continental connection, p.223.

Townes, H. Evidence among the Nearctic Ichneumonidae for a Bering migration route, p. 223-24.

Forest biology

Scott, R.F. Animals and Alaskan forests: a challenge in ecology, p.251.

Geography

Bertrand, K.J. American (United States) exploration, 1783-1899, p.285.

Friis, H.R. Summary of symposium on the development of the Pacific map, p.286.

Randall, R.J., *Jr.*, American (United States) exploration, 1900-1960, p.288-89 (Also pub. in full, separately, and abstracted in this Bibliography under author's name.)

Powers, H.A. The emerged shoreline at two to three meters in the Aleutian Islands, p.294.

Karlstrom, T.N.V. Pleistocene and post-Pleistocene climatic variations in Alaska and western Canada, p.300.

Mackay, J.R. Regime and flooding behavior of the Mackenzie River, Northwest Territories, Canada, p.304.

Uda, M. Pulsation theory of the changing pattern in the North Pacific circulation, p.345-46.

Lavrent'ev, M.A., *and* E.F. Savarenskiĭ. On the results of investigations of tsunamis in the USSR, p.349-50.

Solid earth sciences

Balakina, L.M. The character of stresses and ruptures in earthquake foci of the Pacific seismic zone, p.354.

Davidova, N.I., *and others*. Structure of the earth's crust in the transition zone from the northwestern part of the (Pacific to the) Asiatic continent, p.356.

Gorʹachev, A.V. Geotectonic conditions in the Kurile-Kamchatka zone as an example of structural reformation of the earth's crust in the northwestern part of the Pacific Basin, p.359-60.

Kosminskaĭa, I.P., *and others*. Specific features of the sedimentary layer in the Okhotsk Sea and in the adjacent parts of the Pacific, p.360-61.

Magnitskiĭ, V.A. Geophysical data and the problem of the origin of the Pacific Ocean, p. 361-62.

Petrushevskiĭ, B.A. Seismic and geologic conditions of the northwestern outlying area of the Pacific Basin, p.362-63.

Press, F. Crustal and upper mantle structure of the eastern Pacific Ocean and adjacent continent, p.363.

Rudich, E.M. Relations between deep-focus earthquakes in the eastern margin of Asia and the large structure of the earth's crust, p.363-64.

Bruevich, S.F., *and* E.D. Zaĭtseva. Some chemical features of sediments and interstitial solutions of the northwest Pacific Ocean, p.367.

Cooper, S.C., *and* J.S. Creager. Benthic foraminifera of the Chukchi Sea, p.368-69.

Creager, J.S., *and* D.A. McManus. Marine geology of the continental shelf north of Bering Strait, p.369.

Enbysk, B.J. Foraminifera from northeast Pacific cores, p.369-70.

Jordan, G.F. Major redistribution of sediments in certain bays and inlets of Alaska, p.374.

Zhuze, A.P. Stratigraphy of sediments and paleogeographical conditions of sediment accumulation in the North Pacific Ocean, p.374-75.

McManus, D.A., *and* J.S. Creager. Offshore current control of sedimentary environments associated with large underwater shoals, p.377-78.

Medvedev, V.S. Peculiarities of bench formation on tidal sea shores, p.378.

Moore, D.G. Acoustic reflection reconnaissance of eastern Bering and Chukchi seas, p.380-81.

Romankevich, E.A. Organic substance in the surface layer of bottom sediments in the western Pacific Ocean, p.384-85.

Sysoev, N.N., *and others*. On the relations between the thickness of sediments and the structures in the northwestern Pacific Ocean, p.387.

Udintsev, G.B. Evolutionary features in the structure of the Pacific Ocean floor expressed in the submarine relief, p.388-89.

Coats, R.R. Magma type and crustal structure in the Aleutian arc. p.390-91.

Gorshkov, G.S. Petrochemical features of volcanism in relation to types of the earth's crust, p.391-92.

Nutrition

Scott, E.M. Diet of Eskimos and its relation to anemia, p.400.

Public health and medical sciences

Laird, M. Some factors in avian epizootics, p.418.

Lewis, M., *and* B. Chown. Genetic drift in blood group frequencies in the Alaska Peninsula, p. 421.

Chown, B., *and* M. Lewis. Blood groups of the Eskimos, p.436.

Pitelka, F.A. Regulatory mechanisms in the cycle of the brown lemming near Barrow, Alaska, p. 441-42.

Schantz, E.J. Studies on the paralytic poisons found in mussels and clams along the North American Pacific coast, p.450-51. (DGS.)

PACIFIC SCIENCE CONGRESS, 10th, *Honolulu*, 1961, *see also* Randall, R.H. United States surveys . . . 1961. No. 75035

74620. PADGET, PETER, *and others*. Geochemical prospecting by the Geological Survey of Norway,

1954-1955. *(In:* International Geological Congress. 20th, *Mexico City,* 1956. Symposium de exploracion geoquimica, t.3, *pub.* 1960, p.673-82, maps, profile.) 5 refs. *Other authors:* B. Bruun, T. Gjelsvik, P. Holmsen, Chr. Oftedahl, S. Skjesehk, *and* F.M. Vokes.

Outlines program of field mapping in the Precambrian of Finnmarksvidda, about 69° N., and in the Caledonides near Birtavarre, 50 mi. east-southeast of Tromsø. Equipment, working methods, and field techniques are mentioned. (DGS.)

74621. PADHI, R. K., *and others.* Some observations on deep hypothermia using extracorporeal circulation. (Angiology, Jan. 1961. v. 12, no.1, p.12-16, illus., table.) 6 refs. *Other authors:* E.S. Ko, R.L.G. Rainbow, *and* R.B. Lynn.

Reports a study of dogs made hypothermic to 15-9° C. No significant alterations in electrolytes or gases of the blood were noted. O_2-consumption was about 6% of the basal needs at 10° C. due to the physically dissolved plasma oxygen. (DLC.)

74622. PADNOS, MORTON. Cytology of cold-induced transformation of octogenic reproductive cysts to resting cysts in *Colpoda maupasi.* (Journal of protozoology, Feb. 1962. v. 9, no.1, p.13-20, illus.) 19 refs.

Description of conditions in the cold, and of the transformation which took place when these protozoans were transferred to an optimal temperature after being exposed for at least 36 hrs. to 5° C. This transformation suggests that cold-exposure during a critical period may alter reproductive protein synthesis in favor of cyst protein synthesis. (DLC.)

74623. PAGHIS, I. On the selection of solar-flare radio-burst events that are associated with polar-cap absorption. (Journal of geophysical research, Oct. 1962. v. 67, no.11, p.4503-4504, tables.) 5 refs.

Compiles data from recently published papers on ionospheric polar-cap absorption (PCA) of high and very high frequencies of radiowaves, and attempts to clarify whether or not PCA is associated with enhanced solar radiative emissions. The data are found to be insufficient for answering the problem definitely. (DLC.)

PAI, G. L., *see* Sharabhai, V.A., & G.L. Pai. Cosmic ray effects, PCA events. 1962. No. 75534

PAIGE, RUSSELL A., 1929- , *see* Williams, J.R., & *others.* Geol. . . . Fairbanks D-1 quad. 1959. No. 76564

PAKHOMOV, A. S., *see* Sadovskiĭ, G.I., & *others.* Sovershenstvovanie . . . 1961. No. 75317

74624. PAKHORUKOV, V. I. O gidrologicheskikh usloviiakh v raĭone zimovki norvezhskoĭ sel'di v 1958 g. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten' 1959, no.2 (10), p.12-14, illus., map.) Text in Russian. **Title tr.:** Hydrological conditions in the wintering area of Norway herring in 1958.

Describes temperature conditions east, northeast and southeast of Iceland and the preferred temperature areas where the fish winter. Comparisons with 1957 are made. (DLC.)

PAKHORUKOV, V.I., *see also* Alekseev, A.P., & *others.* International investigations . . . 1961. No. 69692

74625. PAKHTUSOVA, N. A. Novye dannye o vozraste peschanoĭ iurskoĭ tolshchi v verkhnem techenii reki Pinegi i na Pinezhsko-Vashskom vodorazdele. (Akademiia nauk SSSR. Doklady, June 1, 1962. t. 144, no.4, p.886-89, map.) 6 refs. Text in Russian. **Title tr.:** New data on the age of the Jurassic sandy stratum on the upper reaches of the Pinega River and the Pinega-Vashka watershed.

Reviews the distribution, composition and paleontologic characteristics of this predominantly sand stratum. On its age there is considerable difference of opinion; and the various views are evaluated. From own determination of the spore-pollen complex (described) author considers Upper Jurassic (Callovian) most probable. (DLC.)

74626. PAKHTUSOVA, N. A., *and* **M. A. SHISHKIN.** Novye materialy dlia ustanovleniia granitsy permi i triasa v basseĭne Severnoĭ Dviny. (Akademiia nauk SSSR. Doklady, Mar. 1, 1962. t. 143, no.1, p.194-97, cross-section.) 15 refs. Text in Russian. **Title tr.:** New materials for establishing a boundary between the Permian and the Triassic in the Severnaya Dvina basin.

Describes sections of these deposits as studied in 1959-1960, and reports the fauna identified, stratigraphic adjustments are proposed; the Permogor'ye series previously considered Lower Triassic is found to belong to the Triassic and Permian. (DLC.)

74627. PALEEV, N. R. Vliianie kharaktera truda na arterial'noe davlenie cheloveka v Arktike i Antarktike. (Klinicheskaia meditsina, May 1961. t. 39, no.5, p.22-27.) 27 refs. Text in Russian. Summary in English. **Title tr.:** The influence of the nature of work on the arterial pressure of man in the Arctic and Antarctic.

In healthy, normal males, author observed a drop in blood pressure by 15-25%. It was larger in a person with indoor occupations. Only a few subjects showed no change in pressure. (DNLM.)

74628. PALENICHKO, Z. G. Resursy Belogo moria i vnutrennikh vodoemov Karelii. (Akademiia nauk SSSR. Vestnik, Mar. 1961. god 31, no.3, p. 124-25.) Text in Russian. **Title tr.:** Resources of the White Sea and internal water reservoirs in Karelia.

Reports an interdepartmental conference organized by the Karelian Branch of the Academy in Petrozavodsk, Dec. 8-10, 1960: 33 papers were presented on conservation and management of the biological resources of this sea and of the lakes and rivers. Depletion of the herring stock and other fish, need to acclimatize the pink salmon and expand the Atlantic fishery were stressed; algal and invertebrate studies also were outlined. (DLC.)

74629. PALMER, JOHN C., *and* **A. D. HUNT.** The promise of the Arctic Islands. (North, Mar.-Apr. 1961. v. 8, no.2, p.14-16, illus.)

Describes the search since 1957, for oil in northern Canada, and its spread to the Arctic Islands. In June 1960, permits were issued for exploration of approx. 39 million acres in the Parry-Queen Elizabeth Islands. Problems, mostly trans-

portation, of oil companies in the area are noted. (DLC.)

PALMORK, K., *see* Møller, D. *& others*. Loddeundersøkelser . . . 1961. No. 74069

74630. PALOMÄKI, MAURI. Post war pioneering in Finland with special reference to the role of settlement areas. (Fennia, 1960. 84: *Three faces of Finland* . . . pt. 3, Regional geography of the Finnish Lake plateau and of eastern Finland, p.43-68, 6 text maps, 4 tables, 2 graphs.) 28 refs. Summary in French. See No. 68348 for pt. 2.

Discusses resettlement problems of the half million Finns who moved from territory ceded to the USSR, and of others eligible for resettlement under the Land Acquisition Act of 1945. The holdings thus acquired vary in size according to the purpose and primary occupation of the settler; some are isolated units, others form groups of holdings within established complexes, or entirely new settlement areas. The last are most significant in transforming the landscape. In the Peräpohjola and Lappi agricultural district, which includes arctic Finland, these settlement areas are the largest in the country and the holdings greater than those of any other district though fewer in number. The arctic settlements are largely concentrated in Salla and Kuusamo communes where population formerly east of the present boundary was resettled west of it in the remaining Finnish parts of these communes. Availability of reclaimable land was an important factor in the national distribution of resettlement. (DLC.)

PALOSUO, ERKKI, *see* IUGG . . . Snow & Ice Comm. 1961. No. 72396

74631. PAMNANI, M. B., *and* **M. V. S. ACHAR.** Effects of noradrenaline on blood pressure in hypothermia. (Indian journal of medical sciences, Dec. 1960. v. 14, no.12, p.937-39, illus.) 4 refs.

In normothermic dogs, noradrenaline always produces a rise in blood pressure. In hypothermic animals, the rise with the same dose was smaller, and at 20° C. was negligible, none, or (in two out of eight animals) negative. (DNLM.)

74632. PANASENKO, G. D. Struktura zemnoĭ kory Kol'skogo poluostrova po seĭsmicheskim dannym. *(In:* International Association for Quaternary Research. Neotektonika SSSR . . . 1961, p.133-37, tables.) 4 refs. Text in Russian. **Title tr.:** Structure of the earth's crust on the Kola Peninsula according to seismic data.

Compares geologic and geomorphic data with earthquake data and identifies three zones of fractures. These, briefly described, are considered to have been caused by recent tectonic movements. With establishment of the Apatity seismic station in 1956, earthquake surface-wave studies have been carried out and the thickness of the earth's crust determined for certain areas, i.e. 49.1 km. north of the Khibiny massif, 51.5 km. in the Lovozero massif region and 54.3 km. southeast of Kandalaksha. These data are reported and interpreted. Thickness of the granite layer also is given. (DLC.)

PANEGOOSHO, MARY, *see* Canada. Northern welfare '62. 1962. No. 70539

74633. PANFILOV, D. V., *and others*. Eshche o sopriāzhennom rasprostranenii shmeleĭ i bobovykh v Arktike. (Moskovskoe obshchestvo ispytateleĭ prirody. Otdel biologicheskiĭ, Biūlleten' 1962. t.67, no.3, p.130-31.) 3 refs. Text in Russian. *Other authors:* V.F. Shamurin *and* B.A. Īŭrt͡sv. **Title tr.:** More on conjugate distribution of bumblebees and legumes in the Arctic.

Refers to No. 67292: correcting a statement as to the absence of bumblebees from Ellesmere Island; also illustrations no. 1, 3, 4. (DLC.)

74634. PANKOV, I. P. Obzor preniĭ plenarnogo zasedaniīa. *(In:* Nauchnaīa konferent͡siīa po istorii Sibiri i Dal'nego Vostoka. Voprosy istorii . . . *pub.* 1961, p.61-64.) Text in Russian. **Title tr.:** Review of discussions at the plenary meeting.

Summarizes the content of the main addresses offered in the discussion period of the Conference. Two are of northern interest: Z.V. Gogolev, director of the Yakutsk Institute of Language, Literature and History, sketched current and planned studies on Yakut history, archeology, ethnography and ethnogenesis, also prehistoric contacts between northeast Siberia and America. R.V. Vasil'evskiĭ of the Magadan Local History Museum, asked for increased research on the history and colonization of Magadan Province, ethnogenesis of Chukchis and Eskimos, etc. (DLC.)

74635. PANOV, V. V., *and* **A. O. SHPAĬKHER.** Novye zadachi okeanograficheskikh rabot v arkticheskikh moriākh. (Problemy Arktiki i Antarktiki. Sbornik stateĭ, 1962. vyp.10, p.11-15, maps.) 6 refs. Text in Russian. **Title tr.:** New tasks of oceanographic work in the arctic seas.

Outlines development of the Soviet system of hydrological observations and means for its further modernization. The Arctic and Antarctic Institute's use of the Ural-2 computer (5-6,000 computations/min.) for forecasting hydrological conditions, is noted. Conventional research vessels should be replaced by ice-reinforced ships. Systematic collection of hydrological data should be made in the spring. Hydrological vessels working in the Kara Sea in summer should be increased in number, and the work in the Chukchi Sea should be extended to its western areas. Several weather ships should be stationed along the Northern Sea Route during the navigation season. An expedition to study the polar hydrological front is proposed. Systematic installation of automatic radio-weather buoys is recommended. A device for sea-water temperature determination from ice-reconnaissance aircraft should be developed and put into service, as should devices for shipboard observation of current, water temperature, and salinity pulsations. (DLC.)

74636. PANOV, V. V. Opyt opredeleniīa koėffit͡sienta gorizontal'nogo turbulentnogo obmena v Karskom more. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t. 210, Metodika okeanologicheskikh issledovaniĭ, Sbornik stateĭ vyp. 1, p. 185-92, tables, map.) 10 refs. Text in Russian. **Title tr.:** An attempt to determine the coefficient of horizontal turbulent exchange in the Kara Sea.

Discusses the dependence of the coefficient of horizontal macro-exchange of heat in the Kara

Sea on the density of water, ρ, the component of the mixing length of the molar mass of the liquid (sea water), ξ_j and the component of the pulsation of the velocity vector U'_k. By applying the concept of the tensor theory of microturbulence to the proposed semi-empirical method based on the deviation of the sea current components from their mean diurnal values, the values of coefficients, $K_\varphi = \rho \xi_\varphi u'_\varphi$, and $K = \rho \xi_\lambda u'_\lambda$, the horizontal turbulent exchange in the direction of the meridian and the parallel respectively are calculated. The value of the coefficient K, in the Kara Sea was found to be equal to $0.02L^{4/3}$ or to $2 \times 10^6 - 17 \times 10^6$ cm.^{2}/sec. where L is the linear scale of the current. (CaMAI.)

PANOV, V. V., *see also* Gordienko, P.A., & V.V. Panov. V sektsii . . . 1961. No. 71768

74637. PANOVA, L. A. Palinologicheskaia kharakteristika chetvertichnykh otlozhenii severnoi poloviny Zapadno-Sibirskoi nizmennosti; tezisy. (*In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t. 3, p.60-61.) Text in Russian. **Title tr.:** Palynological characteristics of Quaternary deposits in the northern half of the West Siberian plain; summary.

Reports briefly on the Lower, Middle, and Upper Quaternary deposits of the Khanty-Mansiysk and other areas. (DLC.)

74638. PANTELEEV, P. A. K kolichestvennoi kharakteristike fauny ptits iuzhnogo Iamala. (Tyumen. Tiumenskii oblastnoi kraevedcheskii muzei. Ezhegodnik 1959 *pub.* 1960. vyp. 1, p.117-23, tables.) 13 refs. Text in Russian. **Title tr.:** Quantitative aspect of the avifauna of southern Yamal.

Reports on field work during July 11-Aug. 12, 1951 in the valley of the Shchuch'ya River, a tributary of the lower Ob. The physical conditions are described, the swamps and lakes, and their phytocenoses. The distribution in this area of 54 species of birds noted, is described, both in absolute numbers and in percent of the total. (DLC.)

74639. PANTELIĆ, D., *and others*. ECG changes during post-haemorrhagic hypotension in precooled dogs. (Quarterly journal of experimental physiology, Apr. 1960. v. 45, no.2, p.229-34, illus., table.) 20 refs. *Other authors:* E. Vajs *and* R. Debijadji.

The majority of dogs bled during hypothermia of 32-30 or 28-26° C. died some hours later, but 87.5% survived if administered 6% dextran in the amount of the blood lost. ECG changes were similar to those of normothermic animals. (DNLM.)

74640. PANTELIĆ, D., *and others*. ECG changes in dogs cooled after haemorrhage. (Quarterly journal of experimental physiology, Oct. 1960. v. 45, no.4, p.368-71, table.) 15 refs. *Other authors:* E. Vajs, V. Magazinović, *and* R. Debijadji.

Reports on survival of dogs cooled to 21 or 28° C., left at room temperature, or rewarmed. ECG changes were similar to those in normothermic controls after hemorrhage. (DNLM.)

74641. PANTENBURG, VITALIS, 1901– . Die Erschliessung des kanadischen Nordens. (Polarforschung, Bd. 4, 1959 *pub.* May 1961. Jahrg. 29, Heft 1-2, p.170-72.) Text in German. **Title tr.:** Opening up the Canadian North.

Sketches the sea, air, road, and rail transportation networks; notes special-purpose oversnow vehicles in use. (CaMAI.)

74642. PANTENBURG, VITALIS, 1901– . Lapland reindeer round-up. (Beaver, Winter 1962. outfit 293, p.26-29, illus.)

Describes, with photographs, an annual gathering of Scandinavian Lapps to make their herd counts. (DI.)

74643. PANTZER, JOHN G., *and* **H. B. SHUMACKER, *Jr.*** Coronary sinus blood flow in hypothermia. (Journal of thoracic and cardiovascular surgery, July 1961. v. 42, no.1, p.79-83, table.) 10 refs.

Describes a method for direct measuring of total coronary sinus circulation in dogs. Animals cooled by this method to ca 30° C. showed a coronary blood flow reduced by 50% from the normal. (DNLM.)

74644. PANZARINI, RODOLFO N. Nomenclatura del hielo en el mar. Buenos Aires, Instituto Antártico Argentino, 1960. 58 l. tables, diagrs. Text in Spanish. **Title tr.:** Nomenclature of ice at sea.

Contains the classification system; definitions of ice terms; English, French, German, and Russian equivalents (WMO); ice symbols, with a sample map. (SPRI.)

74645. PAPROTH, HANS JOACHIM RÜDIGER. Das Bärenfest der Ketó in Nordsibirien in Zusammenhang gebracht mit den Bärenzeremonien und Bärenfesten anderer Völker der nördlichen Hemisphäre. (Anthropos, 1962. v. 57, fasc. 1-2, p.55-88, illus., map.) Approx. 120 refs. Text in German. **Title tr.:** The bear festival of the Kets in north Siberia correlated with the bear ceremonies and bear festivals of other peoples of the Northern Hemisphere.

Study of this cult of the Ket Yeniseians, a small (751 in 1926), linguistically isolated group, possibly of Paleosiberian origin with secondary Mongoloid admixture. Worship of the bear as ancestor (transmutation of souls) and netherworld deity, rites connected with its hunt and cult are described: pacification of its spirit, tabus, feasts and dances, burial of its remains, adornment of the shaman dress with iron replicas of bear bones, etc. Comparisons are drawn with bear rituals of Lapps, Samoyeds, Voguls, Ostyaks, Yakuts, Gilyaks, Kamchadals, Koryaks, Chukchis, and Eskimos. Archaic features in Ket bear ceremonies are discussed. An Indo-Chinese linguistic affinity of Ket is considered possible. (DSI.)

74646. PAQUET, RAYMOND. Nickel in the province of Quebec. Quebec, 1961. 23 p. fold. map. (Quebec. Dept. of Natural Resources. Mineral Deposits Branch. Preliminary report no. 461.) Refs.

Describes and maps at scale 1 in.: 100 mi. the more important occurrences, including three in northern areas: the Bloom Lake region 52°50′ N. 67°20′ W., the Cape Smith-Wakeham Bay belt 61°00′45′ N. 72°-78° W., and the Gérido Lake region 58° N. 69°45′ W. Type of mineralization, grade of the ores, and literature references are given for each area. (DGS.)

74647. PARAKETSOV, IGOR' ALEKSANDROVICH, 1929– , *and* **D. A. SHUBNIKOV.** Gibrid mezhdu

dvumîa vidami kambal, *Platessa quadrituberculata* Pall. i *Pleuronectes stellatus* Pall., iz Bristol'skogo zaliva. (Voprosy ikhtiologii, 1961. t. 1, vyp. 3 (20), p.395-98, illus., tables.) 8 refs. Text in Russian. **Title tr.**: A cross between two species of plaice, *Platessa quadrituberculata* Pall. and *Pleuronectes stellatus* Pall. from the Bristol Bay.

Description of a hybrid, female with roe in stage III of development. Biometric details, meristematic characteristics, structure of scales, etc. are noted. (DLC.)

PARAKETSOV, IGOR' ALEKSANDROVICH, 1929– , *see also* Moiseev, P.A., & I.A. Paraketsov. . . . Scorpaenidae. 1961. No. 74077

74648. PARENTELA, ALDO, *and others.* Influenza dell' ipotermia sulla funzionalità renale. (Annali italiani di chirurgia, 1961. v. 38, fasc. 6, p.511-31, illus., tables.) 29 refs. Text in Italian. *Other authors:* F. Caramia, C. Marchegiani, *and* S. Messinetti. **Title tr.**: The influence of hypothermia upon renal function.

Reviews earlier studies, then describes changes in the histology and some enzymatic activities in the kidney of rats cooled to about 24° C. for 2-6 hrs. Congestion of vasal or glomerular areas or empty blood vessels; degeneration of the tubular epithelium and presence of protoplasmic material in the Bowman's capsules were usually noted. A significant reduction of phosphatase activity was indicated in rats after long exposure. (DNLM.)

74649. PARFENOV, G. M. Avtomobili na zimneĭ vyvozke lesa. (Lesnaîa promyshlennost', Dec. 1961. god 39, no.12, p.18-20, illus., diagr.) Text in Russian. **Title tr.**: Automobile timber transportation in winter.

Logs can now be hauled to advantage in winter by building ice roads, but the facility is not fully utilized because the trailers available are too small (15-25 $m.^3$ capacity) for trucks which can haul 50-110 $m.^3$ A new type of sled trailer, developed by the Ural Forestry Institute and Tyumen'les Combine with 40 $m.^3$ capacity is described, and its use on ice roads discussed. (DLC.)

PARFENOV, L. M., *see* Kosygin, IU. A. & *others.* Osnovnye strukturnye èlementy . . . 1962. No. 73023

PARHOFER, R., *see*

Kessler, H., & *others.* Vergleichende thermoelektrische Messungen . . . 1959. No. 72752

Pichlmaier, H., & *others.* Experimentelle Untersuchungen . . . Unterkühlung. 1961. No. 74790

74650. PARIN, NIKOLAĬ VASIL'EVICH, 1932– . Raspredelenie glubokovodnykh ryb verkhnego sloîa batipelagiali v subarkticheskikh vodakh severnoĭ chasti Tikhogo okeana. (Akademiîa nauk SSSR. Institut okeanologii. Trudy 1961. t. 45, p.259-78, illus., tables, maps.) 46 refs. Text in Russian. Summary in English. **Title tr.**: Distribution of deep-sea fishes in the upper bathypelagic layer of subarctic waters of the northern part of the Pacific Ocean.

Reports a study based on the considerable records of Institute and on the 29th, winter 1958-59, run of the *Vitîaz'*, including the subsurface and intermediate waters. Their fish population consists of boreal forms whose range coincides with the boundaries of the subarctic water structure. In the northwesternmost section of the area, the boreal fauna is somewhat impoverished. In the northern area generally, it is characterized by qualitative poverty, isolation, homogeneity, and considerable difference between the northeast and northwest sections. (DLC.)

74651. PARISET, ERNEST, *and* **R. HAUSSER.** Formation and evolution of ice covers on rivers. (Engineering Institute of Canada. Transactions, 1961. v. 5, no.1, p.41-49, diagrs., graphs.) 32 refs.

Presents theories for predicting conditions of ice formation and evolution. Ice cover thickness during its progression can be determined by the fact that its upstream edge is not submerged (in narrow rivers); the thickness in wide rivers is governed by ice thrust from the progressing cover. Date of progression of the cover is governed by its thickness, and the difference between incoming ice discharge and that carried downstream under the cover. Progression can be stopped when incoming ice discharge is not large enough to overcome the discharge of ice carried under the cover or when velocity of flow is too high, so that non-submersion conditions cannot be met (narrow rivers), or the cover thickness cannot support the ice thrust (wide rivers).–From authors' abstract. (DLC.)

PARKER, JOHN, *see* National Northern Development Conference. 1961. No. 74224

PARKER, P. B., *see* Canada. Settlement handbook. 1962. No. 70545

74652. PARKER, ROBERT R. Estimations of ocean mortality rates for Pacific salmon, *Oncorhynchus.* (Canada. Fisheries Research Board. Journal, July 1962. v.19, no.4, p.561-89, illus. tables.) 27 refs.

Mathematical study of populations from a series of fresh-water bodies, including such in Alaska and Kamchatka. It is concluded that ocean mortality is relatively constant and of the magnitude q = 0.32, S = 73% annually. Factors in coastal mortality are also suggested. (DLC.)

74653. PARKER, SEYMOUR. Eskimo psychopathology in the context of Eskimo personality and culture. (American anthropologist, Feb. 1962. v. 64, no.1. pt.1, p.76-96.) 73 refs.

Discusses socio-cultural and personality factors associated with psychopathological symptoms. Cooperative social organization of the Eskimos, permissive early childhood, dependence on community in times of crisis, institutionalized religious practices, etc. are considered to be mainly responsible for Eskimo tendency toward hysterical behavior. This pattern is contrasted with the emphasis on individualism in Ojibwa society often leading to loss of self-esteem and hostility toward others. (DSI.)

74654. PARKER, SEYMOUR. Motives in Eskimo and Ojibwa mythology. (Ethnology, Oct. 1962. v. 1, no.4, p.516-23, table.) 22 refs.

Psychological study of 29 Ojibwa and a similar number of Eskimo myths, the latter collected by M. Lantis from Nunivak and by K. Rasmussen from the Copper Eskimos (No. 30332, 14210). The myths

were analyzed by R.J. Kleiner with a modified T.A.T. (Thematic Apperception Test) method scoring the strength of three motives: achievement, power, and affiliation, to determine whether the myths reflect conscious motives or project latent, unconscious ones. Results indicated they reflect consciously held motives and values. (DSI.)

PARKER, W. L., *see* Wilt, J.C., & *others*. Sendai virus antibodies. 1961. No. 76584

74655. PARKHANOV, M. N. K stratigrafii drevnikh tolshch Zapadnogo sklona Polĭarnogo Urala. (Materialy po geologii i poleznym iskopaemym Severo-Vostoka Evropeĭskoĭ chasti SSSR. Sbornik statei 1962. vyp. 2, p.7-16, table, map.) 10 refs. Text in Russian. **Title tr.:** On the stratigraphy of the old strata in the western slope of the Polar Ural.

Reports his geologic mapping in 1948-1949. A stratigraphic division of pre-Ordovician, Ordovician and Silurian deposits is presented, together with different divisions offered by others. Stratigraphic units of the Manita-Nyrd and Usa massifs are described, noting their composition and distribution. Conditions of bedding of the old strata are characterized. (DLC.)

74656. PARKINSON, L. J. One field, one giant, the story of Swanson River. (Oil and gas journal, Mar. 26, 1962. v. 60, no.13, p.180-83, illus., maps, graphs.)

Traces development of this major Alaskan oil field, currently producing 27,250 bbl./day. Four shut-in gas wells have also been completed. The oil and gas-bearing horizons lie within the Tertiary Kenai formation which is 12,000 ft. thick, and subdivided into three units. Development drilling methods are noted; a typical electric log is shown. A structural contour map, also a longitudinal and a transverse structure section are included. (DLC.)

PARKINSON, L. J., *see also* Alaskan Science Conference 1960. 1961. No. 69643

74657. PARKINSON, R. N. Operation Overthrust. (*In:* Royal Society of Canada, The tectonics . . . 1962, p.90-101, maps.) Ref.

Outlines procedures and summarizes results of this cooperative project sponsored by Hunting Survey Corp. Ltd. and 14 other Canadian and American mining-exploration companies 1956-1959. It covers a 370,000 sq. mi. area extending from Lake Winnipeg to Lake Mistassini (51° N. 73° 30′ W.); the first phase was compilation of a base map from aerial photography on 1 in.: 1 mi. scale; the second, compilation of geological data from reports, maps, and mining records; third and final phase was the compilation of geological data from stereoscopic examination of about 15,000 aerial photographs. Some 500 mosaic map-sheets were involved. Structural data were transferred to translucent overlays; then three scale reductions and editings, down to 1 in.: 8 mi., brought out several major tectonic features, including the northeast-trending Eastman (51° N.) and Chibougamau (50° N.) fault zones. (DGS.)

PARKS, JOHN R., *see* Mick, A.H., & H.P. Gazaway. Alaska farm facts . . . 1961. No. 73972

74658. PARKS, THURNE. A report on the geology of the Nastapoka group of sediments Hudson Bay, with its contained lead and zinc-bearing strata. Toronto, 1949. 85 p., illus., diagrs., maps incl. 4 fold. 11 refs. B.A. Sc. thesis, Dept. of Geological Sciences, Univ. of Toronto.

Reports investigation of Precambrian and sedimentary and volcanic rocks on the east Hudson Bay coast opposite the Belcher Islands, while employed by Gulf Lead Mines Ltd. in summers 1947 and 1948. The company's 285 sq. mi. concession extends 60 mi. along the coast from 10 mi. north of the Richmond Gulf entrance to opposite Schooner opening on Manitounuk Sound. The general geology of this sediment-filled basin with basic flows and sills is described. The stratigraphy and petrography of the Nastapoka group is treated in detail, each layer described in descending order: basaltic flows and sills; a formation of sediments of wide lateral extent of variable lithography; concretionary, cherty limestones and dolomites with mineralized beds; unconformity; coarse arkose grading above into sandstones and argillites (Richmond Group). The probable geologic structure, fracture pattern, and cross-folding are described for the area. Economic possibilities are briefly discussed. Appended are 21 petrographic reports on thin-section examinations. (CaTU.)

74659. PARMUZIN, IŬ. P. Osobennosti karstovogo protsessa v usloviĭakh mnogoletneĭ merzloty gruntov. (*In:* Nauchnoe soveshchanie po izucheniĭu karsta. Obshchie voprosy . . . 1962, p.152-56.) Text in Russian. **Title tr.:** Features of the karst process in permafrost conditions.

Reviews the factors which inhibit and those which favor karst development in permafrost regions of the Soviet Union. Small amount of yearly precipitation, limited circulation of ground waters, and energetic weathering retard its development. Positive factors, such as the capacity of frozen ground to concentrate moisture around itself, predominance of physical weathering, frost-cracking, intensive denudation processes, and others also are briefly summarized. Soluble rocks appear on uplands in the Northern Ural, Siberian plateau, Byrranga Mts. and other areas where formation of karsts is common. It leads to degradation of permafrost. (DLC.)

74660. PARMUZIN, IŬ. P. Severnye redkoles'ia Sibiri kak gruppa landshaftnykh zon. (Moskva. Universitet. Vestnik, ser. 5, geografiia, May-June 1961, no.3, p.22-30, illus., map.) Text in Russian. **Title tr.:** The northern sparse forest of Siberia as group of landscape zones.

Describes climate, permafrost processes, development of polygonal soils, vegetation cover, and other features of thin and island forests, from the tundra south to 65°-59° N. The landscape-forming processes of these forests are evaluated as distinct in character. A map of such forests in Siberia and Kamchatka is presented, with suggestion that they be considered as an individual group of landscape zones. (DLC.)

PARMUZIN, IŬ. P., *see also* Amurskiĭ, G.I., & IŬ. P. Parmuzin. Sledy drevneĭ gidroseti . . . 1961. No. 69748

74661. PAROVSHCHIKOV, VIKTOR IAKOVLEVICH, 1912– , *and* G. N. SEVAST'IANOV.

Materialy po rasprostraneniiu i biologii sov Arkhangel'skoĭ oblasti. (Ornitologiia, 1960. vyp. 3, p.122-30, tables, maps.) 5 refs. Text in Russian. **Title tr.**: Materials on the distribution and biology of owls in Arkhangel'sk Province.

Reports results of own long-time observations. Distribution and northern limits of six species are detailed first. Habitats, population size, frequency in different forests, food, migrations, and reproduction are subsequently dealt with. (DLC.)

74662. PAROVSHCHIKOV, VIKTOR IAKOVLEVICH, 1912– .O pitanii lesnoĭ kunitsy pod Arkhangel'skom. (Zoologicheskiĭ zhurnal, July 1961. t. 40, vyp. 7, p.1112-15, table.) Ref. Text in Russian. Summary in English. **Title tr.**: Food of the forest marten near Arkhangel'sk.

Reports on examinations of over 200 stomachs and 400 excrements and food remnants of *Martes martes borealis* B. Kuznetz. The food consisted mainly of small rodents, birds, insects, and in the summer also berries. (DLC.)

PARRISH, DAVID W., *Jr,*. *see* Alaska. Statutes 1962 . . . 1962. No. 69625

PARTHASARATHY, R., *see* Little, C.G., *& others.* Observ. 2.89 Mc./s. equivalent antenna temp. . .. 1962. No. 73541

74663. PARTRIDGE, BEN. The white shelf: a study of arctic ice jurisdiction. (U.S. Naval Institute. Proceedings, Sept. 1961. v. 87, no.9, p.50-57, illus.)

Advocates application of the sector principle to a partition of the arctic ice pack among countries bordering on the Arctic Ocean. Recognition of the principle should be limited to the horizontal strata of the permanent pack, i.e. those parts of the Ocean which are not navigable by surface vessels, hence do not belong in the "high seas" category. The sea below the pack, the air space above, and adjacent open (i.e. navigable) waters should continue to be considered *res communis*. (DLC.)

PARUKHIN, A. M., *see* Mamaev, IU. L. *& others.* Gel'mintofauna . . . 1959. No. 73776

PASECHNIK, I. P., *see* Monakhov, F.I., *& others.* Seismicheskie . . . nabliudeniia . . . 1959. No. 74097

PASETSKIĬ, VASILIĬ MIKHAĬLOVICH, *see* Burkhanov, V.F. Na lediianom ostrove. 1962. No. 70461

74664. PASIUTIN, F. B. IAkutiia v khudozhestvennykh proizvedeniiakh V.G. Korolenko. (Yakutsk. Universitet. Uchenye zapiski 1960, vyp. 7, seriia obshchestvennykh nauk, p.35-47.) Approx. 20 refs. **Text in Russian. Title tr.**: Yakutia in the literary works of V.G. Korolenko.

Sketches his life as a political exile in Amga during 1881-1884, noting his studies of the Yakut language and folkways. His stories and poems on Yakutia, written after return to Russia, are reviewed. Korolenko's correspondence and other unpublished archival sources are used as background material. (DLC.)

74665. PASLEN, D. A. Bunkernyĭ zatvor s gidroprivodom. (Ugol', Aug. 1962. god 37, no.8, p.45-46, illus.) Text in Russian. **Title tr.**: Bunker lock with hydraulic drive.

Describes a coal-loading device constructed by the Vorkuta Planning Bureau and used by Vorkutugol' combine; it loads three tons of coal in 10 sec. (DLC.)

74666. PASTERNAK, F. A. Novye dannye po vidovomu sostavu i rasprostraneniiu glubokovodnykh pennatuliariĭ roda *Kophobelemnon* v severnoĭ chasti Tikhogo okeana. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.45, p.240-58, illus., tables, maps.) 26 refs. Text in Russian. Summary in English. **Title tr.**: New data on the species composition and distribution of the deep-sea pennatularian genus *Kophobelemnon* in the northern part of the Pacific Ocean.

Reports a study of these sea-pens collected by the *Vitiaz'* during 1951-1959. Location and depth of finds, morphology and skeleton, appearance of colonies, taxonomy, and geographic distribution are dealt with. Several species are recorded from the Bering Sea and both sides of the far northern Pacific. (DLC.)

PASTOR, RALPH, *see Military engineer.* Polar engineering . . . 1961. No. 74020

74667. PASTUKHOVA, M. N. Rykhlitel' merzlogo grunta s podveskoĭ na traktore ili bul'dozere. (Transportnoe stroitel'stvo, Feb. 1960. god 10, no.2, p.51-52, illus.) Text in Russian. **Title tr.**: A frozen-ground ripper mounted on a tractor or bulldozer.

The widespread use of excavator-mounted rippers of the D-222 diesel hammer type, increases construction costs by withdrawing the mount from excavating. It is suggested to mount the rippers on the C-80 tractor or the D-157 bulldozer. The devices so mounted can cut out a block of earth 1.2 m. deep and handle 156 cu. in. of frozen soil in one relay. Further technical specifications of the ripper are given, and the techniques of working frozen ground with it are described.—From CRREL. (DLC.)

74668. PATALEEV, A V. Deformatsii paravoznykh depo i nekotorykh drugikh zdaniĭ Amurskoĭ zh. d. v usloviiakh vechnoĭ merzloty. (Akademiia nauk SSSR. Dal'nevostochnyĭ filial. Sbornik rabot po inzhenernomu merzlotovedeniiu, 1959, p.3-18, table, graph, diagrs.) Text in Russian. **Title tr.**: Deformation of railroad depots and some other buildings of the Amur railroad under permafrost conditions.

Reviews damage and loss of these structures from own observations in 1951-52, and from reports of 1901-1954. Construction technique, foundations, and substrates at specific localities are described, as is the damage to structures by frost heaving and by subsidence due to thawing of the permafrost. The permafrost table was found to have dropped considerably beneath the buildings, e.g. its upper boundary below the Shimanovsk depot dropped 3-4 m. in 1915-1936, and by 1951 the 10-m.-thick permafrost layer had thawed completely. At Skovorodino, the permafrost level dropped 2-4 m. 1910-1954; frost heaving was observed in both permafrost and non-permafrost areas and in gravelly-sandy soils as well as in the sandy loams typical of the Soviet Far East.—From CRREL. (DLC.)

PATE, J. A. *see* Kingery, W.D. . . . Project Ice Way. 1962. No. 72796

74669. PATEL, V. L., *and* K. MAEDA. Short-term variations in meson and nucleon component of cosmic rays. (Journal of geophysical research, Apr. 1961. v. 66, no.4, p.1286-87, tables.) 7 refs.

Compares meson and nucleon intensity decreases at Thule, North Greenland. The ratios vary considerably from event to event when the meson intensity is corrected for pressure only; a fairly constant ratio is obtained when the meson intensity is corrected for both pressure and 300-mb. level height. (DLC.)

PATEL, V. L., *see also*

Maeda, K., & V.L. Patel. Seasonal variations cosmic-ray intensity . . . 1961. No. 73739

Maeda, K., & V.L. Patel. Solar flare cosmic rays. 1961. No. 73738

74670. PATKIN, JUDITH K., *and* E. J. MASORO. Effect of cold acclimation on lipid metabolism in adipose tissue. Fort Wainwright, Alaska, October 1961. 12 p., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-41.) 22 refs. Also reported in *American journal of physiology*, Apr. 1961, v. 200, no.4, p.847-50.

Reports experiments demonstrating that adipose tissue from cold-acclimated rats synthetizes 3-6 times as much long-chain fatty acids as tissue from controls living at room temperature. Esterification of these fatty acids and oxidation of palmitic acid to CO_2 were not altered by cold-acclimation. (CaMAI.)

74671. PATKIN, JUDITH K., *and* E. J. MASORO. Effects of cold stress on mitochondrial oxidative phosphorylation. Fort Wainwright, Alaska, Apr. 1961. 6 p. tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-21.) refs.

Liver mitochondria from cold-fasted rats showed the same P:O ratio as those from controls. Similarly oxidative phosphorylation was alike in the mitochondria of the two groups. The differences from results with liver homogenates are discussed. (CaMAI.)

PATKIN, JUDITH K., *see also* Masoro, E.J., & *others*. Effect of cold stress . . . 1961. No. 73863

74672. PATRIKEEVA, N. P. Nekotorye dannye po petrografii Izhma-Omrinskogo kompleksa iuzhnogo Timana. (Izvestiia vysshikh uchebnykh zavedenii. Geologiia i razvedka, Feb. 1962. god 5, no.2, p.97-99.) 7 refs. Text in Russian. **Title tr.:** Some data on the petrography of the Izhma-Omra complex in southern Timan.

Describes the pre-Eifelian (Devonian) complex of rocks distributed in this northwest part of Komi ASSR. They may be divided according to lithologic properties into three series. The distribution, composition, petrographic properties of the rocks of each series are described. (DLC.)

PATTERSON, J. W., *see* Fraser, D.B., & J.W. Patterson. Lead zinc Canada 1960. 1962. No. 71483

74673. PATTERSON, RAYMOND M. The Nahany lands, J.M. McLeod's exploration in 1823 and 1824 of the South Nahanni River country. (Beaver, summer 1961, outfit 292, p.40-47, illus.)

Recounts two trips in southern Mackenzie District-Yukon Territory by a Hudson's Bay Co. employee to contact the Nahani Indians for fur trading. In 1823, he traveled from Fort Simpson up the Liard to the Nahanni River at Mattson Creek, thence overland northwest to the Flat River area. In 1824, he left the Nahanni at Jackfish River and traveled westward overland to the Meilleur River area. The country traversed by McLeod is described from his journals, also his encounters (amicable) with the Nahanis. (DI.)

PAULS, FRANK P., *see* Alaskan Science Conference 1961. 1962. No. 69644

74674. PAULSON, IVAR, 1922– . Schutzgeister und Gottheiten des Wildes (der Jagdtiere und Fische) in Nordeurasien; eine religionsethnographische und religionsphänomenologische Untersuchung jägerischer Glaubensvorstellungen. Stockholm, Almqvist & Wiksell, 1961. 315 p. (Stockholm studies in comparative religion, v.2.) Approx. 450 refs. Text in German. **Title tr.:** Guardian spirits and deities of wild animals (game and fishes) in northern Eurasia; a religio-ethnographic and religio-phenomenologic study of hunting beliefs.

Comprehensive recapitulation of the author's previous publications on Paleosiberian and Ural-Altaic zoomorphic beliefs: No. 67341-67343, 60776-60779. Two main categories of animal divinities are recognized: actual guardian spirits and gods, and nature deities whose duties include protection of the animal world. Among the former are individual and collective (species) animal souls and spirits; animal gods, hunting and fishing divinities, etc. The second category comprises the earth, forest, mountain, sea, and fresh-water deities who own and protect certain kinds of animals. Sky and world gods, though also hunting divinities, act rather as protectors and benefactors of man. Feasts and rituals including the animal bone preservation rites are described and the Eurasian animal and hunting beliefs compared with those of American Indians and Eskimos. The animal is considered the oldest cult object of the hunter, and game spirits probably his first deities. An exhaustive bibliography of pertinent literature from the 18th century to 1961 is appended. A summary report on this study was pub. (in German) in *Paideuma* Dec. 1962, Bd. 8, Heft 2, p.70-84. (DLC.)

74675. PAULSON, IVAR, 1922– . Die Vorstellungen von den Seelen und den Schutzgeistern der Tiere bei einigen nordasiatischen, sibirischen, Völkern. *(In:* Nordic Symposium on the religious conceptions . . . 1961, p.91-100.) 17 refs. Text in German. **Title tr.:** The conceptions of souls and guardian spirits of animals among some north Asiatic, Siberian, peoples.

Comparative analysis of the functions attributed to animal souls (as treated in No. 60778) and animal guardian spirits, by Samoyeds, Ostyaks, Voguls, Kets, Yukaghirs and Gilyaks. Six types are distinguished; they range from close fusion of the two concepts to complete differentiation. Origin, development stages, rituals, and associated beliefs are discussed for all these types as is their ethnic diffusion. (DLC.)

74676. PAULSON, IVAR, 1922– . Wildgeister im Volksglauben der Lappen. (Zeitschrift für Ethnologie, 1961. Bd. 86, Heft 1, p.141-51.) Ap-

prox. 40 refs. Text in German. **Title tr.:** Animal spirits in the folk beliefs of the Lapps.

Discusses the old Lappish animalistic religion and its close affinities to the beliefs of north Siberian hunting tribes, as supplement to No. 67342. The predominance of true animal deities over nature spirits is stressed. Animal souls (free-, body-, and protector-soul), guardian spirits of individual animals and entire species, animal worship, hunting deities, etc. of the Scandinavian and Russian Lapps are dealt with. (DSI.)

74677. PAULY, HANS. Stenonite, a new carbonate-fluoride from Ivigtut, South Greenland. København, Reitzel, 1962. 24 p. 2 plates, illus., tables. (Meddelelser om Grønland, bd. 169, nr.9.) 8 refs.

Reports investigations since 1953, of this mineral from the Ivigtut cryolite mine. The composition of stenonite as calculated from chemical analysis is $Sr_2AlCO_3F_5$. It is vitreous, colorless, crystallizes monoclinally, and has three directions of cleavage, a specific gravity of 3.86 and hardness of nearly 3½. The refractive indices are 1.452 for the lowest and 1.538 for the highest, and the axial angle measures $-2V=43°$. Stenonite belongs to a paragenesis developed in the contact-zone between siderite-cryolite and masses rich in fluorite, underlying the ore body in the eastern part of the mine; formation conditions are discussed. —From author's abstract. (DGS.)

74678. PAVLININ, VLADIMIR NIKOLAEVICH, 1914– . Ptitsy Severnogo Zaural'ia. (Priroda, May 1961. god 50, no.5, p.102-104, illus.) Ref. Text in Russian. **Title tr.:** Birds of the Northern Transural.

Notes from a trip in the Berezovo region including the upper Severnaya Sos'va, Lyapina and Khulga valleys, an area not visited by zoologists for 30 years. Some ten species are recorded, with frequency dates, and location of finds, previous records, etc. (DLC.)

PAVLININ, VLADIMIR NIKOLAEVICH, 1914– , see *also* Shvarts, S.S., & V.N. Pavlinin. Opyt glirogeograficheskogo raionirovaniia Urala. 1960. No. 75635

74679. PAVLINOV, V. N. Stratigraficheskoe znachenie graptolitov v pripoliarnykh oblastiakh SSSR. (Moskva. Moskovskii geologorazvedochnyi institut. Trudy 1961. t.37, Geologiia i razvedka, p.184-89.) Text in Russian. **Title tr.:** The stratigraphic importance of graptolites in the polar provinces of the USSR.

Reports a study of Lower Paleozoic graptolites collected in the Northern Ural, Novaya Zemlya, the lower Yenisey and northern parts of the Siberian platform. Cambrian, Ordovician and Silurian are identified, their distribution and stratigraphic position noted. Development and variation of graptolite fauna are discussed. (DLC.)

PAVLOV, A.V., *see* Golubev, A.V., & A.V. Pavlov. Issledovanie teplovykh potokov v pochve . . . 1961. No. 71749

74680. PAVLOV, B. S. Geotermicheskaia kharakteristika Noril'skogo gornopromyshlennogo raiona. (Voprosy gidrogeologii i inzhenernoi geologii, 1961. Sbornik no.19, p.91-103, tables.) 12 refs. Text in Russian. **Title tr.:** Geothermal characteristics of the Noril'sk mining industry region.

Reports investigations during 1936-1946, in this region where maximum thickness of permafrost varies between 200 and 400 m. Three layers are distinguished according to temperature regime: that of seasonal freeze-thaw, that with yearly temperature changes, and the layer with secular changes. Each is treated in turn, its thermal characteristics are described: thickness of the layer, temperature fluctuation of the rocks, factors affecting temperature fluctuation, its amplitudes, etc. The geothermal regime and variation of the geothermal gradient are outlined in respect to geomorphic elements of the region, taliks, water basins and rivers, color of the surface, and other features. (DLC.)

74681. PAVLOV, F. A., *and* **E. N. SAVEL'EV.** Snegouplotniaiushchaia mashina. (Lesnaia promyshlennost', Oct. 1962. god 40, no.10, p.25-26, illus.) Text in Russian. **Title tr.:** Snow-compacting machine.

Describes in technical detail, two types of snow compactors worked out by the forest transportation laboratory of the Northern Industrial Research Institute (SevNIIP) for loosening, compacting and heating snow in snow- and ice-road construction in forests. The machines were tested in a lumbering establishment in northern Arkhangel'sk Province; data are presented and discussed on snow density before and after compacting and on the bearing strength. Other Soviet types of snow compactor and plans for the 1962-63 winter testing are noted by the editor. (DLC.)

PAVLOVIC-HOURNAC, M., *see* Andjus, R.K., & *others*. Réanimation . . . après congélation. 1962. No. 69775

74682. PAVLOVSKII, EVGENII VLADIMIROVICH, 1901– . Nikolai Sergeevich Shatskii, 1895-1960. (*In:* Kuznetsov, I.V., *ed.* Liudi . . . 1962, p.253-66, port.) Refs. Text in Russian.

Describes the course of life and scientific activity of N.S. Shatskii, outstanding in structural geology through his imaginative ideas, new approaches and methods. His main published books on the tectonic features of the Siberian platform and the Soviet Arctic are reviewed. His publication of structural maps of the USSR, editorship of various journals and monographs, membership and offices in a number of learned institutions, and other activities are stated. His reputation and recognition in the Soviet Union and in other countries are noted. His main published works and papers about him are listed. (DLC.)

74683. PAVSHTIKS, E. A., *and* **L. N. GRUZOV.** Distribution of plankton in the Norwegian Sea in 1958. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v. 149, Contributions to Special IGY Meeting 1959, p.176-78, maps.)

Study of quantitative distribution during spring-fall over an area extending to 15° W. and about 75° N. and down to 100 m. in depth. Dominant forms, biomass, change in forms, etc. are also considered. (DI.)

74684. **PAVSHTIKS, E. A.,** *and* **L. N. GRUZOV.** Ob osobennostiakh razvitiia planktona v Norvezhskom more v 1958 g. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten' 1959. no.2(10), p.8-11, map.) Text in Russian. **Title tr.:** Features of plankton development in the Norwegian Sea during 1958.

Reports study of 3300 samples with comparisons of conditions since 1947. Phytoplankton, beginning and advance of its bloom, and distribution; krill reproduction, abundance and distribution in time and space, are considered. (DLC.)

PAVSHTIKS, E. A., *see also* Gruzov, L.N., & E.A. Pavshtiks. Soviet plankton invest . . . 1961. No. 71892

74685. **PAXTON, FORREST D.** The Sherwood Head project. (American Meteorological Society. Bulletin, Dec. 1962. v. 43, no.12, p.650-53, illus., graphs, tables.)

Reports on the meteorological observations made by the first nuclear-powered automatic weather station located on Sherwood Head (78° 10′ N. 85° 52′ W.), Axel Heiberg Island. Transmissions are made every three hours to Resolute, where two radio receivers feed into a single two-channel recorder, the entire operation taking less than 6 sec. In the first nine months' operation, reception of information ranged from 94% of the time at the beginning Aug. 17-31, 1961, to 70% in Mar. 1962. The main reason for missing observations was poor propagation, resulting from ionospheric disturbances. Analysis of the data is in progress; monthly extremes of temperature, wind speed, and pressure, also prevailing wind direction, are tabulated. Performance is considered satisfactory, though some modifications are needed. (DWB.)

PAYNE, ROBERT B., *see* Adams, T., & *others*. . . . glycine & human response cold. 1961. No. 69484

74686. **PCHELINTSEV, A. M.** Kriogennyĭ drenazh promerzaiushchikh gruntov kak sredstvo bor'by s pucheniem. *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Igarskaia merzlotnaia stantsiia. Trudy 1961. vyp.2, p.54-69, illus., tables, graphs, diagrs.) 11 refs. Text in Russian. **Title tr.:** Cryogenic drainage of freezing ground as a means of controlling heaving.

Reports the 1957-1959 investigation at the Igarka Permafrost Research Station of a working hypothesis that frost heaving might be reduced by directing the migration of moisture away from foundations, thereby causing adjacent ground to freeze last. The experimental arrangement is described, including the nature and placement of heat insulating materials, moisture content of the ground, and the nature and depth of pilings. The insulating material was found to reduce heaving but not exactly in accordance with the working hypothesis. Anisotropic ice crystal growth was found to be a contributing factor along with moisture migration. Heat insulating coverings were found useful in creating anisotropic conditions as well as in reducing tangential forces.—From CRREL. (DLC.)

74687. **PCHELINTSEV, A. M.** Mikroskopicheskie issledovaniia struktury l'da v epigeneticheski promerzshei tolshche gornykh porod v raĭone Igarki. (Akademiia nauk SSSR. Institut merzlotovedeniia. Trudy 1962. t.19, p.113-14, illus., tables.) 14 refs. Text in Russian. **Title tr.:** Microscopic investigation of ice structure in the epigenetic frozen stratum of rocks in the Igarka region.

Reports his observations in 1955, when ice samples were collected from the walls of the Igarka station underground at 2.0, 4.0, 7.0, 8.5, 13.0 and 13.5 m. depths. Structure of the ice at each level is described, noting crystal size, orientation of main axes, and other features. Comparisons are made at various depths and differences of ice crystals interpreted. Characteristic features of ice from frozen alluvial loams and lacustrine-glacial clays are: very large crystals, very irregular edge of the crystals, and horizontal disposition of the main axes. (DLC.)

74688. **PCHELINTSEV, A. M.** O peremeshchenii organo-mineral'nykh chastits v promerzaiushchikh glinistykh porodakh. *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Fiziko-khimicheskie protsessy v promerzaiushchikh i merzlykh gornykh porodakh, 1961, p.57-64, illus., diagrs.) 19 refs. Text in Russian. **Title tr.:** Displacement of organic-mineral particles in freezing clayey soils.

Previously established causes of the migration of water in freezing soils are reviewed and found to be inadequate in explaining the formation of ice lenses and wedges and the frozen texture of highly dispersed systems. A description is given of four laboratory experiments on the migration of soil particles simultaneously with water. In some cases mutual displacement of water and soil particles take place. As a result of the polarization potential of mineral particles, water moves toward the freezing zone, and at the moment of crystallization, mineral particles are repulsed by the growing crystal. This process does not exclude ice forms due to the migration of water alone.—From CRREL. (DLC.)

74689. **PCHELINTSEV, A. M.** O temperaturnom gradiente v promerzaiushchem sloe dispersnykh porod. *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Fiziko-khimicheskie protsessy v promerzaiushchikh i merzlykh gornykh porodakh, 1961, p.40-46, tables.) 7 refs. Text in Russian. **Title tr.:** The temperature gradient in the freezing layer of dispersed soils.

Describes experiments at the Igarka Permafrost Station, to determine numerical temperature and moisture gradients in freezing soils. Measurements were made to 10 m. depths in silty and clayey loams. A very small temperature gradient was established. The relationship between temperature and moisture gradients arrived at by Lykov in 1935 was not confirmed. It is concluded that the migration of water to the freezing zone is conditioned not only by the reduction of temperature but also by natural factors which remain to be clarified. —From CRREL. (DLC.)

74690. **PCHELINTSEV, A. M.** Opredelenie maksimal'noĭ glubiny sezonnogo protaivaniia gornykh porod po ikh kriogennoĭ teksture. *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Igarskaia merzlotnaia stantsiia. Trudy 1961. vyp. 2, p. 97-

108, profiles.) 8 refs. Text in Russian. **Title tr.**: Determination of the maximum depth of seasonal thawing of rocks according to cryogenic texture.

Notes distribution of ice bands and lenses in the layer during its freezing as the main element in cryogenic texture. Such other factors as composition of the ground, granular and mineralogical composition, initial moisture content, moisture migration, are also reviewed. The use of the textural method determining max. thaw depth is demonstrated in nine different profiles, the first of them composed of observations in the Salekhard and Igarka regions. (DLC.)

PEARD, M. C., *see* Prescott, L.F., *& others*. Accidental hypothermia . . . 1962. No. 74949

74691. PEARSON, GRANT HAROLD, 1900– . My life of high adventure. Englewood Cliffs, N.J. Prentice-Hall, 1962. 234 p., illus.

Reviews his 25 years in the U.S. National Park Service, mainly in Mt. McKinley National Park. Alaska of the mid-1920's is described, experiences in the wilds, individuals and wildlife encountered, dog-driving, etc. The Lindley-Liek mountain-climbing expedition in 1932, first successful attempt on both south and north peaks of Mt. McKinley, is described. Appended, p.223-34, is a synopsis of the various climbs and attempts on Mt. McKinley. (CaONA.)

74692. PECHENIK, L. N. Tralovyĭ lov FRG v prolive Devisa. (Rybnoe khozĭaĭstvo, 1961. god 37, no.2, p.82-86, illus., tables, map.) Ref. Text in Russian. **Title tr.**: Trawl catches of the German Federal Republic in Davis Strait.

Reports on the first fishing activities of three East-German trawlers in these waters during 1952-1953; catches in the following years, species and grounds exploited, year-round fishing, types of vessels, hydrographic and fishing conditions, etc. (DLC.)

74693. PECHERSKIĬ, D. M. Odna iz prichin nizkoĭ ostatochnoĭ namagnichennosti izverzhennykh gornykh porod. (Geologiĭa i geofizika, 1962, no.1, p.100-117, tables, graphs.) 27 refs. Text in Russian. Summary in English. **Title tr.**: One of the reasons for the low residual magnetization of igneous rocks.

Reports a study of the magnetic properties of various rocks in the Kolyma basin carried out in 1956-1960 by the Seymchan geological-prospecting survey. Data are given on magnetic susceptibility and residual magnetization as measured by an M-2 magnetometer and an astatic magnetometer. Deflection from statistical regularity of Q-parameters of a series of rocks of various genesis is discussed. The low Q in granitoids is shown to be mainly due to the low crystallization temperature of granitic magma. Thermomagnetic analysis is recommended in study of crystallization temperature of minerals, rocks and ore-forming processes. (DLC.)

74694. PEDERSEN, ALWIN, 1899– . Begegnung mit einer Walrossherde. (Orion, Nov. 1960. Jahrg. 15, no.11, p.841-46, illus.) Text in German. **Title tr.**: Encounter with a herd of walruses.

Notes the way these animals used to sleep on land, and their new habit, due to man's pursuit, of sleeping on ice. A visit to a herd sleeping on land in northeast Greenland is reported. The appearance and movement of the walruses and their acuity of senses are described. Moult, distribution and ecology are outlined, their present numbers, and annual kill stated. (DLC.)

74695. PEDERSEN, ALWIN, 1899– . Oplevelser med polarraeve. (Grønland, Mar. 1962, nr.3, p.111-20, illus.) Text in Danish. **Title tr.**: Experiences with arctic foxes.

Reports foxes in the Scoresbysund and Hochstetters Forland areas in East Greenland penetrating into the camps, persistent in efforts to get food. In southwest Greenland, the annual catch ranges 1,700-2,500, in northwest and North Greenland 450-850. The average is smaller in the northeast and comparatively few are caught in the southeast. (DLC.)

74696. PEDERSEN, ALWIN, 1899– . Narhvalen, grønlaendernes højt vaerdsatte jagtvildt. (Grønland, Dec. 1962, nr.12, p.464-71, illus.) Text in Danish. **Title tr.**: The narwhal, game highly prized by the Greenlanders.

Describes narwhal hunts in Greenland waters, where about two hundred are caught annually. (DLC.)

74697. PEDERSEN, ALWIN, 1899– . Den rødstrubede lom ved ishavskysten. (Grønland, Aug. 1962, nr.8, p.305-311, illus.) Text in Danish. **Title tr.**: The red-throated diver on the Arctic Ocean coast.

Reports a pair of divers observed for several weeks on Hochstetter Forland, northeast Greenland; two young were hatched during the period. (DLC.)

74698. PEDERSEN, ALWIN, 1899– . Ved havørnens rede. (Grønland, Jan. 1962, nr.1, p.20-26, illus.) Text in Danish. **Title tr.**: At the nest of the white-tailed eagle.

Contains several days' observations of a nest with two young in Ameralikfjorden (64° 05′ N. 51° W.), West Greenland. The parent birds were shy, and seemed quite old; they were said to have bred in the same nest for many years. (DLC.)

PEDERSEN, ARNE, *see* Schlüter, B., *& others*. Redegørelse om politiet . . . No. 75416

74699. PEDERSEN, EINAR SVERRE. The Roald Amundsen Institute for Polar Technique. (Arctic, June 1962. v. 15, no.2, p.165-66.)

Notes the purposes and plans of this recently founded memorial organization. Polar survival, transportation, navigation, engineering, resources and raw materials, settlements and industrial planning are to be studied on a year-round basis by permanent and student investigators at a research station on Kongsfjorden, Vestspitsbergen. The main sponsor is Norsk Polar Navigasjon A/S at Ny Ålesund. (DGS.)

74700. PEDERSEN, EINAR SVERRE. Svalbard i flyvningens tidsalder. (Polarboken 1961-62, p.7-23, illus., maps.) Text in Norwegian. **Title tr.**: Svalbard in the era of aviation.

Recommends that a permanent airfield for civil aviation in Svalbard be built by Norway. The islands are at the center of probable future air routes across the Arctic Ocean and can provide a natural intermediate landing place. An airfield is necessary to maintain regular communications

with Norway and has great potential use by scientific expeditions and the tourist trade. Kvadehuken (78° 50′ N. 11° E.) is considered the most suitable site. Activities of Norsk Polar Navigasjon A/S, founded in 1958, are reviewed; it has carried out geotechnical investigations and oil prospecting at this site. Decisions on the project have been deferred by the Norwegian government. (CaMAI.)

PEDERSEN, EINAR SVERRE, *see also* Laerum, O.D., & G.S. Pedersen. Svalbardveg 1959 . . . 1962. No. 73273

74701. PEDERSEN, ELSA. The gateway city. (Alaska sportsman, Aug. 1959. v. 25, no.8, p.8-10, +, illus.)

Describes Seward, its history since 1794, development as terminal port for the Alaska Railroad, present status and facilities, and prospects from oil and a developing sea-food industry. (DI.)

PEDERSEN, GUNNAR S., *see* Laerum, O.D., & G.S. Pedersen. Svalbardveg 1959 . . . 1962. No. 73273

PEDERSEN, P. O., 1910– , *see* Oschinsky, L. A short note . . . 1961. No. 74550

74702. PEEV, KHR. D. Kosvennye priznaki lavinnoĭ opasnosti. (Akademiīa nauk SSSR. Sibirskoe otdelenie. Izvestiīa 1961, no.8, p.50-61, plates.) 38 refs. Text in Russian. **Title tr.:** Indirect indicators of avalanche hazard.

Notes that avalanches tend to occur and recur in certain areas, and discusses features favorable for their development and the traces which they leave: features of relief, microrelief, nevé formation, results of avalanches, geobotanical and other indicators. The study is based on literature relating to dangerous areas in various countries including the Khibiny in the USSR, and Canada. (DLC.)

74703. PEKARSKAĪA, N. K. K voprosu o prochnosti merzlykh gruntov. (*In:* Materialy po laboratornym issledovaniīam merzlykh gruntov, 1961. sbornik 4, p.242-51, tables, graphs.) 10 refs. Text in Russian. **Title tr.:** On the strength of frozen ground.

Deals with the effect of unfrozen water on the strength of frozen ground. Various frozen soil materials were subjected to strength tests of temperatures from 0° to -30°C. Strength was found to increase sharply down to -12°C., which did not agree with the unfrozen water curves. Fair agreement with these curves was obtained only in the temperature range -0.4° to -7°C. Granular makeup of specimens was found to be a factor. The effect of phase state and crystalline lattice structure on the strength of ice under different temperature conditions is discussed also.—From CRREL. (DLC.)

74704. PEKARSKAĪA, N. K. Soprotivlenie sdvigu mnogoletnemerzlykh gruntov razlichnoĭ tekstury i l'distosti. (*In:* Materialy po laboratornym issledovaniīam merzlykh gruntov, 1961. sbornik 4, p.166-86, illus., tables, graphs.) 18 refs. Text in Russian. **Title tr.:** Shear strength of permafrost of different texture and ice content.

Reports studies at the Igarka permafrost research station during 1960. Methods and test conditions are described. It was found that texture of anisotropic bodies is a major factor in their deformation. Ground with laminated structure had greater shear strength than that with a solid structure. Strength of bonds between different contacts in frozen ground varied. The rheological curves of frozen clayey loam and ground ice were also dissimilar.—From CRREL. (DLC.)

74705. PEKELIS, VIKTOR. Net goroda pokhozhego. (Nash sovremennik, 1957, no.3, p.253-68.) Text in Russian. **Title tr.:** There is no town like it.

Popular sketch of Igarka: urban development, port activities; the floating population of foreign sailors, Evenkis, Russian scientists, etc;; the sawmill and lumber-laden barges in tow down the Yenisey, the permafrost station, etc. (DLC.)

74706. PELIKH, G. I. Kol'tsevaīa sviāz' u sel'kupov Narymskogo kraīa. (*In:* Akademiīa nauk SSSR. Institut etnografii. Trudy t.78, Sibirskiĭ . . . 1962, p.176-96, tables, diagrs., map.) 25 refs. Text in Russian. **Title tr.:** Circular kinship ties of Sel'kups of the Narym region.

Study of a peculiar wife giving – wife receiving system involving three exogamous groups, based mainly on the author's field research as head of the Tomsk University Ethnographic Expedition in 1959 and 1960. The circular marriage pattern still encountered among members of this Samoyed group inhabiting the upper Ob basin (57°30′ - 59°30′N.) is compared to a similar, though not identical, system noted among Gilyaks by L. IA. Shternberg (No. 26166). The 19th - early 20th century social structure, patriarchal clan division, obligatory wife selection cycle, kinship terminology, etc. are discussed. Group marriages and unions of brother with own sister, existing to the turn of the 20th century, are dealt with. Folkloristic sources and documentary data from marriage registers are analyzed. The circular marriage system is considered to have evolved during the transition from a matriarchal to a patriarchal organization in a society preserving customs of group marriage. (DSI.)

74707. PELLE PRAKTIK, *and* **KALLE KALKYL,** *pseuds.* Bort med statsbidragen. (Skogs-Norrland, Apr. 1961. nr.2, p.17-18.) Text in Swedish. **Title tr.:** Do away with subsidies!

States the case against subsidies for forestry: they are insufficient, delay needed improvements, kill private initiative, prevent problem solving, and result in state control of private property. It is impossible to combine subsidies with a free-enterprise economy. (DA.)

74708. PELLETIER, BERNARD RODERICK, 1923– . Submarine geology program, Polar Continental Shelf Project, Isachsen, District of Franklin. Ottawa, Queen's Printer, 1961. 10 p. maps incl. fold., diagr., profiles. (Canada. Geological Survey, Paper 61-21.) 9 refs.

Describes the organization and working methods of this program carried out Apr. 1960– , by scientists of the Geological Survey of Canada in collaboration with personnel of other Canadian agencies attached to the main project. Sedimentation conditions, the distribution and nature of the shelf sediments, also their geological history, were investigated. Fossils were collected in order to establish local ecology; submarine topography was studied to interpret, in part, the physiographic

history of the shelf and adjacent island channels. Tentative conclusions are indicated. Samples collected from many areas were given paleontological, mechanical, petrographic, spectrographic, and X-ray analyses; some results are provided. Maps show location of oceanographic stations, presumed currents and sand content of samples; also submarine topography and inferred earlier physiographic events. Submarine topographic profiles are drawn along two sampling routes. (DGS.)

PELLETIER, P. E., *see* Quebec. Dept. of Mines. Pilot plant. 1960. No. 74998

PEL'TEK, E. I., *see* Bogolepov, K.V., & E.I. Pel'tek. O . . . boksitonosnykh . . . 1961. No. 70296

PENIKETT, E. J. K., *see* Corrigan, C., & *others*. Antibodies . . . 1962. No. 70829

74709. **PENNDORF, RUDOLPH, 1911– , and G. E. HILL.** The absorption effect in the Arctic during a severe ionospheric storm. (*In:* NATO. Radio wave absorption . . . *pub.* in Journal of atmospheric and terrestrial physics, Dec. 1961, *pub.* 1962. v.23, p.191-201, maps.) 3 refs.

Analyzes ionospheric data Sept. 11-14, 1957, for the Northern Hemisphere, and constructs three-hour interval synoptic charts of f_{min}, $f°E_s$, and $f°F2$. About 20 hrs. after the occurrence of a solar flare, f_{min} started to increase over the polar cap. The increase lasted for about 24 hrs., reaching about 7 Mc./s. (highest near the Pole) and causing blackout conditions at several inner-arctic stations. A steep gradient of f_{min} (3-4 Mc./s.) occurred as a few hundred km. wide ring along the auroral zone at the time of sudden commencement. f_{min} decreased over the inner Arctic during the main phase of the storm attaining normal values of about 2 Mc./s. eight hrs. after the sudden commencement. A ring of high values prevailed during the main phase, at first along the auroral belt, hence moving southward towards a dip angle of about 71°. (DLC.)

74710. **PENNDORF, RUDOLPH, 1911– .** Diurnal and seasonal variation of spread *F* in the Arctic. (Journal of geophysical research, June 1962. v.67, no.6, p.2289-98, diagrs., graphs, maps.) 4 refs.

Analyzes hourly ionosonde data obtained during the IGY. Small diurnal and seasonal variations found around the magnetic pole are explained by the existence of a permanent maximum over the Canadian archipelago (Foxe Basin). Small diurnal variations exist north of this area during spring and fall; a seasonal variation is present. The general level of spread - F occurrence, however, remains so high that spread - F conditions exist regularly at local noon. Pronounced diurnal and seasonal variations observed over the remainder of the Arctic are explained by a traveling maximum that moves along the auroral zone.–From author's abstract. (DLC.)

74711. **PENNDORF, RUDOLPH, 1911– .** Geographic distribution of spread *F* in the Arctic. (Journal of geophysical research, June 1962. v.67, no.6, p.2279-88, maps.) 2 refs.

Analyzes hourly IGY data to determine the diurnal and seasonal variation of spread F. Results for July and Sept. 1957 are mapped. A zone of maximum occurrence exists that coincides with the auroral belt. Two diurnal maxima are found: one, called the "traveling" maximum, has its center approximately at the point where the midnight meridian crosses the auroral belt; the other, called the "permanent" maximum, is over the Canadian archipelago. The two maxima explain all the diurnal and seasonal variations found in the Arctic.–From author's abstract. (DLC.)

74712. **PENNDORF, RUDOLPH, 1911– .** A spread-*F* index. (Journal of atmospheric and terrestrial physics, June 1962. v.24, no.6, p.543-45, graphs.) 3 refs.

Introduces an index based on the frequency spread only, and computes hourly mean values for six stations in the North American Arctic. All stations show a regular diurnal variation of frequency spreading with two maxima. The importance of the index in the study of spread-F and its correlation with other phenomena is discussed. (DLC.)

74713. **PENNDORF, RUDOLF, 1911– .** Spread *F* over the polar cap on a quiet day. (Journal of geophysical research, Nov. 1962. v.67, no.12, p.4607-4616, table, graphs.) 16 refs.

Scales and analyzes ionograms for Baker Lake, Barrow, Eureka, Fairbanks, Fletcher's Ice Island and Resolute. The spread F of radiowave echoes are determined from vertical incidence soundings on Oct. 6, 1957, arising at 200-300 km. altitude because of local unhomogeneties of electron density in the ionosphere. The spreads F are classified into five types and five species according to their forms and severity and the temporal and spatial changes of the spreads F are discussed. (DLC.)

74714. **PENNIE, A. M.** Arctic explorations and exploitations. (*In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962. p.217-40.)

Reviews the motivation of arctic explorers, whalers, and traders from early times, the hazards and hardship of their journeys. In particular, Hearne's journey from Churchill, Manitoba to the mouth of the Coppermine River in 1770-1772 is recounted. (CaMAI.)

74715. **PENNINGTON, JAMES WILSON.** Mercury, a materials survey. Washington, D.C., 1959. 92 p. illus., fold. map, tables. (U.S. Dept. of the Interior. Bureau of Mines. Information circular, 7941.) 90 refs.

Surveys the properties, uses, technology, production and distribution of this metal. Northern areas with mercury resources are Alaska and probably Kamchatka. In the former, the measured reserve is approx. 25,000 76-lb. flasks in ore averaging 15 lbs. to the ton. Deposits, mostly in the central Kuskokwim region are described. Alaskan production of 1926-1957 is discussed and tabulated, in 1957: 5,500 76-lb. flasks, 15.77% of the total for United States. (DGS.)

PENNYCUICK, COLIN J., *see* Burton, P.J.K., & *others*. Bird notes . . . 1960. No. 70471

PENSTONE, S. R., *see* Heikkila, W.J., & S.R. Penstone. Rocket measurements . . . 1961. No. 72092

74716. **PENTTILÄ, SEPPO.** Ilmakuvantulkinta maaperänkartoituksen apuna. (Finland. Geologinen Tutkimuslaitos. Geoteknillisiä julkaisuja, 1960. no.65, p.70-86.) 5 refs. Text in Finnish. Summary

in English. **Title tr.**: Air-photo interpretation as an aid in mapping of surficial deposits in Finland.

Reports aerial photography successfully used thus, especially in northern Finland where the vegetation is relatively sparse. Types of surficial deposits readily recognized on aerial photographs are rock outcrops, boulder fields, hummocky moraine, moraine ridges, eskers, deltas and outwash plains, glaciofluvial channels, kame terrain, prominent shore cliffs, dunes, and open or sparsely wooded bogs. (DLC.)

74717. PEPELIAEV, B. V., *and* **M. I. TEREKHOV.** Novye dannye po stratigrafii Alazeĭskogo ploskogor'ia. (Sovetskaia geologiia, Feb. 1962, no.2, p.140-44, map.) 3 refs. Text in Russian. **Title tr.**: New data on the stratigraphy of the Alazeyskoye upland.

Reports the 1960 geologic mapping at one to a million of this upland in the Kolyma-Indigirka interfluve. Sinian, Middle-Upper Devonian, Lower Permian, Upper Triassic, Upper Jurassic, and Upper Cretaceous deposits are identified, their paleontologic characteristics given. The tectonic structure is also characterized and a geologic map of the area included. (DLC.)

74718. PEPELIAEV, B. V., *and* **M. I. TEREKHOV.** O nakhodkakh psilofitovoĭ flory v devonskikh otlozheniiakh basseĭna srednego techeniia reki Kolymy. (Akademiia nauk SSSR. Doklady, Apr. 1, 1962. t.143, no.4, p.931-34, text map.) 2 refs. Text in Russian. **Title tr.**: Finds of *Psilophyton* flora in Devonian deposits of the middle Kolyma basin.

Reports on four sites of these finds, made in the course of geologic investigations in 1957-1958: one on the right bank of the Yasachnaya, another near the mouth of the Shamanikha, two on the right bank of the Kolyma near Sredne-Kolymsk. *Psilophyton princeps*, species of *Hostimella*, and *Aphyllopteris* were among the flora discovered, the first Devonian flora known in northeast Asia. Fauna of the sites are also reported. (DLC.)

74719. PEPPER, GEORGE, *and* **K. DALY.** People of the North. (North, Mar.-Apr. 1962. v.9, no.2, p.6-13.)

Reproduces 12 portraits, landscapes, etc. painted on the *C.D. Howe*'s 1960 Eastern Arctic trip. (CaMAI.)

PEQUIGNOT, H., *see* Justin-Besançon, L., & *others*. . . . hypothermie accidentelle . . . 1960. No. 72601

74720. PERCHAL, RUDOLPH J., *and* **S. O. MARCUS.** The U.S. Navy Hydrographic Office ice-observing and forecasting program. (Mariners weather log, Nov. 1961. v.5, no.6, p.193-96, illus.)

Outlines requirements, methods, types of aircraft and surface vessels employed, as well as the various services provided, viz: long-range outlook, 30-day, 5-day, and short-range (48 hrs.) forecasts. Ice photography from TIROS satellites has been tested successfully in limited areas. Future possibilities, as high altitude rocket ice reconnaissance are noted; but long-range patrol aircraft must be principle source of information for immediate future. (DWB.)

74721. PERESYPKIN, V. I. Nekotorye voprosy dinamiki prilivnykh voln. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ. Sbornik stateĭ, vyp.1, p.230-48, graphs.) 14 refs. Text in Russian. **Title tr.**: Certain problems of dynamics of tidal waves.

Discusses the peculiarities of propagation of tidal waves of finite amplitude through a narrow, infinitely long channel, and the theoretical solution of this problem applied by V.V. Shuleĭkin (No. 75616A, 32022A) to the case of the White Sea tides. Two mathematical errors in Shuleĭkin's treatment are pointed out, which lead to an incorrect vertical orbit of water particles of the tidal wave. The cases of forward propagation of sea waves in deep and shallow channels are analyzed, and formulas for the elements of the vertical orbit of water particles of tidal waves are derived, and applied to three concrete examples. (CaMAI.)

74722. PERESYPKIN, V. I. Vychislenie ėkstremal'nykh vysot prilivov po metodu N.F. Kudriavtseva. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, Sbornik stateĭ, vyp.1, p.219-29, graphs, tables.) Text in Russian. **Title tr.**: Calculation of the extreme heights of tides by the N.F. Kudriavtsev method.

Extends Kudriavtsev's method (1956) of determination of the theoretical zero depths by using the harmonic constants of the eight basic components of tidal waves. The nomograms constructed by Kudriavtsev are improved for the mixed-tide cases. Examples are worked out of calculation of the extreme heights of tides (of Barents Sea) for Yekaterininskaya Gavan', 69°13′N. 33°27′E. and the maximum tide level (Sea of Okhotsk) for Bukhta Nagayeva, 59°32′N. 150°40′E. (CaMAI.)

74723. PEREVALOV, V. A. Osnovopolozhnik nauchnykh issledovaniĭ v Arktike i teoretik polĭarnogo plavaniia. (Morskoĭ flot, Nov. 1961. god 21, no.11, p.36-38, illus.) Text in Russian. **Title tr.**: The founder of arctic research and theoretician of polar navigation.

Tribute to M.V. Lomonosov, 1711-1765, with sketch of his achievements. (DLC.)

74724. PERFIL'EV, A. S. Priroda zapadnoĭ granitsy Uraltauskogo antiklinoriia na Polĭarnom Urale. (Akademiia nauk SSSR. Doklady, July 21, 1962. t.145, no.3, p.635-38, cross-sections.) 5 refs. Text in Russian. **Title tr.**: The nature of the western boundary of the Uraltauskiy anticlinorium in the Polar Ural.

Reports study of this anticlinorium with outcropping Cambrian and Riphean deposits, east of the Yelets-Lemva synclinorium. The character of the western contact of the Uraltauskiy anticlinorium with the Orangskaya series in the Nemur-Yugan valley is examined and the nature of the western boundary is interpreted. (DLC.)

PERFIL'EV, A. S., *see also* Moldavantsev, IU.E., & A.S. Perfil'ev. Proiavleniia metamorfizma . . . 1962. No. 74084

PERFIL'EV, V. I., *see* Egorov, O.V., & V.I. Perfil'ev. Nekotorye osobennosti pitaniia . . . 1959. No. 71210

74725. **PERGAMENT, M. A.** Gorizonty mela Koriāksko-Kamchatskoĭ oblasti. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . .' 1961, p.73-79, table.) 14 refs. Text in Russian. **Title tr.:** The Cretaceous horizons of the Koryak-Kamchatka province.

Presents a stratigraphic division of these deposits as identified in eight regions of the Kamchatka and Koryak Ranges, based on literature from recent work. Eight horizons from Aptian to Maestrichtian are distinguished, and each is briefly characterized, noting lithologic properties and fauna. (DLC.)

74726. **PERGAMENT, T. S.** K faune Echiurida dal'nevostochnykh morei SSSR. (Akademiia nauk SSSR. Zoologicheskiĭ institut. Issledovaniia dal'nevostochnykh morei SSSR, 1961. vyp.7, p.144-50, illus., table.) 10 refs. Text in Russian. **Title tr.:** The echiurid fauna of the Far-Eastern seas of the USSR.

Describes six species of these worms, one of them *Thalassema ochotica,* new. With a single exception, all are found in the northern Pacific seas. (DLC.)

74727. **PERLMAN, H. B.,** *and others.* Cochlear blood flow during hypothermia. (Annals of otology, rhinology and laryngology, Sept. 1959. v.68, no.3, p.803-815, illus.) 19 refs. *Other authors:* R. Kimura *and* R.A. Butler.

Reports on guinea pigs, with data on respiration, rectal temperature, heart rate, etc. Cochlear vessels did not change diameter even during profound rapid hypothermia; blood cells did not agglutinate or lyse even when circulation stopped completely. Blood flow rate was reduced by some 50%; but did not stop at rectal temperatures of 20°C. and below. (DNLM.)

74728. **PERMIAKOV, R. S.** Opyt mnogorīadnogo korotkozamedlennogo vzryvaniia na Olenegorskom kar'ere. (Gornyĭ zhurnal, Jan. 1962, no.1, p.44-45, illus., tables.) Ref. Text in Russian. **Title tr.:** Experience with multiple-row millisecond delayed action blasting in the Olenegorsk open pit.

Reports rock-blasting experiments at Olenegorsk, following example of the Noril'sk Mining Metallurgical Combine, using two or three rows of blasting holes with 25 and 50 millisecond intervals in action between rows. Technical details are discussed and advantages of this method noted. (DLC.)

74729. **PERMIAKOV, R. S.** Razvitie gornykh rabot pri otrabotke nagornoĭ chasti Olenegorskogo mestorozhdeniia. (Gornyĭ zhurnal, Nov. 1961. no.11, p.25-28, illus., tables, plan.) Text in Russian. **Title tr.:** Progress of mining in exploiting the upland part of the Olenegorsk deposits.

The Olenegorsk ferruginous quartzite deposits in the east-central region of Kola Peninsula consist of two highlands each 2700 m. in strike and 80-310 m. across. The ore body lies between highlands' horizon and the surface of the hilly side of the area 203 to 233 m. above sea level. The open-mining operations in both parts are described in detail, including the transportation of rock and ore by railroad in the northwestern part and by railroad and truck in the southeastern part. Plan and cross section show location of the ore body. (DLC.)

PERMIAKOV, R. S. *see also*

Kuleshov, A.A., & R.S. Permiakov. Transheĭnaia podsechka blokov . . . 1961. No. 73201

Rosinoer, B.L., & R.S. Permiakov. Sharoshechnoe burenie . . . 1961. No. 75204

PERMIAKOVA, A. A., *see* Shcherbakov, I.P. Rastitel'nost' . . . Viliuia. 1962. No. 75557

74730. **PEROV, V. F.** Skorost' peremeshcheniia oblomochnogo materiala v kamennykh polosakh Khibinskikh gor. (*In:* Moskva. Universitet. Geograficheskiĭ fakul'tet. Voprosy geograficheskogo merzlotovedeniia . . . 1962, p.94-97, table, graph.) 5 refs. Text in Russian. **Title tr.:** Speed of migration of friable material in stone stripes of the Khibiny Mts.

Reports own experimental work on the fluvioglacial terrace of the Poachiok River valley in Kola Peninsula. Three valves were installed to measure the annual velocity of various-size fragments from the 2-6°, 8-9° and 14-16°slopes. The results, tabulated and graphed, indicate that with increased size of fragment, the speed of migration diminishes; with increase of slope from 2-4° to 14-16°, the speed of all fragments increases from 2.5 to 7.0 cm./yr. Silt stripes migrate four times faster than stripes of rock debris. (DLC.)

74731. **PERRY, BYRNE,** *and others.* Simulated wave-riding dolphins. (Nature, Oct. 14, 1961. v.192, no.4798, p.148-50, illus. table.) 10 refs. *Other authors:* A.J. Acosta *and* T. Kiceniuk.

Reviews earlier research (supplementing No. 64487) and unresolved problem (No. 65083), and reports own experiments with a dolphin-like model suspended in a water tunnel with a standing wave. The hydrodynamic data obtained demonstrate that a forward-acting thrust in the wave, acting upon a rigid body with a turbulent flow, enables it to ride the wave. The parameters involved are discussed. (DLC.)

74732. **PERRY, RICHARD BAKER.** A study of the marine sediments of the Canadian Eastern Arctic Archipelago. Ottawa, Queen's Printer, Apr. 1, 1961. 80 p. illus., maps, diagrs., tables. (Canada. Fisheries Research Board. Manuscript report series, oceanographic and limnological, no.89.) 54 refs. Reproduced from M.S. thesis of 1959 to Texas Agricultural and Mechanical College, where data and material from the 1957 cruise of HMCS *Labrador* and from the Fisheries Research Board of Canada were worked up at the Dept. of Oceanography and Meteorology.

Presents results mainly of size analysis of marine sediments in 126 grab samples and 30 cores taken from Labrador coastal waters, Hudson Strait, Baffin Bay, Lancaster Sound, Franklin Strait, Prince Regent Inlet, Gulf of Boothia, Wellington Channel, Peel Sound, and adjacent smaller bodies. General oceanography and geology are outlined; earlier analyses of marine sediments from this and similar regions are summarized. Sampling equipment and procedures were not entirely satisfactory, though the Orange Peel type was used successfully for most of the grab samples. Laboratory procedures included drying, crushing, sifting, more drying, weighing, mechanical analysis, microscopic examination, as well as photography of interesting features. Observations from the *Labrador* deck, of ice-borne material and pertinent

coastal conditions, are given, as are detailed results of sample and core analyses. Material in every grade size from clay to pebbles or cobbles was present in most samples, with finer material predominant but not exclusively present, in deepest water. Ice-rafting occurs extensively, and rapid sedimentation is taking place. Fragments of these sediments resemble those found in other glacial marine environments; similarity to breccias and tills formed in earlier geological periods is noted. Data are summarized in the five appendices; photographs show selected samples. (DN-HO.)

74733. PERSHINA, ANTONIDA IVANOVNA. O polozhenii verkhnei granitsy devona na Pechorskom Urale. (Akademiia nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp.2, Materialy po geologii Komi ASSR, p.3-10.) 14 refs. Text in Russian. **Title tr.:** Position of the upper limit of the Devonian in the Pechora Ural.

Analyzes the stratigraphy of the bordering layers of Devonian and Carboniferous by outlining the lithologic and paleontologic evidences: brachiopods, foraminifers and other fauna are discussed. The boundary between the two is concluded to be the bottom of the zone with mass appearance of *Quasiendothyra communis* Raus. and *Q. kobeitusana* Raus. (DLC.)

74734. PERSHINA, ANTONIDA IVANOVNA. O polozhenii verkhnei granitsy devona na Pechorskom Urale. (*In:* Soveshchanie po utochneniiu unifitsirovannykh stratigraficheskikh skhem paleozoia ... Karbon, 1962, t.3, p.105-107.) Text in Russian. **Title tr.:** On the position of the upper boundary of the Devonian in the Pechora Ural.

Analyzes the arbitrary stratigraphic boundary between Devonian and Carboniferous. Upper Famennian deposits are treated on the basis of the brachiopod, foraminifer, coral and other fauna. A zone with mass appearance of endothyrids: *Endothyra communis* and *Quasiendothyra kobeitusana* is described which tentatively is considered a boundary between Devonian and Carboniferous. (DLC.)

74735. PERSHINA, ANTONIDA IVANOVNA. Siluriiskie i devonskie otlozheniia grady Chernysheva. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1962. 122 p. illus., tables incl. fold., maps., cross-sections and maps in pocket. (Akademiia nauk SSSR. Komi filial.) About 100 refs. Text in Russian. **Title tr.:** Silurian and Devonian deposits of the Chernysheva Ridge.

Presents a detailed stratigraphic description of Silurian Devonian deposits as studied in 1953-1958, particularly in the Bol'shaya Synya, Vangyr, Shar-Yu, Usa, Adz'va, and other river basins, mainly of Komi ASSR. The Silurian deposits are divided into Lower and Upper series, the Lower includes Llandoverian and Wenlockian, the upper: lower and upper Ludlovian. They are divided in turn into horizons. The Chernysheva Silurian deposits are correlated with those of the eastern slope of Northern Ural and the Arctic. Of the Devonian system, only Middle and Upper Devonian are represented; these are described according to typical sections, and correlated with the southern Ural and the Volga-Ural oil-bearing province. Geologic development of the Chernysheva ridges is described. (DLC.)

74736. PERSHINA, ANTONIDA IVANOVNA. Stratigrafiia devona basseinov rek Shar-Yu i Zaostrennoi. (*In:* Akademiia nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.45-55.) 15 refs. Text in Russian. **Title tr.:** Devonian stratigraphy in the Shar-Yu and Zaostrennaya River basins.

Describes Frasnian and Famennian deposits in the Shar-Yu (66°13′N. 58°18′E.) basin as studied in 1956. These two stages are divided into substages and layers, and the fossil fauna of the deposits is indicated. Cross-sections of the deposits are correlated with those of other areas of the western slope of Ural. (DLC.)

PERSSON, HERMAN, 1893– , *see* Fromm, E., & *others*. Interglacial peat . . . near Luleå . . . 1960. No. 71520

74737. PERSSON, SVEN. Utfodringsförsök med renkalvar inom Serriområdet vintern 1960-61. (Samefolket, Oct.-Nov., Dec. 1961, nr.10-11, 12, p.154-56, 166-68, port, tables.) Text in Swedish. **Title tr.:** Feeding experiments with reindeer calves in the Serri area during the winter of 1960-61.

Describes work at the Serri reindeer research station near Jokkmokk in northern Sweden, to prevent excessive loss of calves. All the males and whatever females seem unsuitable for breeding are specially fed for slaughter. The fodder used is reported with details on composition, as are increases in weight of the calves. (SPRI.)

74738. PERTSEV, N. N. Kharkerit i kotoit v skarnakh Poliarnoi IAkutii. (Geologiia i geofizika, 1961, no.7, p.102-105, tables, plates.) 5 refs. Text in Russian. **Title tr.:** Harkerite and kotoite in skarns of polar Yakutia.

Describes physical and optical properties, chemical composition, X-ray powder patterns and other features of these two minerals found in 1959 in Yakutia (place unidentified) in skarns connected with an intrusive massif of Upper Cretaceous age. (DLC.)

PERTSEV, N. N., *see also* Shabynin, L.I., & *others*. Shpinelevo-piroksenovye porody . . . 1961. No. 75515

74739. PERTSEVA-OSTROUMOVA, TAT'IANA ANDREEVNA, 1902– . O vozmozhnosti transplantatsii kambal semeistva Pleuronectidae iz dal'nevostochnykh morei v Barentsovo more. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.43, p.346-50, tables.) 11 refs. Text in Russian. **Title tr.:** On the possibility of transplanting flounders of the family Pleuronectidae from Far-Eastern waters to the Barents Sea.

Reviews earlier proposals for, and activities in fish transplantation and acclimatization, as well as the 27 forms of Far-Eastern pleuronectids. Considering their economic values, and biological conditions in the native and suggested new area, author recommends *Lepidopsetta bilineata,* the rock sole, as eminently suitable for transplantation. (DLC.)

PERUZZI, P., *see* Inman, D.R., & P. Peruzzi. The effects of temperature . . . 1961. No. 72371

PERYAM, DAVID ROGERS, 1915– , *see* Levin, A., & *others*. Systems research . . . 1961. No. 73459

74740. PESHKOVA, G. A. Kobrezniki v Priangar'e. (Akademiia nauk SSSR. Sibirskoe otdelenie. Iz-

vestiĭa 1961, no.5, p.110-14, tables.) 4 refs. Text in Russian. **Title tr.:** *Kobresia* plant association in the Angara River basin.

Reports characteristics of 47 species of grasses of the relict arcto-glacial plant association *Kobresia filifolia* (Turcz.) Meinsh, occurring on dry, cold soils of stony slopes in the Angara River basin. (DLC.)

74741. PESSL, FRED, *Jr.* Glacial geology and geomorphology of the Sortebjorne area, East Greenland. (Arctic, Mar. 1962. v.15, no.1, p.73-76, map.)

Reports studies in 1959 and 1961 of glacial features in five valleys of this area (approx. 72°N. 24°W.) near Mesters Vig. Moraines, erratics, striae, kame terraces, emerged marine deltas, and glacial control of drainage patterns are described. Evidence from these features indicates that: during maximum glaciation, the ice margin extended considerably beyond the present coastline; the higher peaks were nunataks; deglaciation was primarily by lateral thinning and downwasting; the sea was at least 75 meters above its present level; a minor readvance of the glaciers occurred in recent time; and the isostatic adjustment of the land caused rejuvenation of the streams, with extensive canyon cutting. (DGS.)

74742. PESTALOZZI, MARKUS. Praktiske røynsler fra forsøksfolk. (Norden, Oct. 1, 1960. årg. 64, nr.19, p.532.) Text in Norwegian. **Title tr.:** Practical experience of the research people.

Describes preliminary results at the Vågønes Experiment Farm in North Norway in: Italian darnel (*Lolium*) cultivation, grazing on narrow meadow strips changed daily, mowing hay for ensilage, cleaning up meadows after grazing. (DA.)

PETER, GEORGE, *see* Hunkins, K.L., *& others.* Geophys. studies Chukchi cap. 1962. No. 72267

PETERMAN, Z. E., *see* Burwash, R.A., *& others.* Precambrian K-Ar dates . . . 1962. No. 70473

74743. PETERSEN, H. C. Lidt om eskimoisk ornamentik. (Grønland, Aug. 1961, nr.8, p.307-310, illus.) Text in Danish. **Title tr.:** Note on Eskimo ornamentation.

The type of ornamentation most widely distributed over different periods and cultures incorporates zigzag and parallel lines, the Y sign, the circle, etc. derived from masks used in cultic ceremonies. Certain symbols were developed differently in motifs because of their design potential or influence from other peoples. The unusual Dorset type of ornamentation exists only in the eastern part of the Eskimo area; its origin is not known, but traces of the same type of ornamentation are still to be found among the East Greenlanders. (DLC.)

74744. PETERSEN, HANS CHR. To slags is. (Søens verden, 1960-1961. årg. 2, nr.2, p.33-41, illus.) Text in Danish. **Title tr.:** Two types of ice.

Describes ice conditions, types of ice, and problems of ice navigation in the Arctic and Antarctic, to illustrate differences in the two areas. (AIKøbenhavn.)

74745. PETERSEN, LEO M. Surveying Alaska's state lands. (Surveying and mapping, Dec. 1961. v.21, no.4, p.471-73.)

Discusses problems of selecting and surveying some 105 million acres of land available to the State under the Statehood and other Acts. Principles in the land selection and classification are outlined. Patents are issued to the State upon completion of cadastral surveys by the U.S. Bureau of Land Management; about 90% of the land to which Alaska is entitled, has yet to be surveyed. Subdivisional surveys are to be executed by the Alaska Division of Land on contracts with private companies; the various classes of such surveys are outlined to illustrate the scope of the work. (DLC.)

74746. PETERSEN, ROBERT. Karelerne på Grønland, en genopfriskning af en gammel ordtydning. (Grønland, Dec. 1961, nr.12, p.462-68.) Text in Danish. **Title tr.:** The Karelians in Greenland, reviewing an old word interpretation.

Discusses the etymology of "kalâleq", formerly also "karàlek", meaning Greenlander. It came into use in southwest Greenland about 1720 and probably derives from "kareler", a Finnish tribe, and possibly army. Among Eskimos the word is known only in Greenland and Labrador. The r to l mutation indicates a European origin and the distribution and place in the language indicate a young word. Relationship between "kalâleq" and "skrelling", the Norse word for the Greenlanders, is discussed. (DLC.)

74747. PETERSEN, ROBERT. The last Eskimo immigration into Greenland. (Folk, 1962, v.4, p.95-110, illus., map.) 18 refs.

Study based on literature and author's interviews with Eskimo informants in 1957 while conducting investigations in the Igloolik district for the Danish National Museum. Three variants of the migration from Baffin Land to Greenland in the 1850's are cited and analyzed. The route and reasons for the move are described, and characters of the two main leaders, Qillaq the shaman and Orqe the hunter, are evaluated. The probable area of ethnic diffusion is traced by a comparison of personal names (repetitive in each family) in the Baffin Land, Igloolik, and Thule districts. The sources and Eskimo narrative traditions are discussed and the cultural implications of this last migration noted: re-introduction to Greenland of the kayak, bow and arrow, etc. (DSI.)

74748. PETERSIL'E, I. A. Est'-li potok goriūchikh gazov s glubin v Khibinakh? (Akademiĭa nauk SSSR. Izvestiĭa, ser. geologicheskaĭa, Dec. 1961, no.12, p.24-29, tables, diagrs.) 4 refs. Text in Russian. **Title tr.:** Is there a flow of combustible gases from depth in Khibiny?

Reports 1956-1960 investigations in which gas occurrences on the surface, in pores, cavities, fissures and crystals were analyzed. Their properties and composition are reported. The combustible free gas content in various rocks is outlined, but there is no evidence of combustible gas from the depths of the massif. (DLC.)

74749. PETERSIL'E, I. A. O proiskhozhdenii uglevodorodnykh gazov i rasseĭannykh bitumov Khibinskogo shchelochnogo massiva. (Geokhimiĭa, 1961, no.1, p.15-29, tables, diagrs.) 13 refs. Text in Russian. Summary in English. **Title tr.:** On the origin of hydrocarbon gases and dispersed bitumen in the Khibiny alkaline massif.

Reports study of their chemical composition, structure and geologic conditions in this central Kola Peninsula area. Their properties are described from over 500 analyses. Seismic and geophysical investigations are also reported. All the studies indicate the gases and bitumen as having developed during the formation process of the Khibiny intrusion and as not of organic origin. (DLC.)

74750. PETERSIL'E, I. A., *and others.* Opyt primeneniia gazovogo karottazha dlia issledovaniia goriuchikh gazov i bitumov Khibinskogo intruzivnogo massiva. (Geokhimiia, 1961, no.10, p.855-68, illus., tables, diagrs. incl. fold.) 4 refs. Text in Russian. Summary in English. *Other authors:* S.V. Ikorskiĭ, L.I. Smirnova, A.M. Romanikhin, *and* E.B. Proskuriakova. **Title tr.:** Attempt at the use of gas logging in investigation of combustible gases and bitumens of the Khibiny intrusive massif.

Reports geochemical investigation at well No. 168. Distribution and composition of carbon, and bitumens in various rocks are analyzed. Special attention is given to deep well sections, where possibility of commercial accumulation of hydrocarbon gases in the abyssal zones of the massif is not excluded. (DLC.)

74751. PETERSIL'E, I. A., *and* **E. B. PROSKURIAKOVA.** Rasseiannye bitumy shchelochnykh porod Khibinskogo plutona. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Apr. 1961, no.4, p.74-84, tables, graphs.) 11 refs. Text in Russian. **Title tr.:** Dispersed bitumens of the alkaline rocks of the Khibiny pluton.

Reports a chemical study of bitumens detected in alkaline intrusive rocks. They are visible by luminescent lamp in rock samples, filling the pores and small fissures. Elemental and group composition of bitumens in foyaite, rischorrite, urtite and other rocks, is reported. Spectral analyses of thick oil, benzol-tar and spirit-benzol-tar are described and data tabulated. The origin of these bitumens is discussed. (DLC.)

74752. PETERSIL'E, I. A. Rezul'taty issledovanii gazonosnosti Khibinskikh tundr. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy geologii . . . 1961, p.89-102, tables, graphs, diagrs. incl. fold.) 11 refs. Text in Russian. **Title tr.:** Results of investigations of the gas-bearing properties of the Khibiny tundras.

Reports a three-year study started in 1955. A survey was made to define the area of gas occurrence, rock saturation, gas migration in rock fissures, etc. Khibiny massif rocks contain hydrocarbon gases, 85-95% methane and 2-10% heavy hydrocarbons. Other properties of the gases, their occurrence, migration, etc. are described. The possibility is excluded that these gases have migrated from sedimentary rocks and are of inorganic origin. (DLC.)

74753. PETERSON, G. HØPNER. The distribution of *Balanus balanoides* (L.) and *Littorina saxatilis*, Olivi, var. *Groenlandica*, Mencke in northern West Greenland with remarks on some causative factors. København, Reitzel, 1962. 42 p. illus., col. plates, maps (Meddelelser om Grønland, bd. 159, nr.9.) 21 refs.

Reports on the distribution of these barnacles and periwinkles, as observed in 1958-1960 on tidal rocks in forty localities (described) at Godhavn and other parts of Disko Bugt, the Umanak and Upernavik districts. Ecological factors affecting distribution are considered for each species; and the distribution (including northern) limits of the two are compared. *B. balanoides* are attracted to localities of high salinity and/or temperature, concentrations of other barnacles, and small pits in the rocks; neither ice erosion nor ooze in melt water are believed important. The periwinkles migrate seasonally, and are very sensitive to fresh water. Though both species are partly dependent on the same special factors in the tidal zone, especially in crevices, their distribution limits do not coalesce.—From author's summary. (DGS.)

PETERSON, R. S., *see* Irving, L., *& others.* Regulation of temperature in fur seals. 1962. No. 72409

74754. PETRASHKOV, G. D., *and* **L. N. KHRUSTALEV.** O vliianii tekstury ottaiavshikh glinistykh gruntov na ikh prochnost' i fil'tratsionnye svoĭstva. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961. no.1, p.31-35, diagrs., tables.) 6 refs. Text in Russian. **Title tr.:** The effect of the texture of thawed clay ground on its strength and filtering capacity.

Reports the study carried out by the Northern Division of the Institute of Permafrostology on the surface layer of argillaceous soil around Vorkuta and the Mir kimberlite pipe area in Yakutia; comparisons are made with loamy ground which did not undergo the freezing-thawing process. The clay ground was found to lose the homogeneity of its structure when frozen, and its strength when thawed to be 2-3 times less, its filtering capacity 400 times greater than those of the ground not frozen. (DLC.)

74755. PETRENKO, E. S. Vrediteli lesov tsentral'noĭ IAkutii. (Lesnoe khoziaĭstvo, Oct. 1962. god 15, no.10, p.46-47.) Text in Russian. **Title tr.:** Forest pests of central Yakutia.

Reports results of a three-year investigation of the Institute of Forestry Field Station in the Yakutsk, Amga and Mengino-Kangalassy districts. The pests damaging larch (92% of the forest), pine and birch are listed. The appearance of the Siberian egger or pine moth *(Dendrolimus pini)* around Yakutsk, depredations of *Coleophora laricella* on 50,000 hectares of larch in the Verkhoyansk area in 1943, and those of wood-borer and bark beetles in other forests are noted. It is recommended to dry larch before felling, by cutting a ring in the bark and soaking it with sodium arsenite; this protects the timber from pests. (DLC.)

74756. PETRENKO, E. S. Vrediteli semian listvennitsy daurskoĭ v tsentral'noĭ IAkutii. (Lesnoe khoziaĭstvo, June 1961. god 14, no.6, p.44-46, illus.) Ref. Text in Russian. **Title tr.:** Pests of dahurian larch seed in central Yakutia.

Insect damage to larch seeds retards the reforestation of cutting areas: in 1959-1960, 80-90% of such seed in parts of the Yakutsk Forestry Farm were damaged by *Hylemyia laricicola* Karl, *Semasia perangustana* Shell, *Dioryctria abietella* F., and by species of fam. Cecidomyidae. Entomomorphological features and biological cycles of these insects are briefly outlined. Aerial application of DDT and Hexachlorcyclohexane during

the larch flowering and a week later, using 50 kg. insecticide/hectare, is recommended for control. (DLC.)

74757. **PETRENKO, V. K.** Usloviя pogody nad Okhotskim morem v kholodnoe polugodie po materialam aviarazvedok. (Vladivostok. Dal'nevostochnyĭ nauchno-issledovatel'skiĭ gidrometeorologicheskiĭ institut. Trudy 1962, vyp.14, p.84-87.) Text in Russian. **Title tr.**: The weather conditions over the Okhotsk Sea in the cold half of the year according to aerial survey.

Reports data from 60 flights in Nov. 15, 1958-Apr. 15, 1959, and Jan.-Mar. 1960, made to study sea ice and its influence on the weather. Visual observations, atmospheric pressure, air temperature, and wind velocity were registered. Weather conditions were observed to deteriorate over ice barriers with steady cloudiness, poor visibility, etc. At 100-600 m. elevation, the air temperature above open water was 5°-10°C. higher than above ice-covered areas. Some other weather features also are briefly described. (DLC.)

PETRIE, A. G., *see* Kendall, G.R., & A.G. Petrie. Frequency thunderstorms Can. 1962. No. 72730

PETRIE, L. E., *see* Fulton, B.J., & L.E. Petrie. Analysis . . . auroral zone. 1961. No. 71528

74758. *PETROLEUM TIMES*. Geophysical survey on the Mackenzie River, making use of the Sparker instrument. *(Its:* v.64, no.1631, Feb. 12, 1960, p.117-18, illus.)

Describes boats and equipment used in a seismic survey conducted by Accurate Exploration Ltd. in summer 1959, from Hay River across Great Slave Lake and down the Mackenzie River to Norman Wells. The Sparker instrument, developed by Woods Hole Oceanographic Institution, uses a 12,000 volt spark fired under water as a sound source and produces a continuous profile, as a depth sounder does, with a penetration 400-1200 ft. below the river bed. This survey was an experiment to determine requirements of future operations using a cheaper and more rapid system of conducting work on oil possibilities. (CaOG.)

PETROV, B. F., *see* Akademiя nauk SSSR. *Institut geografii.* Dal'niĭ Vostok . . . 1961. No. 69546

74759. **PETROV, DMITRIĬ DMITRIEVICH.** Material'naя pomoshch' trudiashchikhsя IAkutii frontu v gody Velikoĭ Otechestvennoĭ voiny Sovetskogo Soюza, 1941-1945 gg. (Akademiя nauk SSSR. IAkutskiĭ filial. Institut яzyka, istorii i literatury. Sbornik stateĭ po istorii IAkutii sovetskogo perioda, 1955. vyp.1, p.124-34, table.) Approx. 15 refs. Text in Russian. **Title tr.**: Material aid to the front lines by the workers of Yakutia during the Soviet Union's Great Fatherland War, 1941-1945.

Describes and tabulates voluntary cash, food, and clothing donations, bond subscriptions, etc. by Yakut collective farm and industrial workers. (DLC.)

PETROV, E. N., *see* Ziat'kova, L.K., & E.N. Petrov. Analiz prodol'nykh profileĭ rek . . . 1961. No. 76687

PETROV, N. V., *see* Romankevich, E.A., & N.V. Petrov. Okislitel'no-vosstanovitel'nyĭ potentsial . . . 1961. No. 75181

74760. **PETROV, NIKOLAĬ EGOROVICH.** Otglagol'nye poslelogi v яkutskom яzyke. (Akademiя nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniя 1961. vyp.6, p.45-56.) 12 refs. Text in Russian. **Title tr.**: Verbal postpositions in Yakut.

Morphological study of eight postpositions and their grammatical use to denote relationship between actions and objects. (DLC.)

PETROV, OLEG MIKHAĬLOVICH, *see* Merklin, R.L., & *others.* Atlas-opredelitel' mollюskov . . . 1962. No. 73947

74761. **PETROV, V. S.,** *and* **O. T. NIKITIN.** Issledovanie sostava stabil'nykh izotopov ugleroda v kimberlitakh. (Moskva. Universitet. Vestnik, ser. 4, geologiя, May-June 1962. no.3, p.51-53, table.) 5 refs. Text in Russian. **Title tr.**: Investigation of stable isotopes of carbon in kimberlites.

Presents tabulated results on isotope composition of carbon-containing minerals and enclosing rocks taken from the Mir and Udachnaya kimberlite pipes in Yakutia. Carbonate minerals and rocks are disclosed as the source of carbon from which diamonds in kimberlites were formed. (DLC.)

PETROVIĆ, V., *see* Andjus, R.K., & V. Petrović. Hypothermie . . . 1961. No. 69773

PETRUSHEVSKIĬ, B. A., *see*

IUGG. Seismol. proceedings 1960. 1961. No. 72397

Pacific Science Congress. 1961. No. 74619

74762. **PETRUSHKINA, Z. L.** Fotograficheskaя obrabotka cherno-belykh aėronegativov dliя deshifrirovaniя aėrosnimkov pri poiskakh korennykh mestorozhdeniĭ almazov. *(In:* Akademiя nauk SSSR. Laboratoriя aėrometodov. Primenenie aėrometodov pri poiskakh . . . almazov, 1960, p.52-54, table.) 2 refs. Text in Russian. **Title tr.**: Photographic processing of black-white aerial negatives for air-photo interpretation in primary diamond deposit prospecting.

Reports results of a study in western Yakutia to work out a method for aerial mapping of landscape details, pipe-like kimberlite bodies, and the best representation of vegetation. Negatives with a contrast coefficient ranging between 1.80 and 1.83 were found best. Average density of negative, composition of developer, and techniques are described. (DLC.)

74763. **PETTERSEN, TRYGVE.** Brev fra verdens nordligste landbrukstids-skriftsabonnent. (Norden, Dec. 15, 1960. årg. 64, nr.24, p.678-80, illus.) Text in Norwegian. **Title tr.**: Letter from the world's northernmost subscriber to an agricultural journal.

Manager of the Norwegian mining company's farm at Longyearbyen describes life on Svalbard. The farm has nine milk cows, 250 hogs, 300 hens and 12 pack dogs. In 1960 the stock grazed on grassland for 60 days, the first time since World War II. Because so little fresh milk is produced, canned or dried milk may supersede it; the dogs are being replaced by mechanized transport. Most of the mining personnel do a little gardening; they have good wages, low taxes, and most save money for farming in Norway. (DA.)

74764. **PETTUS, TERRY.** Expedition to Russian America. (Beaver, Winter 1962. outfit 293, p.8-19, illus., map.)

Recounts, from G.R. Adams and F.M. Smith's diaries, the activities of the Norton Sound Division of the Western Union Telegraph Expedition. The party under Major R. Kennicott explored and built a telegraph line in the Yukon River area of Alaska during Sept. 1865-Aug. 1867. (DI.)

74765. PETUKHOV, P. Z., *and others.* Vliianie vzryvov na shtangovuiu krep'. (Gornyĭ zhurnal, Dec. 1961, no.12, p.27-30, illus.) Text in Russian. *Other authors:* A.V. Kazantsev, M.I. Gusarov, *and* S.I. Étingov. **Title tr.:** Effect of blasting on roof bolting.

Reports results of investigation carried out in Northern Ural bauxite mines. The arrangement of dynamometers and tensimeters in anchor bolts is indicated; oscillographic records are presented and discussed in detail with conclusion that the blast pressure waves in the rocks of the shafts observed were no threat to the stability of the roof bolting. (DLC.)

74766. PEVZNER, M. E., *and others.* Vliianie burovzryvnykh rabot na ustoĭchivost' bortov kar'erov. (Gornyĭ zhurnal, Dec. 1961. no.12, p.12-16, tables, diagrs.) 3 refs. Text in Russian. *Other authors:* V.F. Kirienko *and* D.N. Kim. **Title tr.:** Effect of drilling and blasting on the stability of open pit sides.

Describes the methods of drilling and blasting used by engineers of the Noril'sk Mining Combine; observational data are presented with conclusion that blasting weakens the rock in the 30 m.-thick side wall zone. Control measures are considered and recommendations offered. (DLC.)

74767. PÉWÉ, TROY LEWIS, 1918– , and R. E. CHURCH. Age of the spit at Barrow, Alaska. (Geological Society of America Bulletin, Oct. 1962. v.73, no.10, p.1287-92, map, graphs.) 7 refs.

Describes this five- plus three-mile spit, northernmost tip of the United States at 71°23′N. 156°29′W. Age of Nuwuk site at the north end is estimated by archeologists at several centuries and that of Birnirk at about 2000 years. Three pieces of wood were found in Aug. 1961 in one of eight auger holes drilled into the frozen beach gravel, in the course of ice-wedge studies. The specimens are driftwood; one is radiocarbon-dated at 1100 ± 120, another at 1090 ± 140 years; both are probably close to the age of the sediments, but the third specimen, dated at 10,800 ± 300 yrs., seems not. Thus the Barrow spit sediments at 6.5 - 9.6 ft. depth near the tip are considered about 1100 yrs. old. (DGS.)

74768. PÉWÉ, TROY LEWIS, 1918– , and N. R. RIVARD. Geologic map and section of the Fairbanks D-3 quadrangle, Alaska. Washington, D.C., 1961. Map sheet with text, 32 x 46 in. (U.S. Geological Survey. Miscellaneous geologic investigations. Map I-340.) 14 refs.

Map at scale 1:63,360 covers a 250 sq. mi. area in central Alaska; part of the Tanana valley agricultural area is included; most of the area is accessible by secondary roads or by the Alaska Railroad. Except for the southeast corner, the map-area lies in the Yukon-Tanana upland and is covered by Quaternary sediments a few inches to several hundred feet thick. The Precambrian Birch Creek schist underlies these sediments. Geologic history is little known prior to the complex events of Quaternary time, with alternating periods of erosion and deposition, formation and destruction of permafrost. The eight geologic units are described in summary table; foundation conditions, effects of permafrost and earthquakes are briefly considered. Samples of soils and crushed aggregate are analyzed for size, moisture content, etc.; subsurface data from nearly 100 map localities are tabulated. (DLC.)

74769. PÉWÉ, TROY LEWIS, 1918– . University of Alaska Gulkana Glacier Expedition. (Arctic, Mar. 1961. v.14, no.1, p.74-75.)

Describes investigations, in summer 1960, of this 2.5-mile long glacier in interior Alaska, 135 miles southeast of Fairbanks. Its ablation, movement, and structure (foliation and crevasses) were studied, gravity measurements taken, and topography mapped at scale 1:2000. At least two recent advances are indicated, probably to be correlated with those of glaciers to the north, in 1750 and 1850. Summer 1961 fieldwork is noted in the same journal Dec. 1961, p.236-37: two two-man parties studied the ablation and surface motion of the glacier; meteorological observations and gravity measurements were also made. (DGS.)

PÉWÉ, TROY LEWIS, 1918– , *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Cederstrom, D.J., & T.L. Péwé. Ground-water data Fairbanks. 1948. No. 70629

Williams, J.R., & *others.* Geol. . . . Fairbanks D-1 quad. 1959. No. 76564

PEYTON, LEONARD J., *see* Irving, L., & *others.* Regulation of temperature in fur seals. 1962. No. 72409

74770. PFLEIDER, EUGENE P., *and* **C. A. DUFRESNE.** Transporting open-pit production by surface-underground haulage. (Mining engineering, June 1961, v.13, no.6, p.592-97, map, diagrs., sections, table.) 7 refs.

Describes the Iron Ore Co. of Canada Carol Project designed to utilize a truck-ore, pass-adit system at its property in Labrador 225 mi. north of Seven Islands. Comparison is made of several methods of transporting ore from the working face at the Carol-Lorraine orebodies to the concentrator at Wabush Lake. (DGS.)

PFORR, BARBARA L., *see*

Larichev, V.E. Neolithic . . . Cis-Baikal. 1962. No. 73317

Levin, M.G. Blood group data Siberia. 1962. No. 73462

74771. PFOTZER, G., *and others.* A contribution to the morphology of X-ray bursts in the auroral zone. (Journal of geophysical research, Feb. 1962. v.67, no.2, p.575-85, tables, diagrs.) 28 refs. *Other authors:* A. Ehmert, H. Erbe, E. Keppler, B. Hultqvist, *and* J. Ortner.

Balloon flights (8) using thin-walled Geiger counters in conjunction with ionization chambers were carried out at Kiruna, Sweden, Sept. 16 - Oct. 5, 1960. X-ray bursts, closely correlated with cosmic noise absorption, were recorded on Sept. 27 and Oct. 1 and 2. The burst onset showed close correspondence with magnetic disturbances, but in

the subsequent phases only tenuous correlations were observed. The events of Oct. 1 and 2 were probably caused by the same extraterrestrial source, possibly a beam of ionized solar gas persisting throughout two rotations of the sun. The sequential relationship of pronounced magnetic disturbances and cosmic noise absorption periods of several hours' duration on all three dates is tentatively interpreted as causal.–From authors' abstract. (DLC.)

74772. **PHELAN, JOHN T.** Frostbite. (International College of Surgeons. Journal, Nov. 1959. v.32, no.5, p.501-509, illus.) About 50 refs.

Contains a brief physiopathological and therapeutic review of cold injury, based on 93 cases. It is indicated that much of the tissue injury and necrosis is due to the direct effect of cold; vascular sequels noted after thawing are considered complications due to the primary cold injury. Treatment of the first and second phase is outlined. (DNLM.)

PHELPS, L. G. J., *see*

Marcus, S., *& others.* Acute & chronic exposure low temp. & survival. 1961. No. 73801

Marcus, S., *& others.* Effect of low ambient temperatures . . . 1962. No. 73804

Marcus, S., *& others. K. pneumoniae* passed mice low temp. 1961. No. 73806

Marcus, S., *& others.* Low ambient temp. mice tumor. 1961. No. 73805

Marcus, S., *& others.* . . . low temp. & develop. *S. pallida* . . . 1961. No. 73803

Marcus, S., *& others.* Low temp. stress & challenged mice. 1961. No. 73802

74773. **PHILBERTH, KARL.** Écoulement de la glace groenlandaise. (Revue de géomorphologie dynamique, Jan.-Mar. 1962. année 13, no.1-3, p.18-25, diagr., section) 47 refs. Text in French. Summary in German and English. **Title tr.:** Movement of Greenland ice.

Summarizes recent research on the formation and movement of the inland ice. Speed of transformation from snow to ice depends on the air temperature and on annual precipitation. Problems of the material balance, also of temperature and movement in the lower layers are only partly solved. For measuring temperature pressure, etc. at the base of the ice sheet, a proposed thermic probe is described and illus. The equipment is of moderate cost and expendable; wind-generated electricity could be used for power. (DLC.)

74774. **PHILIP, ROBERT N.,** *and* **D. B. LACKMAN.** Observations on the present distribution of influenza A/swine antibodies among Alaskan natives relative to the occurrence of influenza in 1918-1919. (American journal of hygiene, May 1962. v.75, no.3, p.322-34, illus., tables, map.) 15 refs.

Account of study for antibodies to influenza A/swine, and other type-A viruses. Alaskan villages where influenza occurred in 1918 resembled Idaho towns, in that nearly all persons born before 1920 and many born in the twenties had A/swine antibodies. In Alaskan villages which had no outbreak, prevalence and titers of these antibodies were low. The significance of these findings for the understanding of the 1918-19 influenza pandemic, is discussed. (DLC.)

74775. **PHILIP, ROBERT N.,** *and others.* Serologic and skin test evidence of tularemia infection among Alaskan Eskimos, Indians and Aleuts. (Journal of infectious diseases, 1962. v.110, no.3, p.220-30, tables, map.) 22 refs. *Other authors:* B. Huntley, D.B. Lackman, *and* G.W. Comstock.

Following an outline of earlier studies authors present evidence based on over a thousand tests "that tularemia infections have occurred in recent years in many Eskimo and Indian communities throughout much of the state." The rarity of clinical tularemia may therefore be attributed to avirulence of the tularemia strains predominant in Alaska. (DNLM.)

PHILIP, ROBERT N., *see also*

Comstock, G.W., *& R.N. Philip.* Decline TB . . . Alaska. 1961. No. 70797

Reinhard, K.R., *& others.* Immunity polio Alaska 3: antibodies. 1960. No. 75103

74776. **PHILLEO, EDGAR S.** Construction of a satellite tracking station on permafrost. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.71-79, diagrs.)

Describes this construction: antennas, three buildings, and utilities, near College, Alaska. Seasonal frost penetrates approx. five ft. below the moss-covered ground surface, the permafrost upper limit ranges 5 - 40 ft. below the surface. Buildings and antennas were placed on four-in. steel pilings driven into the permafrost, with six-inch sleeves around the pilings and the space between filled with wax. Precautions against permafrost degradation included discharge of treated sewage into a nearby creek. (CaMAI.)

74777. **PHILLIPS, FRANCIS JAMES, 1904–** . A preliminary report of out-patient treatment of pulmonary tuberculosis. (Alaska medicine, Mar. 1961. v.3, no.1, p.1-4, illus.) 2 refs.

Discusses the advances of out-patient and "wonder drug" treatment since 1950; effects of Ambulatory Chemotherapy Program (ACP), mass X-raying through air-borne apparatus, nurse-aid, etc., great improvement in the TB picture (with statistics). (DNLM.)

74778. **PHILLIPS, FRANCIS JAMES, 1904–** . The tuberculosis problem in Alaska. (Alaska medicine, Dec. 1962. v.4, no.4, p.101-102.)

Discusses number of active and probably active cases in 1937-1961, reactivated or reopened cases, and recent mortality rates. Incidence among natives and whites, and causes of high incidence are reported. Plans for improvements in services, prophylaxis, and special tuberculosis project are outlined. (CaMAI.)

PHILLIPS, FRANCIS JAMES, 1904– , *see also* Alaskan Science Conference 1960. 1961. No. 69643

PHILLIPS, GUY E., *see* Alaskan Science Conference 1960. 1961. No. 69643

PHILLIPS, LAURENCE, *see* Hemenway, C.L., *& others.* Nanometeorites. 1961. No. 72110

74779. **PHILLIPS, ROBERT ARTHUR JOHN.** The Klondike legend. (Canadian geographical journal, Mar. 1962. v.64, no.3, p.76-85, illus.)

Describes Dawson City, Yukon Territory, during the 1898 gold rush days, and discusses future prospects of the town. Some old buildings still standing are noted, as is the Palace Grand

Theatre under reconstruction as a national historic site. Dawson City is connected by road with the Alaska Highway, thus accessible for tourists. (DGS.)

74780. **PHILLIPS, ROBERT ARTHUR JOHN.** No cold war in the Arctic. (Canadian forum, Jan. 1956. v.35, no.420, p.222-24.)

Discusses Canadian-Russian relations and compares their development northward toward their common boundary, the arctic sea. The Russian North is the more advanced; climate, agriculture, forests, and need for living space are factors in its development. Canada lacks road and rail transportation in the North. The necessities of life for the 25,000 people in Yukon and Northwest Territories should be provided locally to reduce living costs. Eskimo problems are discussed. Their knowledge of living in the Arctic should be utilized, as should Russian experience in northern development. (CaOCU.)

74781. **PHILLIPS, ROBERT ARTHUR JOHN.** The opening door. (North, Jan.-Feb. 1961. v.8, no.1, p.11-17, illus.) Second part of No. 67435.

Discusses schools for native peoples of northern Canada: curriculum, size, and teachers' qualifications. Concentration of pupils in the sparsely settled Northwest Territories is to be achieved by provision of large residential schools for older children and for the younger, small hostels nearer home. (DLC.)

74782. **PHILLIPS, ROBERT ARTHUR JOHN.** Three is not a crowd. (North, July-Aug. 1962. v.9, no.4, p.1-11, illus.)

Discusses the concept of cultural integration as it applies to the future of Canadian Eskimos. Their intellectual development and culture may remain an entity, as part of the Canadian culture, without assimilation. The recent expansion of their traditional art, development of a uniform orthography, and other evidences of the continuing vitality of Eskimo culture are discussed. (CaMAI.)

PHILLIPS, ROBERT ARTHUR JOHN, *see also* Carter, F.A.G., & R.A.J. Phillips. Organizing for northern administration . . . 1962. No. 70622.

74783. **PHILPOTTS, A. R.** Textures of the Ungava nickel ores. (Canadian mineralogist, 1961. v.6, pt.5, p.680-88, illus., map.) 4 refs.

Describes general geology of the Cape Smith - Wakeham Bay belt of Northern Quebec, also the copper-nickel deposits. These are of no economic value, but exhibit a unique case of selective replacement, in which most of the primary textures have been preserved in the "ore." The hypothesis of Wager, Vincent, and Smales (No. 55906) concerning nickeliferous pyrrhotite deposits in Greenland does not seem to apply to these deposits. (DLC.)

74784. **PIADYSHEV, I.** Belye medvedi na ostrove Vaigach. (Okhota i okhotnich'e khoziaĭstvo, Dec. 1961. god 7, no.12, p.55.) Text in Russian. **Title tr.:** Polar bears on Vaygach Island.

Notes their disappearance from Vaygach half a century ago, and their reappearance there in fall - winter 1960, for reasons not yet clear. (DLC.)

74785. **PIADYSHEV, N. P.,** *and* **L. P. KHLOBYSTIN.** Novaia stoianka v Perchorskom Zapoliar'e. (Akademiia nauk SSSR. Institut arkheologii. Kratkie soobshcheniia 1962. vyp.92, p.71-75, illus.) 7 refs. Text in Russian. **Title tr.:** New site in the Pechora polar region.

Describes the lithic and pottery inventory of a camp site discovered by chance in 1960 near Ortino, on the right bank of the lower Pechora. Vessel shapes, technique of ornament application and use of a peculiar comb- and tooth-stamped zigzag pattern have little in common with neighboring Pechora culture sites. Strong affinities are found however, with lower Ob and eastern Bol'shezemel'skaya Tundra pottery of the late 2nd-early 1st millennium B.C. Despite the neolithic aspect of its stone artifacts, Ortino is apparently the first bronze age site yet found in the Pechora North. It also marks the western limit of the sphere of influence of lower Ob tribes. (DLC.)

74786. **PIATENKO, IU. A.,** *and* **A. A. VORONKOV.** Vlasovit, tsirkonosilikat s novym tipom kremnekislorodnogo radikala. (Akademiia nauk SSSR. Doklady, Dec. 1, 1961. t.141, no.4, p.958-61, tables, diagrs.) 4 refs. Text in Russian. **Title tr.:** Vlasovite, a zirconium silicate with a new type of silicon-oxygenous radical.

Reports X-ray analyses of vlasovite, a new mineral recently discovered in the Lovozero alkaline massif of Kola Peninsula. Its chemical formula is $Na_2ZrSi_4O_{11}$, and accordingly it is close to narsarsukite known in Greenland. Crystal structure, atomic arrangement and chemical-crystallographic properties of vlasovite are described. It is considered a new structural type of silicates with an endless chain of $[Si_4O_{11}]_\infty$. (DLC.)

74787. **PIATERIKIN, N. K.** Povedenie sel'di v osenne-zimnii period promysla. (Rybnoe khoziaĭstvo, 1962. god 38, no.8, p.12-15, illus., graph.) Text in Russian. **Title tr.:** Behavior of herring during the fall-winter period of fishing.

Reports on echo-soundings made in the Norwegian Sea during 1958-1960. Diurnal, both vertical and horizontal movements are recorded and described. Implications to fishing are noted. (DLC.)

PIATNENKOV, B. A., *see* Koptev, A.P., & B.A. Piatnenkov. O pogloshchenii i proniknovenii solnechnoĭ radiatsii . . . 1962. No. 72958.

74788. **P'IAVCHENKO, N. I.** Kratera ne bylo; bolota mezhdurech'ia Podkamennoĭ Tunguski i Chuni. (Priroda, Aug. 1962. god 51, no.8, p.39-42, illus.) Text in Russian. **Title tr.:** There was no crater; swamps on the Podkamennaya Tunguska - Chuna watershed.

Reports study of hummocky swamps in the area of the great 1908 meteorite fall, in connection with the expedition of 1961. From air observations and field studies, the peat mounds are described: their composition, vegetation, and other features. Occurrence and degradation of permafrost are noted. The forest fire which followed the meteorite fall is discussed. No crater has been found, and the formation of these swamps has no relationship to cosmic phenomena of the meteorite. (DLC.)

74789. **P'IAVCHENKO, N. I.** O sledakh noveĭshego passivnogo oledeneniia na Severe Evropeĭskoĭ i Zapadno-Sibirskoĭ ravnin SSSR. (*In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.62-66.) Text in Russian. **Title tr.:** On traces of the newest passive

glaciation in the north of the European and West Siberian plains of the USSR.

Reports study of peat bogs in the lower Ob basin, Bol'shezemel'skaya Tundra, Kola Peninsula and Pechora River basin. Specific distortion of peat mounds, glacial carved valleys, washed-off soils are described as evidences of passive glaciation. Spore-pollen analyses indicate its occurrence at the end of middle - beginning of late Holocene, i.e. Recent Quaternary. (DLC.)

74790. **PICHLMAIER, H.**, *and others*. Experimentelle Untersuchungen über die Beeinflussung der Darmmotorik am lebenden Tier durch Unterkühlung. (Archiv für klinische Chirurgie, 1961. Bd. 296, Heft 5, p.465-71, illus.) 14 refs. Text in German. *Other authors:* H. Keyssler *and* R. Pärhofer. **Title tr.**: Experimental investigations on the control of intestinal movements in the living animal, by hypothermia.

Lowering of body temperature resulted in a slowing, and finally in a stoppage of intestinal movements of the guinea pig. The drop in number and force of peristaltic movements, was accompanied by a reduction of intestinal tonus resulting in excessive filling of the intestines. Prostigmine preserved its peristalsis-stimulating properties during hypothermia. (DNLM.)

74791. **PICHOTKA, JOSEPH,** *and* **I. GRUPP.** Die Körpertemperatur normaler und schilddrüsenloser Meerschweinchen bei freier Wahl der Umgebungstemperatur. (Zeitschrift für Biologie, 1961. Bd. 112, Heft 5, p.317-30, illus.) 21 refs. Text in German. Summary in English. **Title tr.**: Body temperature of normal and thyroidectomized guinea pigs with free choice of environmental temperature.

When permitted to choose environmental temperature, both normal and thyroidectomized animals showed identical rectal temperatures. The two groups choose characteristically different ambient temperatures. It is indicated that choice of ambient temperature is a necessary condition for maintaining the species' characteristic body temperature. (DNLM.)

74792. **PICKARD, M. K.** Administration for development in northern Canada: how it looks to a private citizen. (Canadian public administration, Dec. 1960. v.3, no.4, p.367-71.) Paper presented to the 12th annual conference of the Institute of Public Administration of Canada, Banff, Alberta, Sept. 14-17, 1960.

Northern Canadian settlements are expected to be small and close to mineral production on which future development depends. Administration could be improved by increasing local authority and utilizing the summer season more for work. The government should assist private industry by developing transportation, electric power, and extending to five years the tax-free period for mining operations. (CaOCU.)

74793. **PIERCE, CHARLES.** Is sea level falling or the land rising in S.E. Alaska? (Surveying and mapping, Mar. 1961. v.21, no.1, p.51-56, illus., tables, map.) Ref.

Describes the U.S. Coast and Geodetic Survey tidal survey of the area; 20 portable tide-gage stations were established in 1959 and a similar number in 1960, mostly at places where tidal bench marks had been set previously. Long-term data of observations are analyzed and the rate of change in land elevation determined for 16 stations. The largest changes (0.11 ft./yr.) occurred north of Icy Strait in the Glacier Bay area. It is considered unlikely that the sea level has fallen in this limited area while rising in the World Ocean. Consequently, the movement represents land uplift, which may be explained by the decreasing weight of receding glaciers. Names of about a dozen places are traced historically in introduction. (DLC.)

74794. **PIERCE, JOE E.** Possible electronic computation of typological indices for linguistic structures. (International journal of American linguistics, Oct. 1962. v.28, no.4, p.215-26, tables.) Refs.

Comparative methodological study of phonemic and morphological features required to type linguistic structures. Haida, Tlingit, and Tsimshian are among the 14 languages analyzed. (DSI.)

74795. **PIERUCCI, LOUIS,** *Jr., and others*. Studies in profound hypothermia. (American Society for Artificial Internal Organs. Transactions, 1960. v.6, p.197-203, illus.) 16 refs. *Other authors:* G.J. Haupt *and* J.Y. Templeton, III.

Reports experiments with dogs submitted to blood-stream cooling and autogenous lung gas exchange with biventricular bypass. Arterio-venous oxygen saturation, and the pH decreased with cooling, CO_2-tension increased. High flow rates of 100 ml./kg. body wt./min. prevented severe metabolic acidosis, noticed with lower flow rates. Conditions during rewarming are also noted. (DNLM.)

PIERUCCI, LOUIS, *Jr., see also* Ballinger, W.F., *& others*. Accumulation . . . excess lactate . . . 1962. No. 69991

74796. **PIGGOTT, W. R.** The operation of radio altimeters over snow-covered ground or ice. (Institute of Radio Engineers. Proceedings, May 1961. v.49, no.5, pt.1, p.965.) Ref.

Points out the danger of confusing the signal weakly reflected from the snow cover with that strongly reflected from the underlaying medium (sea, ice, frozen ground), when radio altimeters are relied upon during landing or low-altitude flying. Data from vertical incidence soundings at Halley Bay, Antarctica, are cited to elucidate the problem. Additional data given by A.H. Waite, Jr. in the Sept. 1961 issue of the same journal, p.1449, reporting American observations in Greenland and Antarctica together with published sources of the complete data. (DLC.)

74797. **PIHLAINEN, JOHN A.** An approximation of probable permafrost occurrence. (Arctic, June 1962. v.15, no.2, p.151-54, table, graph.) 6 refs.

Describes use of air temperatures to determine permafrost presence for engineering purposes. Annual mean temperature and thawing index (a yearly summation of daily mean temperature over 32°F.) in 61 localities of northern Canada were compared with reported permafrost occurrences. The latter are divided into four categories: free of permafrost; discontinuous permafrost; continuous permafrost in forest, and in tundra. Correlations were found in all but twelve of the localities; the latter are considered individually and in some, permafrost was uncertain. (DGS.)

74798. PIHLAINEN, JOHN A. Fort Simpson, N.W.T., engineering site information; soil and permafrost conditions. Ottawa, Aug. 1961. 9 l., table, illus., map, graphs. (National Research Council of Canada, Division of Building Research, Technical paper no.126.) 4 refs.

Contains general remarks on the locality, an island at the junction of the Liard and Mackenzie Rivers, and on the climate, history and land use, supplemented by graphic summaries. Thirty boreholes were drilled in Aug.-Sept. 1958, at various locations on the island; ten did not encounter permafrost at depth drilled (13-45 ft.). Depth to permafrost in the remaining 20 holes ranged from 3.5 to 18 ft. Soils consist mainly of a series of stratified silts and fine sands, with some clay and organic materials. Results of mechanical analyses are discussed and graphed; moisture content in relation to depth is compared with Aklavik, and is graphed for two representative boreholes. Permafrost is widespread but not continuous, though favored by climate; vegetative cover is the important factor in the present distribution. Settlement has tended to thaw the permafrost to 30 ft. or more in areas occupied 75 yrs. or more. (DLC.)

PIHLAINEN, JOHN A., *see also* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

PĬP, BORIS IVANOVICH, *see*

Aver'ev, V.V., *& others*. Problems of using volcanic thermae . . . 1960. No. 69918

Aver'ev, V.V., *& others*. Sovremennyĭ gidrotermal'nyĭ metamorfizm . . . 1961. No. 69919

Int. Volcan. Assoc. Catalogue . . . active volcanoes . . . 1959. No. 72398

74799. PIKE, GORDON CHESLEY, 1922– . Migration and feeding of the gray whale *Eschristius gibbosus*. (Canada. Fisheries Research Board. Journal, Sept. 1962. v.19, no.5, p.815-38, illus., tables, maps.)

Reports a study based on observations from lighthouses and lightships of the west coast of North America, and on other sources. All indicate that most of the American herd breeds and calves in January-February in Mexican waters, migrates northward in March-May, feeds from June through October as far north as the Chukchi Sea, and migrates south in November-December. Unlike other whales, this species migrates along the coasts, aided by visual contact with shore landmarks. (DLC.)

74800. PIKULEVICH, L. D. Merzlotnye inzhenerno-geologicheskie issledovaniia v praktike stroitel'stva Bratskogo énergo-promyshlennogo kompleksa. (Merzlotnye issledovaniia. Sbornik statei 1961. vyp.2, p.189-97.) 3 refs. Text in Russian. **Title tr.:** Frozen-ground engineering-geologic investigations in connection with the construction of the Bratsk power and industrial complex.

Reports frozen-ground engineering studies of 1956-1957 at the hydroelectric dam site on the Angara River to determine the natural soil temperature regime, depth of freezing, frost heaving and subsidence, and the effect of human activities. Six test areas of taiga, 15-20 m. in radius, were cleared of roots, stumps, and vegetation; wooden and concrete foundation models were installed at depths of 1.2-3.5 m., and the effect of frost action was studied. A borehole 10-15 m. deep was drilled in the center of each test area, and the temp. regime, depth of freezing, and moisture content of the ground were measured. Additional measurement series were made in boreholes sunk in excavations. As the Bratsk area has only island permafrost in low and protected areas, natural conditions were simulated by use of screens adjacent to test areas. Water mains were laid in the same trench as heating mains to keep them from below the active layer (3.5-5.0 m.). Calculations made with the IG-1 hydraulic integrator showed that frozen loam and sand-rubble material can be used in winter construction of earth dams, because this material will thaw by the time the dam becomes operative in spring. Methods rather than observational results are reported in this paper. -From CRREL. (DLC.)

74801. PILITOVICH, S. S. O pushnykh zagotovkakh potrebitel'skoĭ kooperatsii. (Ratsionalizatsiia okhotnich'ego promysla, 1961, vyp.9, p.3-13, tables.) Text in Russian. **Title tr.:** Peltry procurement by consumer cooperatives.

Consumer cooperatives may purchase pelts throughout the Soviet Union except in Chukotka and Kolyma (Magadan Province). Catch data of wild fur-bearers by hunting and trapping and fur-farm output for 1955-1959 are tabulated and discussed. State of the fur trade in the far North is exemplified by description of the Yartsevo (60° 14′N. 90°12′E.) commercial-hunting organization (promyslovo-okhotnich'e khoziaĭstvo) activities in Krasnoyarsk Province. (DLC.)

74802. PILLSBURY, HAROLD W. Building plastic "A" frames. Palmer, Alaska, Apr. 1959. 4 p. diagrs. (Alaska. University. Agricultural Extension Service. Extension circular no.900.)

Contains instructions with measurements for making a plastic covering for the greenhouses under test for growing vegetables in subarctic areas. (DA.)

PILLSBURY, HAROLD W., *see also* Babb, M.F. . . . tomato varieties . . . Alaska. 1959. No. 69946

74803. PIMLOTT, DOUGLAS H. Wolf control in Canada. (Canadian Audubon, Nov.-Dec. 1961. v.23, no.5, p.145-52, illus.) 21 refs.

Discusses control policies and programs in the provinces and Northwest Territories, noting the lack of research on wolf predation. In areas where wolves usefully reduce surplus game populations, control programs are not needed. But in the barren-ground caribou winter range, the human kill approaches the reproduction rate of the herds, and wolf control is essential to provide the margin for herd survival. Such control has proved more successful than instruction of the natives in conservation of caribou. (DGS.)

PINARDI, G., *see* Adolph, R.J., *& others*. Heat loss . . . 1962. No. 69488

74804. PINGS, C. J. Living on cracked ice. (Engineering and science, Oct. 1961. v.25, no.1, p.16-20, illus.)

Reports study of the temperature regime and rate of opening of crevasses on the North Greenland icecap during 1955, 1957. Concurrent measurements of the movement of the glacier indicated

that the surface velocity was non-uniform, and that the occurrence of crevasses could be explained in terms of stress concentrations. Detailed studies revealed one crevasse opening as a wedge about an apex 65 ft. below the surface, at a rate equivalent to an approx. two in./week movement of the walls. Another crevasse, several inches wide in 1955, had expanded to several feet by 1957. The heat flux vectors near the crevasse and in the snow bridge were computed on the basis of data obtained from 65 thermocouples installed at various locations in and near the crevasse. The difference between the temperature of the snow cover over the undisturbed glacier and that of the snow bridge might be sufficient for detection by infrared cameras. -From CRREL. (DLC.)

74805. PINNEKER, E. V. Klassifikat͡siia podzemnykh nassolov po stepeni mineralizat͡sii; na primere ĭuga Sibirskoĭ platformy. (Sovetskaia geologiia, Sept. 1961, no.9, p.153-55, tables, graph.) 10 refs. Text in Russian. **Title tr.:** Underground brine classification according to the degree of mineralization, as exemplified in the southern Siberian platform.

Reports on brines of Angara-Lena artesian basin, some, chloride-calcic, found in 1957-1958 with 500-680 gm./l. mineralization, a concentration higher than any known elsewhere in the USSR. An attempt is made to classify these brines according to degree of mineralization: weak having 50-150 gm./l.; strong 150-320 gm./l.; very strong 320-500 gm./l. and ultimate saturation, more than 500 gm./l. (DLC.)

74806. PINNEKER, E. V. Nekotorye osobennosti razvitiia mnogoletnemerzlykh porod na Lenskikh priiskakh. (Geologiia i geofizika, 1962. no.8, p.76-85, tables, diagrs., map.) 5 refs. Text in Russian. **Title tr.:** Some features of permafrost development in the Lena gold mines.

Reports on the Vitim-Patom area, from material collected by the Lenzoloto trust and own observations in 1958-1959. Climatic and hydrogeologic conditions of the region are summarized. Thermokarst relief, development of frost mounds, naleds, etc. are characterized. The active layer, depth and temperature of permafrost in friable material and bed rock are described. In this area, permafrost is in the degradation stage, due in part to human activity. (DLC.)

PINNEKER, E. V., *see also* Astrakhant͡sev, V.I., & E.V. Pinneker. Tret'e soveshchanie . . . 1962. No. 69902

74807. PIROGOVA, L. I. Opisanie govora shesti punktov Kholmogorskogo raĭona Arkhangel'skoĭ oblasti; po materialam ėkspedit͡sii 1952 i 1956 godov. (Moskva. Gos. pedagogicheskiĭ institut. Uchenye zapiski 1959. t.134, Kafedra russkogo iazyka, vyp.9, p.179-226.) Refs. Text in Russian. **Title tr.:** Description of the vernacular in six localities of the Kholmogory District, Arkhangel'sk Province; according to materials from expeditions in 1952 and 1956.

Phonetic and morphological analysis of north Russian dialects of the Pomor (early settlers in White Sea coastal area) group. The study is based on the Institute's two expeditions to study dialects of the eastern, central, and southern parts of this district. A glossary of approx. 300 local idiomatic words is appended. Following this paper, p.227-47, is a grammatical and phonetic study of the verb in the Kholmogory dialect. (DLC.)

74808. PIROZHNIKOV, L. P. Gorelye porody iz morskogo nizhnego volzhskogo iarusa o. Bergkhauz, arkhipelag Zemlia Frant͡sa-Iosifa. (Akademiia nauk SSSR. Doklady, Sept. 11, 1961. t.140, no.2, p.448-50, illus.) Ref. Text in Russian. **Title tr.:** Burnt rocks in marine lower Volga stage (Upper Jurassic) of Bergkhauz Island, Franz Joseph Land archipelago.

Reports discovery in 1960 of fused rocks in the marine stratum; these deposits are described and the fabric of the burnt rocks is treated in detail. Horizontal stratified and cross-laminated structures are identified. Other burnt rocks structures are also reported. (DLC.)

74809. PIROZHNIKOV, L. P. Morskoĭ nizhniĭ volzhskiĭ iarus o. Bergkhauz, arkhipelag Zemlia Frant͡sa-Iosifa. (Akademiia nauk SSSR. Doklady, Oct. 1, 1961. t.140, no.4, p.912-15, table, graph.) 7 refs. Text in Russian. **Title tr.:** The marine lower Volga stage of Bergkhauz Island, Franz Joseph Land archipelago.

Describes a columnar section of marine Upper Jurassic deposits layer by layer, noting composition of the rocks, forminifera and other fauna. The age of this zone is *Epivirgatites nikitini.* Distribution of elements in some of the layers is reported. (DLC.)

74810. PISKOV, G. A. Spravka vedet passazhira. (Grazhdanskaia aviat͡siia, Apr. 1961. god 18, no.4, p.26-29, illus., diagrs., sketch-map.) Text in Russian. **Title tr.:** Information guides the passenger.

Describes the civil air fleet's flight-information and communication system. A schematic map shows, among others, direct teletype lines from Murmansk, Arkhangel'sk, and Vorkuta to Moscow, and the lines from Noril'sk, Yakutsk, and Magadan relayed through Krasnoyarsk, Irkutsk, and Khabarovsk, respectively. (DLC.)

PIST͡SOVA, E. A., *see* Begunova, T.G., & *others.* K voprosu . . . apatito-nefelinovykh rud. 1961. No. 70090

74811. PITELKA, FRANK ALOIS, 1916– . Some aspects of population structure in the short-term cycle of the brown lemming in northern Alaska. (Cold Spring Harbor Symposia on Quantitative Biology 1957. v.22, p.237-51, illus., tables.) 52 refs.

Study based on author's field observations from 1951, and others' reports for 1946-1954, concerning: population structure, sex ratio and reproductive rate on one hand; and stock, vegetation and predators on the other. On the basis of these, a three-year cycle is found and outlined. The main population growth of the lemming occurs in the second and third winters, the first two summers reversing or deflecting the growth. A complete, or nearly such decline takes place in the third summer. Differences between these cycles and conditions in the fourth year are also discussed. (DLC.)

PITELKA, FRANK ALOIS, 1916– , *see also*
Alaskan Science Conference 1961. 1962. No. 69644
Pacific Science Congress. 1961. No. 74619

74812. **PIT'EVA, K. E.** Gidrogeologicheskie usloviia intruzivnogo massiva v raĭone izbytochnogo uvlazhneniia. (Moskva. Universitet. Vestnik, ser.4, geologiia, Nov.-Dec. 1961, no.6, p.55-61, graphs, diagr.) Text in Russian. **Title tr.:** Hydrogeologic conditions of the intrusive massif in a region of excess humidity.

Reports studies in 1955-1957, mainly of ground water and water wells, of the Lovozero massif in Kola Peninsula. The ground water can be utilized to supply settlement and the mining industry best by wells. Depths, yield and geologic conditions of wells are evaluated. (DLC.)

PITT, T. K., *see* Templeman, W., & T.K. Pitt. Vertebral numbers redfish . . . 1961. No. 76100

74813. **PIVOVAROVA, E. P.** Metodika ucheta zaĭtsa-belĭaka v okhotnich'ikh khoziaĭstvakh i ėkologicheskoe obosnovanie ee. (Voprosy ėkologii, 1962. t.4, p.140-41.) Text in Russian. **Title tr.:** Methods of counting the arctic hare on hunting grounds and its ecological basis.

Discusses difficulties of obtaining precise figures with the two methods currently applied; variability of the hare's diurnal movements depending on season and heat; etc. A recommended method of census taking is outlined. (DLC.)

74814. **PIVOVAROVA, Z. I.** Kharakteristika radiatsionnogo rezhima na territorii SSSR v period MGG, 1957-1959 gg. (*In:* Lietuvos TSR Mokslų Akademija. Aktinometrijos . . . 1962, p.227-37, tables, charts.) 6 refs. Text in Russian. Summary in Lithuanian and English. **Title tr.:** A characteristic of the radiation regime in the USSR territory during the IGY period, 1957-1959.

Presents annual values of total radiation on charts for 1957, 1958 and 1959, including arctic regions. The radiation balance for 1957-1959 is also charted. Monthly albedo values are given in percentage for 14 stations, including Yakutsk and Yeletskaya (Vorkuta Vom). (DLC.)

74815. **PLAFKER, GEORGE, 1929–** . Geologic investigations of proposed power sites at Sheep Creek, Carlson Creek, and Turner Lake, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1962. p.127-48, illus., text map, table, 3 col. fold. plates. (U.S. Geol. Survey. Bulletin 1031-F, Geology of waterpower sites in Alaska.) 9 refs.

Describes conditions at these three localities on the Southeast Alaska mainland near Juneau. Turner Lake and Carlson Creek drain into Taku Inlet, Sheep Creek into Gastineau Channel. Geography and geology of the region are outlined. Reservoir and damsite areas at the proposed sites are illus. by sections and large-scale maps, from a 1954 reconnaissance geologic study (No. 47368) and other, including unpub., reports. (DGS.)

74816. **PLAKHOTNIK, A. F.** Gidrologiia severo-vostochnoĭ chasti Tikhogo okeana. (Moskva. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Trudy 1962. t.46, p.190-201.) 41 refs. Text in Russian. **Title tr.:** Hydrology of the northeastern Pacific Ocean.

Reviews recent literature sources, chiefly Canadian and American, and their implications for fisheries. Accordingly, a scheme is outlined for further studies on the hydrobiology, chemistry, and primary production of fishing areas, and the ecology of fishes. Certain areas in the Northwest still require long-range hydrographic studies. (DLC.)

74817. **PLAKHOTNIK, A. F.** O vodoobmene Beringova moria. (Moskva. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Trudy 1962. t.46, p.185-89, illus., maps.) 10 refs. Text in Russian. **Title tr.:** The water exchange of the Bering Sea.

Analysis and generalizations based on data from the literature. Directions, volume and thermal qualities through the Aleutian gaps and Bering Strait, as well as melt water, ice conditions and water balance are considered. (DLC.)

74818. *PLANOVOE KHOZIAĬSTVO.* O metodakh i praktike raboty koordinatsionnykh sovetov. (Planovoe khoziaĭstvo, Apr. 1962. god 39, no.4, p.42-51.) Text in Russian. **Title tr.:** Methods and activities of the coordinating councils.

Reports on the first conference of the deputy chairmen of the zonal coordinating councils of the national economic councils in RSFSR. Construction of a pilot geothermic station in Kamchatka was stressed by the State Planning Commission chairman as a primary task in development of industry in the Far East. Construction of a facility at Murmansk for reconditioning fisheries vessels was noted by A.A. Kuznetsov of the Northwestern Council; need for reconstructing the system of 110 research institutes in the Ural area was put forward by S.A. Zhuravlev, representing the Ural Council. (DLC.)

PLATNER, WESLEY STANLEY, 1915– , *see* Neubeiser, R.E., & *others*. Mg blood, tissues, cold acclim. 1961. No. 74306

74819. **PLAYFORD, G.** Lower Carboniferous microfloras of Spitsbergen. (Palaeontology, Oct. 1962. v.5, pt.3, p.550-618, plates 78-87, diagrs., graphs, maps.) 120 refs.

Describes in detail dispersed microspores recovered from the Lower Carboniferous Culm succession; most samples studied were collected from the Billefjorden sandstones in 1959 by the Cambridge Spitsbergen Expeditions. Detailed collections from three sections of these sandstones present a comprehensive picture of the microfloral succession, and serve as local reference columns for correlation with other horizons in Svalbard. Two distinct, successive, microfloral assemblages are distinguishable within the otherwise sparsely fossiliferous Billefjorden sandstones. Presence of numerous species recorded previously from the Russian Lower Carboniferous and the Mississippian of Northwest Territories, Canada, facilitates international correlation. Systematic descriptions of 115 microspore species are included; one new genus *(Radialetes)* and 39 new species are proposed; another genus is validated and emended; three probably new species are described but not named; the remaining 73 species are all referable to previously described types. Stratigraphic columns of the three sections of the Billefjorden sandstones and relative stratigraphic position of 18 Lower Carboniferous microspore assemblages recorded from the Northern Hemisphere are graphically shown. Photomicrographs and magnified drawings of representative specimens are included.

The study is to be concluded in the next issue of this journal. (DGS.)

PLAYFORD, G., *see also* Hughes, N.F., & G. Playford. Palynological reconnaissance . . . 1961. No. 72251

74820. **PLEKHANOV, G. F.**, *and others.* O vliĭanii vzryva Tungusskogo meteorita na geomagnitnoe pole. (Geologiĭa i geofizika, 1961, no.6, p.94-96, diagrs.) 2 refs. Text in Russian. *Other authors:* A. F. Kovalevskiĭ, V. K. Zhuravlev, *and* N.V. Vasil'ev. **Title tr.**: On the effect of the Tunguska meteorite explosion on the geomagnetic field.

The fall of Tunguska meteorite on June 30, 1908 is studied on the basis of copies of magnetograms for June 25-July, 1908, obtained from 18 stations operating at that time. The procedure of magnetic disturbance, speed and strength of the magnetic force and behavior of *H* and *Z*, duration of the magnetic effects, and other aspects are briefly reported. The magnetic effects of the meteorite explosion are compared with those of a nuclear bomb. (DLC.)

74821. **PLEKHOV, O.** O stuke i styke. (Master lesa, Feb. 1962. god 6, no.2, p.24.) Text in Russian. **Title tr.**: On jolts and joints.

Notes the slight jolts of train wheels as they pass over joins in the rails; these jolts cause wear on the cars and the rail ends, especially on narrow-gauge lines where the rails are normally only 7-8 m. long. Since 1960, rails for forest railroads in Arkhangel'sk Province have been welded two together end-to-end. The Rovdino lumbering organization pioneered this experiment which proved successful. (DLC.)

74822. **PLESHAKOVA, I. B.** Perspektivy neftenosnosti vostochnogo poberezh'ĭa Kamchatki. (*In:* Akademiĭa nauk SSSR. Komissiĭa po problemam Severa. Syr'evye resursy . . . 1961, p.75-85, tables.) Text in Russian. **Title tr.**: Prospects for oil on the east coast of Kamchatka.

Reviews possibilities for oil accumulation in the Kronotskiy and Ozernovskiy regions. The first extends from the Kronotskaya River north to the Stolbovaya. The Bogachevka, Tyushevka and Malaya Chazhma areas have been examined, and oil search is going on in Tertiary deposits about 14,000 m. thick. They are divided into three stratigraphic series and each is described. Oil and gas occurrence is identified in the Bogachevka series. Rock porosity, permeability and other properties are described. Recommendations are summarized for further prospecting. (DLC.)

74823. **PLOTKIN, V. A.** Stroenie zubov ėmbrionov usatykh kitov. (Zoologicheskiĭ zhurnal, Dec. 1961. t.40, vyp.12, p.1901-1902, illus.) Text in Russian. **Title tr.**: Dental structure in embryos of Odontoceti.

Describes the histological structure of material from the finwhale and humpback. Shape, location and distribution of teeth and of dental layers is noted. (DLC.)

74824. **PLOTNIKOV, I. I.**, *and* **E. D. MILOVIDOV.** O genezise severoural'skikh boksitovykh mestorozhdeniĭ. (Sovetskaĭa geologiĭa, July 1961, no.7, p.134-41, illus., tables, profile, section.) 8 refs. Text in Russian. **Title tr.**: On the genesis of the North Ural bauxite deposits.

Describes relief forms of limestones covered by the Krasnaya Shapochka, Cheremukhovo, Kal'inskiy (60° 15′N. 60° E.) and other bauxite deposits. Six varieties of beds are distinguished. Source of primary material and forms of occurrence are discussed. The hydrologic regime of karst topography and chemical properties of the limestones are considered important factors. The North Ural bauxites were formed under continental conditions. (DLC.)

74825. **PLOTNIKOV, M. A.** K stratigrafii i litologii tatarskikh otlozheniĭ nizhnego techniĭa rek Mezeni i Vashki. (Akademiĭa nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp.2, Materialy po geologii Komi ASSR, p.32-46, illus., tables, diagr.) 8 refs. Text in Russian. **Title tr.**: Stratigraphy and lithology of Tartarian deposits in the lower reaches of the Mezen and Vashka Rivers.

Describes Upper Permian-Tartarian deposits according to layers and beds. Some fauna and the mineral composition are characterized. A new stratigraphic division is proposed, which differs slightly from others. Sedimentation conditions of these depostis are analyzed. (DLC.)

74826. **PLOTNIKOV, M. A.** Markiruŭshchie "problematiki" iz tatarskikh otlozheniĭ rr. Mezeni i Vashki. (Akademiĭa nauk SSSR. Doklady, Aug. 1, 1961. t.139, no.4, p.952-55, illus., tables.) Ref. Text in Russian. **Title tr.**: Marker "problematics" from Tartarian deposits of the Mezen and Vashka Rivers.

Notes that Upper Permian-Tartarian deposits are not easy to distinguish stratigraphically by paleontologic and mineralogic methods. From study of their lithologic character, key beds, consisting of marls and lutaceous clays, are identified and their chemical and granular composition analyzed. The persistence of these key beds is considered of use in establishing time-rock units. (DLC.)

74827. **PLOTNIKOV, M. A.** Novye dannye o stratigrafii permskikh otlozheniĭ poluostrova Kanin. (*In:* Akademiĭa nauk SSSR. Komi filial. Geologicheskiĭ institut. Materialy . . . 1961, p.3-21, diagrs.) Ref. Text in Russian. **Title tr.**: New data on the stratigraphy of Permian deposits of the Kanin Peninsula.

Describes in detail sections of Permian deposits of the Nadtey River and Cape Yarni-Sale. Chemical, granularity, mineralogic and microscopic analyses are made to clarify their petrographic characteristics. New bryozoan brachiopod, pelecypod, ostracod and other fauna are reported. On the basis of new data, some adjustments are proposed in the stratigraphy of these deposits. (DLC.)

74828. **PLOTNIKOVA, M. I.**, *and others.* K voprosu o metodike kartirovaniĭa terras v basseĭne srednego techeniĭa r. Markhi. (Leningrad. Vsesoŭznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informat͡sionnyĭ sbornik 52, Materialy po chetvertichnoĭ geologii i geomorfologii, 1962, p.61-68, map, diagrs.) 6 refs. Text in Russian. *Other authors:* V.N. Umanet͡s *and* O.I. Kardopol'-t͡seva. **Title tr.**: On a method for mapping the high terraces on the middle reaches of the Markha River.

Distinguishes two terrace complexes in the middle Markha valley: the lower one consisting of

two surfaces of flood plain and four terraces of upper-middle Quaternary age; the upper complex has two terraces of Pliocene-Lower Quaternary age. Mapping of these last terraces proved difficult because morphologically they are poorly developed and their alluvium does not have paleontologic remains. It became clear that the best thing to do was to make a mineralogic study of the terrace deposits. Three types of mineral associations are distinguished and described. (DLC.)

74829. **PLOTNIKOVA, M. I.** O proiavlenii noveishikh tektonicheskikh dvizhenii v verkhov'iakh r. Nizhnei Tunguski. (Leningrad. Vsesoiuznyi nauchno-issledovatel'skii geologicheskii institut. Informatsionnyi sbornik 52, Materialy po chetvertichnoi geologii i geomorfologii, 1962, p.103-111, tables, maps, diagrs.) 2 refs. Text in Russian. **Title tr.:** On manifestation of very recent tectonic movements on the upper Nizhnyaya Tunguska River.

Analyzes the asymmetry of right and left tributaries of Nizhnyaya Tunguska. Development of terraces of the Bol'shaya Yerema, Malaya Yerema and Teteya and other evidence presented indicate recent tectonic movements in this region. Their effects and amplitude are discussed. (DLC.)

74830. **PLOTNIKOVA, M. I.,** *and others.* Rezul'taty litologicheskikh issledovanii almazonosnykh rossypei sviazannykh s "vodorazdel'nymi galechnikami" vostochnoi chasti Sibirskoi platformy. (Akademiia nauk SSSR. Komissiia po probleme zakonomernosti razmeshcheniia poleznykh iskopaemykh. Zakonomernosti razmeshcheniia poleznykh iskopaemykh, 1960. t.4, Rossypi, p.198-209, tables, map, graphs, diagr.) 7 refs. Text in Russian. *Other authors:* V.N. Umanets *and* O.I. Kardopol'tseva. **Title tr.:** Results of lithologic investigations of diamond-bearing placers connected with "watershed shingles" in the eastern part of the Siberian platform.

Reports lithologic, geomorphic and palynologic investigations of so-called shingles in the Markha and Tyung watershed, of interest in relation to Tertiary and early Quaternary diamond-bearing placers. They are of two types: Tertiary river-net deposits and alluvial deposits of the sixth and fifth terraces of the Markha River. They are treated in detail as to age, grain size, mineralogic composition, and other features. Age and source of diamond placers are also discussed. (DLC.)

74831. **PLOUFF, DONALD, 1930–** , *and others.* Geophysical studies on IGY Drifting Station Bravo, T-3, 1958 to 1959. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.709-716, maps, diagrs., graphs.) 4 refs. *Other authors:* G.V. Keller, F.C. Frischknecht, *and* R.R. Wahl.

Outlines methods used and tentative findings in seismic, electrical resistivity, and electromagnetic measurements made May 1958 to Sept. 1959, by U.S. Geological Survey personnel, in part a continuation of geophysical studies begun on T-3 in 1952 (No. 50374). During this period, T-3 drifted over a thousand nautical mi. southwest in the Arctic Ocean off the Canadian Arctic Islands. Water depths ranged 200 - 2500 m. according to seismic measurements. Resistivity of the water decreased 0.40 - 0.30 ohm-meters from the surface down to 200 m., below which it was uniform at approx. 0.30 ohm-m. Ice thickness measured along an electro-magnetic profile across the center of T-3 was approx. uniform 60 m. Maps show measurement sites, drift track, generalized bathymetry; diagrams show equipment; graphs show sample recordings. (DLC.)

PLOURDE, A. EARLE, *see* Alaskan Science Conference 1960. 1961. No. 69643

74832. **PLUMMER, P. J. G.,** *and* **J. L. BYRNE.** *Listeria monocytogenes* in lemming. (Canadian journal of comparative medicine and veterinary science, June 1950. v.14, no.6, p.214-16.)

Laboratory study of 24 lemmings (six brown, 18 varying) resulted in isolation of *L. monocytogenes.* In lemmings, the disease seems to resemble that of rabbits, guinea pigs and some other small mammals. (DNLM.)

74833. *PLYWOOD WORLD.* Problems of construction in the North. (*Its:* v.1, no.4, 4th quarter 1961, p.10-13, illus.)

Discusses the remoteness of development areas from markets and supply sources, the high transportation costs, and short working season. Maximum prefabrication of buildings is considered the best solution of these problems. Waterproof-glue, Douglas-fir plywood should be used. It is resistant to temperature extremes and deterioration; simple and economical to transport, erect, and maintain. It has light weight, strength, and rigidity; it is easy to demount and transport. Building designs made by several companies are described. (CaONA.)

PNËVA, G. P., *see* Il'inskaia, I.A., & G.P. Pnëva. Novye dannye o flore . . . 1962. No. 72345

POBORSKI, STANISLAW J., *see* Alaskan Science Conference 1960. 1961. No. 69643

74834. **POCHEKUTOV, K.** Skalouborochnye raboty na nizhnei Angare. (Rechnoi transport, May 1961. god 20, no.5, p.39-41, diagr., illus.) Text in Russian. **Title tr.:** Rock-removing operations on the lower Angara.

Describes methods of removal of 70,000 cu. m. of rock from the lower Angara River bottom to deepen it 90 cm. in the Nedokury-Boguchany sector, and 110 cm. in the Boguchany-Ust'ye sector. The project planned for completion before 1962 was carried out by blasting the rock with explosives during the winter season, and taking it out during the navigation period. It was found that application of non-conditioned pyroseylin to underwater blasting operations, allows increased efficiency and enables the work to be carried on during the navigation season under any horizon and turbulence of the water. (DLC.)

74835. **PODDUBNYI, V. V.** Stratigraficheskii razrez nizhnego paleozoia iuzhnogo obramleniia Anabarskogo massiva. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy 1961. vyp.186, Geologicheskii sbornik no.6, p.4-13, map.) 3 refs. Text in Russian. **Title tr.:** Stratigraphic section of Lower Paleozoic of the southern frame of the Anabar massif.

Describes Sinian and Cambrian deposits, as studied in 1959-1960 between the Kukukhunda and Olenek Rivers. They are divided into various series and the distribution, lithologic characteristics, thickness and other features of each series are described. (DLC.)

74836. **PODGORNAIÂ, N. S.,** *and* **A. G. GUR'EV.** O nekotorykh osobennostiâkh tolshchi konglomerato-brekchiĭ, razvitykh po r. Vorogovke na severe Eniseĭskogo kriâzha. (Leningrad. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyĭ sbornik 1960, no.40. Geologiiâ i poleznye iskopaemye Vostochnoĭ Sibiri, p.17-28, map, diagrs.) 4 refs. Text in Russian. **Title tr.:** Some features of the conglomerate-breccia stratum, developed along the Vorogovka River in the northern Yenisey Ridge.

Describes sections of this stratum as studied along the Vorogovka (approx. 60°30′N. 91°E.), Chapa and Chivida Rivers in 1958-1959. Their petrographic composition, thickness, distribution, stratigraphic position and origin are discussed. This stratum is tentatively considered as Upper Precambrian in age, the data indicate a sedimentary origin not glacial as hitherto believed. (DLC.)

74837. **PODOL'SKIĬ, IÛ. V.** Lineĭnye paragenezisy glavnykh porodoobrazuiûshchikh èlementov shchelochnykh porod tsentral'noĭ chasti Kol'skogo poluostrova. (Akademiiâ nauk SSSR. Doklady, Sept. 11, 1962. t.146, no.2, p.443-46, tables.) 9 refs. Text in Russian. **Title tr.:** Linear paragenesis of the main rock-forming elements of the alkaline rocks in central Kola Peninsula.

Reports a petrographic study in the Khibiny and Lovozero massifs on nephelite, potassium-sodium feldspars, aegirine, arfvedsonite, and other rock-forming minerals. About 95 silicate analyses were used and the connection between rock-forming elements considered. In alkaline rocks relatively rich in SiO_2, the predominant minerals were found to be aegirine, alkaline hornblende, eudialyte, lomonosovite, murmanite and others; in alkaline rocks poor in SiO_2, the prevailing minerals are titonomagnetite, loparite, apatite, and others. (DLC.)

74838. **POE, ROBERT H.,** *and* **T. R. A. DAVIS.** Cold exposure and acclimation in Alloxan-diabetic rats. (American journal of physiology, June 1962. v.202, no.6, p.1045-48, illus., table.) 19 refs.

Survival rate of the diabetic rats at 5°C. was significantly lower than in not-diabetic controls, the survivors showing extensive gangrene of the tail. The diabetic group shivered less and showed a greater drop in rectal temperature. (DLC.)

74839. **POGONIÂ-STEFANOVICH, IÛ. F.** Novye dannye o stratigrafii pozdnetretichnykh otlozheniĭ vostochnoĭ okrainy Zapadno-Sibirskoĭ nizmennosti; mezhdurech'e Sym-Dubches. (Geologiiâ i geofizika, 1961, no.3, p.104-106, table.) Text in Russian. **Title tr.:** New data on the stratigraphy of late Tertiary deposits on the eastern margin of the West Siberian lowland; the Sym-Dubches interfluve.

Presents a general compiled section of Neogene deposits distributed in a 1000 km² area between these left tributaries of the Yenisey, approx. 61°N. 88°E., studied in 1959. Spore-pollen analysis of the deposits is made, and the fossil plants identified, Gymnospermae, Angiospermae and others are listed. Climate and formation conditions of the Neogene are discussed. (DLC.)

74840. **POGORELOV, V. I.** Fluktuatsii èlektronnoĭ plotnosti v zonakh ionizatsii polârnykh siâniĭ. (Geomagnetizm i aèronomiiâ, 1962. t.2, no.1, p.68-70.) 12 refs. Text in Russian. **Title tr.:** Fluctuations of electron density in ionization zones of auroras.

Derives a formula for calculation of the mean square value of fluctuations of electron concentration in the zones of aurora displays, where reflection of ultra-short radio waves ($\lambda = 4$m.) is produced. The calculated maximum values of the fluctuations are found to be (6-15) 10^4 and (4-10) 10^4 electrons per cm³ for the reversed reflection wave, and that perpendicular to the stable component of geomagnetic field respectively. These values are in satisfactory agreement with those obtained by B. Nichols and other investigators. (DLC.)

74841. **POGORELOV, V. I.** O mekhanizme obrazovaniiâ èlementov form polârnykh siâniĭ. (Geomagnetizm i aèronomiiâ, 1962. t.2, no.2, p.275-85.) 16 refs. Text in Russian. **Title tr.:** Mechanism of formation of auroral form elements.

Analyzes mathematically the electrostatic variations in cylindrically symmetrical non-quasi-neutral electron-proton streams, propagating along the external homogeneous magnetic field, and represented by the drift theory equations. The form and the structure of auroras are confirmed to depend upon the oscillatory processes which arise in plasma of corpuscular streams, due to shock excitation of atmospheric gas atoms by the electrons and protons of the streams. The spatial distribution of small parametric variations in the streams, and the corresponding dispersion equation are found. The regular recurrence of structure elements in auroras, their undulating shift, and rhythmic pulsations due to electrostatic variations in corpuscular streams are explained. The results of his analysis are compared with the peculiarities of energy spectra of electrons and protons measured from rockets in aurora zones, and the data of such measurements to support the theoretical derivation. (DLC.)

74842. **POGORELOV, V. I.** O vliianii magnitnykh variatsiĭ na otrazhenie radiovoln zonami ionizatsii polârnykh siâniĭ. (Geomagnetizm i aèronomiiâ, 1961. t.1, no.5, p.687-94, illus.) 14 refs. Text in Russian. **Title tr.:** Magnetic variation effect on the reflection of radio waves by auroral ionization zones.

Investigates the effect of magnetic field variation on dispersion of radio waves by the inhomogeneities of the E_s layer, as indicated by radio-echo sounding of auroras. This effect explains the relationship between the dispersion coefficient and the radio frequency. The width and asymmetry of the region of spatial distribution of radio-echo during auroral display are found to be determined by the magnetic field variations. (DLC.)

74843. **POGORELOV, V. I.** Statsionarnost' korpuskuliârnykh potokov, sootvetstvuiûshchikh naibolee rasprostranennym formam polârnykh siâniĭ. (Geomagnetizm i aèronomiiâ, 1962. t.2, no.6, p.1076-79.) 5 refs. Text in Russian. **Title tr.:** Stability of corpuscular streams, corresponding to the most frequent forms of auroras.

Shows that of all forms of corpuscular streams which produce auroras, only the cylindrically symmetrical and linear forms have a stability independent of the relationship between field intensity and parameters of the medium of each point of the stream. The most stable forms of

auroras are found to be those of isolated arcs and rays. All other forms are distorted by variations of intensities and velocities of the streams. The analysis of the state of the stream's medium was done by using the drift theory and neglecting the collisions of particles in plasma at 1,000 km. altitude. (DLC.)

74844. POGORELYĬ, ĬU. A. Soderzhanie vitamina C v grudnom moloke zhenshchin po dannym rodil'nykh otdeleniĭ Kandalakshskogo raĭona Murmanskoĭ oblasti. (Voprosy pitaniĭa, 1961. t.20, no.4, p.28-32, illus., tables.) 11 refs. Text in Russian. Summary in English. **Title tr.:** Vitamin C content of breast milk according to data of the maternity wards in Kandalaksha District, Murmansk Oblast'.

Reports a lowering of this vitamin noted in 50-75% of women living in this area. The drop was pronounced in the winter and spring months, especially in March. To avoid hypovitaminosis in the infants, daily administration of 200 mg. of vitamin C to pregnant and nursing women is recommended. (DLC.)

POGOSOVA, A. V., *see* Konikova, A.S., *& others.* Izmenenie obmena veshchestv . . . 1962. No. 72925

74845. POHJAKALLIO, ONNI. Om växtpatologiska problem i samband med klöverodling i de nordiska länderna. (Nordisk jordbrugsforskning, Suppl. 1, 1960, p.280-83.) Text in Swedish. **Title tr.:** Plant pathology problems in connection with clover cultivation in Fennoscandian countries.

Summarizes investigations chiefly in Finland on the effect of climate and overwintering fungi on the growth and hardiness of clover. Lack of bacteria in young plants retards growth hardiness, especially in the northern province of Lapland. The long summer days, short growing season, and its sudden stop as the days shorten, decrease plant resistance to frost and ice encasement. Effect of day length on clover at various altitudes is under study. Root fungus (*Sclerotinia trifoliorum*) infestation is common in Finland, but less frequent in Lapland where frost sets in early. Summer climate affects antibiotic microbe occurrence in the soil, weakens the counteraction against *S. trifoliorum mycelium* and increases infection of clover plants. The biology of clover fungi is under study, including unidentified species from dead clover in Lapland. Importance of hardy varieties and use of fungicides are discussed. (DA.)

74846. POKROVSKAIA, T. N. Pervichnaia produktsiia fitoplanktona v ozerakh Kol'skogo poluostrova. (Vsesoiuznoe gidrobiologicheskoe obshchestvo. Trudy 1962. t.12, p.359-74, tables.) 3 refs. Text in Russian. **Title tr.:** Primary production of the phytoplankton in lakes of the Kola Peninsula.

Reports on investigations conducted during the summer of 1960, with data on area and depth of lakes studied, transparency, color, pH, CO_2, CO_3, HCO_3, NO_3, Fe, etc. The lakes were found to be of two kinds (with an intermediary): one of the shallow lakes, i.e. to 5 m. deep, with a relatively high primary production; and the other kind was deep, transparent and poor lakes. (DLC.)

74847. *POLAR RECORD.* News notes. (Polar record, 1961-1962. v.10-11, no.67-72.)

Northern activities, research, publications, institutions, conferences, etc., also developments in polar technology are summarized, viz:

Boreal Institute of the University of Alberta, Canada, established Apr. 1960 (no.68, p.528);

Atomic-powered automatic weather station installed on Axel Heiberg Island, Canadian Arctic, Aug. 1961, description (no.70, p.88-89);

Symposium on prevention of floating ice formation by air bubbling, held in Ottawa, May 1961; papers listed from its *Proceedings*, q.v. (no.71, p.196-97);

"Parcoll" housing unit tested successfully in the Canadian Arctic; description and dimensions (no.72, p.295, plate);

Peter snow-milling machines used successfully in Greenland; description, dimensions (no.69, p.637-38, plate);

Protection of birds in Greenland, text of regulations approved by the Provincial Council in 1960 (no.70, p.85-86);

Danish lead and zinc ore mining at Mesters Vig, East Greenland, 1958-1961; shipments of concentrate by yrs.; note of molybdenum find (no. 70, p.88);

Kevo field station for research on natural history of sub-Arctic and Arctic Finland, established in 1958 at Utsjoki by the University of Turku (no.67, p.407-408);

Jan Mayen topographical map, 1:50,000, pub. in 1959 by Norsk Polarinstitutt q.v., description by W.H. Ward (no.70, p.84-85);

Swedish reindeer research unit's publications and activities, 1953-1961, reviewed by R.A. Corkill (no.72, p.285-87);

Reindeer husbandry practices in northern USSR; observations in 1958 and some comparisons with Finnish methods, from a report (in Finnish) by Y. Alaruikka (no.67, p.404-407);

Method to accelerate the melting of floating ice used successfully at Pevek, northern USSR; described from No. 67396 (no.68, p.528);

Institute of Scientific Information of the Academy of Sciences of the USSR, journals of abstracts; description, especially of the *Geografiia* series covering a large proportion of polar papers (no.70, p.81-83);

Animal population estimates in the Russian Arctic, from a paper by S.M. Uspenskiĭ, q.v. (no. 71, p.195-96);

Thickness gage for floating ice on fresh water reported by IU. L. Nazintsev, q.v. (no.71, p.198);

Soviet drifting stations in the Arctic Ocean, 1937-1961; leaders, dates, geographical coordinates, and length, distance, and speed of drifts, from a publication by M.M. Nikitin q.v. (no.72, 292-93);

U.S. Army Cold Regions Research and Engineering Laboratory, new facilities (no.69, p.628);

Izembek and Clarence Rhode (formerly Kuskokwim) National Wildlife Ranges, established in Alaska in 1960 (no.69, p.628-29);

"Man Living in the Arctic" Conference, held at Natick, Mass., Dec. 1960 (no.69, p.629);

Coldest temperatures ever recorded in Asia, Greenland, and Canada, from a note by D.J. George (no.69, p.629-30);

International Whaling Commission, 12th meeting, London, June 1960 (no.70, p.78-80);

Meeting of representatives of polar institutes and organizations at Copenhagen, Aug. 1960 (no. 70, p.80-81);

Fridtjof Nansen Memorial Symposium on the glacial geology of Spitzbergen, held in Würzburg, Germany, Apr. 1961, noted by W. Blake, *Jr.* (no.70, p.81);

Effect of work and clothing on the maintenance of body temperature in water, from a paper by W.R. Keatinge, q.v. (no.70, p.87);

Blizzard mask, tested successfully in winds up to 80 knots; described by H.P. Black (no.71, p.199, illus.);

Organizations connected with polar research; abbreviations listed (no.72, p.288-91);

Navigation device for steering vehicles in featureless terrain, e.g. polar ice sheets; described by H.P. Black; diagr. (no.72, p.296-98). (DGS.)

74848. *POLAR RECORD.* Notes on field work. (Polar record, 1961-1962. v.10-11, no.67-72.)

Summary account is given of the following:

International Glaciological Expedition to Greenland, 1957-1960; its activities in summer 1960 (no.67, p.387);

Arctic Institute of North America Devon Island Expedition, 1960-1963; its activities in 1960 (no. 67, p.390) and 1961 activities from a note by S. Apollonio, q.v. (no.72, p.279-81).

Scottish Spitsbergen Physiology Expedition, 1960, to study the effects of a 21-hour daily routine on the human adrenal cortex, also mountain climbing and glacial surveying in the Brucebyen area of Vestspitsbergen (no.67, p.386-87).

Cambridge Spitsbergen Expedition, 1961; one of a series organized by W.B. Harland to study the stratigraphic and structural geology of Vestspitsbergen, report by P.F. Friend (no.70, p.44-46).

University of London Beerenberg Expedition to Jan Mayen, 1961, to continue geological and glaciological studies in the Beerenberg area; note by F.J. Fitch (no.70, p.46).

Birmingham University Expedition to South Greenland, 1961, to study glaciology, geology, and meteorology in the Tasermiut fjord area (no.71, p.182).

Cambridge Arctic Canada Expedition, 1961, to Cumberland Peninsula, Baffin Island, to climb mountains, survey Rundle Glacier, and study geology and physiology (no.72, p.281).

Operation Hazen, Canadian investigations on Ellesmere Island; 1960 activities noted (no.67, p.388, illus.) and 1961 studies of meteorology, glaciology, geology, soils, geomagnetism, and entomology, reported by G. Hattersley-Smith (no. 70, p.46-48).

Jacobsen-McGill University Arctic Research Expedition to Axel Heiberg Island, Canadian Arctic; operations in glaciology, geophysics, glacial meteorology, surveying, geomorphology, geology, botany, etc. reported by F. Müller, for 1960 (no. 68, p.518-21) and 1961 (no.71, p.179-81).

Fisheries Research Board of Canada; 1959 and 1960 field activities of its Arctic Unit, summarized from the Board's annual reports for 1959-1960 (no.69, p.614-15) and 1960-1961, q.v. (no.72, p.277-78).

Operation Back River, 1960, airborne geological mapping of 55,000 sq. mi. in northern Keewatin District (no.69, p.615-16).

Search for early Norse remains in Labrador and Newfoundland in 1960 and 1961, by H. Ingstad, to continue in 1962 (no.71, p.181).

Canadian Polar Continental Shelf Project, operations during 1959-1962 in hydrographic and topographic surveying, oceanography, submarine geology, seismology, gravity, geomagnetism, geomorphology, glaciology, biology, and sea ice survey; reported by E.F. Roots (no.72, p.270-76).

Studies of anthropology and kayaks in the Umanak district of northwest Greenland, in 1959, by B. Jensen and K. Taylor (no.67, p.385).

Danish scientific work in Greenland summarized, for 1959, from No. 63136 (no.68, p.513-15) and, for 1960, from a report by Arktisk Institut, København, q.v. (no.70, p.43-44).

Scandinavian archeological, geological (Quaternary), and ornithological expedition to Vestspitsbergen in 1960, continued investigation, mostly at Russekeila, from 1955 and 1958 (no.68, p.516-17).

Northern Sea Route USSR shipping movements in 1960 (no.68, p.515-16) and in 1961, including unusual voyages by the icebreakers *Moskva* and *Lenin* (no.71, p.194-195).

Soviet drifting stations, North Pole-8, and -9 in the Arctic Basin during 1960-1961 and the 1961 spring relief expedition, Sever-13 (no.69, p.616-17); and stations North Pole-8, -10, and -11 in 1961-1962, also relief expedition Sever-14 (no.72, p. 278-79).

U.S. drifting station B on ice island T-3 in Beaufort Sea; activities during 1959 and 1960, reported by I.M. Cotell (no.67, p.385-86); and in 1961 (no.71, p.183).

Oil reconnaissance on Svalbard in summer 1960 by two parties from American Overseas Petroleum Ltd. (no.67, p.387).

Under-ice traverse of the Northwest Passage by the U.S. nuclear submarine *Seadragon* in Aug. 1960 (no.67, p.390).

University of California marine biological studies on ice island T-3 in the North Polar Basin (at 71-72°N. 144-154°W.) and near Pt. Barrow, northern Alaska, in 1959-1960 (no.68, p.515).

Terrestrial Sciences Laboratory, U.S. Air Force Cambridge Research Center, 1960 studies of sites for air fields and of earth sciences in NE and E Greenland, northern Norway, the Ellesmere Ice Shelf, and northern Alaska; also laboratory investigations of engineering properties of snow and ice (no.68, p.517-18).

Arlis-1, U.S. Arctic Research Laboratory ice station, set up on a floe in Beaufort Sea in Sept. 1960, from No. 68944 (no.69, p.617).

Arlis-2, established on an ice island in May 1961, from a report by L.A. LeSchack, q.v. (no. 71, p.183).

Project Ice Way, 1961, joint U.S. Air Force - Navy study of properties of natural and processed sea ice runways near Thule Air Base, NW Greenland (no.71, p.182). (DGS.)

74849. *POLAR RECORD.* Notes on ships. (Polar record, 1961-1962. v.10, no.67-69: v.11, no.70-72.)

Construction, current activities, etc. are reported on the following vessels:

Danish ice-strengthened ships (5) to be built in 1960-1962 for J. Lauritzen Lines' polar service (no.67, p.409-10); one of these, the *Nella Dan,* is described, with dimensions (no.71, p.199-200);

Moskva, the world's largest conventionally powered icebreaker, delivered to the USSR in June 1960 by Wärtsilä-koncernen A/B, Helsinki, description, dimensions (no.67, p.410-11);

Canadian icebreaker, *Camsell,* described from No. 61599 (no.67, p.411-12);

Canadian icebreaker, *John A. Macdonald,* commissioned Sept. 1960, dimensions: other government icebreakers (11) and ice-strengthened ships (11) listed (no.69, p.628);

British submarines, HMS *Finwhale* and *Amphion,* tested navigational equipment for use under ice in arctic waters during Mar.-Apr. 1961 (no.70, p.89). (DGS.)

74850. *POLAR RECORD.* Obituaries. (Polar record, 1961-1962, v.10, no.67-69; v.11, no.70-72.)

Brief obituaries are given for:

Rudolph Martin Anderson, 1876-1961, Canadian zoologist, who participated in the Stefansson-Anderson-American Museum Expedition to the North American Arctic in 1908-1913, and the Canadian Arctic Expedition, 1913-1918 (no.72, p.344);

Johan Gunnar Anderson, 1874-1960, Swedish geologist and archeologist, who participated in an expedition to Spitsbergen in 1898 and led one to Bjørnøya in 1899 (no.68, p.545);

Edward G. Bird, British ornithologist who died at 44, in June 1959, had studied birds on Jan Mayen in 1934 and in East Greenland in 1936-1937, also contributed to knowledge of sledge dog management (no.67, p.443);

James Edward Church, 1869-1959, American scholar and authority on snow surveying and runoff, who was President of the Commission on Snow of the International Association of Scientific Hydrology in the International Union of Geodesy and Geophysics (no.70, p.112);

Viacheslav Vasil'evich Frolov, Director of the Arctic and Antarctic Research Institute, Leningrad since 1950, who died at 52 in Aug. 1960, studied meteorology in the Soviet Arctic and was closely concerned with Arctic Basin drifting stations, (no.68, p.545);

William Vaughan Lewis, 1907-1961, British glaciologist and geomorphologist at Cambridge University, who led expeditions to Norway (no.70, p.112);

Burt M. McConnell, American meteorologist who died at 72, in Sept. 1960, was a participant in the Canadian Arctic Expedition, 1913-1918, and active in cold survival tests and development of polar equipment during World War II (no.70, p.113);

Captain Peder Marcus Pederson, 1886-1959, Danish Greenland navigator, who was master of the *Kap York, Søkongen,* and other expeditionary vessels and a participant in the Fifth Thule Expedition, 1921-1924 (no.67, p.443);

Alan Reece, 1921-1960, British geologist killed in an airplane accident while working at Ellesmere Island, had been a field geologist for firms in East Greenland and northern Canada and compiled a geological map for the first International Symposium of Arctic Geology at Calgary in 1960 (no.67, p.443-44);

Rudolf Sand, Danish barrister, who died at 80 in Mar. 1960, administered for K. Rasmussen the trading station at Thule, northwest Greenland, 1924-1937, and drew up a code of laws for the settlement (no.67, p.444);

Rear-Admiral Edward H. Smith, 1889-1961, U.S. Coast Guard Officer and authority on arctic ice and currents, who became in 1943 commander of the ocean weather stations off Newfoundland, Greenland, and Iceland, which supported trans-Atlantic military flights, and was commander of search and rescue operations for the western North Atlantic 1946-1950 (no.72, p.345);

Leonid Mikhaĭlovich Starokadomskiĭ, 1875-1962, Soviet explorer who served as doctor aboard the *Taĭmyr* during the Russian Hydrographic Expedition of the Arctic Ocean, 1910-1915, and later participated in several smaller expeditions to the Soviet Arctic (no.72, p.346);

Edward Thiel, 1928-1961, American geophysicist who was killed in an airplane accident in the Antarctic, worked in Alaska and was seismologist for the Arctic Institute of North America, 1956-1958 (no.72, p.345-46);

Hugh R. Thompson, New Zealand-born geomorphologist who died at 33, in June 1959, was a Carnegie scholar at the Arctic Institute of North America and participated in expeditions to Nordaustlandet in 1949 and Baffin Island in 1953 (no. 67, p.444);

Nicholas Alexander Transehe, Imperial Russian Navy Officer and émigré who died in the U.S. at 74, in Dec. 1960; he commanded the *Taĭmyr* during arctic expeditions from 1911 to 1915, pioneered sea ice studies, and was associated with Byrd's trans-arctic flight in 1929 (no.70, p.113);

Ujuât (Johan Petersen), 1867-1960, Greenlandic colony manager at Angmagssalik between 1894 and 1924 and at Scoresbysund between 1925 and 1935, became an expert on the history, language, and customs of East Greenlanders (no.68, p.545);

Boris Andreevich Vil'kitskiĭ, 1885-1961, Russian explorer who led the Russian Hydrographic Expedition to the Arctic Ocean, 1910-1915, during its last three years when Severnaya Zemlya was discovered and the first east-west traverse made of the Northeast Passage (no.71, p.211-12);

Sir James Mann Wordie, 1889-1962, British explorer and authority on polar expeditions, who made journeys to Spitsbergen, Jan Mayen, East and West Greenland, and Baffin Island from 1919 to 1937 (no.71, p.212-13);

Nikolai Nikolaevich Zubov, 1885-1960, Soviet oceanographer and authority on sea ice who participated in expeditions to the Soviet Arctic, circumnavigated Zemlya Frantsa-Iosifa in 1932, flew extensively on ice reconnaissance flights, also wrote on history of exploration (no.68, p.545-46). (DGS.)

74851. POLENOVA, E. N., *and others.* Sopostavlenie srednedevonskikh otlozheniĭ Urala, Timana, Russkoĭ platformy po faune ostrakod. (*In:* Soveshchanie po utochneniiu unifitsirovannykh stratigraficheskikh skhem paleozoia . . . Devon, 1962, t.2, p.134-56, tables.) 14 refs. Text in Russian. *Other authors:* A.A. Rozhdestvenskaia *and* L.N. Egorova. **Title tr.:** Correlation of Middle Devonian deposits of the Ural, Timan, and the Russian platform according to ostracod fauna.

Presents stratigraphic correlation of the Eifelian and Givetian deposits of these regions. Some two hundred ostracod species are tabulated; their distribution in the various layers of these deposits is marked, and the prevailing forms in each are noted. (DLC.)

74852. POLETAEV, I. K. Karta podzemnykh vod Komi ASSR; ob"iasnitel'naia zapiska. (Akademiia nauk SSSR. Komi filial. Institut geologii. Trudy

1962. vyp.2, Materialy po geologii Komi ASSR, p.114-21, fold. map.) Text in Russian. **Title tr.**: Map of ground water of the Komi ASSR; explanatory note.

Explains scope, legends, etc. of a map at 1:3 million prepared in 1960 from data of oil, gas, coal, and other drillings (not from data of hydrogeologic investigations). Water is shown in bedrock of pre-Quaternary deposits. Seven ground-water regions of Komi are distinguished and each is described, noting its geologic and tectonic structure, the chemical composition, mineralization and some other features of the ground water. (DLC.)

POLEZHAEVA, L. I., *see* Denisov, A.P., & *others*. O zavisimosti fizicheskikh svoĭstv apatita . . . 1961. No. 70959

74853. POLÎÂKOV, A. I., *and* **M. P. VOLYNETS.** O raspredelenii toriîa v serii ul'traosnovnykh shchelochnykh porod Kol'skogo poluostrova. (Geokhimiîa, 1961, no.5, p.426-32, tables, diagrs.) 14 refs. Text in Russian. Summary in English. **Title tr.**: Distribution of thorium in a series of ultrabasic alkaline rocks of the Kola Peninsula.

Outlines geologic-petrochemical characteristics of ultrabasic-alkaline rocks of the Lesnaya Varaka, Ozernaya Varaka and Afrikanda massifs, in the central part of the Peninsula. The distribution of thorium in rocks and minerals of these massifs and the Monche Tundra massif is determined by analysis of 23 samples, from which the data obtained are tabulated and evaluated. The Th content is found higher than in common ultrabasic rocks. (DLC.)

POLÎÂKOV, A. I., *see also*

Gerasimovskiĭ, V.I., & A.I. Polîakov. Sfenamfibolovyĭ . . . 1962. No. 71650

Gerasimovskiĭ, V.I., & *others*. Stroenie . . . massiva. 1961. No. 71651

Volkov, V.P., & *others*. Petrokhimicheskie osobennosti . . . 1961. No. 76422

74854. POLÎÂKOV, E. A. Sovmestnyĭ vybor tipa dorog i avtomobileĭ dlîa vnutriraĭonnykh transportnykh svîazeĭ Severo-Vostoka SSSR. (Avtomobil'nye dorogi, June 1962. god 25, no.6, p.19-20, table, graphs.) Text in Russian. **Title tr.**: Coordinated selection of road and motor-vehicle types for intraregional transport communication in northeastern USSR.

Criticizes the obsolete construction and the poor state of roads in Magadan Province, which slow automotive transport to 22 km./hr. Bad grading and steeply inclined curves cannot be negotiated by heavy trailer trucks and tractor trains, and the lighter vehicles used with only 1.5 t. payload double transportation costs. Types of road for heavy freighting trucks are discussed: grading and surfacing for average speed of 35 km./hr., construction cost, its amortization through reduction trucking cost, etc. (DLC.)

74855. POLÎÂKOV, S. S. O prirodnoĭ zonal'nosti nizhnego Priob'îa. (Moskva. Universitet. Vestnik ser.5, geografiîa, Mar.-Apr. 1962. no.2, p.25-31, diagrs.) Text in Russian. **Title tr.**: On the natural zonality of the lower Ob.

Describes the relief, climate, vegetation and soils of the Ob valley from the Irtysh, 1,200 km. down to the Bay. Zonality of the climate from south to the north is characterized by the decrease in annual and average monthly temperatures, the drop in precipitation and increase of humidity of the air. A zonality is evident also in the vegetation and type of soil. Human influence is negligible on this natural zonality. (DLC.)

POLÎÂKOV, S. S., *see also*

Morozov, S.S., & *others*. Pochvy . . . 1961. No. 74114

Sergeev, E.M., & *others*. Osobennosti litologicheskogo sostava . . . 1961. No. 75499

74856. POLISHCHUK, N. K. Forma talikov pod vodotokami v oblasti rasprostraneniîa mnogoletnemerzlykh porod. (*In:* Akademiîa nauk SSSR. Institut merzlotovedeniîa. Fiziko-khimicheskie protsessy v promerzaîushchikh i merzlykh gornykh porodakh, 1961, p.90-94, graphs.) 4 refs. Text in Russian. **Title tr.**: The form of taliks beneath water courses in a permafrost area.

Reports studies in the Aldan-Chul'man mining area, Yakut ASSR, where permafrost formations reach 200 m. depth. Continuous taliks are usually found beneath the larger streams, discontinuous forms beneath smaller. Electric resistance was determined in a number of soil and rock formations in frozen and thawed states. The contours of permafrost subjacent to a water-course were established and checked mathematically by means of a formula proposed by Redozubov in 1955; good agreement was obtained.–From CRREL. (DLC.)

74857. POLKANOV, ALEKSANDR ALEKSEEVICH, 1888– , *and* È. K. GERLING. Geokhronologiîa i geologicheskaîa ėvoliîutsiîa Baltiĭskogo shchita i ego skladchatogo obramleniîa. (Akademiîa nauk SSSR. Laboratoriîa geologii dokembriîa. Trudy 1961. vyp.12, Voprosy geokhronologii i geologii, p.7-102, tables, maps.) 58 refs. Text in Russian. **Title tr.**: The geochronology and geologic evolution of the Baltic shield and its folded frame.

Reports investigations of the Precambrian of the shield and adjacent regions, in collaboration with the geological institutes of Finland, Sweden and Norway. Some six hundred samples, mostly micas, were collected, 450 in Kola Peninsula, Karelia, the Kanin and Timan Ranges, 150 in Finland, Sweden and Norway. Absolute age determinations were made by potassium-argon, rubidium-strontium and lead methods. A geochronologic division is made for the Kat-Archean, Archean, Proterozoic, Caledonian and Hercynian of the Baltic shield. A new interpretation of the Precambrian in the Baltic shield is offered. (DLC.)

74858. POLKANOV, ALEKSANDR ALEKSEEVICH, 1888– , *and* U LI - ZHEN'. O genezise i ėvoliîutsii shchelochnoĭ magmy Khibinskogo subvulkana. (Akademiîa nauk SSSR. Laboratoriîa geologii dokembriîa. Trudy 1961. vyp.12, Voprosy geokhronologii i geologii, p.176-86, tables, diagrs.) 9 refs. Text in Russian. **Title tr.**: On the genesis and evolution of alkaline magma of the Khibiny sub-volcano.

Reports geologic and petrographic investigations of the Khibiny intrusions. The absolute age of the sub-volcano is considered 290 ± 10 million years. Special attention is given to the physical-chemical study of Khibiny rocks and the evolution of magma crystallization. For this purpose, the experimental data and reaction series, distinguished

by N.L. Bowen and T.F.W. Barth for silicate melts were observed to determine processes of differentiation and evolution of igneous rocks. (DLC.)

74859. POL'KIN, IA. I. Novye dannye po stratigrafii vulkanogennogo kompleksa severo-zapadnoĭ okrainy Sibirskoĭ platformy. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ sbornik 1962. vyp.28, p.43-56, table.) 6 refs. Text in Russian. **Title tr.:** New data on the stratigraphy of the volcanic complex in the northwestern part of the Siberian platform.

Reports study of the trap formation in the Kheta, Kureyka, Kotuy, Khantayka, Nizhnyaya Tunguska and Pyasina basins, based on stratigraphic subdivision of the volcanic complex according to its tectonic-magmatic phases. Permian and Triassic volcanic rocks are recognized and divided into various series and smaller stratigraphic units. (DGS.)

POL'KIN, IA. I., *see also*

Ermolov, V.V., & *others.* Osobennosti geologicheskogo deshifrirovaniia . . . 1961. No. 71291

Kirĭushina, M.G., & *others.* Osobennosti proiavleniia tektoniki . . . 1961. No. 72813

74860. POLLACK, IRVIN P., *and others.* The effect of hypothermia on aqueous humor dynamics, 1; intraocular pressure and outflow facility of the rabbit eye. (American journal of ophthalmology, May 1960. v.49, no.5, pt.2, p.1126-34, illus., tables.) 18 refs. *Other authors:* B. Becker *and* M.A. Constant.

Reports on experiments with rabbits made hypothermic to 18.5°C. Intraocular pressure fell logarythmically with drop in rectal temperature. Q_{10} of this process was 1.4. The fall in outflow could be entirely accounted for by viscosity change of water. The flow rate was halved for every 7° fall in body temperature. (DNLM.)

74861. POLLACK, IRVIN P., *and* **B. BECKER.** The effect of hypothermia on aqueous humor dynamics, 4; carotid artery ligation and blood flow. (American journal of ophthalmology, May 1961. v.51, no.5, pt.2, p.1039-47, illus., tables.) 9 refs.

Study on the effects of unilateral carotid ligation and preganglionic sympathectomy and their effects on ocular blood flow during hypothermia. Intraocular pressure and temperature are also considered. (DNLM.)

74862. POLONSKIĬ, A. S. Povedenie sel'di zimoĭ. (Rybnoe khoziaĭstvo, 1961. god 37, no.2, p.22-27, illus., tables, maps.) Text in Russian. **Title tr.:** Behavior of herring during the winter.

Discusses area and period of hibernation in the Norwegian Sea; movements, sexual maturity, size composition, year-to-year changes in location of wintering shoals, fatness, etc. (DLC.)

74863. POLOZOVA, T. G. Semennoe vozobnovlenie *Betula nana* L. v lesotundre Bol'shezemel'skoĭ tundry. (Botanicheskiĭ zhurnal, Sept. 1962. t.47, no.9, p.1370-75, illus., tables.) 8 refs. Text in Russian. **Title tr.:** Sexual reproduction of *Betula nana* L. in the forest-tundra of the Bol'shezemel'skaya Tundra.

Describes the (three) plots where observations were made, laboratory germination tests, fertility on the observation plots, age composition of the regrowth and its soil preferences. The main requirement for successful germination is established: the seed to remain in the open over the winter. (DLC.)

POL'SHIN, D. E., *see* International Conference on soil mechanics . . . 1961. No. 72383

74864. POLSKA WYPRAWA NA SPITSBERGEN, 1957–1958. Geological results of the Polish 1957-1958 Spitsbergen expedition. K. Birkenmajer, editor. Warszawa, Wydawnictwa geologiczne, 1960. 2 pt.: 123, 96 p., illus., tables, maps incl. fold., diagrs., profiles. (Studia geologica Polonica, v.4-5.) Refs. Text in English. Summary in Polish.

The Polish IGY expedition to Spitsbergen headed by S. Siedlecki, included K. Birkenmajer as geologist, geomorphic and other related work being carried out by other parties of the expedition. Main purpose of the geologic investigations was mapping north from Hornsund to complement map at 1:50,000 reported in No. 67868. The six papers, immediate results of the geologic work, are abstracted in this Bibliography under the authors' names, viz:

BIRKENMAJER, K. Course of the geological investigations of the Hornsund area, Vestspitsbergen, in 1957-1958.

BIRKENMAJER, K., *and* W. NAREBSKI. Precambrian amphibolite complex and granitization phenomena in Wedel-Jarlsberg Land, Vestspitsbergen.

KIELAN, Z. On two olenellid trilobites from Hornsund, Vestspitsbergen.

SIEDLECKI, S. Culm beds of the SW coast of Hornsund, Vestspitsbergen; preliminary communication.

BIRKENMAJER, K., *and* T. MORAWSKI. Dolerite intrusions of Wedel-Jarlsberg Land, Vestspitsbergen.

BIRKENMAJER, K. Raised marine features of the Hornsund area, Vestspitsbergen. (CaMAI.)

POLTORANOV, V. V., *see* Kurashov, S.V. Kurorty SSSR. 1962. No. 73222

74865. POLUNINA, L. A. Novye dannye ob ul'traosnovnykh porodakh Chadobetskogo podniatiia. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyĭ sbornik 1960. no.40, Geologiia i poleznye iskopaemye Vostochnoĭ Sibiri, p.77-91, table, map, diagrs.) 12 refs. Text in Russian. **Title tr.:** New data on the ultrabasic rocks of the Chadobets uplift.

Gives a geologic and petrographic description of igneous rocks studied in 1956 in the Terina River (tributary to the Chadobets) valley. Vein and metasomatic rocks are identified and their occurrence conditions, mineralogic and chemical analyses are reported. This Chadobets complex shows similarities with kimberlites and further studies are suggested. (DLC.)

POLUNINA, L. A., *see also* Lur'e, M.L., & *others.* Intruzivnye trappy . . . 1962. No. 73634

74866. POLUZADOV, N. B. Sostoianie i vosproizvodstvo zapasov sobolia na Urale i meropriiatiia po ratsionalizatsii ego promysla. (Ratsionalizatsiia okhotnich'ego promysla, 1961. vyp.9, p.24-34, tables.) 4 refs. Text in Russian. **Title tr.:** State and reproduction of the sable stock in the Ural and rationalization measures for the industry.

Presents data on the distribution and catch of sable on the northeastern slopes of the Ural

and adjacent areas, including Khanty-Mansi and Yamal-Nenets National Districts of Tyumen Province. The large region was formerly known for its abundance of sable; but by the beginning of this century, the stock was depleted nearly to extinction. Hunting was prohibited during 1926-1931 and 1935-1940; and further restrictions and regulations, establishment of preserves, including the Konda-Sos'va Preserve from 1927, etc. have resulted in recovery of the stock, in some areas to a population 9 sable/1000 hectares. The catch has gradually increased to 8,782 pelts in 1958-59, though the sable trapping is not yet properly organized in northern areas. Measures are discussed for protecting the stock and raising the catch by strict organization of hunting. (DLC.)

74867. POLYNTSEVA, OL'GA AFANAS'EVNA. Soils of the southwestern part of the Kola Peninsula. Jerusalem, Israel Program for Scientific Translations, 1962. 135 p. tables, map.

English translation of No. 54070, prepared and published for the National Science Foundation, Wash., D. C. (DLC.)

POLYSALOVA, N. F., *see* Girs, A.A., & N.F. Polysalova. Osobennosti raspredeleniia anomalii davleniia . . . 1961. No. 71698

74868. POMANSKIĬ, A. A. Novoe napravlenie v issledovanii kosmicheskikh luchei. (Akademiia nauk SSSR. Vestnik, Nov. 1962. god 32, no.11, p.130-31.) Text in Russian. **Title tr.:** A new trend in investigation of cosmic rays.

Reports the first All-Union conference on cosmophysical trends in cosmic ray investigations held Aug. 23-30 1962, in Yakutsk. The main papers relating chiefly to the problem of galactic or metagalactic origin of cosmic rays are summarized. The outstanding work of the Yakutsk cosmic ray station and its Tiksi branch is noted. (DLC.)

POMERANTSEVA, N. G., *see* Bussen, I.V., & *others*. Amfibolovye peridotity . . . 1962. No. 70476

74869. POMERANTZ, MARTIN A., *and others*. Observations near the North and South Poles of cosmic rays from the sun. (Franklin Institute, *Philadelphia*. Journal, Apr. 1961. v.271, no.4, p.317-26, table, graphs.) 13 refs. *Other authors:* S.P. Duggal *and* K. Nagashima.

Presents results of simultaneous observations at Thule, North Greenland, and McMurdo, Antarctica, during events on Nov. 12 and 15, 1960. Cosmic-ray intensity increased by about 80% on the 12th, 70% on the 15th. The intensity displayed a two-hump structure during the first event; onset times were the same at both stations but the peak value of the first hump was attained later at McMurdo than at Thule, and the intensity was greater at the southern station. The data suggest that the interplanetary space was permeated by clouds containing magnetic fields which deflected the solar particles into the forbidden polar regions. During the Nov. 12 event, the earth apparently was located near the boundary of a modulating region which later completely surrounded the earth. (DLC.)

74870. POMERANTZ, MARTIN A., *and others*. Solar-produced cosmic rays near the North and South Poles. (Physical review letters, Feb. 1, 1961. v.6, no.3, p.123-25, tables, graphs.) Ref. *Other authors:* S.P. Duggal *and* K. Nagashima.

Reports observation at ground level of events on Nov. 12 and 15, 1960, at Thule and McMurdo. An unusual double-hump structure was recorded at both stations during the increase on Nov. 12. Graphs are presented of the present deviation from the preflare level of nucleonic intensity, and the ratio of percent deviation at McMurdo to that at Thule. Times of onset and times and amplitudes of maxima are tabulated. Tentative interpretations are given. (DLC.)

74871. POMERANTZ, MARTIN A., *and* **S. P. DUGGAL.** Unusual increase in the cosmic ray intensity on November 20, 1960. (Franklin Institute, *Philadelphia*. Journal, Apr. 1961. v.271, no.4, p.327-35, table,graphs.) 5 refs.

Presents data on a small event observed at Thule, North Greenland, and McMurdo, Antarctica. Maximum amplitude was attained at both stations between 2200 and 2300 U.T. The increase may have been caused by a flare on the far side of the sun. (DLC.)

POMERLEAU, RENÉ, *see* Royal Soc. of Can. Pop. & colonization. 1962. No. 75234

74872. PONOMARENKO, I. IA. O vozmozhnom vliianii pitaniia molodi treski na ee chislennost'. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchanii 1961. vyp.13, p.301-306, tables.) 8 refs. Text in Russian. **Title tr.:** The possible influence of nutrition of young cod upon its numbers.

Reports a study of stomachs from fish up to 36 cm. length in the Barents Sea. Species of fish consumed in successive months are tabulated and discussed. Special attention is paid to cannibalism prevalent in certain areas and periods, with cod of 8.5-10 cm. mostly affected and the smallest "cannibal" measuring only 15.8 cm. in length. (DLC.)

PONOMARENKO, L., *see* Alekseev, A.P., & *others*. Hydrographic conditions . . . 1961. No. 69691

74873. PONOMARENKO, L. N. Izmenenie aktivnosti kholinatsetilazy i kholinesterazy mozga pri obshchei gipotermii. (Biulleten' eksperimental'noi biologii i meditsiny, Dec. 1962. t.54, no.12, p.47-50, graphs, table.) 29 refs. Text in Russian. Summary in English. **Title tr.:** The change of cholinacetylase and cholinesterase activity in the brain during general hypothermia.

General hypothermia of ether-anesthetized rats was always accompanied by a drop in brain cholinacetylase activity. Cholinesterase activity also decreased in the majority of cases. Rewarming produced a rise in activity of both enzymes. (DLC.)

74874. PONOMARENKO, V. P., *and others*. Eksperimental'nyi reis za saikoi. (Rybnoe khoziaistvo, 1962. god 38, no.12, p.36-40, illus., tables, map.) Text in Russian. *Other authors:* Kh. M. Natenzon *and* V.M. Naumov. **Title tr.:** Experimental run for *Boreogadus saida*.

Reports a trip west off Novaya Zemlya, with the aim of discovering exploitable schools of this small, high arctic cod. Location of the schools, nets used, and size of catches are stated. Size of fish (16-20 cm.), its chemical composition,

quality and composition of meal prepared from it, etc. are described. (DLC.)

74875. PONOMARENKO, V. P. *Raja lintea* Fries na granitse Norvezhskogo i Barentseva morei. (Zoologicheskiĭ zhurnal, Aug. 1961. t.40, vyp.8, p.1260-61.) Text in Russian. Summary in English. **Title tr.:** *Raja lintea* Fries in the area between the Norwegian and Barents Seas.

Reports catch at 73°18′N. 18°55′E. of a large male of this skate of the northwest European waters. This is the most easterly record to date, and the range extension it attributed to a warming of the North Atlantic. (DLC.)

PONOMARENKO, V. P., *see also* Baranenkova, A.S., & *others.* Shipokhvostyĭ skat . . . . 1962. No. 70007

74876. PONOMAREV, A. S. O povyshenii produktivnosti olenevodstva. (Sel'skoe khozīaĭstvo Severo-Zapadnoĭ zony, Aug. 1962, no.8, p.60-61.) Text in Russian. **Title tr.:** Raising productivity in the reindeer industry.

Notes 29,000 reindeer lost in 1961, nearly half from unknown causes; and suggests increasing the number of cows, combatting barrenness, making better use of winter pastures, adding salt to the winter diet, etc. in the Nenets National District. The herds are to be brought up to 145,000 head in 1962, including 85,600 cows, and meat production to 3080 t. (DLC.)

74877. PONOMAREV, E. A. Geometricheskie kharakteristiki otrazhenii ot polīarnykh siīaniĭ i ikh svīaz' s sostoīaniem magnitnogo polīa po nabliūdeniīam v bukhte Tiksi v oktīabre-dekabre 1958 g. (Kiyev. Universitet. Sbornik rabot po mezhdunarodnomu geofizicheskomu godu, 1961. vyp.1, p.67-75, graphs.) 3 refs. Text in Russian. **Title tr.:** Geometric characteristics of auroral radio-echoes, and their relationship to the magnetic field conditions as observed at Tiksi Bay during October-December 1958.

Reports on the radio echoes from auroras recorded by the IGY stations of the Arctic Institute, and of Kiev State University at Tiksi, from Mar. 1958, by two radars working on a wavelength of 4 m. range, and equipped with "wave-channel" type of antenna. The movements of appearance and disappearance of radio-echoes, the type of the signal, the distance from the proximal to the distal ends of aurora, the amplitude of the signal, and the azimuth of the beginning and the end of reflection were recorded. These data for the period Oct.-Dec. 1958 were reduced to illustrate graphically the "population density" of the auroral radio echoes of the surveyed sky. It was established that radio echoes from auroras were recorded from the northern sector of sky at Tiksi. The analytic theory proposed by Chapman (No. 28483) as an explanation of this peculiarity appears to be confirmed by the recorded radio-echo data, and a simplified geometric exposition prepared by the author is presented. (DLC.)

74878. PONOMAREV, F. A. Kontsentrirovannyĭ lov ryby na Pechore. (Rybnoe khozīaĭstvo, 1962. god 38, no.4, p.56-63, illus., tables.) Text in Russian. **Title tr.:** Concentrated fishing on the Pechora.

Describes salmon fisheries on this river in pre- and early-Revolutionary times; the concentrated method introduced in 1958, its operation and advantages; differences in methods according to season; considerations of traffic and spawning movements; savings in labor and cost. (DLC.)

PONOMAREV, V. D., *see* Mikhirev, P.A., & V.D. Ponomarev. Rezervy . . . mashin PPM-4. 1962. No. 73997

74879. PONOMAREV, VASILIĬ MAKSIMOVICH, 1905–1961. Formirovanie mnogoletnemerzlykh gornykh porod i podzemnykh vod na melkomor'e severnykh morei. (*In:* Akademiīa nauk SSSR. Institut merzlotovedeniīa. Fiziko-khimicheskie protsessy v promerzaīushchikh i merzlykh gornykh porodakh, 1961, p.95-101, illus., diagrs.) 4 refs. Text in Russian. **Title tr.:** Formation of permafrost and ground water in shallow areas of northern seas.

Deals with shallow areas of northern seas invaded by marine transgressions during the Quaternary. Chemical alteration of sea water, as it froze from above and below, increase in mineralization of the sea water, and other processes are discussed, from description of the profile of a bore hole to 85.56 m. depth in an unidentified coastal area. Buried ice is reported at the 28.55 - 42 m. depth, and the problem of its preservation is considered. Tectonic dislocations are noted and their effects on permafrost and taliks are characterized. (DLC.)

74880. PONOMAREV, VASILIĬ MAKSIMOVICH, 1905–1961. Osnovnye osobennosti gruntovykh vod territorii razvitiīa mnogoletnemerzlykh porod. (Sovetskaīa geologiīa, Aug. 1962, no.8, p.79-91, illus., table.) 23 refs. Text in Russian. **Title tr.:** The main features of ground water in an area of developing permafrost.

Discusses types, mineralization, resources of ground water in permafrost regions of the USSR. Ground water of the seasonal freezing-and-thawing layer is characterized. Classification of ground water in permafrost regions is offered. The plains (West Siberian, Khatanga, Lena, Lena-Vilyuy, etc.) ground waters, and those of mountain areas (Pay-Khoy, Byrranga, Cherskogo), and of plateaus (Anabar, Anadyr) are distinguished and described. (DLC.)

74881. POPE, JOSEPH H. A correction to the exospheric electron density estimate using the nose whistlers of March 19, 1959. (Journal of geophysical research, Jan. 1962. v.67, no.1, p.412, graph.) 2 refs.

Multiplies the density estimate obtained (*infra*) by a factor of four, observations at Unalaska, Alaska, showing that the whistlers assumed to be "long" in fact were "short," i.e. originated in the Southern Hemisphere. (DLC.)

74882. POPE, JOSEPH H. An estimate of electron densities in the exosphere by means of nose whistlers. (Journal of geophysical research, Jan. 1961. v.66, no.1, p.67-75, graphs, diagrs.) 9 refs.

Integrates numerically the nose whistler equation using three assumed functions for the electron density distribution. Several whistlers received at College, Alaska, on Mar. 19, 1959, are analyzed to obtain electron densities. One of the assumed functions fits the data well; densities of

20-5 electrons/cm³ are found between 4 and 6 earth radii. (DLC.)

POPE, JOSEPH H., *see also* Alaskan Science Conference 1960. 1961. No. 69643

74883. POPOLOV, A. S., *and* **I. V. SUBBOTINA.** Ustroĭstvo tsementobetonnogo pokrytiĭa na Kraĭnem Severe. (Avtomobil'nye dorogi, Apr. 1962. god 25, no.4, p.9-11, illus., graphs.) Text in Russian. **Title tr.:** The installation of cement concrete road surfacing in the far North.

Deals with economic factors involved in hard-surface road construction in areas with long, harsh winters: work stoppage, equipment breakdown, freezing of construction materials, etc. Preventive measures are discussed: special equipment for heating water and materials, admixture of salt solution to concrete which allows a 1½ - 2 month extension to the construction season, etc. Different kinds and durability of prefabricated cement slabs are compared as to cost. Time and labor-costs for various kinds of concrete surfacing are graphed, and further tests of materials and labor-saving factors for the far North are recommended. The current cost of cement mixture in Yakutia is 61.7 rubles/m³. (DLC.)

74884. POPOLOV, A. S. Zemlĭanye raboty na dorozhnykh stroĭkakh Severo-Vostoka strany. (Avtomobil'nye dorogi, Oct. 1962. god 25, no.10, p.6-7. diagrs.) Text in Russian. **Title tr.:** Earthwork on roads of northeastern USSR.

Describes earthwork methods used in the summer and fall-winter seasons of 1959 and 1960 at an unidentified road construction site (in Magadan Province?). Year-round work was found feasible though temperature dropped to -35°C. High-grade machinery, proper maintenance and handling of equipment, qualified mechanics, etc. are required. (DLC.)

74885. POPOV, A. I. Karta podzemnogo oledeneniĭa (vechnoĭ merzloty) na territorii severa Evropeĭskoĭ chasti SSSR i Sibiri. (*In:* Moskva. Universitet. Geograficheskiĭ fakul'tet. Voprosy geograficheskogo merzlotovedeniĭa . . . 1962, p.59-63, fold. map.) 13 refs. Text in Russian. **Title tr.:** Map of subsurface glaciation (permafrost) in the territory of northern European USSR and Siberia.

Reports his permafrost map of the USSR at 1:10,000,000 scale and his criteria of permafrost. The map is based on genetic types of subsurface ice for which a somewhat different classification is given than that used by others. Six genetic types are distinguished: polygonal vein ice, migrating subsurface ice which loses density with increasing depth, migrating subsurface ice without loss of density, subsurface ice of peat mounds, and others. Each type is briefly characterized noting its morphology, deposition conditions, relationship with enclosing rocks, age, and other features. Author's map is reproduced at reduced (1:25 million) scale. (DLC.)

74886. POPOV, A. I., *and* **A. G. KOSTIĬAEV.** Karty periglĭatsial'nykh obrazovaniĭ Azii, sovremennykh i srednepleĭstotsenovykh. (*In:* Moskva. Universitet. Geograficheskiĭ fakul'tet. Voprosy geograficheskogo merzlotovedeniĭa . . . 1962, p.64-74, maps.) 84 refs. Text in Russian. **Title tr.:** Maps of the periglacial formations of Asia: Recent and Middle Pleistocene.

Presents two schematic maps of periglacial features of Asia in the Middle Pleistocene and the Upper Pleistocene-Recent. They were prepared from evaluation of literature, for the International Geographical Congress at Stockholm in 1960, at 1:10,000,000 scale; the arrangement is explained. Soviet arctic regions are included. Ural-Siberia, Middle Siberia, Siberia-Kolyma and other provinces are briefly characterized. (DLC.)

74887. POPOV, A. I. O psevdomerzlotnykh obrazovaniĭakh. (Moskva. Universitet. Vestnik ser. 5, geografiia, May-June 1962. no.3, p.10-17, illus.) 6 refs. Text in Russian. **Title tr.:** On pseudo-permafrost formations.

Analyzes veneering, flow structures having sometimes polygonal patterns and occurring in sedimentary rocks of normal deposition of layers. Such depressions of 1-3 m. depth described by N.N. Romanovskiĭ (No. 61249, 67812) in the New Siberian Islands and the Yana-Indigirka plain are considered to have been caused by ice veins and in general by permafrost. Critical analysis of these structures is made and author's own observations of 1960-1961 in the lower Pechora region, are reported. Veneering structures occurring in aleurite and fine sandy deposits are found to have no connection with permafrost phenomena. (DLC.)

74888. POPOV, A. I. Paleogeografiia pleĭstotsena Bol'shezemel'skoĭ tundry. (Moskva. Universitet. Vestnik, ser. 5, geografiia, Nov.-Dec. 1961, no.6, p.41-47, diagr.) 11 refs. Text in Russian. **Title tr.:** Paleogeography of the Pleistocene of Bol'shezemel'skaya Tundra.

Presents and interprets a stratigraphic core of Pleistocene deposits on the basis of paleogeographic data. The Middle and Upper Pleistocene are distinguished and their horizons are described noting climatic and other conditions under which they were deposited. No deposits of the Zyryanka and Valday glaciations have been found in the Bol'shezemel'skaya Tundra. Glaciations were confined to the Polar Ural, Novaya Zemlya, the Putorana and the Taymyr. Climatic fluctuations, transgressions and glaciation problems are discussed. (DLC.)

74889. POPOV, A. I. Pokrovnye suglinki i poligonal'nyĭ rel'ef Bol'shezemel'skoĭ tundry. (*In:* Moskva. Universitet. Geograficheskiĭ fakul'tet. Voprosy geograficheskogo merzlotovedeniĭa . . . 1962, p.109-130, illus.) 19 refs. Text in Russian. **Title tr.:** Covering loams and polygonal relief of the Bol'shezemel'skaya Tundra.

Reports geologic-geocryologic study in the eastern part of this tundra in 1958 and 1959-1960, his main aim to prove his conception of the interrelated development of polygonal relief and covering loams under the physical-geographic conditions of the Arctic and cryoturbation factors. Bol'shezemel'skaya Tundra has so-called blocky relief, consisting of system of blocks of various sizes and forms, and dissected by depressions. This topography is treated in detail and illus. by aerial photos and diagrs. Covering loams are genetically connected with blocky relief and are products of frost weathering. Their main features such as deposition, structure, composition are also described in detail. Comparisons are made with the covering loams of the Russian plain and other regions. Development conditions and history of

formation of polygonal forms of relief and these mantle deposits are evaluated. (DLC.)

74890. POPOV, A. I. Summarnaĭa i rasseĭannaĭa radiat͡siia v Krasnoĭarskom krae. (Mezhvedomstvennoe soveshchanie po aktinometrii i atmosfernoĭ optike, 2d, *Leningrad,* 1959 *pub.* 1961. Aktinometriia i atmosfernaĭa optika, p.49-52, tables.) 2 refs. Text in Russian. **Title tr.:** Total and dispersed radiation in Krasnoyarskiy Kray.

Reports on actinometric observations started in 1954. For the Turukhansk and Yeniseysk stations, 1956 and 1957 data, and for Solyanka, Khakasskaya and Kyzyl 1957 data are given: annual, seasonal and monthly values for total and dispersed radiation are tabulated and interpreted. (DLC.)

74891. POPOV, ANDREĬ ALEKSANDROVICH, 1902–1960. Die "Kuojka"; Familien- und Sippenschutzgeister bei den Nganasanen. (*In:* Opuscula ethnologica memoriae Ludovici Biró sacra, Budapest, 1959, p.23-37, illus.) Ref. Text in German. **Title tr.:** The *kuoĭka;* family and clan guardian spirits of the Nganasans.

Discusses the dual meaning of the Nganasan Samoyed term *kuoĭka,* denoting both the guardian spirit and the natural or man-made object in which it dwells: unusually shaped stones, zoo- and anthropomorphic figurines, shaman-dress pendants, etc. The worship of these spirits and their object-incorporations, their functions as providers of game and protectors against sickness, and particularly the branded reindeer and sleighs used to transport the *kuoĭka,* are described, as observed in 1936-1938 fieldwork in Taymyr National District. (DLC.)

POPOV, ANDREĬ ALEKSANDROVICH, 1902–1960, *see also* Akademiia nauk SSSR. Istoriko-ėtnograficheskiĭ atlas . . . 1961. No. 69544

POPOV, B. A., *see* Berger, T.S., & *others.* Novye dannye o severnoĭ granit͡se . . . 1962. No. 70151

74892. POPOV, E. Nado preobrazovat' del'tu Severnoĭ Dviny. (Rechnoĭ transport, Oct. 1961. god 20, no.10, p.45-46, map.) Text in Russian. **Title tr.:** The delta of the Severanaya Dvina should be changed.

Describes the silting hazards of the Maymakse channel and its access canal, the only waterways in the Severnaya Dvina delta used in the Arkhangel'sk lumber trade. Origin, growth, migration, etc. of the delta deposits are discussed and corrective measures suggested: diversion of silting river currents, erection of moles and breakwaters to halt marine sedimentation. (DLC.)

POPOV, G. A., *see* Bershadskiĭ, V.L., & *others.* Ėlektroprivod grebnoĭ ustanovki . . . 1959. No. 70174

74893. POPOV, IŪRIĬ N. Noriĭskie otlozheniia Severo-Vostoka SSSR i problema rėtskogo iarusa. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei . . . vyp.16, 1961, *its:* Trudy t.123, p.69-77, tables.) 25 refs. Text in Russian. **Title tr.:** Norian deposits of northeastern USSR and the problem of the Rhaetic stage.

Reviews the Norian stage of Upper Triassic deposits distributed in Verkhoyansk, Kharaulakh, and Koryak Mts., Viliga River basin and other parts of the Northeast. Pelecypod, ammonite, brachiopod and other fauna are characterized. Separation of the marine Rhaetic by I.I. Tuchkov (No. 62199) in approx. the same areas is found insufficiently substantiated and the so-called Rhaetic fauna considered to be Norian. The general problem of the Rhaetic stage as identified in eastern Alps and elsewhere is discussed. (DLC.)

74894. POPOV, IŪRIĬ N. Novye vidy ammonoideĭ iz olenekskogo iarusa Verkhoian'ia i Leno-Olenekskogo mezhdurech'ia. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962, t.127, Paleontologiia i biostratigrafiia, vyp.3, p.176-95, illus., plates, tables.) 17 refs. Text in Russian. **Title tr.:** New species of ammonoids from the Olenek stage of the Verkhoyansk region and the Lena-Olenek interfluve.

Presents systematic description of 14 species of Triassic ammonoids collected in northern Yakutia. Their paleontologic characteristics and stratigraphic importance are discussed. Of particular interest among these are: *Procarnites kummeli* and *Inyoites eiekitensis* n. spp., and the abundant *Hemiprionites,* as well as *Anasibirites multiformis* Welter. (DLC.)

74895. POPOV, IŪRIĬ N. Problema rėtskogo iarusa na severo-vostoke Azii. (Sovetskaia geologiia, Mar. 1961, no.3, p.79-87.) 24 refs. Text in Russian. Summary in English. **Title tr.:** The problem of the Rhaetic stage in northeast Asia.

Discusses the stratigraphic position and paleontologic substantiation of this stage of the Upper Triassic, and evaluates recent collections of pelecypod, brachiopod and ammonite fauna, especially on the Bol'shoy Anyuy. Only a few layers remain which can be considered Rhaetic: Norian and Carnian stages are recognized and a new stratigraphic division of the Upper Triassic is proposed. (DLC.)

74896. POPOV, IŪRIĬ N. Triasovye ammonoidei Severo-Vostoka SSSR; paleontologicheskoe obosnovanie stratigrafii triasovykh otlozheniĭ Severo-Vostoka SSSR. Moskva, Gosgeoltekhizdat, 1961. 180 p. illus., plates. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy t.79.) 84 refs. Text in Russian. **Title tr.:** Triassic Ammonoidea of northeastern USSR; paleontologic substantiation of Triassic deposit stratigraphy in the Soviet Northeast.

Outlines the biostratigraphic division of these deposits from the eastern Taymyr eastward to the Pacific. Lower, Middle and Upper Triassic are distinguished, and divided into six stages and several zones. Main attention is given to the taxonomic description of ammonoids; 115 species are described in 22 families and nine superfamilies; diagnosis, material, form and dimensions of shell lobe line, comparison, distribution and locality of finds are stated. Many new forms are included. The paleogeography and general characteristics of the Triassic boreal zoogeographic province are summarized. (DLC.)

POPOV, L., *see* Baranov, V., & L. Popov. Calculation of minimum run-off . . . 1961. No. 70011

74897. POPOV, L. A. Materialy k obshcheĭ morfologii khokhlacha Grenlandskogo moria, *Cystophora cristata* Erxl. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ 1961.

vyp.12, p.180-91, illus., tables.) 15 refs. Text in Russian. **Title tr.:** Materials to the general morphology of the hooded seal from the Greenland Sea, *Cystophora cristata* Erxl.

Deals with morphology and morphometry of males, females and the young; weight and thickness of blubber; color; anatomy of the hood and skull; dentition and food; reproduction and early development. The study is based on results of his 1956, 1957, and 1958 cruises in the Greenland Sea. (DLC.)

POPOV, L. N., *see* Gavrikov, S.I., & L.N. Popov. K geologii . . . 1962. No. 71603

74898. POPOV, LEONID ANDREEVICH, 1919– . V lesakh Botuob'ia. (Druzhba narodov, Sept. 1962, no.9, p.157-61.) Text in Russian. **Title tr.:** In the forests of the Botuobuya River.

Recounts experience of an old Yakut hunter in the Vilyuy basin taiga, who meets a long-lost brother with a survey party in the Chona River basin prior to its flooding for the new Vilyuy power station. Translated from Yakut by G. Kovalevich and A. Tatarina. (DLC.)

74899. POPOV, M. V. K voprosu o migratsiiakh iakutskogo zaitsa. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskii filial. Nauchnye soobshcheniia 1959. vyp.2, p.73-78, graphs.) 6 refs. Text in Russian. **Title tr.:** On the migration of the Yakut hare.

Discusses earlier studies on the arctic hare of Russia and Yakutia, its population fluctuations, and recent changes in Yakutia as indicated by fluctuations in the number, of processed skins. Vital factors, not migration however, are concluded to be responsible for the numerical fluctuation of the Yakut hares. (DLC.)

POPOV, M. V., *sec also*

Demidov, P.G., & M.V. Popov. O srokakh . . . lin'ki . . . 1961. No. 70955

Egorov, O.V., & *others*. . . . *Lepus timidus*. 1957. No. 71208

74900. POPOV, P. A. Iskopaemye griby Zapadno-Sibirskoi nizmennosti i Eniseiskogo kriazha. (Botanicheskii zhurnal, Nov. 1962. t.47, no.11, p.1596-1610, illus., table.) About 100 refs. Text in Russian. Summary in English. **Title tr.:** Fossil fungi of the West Siberian plain and the Yenisey Ridge.

Meso-Cenozoic sedimentary rocks of this area were found to contain excellently preserved fossil fungi. Microscopic examinations showed their detailed structure and made possible the identification of some hundred forms. The fossils are distributed in definite order and the microspectra indicate different fungal vegetation in different areas at certain geological periods. (DLC.)

74901. POPOV, V. A., *and* **G. G. OSETROV.** Soderzhanie vitamina C v krovi zdorovykh lits i nekotorykh khirurgicheskikh bol'nykh v Arktike. (Voprosy pitaniia, 1962. t.21, no.6, p.60-62, tables.) 3 refs. Text in Russian. Summary in English. **Title tr.:** Vitamin C content in the blood of healthy subjects and of some surgical patients, in the Arctic.

Reports an investigation of 130 young subjects and 20 post-operative patients. On the average, the vitamin level in the first group fell as sojourn in the Arctic extended. A 0.2 mg % drop in vitamin level was observed in the patients. (DLC.)

74902. POPOV, V. V. Prilivnye mel'nitsy na Belom more. (Priroda, Oct. 1962. god 51, no.10, p.119.) 3 refs. Text in Russian. **Title tr.:** Tidal mills on the White Sea.

Notes the expected development of power stations utilizing tidal-water power, and shows from historical sources that mills, run by tidal currents were built on river estuaries of this region in the 16-18th centuries. (DLC.)

74903. POPOV, VALENTIN VASIL'EVICH, 1916– . O faune slepnei, Tabanidae, Tiumenskoi oblasti. (Zoologicheskii zhurnal, Jan. 1962. t.41, vyp.1, p.101-109, illus., tables.) 8 refs. Text in Russian. Summary in English. **Title tr.:** The botfly fauna, Tabanidae, of Tyumenskaya Oblast'.

Records 35 species found in the taiga and forest-steppe, with some described in detail. Seasonal flight-changes, occurrence, ecology, diurnal activity, etc. are considered. The frequency of the different forms is evaluated and tabulated. (DLC.)

POPOVA, ELIDA IVANOVNA, 1929– , *see* Bratsev, A.P., & *others*. Glubokovodnoe ozero . . . 1962. No. 70370

74904. POPOVA, N. A. Metod fotometrii poliarnykh siianii po fokal'nym izobrazheniiam zvezd na snimkakh kamer C-180. (Akademiia nauk SSSR. Mezhduvedomstvennyi komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: poliarnye siianiia i svechenie nochnogo neba. Sbornik statei, 1961. no.7, p.33-36, graphs.) 7 refs. Text in Russian. Summary in English. **Title tr.:** A method of aurora photometry based on focal images of stars on photographs made with a C-180 camera.

Discusses a method of measuring photometric brightness of auroras on the visual stellar magnitude scale of the Henry Draper stellar catalogue, by using photographic images of 15 to 30 stars, taken by an all-sky camera, as a frame of reference. A characteristic curve plotted with stellar magnitudes (abscissae axis) versus optical density of the image or ordinate axis, the image density as a function stellar magnitude is determined, and the absolute brightness of aurora measured. (CaMAI.)

74905. POPOVIĆ, VOJIN. De l'hypothermie léthargique prolongée. (France. Centre national de la Recherche scientifique. Colloques nationaux 1955. p.C219-C229, illus.) 16 refs. Text in French. **Title tr.:** Prolonged lethargic hypothermia.

Reports a study of rats maintained in hypothermia of 21° - 15°C. for up to 32 hours. Duration of life, possibilities of resuscitation, CO_2-consumption, chemical composition of the blood, blood picture, ECG, and the causes of death in prolonged hypothermia are discussed. (DLC.)

POPOVICH, N. I., *see* Malashevskii, V.N., & N.I. Popovich. Strukturno-fatsial'nye zony . . . 1961. No. 73762

74906. POPPE, NIKOLAĬ NIKOLAEVICH, 1897– , *Editor*. American studies in Altaic linguistics. Bloomington, Indiana University, 1962. 351 p.

tables. (Indiana University publications. Uralic and Altaic studies, v.13.) Refs.

Collection of 19 papers, three relating to northern languages. In *Altaic studies in the United States*, p.1-14, N.N. Poppe sketches extent of current research, noting paucity of papers on Tungus-Manchu linguistics. *Tasar ~ Tavar ~ Tovar ~ Tar ~ Tara*, p.229-35, D. Sinor deals with the Eveny-Lamut and Evenki-Tungus forms of this Turkic word for bag, container, etc. It is considered to be secondary borrowings through Russian. *Archaic doublets in Altaic*, p.293-330, by M. Swadesh, is a semantic and phonetic analysis of synonymous doublets in Tungus, Lamut, Gold, Yakut, etc. Various explanations are evaluated concerning the existence of inter-stock similarities between Altaic and, among others, Uralic-Yukaghir, Eskimo-Aleut, and Haida. (DLC.)

74907. POPPE, NIKOLAĬ NIKOLAEVICH, 1897– . Jakutische Etymologien. (Ural-altaische Jahrbücher, Aug. 1961. Bd. 33, Heft 1-2, p.136-41.) 20 refs. Text in German. **Title tr.:** Yakut etymologies.

Semantic analysis of twelve Yakut words of non-Turkic origin. Most are traced to Mongolian; some came into Yakut as Tungusized variants. (DLC.)

74908. PORKHAEV, G. V. Nekotorye dannye o koèffitsiente fil'tratsii ottaĭavshikh gruntov. (*In:* Materialy po laboratornym issledovaniĭam merzlykh gruntov, 1961. sbornik 4, p.100-103, tables, diagr.) Text in Russian. **Title tr.:** Some data on the filtration coefficient of thawed ground.

Presents results of study of three thawed-out samples of permanently frozen ground. The filtration coefficient was considerably higher in the direction of the (melted) ice lenses than in the direction perpendicular to them. When the texture was disrupted, the same samples exhibited a coefficient 4-5 times lower than that measured in the direction of the ice lenses prior to the disruption. The coefficient showed little change with time over a four-day test period. (DLC.)

74909. PORKHAEV, G. V., *and* V. K. SHCHELOKOV. Vliĭanie zastroĭki na termovlazhnostnyĭ rezhim mnogoletnemerzlykh gruntov. (*In:* Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Materialy k osnovam ucheniĭa o merzlykh zonakh zemnoĭ kory, 1961. vyp.7, p.5-35, tables.) 32 refs. Text in Russian. **Title tr.:** Effect of construction on the heat and moisture regime of permafrost.

Reviews work of Middendorff and Bear in mid-19th century and that of Russian scientists in the last two decades from viewpoint of heat and mass transfer in the lithosphere-atmosphere system. General, local, and specific factors, the heat and moisture conditions in permafrost, primarily with reference to Yakutsk, Vorkuta, Igarka and other towns are examined. As a rule, the general factors, i.e., the mass and heat exchange in the atmosphere-lithosphere system, preserve the permafrost layers and even decrease their temperature. The effect of structures is somewhat greater upon the geocryologic conditions, but still relatively unimportant. Specific factors, namely, ground-water conditions, man-made increases of the moisture and mineral content of the top layer, and building density, tend to preserve the permafrost regime. Ground-water variations during the development of an area sometimes lead to degradation of the permafrost layers. But construction based on preservation of the frozen state of the building bases, fosters uniform geocryologic conditions, and neither degradation nor development of permafrost layers has much effect on the stability of structures.—From CRREL. (DLC.)

74910. PORKKA, M. T. On the crustal structure of northern Fennoscandia as determined from near-earthquake data. Helsinki, 1960. 8 p. tables, diagr., map. (Helsinki. Yliopisto. Publications in seismology, no.34.) 10 refs.

Analyzes records of 25 weak earthquakes as registered at Sodankylä (67°22′16″N. 26°37′45″E.), some also at other stations including Kiruna in Sweden, and Apatity in Kola Peninsula, during 1956-1958. The seismograms are explained on assumption that the earth's crust consists of two layers, the depth obtained for the Mohorovičić discontinuity being 34 km. Velocities are derived for *P* and *S* waves of the upper layer (5.79 and 3.41 km./sec.), intermediate layer (6.60 and 3.77), and upper mantel (8.12 and 4.53). (SPRI.)

74911. PORTENKO, LEONID ALEKSANDROVICH, 1896– . Sostoĭanie izuchennosti nazemnoĭ fauny Kamchatskoĭ oblasti i zadachi dal'neĭshikh issledovatel'skikh rabot. (*In:* Akademiĭa nauk SSSR. Komissiĭa po problemam Severa. Syr'evye resursy . . . 1961, p.160-63.) Text in Russian. **Title tr.:** State of knowledge on the terrestrial fauna of Kamchatka Province and tasks for further studies.

Summarizes zoogeographical studies of Kamchatka, noting gaps etc. The northern part of the Sredinnyy Range and the Koryak upland are considered terra incognita as yet. About forty mammals, two hundred birds and nine thousand insect species are known at present. Suggestions are offered on how faunal investigations should be conducted in Kamchatka. (DLC.)

PORTENKO, LEONID ALEKSANDROVICH, 1896– , *see also* Pacific Science Congress. 1961. No. 74619

74912. PORTER, EDITH, *and* E. J. MASORO. Effect of cold acclimation on vitamin A metabolism. Fort Wainwright, Alaska, May 1962. 4 p. table. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 61-44.) 7 refs.

The high hepatic vitamin A levels in cold acclimated rats were found to be due to increased food consumption, and not directly induced by cold. Moreover, evidence is presented that vitamin A needs at 0° to 2°C. are not markedly greater than at 25°C. Also reported in Society for Experimental Biology and Medicine, *Proceedings*, Dec. 1961, v.108, no.3, p.609-610. (CaMAI.)

PORTER, EDITH, *see also*

Masoro, E.J., & *others*. Effect of cold stress . . . 1961. No. 73863

Masoro, E.J., & E. Porter. Fatty acid oxidation mitochondria rats. 1961. No. 73864

Masoro, E.J. & *others*. . . . inhibitory mechanisms . . . lipogenesis. 1961. No. 73866

74913. PORTER, MERILYS E., *and* G. W. COMSTOCK. Ambulatory chemotherapy in Alaska. (U.S. Public Health Service, Public health reports, Dec.

1962. v.77, no.12, p.1021-32, tables, map.) 8 refs.

Reviews the great decline in TB incidence among Eskimos and Indians since 1954, mainly due to home treatment with isoniazide and PAS. Organization of the treatment program, treatment in the villages, and evaluation of the program are discussed. The importance of other aspects in TB control is stressed. (DLC.)

PORTER, MERILYS E., *see also* Comstock, G.W., & M.E. Porter. Tuberculin sensitivity & TB. . . . 1959. No. 70799

PORTET, R., *see* Chevillard, L., & *others*. Variations somatiques . . . 1962. No. 70724

74914. PORTNOĬ, V. F. Izolirovannaīa glubokaīa gipotermiīa golovnogo mozga; obzor litteratury. (Eksperimental'naīa khirurgiīa 1962. god 7, no.4, p.67-73, illus. table.) About 50 refs. Text in Russian. **Title tr.**: Isolated deep hypothermia of the brain; a review of literature.

Reviews recent (five years) publications, and offers an introductory outline of advances in this particular branch. Methods of brain cooling, hypothermia alone and combined with other stresses, and clinical applications, are considered. (DLC.)

74915. PORTNOV, ĪA. Plīazh pod arkticheskim solntsem. (Nauka i zhizn', July 1962. god 29, no.7, p.8-9, illus.) Text in Russian. **Title tr.**: Beach under the arctic sun.

Describes a plan for developing health resorts utilizing local climatic conditions together with artificial heating and illumination; the plan worked out by a group of Moscow architects was approved by a conference on utilization of resources of the Far North, held in Moscow. It includes construction of a hotel with a large winter garden, to operate on a year-round basis. Construction details are discussed for the garden. (DLC.)

74916. POSPELOV, GENNADIĬ L. Bol'shaīa nauka v Sibiri. (*In:* Iokhimovich, D.I. Moīa Sibir', 1960, p.238-66, illus.) Text in Russian. **Title tr.**: Large-scale science in Siberia.

Describes the planned expansion of the Academy of Sciences' Siberian Division and its Irkutsk and Yakutsk branches. Emphasis is on the earth and natural sciences, hydrology and transportation, also mathematics and economics. (DLC.)

POST, AUSTIN S., *see* Meier, M.F., & A.S. Post. Variations . . . glaciers . . . 1962. No. 73912

74917. POTAĬCHUK, S. I. Nekotorye zakonomernosti izmeneniīa gidrologicheskogo rezhima v promyslovykh raĭonakh Norvezhskogo, Grenlandskogo i Barentseva moreĭ. (Moskva. Vsesoīuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozīaĭstva i okeanografii. Trudy 1962. t.46, p.92-102, illus., table.) 10 refs. Text in Russian. **Title tr.**: Some regular changes of the hydrological regime in the fishing areas of the Norwegian, Greenland, and Barents Seas.

Reviews seasonal and year-to-year changes in temperature and salinity, as from 1930. The results obtained enable the conditions over the whole area of study to be gauged from a single profile, also the areas of future investigations to be outlined more precisely. (DLC.)

POTAĬCHUK, S. I., *see also*

Adolph, R.J., & *others*. Heat loss . . . 1962. No. 69488

Alekseev, A.P., & *others*. Results . . . Norwegian Sea in 1958. 1961. No. 69693

74918. POTAPOV, F. M. Osvoenie nizinnykh poĭmennykh zemel'. (Sel'skoe khozīaĭstvo Severo-Zapadnoĭ zony, Oct. 1962. no.10, p.24-26, table.) Text in Russian. **Title tr.**: Utilization of bottomland in a flooded valley.

Reports improvement of marshland in the Severnaya Dvina by the Zaostrovskiy and Organizator collective farms in the Primorskiy District of Arkhangel'sk Province. The marsh was drained by a network of open ditches at 60-80 m. interval; after the scrub was taken out, the ground was plowed, disked, filled, rolled and fertilized. It produced a hay crop of 8-10 to 40-45 cwt./hectare. (DLC.)

74919. POTAPOV, LEONID PAVLOVICH, 1905– . Ėtnograficheskoe izuchenie sotsialisticheskoĭ kul'tury i byta narodov SSSR. (Sovetskaīa ėtnografiīa, Mar.-Apr. 1962, no.2, p.3-19.) Refs. Text in Russian. **Title tr.**: Ethnographic study of the socialist culture and folkways of the peoples of the USSR.

Includes recent investigations aimed at furthering economic and industrial development in sparsely peopled regions of the far North, increasing local work opportunities, continuing the fight against retrogressive traditions and religious beliefs, etc. Ten publications of the 1950's on collectivization and acculturative trends in northern national districts are reviewed. (DLC.)

74920. POTAPOV, LEONID PAVLOVICH, 1905– . Zadachi ėtnograficheskogo izucheniīa narodov Sibiri v svīazi s resheniīami xxi s"ezda KPSS. (*In:* Nauchnaīa konferentsiīa po istorii Sibiri i Dal'nego Vostoka. Voprosy istorii . . . *pub.* 1961, p.23-33.) Ref. Text in Russian. **Title tr.**: Aims in ethnographic studies of the peoples of Siberia in accordance with the resolutions of the 21st Congress of the Communist Party of the Soviet Union.

Includes a discussion of studies to show the nature of problems confronting the so-called small peoples of the Far North, in acculturation, improving the economic potential, the living standards, etc. (DLC.)

POTAPOV, LEONID PAVLOVICH, 1905– , *see also*

Akademiīa nauk SSSR. Istoriko-ėtnograficheskiĭ atlas . . . 1961. No. 69544

Krupīanskaīa, V. IŪ., & *others*. Osnovnye problemy ėtnograficheskogo izucheniīa . . . 1961. No. 73163

74921. POTAPOV, V. ĪA. Dinamika uglevodnogo sostava lisokhvosta vzdutogo v usloviīakh Tsentral'noĭ Īakutii. (Akademiīa nauk SSSR. Īakutskiĭ filial. Nauchnye soobshcheniīa 1961. vyp.5, Biologiīa, p.51-57, illus.) 9 refs. Text in Russian. **Title tr.**: Dynamics of carbohydrate composition of foxtail grass under conditions of central Yakutia.

Reports a study of successive growth stages of *Alopecurus ventricosus*, a common grass of this area. The whole plant as well as the leaves, stalks and ears are examined. The plant does not

have a high content of dissolved carbohydrates; its maximum is found during the blooming period. (DLC.)

74922. POTRASHKOV, G. D. Razrushenie moroznoĭ tekstury v ottaivaĭushchem suglinke. (*In:* Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Igarskaĭa merzlotnaĭa stant̃siĭa. Trudy 1961. vyp.2, p.73-74, tables.) 3 refs. Text in Russian. Title tr.: Destruction of the frost texture in thawed clayey loam.

Reports observations in the Mirnyy region of Yakutia of changes in eluvial clayey loam upon thawing. Specimens were characterized by reticulate frost texture and aggregates of 1.5-2 cm. They were first frozen artificially and naturally. The relationship between the soil moisture content and the flow of specimens is described. Experiments on the settlement of soils after thawing were also made with loading during and after thawing. Preliminary results indicate that the rate of destruction of soil aggregates determines the ultimate strength of thawed soil, and that this effect is greatest when the time of destruction and increased load most nearly coincide.—From CRREL. (DLC.)

74923. POTTER, J. G. Soil temperature records at eight localities in Canada 1959-1960. Ottawa, Dept. of Agriculture, 1962. 31 p. tables.

Reports the instrumentation, location, etc. of each station and twice-daily soil temperature data in °F, at 1, 10, 20, 50, 100, and 150 cm. for both years. Snow depths in inches twice daily are also given. One of the stations is in the North: the Experiment Farm at Fort Simpson, 61°52′N. 121° 21′W. 430 ft. above sea level. (CaOGB.)

74924. POTTER, R. R. Gods River map-area, Manitoba 53 N. Ottawa, Queen's Printer, 1962. 12 p., 2 maps incl. fold. (Canada. Geological Survey. Paper 62-8.) 22 refs.

Presents results of field mapping 1961 as well as examination of the literature, on this 5,500 sq. mi. area in northeastern Manitoba, 55° - 56°N. 92° - 94°W. Traverses were nearly all made on rivers, brooks and lakes because outcrops are scarce; but the entire map-area was traversed by float aircraft. Pleistocene features are mapped on a scale of about 1 in.: 18 mi. Basic volcanic, sedimentary, and gneissic rocks of Precambrian age trend toward the west-northwest across the area. Large granitic and dioritic bodies occur in the southwest. Pegmatite, aplite, and diabase dikes and sills are locally abundant. Flat-lying Ordovician shales and limestones occupy the northeastern part. Similarity of two of the map units to the Hayes River Group and three others to the Oxford Group is suggested. Thick drift covers most of the area; 100-ft. banks of till and alluvium were noted along the lower Hayes River. Gods River map-area is about 120 mi. southeast of the contact between the Superior structural province and the Churchill province to the north. Structural data are inadequate; even aeromagnetic patterns are not conclusive. The few mineral occurrences are noted. (DI.)

74925. POULIN, AMBROSE O. Measurement of frost formed soil patterns using airphoto techniques. (Photogrammetric engineering, Mar. 1962. v.28, no.1, p.141-47, illus., diagrs., map.)

Describes equipment developed for field studies of frost patterns. It comprises a camera mounted 10-20 ft. above ground on a platform consisting of two 26 ft. swing-stages supported by aluminum scaffolding. Results are reported of two years' mapping operations by this method at three unidentified locations in North Greenland. The photogrammetrically compiled maps permit measurements of the rate of soil pattern movements with an accuracy of 2-3 mm. (DLC.)

74926. POULIN, AMBROSE O. Photogrammetry and frost action. (Military engineer, July-Aug. 1961. v.53, no.354, p.268, illus.)

Describes a field study of the magnitude and occurrence of frost patterns in soil. Stereophotographs were obtained during two seasons in Greenland and at a high altitude site in Colorado. Precision mapping cameras, capable of detecting micromovements of the soil surface of 1-3 mm., were mounted on aluminum scaffolding 10-20 ft. above the ground. Scale bars and intersecting cables were installed as photogrammetric controls. Motion measurements were made on maps compiled at scale 1:4, with a contour interval of 0.02 ft. Supplementary data were obtained on soil temperatures, grain-size distribution, and soil moisture profiles.—From CRREL. (DLC.)

74927. POULSEN, ARTHUR O. The occurrence of manganese ores in Norway. (*In:* International Geological Congress, 20th, *Mexico City,* 1956. Sympos. sobre yac . . . manganeso . . . t.5, *pub.* 1956, p.291-98, maps, tables.) 7 refs.

Northern Norway contains manganese deposits in the marble-mica-schists of Nordland, which extend from the Håfjell (68°30′N. 17°E.) near Ofotfjord northward in two branches, 10 km. on the western, 32 km. on the eastern, branch. Manganiferous iron ores occur on Hinnø, an island in the Vesterålen group, and on Rubben mountain in Troms county. Sketch maps show location of deposits. (DGS.)

74928. POULSEN, CHRISTIAN, 1896– . Quelques remarques sur le Cambrien inférieur et l'Eocambrien du Groenland et d'autres régions septentrionales. (France. Centre national de la Recherche scientifique, Colloques internationaux, v.76, 1958. Les relations entre Précambrien et Cambrien. Problèmes des séries intermédiaires, Paris, 1957, p.25-29, discussion p.29-31.) 14 refs. Text in French. Title tr.: Some remarks on the Lower Cambrian and the Eocambrian of Greenland and other northern regions.

Supplements No. 47438 and 48470; summarizing several viewpoints on defining the base of the Cambrian system and on correlating the Cambrian and Eocambrian formations, particularly in the Kejser Franz Josephs Fjord region of East Greenland. There the Eocambrian representing two glacial epochs with an interglacial, appear to be the base of the Cambrian system, underlain by the Precambrian Eleanore Bay Formation and overlain by the fossiliferous Bastion Formation of Lower Cambrian age. Similarities are noted to Norwegian and Svalbard formations. Discussion includes age of oldest fossils and use of the term "interstadiaire" in preference to "interglaciaire." (DLC.)

74929. POUNDER, ELTON ROY, *and* **P. STALINSKI.** Elastic properties of arctic sea ice. (*In:* IUGG.

Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.35-39, diagr., graphs, table.) 5 refs. Summary in French. Contribution from the Ice Research Project, Dept. of Physics, McGill University.

The speed of sound in ice was measured by observations on the transit times of pulses of longitudinal and transverse waves. Average value of Young's modulus, E was 8.42×10^{10} dynes cm^{-2}. Relation between E and the salinity S in ‰ was given by the equation $E = (9.75\text{-}0.242S) \times 10^{10}$ c.g.s. units. Methods are described; only one brief field trial was possible. (DWB.)

74930. POUNDER, ELTON ROY, *and* **P. STALINSKI.** General properties of arctic sea ice. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.25-34, illus., map, graphs.) 6 refs. Summary in French. Contribution as *supra.*

Provides results of observations made Apr. 22-May 10, 1959 from ice cones extracted at about a dozen sites in Barrow Strait-Canadian Arctic Island waters, near 74° 43.5′ N. 96° 27′ W. Methods are outlined; profiles were obtained of salinity: range 9‰ to 4‰, specific gravity: little range, average 0.94, ice thickness: 74.5-97 in., and thermal conductivity: average 2.14×10^{-3} c.g.s. units. Growth rate of the ice was obtained from available meteorological and ice thickness records; and from this, the date of formation of any layer of ice at the test site was determined. Sharp increases of salinity with depth accompanied increases in the freezing rate. Crystal photographs showed that most of the ice consisted of very long vertical crystals with no appreciable spaces. (DWB.)

74931. POUNDER, ELTON ROY. Heat flow in ice sheets and ice cylinders. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no. 54, *pub.* 1961. p.56-62, graphs.) 3 refs. Summary in French. Contribution as *supra.*

The heat flow equation is solved for two simple models. In one, an ice sheet with a uniform temperature gradient is subjected to a step function drop in air temperature. There is a delay of some days before the lower air temperature causes an increase in the freezing rate of the ice. In the other model, a cylinder of ice at constant temperature is moved to a new ambient air temperature. The time for the cylinder to reach the new temperature is calculated. Both analyses neglect the effect of the boundary layer at an air-ice interface; experimental results showing the major influence of this layer are reported.—From author's summary. (DWB.)

74932. POUNDER, ELTON ROY. Thermodynamic considerations on the use of air bubbling systems in salt water. *(In:* National Research Council of Canada . . . Symposium on Air Bubbling, 1961. p.41-46.) Ref. *Its:* Technical memorandum no. 70.

Reviews theoretical requirements and limitations of such systems, discussing the need for a regular horizontal water exchange and the desirability of a positive salinity profile. If the salinity is uniform, it is easier to prevent ice formation than to remove an existing ice cover. Need for a trial installation, similar to Project Polynya at Thule, but more completely instrumental, is stressed. Data on the salinity profile, current measurements, temperature and ice thickness up-stream and down, as well as supporting meteorological observations, would help determine the usefulness of bubbler installations at other sites. (DN-HO.)

POUNDER, ELTON ROY, *see also* Schwerdtfeger, P., & E.R. Pounder. Thermal properties . . . Energy exchange . . . 1962. No. 75431

74933. POUSETTE, INGEMAR, *and* **S. SOLLENBERG.** The Långsele Mine, Sweden. (Canadian mining journal, May 1961. v. 82, no.5, p.53-60, illus., diagrs.) 5 refs.

Describes this test mine of the Boliden Mining Co. near Boliden, northern Sweden and some mining practices developed there. Included are the use of AN-FO (ammonium nitrate-fuel oil) for underground blasting, and of the Alimak Raise Climber for driving raises, also remote-controlled ore trains, automatic loading of ore cars, and high-speed drifting by use of airleg machines and a scraper-loaded train. Production of 250,000 tons of pyrite ore is planned for 1961. (DGS.)

74934. POUSETTE, INGEMAR, *and* **H. HAMRIN.** Raising practice at Boliden Mining Company, Sweden. (Canadian mining journal, Aug. 1960. v. 81, no.8, p.67-73, illus., diagrs.) 5 refs.

Describes six raising methods used in mining sulfide ores in northern and central Sweden, and compares their economy, performance, and applicability. A cage (the Boliden cage) has been developed profitably for vertical raising. (DGS.)

POWELL, GUY C., *see* Alaskan Science Conference 1961. 1962. No. 69644

74935. POWELL, JOHN MARTIN. Operation Hazen: the vegetation and micro-climate of the Lake Hazen area, northern Ellesmere Island, N.W.T. Ottawa, Jan. 1961. vii, 112 l., illus., map, graphs, tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 38.) About 100 refs.

Describes the macroclimate, the microclimate and the soil climate of the area, based on research carried out as part of Operation Hazen 1957-58. Overall effect of climate on vegetation is reviewed, particularly on plant distribution. Hazen Camp was markedly colder in winter than either Eureka or Alert, and had less precipitation. Temperature, snow cover, precipitation, strong winds, and topography are important factors in determining plant species; the 114 species recorded at Lake Hazen, compared to the 65 at Alert, indicate Hazen's favorable habitat, though the region may be the coldest land of the North American continent; winter conditions prevail longer than in the cold areas of Siberia. (DWB.)

74936. POWER, GEOFFREY, *and* **D. R. OLIVER.** Notes on the distribution and relative abundance of fresh-water fish in Ungava. (Canadian field naturalist, Oct.-Dec. 1961. v. 75, no.4, p.221-24, map, table.)

Summarizes own observations during 1955-1960, in localities south of the tree line on the Laurentian plateau, Northern Quebec. Occurrence and relative abundance of 17 species are tabulated, with locations. Methods of sampling are described. (CaOGB.)

74937. **POWER, GEOFFREY.** Salmon investigations on the Whale River, Ungava in 1960 and the development of an Eskimo fishery for salmon in Ungava Bay. (Arctic, June 1961. v. 14, no.2, p. 119-20.)

Notes field work as part of a salmon population study in Northern Quebec since 1956. Of the 900 specimens examined in 1960, 185 were adult spawners of 9-13 lb. weight after two or more years at sea. Growth and age ranges were similar to those found earlier in the George and Koksoak Rivers. Information from these studies is to be utilized by the Dept. of Northern Affairs for an experimental fishery on the Koksoak and, possibly, Whale Rivers in summer 1961. (DGS.)

POWERS, HOWARD ADORNO, 1904– *see* Coats, R.R., & *others*. Geol. reconn. Kiska I. . . 1961. No. 70774

Pacific Science Congress. 1961. No. 74619

74938. **POZDNIAKOV, IU. F.** Rasprostranenie lichinok moĭvy v iūhnoĭ i iūgo-vostochnoĭ chasti Barentseva moria. (Adademiia nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp. 4(8), p.134-45, illus., maps.) 13 refs. Text in Russian. **Title tr.:** Distribution of capelin larvae in the southern and southeastern part of the Barents Sea.

Study of distribution, size composition and times of appearance, based on collections made in 1953-1959. Two generations were established in the southern Barents Sea: one, from spring spawning, appears in the plankton during the second half of April. In July-August a second generation appears in the southeast. Peaks of appearances, distribution and spreading from spawning grounds, occurrence and size during the first year, etc. are discussed. (DLC.)

POZDNIAKOV, IU. F., *see also* Mironova, N.V., & *others*. Raspredelenie . . . ryb . . . 1957 g. 1962. No. 74052

Mironova, N.V., & *others*. Raspredelenie . . . ryb . . . 1958 g. 1962. No. 74053

POZDNIAKOVA, V. A., *see* Zaĭtseva, M.G., & V.A. Pozdniakova. Nekotorye osobennosti pochvennogo pitaniia . . . 1961. No. 76629

PRAGLOWSKI, J., *see* Erdtman, G., & *others*. . . . Scandinavian pollen flora. 1961. No. 71282

PRASLICKA, M., *see* Mráz, L., & M. Praslicka. Influence of hypothermia . . . X-radiation. 1961. No. 74137

PRATT, L. E., *see* Ehrlich, W.A., & *others*. Soil . . . Nelson R. . . . 1959. No. 71213

74939. **PRATT, R. M.** Erratic boulders from Great Meteor Seamount. (Deep-sea research, Sept. 1961. v. 8, no.2, p.152-53, illus.) 4 refs. *Also pub. as:* Woods Hole Oceanographic Institution, Contribution no. 1122.

Describes boulders and cobbles of pink granite, quartz-biotite schist, medium-grained diorite, and a three-inch cobble of dense, thinly-laminated quartzite, all dredged from this seamount (30° N. 28° W.) by the USNS *Chain* in the summer of 1959. These rocks differ markedly from the local foraminiferal and reef limestone; apparently they were transported to this area by ice, probably from the North American continental during the Pleistocene. (DLC.)

PRATUSEVICH, IU. M., *see* Speranskiĭ, G.N., & IU. M. Pratusevich. Ėĝ analiz . . . 1961. No. 75871

74940. **PRAVDIN, A. M.** Ėkonomicheskaia rol' lesov i nekotorye voprosy ispol'zovaniia lesnykh bogatstv Sibiri i Dal'nego Vostoka. (Akademiia nauk SSSR. Sibirskoe otdelenie, Izvestiia 1961. no.9, p.3-12, tables.) 15 refs. Text in Russian. **Title tr.:** The role of forests in the economy and some problems of forest resource development in Siberia and the Far East.

Presents data on lumber production and by-products of forests of the area, and general comparisons with the forests of the RSFSR. Included (p.7) are data on area, number of forest management and lumbering organizations (leskhozy and promkhozy), timber production, also hunting and gathering activities: honey, nuts or cones, mushrooms, berries, etc. in northern Krasnoyarsk Province: the Yeniseysk, Severo-Yeniseysk, Turukhansk, and Igarka Districts, the Taymyr and Evenki National Districts. (DLC.)

PRAVETSKIĬ, V. N., *see* Burnazian, A.I., & *others*. Obespechenie radiatsionnoĭ bezopasnosti . . . 1961. No. 70464

74941. **PRAVOTOROVA, E. P.** O dinamike chislennosti gizhiginskogo stada sel'di. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ, 1961. vyp.13, p.437-42, tables, map.) 7 refs. Text in Russian. **Title tr.:** Numerical dynamics of the Gizhiginskaya tribe of herring.

Discusses: the areas and yields of six NW Pacific spawning tribes, of which the Gizhiginskaya frequents the west and southeast coast of Kamchatka. The migration area of this herring, catches and their fluctuations for 1946-1959, age composition, size of age classes, are reported, and the fisheries described. (DLC.)

PRAZDNIKOV, E. V., *see* Mikhaĭlova, I.G., & E.V. Prazdnikov. Morfologicheskie izmeneniia . . . 1961. No. 73988

74942. ***PRECAMBRIAN.*** The aircraft's role in opening up Canada's North. (Precambrian – Mining in Canada, Dec. 1961 - Jan. 1962. v.34, no.12, p.6, +, illus.)

Describes organization, equipment, and experience of the air carriers serving the North: Nordair, Ontario Central, Pacific Western, Quebecair, etc. Canadian air carriers are listed (p.15-21) indicating services available to the mining industry. (DGS.)

74943. ***PRECAMBRIAN.*** Geological Survey carries out extensive field program. (Precambrian – Mining in Canada, July 1961. v.34, no.7, p.40, table.)

Reports the Canadian Geological Survey 1961 field program with 102 parties, including: geochemical studies, seismic surveys, submarine geology, engineering geology, aeromagnetic surveys, reconnaissance mapping, etc. in northern areas. (DGS.)

74944. ***PRECAMBRIAN.*** Mapping Canada's bedrock. (Precambrian – Mining in Canada, Sept. 1960. v.33, no.9, p.8-15, illus., table.)

Surveys the 1960 field program of the Geological Survey of Canada; about 385 men in 87 parties;

included are Operation Back River in northwest Keewatin District to map 50,000 sq. mi. at reconnaissance scale, an aeromagnetic survey of 28,000 sq. mi. south and east of Great Slave Lake, and 18 other projects in the Yukon, Northwest Territories, northern Ontario, and Quebec – Labrador. (DGS.)

74945. *PRECAMBRIAN*. Nickel flows from Thompson. (Precambrian – Mining in Canada, Mar. 1961. v.34, no.3, p.6-9, +, illus., map.)

Reports dedication of this Northern Manitoba nickel project on Mar. 25, 1961, after 11 years of exploration, four years of construction. Various aspects of this fully integrated plant for refined nickel are described, with illus. and a flow chart. Its effect on the economy, the planned community of Thompson; the 30-mi. railway spur to Sipiwesk on the Hudson Bay Line; the Kelsey power plant on the Nelson River, and service buildings, are also described. (DGS.)

74946. *PRECAMBRIAN*. Precambrian geology on single sheet basis. (Precambrian-Mining in Canada, Aug. 1961. v.34, no.8, p.42.)

Announces comprehensive geological study of almost any area in the Canadian Shield available in single sheet form, from Hunting Survey Corp. Ltd. Some five hundred photo mosaic sheets, each representing about 720 sq. mi., with a transparent overlay showing geological data and pertinent geophysical interpretation, hitherto available only covering about 372,000 sq. mi. is to be sold in individual sheets and overlays at an average cost of 27 cents per sq. mi. Information recorded on each sheet is noted. (DGS.)

74947. *PRECAMBRIAN*. Precambrian reviews iron ore mining in Canada, 1959. (Precambrian, Dec. 1959. v.32, no.12, p.7-25, illus., map.)

Includes descriptions (by editor R. Guimond) of the Iron Ore Co. of Canada mine at Schefferville and its shipping port Seven Islands; the Quebec Cartier Mining Co. development near Lac Jeannine in Northern Quebec; the Wabush Iron Co. project near the western border of Labrador; the Iron Ore Co. Carol Project near Wabush Lake, planned to be operating in 1962; and the Great Whale Iron Mines Ltd.'s properties 35 mi. southeast of Great Whale River. Map shows 1959 iron-ore producers, by-products producers, and prospective by 1961 producers. (DGS.)

PREOBRAZHENSKAĬA, N. P., *see* Gutkin, A. ĬA., & *others*. Polovoe razvitie . . . 1962. No. 71935

74948. **PREOBRAZHENSKIĬ, B. V.** Preduprezhdat' mineral'noe golodanie oleneĭ. (Sel'skoe khozīaĭstvo Severo-Zapadnoĭ zony, Nov. 1961. god 4, no.11, p.92.) Text in Russian. **Title tr.**: Prevention of mineral starvation in reindeer.

Notes that the bones have 99% of the body's mineral content which is drawn upon when the feed is low in minerals. This occurs every winter in reindeer, feeding chiefly on reindeer moss, and the mineral content of the bones decreases sharply the latter becoming brittle prone to fracture, according to studies made by the Nar'yan-Mar agricultural experiment station. As preventive, the winter grazing should be supplemented with mineral-rich feed, etc. fish meal. (DLC.)

74949. **PRESCOTT, L. F.**, *and others*. Accidental hypothermia; a common condition. (British medical journal, Nov. 24, 1962. no.5316, p.1367-70, tables.) 27 refs. *Other authors:* M.C. Peard *and* I.R. Wallace.

Reports on nine cases admitted to a small hospital in London within four months. Clinical data and laboratory findings are presented in tabular form, and one serious case is described in detail. Environmental and predisposing factors, physical signs, ECG, biochemical aspects, etc. and treatment are discussed. (DNLM.)

PRESS, FRANK, 1925– , *see* Pacific Science Congress. 1961. No. 74619

74950. **PRESSMAN, ALBERT E.**, *and others*. Terrain analysis of ice-free land sites in arctic Canada. Philadelphia, Pa. Feb. 1961. x, 455 p., illus., maps incl. fold., tables. (U.S. Air Force Cambridge Research Laboratories, Geophysics Research Directorate, Final report no. 0047-30, under contract no. AF 19(604)-6182 with the Aero Service Corp. AFCRL 206.) 98 refs. *Other authors:* R.L. Stitt, J.H. Montanari, R.R. Blesch.

Describes and shows graphically 50 ice-free natural landing sites north of 65°N. selected mainly from air-photo analyses and published data. Introductory account of exploration and its motivation, the geology and physiography of the area, climatological factors and weather conditions are discussed in chap.1-3. Then follows a terrain analysis of the sites, a typical description consisting of: an oblique and a vertical aerial photograph, a stereogram, an interpreted description, and a surficial-geology map of the site. Regional map, scale 1 in:63 mi., indicates site locations. (DWB.)

PRESSMAN, ALBERT E., *see also* Needleman, S.M., & A.E. Pressman. Site location . . . airphoto . . . 1962. No. 74246

74951. **PREST, VICTOR KENT.** Geology of the soils of Canada. (*In:* Royal Society of Canada. Soils in Canada . . . 1961. p.6-21, maps, table.) 20 refs.

Considers, in general, the origin, stratigraphy, and areal distribution of the complex unconsolidated deposits. Lack of a Pleistocene stratigraphic sequence in Yukon Territory is noted, also evidence of interglacial deposits at several localities in the Northwest Territories. (DLC.)

74952. **PRESTON, EUDORA M.** Medicine women. (Alaska sportsman, Nov. 1961. v.27, no.11, p.26-29, illus.)

Describes Alaskan Eskimo and Aleut use of steam baths and herbs in therapy: willow leaves, goldenrod, yarrow, elderberry blossoms, wild geranium, etc. Some examples of healing are cited. Author's sketches of some of these women and plants are included. (DLC.)

PREUSS, NIELS OTTO, *see* Holm Joensen, A., & N.O. Preuss. Ornithologiske iagttagelser . . . 1962. No. 72213

74953. **PREVITE, J. J.**, *and* **L. J. BERRY.** The effect of cold exposure on the survival of mice inoculated with viable or heat-killed *Salmonella typhimurium*. Fort Wainwright, Alaska, June 1962. 3, 13 p. tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical documentary report 62-2.) 9 refs.

Mice exposed to 5°C. showed increased susceptibility to the lethal effects of viable or heat-

killed *S. typhimurium,* strain SR-11A, or a slightly virulent strain of *Staphylococcus aureus.* This increased susceptibility to infection in cold was masked however in the case of strain SR-11 of *S. typhimurium.* The possible cause of this "anomaly" are noted. (CaMAI.)

PRICE, W. I. J., *see* IUGG . . . Snow & Ice Comm. 1961. No. 72396

74954. PRIEST, GUY E. G. Pole star overhead, a reminiscence. (North, Nov.-Dec. 1962. v.9, no.6, p.19-24, illus.)

Recounts impressions and experiences as officeman during construction of a DEW Line site on Baffin Island in 1955-1956. Arctic landscape, accommodations, living and health conditions, activities, etc. at the construction camp are sketched. Effects on the men of several months' isolation from outside are described. (CaMAI.)

74955. PRIÏATKINA, L. A. Ritmichnaïa sloistost' v arkheĭskikh porodakh Kol'skogo poluostrova. (Akademiïa nauk SSSR. Laboratoriïa geologii dokembriïa. Trudy 1961. vyp.12, Voprosy geokhronologii i geologii, p.156-65, illus., tables, map.) 10 refs. Text in Russian. **Title tr.**: Rhythmic lamination in the Archean rocks of Kola Peninsula.

Describes the rhythmic reoccurrence of bedding of early Precambrian metamorphic rocks in four sites studied during 1957-1959: the Kontozero, Litse, and Porosozero lake areas, and in the Soldat-myl'k Mts. Rhythmic bedding is not disturbed by processes of metamorphism, but remains even more evident. (DLC.)

PRISHCHENKO, V. I. *see* Azarov, A.L., & V.I. Prishchenko. Sravnitel'nye dannye . . . 1962. No. 69934

74956. PRITCHARD, GORDON B. Inuvik, Canada's new arctic town. (Canadian geographical journal, June 1962. v.64, no.6, p.200-209, illus., map.)

Reviews the construction during 1954-1961, of this town in northern Mackenzie District. Site selection, town planning, permafrost problems, training the local Indian and Eskimo construction workers, etc., and the new community's facilities are described. Because of the permafrost, all structures were placed on piles driven into holes steamed in the permafrost. Similar article pub. in *Polar record,* May 1962, no.71, p.145-54. (DGS.)

74957. PRITCHARD, WILLIAM LEE. Selective head cooling in the dog; a preliminary report of technic and results. (Neurology, Jan. 1961. v.11, no.1, p.77-80, illus., tables.) 4 refs.

The method involves extracorporeal perfusion with rewarming of the jugular blood before its return to the systemic circulation. Thus hypothermic perfusion of the head may be applied for a relatively long time without neurologic deficit or damage. (DNLM.)

74958. PRITVITS, NATAL'IA. Iz dnevnika poluaborigena. (Sibirskie ogni, Oct. 1962. god 41, no. 10, p.27-33.) Text in Russian. **Title tr.**: Diary of a semi-aboriginal.

Journal entries of June 1959-August 1962, describing work and living conditions in Akademgorodok, the Academy of Sciences' new Siberian center near Novosibirsk. The author is a scientific worker at the Institute of Hydrodynamics there. (DLC.)

PRIVALOVA, L. A., *see* Vints, B.D., & L.A. Privalova. O korrekture karty geomagnitnogo poliïa . . . 1962. No. 76394

74959. PRIZHIMOVA, L. P., *and* **M. G. TRUSHCHELEV.** Geologo-petrograficheskaïa kharakteristika paleozoĭskikh karbonatnykh porod v raĭone munskikh kimberlitovykh trubok. (*In:* Akademiïa nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Petrografiïa i mineralogiïa . . . almazov, 1962. Trudy, sbornik no.8, p.133-50, illus., tables, map.) 5 refs. Text in Russian. **Title tr.**: Geologic-petrographic characteristics of Paleozoic carbonaceous rocks in the Muna kimberlite-pipe region.

Distinguishes the several petrographic types among carbonaceous rocks approx. 67°-67°30'N. 114°-116°E.: limestones, slightly dolomitic limestones, slightly dolomitic sandy-clayey limestones, and slightly dolomitic marls. Each type is described, noting the mineralogic and chemical composition and other properties. According to structural-lithologic considerations, all the limestones are divided into detrital, organic or chemogenic. (DLC.)

PROBERT-JONES, J. R., *see* Lamb, H.H. Advance of the Jan Mayen glaciers . . . 1962. No. 73287

74960. *PROBLEMY SEVERA.* V Komissii po problemam Severa Soveta po izucheniiu proizvoditel'nykh sil pri prezidiume AN SSSR. (Problemy Severa, 1961. vyp.4, p.178-81.) Text in Russian. **Title tr.**: In Commission for Problems of the North of the Council for Study of Natural Resources at the Presidium of the Academy of Sciences of the USSR.

Reports a conference on Nov. 30, 1959, to evaluate P.M. Borisov's plan for the basic improvement of the climate of the Northern Hemisphere; it involves construction of a dam across the Bering Strait and power station of 10 million kw. overall capacity for pumping Pacific water into arctic seas at 140,000 km³/yr.; after 3-4 years of pumping, the arctic ice is expected to melt and the climate of hemisphere to ameliorate. Representatives were present from leading organizations in geography, geophysics and meteorology, where the plan had already been discussed. In summation, the conference found the technical feasibility of the plan uncertain, and the high expectations from its implementation, without basis; part of conference considered the consequences might be disastrous, such as melting of Greenland glaciers, inundation of coastal areas of Europe, and turning continental areas into deserts. (DLC.)

74961. PROKHOROV, IU. D., *and others.* Issledovanie teplozashchitnykh svoĭstv odezhdy dliïa gornorabochikh otkrytykh razrezov Zapoliïar'iïa. (Gigiena i sanitariïa, June 1961. god 26, no.6, p.39-46, illus., tables.) 6 refs. Text in Russian. Summary in English. *Other authors:* I.V. Roshchin *and* N.I. Slepak. **Title tr.**: Investigation of thermal insulating properties of clothes for miners working in open cuts of the Arctic.

Reports a study carried out in Noril'sk in various types of clothing made from different fabrics and wadding. Best thermal insulation was found in a suit made of waterproof fabric and cotton-wool wadding. Theoretical thermal requirements for such garments are outlined. (DLC.)

74962. PROKHOROV, K. V. Osobennosti evoliutsii magmaticheskikh rasplavov v khode kristallizatsii gibridnykh magm na primere tretichnykh granitoidov

Kamchatki. (Akademiīa nauk SSSR. Izvestiīa, ser. geologicheskaīa, Aug. 1962. no.8, p.60-77, tables, diagrs.) 20 refs. Text in Russian. **Title tr.**: Features of the evolution of magmatic fusions in the process of hybrid magma crystallization as exemplified by the Tertiary granitoids of Kamchatka.

Outlines granitoid intrusions in southeast Kamchatka including that at Akhomten Bay (52° 26′N. 158°30′E.). The petrographic features, mineralogic and chemical composition of granitoids are described. Assimilation processes observed in them are characterized. Changes of fusion during the crystallization of hybrid magmas are reported. Conditions of physical-chemical equilibrium and evolution of hybrid magmas during its crystallization are evaluated. (DLC.)

PROKHOROVA, S. M., *see* Egorov, L.S., & S.M. Prokhorova. Predvaritel'nye itogi . . . 1962. No. 71206

74963. PROKOF'EVA, E. D. Predstavleniīa sel'kupskikh shamanov o mire; po risunkam i akvarelīam sel'kupov. (Akademiīa nauk SSSR. Muzeĭ antropologii i ėtnografii. Sbornik 1961. t.20, p.54-74, illus. incl. fold.) Text in Russian. **Title tr.**: The Sel'kup shamans' concept of the world; based on Sel'kup drawings and watercolors.

Describes and interprets five pictures by Sel'kup-Samoyeds, made for G.N. Prokof'ev and the author in 1925-1928 and now in the Museum collection. The pictures represent mythological aspects of the world as conceived by shamans; they are of historical and ethnographical interest for the study of vanishing or extinct cosmogonic beliefs. (DLC.)

PROKOF'EVA, E. D., *see also* Akademiīa nauk SSSR. Istoriko-ėtnograficheskiĭ atlas . . . 1961. No. 69544

74964. PROKOPCHUK, B. I., *and* **L. M. IZRAILEV.** Pervye nakhodki almazov v nizhneīūrskikh bazal'nykh konglomeratakh zapadnogo sklona Priverkhoīānskogo kraevogo progiba. (Akademiīa nauk SSSR. Doklady, Dec. 1, 1962. t.147, no.4, p.906-907.) 3 refs. Text in Russian. **Title tr.**: The first discoveries of diamonds in the Lower Jurassic basal conglomerates in the western slope of Verkhoyansk foredeep.

Reports find of diamond placers in the left bank of Lena made by the authors in 1961. Petrographic composition and fauna of the conglomerates are indicated. They are considered to belong to the Domerian stage of Lower Jurassic. Three small pieces of colorless diamonds were found as fragments of rhombododecahedral crystal. Picroilmenite and pyrope also were found as satellites of diamond. The source of primary diamond deposits is discussed and the Anabar anticline considered one. (DLC.)

74965. PROKOPCHUK, B. I. Primenenie materialov aėrofotos"emki pri poiskakh rossypnykh mestorozhdeniĭ almazov v severo-vostochnoĭ chasti Sibirskoĭ platformy. (Moskva. Universitet. Vestnik, ser. 5, geografiīa, Nov.-Dec. 1961, no.6, p.35-40, illus.) Text in Russian. **Title tr.**: The use of aerial photography in the search for diamond placer deposits in the northeastern part of the Siberian platform.

Reports air reconnaissance work above the Arctic Circle in Yakutia under own direction in 1959. Aerial photography and mapping results greatly facilitate the selection of bed floodplain, terrace and old diamond placer localities for subsequent ground search. The various scales of aerial mapping are evaluated as suitable for one or another type of placer. (DLC.)

74966. PROKUDIN, A. N. Na lesozagotovkakh Karelii. (Lesnaīa promyshlennost', July 1961. god 39, no.7, p.3-6, diagrs.) Text in Russian. **Title tr.**: In lumbering areas of Karelia.

Reports timber production for the first quarter of 1961 up 328,000 m³ from that of 1960. The increase was achieved chiefly through better organization of the work and mechanization of skidding and transportation. Logging concerns are taking reforestation measures now: leaving seeding curtains and protecting the residual stand of young trees from damage. Logging methods of the Kondopoga lumbering concern, now moving into new locations in Karelia, are described in detail and illus. (DLC.)

74967. PROPP, M. V. Nekotorye rezul'taty izucheniīa sublitorali vostochnogo Murmana v raĭone Dal'nikh Zelentsov s pomoshch'īū akvalangov. (Akademiīa nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp.4 (8), p.59-63, tables.) 12 refs. Text in Russian. **Title tr.**: Some results of a study of the sublittoral on the eastern Murman in the Dal'ne-Zelenetskaya area, with the aid of aqualungs.

Describes the bottom flora and fauna in two localities, as examined by divers equipped with aqualungs. Four areas in the sublittoral are distinguished and characterized. (DLC.)

74968. PROPP, V. ĪA. Chukotskiĭ mif i giliātskiĭ ėpos. (Leningrad. Universitet. Nauchnyĭ bīūlleten', 1945, no.4, p.29-30.) 2 refs. Text in Russian. **Title tr.**: Chikchi mythology and Gilyak epos.

Discusses shamanistic mythology as a main root of epic folklore. The structure and topical composition of Chukchi shaman myths are compared with the thematic pattern and the hero's adventures in Gilyak tales. Shaman's magic power becomes the human hero's endowment of superhuman physical strength. (DLC.)

74969. PROSHCHENKO, E. G. K kharakteristike ittrialita. (Vsesoīūznoe mineralogicheskoe obshchestvo. Zapiski, 1962. ser. 2, chast' 91, vyp.3, p.260-70, tables, graphs.) 13 refs. Text in Russian. **Title tr.**: On characteristics of ittrialite.

Deals with the mineralogy of ittrialite as found in pegmatites of Siberia (evidently Yakut ASSR). Color, hardness, specific weight, and other physical and optical properties are described and compared with ittrialites found in the United States, Japan, and elsewhere. Results of X-ray and chemical analyses are tabulated. The formula is (Y, Ce, Th, Ca, Mn)$_2$ [Si_2O_7]. (DLC.)

74970. PROSHCHENKO, E. G. K voprosu o vozraste metamorficheskikh porod Selennīākhskogo krīāzha, ĪAASSR. (Geologiīa i geofizika, 1962, no.3, p.41-48.) 8 refs. Text in Russian. Summary in English. **Title tr.**: On the age of metamorphic rocks in the Selennyakhskiy Ridge, Yakut ASSR.

Reviews previous work and presents absolute age determinations, by the potassium-argon method, of biotite and biotite schists of these metamorphic

rocks. Obtained data and other geologic premises indicate Lower Paleozoic age. (DLC.)

PROSHCHENKO, E. G., *see also* Vikhert, A.V., & *others*. Geologicheskoe stroenie . . . 1961. No. 76386

PROSKURÎAKOVA, E. B., *see*

Petersil'e, I.A., & *others*. Opyt primeneniîa gazovogo karottazha . . . 1961. No. 74750

Petersil'e, I.A., & E.B. Proskurîakova. Rasseîannye bitumy . . . 1961. No. 74751

74971. PROSSER, C. LADD. Acclimation of poikilothermic vertebrates to low temperatures. (*In:* Symposia on arctic biology and medicine. Proceedings 1962, p.1-44, illus., tables.) 68 refs.

Discusses sequence of responses in a homeotherm to ambient cold, and responses in poikilotherms, specifically thyroid responses. Acclimation in poikilotherms, metabolic and enzymatic changes in the cold, and general metabolism are dealt with, as are changes in water content, protein and lipids, nervous and behavioral changes, resistance to thermal extremes. It is concluded that adaptations in poikilotherms "tend toward maintenance of relatively constant metabolism and behavior with changing body temperature," while acclimation in homeotherms tends to maintain a constant body temperature. (CaMAI.)

74972. PROTAS'EVA, I. V. Primenenie aerofotos"emki v izuchenii mnogoletnemerzlykh gornykh porod. (*In:* Akademiîa nauk SSSR. Institut merzlotovedeniîa. Igarskaîa merzlotnaîa stanţsiîa. Trudy 1961, vyp.2, p.75-90, illus.) 16 refs. Text in Russian. **Title tr.:** Application of air-photo survey in investigation of permafrost rocks.

Reports study of geologic structure, relief, lithologic composition, vegetation cover, snow cover and other features of permafrost areas by means of air photos. Thermokarst, solifluction phenomena, patterned ground and other relief features are clearly expressed on them. Use of air photographs for permafrost mapping is discussed. Cryogenic phenomena in the Igarka region are cited as examples. Thermokarst lakes and swamps are characterized. Methods of using air photography in cryologic survey are summarized. (DLC.)

74973. PROTOD'ÎAKONOV, VASILIĬ ANDREEVICH (V. KULANTAĬ), 1912– . ÎAkutiîa posle pobedonosnogo zaversheniîa Velikoĭ Otechestvennoĭ voĭny, 1946-1950 gg. (Akademiîa nauk SSSR. ÎAkutskiĭ filial. Institut îazyka, istorii i literatury. Sbornik stateĭ po istorii ÎAkutii sovetskogo perioda, 1955, vyp.1, p.135-52.) Approx. 15 refs. Text in Russian. **Title tr.:** Yakutia after the victorious end of the Great Fatherland War, 1946-1950.

Describes post-war elections and the rehabilitation of Yakut economy during the fourth five-year plan. Selective statistics are given on heavy and light industry production, mining, lumber, construction, kolkhoz electrification, agriculture, fur trade of northern districts, etc. Educational and public health facilities, cultural development, consumer goods supply and wage increases are also discussed. (DLC.)

74974. PROTOPOPOVA, U. M. K voprosu izucheniîa mestnogo i ob"ektnogo znacheniĭ predlozhnogo padezha s predlogom *na* v îakutskoĭ shkole. (Yakutsk. Universitet. Uchenye zapiski 1960, vyp.7, Seriîa obshchestvennykh nauk, p.101-114.) Refs. in text. Text in Russian. **Title tr.:** The study in Yakut schools of the locative and objective meaning of the prepositional case governed by the preposition *na*.

An analysis of Russian grammatical structures presenting difficulties to Yakut students. (DLC.)

74975. PROVINS, K. A., *and* **R. S. J. CLARKE.** The effect of cold on manual performance. (Journal of occupational medicine, Apr. 1960. v.2, no.4, p.169-76.) About 50 refs.

Review based on the literature and the authors' own studies. Reaction time, tracking proficiency, general dexterity, tactile discrimination, and muscle strength are treated in turn. The difficulty of generalization from the not numerous experimental work, the role of personal and racial factors, etc., is stressed. (DNLM.)

PROVODNIKOV, L. ÎA., *see*

Nikolaev, V.A., & L. ÎA. Provodnikov. Noveĭshaîa tektonika . . . 1961. No. 74344

Nikolaev, V.A., & L. ÎA. Provodnikov. Verkhnekazymskiĭ svod. 1961. No. 74345

74976. PROVOST, ERNEST E. Morphological characteristics of the beaver ovary. (Journal of wildlife management, July 1962. v.26, no.3, p.272-78, illus.) 15 refs.

Describes macro- and micro-structure of ovaries, follicles, corpora lutea and corpora albicantia. Fetal counts made close to term provide a measure of "parturition frequency," i.e. the number of viable young per 100 corpora lutea in a population sampled. (DLC.)

74977. PROZOROVICH, G. È. Litologiîa otlozheniĭ îury i nizhnego mela razreza Turukhanskoĭ opornoĭ skvazhiny; obshchee opisanie razreza. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'îa. Trudy, ser. neftîanaîa geologiîa, 1961. vyp.17, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.123-36, illus., table, cross-section.) 11 refs. Text in Russian. **Title tr.:** Lithology of Jurassic and Lower Cretaceous deposits in a section of the Turukhansk key well; general description of the section.

Describes various series of these deposits, noting lithologic composition, thickness and depth, roundness and sorting of material, mineralogic composition and other features. Facies are characterized. Source of dispersal material from which the terrigenous deposits were derived is discussed. (DLC.)

74978. PROZOROVICH, G. È. Ritmy osadkoobrazovaniîa v otlozheniîakh mezozoîa i kaĭnozoîa severo-vostoka Zapadno-Sibirskoĭ nizmennosti. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'îa. Trudy, ser. neftîanaîa geologiîa, 1961. vyp.14, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.49-53, diagrs., cross-sections.) 7 refs. Text in Russian. **Title tr.:** Sedimentation rhythms in Mesozoic and Cenozoic deposits in the northeast of the West Siberian plain.

Reports periodic sedimentation rhythms caused by waves of planetary transgressions and regressions, on the basis of study of geologic sections of key wells and the Ust'-Yenisey depression. Three such rhythms are established for

the well at Lar'yak (61°16′N. 80°15′E.) and two for the Ust'-Yenisey depression and the Turukhansk well. Their age, the rocks deposited, and other features are characterized. (DLC.)

74979. PRUITT, WILLIAM OBADIAH, 1922– . Animal ecology and the Arctic National Wildlife Range. (*In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.44-51.)

Discusses advantages and use of this northeastern Alaska area comprising the coastal tundra, arctic mountains and foothills, forest tundra, and spruce forest. The wide variety of habitat types and completeness (except for the musk ox) of the original faunal assemblage are important features. Management of the Range as a control area for evaluating land-use practices in North Alaska is advocated. Recommendations are made to the U.S. Fish and Wildlife Service as the administering agency to foster research, in particular to establish a board of advisors for the Range. (CaMAI.)

74980. PRUITT, WILLIAM OBADIAH, 1922– . A new "caribou problem." (Beaver, Winter 1962. outfit 293, p.24-25, illus.) Reprinted in: *Atlantic naturalist,* Apr.-June 1963, v.18, no.2, p.86-89.

Discusses radioactive contamination of the northern food chain. Lichens, the principal food of caribou and reindeer, are physiologically susceptible to fallout from nuclear explosions. The mammals which feed on these plants become contaminated as do in turn, the northern peoples whose food source is game. Tests for strontium-90 in Alaskans and cesium-137 in Swedish Lapps indicate above-average concentrations. (DI.)

74981. PRUITT, WILLIAM OBADIAH, 1922– . On post natal mortality in Barren-ground caribou. (Journal of mammalogy, Nov. 1961. v.42, no.4, p.550-51, tables.)

Notes from three days' observations in west-central Keewatin, of a hill near Fawn Lake (64° 43′N. 100°15′W.) used by does in a maternity band and in false nursery bands. Author estimates that about 4.5% or less of the newborn died. Near blizzard conditions prevailed most of the time. (DLC.)

74982. PRUITT, WILLIAM OBADIAH, 1922– *and others.* Small mammal bioclimate studies in northern regions. Fort Wainwright, Alaska. October 1961. 19 p. illus., map. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 60-34.) 10 refs. *Other authors:* C.V. Lucier *and* L.L. Hufman.

Reports on two-years' study of areas representative of central Yukon basin. Of nine study plots selected, field work was carried out on three: subarctic spruce forest, subalpine spruce, and arctic-alpine tundra. Air and soil temperature, and snow cover data are shown. Two bioclimatic zones, the subniveal and the moss layer, are described and their suitability as small-mammal habitat analyzed. (CaMAI.)

PRUTER, A. T., *see* Alaskan Science Conference 1961. 1962. No. 69644

74983. PRUTER, AL., *and* **D. L. ALVERSON.** U.S. fishery scientists reveal facts on Russian "invasion" of halibut banks. (Fish boat, July 1962. v.7, no.8, p.17-19, illus., map, graph.)

Describes two Russian trawlers sighted in the Gulf of Alaska, east of Kodiak Island in May 1962 by the U.S. fisheries research vessel *John N. Cobb.* Their fishing gear, methods and attitude of personnel are sketched. The Russians are claimed to have been fishing off the bottom (harmful to the halibut stocks); their equipment seems superior to that of U.S. fishermen. (DI.)

PRYTKOVA, N. F., *see* Akademiia nauk SSSR. Istoriko-ėtnograficheskiĭ atlas . . . 1961. No. 69544

PRYTZ, VAGN, *see* Mølgaard, H., & V. Prytz. Flyoningen . . . 1962. No. 74067

PSAREVA, T. V., *see*

Akademiia nauk SSSR. . . . Zemliia Franca-Iosifa; struktura l'da. 1962. No. 69560

Grosval'd, M.G., & T.V. Psareva. Strukturnyĭ razrez . . . Churlianisa. 1961. No. 71883

Krenke, A.N., & *others.* Nakoplenie . . . snezhnogo pokrova . . . 1962. No. 73111

74984. PTITSYN, A., *and* **N. SHILOV.** Stroĭka na severe. (Sovetskiĭ soiuz, 1961, no.1 (131), p.5, illus.) Text in Russian. **Title tr.:** Construction projects in the North.

Photosketch of the erection of a giant cellulose-paper combine near Kotlas, Arkhangel'sk Province. The settlement is expected to have a 50,000 population within five years. (DLC.)

PTITSYN, IU. V., *see* Golovanov, G.A., & *others.* Rekonstrukciia . . . fabriki. 1962. No. 71743

74985. PUDOVKIN, M. I., *and* **L. S. EVLASHIN.** Prostranstvennaia sviaz' poliarnykh siianiĭ s ėlektricheskimi tokami v ionosfere. (Geomagnetizm i aėronomiia, 1962. v.2, no.4, p.669-73, graphs.) 19 refs. Text in Russian. **Title tr.:** Spatial relationship of auroras with electric currents in the ionosphere.

Analyzes 17 bay-like magnetic disturbances at Murmansk in 1958-1959 and according to J.P. Heppner's data of 1954 (No. 35239). The following conclusions reached: *1,* the ionospheric electric currents which result in these disturbances are not, in general, related to the bright ray forms of aurora borealis, but rather to uniform arcs and diffuse airglow that contain H_α hydrogen emission; *2,* the intensity usually displaced to the south from the arc during positive bays, and to the north during negative bays; and *3,* the observed displacement of the current with respect to the arc is explained by the effect of ionospheric wind of approx. 100 m./s. (DLC.)

PUDOVKIN, M. I., *see also* Loginov, G.A., & *others.* Sutochnyĭ khod intensivnosti poliarnykh siianiĭ . . . 1962. No. 73581

PUGACH, V. B., *see*

Markhinin, E.K., & *others.* Izuchenie sostoianiia vulkanov . . . 1961. No. 73819

Markhinin, E.K., & *others.* Izuchenie sostoianiia vulkanov . . . 1962. No. 73820

74986. PUGACHEV, NAUM FILIPPOVICH, 1905–1942. Chukotskie rasskazy. Magadan, Magadanskoe knizhnoe izd-vo, 1960. 70 p. port. Text in Russian. **Title tr.:** Chukchi tales.

Eight short stories depicting life in Chukotka in the 1930's: acculturative processes, education, hunting adventures, etc. A biographical sketch of the author by I. Garusov is included: a Russian party member, he became secretary of the Chaun

District committee (raĭkom) in 1933 and was instrumental in developing the economy and school system of the region. (DLC.)

PUK, PINKHOS SOLOMONOVICH, *see* Gramberg, I.S., *& others.* K voprosu o dal'neĭshem napravlenii neftepoiskovykh rabot . . . 1961. No. 71815

74987. PULVERTAFT, T. C. R. The Puklen intrusion, Nunarssuit, SW Greenland; a preliminary account of a new Gardar intrusion. (Meddelelser om Grønland, 1961. bd. 123, nr.6, p.33-50, maps.) 4 refs.

Describes this small elongate complex on Nunarssuit Island, mapped in 1958 and 1959. It was emplaced in Ketilidian basement, and cut off and hornfelsed Gardar dolerites. The four components of the intrusion are augite syenite, quartz syenite, soda granite and granophyre, emplaced in that order. They seemingly represent a differentiation sequence from augite syenite, which is of interest because of the widespread occurrence of this rock (with fayalite) in the Gardar province.— From author's abstract. (DGS.)

74988. PUMINOV, A. P., *and* **R. V. FEDOROVA.** Torfīanik s ust'īa r. Pur; severo-vostochnaīa chast' Sredne-Sibirskogo ploskogor'īa. (*In:* Leningrad. Nauchno-issled institut geologii Arktiki. Sbornik statei . . . vyp.16, 1961, *its:* Trudy t.123, p.179-83, table, diagrs.) 3 refs. Text in Russian. **Title tr.:** Peat bog from the Pur River mouth, northeastern part of the Middle Siberian upland.

Reports results from spore-pollen analysis of 11 samples of this 1.5 m. thick peat bog, approx. 71°N. 123°40'E. Changes in vegetation during its formation are characterized. Among other plants, *Pinus silvestris* which now grows south of 65°N. is present in all layers. Age of the bog is discussed. (DLC.)

74989. PURVES, P. E. Measuring the age of whales. (New scientist, Apr. 21, 1960. v.7, no.179, p.1008-11, illus.)

Discusses earlier attempts at age determination of whales; chemical and structural traits of whale ear plugs; lamination of plugs as related to age and size of animal, age determination and commercial exploitation. (DLC.)

PUSHKOV, NIKOLAĬ VASIL'EVICH, *see* Dolginov, Sh. Sh., *& others.* Nekotorye . . . postoīannogo magnitnogo polīa . . . 1962. No. 71066

74990. PUTALLAZ, JEAN. Géologie de la partie médiane de Traill Ø, Groenland oriental. København, 1961. 84 p. illus., maps & profiles incl. fold. (Meddelelser om Grønland, bd. 164, nr.2.) 67 refs. Text in French. Summary in English. **Title tr.:** Geology of the central part of Traill Island, East Greenland.

Reports and maps at scale 1:250,000 the stratigraphy and tectonics of this area investigated in 1955-1957, during the Danish Expedition under L. Koch. Formations of Carboniferous, Permian, Triassic, Jurassic and Cretaceous age are described, and their fossil correlations discussed. Evidence is presented that the Carboniferous sediments did not originate from reworked Devonian. The Yellow series, a Jurassic formation, attains its greatest thickness (1300 m.) in this area, and is attributed, partly from fossil evidence, to the Bathonian, Callovian, and Middle Oxfordian ages. Deposits of seven marine transgressions during the Cretaceous are identified. The structural pattern of antithetic faults separating numerous blocks is assumed to result from the earlier Tertiary revolution; four major faults are described. A horizontal displacement of the coastal area in relation to the Caledonian range to the west is assumed. (DGS.)

74991. PUTIMTSEV, G. N. Rezul'taty primeneniīa seĭsmicheskogo metoda RNP v Timano-Pechorskoĭ neftenosnoĭ provintsii. (Moskva. Institut neftekhimicheskoĭ i gazovoĭ promyshlennosti. Trudy 1960. vyp.26, p.213-29, diagrs.) Text in Russian. **Title tr.:** Results of application of the RNP seismic method in the Timan-Pechora oil-bearing province.

Describes the use of this method, with controlled directional sensitivity receiver, in the 1956-1957 studies of the Terekhevey, Chikshino and Savinobor structures in the Pechora depression. Trace records of multiple reflected and diffracted waves are demonstrated and interpreted. These were the first experiments on platformic type structures. Experience with this method in the field has given satisfactory results. (DLC.)

74992. PUTNINS, PAULS H., 1903– . Correlation between pressure changes aloft and at the surface in the Greenland area, and some aspects of the "Steering" problem. (Archiv für Meteorologie, Geophysik and Bioklimatologie, 1962. Serie A, Bd.13, Heft 2, p.218-40, map, tables.) 24 refs.

Discusses partial results of investigation sponsored by the U.S. Army Signal Research and Developmental Laboratory, Fort Monmouth, N.J. Data from 19 stations in and near Greenland also from Soviet drifting station North Pole-2 Apr.-Oct. 1950, were studied regarding 24-hour pressure changes at the surface, at 700, and 500 mb levels, such changes occurring simultaneously or after 24 hrs. Results indicate that "steering" may be initiated in the lower levels of the troposphere in this area, rather than throughout the atmosphere, as suggested by the Leipzig school of meteorologists, and in contrast to the so-called Frankfurt school assumption that pressure changes proceeded only from the upper to the lower layers. Complexity of the problem, and the common misinterpretation of Ficker's "primary" and "secondary" waves, were also noted. (DGS.)

74993. PUTNINS, PAULS H., 1903– , *and others.* Some further studies on the meteorology of the Greenland area. Washington, D.C., Mar. 1961. 110 p. maps, graphs, tables. (U.S. Weather Bureau. Office of Climatology. Foreign Area Section, Quarterly, final report, Nov. 1, 1960 - Jan. 31, 1961.) Refs. Sponsored by U.S. Army. Signal Research and Development Laboratory, Fort Monmouth, N.J. *Other authors:* V.J. Creasi, *and* H.E. Rosendal.

Contains a general analysis of pressure changes and circulation over Greenland, and three synoptic illustrations.

Correlation between pressure changes aloft and at the surface in the Greenland area, and some aspects of the "steering" problem, by P.H. Putnins, p.1-34, 18 refs. *Finds:* correlation with 24-hr. lag between interdiurnal pressure-height changes slightly better in the surface-500 mb thickness, than in the surface-700 mb thickness. Correlations

between simultaneous interdiurnal changes in the 1000 mb - 700 mb, and in the 1000 mb - 500 mb thickness are relatively high, especially over eastern Greenland. In some areas, high correlation between pressure changes at the surface and subsequent pressure changes aloft may indicate the initiation of "steering" in the lower levels.

An analysis of an extreme case of air mass change over the Greenland icecap, by V.J. Creasi, p.35-67, 5 refs. *Examines* Greenland weather for Feb. 21-23, 1950, by means of surface data, radiosondes, and weather charts; Station Centrale, Egedesminde, and Kap Tobin data were studied in detail. A 6290 geopotential meter change in the height of the tropopause, associated with a strong advection of warm air, particularly over the inland ice, were features of the period.

Correlation between some upper air elements at the icecap and Greenland coastal stations, by H.E. Rosendal, p.69-76, 4 refs. Selected upper air soundings made at the same three stations during Sept. 1949-Aug. 1951 were analyzed, and certain parameters correlated to determine if data from soundings at the regularly reporting coastal stations could be used to extrapolate conditions at upper levels over the icecap. Results were best in winter, but more data are needed.

A case of cyclogenesis at the west coast of Greenland, March 15-16, 1950, by P.H. Putnins, p.77-110, ref. *Describes* the circulation pattern, also temperature distribution, and offers an explanation for the warmth and steep north-south gradient, based on data from the same three stations. Temperature distribution tended to strengthen the northerly winds over eastern, and weaken them over western Greenland. Synoptic maps, sections, and tables supplement text. (DWB.)

74994. PUZAKOV, N. Osobennosti stroitel'stva dorog v raĭonakh vechnomerzlykh gruntov. (Avtomobil'nye dorogi, Jan. 1962. god 25, no.1, p.27-28.) Text in Russian. **Title tr.:** Features of road construction in areas of permafrost.

Experience from road building in Magadan, Yakutia, the Noril'sk and Vorkuta areas is to be utilized in the road-building programs required for the planned industrialization of the far North and Northwest with eight-ten month winters, temperatures to -65°C. and wind velocity to 40 m./sec. Climatic, hydrological, and terrain factors are outlined. Problems of surveying the road, of roadbed and causeway construction, earth work, drainage, etc. are treated in turn. (DLC.)

PUZANOVA, V. F., *see*

Agranat, G.A., & V.F. Puzanova. Énergetika . . . 1962. No. 69508

Agranat, G.A., & *others*. Promyshlennost' . . . 1962. No. 69511

PYKHOVA, N. G., *see* Kaliŭzhnyĭ, V.A., & N.G. Pykhova. Novye materialy o litologo-mineral'nom . . . 1962. No. 72628

74995. PYRERKA, VALERIĬ. Evane. (Druzhba narodov, Nov. 1961, no.11, p.40-47.) Text in Russian. **Title tr.:** Evane.

A Nenets (Samoyed) girl, adopted by a reindeer herder and cared for by the kolkhoz community, grows up to become a professional folk singer. Translated from Nenets by K. Oreshin. (DLC.)

PYRON, W. W., *see* Murdaugh, H.V. Function of the inferior vena cava valve . . . 1962. No. 74167

QUASHNOCK, JOSEPH MATTHEW, 1913– , *see* Stanley, G.M., & J.M. Quashnock. Evaluation of an electronic location marker . . . 1961. No. 75896

QUAY, J. F., *see* Quay, W.B., & J.F. Quay. . . . collared lemming . . . in captivity. 1956. No. 74997

74996. QUAY, WILBUR BROOKS, 1927– . The endocrine organs of the collared lemming, *Dicrostonyx,* in captivity under diverse temperature and light conditions. (Journal of morphology, July 1960. v. 107, no.1, p.25-46, illus., tables.) 45 refs.

A microscope study of the hypophyses, adrenals, thyroids, parathyroids and pancreatic islets, after: continuous light at 24° C. three to six months, continuous dark at 23° C. four months, continuous light and cold (-9 to -6°C.) up to 38 days, and continuous darkness and cold, up to 4.75 months; also continuous light and heat for 1-2 days, following 3-6 mo. light at 24° C. In addition to specific changes, the ability of these animals to thrive at low temperatures with slight manifestations of increased adrenocortical and thyroid activity, are noted. (DNLM.)

74997. QUAY, WILBUR BROOKS, 1927– , *and* **J. F. QUAY.** The requirements and biology of the collared lemming *Dicrostonyx torquatus,* Pallas, 1778, in captivity. (Säugetierkundliche Mitteilungen, Oct. 1956. Bd. 4, Heft 4, p.174-80, illus.) 13 refs.

Reports on 2.5 yr. observations on a colony of 110 animals. Food and drink preferences, cold and heat tolerance, sociability, reproduction and early development, diseases and causes of death are discussed. (DLC.)

74998. QUEBEC. *Dept. of Mines.* The pilot plant of the Department of Mines of the Province of Quebec, 1960. 26 p. illus.

Describes the plant proper, and the laboratories for mineral dressing, analytical control, and asbestos treatment, in Quebec City. Equipment and floor layout are depicted; flow sheets are given of the sampling and treatment and asbestos plants. Also described in: *Canadian mining and metallurgical bulletin,* Apr. 1962. v.55, no.600, p.224-27, by P.E. Pelletier, B. J. Walsh and J.P. Bolduc. (DGS.)

74999. QUEBEC. *Dept. of Natural Resources.* Liste des principaux exploitants et propriétaires de mines et de carrières dans la Province de Québec. List of the principal operators and owners of mines and quarries in the Province of Quebec. Québec, 1961. 81 p., tables. (*Its:* S-58.) Text in French and English.

Lists: metals and industrial minerals, indicating mines in operation in 1959; also stone quarries, clay and sand pits. In the northern area, are one of some 300 copper mines listed, 11 of the 66 iron, and four of the 14 nickel mines. (DGS.)

75000. QUENEAU, PAUL E. Mining in the Arctic; the future prospect brightens. (Mining engineering, July 1961. v. 13, no.7, p.695-99, illus., map.) Paper presented at the Natick, Mass. Conference on Man Living in the Arctic, Dec. 1960.

Compares the few, small mining operations in the North American Arctic with the greater activity in northern Scandinavia, Svalbard, and USSR. Major

problems of arctic mining are cited: high costs of logistics, power, construction in permafrost areas, and of manpower. Combined they may make capital investment and operating costs more than double those in more accessible and favorable regions. Population pressure, technical progress, and military requirements however, will lead to year-round, practical and profitable activity in the North. (DLC.)

75001. QUIRIN, G. DAVID. Economics of oil and gas development in northern Canada. Ottawa, Queen's Printer, Jan. 1962. xiv, 130 p., maps, graphs, tables. Refs. Summarized in *Oilweek,* Jan. 22, v. 12, no.49, p.16-20.

Discusses conditions for development of oil and gas competitive in the world market, and outlines the possibilities and the geologic and geographic setting on the Canadian mainland and Arctic Islands. The world energy market is discussed with projections to 1980 of oil requirements and supplies, especially northern Canadian crude oil, the prevailing price structure and tanker rates. Logistic problems are analyzed for the Arctic Islands and the mainland. Transportation costs are discussed as a factor in marketing; shipment of refrigerated liquid methane by ocean tanker is suggested, when markets for northern gas develop. The economics of petroleum exploration under northern conditions are analyzed, and an estimate made of requirement for initiating programs in various areas in northern Canada. (DI.)

75002. QUIRKE, TERENCE T., *Jr.* Geology of the Temiscamie iron-formation, Lake Albanel iron range, Mistassini Territory, Quebec, Canada. (Economic geology, Mar.-Apr. 1961. v. 56, no.2, p.299-320, illus., maps, tables.) 17 refs. Supplements his Ph.D. dissertation to Univ. of Minnesota, 1958.

Reports field work in 1956, 1957, and 1959, and chemical analysis carried out mainly by Cleveland Cliffs Iron Co. Regional geology is summarized; five Precambrian groups are identified. The Temiscamie iron-formation is described in some detail; with ten new chemical analyses of specimens from the six members. Structure, generally simple, increases in complexity near the Mistassini fault. Paragenesis is also simple; siderite, chert and hematite were formed first, along with, or shortly followed by stilpnomelane, minnesotaite, and octahedral magnetite. Nine ore bodies of magnetic iron-formation had been explored by the end of 1959: at least 200 million long tons of magnetite concentrates containing 66% iron and 7.7% silica are estimated available. (DGS.)

75003. QUIROZ, RODERICK S. Air density profiles for the atmosphere between 30 and 80 kilometers. Washington, D.C., Jan. 1961. 46 p., map, graph, tables. (U.S. Air Force. Air Weather Service. Technical report 150.) 46 refs.

Presents data for 65 individual air density soundings in the mesosphere taken during 1947-1958, at latitudes from the equator to 75° N.; all values reduced to gm./m^3. Included are data from Fort Churchill, Man., Davis Strait at 65° 36′ N. 58° 03′ W., Labrador Sea at 58° 26′ N. 55° 04′ W. and 54° N. 53° 20′ W., from 62° 04′ N. 63° 55′ W. near Baffin Island, and from 74° 34′ N. 94° 29′ W. in the Arctic Islands waters. Maximum altitude of soundings ranged from 20-220 km. (DWB.)

75004. QUIROZ, RODERICK S. Seasonal and latitudinal variations of air density in the mesosphere, 30 to 80 kilometers. Washington, D.C., Mar. 1961. 16 p. graphs, tables. (U.S. Air Force. Air Weather Service. Technical report 151.) 14 refs.

Includes 25 soundings from Fort Churchill as well as several from ships. Arctic winter densities show negative departures from the annual mean as great as 40% at 200 km. and 27% at 65 km. Arctic summer densities show positive departures of 40% and 27% respectively. Both winter and summer density curves show only -8, and +8% departure at the mesopause, 80 km. (DWB.)

75005. QUIROZ, RODERICK S. Seasonal and latitudinal variations of air density in the mesosphere, 30 to 80 kilometers. (Journal of geophysical research, July 1961. v. 66, no.7, p.2129-39, tables, graphs.) 20 refs.

Statistical analysis of 69 soundings from the Equator-75° N., obtained 1947-1958 by means of rocket-borne equipment and the searchlight technique. Mean and extreme densities are given for winter and summer and standard deviations are shown. A model of seasonal variations from ground level to 200 km. is included. Aspects of the density variability in the mesosphere are discussed, in particular the large seasonal variation in high latitudes. (DLC.)

75006. QVIGSTAD, JUST KNUD, 1853-1957. Lappiske eventyr og sagn; iv, Lappiske eventyr og sagn fra Lyngen II; og fra Nordland. Oslo, 1929. 566 p. (Instituttet for sammenlignende kulturforskning. Publikationer, ser. B. Skrifter, bd. 15.) Refs. Text in Norwegian. **Title tr.:** Lappish folk tales and myths; v. 4, Lappish folk tales and myths from Lyngen, 2; and from Nordland. In sequence to No. 14045.

Presents Lappish texts with Norwegian translation of 128 myths from Lyngen, also 37 folk tales and myths from Nordland. Explanatory notes are appended, p.553-61. (CtY.)

75007. RAABEN, M. E., *and* V. S. ZHURAVLEV. Sopostavlenie razrezov rifeĭskikh Polĭudova kriazha i IUzhnogo Urala. (Akademiia nauk SSSR. Doklady, Nov. 11, 1962. t.147, no.2, p.448-51, tables.) 15 refs. Text in Russian. **Title tr.:** Correlation of Riphean sections in the Polyudov Ridge and the Southern Ural.

Reports a 1960-1961 study, layer by layer, of upper Proterozoic-Middle Ordovician deposits, approx. 60° 34′ N. 57° E., noting stromatolites discovered. The Rassol'nyy, Demino, Niz'va and Churochnaya series are analyzed and correlated with the Riphean of the Southern Ural. (DLC.)

RAABEN, M. E., *see also* Voĭnovskiĭ-Kriger, K.G. K voprosu o stroenii . . . 1961. No. 76413

75008. RAASCH, GILBERT OSCAR, *and others.* The Silurian *Aulacopleura socialis* in the Yukon Territory. (*In:* International Symposium on Arctic Geology. Proceedings 1961, v.1, p.466-80, illus., maps.) 12 refs. *Other authors:* B.S. Norford *and* D.W.R. Wilson.

Presents results of field and laboratory studies of fossil collections made in 1958 by Shell Oil Co. field parties, near Prong Creek (65° 17′ N. 135° 45′ W.) a tributary of the Wind and Peel Rivers. Dark marly limestones and marls

in this locality contain trilobites, graptolites, and brachiopods. The fauna, surprisingly the trilobite *Aulacopleura,* shows affinities with that of the Cape Schuchert formation (Lower Silurian) of North Greenland, as well as with that of a northern British Columbia group. Remarkable taxonomic agreement between Greenland and Prong Creek specimens of *Aulacopleura socialis* is noted and illus. The presence of *Monograptus turriculatus* (Barrande) indicates correlation with the early Gala-Tarannon (later Lower Silurian) of the standard European sequence. (DLC.)

RABIKHANUKAEVA, ELIZAVETA SEMENOVNA, *see*

Kolgina, L.P., & *others.* Litologiia . . . 1961. No. 72898

Zadkova, I.I., & *others.* Osadochnye formatsii . . . 1961. No. 76618

75009. RABINOVICH, S. D. Chetvertichnye otlozheniia vostochnogo sklona Severnogo Urala i ikh vzaimosviaz' s neotektonikoi; tezisy. (*In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.29-31.) Text in Russian. **Title tr.:** Quaternary deposits of the eastern slope of Northern Ural and the effects of recent tectonics; summary.

Notes breaks, upthrow faults, disjunctive and plicated dislocations in the Ivdel' and adjacent areas. The age of the tectonic disturbances is discussed and their effects are noted on the development of Quaternary deposits and on the river valleys. (DLC.)

RABINOVITZ, MARVIN J., *see* Boatman, J.B., & *others.* Mitochondrial swelling cold. 1962. No. 70258

75010. RABKIN, MIKHAIL IZRAILEVICH, *and* **M. G. RAVICH.** Dokembrii Sovetskoi Arktiki. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t.117, Geologiia . . . 1961, p.3-17, tables.) 14 refs. Text in Russian. Pub. in English in International Symposium on Arctic Geology, q.v. **Title tr.:** The Precambrian of the Soviet Arctic.

Reviews the Precambrian rock composition, stratigraphy and history of geologic development in Kola Peninsula, the Anabar shield, the Taymyr and Severnaya Zemlya, the Polar Ural, also eastern parts of the Soviet Arctic: Chukotka, Omolon, Kolyma massifs, and other areas. Precambrian deposits of each region are characterized. General features of the Precambrian in the Soviet Arctic are briefly noted, such as sedimentation and metamorphism. Paragenetic analysis of mineral associations is considered the best method for correlation of Precambrian deposits. (DLC.)

75011. RABKIN, MIKHAIL IZRAILEVICH, *and* **V. A. MILASHEV.** Kimberlitovyi vulkanizm Sibirskoi platformy. (Vsesoiuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.357-58.) Text in Russian. **Title tr.:** Kimberlite volcanism of the Siberian platform.

Notes four regions: the Malaya Botuobuya, Alakit-Daldyn, Muna, and the middle Olenek, where kimberlite pipes are known. Kimberlite volcanism lasted from the Permian to the Jurassic. Morphology of the pipes, composition of the magma, and other features of kimberlites are briefly reviewed. (DLC.)

75012. RABKIN, MIKHAIL IZRAILEVICH, *and others.* Klassifikatsiia kimberlitovykh porod IAkutii i ikh nomenklatura. (Leningrad. Nauchno-issledovatel'skii institut geologii Arktiki. Trudy 1962. t.121, vyp.18, Sbornik statei po geologii i neftegazonosnosti Arktiki, p.154-64, table.) 13 refs. Text in Russian. *Other authors:* M.A. Krutoiarskii *and* V.A. Milashev. **Title tr.:** Classification of the kimberlite rocks of Yakutia and their nomenclature.

Reviews earlier classifications noting their inadequacies. According to genetic and textural signs, three large rock groups are distinguished and characterized: massive kimberlites, eruptive breccias of kimberlites, and tuff and tuff-breccias of kimberlites. (DLC.)

75013. RABOTNOV, IU. N. Khladnostoikost' mashin i metallokonstruktsii. (Akademiia nauk SSSR. Vestnik, Jan. 1962. god 32, no.1, p.53-55.) Text in Russian. **Title tr.:** Cold resistance of machines and metal constructions.

Outlines the problem of coping with brittle fracture especially in carbon steel, its importance in the Soviet North, lack of systematic studies, plans of the Scientific-Technical Council for Cold Resistance set up by the Academy of Sciences' Siberian Division. (DLC.)

75014. RACE, GEORGE J., *and* **H. M. WU.** Adrenal cortex functional zonation in the whale *Physeter catadon.* (Endocrinology, Jan. 1961. v.68, no.1, p.156-58, tables.) 21 refs.

Reports on chemical analysis of the three cortical zones of adrenal glands from adult sperm whales. The results support the functional zonation theory in these mammals. The presence of aldosterone in the outer cortex of these animals drinking sea-water, is noted. (DLC.)

75015. RACE, WILLIAM H. The mineral industry of the Kenai-Cook Inlet-Susitna region. Juneau, Alaska, 1962. 42 p., map, tables. 41 refs. Alaska, Division of Mines and Minerals, First regional report, a cooperative project with the U.S. Bureau of Mines. and similar to the Bureau's earlier reports, e.g. No. 52203.

Describes the main physical and geologic features of this varied, 44,500 sq. mi. region in southern Alaska, contained generally between 58°-64°N. and 146°-154°W. Its topography reflects the bedrock geology; main geologic characteristics were developed during the Mesozoic. Development of the gold, coal, chrome, and petroleum industries is outlined; current estimates of reserves are given of coal: Wishbone Hill and Beluga Lake, about 200 million tons; gold: low output expected to continue; construction materials: ample, including limestone for cement manufactures; copper: Iron Creek deposit uneconomic; iron: Tuxedni Bay deposit a possibility; and other minerals. Economic factors, such as labor supply and costs, transportation, water supply, power, taxes, and markets, indicate the need for extensive exploration and development in this region to take advantage of markets for ore and concentrates in the Pacific Northwest and the Far East. (DGS.)

RACHLIN, JOSEPH W., *see* Di Giovanni, C., & *others.* Microbiol. & sanitation military op. 1962. No. 71032

75016. RADFORTH, NORMAN WILLIAM, 1912– . Distribution of organic terrain in northern Canada. (*In:* National Research Council of Canada . . . Proceedings of the Seventh Muskeg Research Conference . . . 1961. p.8-11, map.) Summary only.

Presents a new distribution map of muskeg types and frequency of occurrence, showing muskeg-problem areas in Canada. Several localities, e.g., Fort Churchill, Kapuskasing, Hay River, typify several kinds of environment within the distribution pattern. (DLC.)

75017. RADFORTH, NORMAN WILLIAM, 1912– . Organic terrain. (*In:* Royal Society of Canada. Soils in Canada . . . 1961. p.115-39, illus., diagr., tables.) 11 refs.

Defines this term as the condition found in lands covered with vegetation growing in peat. Physiographic relationships are significant in organic terrain studies, as is the inter-relation of micro- and macro-paleobotany, ecology and physiography. Results of microfossil investigations are outlined; methods of cover analysis are described, and nine classes of cover are established and illus. Aerial interpretation of organic terrain is usually aided by classification according to topographic features; 12 examples of physiographic types of organic terrain are illus. as aid to interpretation also. (DLC.)

75018. RADFORTH, NORMAN WILLIAM, 1912– . Organic terrain and geomorphology. (Canadian geographer, Winter 1962. v.6, no.3-4, p.166-71, illus.) 10 refs.

Summarizes current knowledge on organic terrain or muskeg; its recognition from the vegetation and other surficial features; the effects of topography, permafrost, water, and the mineral sub-layer. A useful hypothesis proposes that the contemporary cover of the muskeg is related to the type of mineral aggregate beneath the peat. Examples are given of muskeg types according to author's classification. (DGS.)

75019. RADFORTH, NORMAN WILLIAM, 1912– Why and how does muskeg occur? (*In:* National Research Council of Canada . . . Proceedings of the Eighth Muskeg Research Conference . . . 1962. p.145-55.) 4 refs. Discussion p. 151-55.

Notes that 500,000 sq. mi. of this phenomenon hamper northern development in Canada. Extrabiotic factors, water, temperature, wind, the mineral sub-layer, etc. are considered in describing growth of the living cover and the formation of peat. Botanical factors, qualities intrinsic to the plants themselves, are also considered; these tend to create distinctly different kinds of peat. Organic terrain, once established, can maintain the water requirement for fossilization independent of the extrabiotic factors that would normally prevail in the area. In peat, according to ensuing discussion, there is no succession of vegetal species moving toward a climax; but a succession of one kind of vegetation throughout the depth of a muskeg. The rate of deposition may vary, resulting in an uneven surface as one travels over a muskeg from one type to another. (DLC.)

RADFORTH, NORMAN WILLIAM, 1912– , *see also*

Eydt, H.R., *& others.* Structural aspects peat. 1961. No. 71324

National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

75020. RADOVANSKIĬ, R., *and* G. KIR'IANOV. Raboty sibirskikh okhotovedov. (Sel'skoe khoziaĭstvo Sibiri, May 1961. god 6, no.5, p.85-86.) Text in Russian. **Title tr.:** Publications of the hunting experts in Siberia.

Lists the main publications of the Irkutsk Agricultural Institute's Hunting Science Dept. organized in 1960 and headed by V.N. Skalon. (DLC.)

75021. RÄTSEP, H. *n*-ilistet infiniitsetest verbivormidest soome-ugri keeltes. (Tartu. Ülikooli. Toimetised, 1956. vinik 43, p.100-113.) Refs. Text in Estonian. Summary in Russian, p.112-13. **Title tr.:** Verbal infinitive forms with the formant *-n* in Finno-Ugric languages.

Morphological analysis of Finno-Ugric verb forms with participle and adverbial functions; they are present in Ostyak, among others, but not in Vogul or Lappish. (DLC.)

RAGAN, DONAL M., *see* Alaskan Science Conference 1961. 1962. No. 69644

75022. RAGLE, R. N., *and* T. C. DAVIS, *Jr.* South Greenland traverses. (Journal of glaciology, Mar. 1962. v.4, no.31, p.129-31, map, tables.) 3 refs.

Presents supplementary data to No. 64170 based on work in 1959 and 1960. Preliminary information on accumulation and mean annual temperature at 25 points along traverse routes are given. A formula is offered for predicting the mean annual temperature above 1,800 m. elevation from 62.6° to 67°N. (DLC.)

75023. RAGLE, RICHARD HARRISON, 1923– . Proposal for the long-term study of a glacierized geographical area. (Polar notes, Nov. 1961. no.3, p.49-50.)

Describes the Icefield Ranges Research Program for year-round training and research in glaciology in the St. Elias Mts. of Yukon Territory, a project led by W.A. Wood and sponsored jointly by the American Geographical Society and the Arctic Institute of North America. The 1961 field reconnaissance to determine feasibility of the project is noted. The St. Elias Mt. complex on the Alaska-Canada boundary, and its Icefield Ranges are briefly characterized. (CaMAI.)

RAGLE, RICHARD HARRISON, 1923– , *see also* Lyons, J.B., & R.H. Ragle. Thermal history and growth . . . 1962. No. 73656

75024. RAGOTZKIE, ROBERT A. Compilation of freezing and thawing dates for lakes in north-central United States and Canada. Madison, Wis., Sept. 1960. 61 p. maps, tables. (Wisconsin. University. Dept. of Meteorology, contract NONR 1202(07), technical report no.3.) Refs.

Includes breakup and freeze-up data for about 15 Canadian lakes in northern Manitoba and Northwest Territories, reproduced from No. 57242. (DWB.)

75025. RAGOZIN, A. I., *and* K. I. CHUKANIN. Napravleniia i skorosti peremeshcheniia tsiklonov i antitsiklonov v Arktike. (*In:* Leningrad. Arkticheskiĭ . . . institut. Trudy 1961. t.235, Sbornik

stateĭ po sinopticheskoĭ meteorologii, p.37-46, graph, charts.) 8 refs. Text in Russian. **Title tr.:** The direction and rate of movement of cyclones and anticyclones in the Arctic.

Supplements authors' study of the trajectories and frequency of arctic cyclones and anticylones (No. 67634). Mean trajectories and speeds of movement of baric fields are determined from observations 1947-1956, including such from Soviet drifting stations. (SPRI.)

75026. RAGOZIN, A. I., *and* **K. I. CHUKANIN.** Preobladaĭushchie traektorii t͡siklonov v Arktike pri osnovnykh formakh atmosfernoĭ t͡sirkuli͡atsii. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.240, Voprosy dolgosrochnykh prognozov pogody . . . p. 163-76, maps, tables, graphs.) 7 refs. Text in Russian. **Title tr.:** The cyclone trajectories prevailing in the Arctic during the basic forms of atmospheric circulation.

Presents maps of trajectories of baric centers during different forms of atmospheric circulation in higher northern latitudes, and in the Atlantic-European longitude sector in particular. The singularities in the prepared maps are discussed and interpreted. The observed systematic recurrence of cyclones in the Arctic is demonstrated as different during the western (W), meridional (C), and eastern (E) forms of atmospheric circulation. The prepared maps of the mean trajectories of cyclones during different seasons may be applied to long-range meteorological predictions in the Arctic. (CaMAI.)

RAGOZIN, A. I., *see also* Leningrad. Arkticheskiĭ . . . institut. Rukovodstvo . . . 1961. No. 73408

75027. RAGOZIN, L. A. Dvustvorchatye molliu͡skiuglenosnykh otlozheniĭ Sibiri. (Akademii͡a nauk SSSR. Doklady, Feb. 21, 1962. t.142, no.6, p.1374-77, table, diagr.) 15 refs. Text in Russian. **Title tr.:** Bivalve molluscs in coal-bearing deposits of Siberia.

Reports a study of Carboniferous, Permian and, in part, Mesozoic bivalve molluscs in the Kuzbass, Minusinskiy and Tungusskiy coal basins. Since 1930, 145 new species and eight genera have been described; their various families are noted; their regional and stratigraphic distributions are summarized. (DLC.)

75028. RAGOZINA, V. S. K metodike prognoza krupnykh anomaliĭ temperatury vozdukha dli͡a Chukotskogo mori͡a na okti͡abr'. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.240, Voprosy dolgosrochnykh prognozov pogody . . . p.153-62, tables, graphs.) 2 refs. Text in Russian. **Title tr.:** The methods of prediction of large air temperature anomalies for the Chukchi Sea in October.

Analyzes the formation of air temperature anomalies of not less than ±2°C. during cold autumns of the 1931-1958 period, and warm autumns during 1934-1953 at the Vrangel Island, Cape Shmidta, Vankarem, and Uelen stations. The October air temperature at these stations is shown for each year, and the diagnostic and prognostic correlations of large monthly anomalies of air temperature with atmospheric circulation forms are discussed. Large temperature anomalies are thought to originate from singularities in the development of atmospheric circulation during its formation and the following months. (CaMAI.)

RAICHE, V. G., *see*
Cook, F.A., & V.G. Raiche. Freeze-thaw cycles Resolute. 1962. No. 70810
Cook, F.A., & V.G. Raiche. . . . Nivation hollows Resolute . . . 1962. No. 70814

RAINBOW, R. L. G., *see* Padhi, R.K., & *others.* Deep hypothermia & extracorporeal circ. 1961. No. 74621

75029. RAINES, JOHN I. Transportation and communication in Canada's northland. (Canadian oil and gas industries, Jan. 1961. v.14, no.1, p. 29-32, illus., port.)

Discusses effectiveness of aircraft and tracked vehicles in overcoming muskeg problems. Use of two-way radio linked with centrally located telephone or teletype facilities, is noted, also private radio systems, VHF most satisfactory, providing dependable, 24-hour communication. (DGS.)

75030. RAINWATER, FRANK HAYS, 1921– , *and* **H. P. GUY.** Some observations on the hydrochemistry and sedimentation of the Chamberlin Glacier area Alaska. Washington, D.C., U.S. Govt. Print. Office, 1961. p.C1-C14, graphs, tables, map. (U.S. Geological Survey. Professional paper 414-C, Shorter contributions to general geology.) 3 refs.

Describes a two month reconnaissance study in 1958, of the hydrochemical and sediment characteristics of this glacier in the Brooks Range. Sampling program is outlined. Chief dissolved constituents in the glacial melt waters and nearby streams are defined; dissolved solids range from 7 p.p.m. in a composite sample of precipitation to 55 p.p.m. in a nearby non-glacial stream. Total flow is divided into components of water from ground environment and such from glacial melt water and precipitation. Fragments of schist found in the streambed ranged in size from boulders to sand. Diurnal and day-to-day variation in suspended-sediment concentration, load, and particle size are appreciable. Correlations are shown between: concentration of sand and water discharge, also concentration of clay or clay plus silt and turbidity. Water samples for this study were collected by D.G. Anderson, as reported in No. 62289, other data derive from the U.S. Air Force Cambridge Research Center study of the region in 1958. (DGS.)

RAĬTMAN, V. A., *see* Trofimenko, V.I͡A. Materialy po gel'mintofaune . . . 1962. No. 76192

RAJALA, PAAVO, *see* Siivonen, L., & *others.* Arfugle. 1961. No. 75659

RAJEVSKI, V., *see*
Andjus, R.K., & V. Rajevski. Réanimation . . . 1961. No. 69774
Andjus, R.K., & *others.* Réanimation . . . après congélation. 1962. No. 69775

RAMBERG, HANS, 1917– , *see* Noe-Nygaard, A., & H. Ramberg. Geological reconnaissance map . . . 1961. No. 74369

75031. RAMKOV, É. Peredovoĭ kolkhoz "Put' kommunizma". (Okhota i okhotnich'e khozi͡aĭstvo, July 1961. god 7, no.7, p.12.) Text in Russian.

Title tr.: Put' kommunizma, a leading collective farm.

Reports this collective at Baykit (61°43′N. 96°27′E.) in the Evenki National District of Krasnoyarsk Province, to have a 1959 income of 970,300 rubles, 752,400 r. from hunting and fur farming. The 32 registered hunters are organized in three teams. The 24,131 km² hunting grounds have a score of fur-bearers and many kinds of birds, though squirrel and sable are mainly hunted and raised; methods are noted, the best hunters cited. (DLC.)

RAMOS, ANDY A., *see* Alaskan Science Conference 1961. 1962. No. 69644

75032. RAMSFJELL, EINAR. Phytoplankton distribution in the Norwegian Sea in June 1952 and 1953. (Norway. Fiskeridirektoratet. Skrifter, ser. havundersøkelser. Report on Norwegian fishery and marine investigations 1960. v.12, no.10, p. 1-112, illus., tables, maps.) 25 refs.

Presents quantitative studies, preceded by hydrographic outlines of a zone extending between Iceland and Spitsbergen. Three to four levels, down to 30 m. were examined. Great variations in the phytoplankton were encountered. The leading forms in the different water masses and areas are analyzed, the seasonal changes outlined. Main data of the surveys are tabulated, p.39-112. (DI.)

75033. RAND McNALLY & CO., *and* **ALASKA. DIVISION OF HIGHWAYS.** Alaska highway map 1961. Juneau, 1961. Colored, fold. map sheet 32 x 23 in.

Maps the state at 1 in.: 60 mi. scale showing the road net and related information for travellers, mileage table, index to towns, etc. Verso has map on scale of 1 in.: 40 mi. showing the southern part of the Alaska Highway and connecting roads in British Columbia and Alberta, with a descriptive note on the Highway. (DGS.)

75034. RANDALL, B. A. O. On the relationship of valley and fjord directions to the fracture pattern of Lyngen, Troms, N. Norway. (Geografiska annaler, 1961. v.43, no.3-4, p.336-38, map, diagrs.) 3 refs.

Presents results of investigation of the southern part of the Lyngen Peninsula, in 1956-1959. Evidence obtained from constructing rose diagrams indicates the dependence of valley direction on the local fracture pattern and a close relationship between valley and fjord directions. No correspondence was found between direction of major fractures and orientation of valleys and fjords. Many valleys however, are believed to lie on important fault lines. (DWB.)

75035. RANDALL, ROBERT H., *Jr.* United States surveys in the Pacific, 1900-1960. Washington, D.C., Aug. 1961. 31 p., maps. Refs. Paper presented at the Tenth Pacific Science Congress.

Includes, p.18-19, survey of hydrographic charting of Alaskan waters, from the early work on the Inside Passage to the recent extension of the North American datum through the entire Aleutian chain; also a summary of topographic mapping to the second edition of the 1:250,000 Alaska series, using data from recent 1:63,360 series. Index maps show status of U.S. surveys in the Pacific as of June 30, 1904 and Dec. 31, 1960. (DGS.)

RANDALL, ROBERT H., *Jr.*, *see also* Pacific Science Congress. 1961. No. 74619

75036. RANHOFF, EIVIND, 1942– . En sommer på Newton-toppen. (Polarboken 1961-62, p. 79-87, illus.) Text in Norwegian. **Title tr.**: A summer on Newtontoppen.

Describes a six-week stay in 1961 on this summit (79°N. 17°30′E.) in Vestspitsbergen, to morse twice-daily weather observations to Isfjord Radio in connection with an air photography project. The two observers were landed by helicopter and established a tent camp. Details on their daily routine are given. (CaMAI.)

75037. RAO, KANDULA PAMPATHI. Physiology of acclimation to low temperature in poikilotherms. (Science, Aug. 31, 1962. v.137, no.3531, p.682-83, table.) 9 refs.

Fresh-water mussels and earthworms kept at relatively low temperatures for 20-30 days showed increased K, N, Ca and decreased Cl, Mg and free amino acids in their blood or body fluid. Protein synthesis and neurosecretory activity also increased. It is suggested that hormonal agents trigger the changes. (DLC.)

RAPATZ, G. L., *see* Luyet, B.J., & *others*. X-ray diffraction . . . 1962. No. 73647

75038. RAPELI, PENTTI. Maanpintainversiosta. (Lapin Tutkimusseura. Vuosikirja, 1961. v.2, p. 74-86, graphs.) Text in Finnish. Summary in English. **Title tr.**: Ground inversion.

Temperature inversion based at the earth's surface is an important feature of Finnish Lapland's semi-continental climate. A well developed inversion is possible in midwinter when sunshine is negligible, the earth snow-covered, and the sky clear. Under these conditions the radiation balance attains an equilibrium within ten hrs. (SPRI.)

RAPELI, PENTTI, *see also* Mattsson, R., & P. Rapeli. Total radiation Sodankylä . . . 1960. No. 73886

75039. RAPOPORT, L. G., *and* **N. N. ROMANOVSKIĬ.** Diatomovaīa flora v otlozheniīakh s singeneticheskimi povtorno-zhil'nymi l'dami. (Merzlotnye issledovaniīa. Sbornik statei 1961. vyp.1, p.162-66.) 8 refs. Text in Russian. **Title tr.**: Diatom flora of deposits with syngenetic multiple ice veins.

Polygonal floodplain of alluvial lowland, erosion-thermokarst basins and polygonal-vein deposits in northern Yakutia are analyzed and the composition of diatom flora complexes are reported. The latter elucidates the paleogeographic conditions and facies of Quaternary deposits. (DLC.)

75040. RAPOPORT, O. Vliīanie ryb'ego zhira na kachestva mekha golubykh pestsov. (Sel'skoe khozīaĭstvo Sibiri, Aug. 1962. god 7, no.8, p.84-85, illus., tables.) Text in Russian. **Title tr.**: Effect of fish oil on the quality of blue fox pelts.

Reports experiments at the fur farm of Salekhard sovkhoz: in Aug.-Dec. 1960, foxes fed a diet with 12-18 gm. fresh-water fish oil added daily grew larger, the pelage longer and thicker than the controls. Best results were obtained by a daily addition of 12 gm. fat and vitamin E. (DLC.)

75041. RAPP, ANDERS, *and others*. Iskilar i Padjelanta? (Ymer 1962. årg. 82, hft. 3, p.188-

202, illus., map, table.) 20 refs. Text in Swedish. Summary in English. *Other authors:* K. Gustafsson and P. Jobs. **Title tr.:** Ice-wedges in Padjelanta?

Reports observations of the junior authors in the area southeast of lake Virihaure in northern Sweden, at 67°20′N. 17°E. in Aug. 1962. When examining some plateaux and terraces of fine-grained ice-lake sediments from the deglaciation period, they found frozen ground at 1 - 1.50 m. depth in many pits. Air photos studied by the senior author disclosed a large area with patterns of what is interpreted as high-center ice-wedge polygons on top of the plateaux and terraces. The polygon pattern is practically identical with high-center ice-wedge polygons described from Alaska (No. 40405). The Padjelanta polygons have four to six sides, a 10-40 m. diameter and the same fracture forms as those in Alaska. The locality is 700 m. above sea level and about 100 m. above the forest limit. The annual mean air temperature is estimated at -3° to -4°C., the annual precipitation at about 1,000 mm. The snow-cover in winter is probably thin or lacking due to strong wind. (DLC.)

75042. RAPP, ANDERS. Studies of the postglacial development of mountain slopes. Uppsala, Almqvist & Wiksell, 1961. 11 p. (Uppsala. Universitet. Geografiska Institution. Meddelanden, ser. A, nr.159.) 13 refs. Ph.D. thesis.

Summarizes his four analytical studies of post-glacial land forms in four mountain regions. Forms and processes were considered in all four and the rate of denudation in two: on Tempelfjorden and Kärkevagge. Snow avalanches, rock falls, accumulations of rock debris, transportation of dissolved salts, earth slides and mudflows were measured and analyzed, also mass transfer in sheet slides, retreat of rock wall, and fresh fallen rock on snow patches. Working methods are briefly stated. Numerical values are given, not as absolute determinations but as working hypotheses. Three of the studies concern arctic areas, viz: *Avalanche boulder tongues in Lappland,* No. 61105; *Talus slopes and mountain walls at Tempelfjorden,* No. 67654; and *Recent development of mountain slopes in Kärkevagge,* No. 67652; the other study concerns the Alps. (DLC.)

75043. RASMUSSEN, BIRGER, 1907– . Klappmyssens aldersfordeling i Danmarkstredet. (Fiskets gang, Feb. 1, 1962. årg. 48, nr.5, p.60-62, tables, graph.) Text in Norwegian. Summary in English. **Title tr.:** Age distribution of hooded seal in Denmark Strait.

Presents age distribution of *Cystophora cristata* for 1956-1960, based on analysis of jaws of those taken by Norwegian sealers. The number of 1-4 year olds increased and that of mature animals decreased in this period. Mortality is estimated at 20% among 1-5 year olds and 22% among mature animals, indicating protective measures needed especially for mature females. Norwegian hood sealing in Denmark Strait was prohibited in the 1961 season, and better utilization of the other and more important hunting ground, namely Jan Mayen, is expected. (DA.)

75044. RASMUSSEN, BIRGER, 1907– . Om klappmyssbestanden i det nordlige Atlanterhav. (Fisken og havet, Jan. 1960. nr.1, 23 p. illus., tables, diagrs., graph, map.) 25 refs. Text in Norwegian. **Title tr.:** On the distribution of hooded seal in the North Atlantic.

Maps and discusses the migration patterns along the coasts of Greenland and Labrador, between this seal's breeding areas northeast of Newfoundland and west of Jan Mayen and its molting area in Denmark Strait west of Iceland. Seasonal variations in blubber thickness are analyzed as an indicator of the animals' condition. The effect of recent climatic changes on the stock is considered. Fluctuations in catch since 1946 are analyzed, as are the age distribution (in general and on the breeding and molting grounds) and rate of growth. Total stock is estimated and data on catch volume are presented; protective measures are discussed. Condensed version in Danish pub. in *Grønland,* Mar. 1962, p.104-110, copy at CaMAI. (SPRI.)

75045. RASMUSSEN, BIRGER, 1907– . Stillehavslaks pa norskekysten. (Fiskets gang, Apr. 27, 1961. årg. 47, nr.17, p.351-54, illus.) Text in Norwegian. **Title tr.:** Pacific salmon in Norwegian waters.

Reviews Russian efforts, long unsuccessful, to acclimatize the pink salmon *Oncorhynchus gorbuscha* to the Barents Sea. In 1959 and 1960 fertilized eggs from the Pacific were hatched in hatcheries, the larvae fed in specially prepared fish ponds, and the rivers of Kola Peninsula stocked with 37 million young salmon. In 1960 and 1961 *O. gorbuscha* began to appear in North Norway waters and rivers of Finnmark. Prospects for a new large-scale salmon fishery in North Atlantic waters and potential competition for spawning grounds between Pacific and Atlantic forms are discussed. Detailed description and life cycle of *O. gorbuscha* are included. (DA.)

RASMUSSEN, THOROLV, *see* Rollefsen, G. Havet . . . fisker. 1960-62. No. 75176

75046. RASMUSSON, GUNNAR. Exploateringen av vattnen. (Sveriges natur, årsbok 1961; årg. 52, nr.5 A, p.29-40, illus., map.) Text in Swedish. Summary in English. **Title tr.:** Exploitation of the waters.

Reviews use and misuse of Swedish Rivers and lakes: discussing winter travel in earlier times, building canals to link the waterways, efforts to create arable land by reclaiming lakes, changes in the balance of nature caused by timber-floating lanes and use of lakes for water supply, river pollution caused by industrial waste, etc., and particularly the recent regulation and damming of rivers and lakes for hydro electric power purposes. The elements of water storage and power stations are outlined. Their detrimental effects are pointed out in relation to agriculture, forestry, fishing, reindeer raising, tourism, recreation, biology, geology and cultural history. A map of Swedish rivers and lakes shows areas used or planned for water-storage reservoirs, and for power stations, also areas free of such improvements, made or planned. However, in southern Sweden the latter are often seriously polluted. (DA.)

75047. RASS, TEODOR SAULOVICH, 1904– . Nekotorye puti uvelicheniĭa ulovov ryby v morskikh vodoemakh. (Voprosy ikhtiologii, 1961. t.1, vyp.4 (21), p.622-39, maps.) About 50 refs. Text in

Russian. **Title tr.:** Some ways of increasing the catches of fish in marine basins.

Reviews possibilities of increased catches in the Japan, Okhotsk and Bering Seas, including three cold-water forms: *Theragra chalcogramma, Cololabis saira,* and *Pleurogrammus monopterygius.* Their distribution, economic value, schooling and spawning, also the catches, actual and potential, are described. The latter part of the paper deals with transplantation activities concerning Far Eastern fish introduced into the Barents, Baltic and Black Seas. (DLC.)

75048. RASSADINA, KSENIĬA ALEKSANDROVNA, 1903– . O novom vide *Cladonia oxneri* Rass. (Akademiĭa nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy 1960. t.13, p.14-20, illus.) 4 refs. Text in Russian and Latin. **Title tr.:** A new species *Cladonia oxneri* Rass.

Describes this new lichen from the Malyy Yamal Peninsula, including its anatomy and microscopic structure, location, differential diagnosis, etc. (DLC.)

RASSADINA, KSENIĬA ALEKSANDROVNA, 1903– , *see also* Oksner, A.N., & K.A. Rassadina. . . . *Cetraria* v SSSR. 1960. No. 74504

75049. RASSKAZOVA, E. S. Chlenistostebel'nye verkhnego paleozoĭa iz Tungusskogo basseĭna. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii 1961, vyp.23, p.35-76, plates.) 28 refs. Text in Russian. **Title tr.:** Upper Paleozoic arthrophytes from the Tungusskiy basin.

Presents a taxonomic description of about twelve forms, including new genera and species, mostly Equisetales. They were found by the author during 1950-1959 in the Nizhnyaya Tunguska, Kureyka, and Chunya River basins and the Noril'sk mines, and other forms found are described in item following. Arthrophytes distributed in a stratigraphic section of the Tungusskiy basin are correlated with such of the Kuznetsk and Pechora basins. (DLC.)

75050. RASSKAZOVA, E. S. Chlenistostebel'nye verkhnego paleozoĭa iz Tungusskogo basseĭna; okonchanie. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik po paleontologii i biostratigrafii, 1961, vyp.24, p.46-73, plates.) 63 refs. Text in Russian. **Title tr.:** Upper Paleozoic arthrophytes from the Tungusskiy basin, conclusion. In sequence to item above.

Presents taxonomic description of Calamariales, Sphenophyllales and Authophyllales: 12 species, including *Annularia subtenuifolia, A. spiculosa, Autophyllites* (?) *polystachyus,* n. spp. (DLC.)

RASSKAZOVA, V. S., *see* Gerasimovskiĭ, V.I., & V.S. Rasskazova. O rasprostranenii talliĭa . . . 1962. No. 71648

75051. RASTEGAR, MOHAMAD J., *and others.* The influence of hypothermia on myeloid maturation. (Surgical forum, 1961. v.12, p.192-93.) 2 refs. *Other authors:* R.L. Webb *and* S.W. Jacob.

Reports studies of dogs having refrigerated (5-10 days at 4°C.) and control pieces of rib inserted into the spleen. Observations made 6, 12, 24 weeks later showed that the myeloid cells in the bone marrow were more sensitive to cooling than the erythrocytic and lymphocytic elements. (DNLM.)

75052. RAUN, ALO, 1905– . Concerning the qualified grade of superiority in Uralic. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . , p.443-61.) Refs. in text.

Semantic analysis of qualitative, quantitative, and contrastive juxtaposition used in comparative grading of shared features. Examples from Vogul, Ostyak, Samoyed, Zyryan, and Lappish are included. (DSI.)

75053. RAUN, ALO, 1905– . The equivalents of English "than" in Finno-Ugric. (Indiana University publications. Uralic and Altaic series, 1960. v.1, American studies in Uralic linguistics, p.149-247.) Refs. in text.

Analyzes ways of expressing comparison, including such in Lappish, Samoyed, Zyryan, Ostyak, and Vogul. Typical for Finno-Ugric-Samoyed languages in the use of case and postposition. (DLC.)

75054. RAUN, ALO, 1905– . Zum Komparativ und Superlativ in den finnisch-ugrischen Sprachen. (Finnisch-ugrische Forschungen, 1951. Bd.30, p.376-89.) Refs. Text in German. **Title tr.:** On the comparative and superlative in Finnish-Ugric languages.

Critical rejoinder to D.R. Fokos, q.v., taking issue on some of his etymological interpretations of the meaning and use of suffixes. (CtY.)

RAUSCH, ROBERT A., *see* Alaskan Science Conference 1961. 1962. No. 69644

75055. RAUSCH, ROBERT LLOYD, 1921– . Notes on the black bear, *Ursus americanus* Pallas, in Alaska, with particular reference to dentition and growth. (Zeitschrift für Säugetierkunde, May 1961. Bd.26, Heft 2, p.77-107, illus., tables, map.) About 60 refs.

Reports on over ten years' observations and on material from 219 animals. In addition to growth and dentition, reproduction, parasites and diseases are discussed. During the six-seven month denning period, body temperature drops by 5-6°C. and the animals do not grow. Captive animals which do not undergo denning, consequently grow twice as fast during the growth period, which is strongest in the first three years of life. The canine teeth show clear annual zones to the age of six, and growth to the age of ten years can be determined from changes in the skull, dentition, etc. (DLC.)

75056. RAUSCH, ROBERT LLOYD, 1921– . Notes on the occurrence of *Capillaria hepatica,* Bancroft, 1893 (Helminthological Society of Washington. Proceedings, Jan. 1961. v.28, no.1, p.17-18, illus.) 4 refs.

Of the four occurrences noted, two are from Alaska, viz: in the white-footed mouse (Ketchikan) and the brown lemming (Nunivak Island). Degree of infection, histological pathology, etc. are recorded. (DA.)

75057. RAUSCH, ROBERT LLOYD, 1921– . The outlook for conservation in Alaska. (Wilderness Conference, 6th biennial, San Francisco. Proceedings, 1960. p.46-63, illus.)

Reviews the natural resources and their utilization in relation to conservation: agriculture,

fisheries, lumbering, transport in particular by aircraft, communication, power development, outdoor recreation, etc. and their effect on landscape and wildlife. Data are given on the national parks (three), the area, location, wildlife, access, etc.; the national refuges: 15, seven of them treated in detail; national forests; proposed refuges: three, including the Arctic Wildlife Range in North Alaska; wildlife: caribou, moose, elk, deer, bear, wolverine, wolves, walrus, etc., and its protection; state parks, etc. Economic and administrative aspects of conservation in the new state are dealt with. Recommendations include specific measures of protection and education. Ensuing discussion is appended. Nearly a hundred excellent photographs of landscape, terrain, fauna, etc. embellish the text. (DLC.)

75058. RAUSCH, ROBERT LLOYD, 1921– . Trichinellosis in the Arctic. (International Conference on Trichinellosis, 1st. *Warsaw* 1960. Proceedings *pub.* 1962. p.80-86.) 23 refs.

Reviews earlier studies as pertinent, and discusses marine mammals and the polar bear as potential sources of human infection. Wolf, arctic fox, ermine and numerous small rodents are also discussed as carriers. (DNLM.)

75059. RAUSCH, ROBERT LLOYD, 1921– . The wolverine. (Alaska sportsman, Jan. 1961. v.27, no.1, p.8-10, illus.) Alaska wildlife library, no.9.

Describes the appearance and habits, especially dietary, of *Gulo gulo* L. now restricted (in North America) to wilderness areas of Alaska and northern Canada. The $15.00 bounty paid by Alaska is unnecessary, as there is a good market for wolverine pelts. The fur is used for parka ruffs and trim; it is valued for its property of shedding rime that forms from condensation in cold weather. Long-standing misconceptions of the wolverine for unusual cleverness, voracity and strength are being dispelled. (DI.)

RAUSCH, ROBERT LLOYD, 1921– , *see also* Pacific Science Congress. 1961. No. 74619

RAUSCHENBERGER, *see* Nielson, J.K., & Rauschenberger. Frost og fundering . . . 1957, 1962. No. 74330

RAUZER-CHERNOUSOVA, DAGMARA MAKSIMILIANOVNA, *see* Varsanof'eva, V.A., & D.M. Rauzer-Chernousova. K kharakteristike . . . 1960. No. 76326

RAVDIN, R. G., *see* Sloviter, H.A., & R.G. Ravdin. Recovery . . . human erythrocytes freezing. 1962. No. 75735

75060. RAVICH, MIKHAIL GRIGOR'EVICH. Analiz paragenezisov mineralov v proterozoĭskikh metamorficheskikh porodakh Taĭmyra. (*In:* Akademiīā nauk SSSR. Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii. Fiziko-khimicheskie problemy . . . 1961, t.1, p.209-233, tables, diagrs.) 10 refs. Text in Russian. Summary in English. **Title tr.:** Analysis of mineral paragenesis in the Proterozoic metamorphic rocks of Taymyr.

Reports mineral paragenesis of these rocks, more than 15,000 m. thick and occupying about 70,000 km² in the mountainous part of Taymyr Peninsula. Patterns of regional metamorphism are outlined. The factors effecting variety in metamorphic rocks: depth of formation, original rock composition and temperature regime, are described. The original composition of the Taymyr gneissic complex and of the green schist and phyllite formations is described and characteristic sequences of mineral deposition are reported. (DLC.)

75061. RAVICH, MIKHAIL GRIGOR'EVICH, *and* **A. IĀ. KRYLOV.** O vozraste metamorficheskikh kompleksov Taĭmyra. (Akademiīā nauk SSSR. Komissiīā po opredeleniīū absolīūtnogo vozrasta geologicheskikh formatsiĭ. Trudy 1960 *pub.* 1961, devīātaīā sessiīā, p.140-45, tables.) Text in Russian. **Title tr.:** On the age of the Taymyr metamorphic complex.

Describes the composition, deposition and stratigraphy of two metamorphic complexes of rocks in an approx. 70,000 km² area of northern mountainous Taymyr. Absolute age determinations by the argon method are reported for 14 samples of granitoids, gneisses and phyllites. Geologic age also is estimated and the discrepancy noted. Tectonic processes are considered to be responsible for the preservation of radiogenic argon. (DLC.)

75062. RAVICH, MIKHAIL GRIGOR'EVICH, *and* **L. A. CHAĬKA.** Proterozoĭskie metamorficheskie i magmaticheskie formatsii Gornogo Taĭmyra. (*In:* Akademiīā nauk SSSR. Otdelenie geologo-geograficheskikh nauk. Petrografiīā Vostochnoĭ Sibiri, t.1, 1962, p.590-719, illus., tables, map, diagrs.) 20 refs. Text in Russian. **Title tr.:** Proterozoic metamorphic and magmatic formations of mountainous Taymyr.

Reviews investigation of this area, the relief, geologic structure, and Proterozoic stratigraphy. Three metamorphic formations: gneisses, greenschists, and phyllites, are described as to their composition, petrography and mineralogy. Intrusive formations are similarly treated: metamorphized basites, orthoamphibolites, muscovitized granites and porphyraceous granitoids. Useful mineral resources: graphite, garnet, muscovite, beryl and feldspar are reported. Absolute age determinations for granitoids, crystalline and metamorphic schists are given. The geologic history of metamorphic and magmatic formations is discussed. (DLC.)

RAVICH, MIKHAIL GRIGOR'EVICH, *see also* Rabkin, M.I., & M.G. Ravich. Dokembriĭ . . . 1961. No. 75010

RAVILA, PAAVO ILMARI, 1902– , *see* Suomalaia-ugrilainen seura. Commentationes fennougricae . . . Ravila. 1962. No. 76004

RAVITCH, M. M., *see*

Rush, B.F., & *others.* Effects of circulatory standstill . . . 1961. No. 75269

Wilder, R.J., & *others.* Survival . . . 1961. No. 76556

75063. RAVSKIĬ, ÈDMUND IOSIFOVICH. O stratigrafii kaĭnozoĭskikh otlozheniĭ īūga Sibirskoĭ platformy: basseĭn Angary i nekotorye sopredel'nye raĭony; tezisy. (*In:* Vsesoīūznoe soveshchanie po izucheniīū chetvertichnogo perioda. Materialy . . . 1961, t.3, p.179-80.) Text in Russian. **Title tr.:** On the stratigraphy of the Cenozoic deposits in the southern part of the Siberian platform: the Angara basin and some adjacent regions; summary.

Reviews the Tertiary and Quaternary deposits and their stratigraphic position. Alluvial and weathering-solifluction are best studied from the latter. Climatic and vegetation changes during the Quaternary period are noted. (DLC.)

75064. RAVSKIĬ, ÉDMUND IOSIFOVICH. Periglîatsial'nye iavleniîa i periglîatsial'nye zony pleĭstotsena Vostochnoĭ Sibiri. (*In:* Akademiîa nauk SSSR. Geologicheskiĭ institut. Voprosy . . . antropogena, 1961, p.141-51, illus., map.) 25 refs. Text in Russian. Summary in English. **Title tr.:** Periglacial phenomena and the periglacial zone of the Pleistocene of Eastern Siberia.

Reports a study of Quaternary deposits in Krasnoyarsk Province and Yakutia with reference particularly to the fossil periglacial phenomena. Two glaciations, both occurring in two phases, are recognized and four generations of fossil permafrost are established. The periglacial regime manifests itself in development of permafrost, periglacial character of lithogenesis, distribition of loess-like deposits, prevailing tundra and forest-tundra vegetation; and in distribution of arctic fauna. All these phenomena were present in the northern parts of Eastern Siberia during even the interglacial period. (DLC.)

RAWSON, A. J., *see* Speicher, C.E., *& others.* Cold injury . . . cardiac. 1962. No. 75863

75065. RAY, CARLETON. A question of whale behavior. (Natural history, June-July 1961. v.70, no.6, p.46-53, illus.)

Describes, with excellent photos, the appearance, size, and taxonomy of cetaceans, their physiology and behavior. Captive and stranded animals are noted and behavioral and physiological observations on them given. Stranding, especially in solitary animals, is said to be due to sickness. (DLC.)

75066. RAY, CARLETON. Three whales that flew. (National geographic magazine, Mar. 1962. v.121. no.3, p.346-59, col. illus.)

Describes an expedition to the Kvichak River and Bay area of southwestern Alaska, in summer 1961, to capture three young belugas for the New York Aquarium. Problems and methods of catching them are reviewed, also precautions for their safety during the flight to New York. Characteristics of the belugas are noted: size, color, docility, sonar ability, etc. (DI.)

RAY, CHARLES K., *see* Alaskan Science Conference 1960. 1961. No. 69643

75067. RAY, DOROTHY JEAN. The Eskimo dwelling.(Alaska sportsman, Aug. 1960. v.26, no.8, p.13-15, +, illus.)

Describes the materials and construction of traditional Eskimo houses. Included are the Greenland houses of stones and earth in the North, and those of rock, sod, and driftwood in Egedesminde; the snowhouses among the Copper and other Canadian Eskimos; the Alaskan dwellings of driftwood and sod from Cape Barrow to Seward Peninsula, of stone and driftwood on King Island, and those of driftwood, grass and sod in the Aleutians; the Siberian Eskimo round house of sod, whales' bones, driftwood and skin concludes the account of winter dwellings. In summer, the tent was used, almost universally. Most of these dwellings have been replaced by western type frame houses. (DI.)

RAY, RICHARD GODFREY, 1920– , *see* Warner, L.A., *& others.* Iron and copper deposits . . . 1961. No. 76489

75068. RAYNER, JOHN NORMAN. Atlas of surface temperature frequencies for Eurasia. Montreal, Feb. 1961. 78 p. col. maps. (McGill University. Arctic Meteorology Research Group, Publication in meteorology no.39.) 4 refs. For U.S. Army. Quartermaster Research and Engineering Command, Contract no. DA 19-129-QM-1447, O.I. no. 9177. Completes together with his atlas for North America, *infra,* a set of temperature frequency maps for Northern Hemisphere land areas north of approx. 30°N. and eastward from about 50°W. to the 180° meridian.

Temperature frequencies were calculated using the Lackey method (c.f. No. 52616) for 18 stations, including four in Greenland and eight in northern USSR. Maps show the percentage frequency of time that the recorded temperatures are below ten levels ranging from -50°F. to 100°F. Isopleths are drawn for 13 percentage values, ranging from 1 to 99. The lowest temperature maps are those for -50°F., but -80°F. and -65°F. maps should appear, since those values have been observed in Greenland and eastern Siberia. (DWB.)

75069. RAYNER, JOHN NORMAN. Atlas of surface temperature frequencies for North America and Greenland. Montreal, Jan. 1961. approx. 150 unnumb. col. maps. (McGill University. Arctic Meteorology no.33.) 4 refs. Complements his atlas for Eurasia, *supra.*

Maps show temperature frequencies for roughly the land areas in west longitude north of 30°N. Data were computed from 15 additional arctic stations to frequencies previously published; accuracy of data varies from good to unreliable, according to observation periods and number per day. (DWB.)

75070. RAYNER, JOHN NORMAN. Index and analysis of surface temperature and wind frequency data. Montreal, Apr. 1961. 18 l. graphs, tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 40.) 7 refs. Final publication of a series of reports and atlases prepared by the Arctic Meteorology Research Group for the U.S. Army. Quartermaster Research and Engineering Command.

Index in alphabetical order by country then station represents reasonable coverage of most of the land areas in the northern part of the Northern Hemisphere. The tables represent data of varied accuracy. The maps, also of varied accuracy, give a generalized picture of the frequency conditions. (DWB.)

RAZIN, V. K., *see* Dibner, V.D., *& others.* Litologiîa. . . 1962. No. 71010

75071. RAZIN, VL. Kurs: na okean. (Sovetskiĭ soĭuz, 1961, no.5(135), p.40-43, illus. incl. col., sketch map.) Text in Russian. **Title tr.:** Course set: to the ocean.

Reports interview with B.E. Butoma, chairman of the ship-building committee at the Council of

Ministers, USSR. Present and planned construction of merchantmen, fishing vessels, icebreakers, etc. is discussed; the research submarine *Severianka,* atomic icebreaker *Lenin,* the 44,000 t. whalers *Sovetskaia Ukraina* and *Sovetskaia Rossiia,* etc. are noted; two planned arctic sea-mammal hunting and fishing vessels and a polar passenger liner are illus. (DLC.)

75072. RAZNITSYN, V. A. Geologicheskoe stroenie iugo-zapadnogo Pritiman'ia; stratigrafiia i paleogeografiia paleozoia. *(In:* Akademiia nauk SSSR. Komi filial. Geologicheskii institut. Materialy . . . 1961, p.102-146, tables, fold. maps, diagrs. incl. fold.) 41 refs. Text in Russian. **Title tr.:** Geologic structure of the southwestern Timan region; Paleozoic stratigraphy and paleogeography.

Describes the stratigraphy and composition of Upper Riphean and Lower Cambrian; Devonian, Carboniferous and Permian deposits, divided into series and stages; brachiopod, ostracod, pelecypod and other fauna and spore-pollen analyses are reported; based on own field work in the Vym', Vychegda, Soyva, Kedva, and other river valleys and on others'studies. Paleozoic paleogeography is characterized from the mineralogic analyses of each stratigraphic stratum. Paleofacies of Frasnian, Lower Carboniferous, Lower Permian, etc. are mapped. (DLC.)

75073. RAZNITSYN, V. A. Izhma-omrinskii kompleks Timana. (Geologiia nefti i gaza, Aug. 1962. god 6, no.8, p.56-60, cross-sections.) 8 refs. Text in Russian. **Title tr.:** The Izhma-Omra complex of the Timan.

Describes the stratigraphy and composition of the sedimentary rock complex in the Izhma-Nizhnyaya Omra River region of Komi ASSR. It is up to 757 m. thick. Cross-sections of deposits drilled at four sites are described and correlated. The age of the complex is discussed. (DLC.)

75074. RAZNITSYN, V. A. O granitse karbona i permi na IUzhnom Timane. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Feb. 1962, no.2, p.94-97.) 17 refs. Text in Russian. **Title tr.:** On the limits of Carboniferous and Permian in the southern Timan.

Outlines the Upper Carboniferous and Lower Permian deposits of the region. A stratum having *Schwagerina* foraminifers, described in detail, is considered a suitable division between Carboniferous and Permian systems. (DLC.)

75075. RAZNITSYN, V. A. Ob odnoi osobennosti tatarskikh otlozhenii Timana. (Akademiia nauk SSSR. Doklady, Sept. 1, 1962. t.146, no.1, p.187-89, diagr.) 5 refs. Text in Russian. **Title tr.:** On one feature of the Tartarian deposits of Timan.

Reports his 1959-1960 study of Upper Permian deposits in the Vishera (tributary to the Vychegda), and the upper Mezen basins. Stratigraphic sections are correlated. A key horizon, consisting of banded clays in the Tartarian stage, is distinguished and characterized. (DLC.)

75076. RAZNITSYN, V. A. Paleogeografiia karbona Timano-Pechorskoi provintsii. (Moskovskoe obshchestvo ispytatelei prirody. Biulleten' 1961. n. ser., t.66, otdel geologicheskii, t.36, vyp.5, p.102-122, maps.)9 refs. Text in Russian. Summary in English. **Title tr.:** Paleogeography of the Carboniferous of the Timan-Pechora province.

Characterizes development of this region based on analysis of the facies and the thickness along horizons, substages, stages and series. Two large cycles in sedimentation are revealed, Lower, and Middle-Upper Carboniferous, both involved in epeirogenic movements. An appraisal of gas and oil prospects is given. In the Visean stage, hard bitumen and the Tournaisian, oil and gas occurrence are noted. (DLC.)

75077. RAZNITSYN, V. A. Priroda dislokatsii Timana. (Moskovskoe obshchestvo ispytatelei prirody. Biulleten', nov. ser. t.67, Otdel geologicheskii, Sept.-Oct. 1962. t.37, vyp. 5, p.165.) Text in Russian. **Title tr.:** The nature of Timan dislocations.

Characterizes dislocations in sedimentary cover and basement of the Timan Ridge, from own observations in 1947-1961. (DLC.)

75078. RAZNITSYN, V. A. Privzbrosovye dislokatsii Dzhezhim-Parmy IUzhnogo Timana. (Akademiia nauk SSSR. Doklady, Sept. 11, 1961. t.140, no.2, p.430-33, map.) 5 refs. Text in Russian. **Title tr.:** The Dzhezhim-Parma upthrust dislocations in southern Timan.

Reports on the geologic structure of a steeply dipping reversed fault developed in basement and sedimentary cover in this area of the Vychegda basin. Its nature, component rocks, and other features are described. Disjunctive distortions in the basement are interpreted. (DLC.)

75079. RAZNITSYN, V. A. Struktura IUzhnogo Timana i IUgo-Zapadnogo Pritiman'ia. (Akademiia nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp. 2, Materialy po geologii Komi ASSR, p. 53-63, fold. map, diagrs.) 11 refs. Text in Russian. **Title tr.:** Structure of southern Timan and southwestern Timan foreland.

Presents and interprets a structural-tectonic map of this part of central Komi ASSR. Distribution of the platformic, geosynclinal and transitional structural stages is outlined. Structural evolution of the region is reviewed. Main tectonic structures are analyzed. (DLC.)

75080. RAZNITSYNA, L. A. K kharakteristike karbonatnykh porod metamorficheskoi tolshchi IUzhnogo Timana. (Akademiia nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp. 2, Materialy po geologii Komi ASSR, p.111-13, tables.) 4 refs. Text in Russian. **Title tr.:** Characteristics of carbonaceous rocks of the metamorphic stratum of southern Timan.

Reports chemical analysis of 74 rock samples collected in the Dzhezhim-Parma, Och'-Parma and other localities in this part of Komi ASSR. Content of CO_2, CaO, MgO, SO_3 and other components was determined. The rocks consist mainly of dolomites (93.38%), with admixture of calcite (1.62%); 4.41% is insoluble sediments. Three groups are distinguished on the basis of chemical composition. The Timan rocks are compared with those of the Russian platform. (DLC.)

75081. RAZUMEIKO, N. G., *and others.* Marshrutnoe termozondirovanie na lednikakh Sovets-

kogo Soĭuza. (Issledovaniĭa lednikov i lednikovykh raĭonov, 1962. vyp. 2, p.5-33, illus., tables.) 25 refs. Text in Russian. Summary in English. *Other authors:* I.F.Khmelevskoĭ, E.N. TSykin, *and* G.A. TSykina. **Title tr.:** Thermosonde observations on Soviet Union glacier traverses.

Describes the method and instrumentation worked out by E.N. TSykin (No. 68837) and used for first time in Russian investigations within the IGY program. The manual drilling of special holes and glacier temperature measurements are described. The transistor thermosonde (illus.), a variant of MMT4 type thermistor, is placed in a hollow pointed rod (pin) which is driven into ice. Results are tabulated for the Churlyanisa ice dome and Sedova Glaciers on Gukera Island of Franz Joseph Land, glaciers of Novaya Zemlya, the Polar Ural, and Tyan-Shan; and evaluations are made. Temperature of ice under various climatic conditions depends mainly on the thickness of the firn. On glaciers where firn is absent, thickness of the seasonal snow cover influences the ice temperature. (DLC.)

75082. RAZUMEĬKO, N. G. Temperaturnye oblasti na lednikovom kupole Churlĭanisa i lednike Sedova. *(In:* Akademiĭa nauk SSSR. Institut geografii . . . Materialy gliatsiologicheskikh . . . 1961. vyp. 2, p.32-34, text map.) Text in Russian. **Title tr.:** Temperature areas on Churlyanisa ice dome and Sedova Glacier.

Reports ice temperature measurements on various slopes and localities of these glaciers, and distinguishes thereby seven different areas which are briefly characterized. Temperature measurements of the ice were also made in drilled holes to 25 m. or more depth. Three layers of ice are reported. (DLC.)

75083. RAZUMEĬKO, N. G. Tipy temperaturnogo rezhima lednikov Zemli Frantsa-Iosifa. (Issledovaniĭa lednikov i lednikovykh raĭonov, 1961. vyp. 1, p.94-98, table, diagrs.) 3 refs. Text in Russian. Summary in English. **Title tr.:** Types of temperature regime in the Franz Joseph Land glaciers.

Presents results of preliminary analysis of temperature data from bore holes in the Churlyanisa and Jackson ice domes, obtained during 1957-1959 by the Institute of Geography expedition to Hooker Island. The distribution of average temperature with depth 0-19 m. during Apr. 13-19, 1959, is tabulated for both, together with information on the type of layer: snow, firn, ice. The distribution in Churlyanisa is identified as of continental type; that in Jackson is the moist-cold type. In this southern area of Franz Joseph Land, glaciers lying above 380 m. altitude should have a moist-cold temperature regimen, those below 380 m., continental. (CaMAI.)

RAZUMEĬKO, N. G., *see also*

Krenke, A.N., & N.G. Razumeĭko. Lednikovye kupola Zemli Frantsa-Iosifa. 1961. No. 73109

Krenke, A.N., & *others.* Nakoplenie . . . snezhnogo pokrova . . . 1962. No. 73111

READ, BAYARD W. R., *see* Gregg, M. Alaska's bald eagles. 1961. No. 71839

REBAGLIATI, M., *see* Conne, G., & *others.* L'hypothermie . . . contrôle biochimique. 1961. No. 70807

REDOZUBOV, D. V., *see* Zaporozhtseva, I.V., & L.A. Tokareva. Rezul'taty sverki . . . 1962. No. 76644

75084. REECE, ALAN, *and* **A. L. MATHER.** Geochemical prospecting for base metals in Schuchert Dal, northeast Greenland. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.1157-66, maps incl. fold. in v.3.) 3 refs.

Outlines exploratory methods used in reconnaissance surveys of 1955-1957 over the area, and a detailed survey of a lead-zinc deposit near a small lake, Lummen Sø, on the east side of Schuchertdalen. Topographic and geologic conditions are described and sketch-mapped; minor galena veins below the permafrost level and covered by two meters of glacial drift, were found by geochemical methods. Detailed surveys of promising areas may follow a rapid reconnaissance by geochemical methods requiring considerably less personnel than usual, and visual techniques. Methods of analysis used for determining lead and zinc are appended. Search was conducted by Nordisk Mineselskab A/S, Copenhagen, after the opening of the lead-zinc mine near Mesters Vig. (DGS.)

75085. REED, EDWARD B. Freshwater plankton Crustacea of the Colville River area, northern Alaska. (Arctic, Mar. 1962. v.15, no.1, p.27-50, illus., map, tables.) 31 refs.

Reports study of Microcrustacea from 200 water bodies, collected during the summer of 1955. Twenty-two species of Cladocera, 29 Copepoda and six larger forms were identified. Some species characteristic of lakes or pools are separated. Surface temperatures ranged from 0.5 to 20.5° C. Chemical determinations of 48 water bodies include chloride, calcium, bicarbonate and oxygen. Similarities with Siberian and other high latitude forms are noted. (DI.)

75086. REED, JOHN CALVIN, 1905– . Arctic research. (Science, Feb. 16, 1962. v.135, no.3503, p.607.)

Notes the on-the-ground review of research work and facilities carried out by the Arctic Institute of North America with the sponsorship of the U.S. Office of Naval Research. During Oct. 2-13, 1961 the party visited stations on Greenland, Canada, and Alaska. Recommendations are made for increasing some areas of research, its utilization, coordination, etc. (DLC.)

75087. REED, JOHN CALVIN, 1905– . Scientific research and northern development. (Arctic, Mar. 1962. v.15, no.1, p.3-8.) Substance of an address to the National Northern Development Conference at Edmonton, Alta., Sept. 13, 1961, by the Director of the Arctic Institute of North America.

Comments on research in Canada and Alaska, and on resource development as dependent on research: the renewable, and non-renewable resources, also such non-expendable resources as geographic location, ice, snow, etc. Contributions of the Canadian and U.S. Governments, universities, and private industries are outlined. (DI.)

75088. REED, JOHN CALVIN, *Jr.,* **1930–** . Geology of the Mount McKinley quadrangle, Alaska.

Washington, D.C., U.S. Govt. Print. Office, 1961. p.A1-A36, illus., maps incl. col. fold. (U.S. Geological Survey. Bulletin 1108-A, Mineral resources of Alaska.) 29 refs.

Summarizes information available on this 400 sq. mi. area 63°-64°N. 150°-153°W. including such unpublished, and such from own reconnaissance in 1954. Precambrian schists crop out in the northern foothills of the Alaska Range. Sedimentary and volcanic rocks of Paleozoic and Mesozoic age are exposed in the Kuskokwim Mts., and in the Alaska Range where they occupy the axial part and northern limb of a great synclinorium. Granitic batholiths, mostly Mesozoic, intrude the Paleozoic and Mesozoic rocks in this range. Poorly consolidated and semiconsolidated Tertiary deposits occupy narrow structural depressions within it and probably underlie deposits of Quaternary age over broad areas in the lowlands to the north. Faults constitute a prominent structural feature. Most of the lowlands are covered with glacial, alluvial, and eolian deposits of Pleistocene and Recent Age. Deposits of gold, silver, and antimony are known in the Kantishna Hills, lead-zinc deposits occur at Mt. Eielson. Geologic map, scale 1:250,000 and sections are appended. (DLC.)

75089. REED, RICHARD J., *and* **W. J. CAMPBELL.** The equilibrium drift of Ice Station Alpha. (Journal of geophysical research, Jan. 1962. v.67, no.1, p.281-97, table, graphs, diagrs., maps.) 14 refs.

Determines the unaccelerated drift according to Shuleĭkin's theory (No. 16045). Curves of drift angle and speed and wind factor as functions of wind speed are computed for two different sets of parameters and compared with Shuleĭkin's curves for one of the sets. The data exhibit considerable scatter when plotted for 107 periods July 1957-Aug. 1958. Six sources of error are considered in explaining the deviations between observations and theory. Part of the scatter is found to be the result of navigation errors, but gradient currents and internal stresses are probably the main causes of drift anomalies. Evidence suggests that a permanent current of about three m./sec. exists in the Alpha drift region. (DLC.)

75090. REED, RICHARD J., 1922– , *and others.* A spectral analysis of energy changes and energy conversions during the sudden warmings of January 1957 & 1958. (Washington. University, Dept. of Meteorology and Climatology, 1962. Annual summary report, contract Nonr 477 (24), T.O. 307252, p.8-46, maps, graphs.) 9 refs. *Other authors:* J.L. Wolfe, *and* H. Nishimoto. Paper given at a seminar on the stratosphere and mesosphere, Stanstead, Que., July 6-20, 1961, sponsored by McGill University, Arctic Meteorology Research Group.

These warmings were characterized by large increases of temperature and pressure-height over the north polar region and by maximum variance of temperature and vertical motion in the sub-polar belt. Most of the variance was contained in two energy waves. Mean vertical motion was downward at middle latitudes and upward at high north latitudes. Presence of upward motion and adiabatic cooling over the polar cap implies that the warming there was due to advection of warm air from the sub-polar belt of large temperature variance. The same mechanism may be assumed to cause the wintertime rise in ozone and radioactivity in the arctic stratosphere. Features common to both warmings are noted. The energy changes do not favor baroclinic instability as the explanation for this phenomenon. They are consistent however, with the energetics of the Solberg-Höiland type instability. (DWB.)

75091. REEDER, WILLIAM G. Aleut-Konyag prehistory and ecology, 1961. Report of field biologists. (Arctic anthropology, 1962, v.1, no.1, p.110-13.)

Describes the flora and fauna of south Kodiak Island and the food resources of Sitkalidak and Umnak Islands from summer 1961 investigations including excavations at two sites. Some fifty fish and sixty bird species are represented in collections taken; quantitative studies were made of reef invertebrates and plants. At the Rolling Bay excavation on Sitkalidak Island fish remains (salmon, cottids, greenlings) predominate: at Chaluka on Umnak, pinnipeds, sea otter. The latter is so abundantly represented as to provide a large osteological series which suggests a change of modal size in this species through 3,000 years. Ethnological significance of animal behavioral traits, fixed within each species or subject to adaptation, is noted. (DSI.)

REEDER, WILLIAM G., *see also*

Laughlin, W.S., & W.G. Reeder. Aleut-Konyag prehist. & ecol.: rationale . . . 1962. No. 73341

Laughlin, W.S., & W.G. Reeder. Rev. Aleut. prehist. 1962. No. 73343

75092. REES, M. H., *and* **C. S. DEEHR.** Twilight enhancement of atmospheric sodium emission at College, Alaska. (Journal of geophysical research, June 1962. v.67, no.6, p.2309-13, table, graphs.) 6 refs.

Reports observations Nov. 1959-Mar. 1960 using a birefringent filter photometer. The average height of the emission layer was 91.8 km. and the abundance of sodium atoms varied from 1.9×10^9 to 8.2×10^9 cm.$^{-2}$. These numerical results are similar to values obtained at middle and tropical latitudes. —From authors' abstracts. (DLC.)

REES, M. H., *see also* Campbell, W.H., & M.H. Rees. . . . auroral coruscations. 1961. No. 70515

REESOR, JOHN ELGIN, 1920– , *see* Lowdon, J.A., & *others.* Age determinations . . . 2: isotopic ages. 1961. No. 73611

75093. REFNES, FINN. Guarding the Iron Curtain. (Norseman, 1962. no.2, p.26-29, illus.)

Describes the life of Norwegian guards along the 120-mi. Soviet frontier, mostly along the Pasvik River. On the shorter overland sector, two lines, Russian and Norwegian, of poles mark the boundary, which is patrolled on foot or skis, in temperatures down to -25°C. The frontier is closed to tourists; fraternizing of guards is discouraged, procedures for official contacts are complicated. (DLC.)

75094. REGNELL, STEN. Där fågeln är fredad. (Vår fågelvärld, 1959. årg. 18, nr.1, p.34-36, 4 maps.) Text in Swedish. **Title tr.:** Where birds are protected.

Summarizes differences in character of Swedish national parks, natural monuments, natural parks, and minor preserves where wildlife is protected. Birds partly or fully protected by game laws are cited (common names). Maps show the major reserves, of which eight are in arctic Lapland; several minor, restricted tracts are in Norrbotten county. (DLC.)

75095. REH, HERBERT. Erschliessung der Eisenerzvorkommen in Quebec-Labrador. (Zeitschrift für angewandte Geologie, Mar. 1960, Bd. 6, Heft 3, p.100-103, map.) Ref. Text in German; Summary in English and Russian. **Title tr.:** Exploration of iron ores in Quebec-Labrador.

Reports geologic conditions and exploration work in the Quebec-Labrador Trough, including those in the Cape Hopes Advance region, Ungava Bay. Companies involved, drillings, estimated reserves of iron ores, their properties, and data to 1958 are summarized from Canadian sources. (DLC.)

REHDER, K., *see* Lim, R., & *others*. Circulatory arrest . . . 1961. No. 73501

75096. REID, GEORGE C. The electron density profile of the lower ionosphere during a polar cap absorption event. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.1, p.130-34, graphs.) 12 refs.

Assumes the polar cap absorption to be caused by excess ionization produced by incoming solar protons. Taking a proton energy spectrum, author determines the resulting electron density profile for both day and night conditions. The transition between day and night conditions is examined assuming O_2^- the only species of negative ion in the lower ionosphere, and electron density profile determined for solar zenith angles between 90°-102°. The verticle-incidence absorption of 30 Mc/s radio waves is evaluated, and the result compared with riometer recordings made during sunset conditions, indicates that O_2^- is probably the dominant negative ion in the lower ionosphere during twilight conditions. (DLC.)

75097. REID, GEORGE C., *and* **H. LEINBACH.** Morphology and interpretation of the great polar cap absorption events of May and July, 1959. (*In:* NATO. Radio wave absorption . . . *pub.* in Journal of atmospheric and terrestrial physics, Dec. 1961, *pub.* 1962. v.23, p.216-28, diagrs., graphs, map.) 9 refs.

Describes the Alaskan IGY riometer chain which extends from Unalaska through King Salmon, Farewell, College, and Ft. Yukon to Barrow and includes Thule, Greenland. The type of information obtainable from measurements of polar cap absorption is discussed. The events which began on May 10 and July 10, 1959, are described in detail, with emphasis on absorption variations in time and latitude. The extent to which these variations represent variations of particle flux is discussed in the light of current knowledge of electron loss processes in the lower ionosphere. The possible bearing of the variations on knowledge of the propagational mechanism of solar particles is discussed.—From authors' abstract. (DLC.)

75098. REID, GEORGE C. A study of the enhanced ionization produced by solar protons during a polar cap absorption event. (Journal of geophysical research, Dec. 1961. v.66, no.12, p.4071-85, table, graphs, diagrs.) 27 refs.

The steady-state daytime and nighttime electron-density profiles produced in the lower ionosphere by the influx of solar particles are calculated, assuming that the particles are protons and that their differential energy spectrum is of the form $n(E)\,dE = KE^{-5}\,dE$, with a sharp cutoff at the low-energy end. The shapes of the profiles are shown to be almost independent of the proton spectrum and low-energy cutoff, provided the latter is higher than about 10 Mev. The radio-wave absorption this ionization would produce is calculated for 30 and 60 Mc./s. Conditions during the twilight trasition period are examined, assuming that O_2^- is the only negative ion present. The photodetachment coefficient of O_2^- is calculated as a function of solar zenith angle, and corresponding electron-density profiles are deduced. By comparing the absorption these profiles would produce with the observed (at Ft. Churchill) variation of cosmic noise absorption during twilight, it is shown that the presence of O_2^- alone is insufficient to account for the observations.—From author's abstract. (DLC.)

REID, GEORGE C., *see also*

Axford, W.I., & G.C. Reid. PCA & mag. storm 2/11 '58. 1962. No. 69932

Little, C.G., & *others*. Scintillation . . . radio stars. 1962. No. 73540

REID, GERALD M., *see* Alaskan Science Conference 1961. 1962. No. 69644

75099. REID, JOSEPH L., 1923– . Distribution of dissolved oxygen in the summer thermocline. (Journal of marine research, July 15, 1962. v.20, no.2, p.138-48, maps, graphs.) 27 refs. Contribution from the Scripps Institution of Oceanography, new series.

Discusses conclusions, from NORPAC and other data, related to the general observation that the maximum concentration of dissolved oxygen in summer is close in depth to that of the lower part of the winter mixed layer, approx. 100 m. Above the depth of the summer max., the oxygen concentration remains near saturation throughout the year, hence depends principally upon the temperature. Bering Sea data show less correlation of oxygen concentration with temperature, than do other Pacific observations. (DWB.)

REID, JOSEPH L., 1923– , *see also*

Pacific Science Congress. 1961. No. 74619

Roden, G.I., & J.L. Reid. Sea surface temp. radiation & wind . . . 1961. No. 75160

REIERSON, RAYMOND, *see* National Northern Development Conference. 1961. No. 74224

75100. REILLY, WILLIAM F., *and* **J. T. RHETT, *Jr.*** Nuclear power for the Arctic. (American Society of Civil Engineers. Construction Division. Journal, Mar. 1961. v.87, no.CO 1, p.63-83, illus., diagrs., maps.)

Describes the development and installation (1959-1960), of the PM-2A pressurized-water

package reactor at Camp Century. The 650 t. plant, producing 1500 kw. of electric power and 1000 lb. steam per hr., is housed in insulated buildings elevated above the floor in snow tunnels; the foundations are of the crib type. Solutions to various of the unique problems of constructing and operating the plant are reviewed, in particular those related to the maintenance of below-freezing temperatures in the surrounding snow. Physical conditions of the icecap and previous experience in snow-tunneling are also discussed. (DLC.)

75101. REINHARD, KARL R., 1916– , *and* H. V. GIBSON. Immunity toward poliovirus among Alaskan natives, 1; comparative reported incidence of clinical poliomyelitis in Alaskan natives and non-native residents. (American journal of hygiene, Nov. 1960. v.72, no.3, p.289-97, tables.) 12 refs.

Study of morbidity reports for the period June 1950-Oct. 1954 showed a much lower incidence of the disease among natives. The age distribution, especially of paralytic polio, was more restricted among natives; the greatest disparity was found in individuals under ten years of age. The distribution in urban and village areas is also analyzed. (DLC.)

75102. REINHARD, KARL R., 1916– , *and* R. K. GERLOFF. Immunity towards poliovirus among Alaskan natives, 2; a serological survey of 47 native communities of western and northern Alaska. (American journal of hygiene, Nov. 1960. v.72, no.3, p.298-307, tables, map.) 11 refs.

Reports a study of 717 men aged 17-52 yrs. of the Eskimo Scout Battalion, using colorimetric serum-virus neutralization in tissue culture. Antibodies for types 1 and 2 poliovirus were detected in 87 and 92% respectively, those of type 3 in 62%. Only 0.4% of the subjects examined had no antibodies. (DLC.)

75103. REINHARD, KARL R., 1916– , *and others*. Immunity towards poliovirus among Alaskan natives, 3; a study of naturally and artificially acquired antibodies against poliovirus among residents of two Bering Sea communities. (American journal of hygiene, Nov. 1960. v.72, no.3, p.308-320, illus., tables, map.) 16 refs. *Other authors:* R.K. Gerloff *and* R.N. Philip.

Reports a detailed serological study of the greater part of two populated places on St. Lawrence Island. The majority of unvaccinated people had antibodies against one or more types of poliovirus. Antibodies to type 2 virus were present in all age groups, but prevalent in children; types 1 and 3 were more common in the second decade of life. All antibodies showed low levels in the 30-40 year group. (DLC.)

75104. REINHARD, KARL R., 1916– . The serological sequelae of an influenza A-2 epidemic modified by intercurrent vaccination in an insular Eskimo population group. (Journal of immunology, May 1962. v.88, no.5, p.551-55, illus., tables.) 13 refs.

Study of conditions of the 1957 epidemic on St. Lawrence Island. The general serological reaction after the epidemic was quantitatively lower in a vaccinated group than in unvaccinated patients. The findings did not prove that intercurrent vaccination prevented infection, but it most probably altered morbidity rate. (DLC.)

REINHARD, KARL R., 1916– , *see also* Alaskan Science Conference 1961. 1962. No. 69644

75105. REĬNIN, I. V. O morskikh chetvertichnykh otlozheniiakh severo-zapadnoĭ chasti Zapadno-Sibirskoĭ nizmennosti. (Leningrad. Vsesoĭuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp.186, Geologicheskiĭ sbornik 6, p.212-23, profiles, diagrs.) 15 refs. Text in Russian. **Title tr.:** On marine Quaternary deposits in the northwestern part of the West Siberian plain.

Describes the Lower and Middle Quaternary deposits of the Ob-Yenisey region: their lithologic characteristics, microfauna, molluscs, and diatoms. They are considered to be of the Yamal series, and are divided stratigraphically into subseries. The Yamal series is shown to be of marine origin. There were no glaciations in this area. (DLC.)

REĬNIN, I. V., *see also* Kuzin, I.L., *& others*. Osnovnye cherty paleogeografii . . . 1961. No. 73248

REINIŠ, S., *see* Záhlava, J., *& others*. L'élimination du néopallium . . . 1961. No. 76623

REISER, HILLARD N., *see* Brosgé, W.P., *& others*. Paleozoic sequence . . . 1962. No. 70394

REISH, DONALD J., *see* Mohr, J.L., *& others*. Marine nature of Nuwuk Lake . . . 1961. No. 74076

75106. REMICK, JEROME H. Preliminary report on Manthet-Jérémie-La Forest area, Abitibi-West and Abitibi-East Counties and Abitibi Territory. Quebec, 1961. 23 p. 3 fold. maps, tables. (Quebec, Dept. of Natural Resources. Geological Surveys Branch. P.R. no. 458.) 5 refs.

Maps at scale 1 in.: 1 mi. and describes the stratigraphic and structural geology of this area, 50° 00′ - 15′N. 78°-79°31′W., along the Ontario border in northern Quebec; the mapping done under author's supervision in 1960 by R.L. Grenier, H.E.O. Neugebauer, and T.F. Frizzell. Precambrian rocks, overlain by thick Pleistocene and Recent sediments, include metamorphosed volcanic ("greenstones") and sedimentary rocks; meta-gabbro and meta-diorite; diorite and amphibolite; acidic intrusive rocks, mostly biotite granite; and gabbro and diabase. Local structural features are mapped, but broader structures are not delineated because of the scarcity and erratic distribution of outcrops. Occurrences of sulfide minerals, beryl, molybdenite, and gypsum are noted, and mineral exploration outlined; diamond drilling data are appended. (DGS.)

RENDEL, JAN, *see* Gahne, B., *& J. Rendel*. Blood and serum groups in reindeer . . . 1961. No. 71543

RENGMARK, FOLKE, 1902– , *see* International Conference on soil mechanics . . . 1961. No. 72383

75107. RENNIE, DONALD WESLEY, 1925– , *and others*. Physical insulation of Korean diving women. (Journal of applied physiology, Nov. 1962. v.17, no.6, p.461-66, illus., tables.) 15 refs. *Other authors:* B.G. Covino, B.J. Howell, S.H. Song, B.S. Kang *and* D.S. Hong.

Study of cold-adaptation by comparing maximal body insulation of these diving women with non-

diving Koreans and Americans of both sexes. The only evidence for cold adaptation in the women divers was, that they did not shiver in water cold enough to produce shivering in the other groups. Also reported by Rennie, Covino, and Howell in U.S. Air Force, Arctic Aeromedical Laboratory, Technical documentary report 62-22, Fort Wainwright, Alaska, July 1962. 19 p. (CaMAI.) (DLC.)

75108. RENNIE, DONALD WESLEY, 1925– , *and others.* Physical regulation of temperature in Eskimos. (Journal of applied physiology, Mar. 1962. v.17, no.2, p.326-32, illus., tables.) 37 refs. *Other authors:* B.G. Covino, M.R. Blair *and* K. Rodahl.

Reports study of temperature regulation in Eskimos and non-Eskimos (exclusive of shivering) at 35°C. air temperature, and 23° air or 33° water bath. At rest, the Eskimos consistently produced 15-20 kcal/m²/hr. more heat. In cold air or water, heat conductance through the tissues remained 60% higher in the Eskimos, resulting in warmer skin or greater drop of rectal temperature. This is accountable by the fact that the Eskimos had 1 cm. less subcutaneous fat. (DLC.)

RENNIE, DONALD WESLEY, 1925– , *see also* MacHattie, L., & *others.* Eskimo metabolism measured . . . 1961. No. 73697

75109. REPNEVSKIĬ, V. V. Lesnoe khozīaĭstvo na Kol'skom poluostrove. (Akademīa nauk SSSR. Vestnik, Mar. 1961. god 31, no.3, p.125-26.) Text in Russian. **Title tr.:** Forest management in Kola Peninsula.

Reports a conference called by the Academy's Institute of Forestry and Wood Chemistry, in Murmansk Dec. 7-8, 1960: 14 papers delivered; study of the wood industry needed, also better utilization of local forest resources. (DLC.)

75110. REPNEVSKIĬ, V. V. Obsemenenie vyrubok v sosnīakakh Murmanskoĭ oblasti. (Lesnoe khozīaĭstvo, Sept. 1961. god 14, no.9, p.9-13, tables.) Text in Russian. **Title tr.:** Seeding the felling areas in Murmansk Province pine forests.

The clear cutting of large areas creates a natural reforestation problem. Single trees left for seeding purposes have proved ineffective due to their uprooting by wind. Better results are expected from 50 x 50 m. or 100 x 100 m. plots left uncut, 0.5 hectare being sufficient to seed 7 hectares of cutover area; belts 250 x 10 m. left at 250 m. intervals are also promising, as they can be adjusted to the usual cutting 1000 x 250 m. area, and they produce 8-9,000 seedlings/hectare. These reforestation measures merely complement the residual stand of young trees, left on the cutting area, and protected from damage during the logging operations. (DLC.)

RESHETNIKOV, ÎŪ. S., *see* Savvaitova, K.A., & ÎŪ. S. Reshetnikov. Pitanie . . . 1961. No. 75396

75111. RESOURCES FOR TOMORROW CONFERENCE. *Montreal,* Oct. 23-28, 1961. Proceedings and background papers. Ottawa, Dept. of Northern Affairs and National Resources, 1961. 3v. v.1-2: 1061 p., supp. 195 p. *Background papers;* v.3:519 p. *Proceedings.*

This conference, under direction of provincial and federal ministers, with collaboration of groups from industry, commerce, the universities, and private interests, aimed to identify and to formulate solutions for the major problems of renewable resources. A federal-provinical Resources Ministers Council was agreed upon, to meet several times a year to coordinate inter-departmental policies and programs. Of the 89 background papers presented, several dealt specifically with the North and are abstracted in this Bibliography under their authors' names, viz:

KUIPER, E. The water resources of the Nelson River basin.

SIVERTZ, B. G. The North as a region.

MAIN, J. R. K. Transportation as a factor in northern development.

HAWTHORN, H. B. Problems of cultural adjustment in relation to northern resources development.

LLOYD, T. Northern research review and forecast.

LOUGHREY, A. G. The economics of the fur industry in Canada. (CaONA.)

RESOURCES FOR TOMORROW CONFERENCE, *Montreal,* 1961, *see also* Jenness, D. Human resources Can. 1961. No. 72538

75112. RETALLACK, ATHOL. Paris of the North. (North, May-June 1962. v.9, no.3, p.22-25.)

Describes some social activities and community facilities among the well-to-do of Dawson City when gold-mining flourished on the Klondike, in the early 1900's. (CaMAI.)

75113. RETTY, JOSEPH ARLINGTON, 1904– . Iron, master of metals, in New Quebec and Labrador. (Canadian banker, winter 1951, v.58, no.1, p.46-60, illus., map, tables.)

Recounts the history of the iron ore mines (then being developed) near Schefferville, Quebec. Early explorations and discoveries are outlined, and the Labrador Trough iron formation is described. In 1949 the Iron Ore Co. of Canada was incorporated with a $155 - 160 million capital outlay to produce an estimated 10 million tons of iron ore annually. In the construction phase, supplies and building materials, including those for the 357 mi. Quebec North Shore & Labrador Railway from Schefferville to the port at Seven Islands, are being transported by airplane. Port facilities, and proposed hydro-electric power stations are described. Most of the iron ore is to be shipped to Cleveland, Youngstown, and Pittsburgh blast furnaces. The ore field is expected to produce for at least 40 years. (CaOCU.)

75114. REUT, VIKTOR FEDOROVICH. Moskva-Severnyĭ Poliūs; putevye ocherki. Moskva, Vses. uchebno-pedagogicheskoe izd-vo Proftekhizdat, 1961. 149 p. illus., plates. Text in Russian. **Title tr.:** Moscow - North Pole, a traveler's sketches.

Describes an air excursion by a group of 20 Soviet and foreign newspapermen in Nov. 1958, over the route Moscow - Arkhangel'sk - Kamennyy Mys - Igarka - Dudinka - Dikson - Nagurskaya - drifting station North Pole-7 - the North Pole - Chelyuskin - Arkhangel'sk - Moscow. Fragmentary description of the travel is given by one participant of the flight. The plane was piloted by I. Mazuruk

on his 188th flight in the North Pole area since 1937. Conditions at the various landing points are noted and some details given on a four-day stopover at Igarka (p.40-67), Dikson Island (p.77-91), Nagurskaya polar station (p.95-110), and drifting station North Pole-7 when at 86°36′N. 63°40′W. (p.113-44). The North Pole was overflown on Nov. 29. An introductory sketch of arctic research from ancient times till 1958 is included, p.13-34. (DLC.)

75115. REVERDATTO, VIKTOR VLADIMIROVICH, 1891– . Magnomagnetitovye i magnetitovye rudoproiavleniia raiona Anakitskogo podniatiia na r. Nizhnei Tunguske. (Geologiia i geofizika, 1962, no.11, p.60-73, illus., tables.) 18 refs. Text in Russian. Summary in English. **Title tr.:** Magnomagnetite and magnetite ore manifestation in the Anakit uplift region on the Nizhnyaya Tunguska River.

Reports his 1960-1961 petrologic study of Anakit differentiated trap intrusion. Contact-metasomatic magnetite and magnomagnetite ores are described, noting ore bodies, mineral and chemical composition, and other properties. The genesis problem of Anakit ore node is treated in detail. The magnomagnetite deposits are similar to those occurring in the Kureyka, Severnaya, and other regions. (DLC.)

75116. REVERDATTO, VIKTOR VLADIMIROVICH, 1891– . O nakhodke tilliita v kontaktovoi zone Anakitskogo trappovogo intruziva na Nizhnei Tunguske. (Akademiia nauk SSSR. Doklady, Feb. 11, 1962. t.142, no.5, p.1155-57.) 7 refs. Text in Russian. **Title tr.:** On a find of tilleyite in the contact zone of the Anakit trap intrusive on the Nizhnyaya Tunguska.

Reports the first find in the USSR of this very rare calcium silicate $Ca_5Si_2O_7(CO_3)_2$ with description of grain size, specific weight, optical properties, and other features. Mode and conditions of occurrence are noted. (DLC.)

REVERDATTO, VIKTOR VLADIMIROVICH, 1891– , *see also* Sobolev, V.S., & V.V. Reverdatto. Vysokotemperaturnaia mineral'naia assotsiatsiia . . . 1962. No. 75784

REVHEIM, ARNE, *see* Aasen, O., & A. Revheim. Håbrand- , pigghå- og makrell . . . 1961. No. 69458

REX, ROBERT W., *see* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

REYMOND, C., *see* Conne, G., & *others*. L'hypothermie . . . contrôle biochimique. 1961. No. 70807

75117. REZANOV, I. A. Nekotorye voprosy istorii razvitiia Severo-Vostoka SSSR v rifee i paleozoe. (Izvestiia vysshikh uchebnykh zavedenii. Geologiia i razvedka, Feb. 1962. god 5, no.2, p.9-27, maps, cross-sections.) 48 refs. Text in Russian. **Title tr.:** Some problems of the development history of northeastern USSR in the Riphean and Paleozoic.

Evaluates the stratigraphy and tectonics of Riphean and Paleozoic deposits of the region east of the Lena, on the basis of the recent literature. Disagreement is expressed with K. IA. Springis (No. 61833) and IU. M. Pushcharovskii, who consider that the Northeast during Riphean and Paleozoic times had a platform or mobile platform tectonic regime. Evidence is presented that this region was one of geosynclines. (DLC.)

75118. REZANOV, I. A. O dreife kontinentov; po paleomagnitnym dannym. (Sovetskaia geologiia, Apr. 1961, no.4, p.25-46, table, maps.) 44 refs. Text in Russian. Summary in English. **Title tr.:** On the drift of continents; from paleomagnetic data.

Notes magnetic and geographic pole transference in the course of geologic times as beyond doubt. First approximation of paleomagnetic measurements corresponds with the results of paleoclimate reconstruction; but it is impossible at present to prove relative movements of continents on the basis of paleomagnetic data. The low accuracy of paleomagnetic measurements, the insufficiency and discrepancy of obtained data, systematic errors in measurements and other reasons are summarized which preclude the use of this method for determining drift of the continents. (DLC.)

75119. REZANOV, I. A. O geologicheskoi interpretatsii profilia glubinnogo seismicheskogo zondirovaniia Magadan-Kolyma. (Akademiia nauk SSSR. Izvestiia, ser. geofizicheskaia, July 1962, no.7, p.865-72, map, graphs, cross-section.) 10 refs. Text in Russian. **Title tr.:** Geologic interpretation of the Magadan-Kolyma profile of deep seismic sounding.

Interprets three seismic boundaries (4-5, 20-22, and 32-38 km.) in this profile of soundings carried out in 1959. Field and rock-density data (1877 samples) of the stratigraphic complex of the Archean basement of the Okhotsk massif are analyzed. The so-called basaltic layer in the region explored is concluded to be composed of metamorphic Archean rocks, only slightly affected by the progress of metasomatosis. (DLC.)

75120. REZANOV, I. A. Soveshchanie po glubinnomu seismicheskomu zondirovaniiu zemnoi kory. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, May 1961, no.5, p.119-22.) Text in Russian. **Title tr.:** Conference on deep seismic sounding of the earth's crust.

Reports scope and program of this conference in Moscow, Nov. 14-19, 1960, to celebrate ten years' use of this technique in the USSR. Experience in the Magadan - Kolyma, Okhotsk Sea, and other areas is reported. A 7 km. deep sounding near the Kolyma and one 4 km. deep on the Kolyma - Okhotsk watershed, average frequency of seismic waves, etc. are noted. (DLC.)

REZANOV, I. A., *see also* IUGG. Seismol. proceedings 1960. 1961. No. 72397

RHETT, JOHN T., *Jr., see* Reilly, W.F., & J.T. Rhett. Nuclear power. 1961. No. 75100

75121. RIABCHIKOV, I. D., *and* **B. A. SOLOV'EVA.** K geokhimii rubidiia i litiia v sliudonosnykh pegmatitakh Severnoi Karelii. (Geokhimiia, 1961, no.4, p.316-23, tables, diagrs.) 18 refs. Text in Russian. Summary in English. **Title tr.:** On the geochemistry of rubidium and lithium in micaceous pegmatites of northern Karelia.

Describes pegmatite veins of the Tedino and Khetolambina deposits. The rubidium and lithium

content and the average value of the K/Rb ratio for the minerals of pegmatites and gneisses are distinguished in the two deposits. For the Tedino, the average value of K/Rb ratio is 240, and for Khetolambina, 400. These pegmatites are thought to be the results of the ultrametamorphic processes. (DLC.)

75122. RIABCHIKOV, I. D. Vychislenie koéffitsientov kristallizatsii redkikh shchelochnykh metallov dlia kalievykh mineralov v pegmatitakh. (Geokhimiia, 1961, no.10, p.926-30, illus., table, graph.) 14 refs. Text in Russian. Summary in English. **Title tr.:** Calculation of the crystallization coefficient of rare alkaline elements for potassium minerals in pegmatites.

Reports a geochemical study on the rubidium and lithium content in various types of muscovites from pegmatites of Tedino (66°28'N. 32°45'E.) and other veins in northern Karelia. The rubidium and lithium content decreases regularly toward the outer zones of zoned muscovite crystals. The mode of crystallization is discussed. The fractionation constant for rubidium is estimated and found equal or greater than 2. (DLC.)

75123. RIABOKON', N. F., *and others.* Ugli Krasnoiarskogo kraia. (*In:* Krasnoiarskaia . . . ekspeditsiia. Poleznye iskopaemye . . . 1962, p.25-76, tables, maps.) 2 refs. Text in Russian. *Other authors:* K.L. Kokhanchik *and* Z.F. Leibovich. **Title tr.:** Coals of Krasnoyarsk Province.

Outlines in detail the Minusinsk, Kansk-Achinsk, Tungusskiy and Taymyr coal basins, analyzing the reserves and properties of the coals. The Tungusskiy basin, a one-million km² area has best prospects for coking coal; properties of its coals, hydrogeologic and technical conditions are characterized. The coals of the Noril'sk region, Nizhnyaya Tunguska basin are described in greater detail. The Taymyr coal basin, 75,000 km² in area, with 500-600 billion tons in reserve, is dealt with by characterizing the Slobodskaya, Krest'yanka, Lemberova, Ugol'naya, Ozernaya and other deposits, but none of these is in production. (DLC.)

75124. RIAZANOV, A. A., *and* **I. F. BOL'SHAKOV.** Temperaturnyi rezhim promyvki skvazhin pri burenii mnogoletnemerzlykh porod. (Izvestiia vysshikh uchebnykh zavedenii. Geologiia i razvedka, Feb. 1961, no.2, p.133-41, illus.) 3 refs. Text in Russian. **Title tr.:** Temperature regime of drilling fluid in the drilling of permafrost rocks.

Reports, mostly from work in the Noril'sk region, that drilling operations can be accelerated three-six fold by correct temperature of the drilling fluid. Permafrost rocks are characterized in respect to this matter and drilling fluids of positive and negative temperature are discussed, their installation and maintenance outlined and illus. (DLC.)

RICE, D. W., *see* Kenyon, K.W., & D.W. Rice. Abundance & distrib. Steller sea lion. 1961. No. 72734

75125. RICE, ELBERT F. Engineering characteristics of siphon spillways. (*In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.73-83, diagrs.)

Discusses the advantages, operation, and potentialities for Alaskan use of these hydraulic structures. Danger of ice-up in cold weather is minimized because the inlets can be well submerged and there are no moving parts to be frozen immobile. Successful use of five siphon spillways on the Chatanika Power Development near Fairbanks is cited. (CaMAI.)

75126. RICHARDS, HORACE G. Studies on the marine Pleistocene; part 1, the marine Pleistocene of the Americas and Europe; part 2, the marine Pleistocene mollusks of eastern North America. Philadelphia, July 1962. 141 p. illus., plates, maps, graphs, tables. (American Philosophical Society. Transactions, new series, v.53, pt.3.) Approx. 425 refs.

Summarizes in pt. 1, the Pleistocene history of the shore lines, including brief but documented notes on the considerable subsidence under weight of the Wisconsin ice and subsequent uplift along Hudson and James Bays, Eastern Canadian Arctic waters, and the Labrador Sea. The faunas in all cases indicate cold water, and are considered to be post-Wisconsin. Postglacial uplift is also indicated in Greenland, Svalbard, northern Norway; late- or post-glacial marine deposits are also known from the Kola Peninsula and parts of arctic USSR. Pt. 2 (p.42-87) includes lists of important Pleistocene fossil localities near Hudson Bay (17), James Bay (7); also data on the pelecypods and gastropods from Pleistocene deposits between Hudson Bay and Georgia. Almost all species are illustrated, including 21 arctic specimens. (DLC.)

75127. RICKER, KARL. First ascents on Axel Heiberg Island, District of Franklin, N.W.T. (Canadian alpine journal, May 1962. v.45, p.140-41.)

Lists 17 peaks climbed by members of the Jacobsen-McGill Arctic Research Expedition in 1959-1960, including an unnamed peak about 2260 m., the highest on the Island. (DGS.)

75128. RICKER, KARL. Polar ice-dammed lakes. (Canadian alpine journal, May 1962. v.45, p.149-51.) Ref.

Describes five types of these lakes, which take the place of lateral moraines of subarctic and temperate glaciers on the glaciers of Axel Heiberg Island and other high-latitude regions. One, formed at the inside junction of two valley glaciers which meet at an oblique angle, occupied a basin known as "Concordia" Lake near White Glacier in 1960. Another, the most common type, consists of small, long water bodies between the valley wall and glacier ice, best exemplified along the Malaspina Glacier in Alaska. Examples of a third type were found in western Axel Heiberg Island, adjacent to slowly melting remnants of the Pleistocene ice sheet. Most spectacular is the type created by a lateral valley glacier broadening into a piedmont glacier, which in turn blocks a major ice-free valley or plain; examples are noted near South Fjord and "Iceberg" Fjord on Axel Heiberg, and in northern Ellesmere Island. A fifth type, result of a lateral valley glacier joining a larger main valley glacier at right angles, was familiar to Jacobsen-McGill Arctic Research Expedition as the "Phantom" Lake on Hugh Thompson Glacier. (DGS.)

75129. RICKER, WILLIAM EDWIN, 1908– , Comparison of ocean growth and mortality of sockeye salmon during their last two years. (Canada. Fisheries Research Board. Journal, July 1962. v.19, no.4, p.531-60, illus., tables.) 20 refs.

Reports study of the Karluk (Kodiak Island) and Cultus (B.C.) Lake stocks in their last two years of ocean life and of the high-sea catches as compared to those in coastal waters. Growth in weight is calculated as 0.081-0.165/month, and maximal mortality as 0.038/month. Oceanic capture of these fish during the year prior to their maturation, yields less than 35-50% of the amount that would be taken from the same fish by a shore fishery in the next year. Hence, excessive high-seas fishery of non-mature sockeye will sharply reduce their stock. (DLC.)

75130. RIEGER, SAMUEL, 1921– , *and* **R. E. WUNDERLICH.** Soil survey and vegetation northeastern Kodiak Island area, Alaska. Washington, D. C., U.S. Soil Conservation Service and U.S. Bureau of Land Management in cooperation with Alaska Agricultural Experiment Station, Oct. 1960. 46 p. illus., tables, maps incl. 2 fold. & col. (U.S. Soil Conservation Service. Soil survey series 1956, no.17.) 16 refs.

Describes and maps at 1 in.: 1 mi. the soils and vegetation of this area, as surveyed in 1956. Soil types of 11 series are treated in detail, their potentialities for agriculture (stock raising) and engineering construction evaluated, and the soil series classified into seven great soil groups. The 46 identified vegetation types are listed, with their main plants, type localities, acreage, and estimated forage capacities. Of the 307,207 acres, 101,863 are suitable for grazing, their carrying capacity estimated at 45,477 animal-unit months per year. (DLC.)

75131. RIGSBY, GEORGE PIERCE, 1915– . Studies of the physical characteristics of arctic terrain. Washington, D.C., July 1961. v, 52 p. (Arctic Institute of North America. Contract AF 19 (604)-3073.) Refs. *Also issued* as: U.S. Air Force. Cambridge Research Laboratories, AFCRL-817.

Summarizes work of 1958-1961 at Fletcher's Ice Island and station Alpha, p.5-9; Ward Hunt Ice Shelf, Ellesmere Island, p.9-22; some ice engineering field studies at Point Barrow, Alaska, p.22-27; several ice-free land areas in Greenland, p.27-31; seismic, limnologic, meteorological and geological studies in several areas of Alaska, p.31-37. Analysis of the three years' results is followed by recommendations for oceanographic measurements around and under the Ward Hunt Ice Shelf, also more ice cores, two meteorological-oceanographic stations, biological and hydrological studies. Continued work in the use of ice as a structural material is also recommended. Publications appearing as a result of this contract are listed. (DWB.)

75132. RIKHTER, GAVRIIL DMITRIEVICH, 1889– . Prirodnoe raĭonirovanie SSSR. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geograficheskaĭa, May - June 1961, no.3, p.3-13, fold. map.) Text in Russian. **Title tr.:** Natural regionalization of the USSR.

Discusses the nature, importance, principles, advection and moisture, zonal and azonal factors, methods and other problems of regionalization. Map is presented with 19 provinces distinguished, divided into smaller units. The arctic regions are in the tundra, forest-tundra and northern taiga zones. (DLC.)

RIKHTER, GAVRIIL DMITRIEVICH, 1889– , *see also* IUGG . . . Snow & Ice Comm. 1961. No. 72396

75133. RILEY, FRANCIS. Fur seal industry of the Pribilof Islands 1786-1960. Washington, D.C., 1961. 3, 14 p. illus., tables, map. (U.S. Fish and Wildlife Service. Fishery leaflet 516.) 12 refs.

Outlines the natural conditions and the history of these islands; the seals, their exploitation and protection (national and international). Take is shown in tables for 1786-1960, with notes on source of data, regulations, etc., and in diagrams for the period since 1820. Seal byproducts are noted with data of production and sales of seal meal, oil and bones since 1917. (DI.)

75134. RISS, ÏU. A. Iz opyta pervykh melkomasshtabnykh geofizicheskikh s"emok s primeneniem aviatransporta v trudnoprokhodimykh raĭonakh Zapadnoĭ Sibiri. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. Institut geologii i geofiziki. Trudy 1961. vyp. 11, p.167-74, diagrs.) Text in Russian. **Title tr.:** From an attempt at initial small-scale geophysical surveys using air transport in regions difficult of access in West Siberia.

Describes methods and techniques of using an MI-4 helicopter, AN-2 airplane and hydroplanes in regional geophysical investigations during 1954-1958. Special attention given to a gravimetric survey at 1:one million, using a helicopter: the network of stations, dispatch of landing parties, collecting of data, correction and plotting of gravity values, use of the type GAK-3M gravimeter, etc. Aircraft are heartily recommended for this kind of work in this type of terrain. (DLC.)

75135. RITCHIE, JAMES C. A geobotanical survey of northern Manitoba. Montreal, Mar. 1962. 48 p. maps incl. 2 col. and fold., diagrs., tables. (Arctic Institute of North America. Technical paper no.9.) 58 refs. Abstract in Russian.

Describes and maps at scale 1 in.: 16 mi. and in some detail, the vegetation and landforms from 56° N. 92° W. northward and westward to the provincial boundaries. Field studies were made at seven selected localities prior to interpretation of vertical air photos of each. Types of vegetation and landforms readily identified on the air photos (tabulated with notes on their photographic appearance) were mapped on the 4500-odd photographs, mostly at a scale of 1:60,000; then the outlined areas and designations were transferred instrumentally to 1:506,880 base maps. These preliminary vegetation-landform maps are reproduced at 1:1 million scale. Interpretation and mapping was done by the author, and nearly all categories were distinguished on the basis of photographic appearance, genesis, status, and ecology being disregarded. The main environmental factors governing distribution of vegetation are climate and topography. Most comparable area in Eurasia is 60°-67° N. between the Urals and Finno-Karelia. Floristic geography is summarized in a table of 580 species

and varieties, with their general extent in the Northern Hemisphere; general latitudinal extent, distribution in Manitoba, and by physiographic regions, the Hudson Bay Lowlands and the Precambrian Shield. (CaMAI.)

75136. RITZMANN, STEPHAN E., *and* W. C. LEVIN. Cryopathies; a review. (Archives of internal medicine, May 1961. v. 107, no.5, p.754-72, table.) 209 refs.

Gives a summary of the symptoms and an explanation of the term "cryopathy" as an all-inclusive term for these clinical conditions." An etiological classification of five common and several minor diseases triggered by cold, is outlined. Diagnosis, including differential, prophylaxis and therapy are also outlined. (DNLM.)

RIVARD, NORMAN R., *see*

Alaskan Science Conference 1961. 1962. No. 69644

Péwé, T.L., & N.R. Rivard. Geologic map . . . 1961. No. 74768

RIVOSH, L. A., *see*

Artamonov, L.V., & L.A. Rivosh. Opyt kompleksnogo primeneniia aèroèlektrorazvedki . . . 1961. No. 69883

Shteĭnberg, G.S., & *others*. Magnitnaia s"emka . . . 1962. No. 75608

Tikhonov, V.I., & L.A. Rivosh. Novye dannye o tektonicheskom stroenii . . . 1961. No. 76146

RIZNICHENKO, IU. V., *see* Veĭtsman, P.S., & *others*. On research of the earth's crust . . . 1961. No. 76367

75137. ROBAK, HÅKON. Overvintringen av en- og to-årig sitkagran i planteskolene. (Norway. Skogdirektoratet, Årsskrift for norske skog-planteskoler, 1961, *pub.* 1962, p.35-59, tables.) 14 refs. Text in Norwegian. Summary in English. **Title tr.:** Overwintering of one- and two-year Sitka spruce in nurseries.

Notes that Sitka spruce seed has proved generally satisfactory in West and North Norway nurseries, but the one-two yr. plants have less resistance to overwintering and lower survival rate than Norway spruce. The effect of provenance was studied and climatological data of Alaskan and British Columbia provenance areas correlated with those of slightly more northerly areas in Norway, e.g. the Cordova, Homer and Valdez areas correlated with areas of Troms and northern Nordland, etc. Seed from the provenance area just south of the ideal may be used without much risk except in North Norway. Seed from Gull Cove-Sitka-Juneau-Ketchikan areas does poorly in North Norway. Queen Charlotte Islands and Ketchikan provenance seed is not hardy enough for exposed areas on the north coast of West Norway, but is satisfactory on the south coast. Seed grown in a milder-climate nursery however, can be planted successfully in harsher climates: vigorous stands at 68° N. have developed from Gull Cove, Sitka, and Juneau provenance. When 1-2 yr. Sitka plants show poor overwintering capacity despite precautions as to provenance, more stable moisture is probably needed, and irrigation of seed beds is recommended. (DA.)

75138. ROBBINS, BARRY PHILLIP. The Imperial Formation, northeastern Mackenzie Mountains, Northwest Territories. Edmonton, Alberta, 1960. 108 p., illus., plates, tables. diagrs., graphs, maps incl. 1 fold. 52 refs. Typescript. M. Sc. thesis to Univ. of Alberta, Dept. of Geology.

Presents the results of summer 1959 field work along the mountain flank, south, southeast, and southwest of Norman Wells, in four areas on or adjacent to the banks of the Imperial, Carcajou, and Redstone Rivers, and the Canol Road. Provenance, depositional environment and paleoecology of the Imperial formation were determined by means of a petrological and paleontological study of the selected areas. The principal source for these rocks was sedimentary and low-rank metamorphic terrain lying to the west or northwest probably in northern Yukon. The Imperial formation is entirely marine and was deposited in a warm, shallow sea. Terrestrial organic material indicates the presence of land at some intermediate distance to the west or northwest. Appended (p. 45-108) are descriptions of the four sections, and of selected thin sections, locations of samples collected for study, description of heavy minerals, and of the illus. on 9 plates. (CaAU.)

ROBERTS, D. W. A., *see* Andrews, J.E., & D.W.A. Roberts. Ascorbic acid & cold hardening wheat. 1961. No. 69788

75139. ROBERTS, ELLIOTT B. History of a tsunami. (Smithsonian Institution. Annual report 1960, *pub.* 1961. Publication 4435, p.327-40, illus.)

Describes in non-technical terms the events of July 9, 1958, following a major earthquake under the Fairweather Range of Southeast Alaska. Topographic, hydrologic, and oceanographic changes are noted; damage extended over a 400,000 sq. mi. area from Anchorage to Ketchikan, but loss of life was small; the Gutenberg-Richter intensity rating was 8.0 as compared with the 8.25 of the 1906 San Francisco quake. Horizontal displacement of 21.5 ft. was accompanied by 3.5 ft. vertical movement, much less than the 47-ft. uplift at Yakutat Bay in 1899. Most violent effects of the 1958 quake were in Lituya Bay, 15 mi. from the center. The only refuge to sailors between Cape Spencer and Yakutat Bay, Lituya Bay has a narrow entrance, dangerous tides and currents, its 1800 ft. tsunami in 1958 is probably the highest known. Experiences of four survivors whose boats rode out the wave are recounted. Photos show shores cleared of trees to about 1800 ft., and wave scour near the entrance. (DGS.)

ROBERTSEN, WIKTOR, *see* Stockinger, C., & F.W. Gulbranson. Skipsfarten . . . 1958. No. 75940

ROBERTSON, GORDON, *see* National Northern Development Conference. 1961. No. 74224

75140. ROBERTSON, J. D. Caribou tagging. (Beaver, summer 1961. outfit 292, p.24-27, illus.)

Describes a method for tagging Barren-ground caribou from canoes at water crossings, tested at Duck Lake, northern Manitoba, in Sept. 1959 and 1960. Ear tags with 8 x 1¼ in. yellow streamers were used to help trace their seasonal movements, part of the government caribou conservation program. (DI.)

75141. ROBERTSON, L. P. Precise and secondary levelling in British Columbia north of Dawson Creek and Yukon Territory. Ottawa, Queen's Printer, 1961. 132 p. illus., table. Refs. (Canada. Geo-

detic Survey. Publication 24B, 1960.) Revision of the 1951 edition.

Outlines details of the precise and secondary lines in order 1943-1951, instruments and procedure, bench marks, and arrangement of data. Descriptions and elevations are given for bench marks along the Alaska Highway main line to the Alaska border, and on its branches in British Columbia and Yukon. (DLC.)

75142. ROBERTSON, O. H., *and others.* Physiological changes occurring in the blood of the Pacific salmon, *Oncorhynchus tshawytscha* accompanying sexual maturation and spawning. (Endocrinology, May 1961. v. 68, no.5, p.733-46, illus., tables.) 32 refs. *Other authors:* M.A. Krupp, C.B. Favour, S. Hane, *and* S.F. Thomas.

Study of a series of chemical and cellular blood constituents during spawning migration, as compared to conditions in the sea salmon. Physiological and histological features of the spawning fish showed many similarities to Cushing's syndrome in man. (DLC.)

75143. ROBERTSON, ROBERT GORDON, 1917– . Administration for development in northern Canada: the growth and evolution of government. (Canadian public administration, Dec. 1960. v. 3, no.4, p.354-62.) Paper presented to the 12th annual conference of the Institute of Public Administration of Canada, Sept. 1960.

Discusses the emergence of the territories (Yukon and Northwest) from federal administration to self government. The chief official, territorial commissioner, is appointive and is responsible to the Minister of Northern Affairs and National Resources and the Governor in Council at Ottawa; the Federal Government has jurisdiction also over territorial resources and finances. Territorial councils however, popularly elected, pass legislation, approve expenditures and authorize taxes. Provincial status is expected to supersede territorial in due course. At present several federal agencies are active in the territories: the Dept. of Northern Affairs and National Resources administers lands, resources, and Eskimos, and builds the roads; it also provides the civil service for NWT but not for the Yukon. The Dept. of Transport, Dept. of National Health and Welfare, the Indian Affairs Branch of Dept. of Citizenship and Immigration, the Royal Canadian Mounted Police, and the Dept. of Public Works also provide their respective services; but these services are expected to be taken over, as feasible by local agencies. (CaOCU.)

75144. ROBERTSON, ROBERT GORDON, 1917– . Aviation and northern development. (Canadian aeronautical journal, Apr. 1960. v.6, no.4, p.116-18.)

Discusses the present and future role of aviation in developing the Canadian North. (DLC.)

75145. ROBERTSON, ROBERT GORDON, 1917– . Canadians of the Arctic. (Canadian welfare, June 1956, v.32, no.2, p.65-67, illus.)

Presents the text of a speech about Eskimo problems broadcast by CBC, Feb. 19, 1956. The Eskimos in increasing numbers are outgrowing their food supply; new developments in the North are difficult for them to adjust to. Creation of new economic outlets, and improved education and health are discussed as solution to the problem. (CaOCU.)

75146. ROBERTSON, ROBERT GORDON, 1917– . Eskimos are doing it through co-operatives. (Canadian co-operative digest, autumn 1962. v.5, no.3, p.18-20.) Part of opening address to Northwest Territories Council at Cape Dorset July 30, 1962.

Reviews activities at ten Eskimo cooperatives established since January 1959. Those at Cape Dorset on Baffin Island and Port Burwell in Quebec are doing remarkably well; the others at Resolute Bay, Holman Island, Grise Fiord and Cambridge Bay in the Arctic Islands, Whale Cove in Keewatin District, Coppermine, and Frobisher Bay are all utilizing local renewable resources. The 1962 gross income of all together is expected to be $800,000. The cooperatives provide opportunities for work, cash income, leadership, and future planning among the Eskimos; technical and educational assistance will be supplied from federal government for some years. (CaONA.)

75147. ROBERTSON, ROBERT GORDON, 1917– . The future of the North. (North, Mar.-Apr. 1961. v.8, no.2, p.1-13, illus.)

Surveys prospects for development of natural and human resources in northern Canada. Minerals and petroleum have the best potentialities: reserves of oil estimated at 10 billion barrels, and of gas 60-90 trillion cu. ft. on the mainland, 21 billion barrels and 150 trillion cu. ft. in the Arctic Islands. Development of minor resources, as fisheries, tourism, Eskimo art, etc. affords transitional aid to the Eskimos whose development, in turn, is aided by improved education and health programs. (DLC.)

75148. ROBERTSON, ROBERT GORDON, 1917– . The Northwest Territories. (Western miner and oil review, Apr. 1961. v.34, no.4, p.90, 92, illus., table.)

Reports mining activity during 1960: production by four mines; development of gold at Matthews Lake northeast of Yellowknife, and tungsten in the Flat River area of western Mackenzie District; also exploration in several localities. New mining regulations were issued. Total production, reduced by the Port Radium uranium mine closing down in Sept., was $22,683,098. Quantity and value of production by mineral are tabulated for 1959 and 1960. (DI.)

75149. ROBERTSON, ROBERT GORDON, 1917– . Oil in the Arctic. (Western miner and oil review, Apr. 1961. v.34, no.4, p.88-89, illus.)

Reports oil and gas explorations in Yukon and Northwest Territories during 1960: the Canadian Arctic Islands opened to exploration and permits issued for over forty million acres; 66 geological summer field parties operating on the mainland, 30 wildcat wells drilled, approx. $20 million laid out. Geophysical surveys increased during winter 1960-1961; 18 exploratory wells were drilled, mostly in the Fort Liard-Fort Simpson area of southern Mackenzie District. Increased activity in 1961 is anticipated. (DI.)

75150. ROBERTSON, ROBERT GORDON, 1917– . Yukon maintains production. (Western miner and oil review, Apr. 1961. v.34, no.4, p.71, table.)

Reviews mining activity in Yukon Territory during 1960: production totalling $12,179,852; exploration for gold, silver-lead-zinc, tungsten (discovered in the Nahanni area), and molybdenum. The most active 1961 exploration is expected in the Frances Lake and Fire River areas. Quantity and value of production by mineral are tabulated for 1959 and 1960. (DI.)

75151. ROBINSON, MARGARET KING, 1906– . Comparison of Norpac temperature sections with average BT sections along the same tracks. (Journal of marine research, Mar. 15, 1961. v.19, no.1, p.21-27, graphs.) 6 refs. Also issued as Contribution, new series, of Scripps Institution of Oceanography, California Univ.

Compares this expedition's temperature sections with bathythermograph observations as pub. in No. 54347, etc. Relationship of the August 1955 temperature distributions to average August conditions are shown from 1941-1952 data. Included is one latitude section, 52° N. from 130° W. to 165° E. long., which passes through part of the Aleutian waters. Isotherms in this section show disagreement above the thermocline but good agreement at depth. Temperatures at 300 and 400 ft. in the Norpac sections are, in general, within 0.3°F. of the temperatures shown by the average sections. (DWB.)

ROBINSON, STEPHEN CLIVE, 1911– , *see* Lowdon, J.A., & *others*. Age determinations . . . 1: isotopic ages. 1960. No. 73610

75152. ROBISON, WILLIAM C., *and others*. Muskeg, review of research. Natick, Mass., July 1962. iv, 32 p. (U.S. Quartermaster Research and Engineering Center. Earth Sciences Division, Technical report ES-5.) 150 refs. *Other authors:* A.V. Dodd *and* W.F. Thompson.

Defines muskeg; discusses its terminology and classification, comparing bog designations in nine languages as well as the main features of physiographic, climatic, and physiognomic classifications. Most muskeg research in Europe has had some economic significance, though considerable study of this organic material has been made from the botanical, geological or ecologic point of view. North American muskeg research has given principal attention to the problem of trafficability. Radforth's classification system (cf. No. 47495 & 54189) is recommended because of its convenience and applicability to military problems. The selected, annotated bibliography and index conclude the review. (CaMAI.)

75153. ROBITAILLE, BENOÎT, *and* C. GREFFARD. Notes sur les matériaux terminaux du glacier Thompson, Canada arctique. (Geographical bulletin, May 1962. no.17, p.85-94, illus.) 6 refs. Text in French. **Title tr.:** Notes on the terminal moraines of Thompson Glacier, arctic Canada.

Describes the complex stratification of the various moraines found at the terminus of this north-south glacier, in one of the deepest and widest valleys in northern Axel Heiberg Island. It is a polar-type glacier, i.e., negative temperatures prevail over the zone of accumulation and the tongue. Similar pressure moraines are noted elsewhere on this island, on Ellesmere and in Spitsbergen; but none are known in the other Canadian Arctic Islands, or in Greenland. It is suggested that the unusual features of this type of moraine seem to indicate both glacial and periglacial influence. Tongue and front are illus. by vertical air photo at approx. 1:60,000 scale; other photos illus. main features of the deposits. Field work was carried out while on the Jacobsen-McGill Arctic Research Expedition to Axel Heiberg Island, 1960. (DGS.)

75154. ROBLIN, J. DUFF. Manitoba, our frontier is our future. (Western miner and oil review, Apr. 1961. v.34, no.4, p.54-55, illus.)

Text of the Provincial Premier's address at the dedication ceremony of the International Nickel Co. Thompson project, Mar. 25, 1961. Catalytic effect of this industry on northern Manitoba development, government aid to the project in providing power and access road, plans for regional development, coordinating government and industrial activities, etc. are noted. (DI.)

75155. ROBONEN, V. I. Puti osvoeniîa i rasshireniîa mineral'no-syr'evykh resursov Karelii. (Sovetskaîa geologiîa, Oct. 1961, no.10, p.145-47.) Text in Russian. **Title tr.:** Ways of utilizing and expanding the raw materials of the mineral resources in Karelia.

Reports the conference of May 25-26, 1961 at Petrozavodsk, the participating organizations, papers delivered and problems discussed. Sources of iron ore, construction materials, mica, and others are briefly mentioned, as well as requirement for geophysical, geochemical and other studies. (DLC.)

ROBOTHAM, RUTH, *see* Kaufman, A. Trends in Alaska . . . 1961. No. 72696

ROCKWOOD, W. G., *see* Newfoundland. Public welfare report. 1960. No. 74312

75156. RODAHL, KÅRE, 1917– , *and others*. Effects of dietary protein on physical work capacity during severe cold stress. (Journal of applied physiology, Sept. 1962. v.17, no.5, p.763-67, tables.) 16 refs. *Other authors:* S.M. Horvath, N.C. Birkhead, *and* B. Issekutz, *Jr.*

Study of the effects of four different diets (specified) upon the work of young men, at 22° and 8° C. There was no difference in performance due to different diet in the warm environment. In the cold, reduction in calories or in protein caused deterioration of physical work. Resting metabolism, pulse rates and catecholamine excretion, under cold stress, were also studied. (DLC.)

75157. RODAHL, KÅRE, 1917– . Studies on the blood and blood pressure in the Eskimo and the significance of ketosis under arctic conditions. (Norway. Norsk Polarinstitutt. Skrifter 1954, no. 102, p.1-79, illus. tables.)

Presents six studies based on investigations carried out in 1950-1952 at the Arctic Aeromedical Laboratory, Ladd AFB, Fairbanks, Alaska, viz:

Seasonal blood changes in the Eskimo (p.5-16, 19 refs.) Hemoglobin values were higher in winter than in summer, both in Eskimo men and women,

and in white residents. Hemoglobin and hemotocrit were lower in Eskimos than in corresponding whites. Male-female differences in Eskimos also are considered.

Blood sedimentation rates in Eskimos (p.17-25, 7 refs.) Mean sedimentation rates after one hour were 15 mm. in Eskimo males, 26 mm. in females and 9 mm. in white males. No seasonal variation in sedimentation rates was found in Eskimos; in resident whites it was highest in the fall.

Prothrombin content of the blood in man exposed to cold environments (p.27-29, 3 refs.) In Eskimo men and women, prothrombin content was 58-62%, in white males ca. 70%. In the former, mean values were higher in winter, in the latter, no seasonal variation was noted.

Preliminary survey of dietary intakes and blood levels of cholesterol and the occurrence of cardiovascular disease in the Eskimo (p.31-51, 27 refs.) Study of 16 Eskimos, average age 35, indicates that some have high cholesteral intake, as compared with American men, but identical blood cholesterol levels. The Sf 12-20 lipoprotein concentrations are lower in Eskimos than in whites. Incidence of cardiovascular disease may be lower in Eskimos.

Observations on blood pressure in Eskimos (p.53-65, 9 refs.) Study of 104 Eskimo men and women and 40 white men showed that both systolic and diastolic blood pressures are lower in Eskimos. Mean pulse rates were similar in the two groups.

The significance of ketosis produced by a high meat-fat ration under arctic conditions, by K. Rodahl, C.R. Shaw *and* H.F. Drury (p.67-79, 16 refs.) Study of 12 young men, including one Eskimo, exposed to strenuous arctic conditions, showed, that from a physiological standpoint, an all-carbohydrate ration offered no significant advantage over a high-meat ration. (DLC.)

RODAHL, KÅRE, 191?– , *see also*

Issekutz, B., & *others.* Effect of severe cold stress . . . 1962. No. 72425

Milan, F.A., & K. Rodahl. Caloric requirements man . . . 1961. No. 74006

Milan, F.A., & K. Rodahl. Nutrition & energy expenditure . . . 1961. No. 74009

Milan, F.A., & *others.* . . . year in Antarctic & response . . . 1961. No. 74007

Rennie, D.W., & *others.* Physical regulation . . . 1962. No. 75108

75158. RODDICK, JAMES ARCHIBALD, *and* **L. H. GREEN.** Sheldon Lake, Yukon Territory; Tay River, Yukon Territory. Ottawa, 1961. 2 fold. map sheets, each 28.5 x 24 in. (Canada. Geological Survey. Surveys and Mapping Branch. Preliminary series, maps 12-13-1961. Sheet 105 J; 105 K.)

Delineates geologic features of these two adjoining areas northeast of Whitehorse, 62°-63° N. 130°-134° W., on the basis of 1958-1960 field work. The 16 rock types mapped range from Proterozoic clastics to modern extensive unconsolidated glacial and alluvial deposits. Tintina valley continues across the Tay River area from the Glenlyon sheet to the west. No active mineral prospects are known in either area. (DGS.)

RODDICK, JAMES ARCHIBALD, *see also* Green, L.H., & J.A. Roddick. Dawson, Larsen & Nash Creeks. 1962. No. 71836

75159. RODDIE, IAN C. The role of vasoconstrictor and vasodilator nerves in the control of the peripheral circulation. *(In:* Symposia on arctic biology and medicine 1960. Proceedings, 1, neural aspects of temperature regulation, *pub.* 1961, p.113-48, illus.) 53 refs.

Account of recent studies, indicating that human skeletal muscle has (1) an adrenergic vasoconstrictor innervation active in certain baro- and chemoreceptor reflexes, and (2) a cholinergic vasodilator innervation acting in circulatory adaptation. The two sets can be activated independently of each other and independently of those supplying the skin blood-vessels. The main innervation of the extremities is vasoconstrictor, and changes in blood flow during temperature regulation are due to changes in the vasoconstrictor tone. Appended p.36-42 is discussion of the paper. (CaMAI.)

75160. RODEN, GUNNAR I., *and* **J. L. REID,** *Jr.* Sea surface temperature, radiation, and wind anomalies in the North Pacific Ocean. (Records of oceanographic works in Japan, Mar. 1961. v.6, no.1, p. 36-42 is discussion of the paper.

Considers the relation of temperature anomalies to those of wind and radiation by computing the cross correlations, based on data for parts of the period 1899-1958, including two 5° squares in subarctic waters: 50°- 55° N. 170°- 175° E. and 50°- 55° N. 150°- 155° W. Results for these squares show rapid decrease in correlations during the first three or four months, with temperature anomalies being persistent for three to six months. Significant cross-correlation values were found only in winter and in the regions of westerly winds such as the Gulf of Alaska and Aleutian waters. (DI.)

RODHE, BERTIL, *see* Sweden. Östersjökoden . . . 1959. No. 76045

RODINA, A. P., *see* Gutkin, A. ÎÀ., & *others.* Polovoe razvitie . . . 1962. No. 71935

RØED, ØISTEIN, *see* Norsk tindeklub. Fjellsport. 1958. No. 74388

75161. RØEN, ULRIK IB. Salt- of brakvandsdyr i grønlandske ferskvande. (Grønland, Sept. 1962. nr.9, p.335-41, illus., map.) / refs. Text in Danish. Summary in English. **Title tr.:** Fauna from salt and brackish water to be found in freshwater localities in Greenland.

Discusses eight invertebrate species, a turbelarian, two amphipods, a mysid and four copepods, mostly taken from lakes which are old sea arms, but the turbelarian and one amphipod found in warm springs formerly below sea level, and one of the copepods in a river mouth. Of the four freshwater fish found in Greenland, three are migratory and the fourth, the stickleback *Gasterosteus aculeatus,* is often seen in brackish water. The eel, *Anguilla rostrata* shows connection with the American fauna, as does the copepod *Limnocalanus grimaldi;* its occurrence in northeast Greenland the easternmost in the species' North American distribution. (DLC.)

75162. RØEN, ULRIK IB. Studies on freshwater Entomostraca in Greenland 2, localities, ecology,

and geographical distribution of the species. København, Reitzel, 1962. 249 p. illus., plates, maps, tables, diagrs., graphs. (Meddelelser om Grønland, bd. 170, nr.2.) 290 refs.

Reports investigations of 1954-1960 in 207 freshwater localities in East and West Greenland, and the crustaceans collected from these and 118 other localities. The 64 lakes, 107 ponds, and 36 temporary waters are grouped into types and described, including their temperatures, ice conditions, conductivity, and chemical contents. The 52 species of Entomostraca are listed with taxonomic discussion of several; eight are new to Greenland. The species distribution is mapped and related to various physico-chemical conditions. On the basis of distribution and percentage occurrence within 11 areas into which Greenland is divided, the species are found to comprise four faunal elements: one throughout Greenland, and northwestern, southern, and brackish water elements. (DGS.)

75163. RØEN, ULRIK IB. Trues Grønlands ferskvande af forurening? (Grønland, Apr. 1962, nr.4, p.137-43, illus.) Text in Danish. **Title tr.:** Are the freshwater localities in Greenland threatened by pollution?

Small lakes and ponds near human habitation are subject to rapid pollution in Greenland. In 1931, three crustacean species were found in Tyfussøen in Upernavik, West Greenland, but in 1959 only two individuals of one species. A pond at Igánaq, a three-four family settlement in North Greenland established in 1956, has become polluted in only three years. These polluted lakes and ponds are a breeding-place for mosquitoes and biting flies, e.g. *Simulium vittatum*, as well as for bacteria, a source of disease in humans and animals. (DLC.)

75164. ROELS, H., *and* A. LAGASSE. Influence of cold stress on the dry weight of the cell nuclei of the adrenal medulla of the white rat. (Experimental cell research, Mar. 1961. v.23, no.2, p.408-409, table.) 7 refs.

Report of tests on rats exposed to 4° C. for two weeks. Following this period, a significant increase in nuclear dry weight was noted in two out of three animals. (DNLM.)

75165. RØMMEN, JOHANNES. Utsiktene for kjøttmarkedet. (Norden, Sept. 16, 1960. årg. 64, nr.18, p.492-93, table.) Text in Norwegian. **Title tr.:** Prospects for meat marketing.

Reports on North Norway meat production: lean beef from oxen has a good local market, even export to South Norway; beef from cattle is too fat and not easily sold even for variety meats. Veal and mutton production is below demand and mutton is brought in from South Norway. The average meat consumption is low in Norway compared to other countries, but is expected to increase as the living standard rises. (DA.)

75166. RØNNING, OLAF I. Some new contributions to the flora of Svalbard. Oslo, distributed by Univ. Press, 1961. 20 p. illus. (Norway. Norsk Polarinstitutt. Skrifter, nr.124.) 32 refs.

Reports attempts to clarify the taxonomic position as regards the critical genera *Cerastium, Draba, Festuca, Poa* and *Potentilla;* and identification keys prepared for the Svalbard species of these genera. Eight species new to the area are described. Recent transfers and changes of taxonomic status are mentioned, based on field work by the Tromsø Museum on Bjørnøya in 1957, Vestspitsbergen 1958 and 1960, as well as author's work, particularly around Kongsfjorden (79° N. 12° E.) in 1959. (DLC.)

75167. RØNNING, OLAF I. Svalbards Sphagnumarter. (Blyttia, 1961. bd. 19, hefte 2, p.41-53, 2 diagrs.) 17 refs. Text in Norwegian. Summary in English. **Title tr.:** The *Sphagnum* species of Svalbard.

Reports on the nine known and a tenth reported species; comparisons are made with mosses of northeast Greenland, where the eleven species found in 68°- 77° N. are all south of the Svalbard finds. In northern Scandinavia, 27 species are known at 70°- 71° N., and at about 68° N. the number is 38-40. For each Spitsbergen species, brief notes are given on the localities where found. (DLC.)

RØNNING, OLAF I., *see also* Laerum, O.D., & G.S. Pedersen. Svalbardveg 1959 . . . 1962. No. 73273

ROER, NILS, *see* Norsk tindeklub. Fjellsport. 1958. No. 74388

75168. RØSTUM, SIGMUND. Har arealtrygda for poteter svart til målsettinga? (Norden, Sept. 16, 1960. årg. 64, nr.18, p.487, table.) Text in Norwegian. **Title tr.:** Has acreage subsidy for potatoes paid off?

Reviews small subsidies to farmers in northern, certain mountain and coastal areas of Norway to encourage production. In Nordland and Troms, potato acreage has decreased in recent years however, the subsidy received by those eligible was negligible. The specific, small subsidies should be replaced by a general, more substantial one to be effective. (DA.)

75169. RÖTHLISBERGER, HANS. The applicability of seismic refraction soundings in permafrost near Thule, Greenland. Hanover, N.H., Feb. 1961. iv, 34 p. tables, graphs, diagrs. incl. 1 fold., maps. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Technical report 81.) 12 refs. Condensed version pub. in International Symposium on Arctic Geology, *Proceedings* 1961, v.2, p.970-80.

Describes measurements made during 1958-1959 in ice (less than 200 ft. thick) and in frozen till over bedrock. Velocities were measured in a variety of rock types. Permafrost has certain properties important for shallow soundings, i.e. high velocities and relatively small velocity discrimination. In the Thule area, where the mean ground temperature is slightly below -10° C., the refraction technique proved successful in most cases where shallow ice overlies frozen ground, or frozen ground overlies bedrock with or without ice on top. (CaMAI.)

RÖTHLISBERGER, HANS, *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

75170. ROGACHEV, VIACHESLAV, M. Pervaîa komsomol'skaîa. (*In:* Burkhanov, V.F. Na ledîanom ostrove, 1962, p.182-90, illus., plate.) Text in Russian. **Title tr.:** The first communist youth drifting station.

Reports the drift, life and work of the drifting station "North Pole-8" in 1959-60. Author was head

of its first team of 18, mostly members of the Communist Youth Organization (Komsomol). Reconnaissance Apr. 7-15 in search of suitable ice, landing at 75° 42′ N. 196° 50′ E. and beginning of operations on Apr. 28 are described. Dangerous ice pressures developed in May and the camp split in three parts, forcing a change of location four times. The station drifted 2589 km. in 356 days, 574 km. point to point; 880 depth measurements, ranging from 268 to 2640 m., were made, also 2755 weather and 2755 actinometric observations; 700 radiosondes were released, average altitude 23.4 km., max. 40 km., etc. (DLC.)

ROGACHEVA, ĖNERGIĬA VASIL'EVNA, 1932– , *see*

Syroechkovskiĭ, E.E., & Ė.V. Rogacheva. Fauna . . .1961. No. 76057

Styroechkovskiĭ, E.E., & Ė.V. Rogacheva. Sobol' . . . 1961. No. 76060

ROGATRICK, ABRAHAM, *see* Garrett, R.M., & A. Rogatrick. Grand Palace Theatre. 1962. No. 71596

75171. ROGERS, GEORGE WILLIAM, 1917– , *and* **R. A. COOLEY.** Alaska's population and economy: regional growth, development and future outlook; report to Division of State Planning, Office of the Governor. Juneau, Mar. 1962. 2 v.: 235, 229 p. tables, graphs. (Alaska Project P-4.) Refs.

Basic work. *Contains* detailed analysis in v.1, with pertinent statistics, v.2. Population growth since 1880, distribution by regions and in urban places, composition by race (white, native, other), age, sex, economics and educational status are examined; also migration, mobility, and natural increase. Patterns and trends mostly in the 1950's are analyzed for employment, income, for production from agriculture, wildlife, fisheries, forestry, mining, etc.; and for manufacturing. Defense expenditures and construction, wholesale and retail sales and services, taxation and finance are similarly treated. These various population and economic factors are compared in five Alaskan regions: southeast, south-central, southwest, interior, and northwest; comparisons are drawn also between Alaska and the contiguous United States, the four Far-West states, and the five Mountain states. Alaskan population, employment,. and income growth levelled off by the mid-1950's as result of decreased federal military and construction activities. Population increased from births, rather than migration; and the economy shifted toward consolidation. Increased natural resources development appears probable however, with prospective Japanese markets for forestry products, etc., and tourism. Population and employment forecasts are made to 1980 and 2000. By the latter year, a population of 607,392 to 963,960 is estimated, on the basis of varying assumptions. By 1980, an employed labor force of 150,000 and resultant population of 420,000-450,000 are possible. This and similar estimates for each of the five regions, are based on expected trends in military activities, civilian government employment, construction, natural resources extraction and manufacturing, and distributive industries including tourism. Some increases are foreseen in all categories except the military. South-central Alaska is expected to remain the most populous region, and Southeast to have the most rapid rate of employment and population growth.

Vol. 2, statistical handbook, contains over 130 tables, some with several sections and all with sources cited; population data in 47, employment 23, income 10, natural resource extraction 38; ten deal with manufacturing and four with other business activities. Each of these sections has introductory notes on sources, adequacy of data, methods of calculation, etc. Pertinent sections of this work supersede three statistical annals formerly pub: No. 58987, 62956, 69610. This work is expected to become the official statistical handbook for Alaska, and the data tables are to be revised from time to time. (DI.)

ROGERS, GEORGE WILLIAM, 1917– , *see also* Alaska. Revenue & taxation . . . 1962. No. 69628

ROGERS, RODDY R., *see*

Jiusto, J.E., & R.R. Rogers. Seeding whiteouts . . . 1961. No. 72558

Jiusto, J.E., & R.R. Rogers. . . . whiteout modification. 1961. No. 72557

75172. ROGINSKIĬ, IAKOV IAKOVLEVICH, 1895–

.Racial differentiation and the psyche. (*In*: Bunak, V.V. Contemporary raciology . . . 1961, p. 44-69.) 10 refs.

Discusses the influence of socio-historical development versus racial heritage on the psychology of ethnic groups. Geographical and economic conditions are considered also important factors in the formation of individual emotional types. They account for differences in the psychological make-ups of groups belonging to similar culture levels. The emotionalism of Negro tribes is contrasted with the reticence of some Siberian peoples. Examples are cited from the folklore of, among others, the Yakuts, Samoyeds, and Voguls. (DLC.)

ROGNON, M., *see* Malméjac, J., *& others.* . . . centres respiratoires . . . 1962. No. 73770

75173. ROGOVER, GRIGORIĬ BORISOVICH. O geologicheskoĭ osnove poiskov bogatykh sul'fidnykh mednonikelevykh rud na severo-zapade Sibirskoĭ platformy. (Sovetskaia geologiia, Oct. 1961. no.10, p.108-117.) 10 refs. Text in Russian. **Title tr.:** On geologic bases for the search for sulfide-rich copper-nickel ores in the northwest Siberian platform.

Evaluates recent work connected with the Yenisey ore field, especially the Noril'sk copper-nickel deposits. New criteria and methods in prospecting these deposits are required. All possible genetic types of ores should be studied, geophysical parties increased, geophysical and geochemical methods worked out, tectonic structure interpreted, etc. Speed and a new approach in prospecting the Yenisey ore field is urged. (DLC.)

75174. ROGOZOV, IU. G. Stratigrafiia i paleogeografiia kamennougol'nykh otlozheniĭ Pripolĭarnogo Urala v basseĭne srednego i verkhnego techeniĭ r. Pechory. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei . . . vyp. 16, 1961, *its:* Trudy t.123, p.61-68.) 5 refs. Text in Russian. **Title tr.:** Stratigraphy and paleogeography of Carboniferous deposits of the Subpolar Ural on the middle and upper reaches of the Pechora River basin.

Lower, Middle and Upper Carboniferous deposits are distinguished and divided into stages

on the basis of work by various scientists since 1926, the Tournaisian, Visean, and Namurian stages treated in greater detail. Paleogeography, variation of sea and land, development of Carboniferous fauna are briefly characterized. (DLC.)

ROHMAN, M., *see*
Dee, R., & *others*. Circulatory effects . . . 1961. No. 70935

Goetz, R.H., & *others*. Temp. changes & pulmonary circ. 1962. No. 71722

ROĬTMAN, V. A., *see* Spasskiĭ, A.A., & *others*. Rabota . . . SGE v 1960 g. 1962. No. 75860

75175. ROLL-HANSEN, F. Skogbotanikk, traerne 1, de nakenfröete. Oslo, Norges Landbrukshögskole, 1956. 133 p. maps. 127 refs. Text in Norwegian. **Title tr.:** Forest botany, trees 1, the gymnosperms.

Presents detailed outline for classroom use of botanical characteristics of important species and varieties of conifers together with keys to their identification. Accounts of individual species include the geographic distribution, growth requirements, productive capacity and uses, parasites, evaluation of place in Norwegian forests, and brief mention of research studies and experimental plantings. Several of the species of pine, larch, spruce, fir, and juniper are native to arctic Eurasia, America, and some arctic islands. Latin, Norwegian, English, etc. names of species are given. (DA.)

ROLL-HANSEN, F., *see also* Buchwald, N.F., & *others*. . . . Parasitical fungi & hosts . . . 1961. No. 70425

75176. ROLLEFSEN, GUNNAR, 1899– , *Editor*. Havet og våre fisker. Bergen, J.W. Eides forlag, 1960, 1962. 2 v., each approx. 300 p. illus. incl. col., tables, diagrs., maps. Text in Norwegian. **Title tr.:** The ocean and our fishes.

Basic work prepared by specialists, on various aspects of Norwegian coastal and off-shore waters and their resources. The marine and fresh-water fish species recorded in and off Norway are illus. and described. Fisheries and equipment are treated in detail. Sea-weed resources, their value, harvesting, etc. are dealt with. The illustrative material, of exceptional quality, includes over two hundred drawings of fishes most in natural colors, in preparation by T. Rasmussen for 40 years. Indexed. (NPOslo.)

75177. ROLLINS, REED CLARK, 1911– . A new crucifer from the Great Slave Lake area of Canada. (Rhodora, Oct.-Dec. 1962, v.64, no.760, p.324-27, illus.)

Reports on four collections made in 1961 along Yellowknife Highway northwest of Great Slave Lake by John W. Thieret and Robert J. Reich, and a fifth made in 1962 by Thieret. The new form, *Rorippa crystallina* n. sp., a yellow cress of the mustard family occurring in moist situations is fully described, with locations where found. (CaONM.)

ROM, A. M., *see* Paasche, E., & A.M. Rom. Phytoplankton . . . 1960. No. 74601

75178. ROM, V. ÎA. Cherepovets. (Geografiia v shkole, Nov.-Dec. 1961. god 24, no.6, p.18-22.) Text in Russian. **Title tr.:** The town of Cherepovets.

Outlines development of the Cherepovets metallurgical plant; based on iron ore from Kola Peninsula and coal from the Pechora basin. The plant began operations in 1955, and was working at capacity by 1959. (DLC.)

75179. ROM, V. ÎA. Volgo-Baltiĭskiĭ vodnyĭ put'. (Geografiia v shkole, Sept.-Oct. 1961. god 24, no.5, p.5-13, illus., maps.) Text in Russian. **Title tr.:** The Volga-Baltic waterway.

Outlines the reconstruction and modernization of the Mariinskiy waterway; the work was begun in 1940, interrupted by the war and resumed in 1960. Its connection with the White Sea-Baltic Canal is shown, and its influence on the economic development of the Soviet European North is discussed. (DLC.)

75180. ROMANENKO, D. Polîarnye zvezdy. (Nash sovremennik, 1962, no.4, p.215-22.) Refs. in text. Text in Russian. **Title tr.:** Polar stars.

Reviews two collections (pub. in 1961) of prose and verse by participants in the first Conference of Writers of the Far North and Far East, held in Mar. 1961 at Leningrad. Discussed at length are the novels of the Chukchi ÎU. Rytkhéu, with excerpts from his latest, entitled Rintyn goes to college; also the works of A. Passar, a Gold, the Vogul ÎU. Shestalov, and the Ul'chi-Tungus A. Val'dîu. Style, theme, folkloristic and modern elements, influence of Russian literature, etc. are analyzed. (DLC.)

ROMANIKHIN, A. M., *see* Petersil'e, I.A., & *others*. Opyt primeneniia gazovogo karottazha . . . 1961. No. 74750

75181. ROMANKEVICH, E. A., *and* **N. V. PETROV.** Okislitel'no-vosstanovitel'nyĭ potentsiîal i pH osadkov severo-vostochnoĭ chasti Tikhogo okeana. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.45, p.72-85, illus., tables, map.) 14 refs. Text in Russian. Summary in English. **Title tr.:** Oxidation-reduction potential, and pH of sediments in the northeastern part of the Pacific Ocean.

Reports on a study of 26 cores, three of them in Aleutian waters. Nature of sediments, moisture, pH, Eh, Fe^{++} and Fe^{+++} are described, and all data tabulated. The implications of the results are discussed. (DLC.)

75182. ROMANKEVICH, E. A. Organicheskoe veshchestvo v donnykh otlozheniiakh Tikhogo okeana k vostoku ot Kamchatki. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy 1960. t.10, vyp.2, khimiia moria, p.39-47, tables, map, diagrs.) 17 refs. Text in Russian. **Title tr.:** Organic matter in bottom sediments of the Pacific Ocean east of Kamchatka.

Reports on the quantity, character and distribution of organic matter in this area: from study of a hundred bottom surface samples and some thirty 1.5-12 m. cores. Clayey, aleurite-clayey, sandy and other bottom muds from the continental shelf and slope, the Kuril-Kamchatka and Aleutian Trenches, etc. were examined. Vertical and horizontal distribution and variation of organic matter are characterized. Granulation of deposits and the SiO_2 and $CaCO_3$ content are also treated. (DLC.)

75183. ROMANKEVICH, E. A. Organicheskoe veshchestvo v poverkhnostnom sloe osadkov zapadnoĭ chasti Tikhogo okeana. (Akademiia nauk

SSSR. Mezhduvedomstvennyĭ komitet po provedeniĭū Mezhdunarodnogo geofizicheskogo goda, X razdel programmy MGG: okeanologiĭa. Sbornik statei 1962. no.5, p.67-111, tables, graphs, maps.) 65 refs. Text in Russian. Summary in English. **Title tr.:** Organic matter in the surface layer of sediments in the western Pacific.

Reports a study within the frame of the IGY 1957-1959, conducted from the R/V *Vitiaz'* in areas off the Aleutians, Kamchatka, the Kuril Islands, and elsewhere. Methods, locality, and the general character of the sediments are described. The following of their components are determined and the distribution charted: organic C, P (and its relation to the plankton biomass), humic acid, bituminous matter, pheophytin and carotin, certain organic substances, chlorophylls, and other pigments. General characteristics and factors of occurrence are outlined. (DLC.)

ROMANKEVICH, E. A., *see also* Pacific Science Congress. 1961. No. 74619

ROMANOVICH, Z. S., *see* Laktionov, A.F., & Z.S. Romanovich. Sokrashchennyĭ spisok . . . 1962. No. 73284

ROMANOVSKIĬ, DR., *see* Browning, L. Five years of medical observations . . . 1962. No. 70410

75184. ROMANOVSKIĬ, N. N. Érozionno-termokarstovye kotloviny na severe primorskikh nizmennosteĭ IAkutii i Novosibirskikh ostrovakh. (Merzlotnye issledovaniĭa. Sbornik statei 1961. vyp.1, p.124-44, illus.) 18 refs. Text in Russian. **Title tr.:** Erosion-thermokarst basins in the northern marine plains of Yakutia and the New Siberian Islands.

Reports on the distribution, form, and other features of these basin-depressions in the Yana-Indigirka plain and the islands to the north of it. Their facies of deposits are analyzed. Their age and causes of origin are discussed. Age of the basins and their deposits is considered upper Quaternary and Recent, the basins originating as result of denudation of the alluvial plain stratum and in the process of tectonic subsistence. Thermokarst processes, development of thermokarst lakes, climatic conditions of development, and other aspects of these features are summarized. (DLC.)

75185. ROMANOVSKIĬ, N. N. K metodike issledovaniĭa otlozheniĭ s singeneticheskimi povtornozhil'nymi l'dami. (Merzlotnye issledovaniĭa. Sbornik statei 1961. vyp.1, p.11-20, illus. table.) 11 refs. Text in Russian. **Title tr.:** On methods of investigating deposits with syngenetic multiple ice veins.

Reports distribution of such deposits in northeastern USSR and central Yakutia, with attention particularly to the Yana-Indigirka lowland, East Siberian Islands, and the Verkhoyansk folded mountain zone. Two complexes are distinguished: those of polygonal floodplains, and those of erosion-thermokarst basins. Their spore-pollen spectra are described and interpreted. The vegetation remains reveal climatic conditions of the deposits' formation and enable reconstruction of the paleogeography of the regions. (DLC.)

75186. ROMANOVSKIĬ, N. N. Nabliūdeniĭa za obrazovaniem melko-bugristykh form rel'efa. (Merzlotnye issledovaniĭa. Sbornik statei 1961. vyp.1, p.106-111, illus.) 2 refs. Text in Russian. **Title tr.:** Observation of formation of small-hummocky relief forms.

Describes and illus. the transition of desiccation polygons into fine-hummocky relief forms, as observed in the floodplain terraces of small rivers in northeastern Yakutia. First, undulating ripples occur close to the bed, they develop into convex polygons, and later into small hummocks. (DLC.)

75187. ROMANOVSKIĬ, N. N. O stroenii IAno-Indigirskoĭ primorskoĭ allūvial'noĭ ravniny i usloviĭakh ee formirovaniĭa. (Merzlotnye issledovaniĭa. Sbornik statei 1961. vyp.2, p.129-38, illus., table, diagr.) 14 refs. Text in Russian. **Title tr.:** On the structure of the Yana-Indigirka maritime alluvial plain and its formation conditions.

Reports a 1956-1957 field study on Bol'shoy Lyakhovskiy Island and the northern Yana-Indigirka plain. A horizon of aleurites studied is considered of lagoon genesis. Further deposits of the "lower," and the polygonal floodplain are described, noting their lithologic properties, distribution of facies, deposition conditions, and other features. Mammal remains found in the polygonal floodplain are listed. Alluvial plain structure and development are characterized. (DLC.)

ROMANOVSKIĬ, N .N., *see also* Rapoport, L.G., & N.N. Romanovskiĭ. Diatomovaĭa flora . . . 1961. No. 75039

ROMASHEVA, N. N., *see* Lepeshkov, I.N., & *others*. Prirodnye soli . . . 1962. No. 73433

75188. ROMBANDEEVA, E. I. Kauzativnye glagoly v aktivnykh i passivnykh sintaksicheskikh konstrukciiakh mansiĭskogo iāzyka. (*In:* Akademiĭa nauk SSSR. Institut iāzykoznaniĭa. Voprosy finno-ugorskogo . . . 1962, p.236-56.) Text in Russian. **Title tr.:** Causative verbs in active and passive constructions in Vogul.

Morphological study of causative suffixes used with transitive and intransitive verbs. (DLC.)

ROMICK, GERALD J., *see* Alaskan Science Conference 1961. 1962. No. 69644

75189. ROMODINA, L. I. O korreliāciĭ razrezov verkhnego mela Prieniseĭskoĭ chasti Zapadno-Sibirskoĭ nizmennosti po tipomorfnym osobennostiām mineralov. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaia geologiĭa, 1961. vyp.17. Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.143-49, illus., table, text map.) 3 refs. Text in Russian. **Title tr.:** On correlation of sections of the Upper Cretaceous in the Cis-Yenisey part of the West Siberian plain, according to typomorphic features of minerals.

Reports study of color, crystallographic appearance, inclusions, character of surfaces, and other properties of typomorphic minerals in Upper Cretaceous deposits from the Yeloguy and other drillings in the Yenisey basin. Typomorphic minerals for these deposits are: tourmaline, zircon, garnet, and hornblende. They are described and correlated according to stages of the deposits and according to the drillings. This type of study

allows determination of the source areas of dispersal material. (DLC.)

75190. ROMODINA, L. I. Sravnitel'naĭa mineralogicheskaĭa kharakteristika alevritovoĭ i peschanoĭ fraktsiĭ mezozoĭskikh otlozheniĭ Prieniseĭskoĭ chasti Zapadno-Sibirskoĭ nizmennosti. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaĭa geologiĭa, 1960. vyp.10. Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.109-116, diagr.) Text in Russian. **Title tr.:** Comparative mineral characteristics of aleurite and sand fractions of Mesozoic deposits in the Cis-Yenisey part of the West Siberian plain.

Reports on material collected from the Yeloguy stratigraphic well on the middle reaches of that river. Calculated mineral composition of aleurite (size fraction 0.01-0.1 mm.) and sand (0.25-0.1 mm.) is presented for Middle and Upper Jurassic and Lower and Upper Cretaceous deposits and their stages. Mineral composition of the rocks indicates that these deposits may be divided into horizons. (DLC.)

75191. RONAYNE, MARK. Review of Canada's fisheries in 1961. (Canadian fisherman, June 1962. v.49, no.6, p.34, +, illus.)

Reports production and values on the east and west coasts and inland. Cod landings declined in Newfoundland, Great Slave and satellite lakes fishing increased in winter 1960-1961 over 1959-1960, yielding 2.3 million lbs. valued at $308,000; the summer production, 3.5 million lbs. worth $379,000, declined from 1960. Landings and values of the Northwest Territories inland fisheries 1941-1960 are given p.86, in a statistical summary. (DI.)

RONKINA, Z. Z., *see*

Basov, V.A., & *others*. Novye dannye . . . Khatangskoĭ vpadiny. 1962. No. 70061

Dibner, V.D., & *others*. Litologiia . . . 1962. No. 71010

75192. RONSON, WILLIAM. Stamps of the Arctic and of the Antarctic. (Explorers journal, June 1962. v.11, no.2, p.52-54, illus.)

Describes an exhibit of U.S. postage stamps, covers, etc., commemorating American explorations in the Arctic, especially those of the atomic submarine USS *Nautilus*. (DLC.)

ROOTS, ERNEST FREDERICK, 1923– , *see Polar record*. Field work. 1961-62. No. 74848

ROSANO, C. L., *see* Welch, H.F., & *others*. Hypothermia & blood ammonia. 1961. No. 76521

ROSE, DONALD CHARLES, 1901– , *see*

Lapointe, S.M., & D.C. Rose. Directional sensitivity . . . neutron monitors. 1961. No. 73310

McDiarmid, I.B., & *others*. Direct measurement of charged particles . . . 1961. No. 73682

Wilson, B.G., & *others*. Small cosmic-ray increases . . . 1962. No. 76574

ROSÉN, BENGT, *see* Dyring, E., & B. Rosén. Standard errors at harmonic analysis . . . 1961. No. 71166

ROSENBAUM, S., *see* Lewis, H.E., & *others*. Stability of BMR . . . 1961. No. 73472

75193. ROSENBLUM, EDWIN E. Distribution of sperm whales. (Journal of mammalogy, Feb. 1962. v.43, no.1, p.111-12.)

Notes the appearance of females in the California catches, polar range of the males, isolation of bachelor groups, etc. (DLC.)

75194. ROSENDAHL, GUNNAR P., 1919– . Bliver den grønlandske arbejder forbigået? (Grønland, Apr. 1961, nr.4, p.129-38, illus.) Text in Danish. **Title tr.:** Is the Greenlandic worker bypassed?

Defends the policy of Grønlands Tekniske Organisation on the employment and training of Greenlanders against implied criticism of Claus Bornemann in No. 63563. An August 1960 survey showed the summer labor force to be over 50% Greenlanders; and the ratio was even higher in the winter. Bornemann, q.v., replied. (DLC.)

75195. ROSENDAHL, GUNNAR P., 1919– . Grønland får sin første højskole. (Ingeniørens ugeblad, June 24, 1961. årg. 5, nr.25, p.1, illus.) Text in Danish. **Title tr.:** First high school in Greenland.

Describes school for 20 students to be built at Holsteinsborg and named Knud Rasmussen's High School. Nikolaj Rosing, a Greenlander, has been appointed principal. (DLC.)

75196. ROSENDAHL, GUNNAR P., 1919– . Grønlandske anlaegsarbejder for 77 mill. kr. (Ingeniørens ugeblad, May 6, 1961. årg. 5, nr.18, p.1, 18, diagr.) Text in Danish. **Title tr.:** Construction work in Greenland for 77 million kr.

Outlines the government construction program for 1961: housing, port and harbor installations, hospitals and schools, electric power development and others, for which nearly 8 million dollars has been allocated. Knud Rasmussen's church at the former Eskimo village of Thule is being dismantled for shipment to Holsteinsborg and re-erection there. (DLC.)

75197. ROSENDAHL, GUNNAR P., 1919– . Den nye kirke i Kapisigdlit. (Grønland, Aug. 1961, nr.8, p.300-301, illus.) Text in Danish. **Title tr.:** The new church at Kapisigdlit.

Describes this church opened in Dec. 1960; it is built of wood with a pitched roof, and accommodates two hundred; Kapisigdlit (64°26'N. 50°15'W.) is inland from Godthåb, West Greenland. (DLC.)

75198. ROSENDAHL, GUNNAR P., 1919– . Sukkertoppens havneproblem løses snart på radikal vis. (Ingeniørens ugeblad, July 22, 1961. årg. 5, nr.29, p.1, 16, diagr.) Text in Danish. **Title tr.:** The port problem at Sukkertoppen soon to be solved in a radical way.

Describes plans for a 40-m. pier on a small island in the harbor, to be connected with the town, across another island, a 40-m. suspension bridge and a mole. The mole provides wharfage for fishing vessels in a protected harbor, and a fish-processing plant on the intermediate island is planned. (DLC.)

ROSENDAHL, GUNNAR P., 1919– , *see also* Denmark. Byggeriet . . . 1959. No. 70968.

75199. ROSENDAHL, PHILIP, 1893– . Grønlandsk jagt- og fangststatistik. (Geografisk tids-

skrift 1961. bd. 60, p.16-38, map, diagrs., 3 fold. tables.) Text in Danish. Summary in English. **Title tr.:** Greenland hunting and catch statistics.

Discusses the range, quality and uses of these records, made locally for each hunter, assembled and pub. by government. They cover seal and fox from 1862; from 1900, all mammals and Greenland shark. The data reflect the northward extension of marine mammal range and invasion of cod during approx. 1915-1945, then southward again, showing temperature trends. Relative abundance of catch shows (inversely) relative need of food supplement from outside. Catch varies inversely with concentration of human population: hence the sparse distribution of hunters in the north and increasing concentration of population in more southerly fish-processing towns. The records indicate economic status and trends of communities as well as families, and guide planning in resettlement and development as well as welfare work. The individual records show a hunter's maximum ability in his 25-40 yr. age period. (DLC.)

ROSENDAL, HANS ERIK, *see* Putnins, P.H., & *others.* Some further studies . . . Greenland area. 1961. No. 74993

75200. ROSENGREN, STURE. Isens bärförmåga, praktiska överlagsberäkningar. (Skogen, Feb. 17, 1961. årg. 48, nr.4, p.69-70, tables, graph.) 4 refs. Text in Swedish. **Title tr.:** Carrying capacity of ice, practical estimates.

Describes various factors affecting the bearing strength of river and lake ice: mild and extremely cold weather, falling and rising water level, running water with warmer bottom layer, shallow water, snow cover, and contamination by plants or timber. An equation is offered for calculating maximum permissible loads for different areas, based on load radius and ice thickness. (DA.)

75201. ROSENKRANTZ, ALFRED, 1898– . Olie på havet. (Grønland, July 1962, nr.7, p.271-75, illus.) Text in Danish. **Title tr.:** Oil on the sea.

Comments on this phenomenon observed occasionally off Nûgssuaq, West Greenland, and on the speculation that it might have come from oil-bearing strata inland. The explanation is that glacial silt is carried out to sea by the river Kûgssuaq, its effluence approx. 70°30′N. 54°10′W. (DLC.)

75202. ROSENKRANTZ, ALFRED, 1898– . V.J.H. Nordmann, 23. februar 1872-31. januar 1962. (Grønland, Apr. 1962, nr.4, p.158-59, illus., port.) Text in Danish. **Title tr.:** V.J.H. Nordmann, 23 February 1872-31 January 1962.

Obituary of this Danish geologist and zoologist, noting his interest in Greenland, and his 1911 expedition to Nordre Strømfjord. (DLC.)

75203. ROSENQVIST, IVAN TH. Metamorfizm v ėpidot-amfibolitovoĭ fat͡siĭ kaledonskogo gornogo khrebta v Norvegii. (*In:* Akademiĭa nauk SSSR. Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii. Fiziko-khimicheskie problemy . . . 1961, t.1, p.307-312.) 11 refs. Text in Russian. Summary in English. **Title tr.:** Metamorphism in epidote-amphibolite facies of the Caledonian mountain chain in Norway.

Reviews publications concerning intermediate regional metamorphism in the epidote-amphibolite facies developed in the Sulitjelma area among others. This facies group gives very sensitive indications as to the physical and chemical conditions during metamorphism. Necessity of water is noted to develop the normal course of metamorphism. (DLC.)

ROSHCHIN, I. V., *see* Prokhorov, ĬU.D., & *others.* Issledovanie teplozashchitnykh svoĭstv odezhdy . . . 1961. No. 74961

ROSING, KALE, *see* Denmark. Greenland. 1961. No. 70974

ROSING, NIKOLAJ, *see* Rosendahl, G.P. Grønland . . . højskole. 1961. No. 75195

75204. ROSINOER, B. L., *and* **R. S. PERMIAKOV.** Sharoshechnoe burenie glubokikh vzryvnykh skvazhin na apatitovom rudnike im. S.M. Kirova. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.55-60, illus., tables.) Ref. Text in Russian. **Title tr.:** Rotary-bit drilling of deep blasting holes at the S.M. Kirov apatite mine.

Notes the doubling of output expected in the seven-year plan for the Apatit Combine on Kola Peninsula, and tests at the Kirov mine since Oct. 1958, with the induced block caving and deep blasting. Vertical holes of 30 m. average depth were drilled with an SB-4 machine using SSh-10-100 rotary bits under various conditions of work; and data on bit wear and performance are presented and discussed. (DLC.)

75205. ROSOWSKI, FRANCISZEK. Wpływ hipotermii na oddychanie wątroby psa po zamknięciu dopływu krwi i tlenu. (Acta physiologica polonica 1961. v.12, no.1, p.117-27, illus. tables.) 33 refs. Text in Polish. Summary in English. **Title tr.:** Influence of hypothermia upon hepatic respiration of dogs with blocked blood and oxygen supply.

Study of O_2-uptake by liver slices, both the hypothermic and control groups having blood and oxygen supply excluded. Increase of oxygen uptake was conspicuously higher in the hypothermic material than in the controls. (DNLM.)

75206. ROSOWSKI, FRANCISZEK. Wpływ hipotermii na zachowanie się psa po podwiązaniu tętnicy wątrobowej. (Acta physiologica polonica 1961. v.12, no.1, p.107-116, illus., tables.) 26 refs. Text in Polish. Summary in English. **Title tr.:** Effect of hypothermia upon the behavior of dogs, following ligation of the hepatic artery.

Hypothermic dogs tolerated ligation better than normothermic, anesthetized animals. Hypothermia, combined with block of the autonomous nervous system, had a profound effect on vascular reflexes, and the vessels of the portal system did not show increased pressure following manipulation of these vessels. (DNLM.)

75207. ROSS, ALEXANDER M. North to Ungava. (Queen's quarterly, autumn 1956. v.63, p.394-403.)

Describes a trip with a geological field party in August 1954 to an iron formation area held by Oceanic Iron Ore of Canada between Hopes Advance Bay and Payne River. The air trip from Roberval to Fort Chimo, Quebec, the landscape, flora and fauna are depicted. The Eskimos and their problems are discussed: excessive government support is said to be undermining their ability to

live off the land. A bright future for iron ore in the area is predicted. (CaOCU.)

ROSS, C. K., *see* Fofonoff, N.P., & C.K. Ross. Transport computations . . . 1961. No. 71449

75208. ROSS, CHARLES A., *and* **C. O. DUNBAR.** Faunas and correlation of the late Paleozoic rocks of northeast Greenland, pt.2, Fusulinidae. København, Reitzel, 1962. 55 p. 7 plates. (Meddelelser om Grønland, bd. 167, nr.5.) 23 refs.

Describes ten genera of these foraminifers in the Lower Marine group, from Holm and Amdrup Lands, and five genera in the Upper Marine. The former are close to forms in the Moscovian Series of the USSR, and the latter to the early Permian of the USSR. Though not all are described, 15 species are recognized in the Lower Marine group and six in the Upper. (DGS.)

ROSS, CHARLES A., *see also* Ross, J.P., & C.A. Ross. . . . Paleozoic NE Greenland Bryozoa. 1962. No. 75211

ROSS, D. B., *see*

Belrose, J.S., & D.B. Ross. LF propagation 11/12/60. 1961. No. 70124

Belrose, J.S., & D.B. Ross. Unusual LF propagation PCD. 1962. No. 70123

75209. ROSS, JOHN VICTOR. Deposition and current direction within the Yellowknife Group at Mesa Lake, N.W.T., Canada. (Geological Society of America. Bulletin, Sept. 1962. v.73, no.9, p.1159-62, map.) 8 refs.

Describes the 6500-ft. thick succession of metasedimentary rocks of the Yellowknife Group exposed in this 130 sq.-mi. area, 64°45′-65°N. 115°15′-115°30′W. about 200 mi. NNW of Yellowknife. In spite of three periods of folding, the original textures and structures are retained well enough to permit study of the mode of deposition and direction of transport. The succession consists of a monotonous series of graywacke-slate units with graded bedding, within which is one distinctive zone of metavolcanic rocks. Deposition apparently took place in a eugeosynclinal environment; a fairly constant southwesterly current direction is indicated, possibly parallel to the length of the basin of deposition. (DGS.)

75210. ROSS, JOHN VICTOR. Mesa Lake, District of Mackenzie, Northwest Territories. Ottawa, 1959. Fold. map 19 x 22.5 in. (Canada. Geological Survey. Surveys and Mapping Branch. Preliminary series, map 30-1959.)

Maps on scale of 1 in.: 1 mi. eleven Precambrian rock types, other geologic features, portages, streams, rapids, etc., in this wilderness area 64°45′-65°N. 115°15′-115°30′W., nearly 200 mi. north of Yellowknife. Brief descriptive notes are appended; nothing of economic interest was observed. (DGS.)

ROSS, JOHN VICTOR, *see also* McGlynn, J.C., & J.V. Ross. Geol. Basler L. 1962. No. 73695

75211. ROSS, JUNE PHILLIPS, *and* **C. A. ROSS.** Faunas and correlation of the late Paleozoic rocks of northeast Greenland, part 4; Bryozoa. København, Reitzel, 1962. 65 p. 18 plates, maps, diagrs., tables. (Meddelelser om Grønland, bd. 167, nr.7.) 47 refs.

Describes fossils collected in Holms and Amdrups Lands by Danish expeditions in 1906-1908 and 1938-1939. Of the 23 species included, ten are new. The bryozoans mostly stenoporids and fenestellids, are of Pennsylvanian and Permian age. Relations with faunas of similar age from USSR and Spitsbergen are considered. (DGS.)

75212. ROSS, REUBEN JAMES, *Jr.* Distribution of Ordovician graptolites in eugeosynclinal facies in western North America and its paleogeographic implications. (American Association of Petroleum Geologists. Bulletin, Mar. 1961. v.45, no.3, p.330-41, map.) 103 refs.

Includes description of exposures of these facies in eleven areas in Northwest Territories and Yukon, and nine in Alaska. Graptolites, the most abundant fossils, form a promising source of paleogeographic information; may serve as drift or current indicators. In general the eugeosynclinal rocks lie west of the miogeosynclinal facies. Possible relation of the Yukon facies with similar rock in Alaska and Melville Island should be investigated. (DGS.)

ROSS, W. A., *see* Crowe, B.W. Time lags first 32°F. & 0°F. . . . 1962. No. 70857

ROSSI, J. H., *see* Ellison, R.G., & *others*. Further studies . . . hypothermia. 1960. No. 71247

75213. ROSSOV, V. V. O kolebaniiakh temperatury v sisteme Gol'fstrim-Poliarnyĭ bassein. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten' 1959, no.2 (10), p.34-37, illus.) Text in Russian. **Title tr.:** Temperature fluctuations in the Gulf Stream - Polar Basin system.

Analyzes the concept of "autofluctuation" of the Atlantic-Polar Basin, propounded by V.V. Shuleĭkin (cf. No. 32022A, No. 27751) and offers own theory which claims an interplay of the warm Gulf Stream waters with those from the Arctic Basin. Meteorological, hydrographic and ice conditions of the areas in question are shown to be much influenced by this thermal interplay. (DLC.)

75214. ROSSOV, V. V. O sutochnykh kolebaniiakh temperatury vody v Barentsevom more. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biulleten' 1961, no.1 (15) p.33-35, map.) Text in Russian. **Title tr.:** Diurnal fluctuations of water temperature in the Barents Sea.

Discusses the range of these fluctuations (up to 6°-8°C.), and the causative factors: internal waves of cold water in summer, tidal waves, or currents. Areas where these fluctuations take place are treated in detail. (DLC.)

75215. ROSSOV, V. V. O vodnom i teplovom balanse Norvezhskogo i Grenlandskogo morei; po povodu stat'i G.N. Zaitseva "Teplovoĭ balans Norvezhskogo i Grenlandskogo morei i faktory, ego obrazuiushchie." (Okeanologiia, 1961. t.1, vyp.5, p.944-47.) 8 refs. Text in Russian. **Title tr.:** On the water and heat budget in the Norwegian and Greenland Seas; occasioned by G.N. Zaitsev's paper "The heat budget of the Norwegian and Greenland Seas and its determining factors."

Presents a critical analysis of No. 69345. Zaitsev's calculated values on inflow and outflow through various straits of these seas, are found

erroneous or not supported by observations. The same applies to the calculation on heat exchange. (DLC.)

75216. ROSSOV, V. V. O vybore naibolee ėkonomichnykh puteĭ dliā plavaniia iz Murmanska v raĭon N'iufaundlenda. (Murmansk. Poliārnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziāistva i okeanografii. Nauchno-tekhnicheskiĭ biūlleten' 1960, no.3 (13) p.10-14, map.) Text in Russian. **Title tr.:** Selection of the most economical route for sailing from Murmansk to the Newfoundland area.

Discusses best routes for fishing craft, according to the weather and sea conditions. Three are considered, depending on season of the year: a southerly route passing near the northern tip of the British Isles, and two northern, almost entirely arctic: one around the south and the other around the north coast of Iceland. (DLC.)

75217. ROSTOVTSEV, N. N. Usloviia formirovaniia gazovykh zalezheĭ v Berezovskom raĭone Zapadno-Sibirskoĭ nizmennosti. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaia geologiia, 1961. vyp.17, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.7-14, maps.) 12 refs. Text in Russian. **Title tr.:** Formation conditions of gas deposits in the Berezovo region of the West Siberian plain.

Discusses why some structures in this region are saturated with gas, while others of the same geologic structure are water saturated. Underground gas pressure and hydrostatic pressure are analyzed, with conclusion that in structures where the former is higher than the latter, gas accumulation is found. This method is considered of value for further studies of natural gas deposits in the Berezovo region. (DLC.)

ROTH, HANS, 1905–1951, *see* Madsen, H. Distribution of Trichinella . . . 1961. No. 73735

ROTH, URSULA, *see* Madsen, H. Distribution of Trichinella . . . 1961. No. 73735

ROTHSCHILD, M. A., *see* Schreiber, S.S., & *others.* Effect of ouabain . . . 1962. No. 75424

75218. ROTHWELL, P. Charged particles in the earth's magnetic field and the ionospheric F2 layer. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.1, p.263-70, graphs, tables, map.) 9 refs.

Suggests that large fluxes of ionospheric electrons and protons spiral along magnetic lines of force of the earth's field, linking two magnetically conjugate points in *F2* ionospheric layers of opposite hemispheres, to establish a near-equilibrium condition between their ionospheres such that equal fluxes of ionized particles are found at both places. The number of electrons and ions in the northern *F2* layer would depend on the ionization processes in the upper atmosphere of both hemispheres and their magnetically conjugate points. By analyzing this suggestion, and using data from 39 stations, 14 above 50°N., it was found that net fluxes of at least 10^8 ions per cm^2 per sec. should pass along the lines of force connecting conjugate points; therefore it should be possible for protons and electrons at 1500°K to establish the suggested equilibrium at latitudes below 60°. Experimental observations of daytime *F2* layer critical frequencies for the reflection of radio waves indicate these layers to be interrelated at the magnetically conjugate points, and therefore, lend support to this hypothesis. The ionosphere is considered a possible source of electrons trapped in the radiation belts. (DLC.)

75219. ROTMAN, V. K. O sootnoshenii iruneĭskoĭ i kirganikskoĭ svit tsentral'noĭ Kamchatki. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.80-82.) Text in Russian. **Title tr.:** On the relation of the Iruney and Kirganik series of central Kamchatka.

Reports a 1958 study of Cretaceous deposits in the Andrianovka - Levyy Kirganik interfluve, Sredinnyy Range. The Iruney and Kirganik series are considered independent strata. Their stratigraphy and lithology are discussed, and the latter of the two is divided into three subseries. (DLC.)

75220. ROUKHIIAINEN, M. I. K biologii zolotistoĭ vodorosli *Phaeocystis pouchetii* (Hariot) Lagerheim. (Akademiia nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp.4 (8), p.19-26, illus., table, maps.) 26 refs. Text in Russian. **Title tr.:** To the biology of the brown alga *Phaeocystis pouchetii* (Hariot) Lagerheim.

Reviews earlier studies on the taxonomy, biology, and occurrence of this common plankter, and discusses own investigation on its seasonal distribution in the southeastern Murman during 1954-1959. The upper 50 m. of the sea are considered and the density of *Ph. p.* in June of 1954 and 1958 mapped. (DLC.)

75221. ROUKHIIAINEN, M. I. Pervichnaia produktsiia planktona odnoĭ iz gub Barentseva moria. (Akademiia nauk SSSR. Doklady 1961. t.141, no.1, p.205-207, illus., table.) 13 refs. Text in Russian. **Title tr.:** Primary production of plankton in one of the Barents Sea bays.

Reports on weekly determinations of organic production in the Dal'ne-Zelenetskaya inlet, during Apr.-Nov. 1960. Three peaks of phytoplankton production (May, June, August-September) and its main elements are described. Data are compared with such of other seas. (DLC.)

75222. ROUKHIIAINEN, M. I. Sezonnost' v razvitii fitoplanktona v pribrezhnykh vodakh Vostochnogo Murmana. (Akademiia nauk SSSR. Murmanskiĭ morskoĭ biologicheskiĭ institut. Trudy 1962. vyp.4 (8), p.11-18, illus., tables.) 5 refs. Text in Russian. **Title tr.:** Seasonal development of phytoplankton in the coastal waters of the eastern Murman.

Reports on conditions in three levels of the upper 50 m. investigated in Dal'ne-Zelenetskaya Guba at ten-day intervals. Total number of cells as well as the number of diatoms and peridinians are presented, and the frequency of the main forms tabulated. Seasonal changes in phosphates, nitrites and nitrates are included. (DLC.)

75223. *ROUNDEL.* Sealift supply of DEW Line uses $6 million shopping list. (Roundel, June 1962. v.14, no.5, p.21, illus.)

Notes selected categories on the 750-page list of supplies shipped once a year to DEW Line stations, as well as the year-round airlift of perishable foods, etc. valued at $8 million. The sealift

has four sectors of operation: DEW Alaska, Mackenzie River, Foxe-Baffin, and DEW East (Greenland) areas. Types of craft used, routes followed, destinations, and the time element are indicated. (DLC.)

75224. ROURKE, G. F. Minor PCA events during March 1958. (Journal of geophysical research, Dec. 1961. v.66, no.12, p.4316-18, graphs.) 11 refs.

Notes two polar-cap absorption events and two sudden-commencement impulses, Mar. 11 and 14-15. Variations of f_{min}, at six arctic stations are shown, and the events are described briefly. (DLC.)

75225. ROURKE, G. F. Small-scale polar-cap absorption and related geomagnetic effect. (Journal of geophysical research, May 1961. v.66, no.5, p.1594-95, table, diagr.) 2 refs.

Offers an explanation for the high geomagnetic activity inside the polar cap relative to that in the auroral zone, observed on Dec. 17, 1957, and reported in No. 69251. Plots of f_{min} at seven polar stations are presented to show the relation of the high geomagnetic activity level to the influx of corpuscular radiation: intensification of the polar-cap current system due to energetic particles would result in a higher level of geomagnetic disturbance. (DLC.)

ROUSI, ARNE, *see* Marklund, G., & A. Rousi. Outlines of evolution . . . 1961. No. 73828

75226. ROUSSEAU, JACQUES, 1905– . La zonation latitudinale dans la péninsule Québec-Labrador. Paris, Sorbonne, École pratique des hautes Études, Centre d'Études arctiques et antarctiques, 1961. 64 p. map, table. 95 refs. Text in French. **Title tr.:** Latitudinal zonation in the Quebec-Labrador peninsula.

Discusses latitudinal effects: light, temperature, etc. on vegetation, as illustrated by the phytogeography of northern Quebec and Labrador. This area is divided into four bioclimatic zones: the temperate coniferous forest to approx. 51°N.; the subarctic taiga to 55°N., with an extension along the Kaniapiskau River; the hemiarctic forest tundra, to 57°N. in the west, 58°30′N. near George River, 56°N. in Labrador; and the arctic tundra. For each zone, the vegetation, climatic and ecological conditions, and main habitats with their representative plant species are described. Subject, plant, and geographic name indexes are included. (CaMAI.)

75227. ROUSSELIÈRE, GUY MARY. A few comments on the health services in the Arctic. (Eskimo, June-Sept. 1961. v.59, p.6-7, map.)

Cites inadequate medical care for Canadian Eskimos, especially lack of TB sanatoria in the North; hospitals with a doctor (three, compared to 15 in Greenland), first-aid posts and dispensaries with nurses, are indicated on map. (CaMAI.)

75228. ROUSSELIÈRE, GUY MARY. Inukkat Eskimo game. (Eskimo, Mar.-June 1962. v.61, p.3-9, +, illus.)

Describes this game, with several variations, as played with the bones from seal fins by Netsilik Eskimos at Pelly Bay, Keewatin District. The (50) bones are illus. with names. (CaMAI.)

ROUSSELIÈRE, GUY MARY, *see also*

Ebbesen, H. Schools Greenland bilingual. 1961. No. 71183

Kualut, P. Hero . . Ayoqe. 1962. No. 73172

75229. ROUX, JEAN PAUL. Le chaman altaïque d'après les voyageurs européens des XVII^{e} et XVIII^{e} siècles. (Anthropos, 1961. v.56, fasc. 3-4, p.438-58.) Refs. Text in French. **Title tr.:** The Altayan shaman according to European travelers of the 17th and 18th centuries.

The practices, costume, and equipment of the shaman in the Altay region as observed by Krasheninnikov, Gmelin, Georgi, and others, are compared with historical accounts of shamanism. Among others, the Kamchadals, Chukchis, Tungus, Yakuts, Samoyeds, Ostyaks, and Voguls are considered. (DSI.)

ROVNIN, L. I., *see* Dmitriev, E.IA., & *others*. Ocherednye zadachi geologorazvedochnykh rabot . . . 1962. No. 71039

75230. ROVSHA, V. S. O sostave tverdykh vkliuchenii v mineralakh-sputnikakh almaza. (Vsesoiuznoe mineralogicheskoe obshchestvo. Zapiski 1962. ser. 2, chast' 91, vyp.5, p.603-605, tables.) 9 refs. Text in Russian. **Title tr.:** On the composition of solid inclusions in minerals associated with diamonds.

Reports study of inclusions in chrome-spinel in the Aldanskaya kimberlite dike in Yakut ASSR. In the more than 1500 grains analyzed, 52 solid inclusions were detected, 32 of them olivine, 13 garnet, etc. Their optical properties are analyzed. (DLC.)

ROVSHA, V. S., *see also* Blagul'kina, V.A., & *others*. K mineralogii . . . 1962. No. 70245

ROWE, G. G., *see* Afonso, S., & *others*. Temperature variations . . . 1962. No. 69500

ROWINSKI, L. J., *see* Alaskan Science Conference 1960. 1961. No. 69643

75231. ROWLAND, LESLIE O. New equipment sparks big S.E.G. conference. (Oil in Canada, Sept. 27, 1962. v.14, no.48, p.15-19, illus.)

Includes photos of Nodwell and Bombardier vehicles under actual muskeg operating conditions. Mobility of both vehicles was shown in tests near Calgary. (DGS.)

75232. ROY, AMALENDU, *and others*. Angiographic study in hypothermia, with relation to circulatory pattern in heart and blood vessels of different regions. (Journal of experimental medical sciences, Dec. 1960. v.4, no.3, p.85-91, illus.) 8 refs. *Other authors:* P.K. Dey *and* S.R. Murkherjee.

Reported experiments in guinea-pigs and cats indicate a slow-down in circulation with progressing cooling. At moderate hypothermia (27-28°C.) distinct skiagrams of the heart and pulmonary bed were obtained; at deep hypothermia distinct venograms of the inferior vena cava, and of the hepatic, renal and mesenteric veins. Cardiac venous reflux occurred during cardiac failure and lack of forward pumping. (DNLM.)

75233. ROYAL GEOGRAPHICAL SOCIETY, *London*. Spitsbergen, southern Ny Friesland; from

surveys and compilation by the Cambridge Spitsbergen Expeditions, 1949-1958, under the direction of W.B. Harland and D. Masson-Smith. London, 1962. col. map sheet, 31″ x 35″.

Maps, at 1:125,000, an area approx. 78°25′-79°25′N. 15°45′-19°E. in central Vestspitsbergen comprising southern Ny Friesland, Bünsow Land, parts of Olav V and Dikson Lands. Geodetic and trigonometrical stations, heights in meters, the ice/rock boundary, rock and ice contours at 100 m. intervals, streams, lakes, moraines, alluvial and mud flats, and huts are shown. Of the 553 place names, 181 listed in the margin, are new. Insets are included of the Tempelfjorden area and central Vestspitsbergen. The latter, at 1:500,000, shows the Cambridge triangulation 1949-1956, Russo-Swedish geodetic stations, and areas previously mapped or charted. Preparation of the map by the Cambridge expeditions is described in a paper by W.B. Harland and D. Masson-Smith, q.v. (DNG.)

75234. ROYAL SOCIETY OF CANADA. Canadian population and northern colonization; symposium 1961, edited by V.W. Bladen. Toronto, Univ. of Toronto Press, 1962. 158 p. tables. (*Its:* Studia varia series, 7.) Refs.

In two parts, the first containing the symposium papers on general Canadian demography; pt. 2 on northern development (p.71-158) has a short introduction by R. Pomerleau, and five papers which are abstracted in this volume under the authors' names, viz:

BUCK, W.K., *and* J.F. HENDERSON. The rôle of mineral resources in the development and colonization of northern Canada.

HUMPHRYS, E.W. Possibilities of light and heat from atomic energy and other sources.

DUNBAR, M.J. The living resources of northern Canada.

BROWN, G.M. Man in the North.

LLOYD, T. The future colonization of northern Canada. (DLC.)

75235. ROYAL SOCIETY OF CANADA. Evolution: its science and doctrine; symposium . . . in 1959. T.W.M. Cameron, editor. Toronto, Univ. of Toronto Press, 1960. 242 p. (*Its:* Studia varia series, 4.) Refs.

Papers commemorating the centenary of publication of Darwin's *The origin of species;* two, pertinent to the North, are abstracted in this Bibliography under their authors' names, viz:

RUSSELL, L.S. Fossil mammals and intercontinental connections.

DUNBAR, M.J. The evolution of stability, natural selection at the level of the ecosystem. (DLC.)

75236. ROYAL SOCIETY OF CANADA. Soils in Canada; geological, pedological, and engineering studies. Edited by Robert F. Legget. Toronto, University of Toronto Press, 1961. x, 229 p. illus., maps, diagrs., graphs, tables. (Royal Society of Canada. Special publications no.3.) Refs.

Contains 17 papers comprising a symposium under the geological and allied sciences section of the Society at the June 1960 meeting. Four are of arctic interest, two of them* abstracted under their authors' names:

*PREST, V.K. Geology of the soils of Canada.

*RADFORTH, N.W. Organic terrain.

McLeod, N.W. Influence of geology on the design and construction of airports, p.193-99, notes among others the problems resulting from permafrost at Inuvik airport, Mackenzie District.

Legget, R.F., *and* R.M. Hardy, Engineering significance of soils in Canada, p.218-29, reviews soil problems encountered in civil engineering, including muskeg, permafrost, etc., and their correlation with geology. (DLC.)

75237. ROYAL SOCIETY OF CANADA. The tectonics of the Canadian Shield. Edited by John S. Stevenson. Toronto, 1962. x, 180 p. illus., diagrs., tables, maps incl. 5 fold. (*Its:* Special pub. no.4) Refs. Symposium held in Section IV, Geological Sciences, of the Society meeting in Montreal, June 6-7, 1961.

Considers the structural geology of the Shield, largely during the Precambrian, but partly related to orogenic events of more recent periods. Editor's introduction is followed by 14 papers, 10 of them on arctic or sub-arctic portions of the Shield, and these* are abstracted in this Bibliography under the author's name, viz:

*STOCKWELL, C.H. A tectonic map of the Canadian Shield.

*LANG, A.H. On the relation of metal occurrences to tectonic divisions of the Canadian Shield.

*BURWASH, R.A., *and* H. BAADSGAARD. Yellowknife-Nonacho age and structural relations.

Godfrey, J.D., *and* H. Baadsgaard. Structural pattern of the Precambrian Shield in northeastern Alberta and mica age-dates from the Andrew Lake district, p.30-39.

*BYERS, A.R. Major faults in western part of Canadian Shield with special reference to Saskatchewan.

*WILSON, H.D.B., *and* W.C. BRISBIN. Tectonics of the Canadian Shield in Northern Manitoba.

Thomson, J.E. Extent of the Huronian system between Lake Timagami and Blind River, Ontario, p.76-89.

*PARKINSON, R.N. Operation Overthrust.

Hewitt, D.F. Some tectonic features of the Grenville province of Ontario, p.102-117.

Osborne, F.F., *and* M. Morin. Tectonics of part of the Grenville subprovince in Quebec, p.118-43.

*BERGERON, R., *and others.* Tectonics of regions bordering the Ungava stable area.

*DOUGLAS, R.J.W., *and* S. DUFFELL. Some aspects of phanerozoic epeirogenic and orogenic events that involve Precambrian rocks.

*SPROULE, J.C. The tectonics of the Canadian Shield and adjoining sedimentary basins in relation to oil and gas occurrences.

*WILSON, J.T. The effect of new orogenetic theories upon ideas of the tectonics of the Canadian Shield. (DGS.)

ROYCE, WILLIAM F., *see*

Alaska. Forecast Bristol Bay red salmon . . . 1961. No. 69613

Alaskan Science Conference 1960. 1961. No. 69643

75238. ROZANOV, ARKADIĬ. Brat polīarnykh moreĭ. (Sem'ia i shkola, Jan. 1961. god 16, no.1, p.30-33.) Text in Russian. **Title tr.:** Brother to the polar seas.

Describes his voyage on the diesel vessel *Anton Rubinshtein* down the Yenisey, with stops at Kureyka, Turukhansk, Igarka, Dudinka, and a side-trip to Noril'sk. Schools and school activities of each town are sketched. The forest sanitarium boarding school at Ust'-Khantayka, near Dudinka, houses about seventy 7-to-10-year olds, mostly aborigines of the Taymyr Peninsula. (DLC.)

75239. ROZENTALS, A. Nekotorye voprosy pravil'nogo primeneniia PPSS. (Morskoĭ flot, July 1961. god 21, no.7, p.16-18.) Text in Russian. **Title tr.:** Comments on the correct use of PPSS.*

Discusses, inter alia, the validity of these navigational rules in ice convoying, for which special directives exist also. Examples are given of conflicting interpretations of signals. Conclusion is reached that the special rules for ships escorted by icebreakers govern only the order (place) of the ships in the convoy and may never be substituted for PPSS. Comments offered by I. Siasin, q.v. (DLC.)

75240. ROZENTUL, È. B. O soderzhanii shchelochnoĭ fosfatazy krovi u beremennykh, rozhenits i rodil'nits v usloviiakh Zapolīar'ia za zimniĭ period. (Sovetskaia meditsina, July 1960. god 24, no.7, p. 119-23, tables.) 2 refs. Text in Russian. **Title tr.:** Content of alkaline phosphatase in the blood of gravidae, parturients and puerperae under arctic winter conditions.

Report on study of 655 women, mostly examined every month. The activity of alkaline phosphatase increased with pregnancy, especially in its second half, and during the polar night. Birth frequency and length of arctic residence had no effect on the blood content of phosphatase. The relation of this enzyme to vitamin D (deficiency) is noted. (DNLM.)

ROZHDESTVENSKAIA, A. A., *see* Polenova, E.N., *& others.* Sopostavlenie . . . 1962. No. 74851

75241. ROZHKOV, A. S., *and others.* Ob izmenenii soderzhaniia polisakharidov v stvole listvennitsy, povrezhdennoĭ sibirskim shelkopriadom. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961. no.2, p.125-27, table.) 2 refs. Text in Russian. *Other authors:* B.P. Sendarovich *and* K.N. Danovich. **Title tr.:** Change of the poly-saccharides content in the stem of larch damaged by the Siberian egger.

Reports a study of *Dendrolimus sibiricus* Tschetv. damage in 1957-1959. Data are tabulated and discussed on content of cellulose, lignin, poly-saccharides, fat and tar in various parts of the larch stem. The poly-saccharides content in the upper part of damaged trees was a third that in non-damaged trees. (DLC.)

75242. ROZHKOV, IVAN SERGEEVICH, 1908– . Genezis nizhneĭurskikh almaznykh rossypeĭ v raĭone trubki "Mir." (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniia 1960. vyp.3, p.14-17.) 3 refs. Text in Russian. **Title tr.:** Genesis of the Lower Jurassic diamond placers in the Mir pipe region.

Discusses climatic conditions, crust weathering, lithology, petrographic and mineralogic composition, age, mode of occurrence and other features of Lower Jurassic deposits in respect of diamond placer accumulation. The largest concentrations of diamonds are found in sandy-gravelly pebbles, formed by temporary streams. Washout of kimberlite pipes, distribution of diamond-bearing pebbles, erosion, and other processes relating to the genesis of Lower Jurassic diamond placers in Malaya Botuobuya River region are considered. (DLC.)

75243. ROZHKOV, IVAN SERGEEVICH, 1908– , *and others.* K voprosu o perspektivakh razvitiia oloviannoĭ promyshlennosti i osnovnye zadachi nauchnykh issledovaniĭ. (Geologiia i geofizika, 1962, no.4, p.3-12, text map.) 6 refs. Text in Russian. Summary in English. *Other authors:* B.L. Flerov and K.G. Kondakov. **Title tr.:** On prospects of tin industry development and the main tasks of research.

Characterizes the metallogeny of tin of the Pacific belt, a wide region roughly east of the Lena. The Kolyma medial massif, Okhotsk-Chukotka volcanic zone and some other arctic areas are included in the review. Appraisal is made of prospects and importance of various types of tin-bearing deposits. Geologic and mining activities for the organization and establishment of a tin industry are summarized, and the economic problems discussed. (DLC.)

75244. ROZHKOV, IVAN SERGEEVICH, 1908– . Morfologicheskie i geneticheskie tipy rossypeĭ chetvertichnogo vozrasta i ikh sravnitel'naia tsennost'. (*In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.1, p.104-115, tables.) Text in Russian. **Title tr.:** The morphologic and genetic types of placers of Quaternary age and their comparative value.

Reviews the distribution of Quaternary placers in the Aldan shield, Siberian platform and other areas of the USSR. Valley, channel-lag, ravine and other placers are described; genetic and morphologic types are distinguished. Regionalization of Quaternary placers is outlined: 15 provinces are recognized, among them the Lena, Aldan, Siberian, Yenisey, etc. Valley and channel placers are considered to have the best value. (DLC.)

75245. ROZHKOV, IVAN SERGEEVICH, 1908– . Nauka v Sovetskoĭ IAkutii. (Akademiia nauk SSSR. Vestnik, Nov. 1962. god 32, no.11, p.70-75.) Text in Russian. **Title tr.:** Science in Soviet Yakutia.

Surveys its status: the 665 elementary-secondary schools with six thousand teachers and a hundred thousand pupils, 5,200 students in technical, etc. schools, and 2,700 at Yakutsk University, The Yakut Branch of the Academy of Sciences' Siberian Division heads scientific work with its Institutes of Geology, Biology, Cosmophysical investigations and aeronomy, Language, literature and history; achievements of the Institute of Geology in mineral explorations and the work of the

* PPSS—Pravila dlia preduprezhdeniia stolknoveniĭ sudov v more, i.e. Regulations for prevention of collisions of vessels at sea.

other institutes are noted with reference to their publications. The Institute of Biology's work on avifauna is noted. (DLC.)

75246. ROZHKOV, IVAN SERGEEVICH, 1908– , *and others*. Nekotorye osobennosti geologii i metallogenii raĭona verkhnego techeniĭa r. Indigirki. (Geologiĭa i geofizika, 1961, no.11, p.3-13, tables, map, diagr.) 9 refs. Text in Russian. Summary in English. *Other authors:* G.A. Grinberg *and* G.G. Kukhtinskiĭ. **Title tr.:** Some features of the geology and metallogeny of the upper Indigirka River region.

Presents a tectonic regionalization. Medial massifs, mobile geosynclinal zones and fold – block structures are analyzed. Tectonic structures controlling gold-bearing deposits are evaluated. New data are given on the absolute age of igneous rocks. These data show evidence of no clear distinction between intrusions of folded and post-folded stages and of their belonging to one magmatic complex. Structural types and stages of mineralization of gold-bearing deposits are treated. (DLC.)

75247. ROZHKOV, IVAN SERGEEVICH, 1908– , and **B. G. LUTTS.** Vsesoĭuznoe soveshchanie po geologii almaznykh mestorozhdeniĭ. (Geologiĭa i geofizika, 1961, no.11, p.122-25.) Text in Russian. **Title tr.:** All-Union Conference on the geology of diamond deposits. Also reported in *Geologiĭa rudnykh mestorozhdeniĭ*, Nov.-Dec. 1961, p.122-23.

Describes the scope and program of this conference at Yakutsk, June 26-29, 1961, with about 150 present and 40 papers delivered. The geology and tectonics of diamond regions, geology of primary deposits and placers, were dealt with, as well as the petrography and mineralogy of kimberlites, and the crystallography of diamonds. Some of the papers are briefly summarized. Results achieved and plans for further studies are reported; a coordinating committee in study of diamonds is suggested and the next conference set for 1969. (DLC.)

75248. ROZHKOV, IVAN SERGEEVICH, 1908– , Zakonomernosti formirovaniĭa rossypnykh mestorozhdeniĭ vostochnoĭ chasti Sibirskoĭ platformy. (Vsesoĭuznaĭa ob"edinennaĭa sessiĭa po zakonomernostiam razmeshcheniĭa poleznykh iskopaemykh i prognoznym kartam, 2d, *Kiyev*, 1960. Doklady sessii, chast' 2, p.91-114, tables, diagrs.) 10 refs. Text in Russian. **Title tr.:** The formation laws of placer deposits in the eastern part of the Siberian platform.

Outlines diamond, gold and platinum placer formation. The original source of diamond placers is kimberlite pipes, whose age, depths, weathering, etc. are outlined, and diamond placer formation discussed, with specific reference to the Mir, Pyatachok, and other pipes. Genetic types of diamond placers are analyzed; and the gold and platinum placers in the Aldan shield are considered in relation to type and other features. (DLC.)

ROZHKOV, IVAN SERGEEVICH, 1908– , *see also* Nekrasov, I.I͡A., *&* *others*. Zolotonosnost' . . . 1961. No. 74275

ROZOV, N. N., *see*

Ivanova, E.N., *&* N.N. Rozov. Classification of soils . . . 1960. No. 72475

Ivanova, E.N., *&* *others*. Novye materialy . . . 1961. No. 72477

75249. ROZOV, N. S. Antropologicheskie issledovaniĭa korennogo naseleniĭa Zapadnoĭ Sibiri. (Voprosy antropologii, 1961. vyp.6, p.71-91, tables.) 33 refs. Text in Russian. **Title tr.:** Anthropological investigations of the aboriginal population of Western Siberia.

Analyzes and tabulates comparative cranial and facial characteristics, eye and hair color of Vas'yugan River Ostyaks, Sel'kups (Samoyeds), Evenki (Tungus) and others. All the ethnic groups studied, notwithstanding local differences due to historical and geographical factors, are considered as belonging to the Uralian race. The genesis of the latter, the autochthonus West-Siberian nature of the flat-face type with weakened Mongoloid traits, and the geographic diffusion of Europoid traits are discussed. (DLC.)

ROZOV, V. N., *see* Milovanova, I.B., *&* *others*. Ėkstraktsionnyĭ sposob . . . 1962. No. 74034

75250. ROZOVSKY, H. Dust collection at the Carol Project, Iron Ore Company of Canada. (Canadian Mining and Metallurgical Bulletin, Oct. 1962. v.55, no.606, p.716-23, illus., map, diagrs., table.) Presented at Forum on Dust Collection, Canadian Institute of Mining meeting, Ottawa, Apr. 1962.

Describes location, facilities, ore composition, preventative measures; also mining, crushing, storage and ore reclamation processes, as well as grinding and classification operations at this concentrating plant near Wabush Lake, Labrador. Details of dust collection and removal methods at various stages on the project are presented and shown on diagrams. Actual concentration of the ore takes place in the wet state, by use of spiral concentrators, with provision for possible flotation or magnetic separation if required. Dust collection in the concentrating plant is carried out by 23 wet scrubbing systems of which 12 are assigned to grinding and 11 to plant dust control. Studies and designs have been made for two years; a dust laboratory provides facilities for control and research. (DGS.)

75251. RUBEL, ARTHUR J. Partnership and wife-exchange among the Eskimo and Aleut of northern North America. (Alaska. University. Anthropological papers, Dec. 1961. v.10, no.1, p.59-72.) 23 refs.

Comparative study of "institutionalized associations contracted between two or more males" involving periodical gift exchange, wives being the most valuable of such gifts. Cases reported in the ethnographic literature of 1888-1960 are described and authors' deductions evaluated. Wife-exchange is considered primarily a means of achieving economic and social aid from associates other than close kin, and is most frequent between cross-cousins. Research on Eskimo and Aleut behavior toward neighbors in the new urban environment is urged before complete acculturative disintegration of aboriginal social organization. (DSI.)

75252. RUDAKOV, S. V. O proizvodstvennom obuchenii uchashchikhsîa ix-xi klassov shkol Komi ASSR. (Shkola i proizvodstvo, Sept. 1961. god 5, no.9, p.17-22.) Text in Russian. **Title tr.:** Vocational training of 9th-11th graders in the schools of the Komi ASSR.

The minister of education discusses shop training in the top grades of secondary schools. Data given include two urban and a rural school in the North, at Ukhta, Vorkuta and Koslan. Each school's vocational courses are oriented toward a specific industry, hence students should select the school they attend according to training desired. (DLC.)

RUDENKO, I. A., *see* Nadubovich, IÛ.A., & I.A. Rudenko. O periodicheskikh izmeneniîakh svetovogo potoka . . . 1962. No. 74197

75253. RUDENKO, SERGEĬ IVANOVICH, 1885–
The ancient culture of the Bering Sea and the Eskimo problem. Translated by Paul Tolstoy. Toronto, Univ. of Toronto Press, 1961. 198 p. text maps, illus. on 38 plates. (Arctic Institute of North America. Anthropology of the North: translations from Russian scources, no.1.) 149 refs.

Translation of No. 14977, edited by Henry N. Michael. (CaMAI.)

RUDICH, E. M., *see*
Belousov, V.V., & E.M. Rudich. Island arcs Okhotsk. 1961. No. 70114
Pacific Science Congress. 1961. No. 74619

75254. RUDKEVICH, M. ÎA. K voprosu o stroenii podniatiîa Muzhinskiĭ Ural. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'îa. Trudy, ser. neftîanaîa geologiîa, 1961. vyp.14, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.21-25, text map, profile.) 4 refs. Text in Russian. **Title tr.:** Structure of the Muzhi Ural uplift.

Reports five drillings, electric and seismic loggings carried out by the Tyumen Geological Survey, along the line Muzhi – Til'tim, 65°22′N. 64°40′E. – 65°14′N. 63°31′E. in 1958-1959. Profile of a drilling to 385 m. depth is presented and described. Quaternary deposits more than 300 m. thick are found in some drillings. In others they cover Cretaceous deposits. Uplift of the Urals in the Muzhi area is described. It is considered to be of tectonic nature and the main phase of its growth in Upper Quaternary time. (DLC.)

75255. RUDKEVICH, M. ÎA., *and* **A. P. OSLOPOVSKIĬ.** O prirode dislokatsii paleogenovykh otlozheniĭ v basseine r. Poluîa v Nizhnem Priob'e. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'îa. Trudy, ser. neftîanaîa geologiîa, 1961. vyp.14, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.15-20, text map, profiles.) 3 refs. Text in Russian. **Title tr.:** Nature of the dislocations of Paleogene deposits in the Poluy River basin, lower Ob region.

Reports the 1958-1959 drilling and seismic investigations along the Poluy from Salekhard to the junction of the Sukhoy and Glubokiy Poluy. Salekhard-Poluy and Tanopcha-Nadym profiles are illus. and described. Relief structure and distribution of Paleogene and Quaternary deposits are characterized. Recent tectonic differentiated movements are recognized and interpreted. Glacial dislocations are noted. (DLC.)

75256. RUDKEVICH, M. ÎA., *and* L. M. ZOR'KIN. Perspektivy neftegazonosnosti priural'skoĭ chasti Zapadno-Sibirskoĭ nizmennosti. (Sovetskaîa geologiîa, Feb. 1961, no.2, p.6-22, maps.) 27 refs. Text in Russian. Summary in English. **Title tr.:** Prospects for oil and gas in the western Ural part of the West Siberian lowland.

Reports the main features of the area between the Ural Mts. and the Ob River. The Mesozoic-Cenozoic cover and its tectonic structure are analyzed, and summarized on map. Characteristics of gas and oil occurrences are given. The Berezovo region gas is under development, the others still in the prospecting stage. Appraisal of gas and oil prospects is offered for various parts of the West Siberian lowland noting direct evidences, structural factors, lithologic properties, hydrogeologic conditions, and other criteria. The Khanty-Mansiysk depression and the northern part of the Ob valley are considered the most promising areas. (DLC.)

RUDKEVICH, M. ÎA., *see also* Gurari, F.G., & *others.* O stratifikatsii . . . 1962. No. 71914

75257. RUDKIN, AL. We lived on the Arctic Islands. (Imperial oil review, Aug. 1961. v.45, no.4, p.21-25, illus., part. col.)

Recounts experiences (as told to G. Wesley) during geological investigations of the oil potential in the Canadian Arctic Islands in summer 1960. Eleven islands were visited by Piper Cub aircraft. The landscape, weather, animal and plant life are described, the isolation and need for mental preparedness noted. (DGS.)

RUDNICKI, W., *see* Canada. Northern welfare '62. 1962. No. 70539

RUDO, F., *see* Bessman, S.P., & *others.* Relation of blood pH . . . 1961. No. 70186

75258. RUDOVSKAÎA, L. N. TSirtolity iz pegmatitov Severo-Zapadnogo Belomor'îa. (Akademiîa nauk SSSR. Institut mineralogii, geokhimii i kristallokhimii redkikh èlementov. Trudy 1962. vyp.8, p.212-19, tables.) 5 refs. Text in Russian. **Title tr.:** Cyrtolites of pegmatites in the northwestern White Sea region.

Presents a mineralogic description of cyrtolite (related to zircon), the most widely distributed accessory mineral in granite pegmatites of the region. According to morphologic features, four varieties are distinguished and characterized. Physical properties and chemical analyses are reported. The hafnium, scandium, and beryl content are calculated and compared. Formation conditions are discussed. (DLC.)

RUILÎA, K., *see* German, IÛ., & K. Ruilîa. Vozrozhdennoe plemîa. 1961. No. 71659

75259. RUKHINA, EVGENIÎA VALERIANOVNA. Litologicheskie osobennosti moreny poslednego oledeneniîa i ispol'zovanie ikh pri stratigraficheskikh issledovaniîakh na primere severo-zapadnoĭ chasti Russkoĭ platformy. (*In:* Vsesoîûznoe soveshchanie po izucheniîû chetvertichnogo perioda. Materialy . . . 1961, t.1, p.205-211.) 19 refs. Text in Russian. **Title tr.:** Lithologic features of moraines of the last glaciation and their use for

stratigraphic studies as exemplified by the northwestern part of the Russian platform.

Reports a study on grain size of moraines, their mineral and petrographic composition, in the Kola Peninsula, Karelia and Leningrad regions. Prevailing patterns in lithologic variations of moraine materials are summarized and their use indicated for stratigraphic purposes. (DLC.)

75260. RUMI, G. C. Preliminary results of Experiment Luxembourg. (*In:* NATO. Radio wave absorption . . . *pub.* in Journal of atmospheric and terrestrial physics, Dec. 1961, *pub.* 1962. v.23, p.101-105, table, graphs, diagr.) 3 refs.

Outlines experiment in operation at the University of Alaska, College, to determine electron collision frequency and electron density as a function of height in the *D*-region (cf. No. 67889-67892.) Observations during a brief period in 1960 indicated an electron-neutral particle collision frequency of 2×10^8 sec. and electron density $1.2 \times 10^7/m^3$ at 48 km. height. (DLC.)

75261. RUNCORN, STANLEY KEITH, 1922– . Climatic change through geological time in the light of the palaeomagnetic evidence for polar wandering and continental drift. (Royal Meteorological Society, Quarterly journal, July 1961. v.87, no.373, p.282-313, illus., maps, graphs, tables.) Napier Shaw Prize Essay 1959.

Discusses the evidence supplied by paleomagnetic surveys in the search for a physical method of determining changes of latitude and climate in the geologic past. Assuming that the average geomagnetic field is a dipole along the axis of rotation, paleomagnetic evidence shows the Tertiary pole located near the present geographical pole, and distinctly different from the present magnetic pole. Systematic differences shown by paleomagnetic surveys of the various continents are unexplained before Tertiary time; thus continental drift as well as polar wandering must be considered. Paleowind observations from Great Britain and western United States agree with paleomagnetic indications that Europe and North America were in low latitude between the Devonian and the Triassic. Explanation of continental drift involves the assumption of convection currents in the earth's mantle. Climatic oscillations during the four ice ages of Pleistocene times and the presumed similar retreats and advances in the Permo-Carboniferous ice age require further determinations of pole position for explanation, and may test Ewing and Donn's suggestion that the pole moved into the Arctic Ocean (No. 44828, 50818). (DWB.)

75262. RUNEVA, NINA PETROVNA, 1930– . Novye dannye o mikrofaune iz mezozoĭskikh otlozheniĭ IAkutii. (Leningrad. Vsesoĭuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp.186, Geologicheskiĭ sbornik no.6, p.64-77, table.) 7 refs. Text in Russian. **Title tr.:** New data on the microfauna of Mesozoic deposits in Yakutia.

Reports study of Lower and Middle Jurassic microfauna collected from exposures and drill cores in the Vilyuy syncline, Verkhoyansk trough and other regions. Of the 1258 samples analyzed, 252 had microfauna which was identified: 42 species of foraminifers and five of ostracods. Their stratigraphic distribution is described, and abundance noted in clays, argillites, silts, less in sandstones and limestones. (DLC.)

75263. RUONG, ISRAEL, 1903– . Något om den gamla skogsrenskötseln i Avridsjaurs socken. (Geographica 1944. nr.15, p.92-101, text map.) Refs. Text in Swedish. **Title tr.:** Note on the old forest-reindeer husbandry in Arvidsjaur parish.

Reviews briefly the traditional annual cycle of this occupation in Swedish Lapland. Some of the land in Arvidsjaur is still held by the forest Lapps, and, with parts of Jokkmokk and Malå parishes remains typical forest-Lapp country. The early separation of these Lapps from the nomadic group is indicated in some 23 Lappish geographic terms which are translated, and accompany map. (DLC.)

75264. RUONG, ISRAEL, 1903– . Om renskötselformer. (Samefolket, June-July 1951, no.6-7, p.100-104, illus.) Text in Swedish. **Title tr.:** On different forms of reindeer husbandry.

Surveys the various uses of reindeer: as draught animals, for milking, for meat production. The industry in Sweden is now almost exclusively concerned with meat production, and a crisis has developed in a culture that was based on a reindeer husbandry, with the loss of practical experience in tending the animals, breeding, etc. (SPRI.)

75265. RUONG, ISRAEL, 1903– . Renforskningens organisation. (Samefolket, Jan. 1961, nr.1, p.26-28.) Text in Swedish. **Title tr.:** The organization of reindeer research.

Summarizes report of a special commission of enquiry into reindeer research in Sweden, as started in 1947. In 1951 Lappväsendets renforskning was set up, and the Kuolpavare research station near Gällivare was opened in 1954. A reindeer consultantship was created at the state school of veterinary medicine in 1955, and the so-called reindeer committee formed in 1956. Another research station at Serri near Jokkmokk is sponsored by the state water resources board. The Commission recommends that the two research stations be coordinated and that a state organ for reindeer research be set up; the composition and organization of latter are suggested. (SPRI.)

75266. RUONG, ISRAEL, 1903– . Samerna som namader och bofasta. (Samefolket, Jan. 1961, no.1, p.6-14, illus., maps.) Text in Swedish. **Title tr.:** The Lapps as nomads and settlers.

Reviews the development of nomadism among northern Scandinavian Lapps. The original form of Lapp economy was hunting and fishing combined with the keeping of a few domesticated reindeer (semi-nomadism). The mountain reindeer husbandry (complete nomadism) developed during the 16-18th centuries, particularly in Sweden. As communications improved, nomadism has decreased as groups of families remain permanently by the spring and autumn pastures on the lower mountains and in the birch forest belt. Thus a new kind of semi-nomadism has arisen, and reindeer husbandry no longer constitutes the sole occupation. In Finland and Norway, nomadism never developed to the same extent as in Sweden, mainly because of different ecological conditions. The political inactivity of the Lapps in Sweden is pointed out and various explanations of it are cited. (SPRI.)

RUONG, ISRAEL, 1903– . *see also* Näslund, M., & *others*. Samernas skolgång; betänkande . . . 1960. No. 74203

75267. RUSANOVSKIĬ, N. S. I v tundre zashumit les. (Put' i putevoe khoziaĭstvo, June 1961. god 5, no.6, p.31-33, port.) Text in Russian. **Title tr.:** The forest will rustle in the tundra, too.

Reports activities of the Severnaĭa Railroad forest shelter belt experiment station at Seyda, 67°05′N. 63°07′E. The task of the station is to work out methods of protecting the railway crossing the tundra from snow. Its first efforts growing 15 species of cold-resistant trees and shrubs on tundra soil in 1954 failed: all the plants were dead by 1956, except a few spruce, larch, willow, birch, pine and dog rose. A new series was started in 1959 after improving the physical and biological properties of the soil and using only species which had survived the first experiment; results in 1960 seem promising. (DLC.)

75268. RUSCK, ÅKE, *and* **G. WESTERBERG.** Underground hydro-electric power stations in Sweden. Stockholm, Swedish State Power Board, 1960. 8 p. illus., diagrs., graph. (Sweden. Vattenfalls styrelsen. Publication no.9.)

Stresses need for efficient use of the abundant water-power resources, because coal, oil, and natural gas are lacking in Sweden. Power stations are planned and built to utilize the head of the falls and the rapids to best advantage, and they can now be concentrated in a single power station because of improved digging and blasting techniques. If the rock is of good quality, the generators may be built underground, and the tail-race may be partly or entirely in the form of a tunnel. Four plants, two in operation, but not identified, are described. Numerous operational problems have accompanied the transfer of the center of power production to northern Sweden, where the less developed plants are operated at full capacity for long periods. (DLC.)

75269. RUSH, BENJAMIN F., *Jr., and others.* Effects of total circulatory standstill in profound hypothermia. (Surgery, July 1961. v.50, no.1, p. 40-49, illus., tables.) 11 refs. *Other authors:* R.J. Wilder, R. Fishbein *and* M.M. Ravitch.

Reports on dogs made hypothermic to 4°C., with circulation arrested for two hours, and then rewarmed. Changes in blood flow, temperature, hematocrit, electrolyte concentration and oxygen consumption as well as gross and microscopic pathology are described. Death and its causes and survival are also considered. (DLC.)

RUSH, BENJAMIN F., *Jr., see also* Wilder, R.J., & *others*. Survival . . . 1961. No. 76556

RUSHMER, R. F., *see* Adolph, R.J., & *others*. Heat loss . . . 1962. No. 69488

RUSIN, NIKOLAĬ PETROVICH, *see* Dolgin, I.M., & *others*. Itogi meteorologicheskikh . . . 1962. No. 71064

75270. RUSIN, V. IA. Rol' adaptatsii k nizkoĭ temperature i dibazola v povyshenii ustoĭchivosti myshei k neblagopriiatnym faktoram. (Fiziologicheskiĭ zhurnal SSSR, Feb. 1962. t.48, no.2, p. 195-200, illus., tables.) 4 refs. Text in Russian. **Title tr.:** The role of adaptation to low temperature and dibazol in resistance of mice to adverse factors.

Daily 5-hours' cold-exposure of mice increased their resistance to cold, to acceleration and to muscle fatigue. Exposures of 2-hours were less effective. Administration of dibazol had similar effects. Cold exposure and dibazol had a greater effect than each of them applied separately. (DLC.)

75271. RUSSANOW, IWAN. Forskning och utbildning på skogsbrukets område i Ryssland åren 1910-1960. (Svenska skogsvårdsföreningen. Tidskrift, 1961. nr.2, p.143-57, tables.) 14 refs. Text in Swedish. Summary in English. **Title tr.:** Forestry research and education in the Soviet Union during 1910-1960.

Traces, from Soviet sources, the development of research and higher education in this field, and describes their present scope, organization, administration and functions, based on the reorganization law of 1958. The 11 colleges of forestry are listed with their location; one is in Siberia and one in Arkhangel'sk; typical strength of faculty and student body, curricula, and research projects are described. As of 1960, there are 12 independent forest research institutes, of which one, the All Union Forest Research Institute, has branches and experiment stations in all parts of the country. The Academy of Sciences also has a large forest research institute with regional branches. Organization and research fields of these two major forest research institutes are described in detail. (DA.)

75272. RUSSELL, E. S. Unintentional hypothermia. (Canadian Medical Association. Journal, Oct. 7, 1961. v.85, no.15, p.846-47.) 5 refs.

Case history of a boy, white, age 4, who fell into an icy creek and remained there over half an hour. Hypothermic symptoms (rectal temperature 25°C.), first aid (slow rewarming), and therapy with recovery are described. (DNLM.)

75273. RUSSELL, FRANK L. Under-ice camp in the Arctic. (Military engineer, July-Aug. 1961. v. 53, no.354, p.282-84, illus.)

Describes the construction, layout and facilities of the 1,100 ft. long tunnel excavated in the Greenland icecap near Camp Tuto. Modern coal-mining techniques by the continuous miner method were used to excavate the 31,000 cu. yds. of ice. The self-contained 25-man camp has branch tunnels for power supply, water supply and fuel storage, mess and recreation facilities, etc. Buildings are placed on 4 x 4 in. rough-sawed wood piers set 30 in. deep in the ice, to provide underfloor ventilation. Thermostat-controlled heaters maintain inside temperatures near 70°F. Ventilation is effected by a pair of 30-in. diameter 15 hp., 10,000 c.f.m. axivane mine fans. (DLC.)

RUSSELL, H. A., *see* Wilbraham, A.B. East coast . . . 1962. No. 76553

RUSSELL, H. W., *see* Jolley, T.R., & H.W. Russell. Control of fires in coal . . . 1959. No. 72585

75274. RUSSELL, JOHN. Low temperature operation of diesel engines. (Australian engineer, June 1960, p.73-77, illus.)

Summarizes experience in the operation of diesel engines during five years in the Antarctic. Marine diesels, stationary plants, and mobile equipment are dealt with. Lubricants and fuels for trouble-free operation to below -70°F. are avail-

able. Modifications for antarctic conditions are described; starting problems and aids are discussed including pre-heater units. (SPRI.)

75275. RUSSELL, LORIS S. Fossil mammals and intercontinental connections. (*In:* Royal Society of Canada. Studia varia 4, Evolution symposium, 1960, p.63-78, chart.) 15 refs. Presidential address to Section IV of the Society in June 1959, abstracted in its Proceedings, v.53, p.18.

Outlines periods of mammalian migrations over land connections between North America and other continents during the Cenozoic era. Connections with Eurasia via Bering Strait occurred in late Paleocene, early Eocene, late Eocene-early Oligocene, middle-late Miocene, early-middle Pliocene, late Pliocene-early Pleistocene, and mid-Pleistocene times. Close correlation is found, at least for the Tertiary, between these periods and times of major diastrophism in North America. (DLC.)

75276. RUSSELL, LORIS S. Rudolph Martin Anderson. (Canadian geographical journal, June 1962. v.64, no.6, p.198-99, illus.)

Biographical account of this Canadian zoologist, 1876-1961, his work in northern Alaska and Canada, his observations and collections of birds, mammals, plants, etc. in 1913-1916, while with the Canadian Arctic Expedition, his editing of its 16-vol. series of reports: No. 2817. (DGS.)

RUSSELL, WILLIAM ALLAN CAMPBELL, *see* Kent, P.E., & W.A.C. Russell. Evaporite piercement structures . . . 1961. No. 72732

75277. RUSSKAIA, IU. N. O nekotorykh osobennostiakh padezhnoĭ sistemy priural'skogo govora khantyĭskogo iazyka. (*In:* Akademiia nauk SSSR. Institut iazykoznaniia. Voprosy finno-ugorskogo . . . 1962, p.257-64, map.) Text in Russian. **Title tr.:** Some characteristic features of the declension system in the Ural regional speech of Ostyak.

Study of this patois of the lower-Ob or Obdorsk (Salekhard) dialect of Ostyak, based on his 1959 field trip to the Yamal-Nenets National District. Unlike other north-Ostyak dialects with only three cases, the Ural patois retained a fourth, the lative, peculiar to the 6- to 8-case declension system of east- and south-Ostyak dialects. (DLC.)

75278. *RUSSKIĬ IAZYK V NATSIONAL'NOĬ SHKOLE.* Redaktsionnaia pochta. (Russkiĭ iazyk v natsional'noĭ shkole, 1962, no.4, p.66-70.) Text in Russian. **Title tr.:** Letter to the editor.

Elementary-school teacher in Yakutsk describes the use of an illustrated dictionary in Russian language instruction. (DLC.)

75279. RUST, CHARLES CHAPIN. Temperature as a modifying factor in the spring pelage change of short-tailed weasels. (Journal of mammalogy, Aug. 1962. v.43, no.3, p.323-28, illus., table.) 10 refs.

Reports experiments with animals in white pelage, exposed to constant temperatures of 70° or 20° F. Both groups molted into brown by March 16th, but the onset of molt was delayed in the cold-exposed animals. The latter did not show transitional areas of mixed brown and white hair as did the animals in the warm environment. (DLC.)

RUST, CLARA, *see* Elvey, C.T., & C. Rust. Hear N. lights? 1962. No. 71262

RUTENBERG, L. A., *see* Kurashov, S.V. Kurorty SSSR. 1962. No. 73222

RUTLEDGE, D. W., *see*

Simpson, R.A., & *others*. Natural gas . . . 1962. No. 75666

Simpson, R.A., & *others*. Petroleum indus. Canada 1960. 1961. No. 75667

RUTTER, NATHANIEL W., *see*

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

75280. RUUHIJÄRVI, RAUNO. Palsasoista ja niiden morfologiasta siite pölyanalayysin valossa. (Terra, 1962. v.74, no.2, p.58-68, illus., diagrs.) 18 refs. Text in Finnish. Summary in German. **Title tr.:** On palsa bogs and their morphology in the light of pollen analysis.

Describes a palsa bog near Petsikko, 69° 27′ N. 27° 20′ E., northern Finland, the center of which had sunk 2.5 m. Pollen diagrams of its exposed wall and of a 0.5 m. deep cavity beneath it are presented; evidence of the recent climatic warming is shown. Comparison is made with descriptions of other palsa bogs in northern Europe. (DGS.)

75281. RUZHENTSEV, V. E. Pervye ammonoidei iz permskikh otlozhenii Verkhoian'ia. (Paleontologicheskiĭ zhurnal, 1961, no.2, p.50-63, illus.) 10 refs. Text in Russian. **Title tr.:** First ammonoids from Permian deposits of the Verkhoyansk region.

Describes systematically ammonoids, collected in the Tumara and partly in the Arkachan (65°53′ N. 130° 51′ E.) River basins, western Verkhoyansk region. Two genera *Neouddenites* and *Tumaroceras* and several species are found new. The phylogeny of fam. Medlicottiidae is discussed. (DLC.)

75282. RYBAKOV, V. Afishi Noril'ska. (Ogonëk, Sept. 1962. god 40, no.35, p.12.) Text in Russian. **Title tr.:** Posters of Noril'sk.

Notes twenty years' activity in the Noril'sk theater; in 1961, 176 artists gave performances. In 1962, some three hundred students completed night classes at the School of Music. (DLC.)

75283. RYBAKOVA, N.' O. Mikropaleobotanicheskaia kharakteristika chetvertichnykh otlozheniĭ arkticheskoĭ IAkutii. (Moskva. Universitet. Vestnik, ser. 5, geologiia, Nov.-Dec. 1962. no.6, p.55-63, diagrs.) 7 refs. Text in Russian. **Title tr.:** Micropaleobotanical characteristics of the Quaternary deposits in arctic Yakutia.

Reports spore-pollen analyses of four sections of Quaternary deposits: two from the southern coast of Bol'shoy Lyakhovskiy Island, and two from the Yana-Indigirka plain. In the lower Quaternary, woody-plant pollen prevails: 33-98% with *Pinus* predominant. Middle and Upper Quaternary are also described, with their spore-pollen diagrams; vegetation formation and history and climatic changes are summarized. During both, cold climate conditions prevailed in the Bol'shoy Lyakhovskiy area and the Yana-Indigirka plain; two warming periods are noted. (DLC.)

RYBAKOVA, N. O., *see also* Gorshkov, S.P., & N.O. Rybakova. O sostave i vozraste èopleistotsenovykh otlozheniĭ . . . 1961. No. 71796

75284. **RYBNER, JØRGEN, 1902–** . Den danske nationalkomite af Den internationale videnskabelige radio union, U.R.S.I.; årsberetning for tiden 1/1 1961-31/12 1961. København, Feb. 1962. 13 l. Mimeo. Text in Danish. **Title tr.**: The Danish National Committee of the International Scientific Radio Union, U.R.S.I.; annual report for the period Jan. 1-Dec. 31, 1961.

Reports, among others, continuous recording at Godhavn and Narssarssuaq, West Greenland, of ionospheric data, radio noise, earth currents, aurora; observations of VLF noise at various locations in West Greenland by means of a field station; Scandinavian cooperation in a study of the ionosphere by means of rockets to be launched from Andøya (69° 08′ N. 15° 45′ E.), North Norway. Equipment and preliminary results are described; participating personnel is listed. (CaMAI.)

75285. *RYBNOE KHOZĬAĬSTVO*. Boevye zadachi rybnikov Sovetskogo Soĭuza. (Rybnoe khozĭaĭstvo, 1962. god 38, no.8, p.3-7.) Text in Russian. **Title tr.**: Battle aims of the fishery industry personnel of the Soviet Union.

A manifesto, stressing the great advances in catches of the past decade and a doubling of fish consumption in the past 20 years. Aims for 1965 are a five million ton catch and a 50% rise in consumption; exploitation of new areas, including the Northwest Atlantic; peak catches including those in the Murmansk basin. Improvements for the future, canning and conservation, etc. also are dealt with. (DLC.)

75286. *RYBNOE KHOZĬAĬSTVO*. Gorbusha v tundrovykh rekakh ĬAmala. (Rybnoe khozĭaĭstvo, 1962. god 38, no.3, p.11.) Text in Russian. **Title tr.**: Pink salmon in the tundra rivers of Yamal.

Reports catch of these fish in the mouth of the Mordy-Yaga River, Yamal Peninsula. The catches attest to a quick acclimatization and spreading of this Pacific salmon in the Barents and White Seas. (DLC.)

75287. *RYBNOE KHOZĬAĬSTVO*. Rybovody Zapolĭar'ia. (Rybnoe khozĭaĭstvo, 1961. god 37, no.4, p.42-47, illus.) Text in Russian. **Title tr.**: Fish-farms of the Arctic.

Illus. account of the Kandalaksha hatchery built in 1958 with the aim of stocking rivers, depopulated through hydro-electric installations, with salmon. The farm also participated in the acclimatization of hump-backed salmon in the Atlantic; it also raises live fish food. (DLC.)

75288. *RYBNOE KHOZĬAĬSTVO*. Sovershenstvovat' tekhniku rybolovstva. (Rybnoe khozĭaĭstvo, 1962. god 38, no.2, p.3-9.) Ref. Text in Russian. **Title tr.**: Improve the fishing techniques.

Directives aimed at doubling the output in each of the next two decades. Qualitative improvement of processed goods and of byproducts especially fish-meal, is also advocated, while the increase in quantity is to be achieved by further mechanization and automation in methods of catch, handling, landing, processing, etc. Increase in scientific and technological research is encouraged. (DLC.)

75289. *RYBNOE KHOZĬAĬSTVO*. Sovershenstvovat' tekhnologiiu rybnykh produktov. (Rybnoe khozĭaĭstvo, 1962. god 38, no.11, p.3-8.) Text in Russian. **Title tr.**: To perfect the technology of fish products.

Stresses the gaps in the technology of fish processing, especially in control and automation; mechanization of fish handling in big harbors, like Murmansk, refrigeration and freezing, salting, canning of high quality. Herring, cod, haddock and redfish are included in the scheme. (DLC.)

75290. *RYBNOE KHOZĬAĬSTVO*. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozĭaĭstva i okeanografii, VNIRO. (Rybnoe khozĭaĭstvo, 1961. god 37, no.3, p.11-23, illus.) Text in Russian. **Title tr.**: The All-Union Scientific Research Institute of Marine Fisheries and Oceanography, VNIRO.

Presents a well-illus. account on this leading institute, its laboratories (15), staff; problems, including those of machinery, industrial equipment and methods; its expeditions and their aims, exploration of new areas, etc. (DLC.)

75291. *RYBNOE KHOZĬAĬSTVO*. Za okunem v Beringovo more. (Rybnoe khozĭaĭstvo, 1961. god 37, no.12, p.52-57, illus.) Text in Russian. **Title tr.**: After redfish in the Bering Sea.

Abundantly illus. article on factors in the progress of Far East fisheries; economic species of the Bering Sea, a new source: the redfish, its culinary and industrial value, techniques of catch, problem of weather, prospects. (DLC.)

75292. *RYBNOE KHOZĬAĬSTVO*. Zadachi rybnoĭ promyshlennosti na 1962 g. (Rybnoe khozĭaĭstvo, 1962. god 38, no.1, p.3-8.) 2 refs. Text in Russian. **Title tr.**: Tasks of the fishery industry for 1962.

Outlines with data (some absolute) the achievements of this industry in 1961, including whaling. Special emphasis is put on developments in the North and northwest Atlantic. Extension of mechanization, rationalization, conservation and processing is stressed in all areas and branches. Aims for 1962 envisage spread over larger areas of the North Atlantic and a shift during the summer to the South Atlantic, also more intensive activity in the northwest Pacific. (DLC.)

75293. **RYCHKOV, IU. G.** Materialy po antropologii zapadnykh tungusov. (Akademiia nauk SSSR. Institut ėtnografii. Trudy 1961. t.71, Antropologicheskiĭ sbornik 3, p.242-68, illus., tables, maps.) 13 refs. Text in Russian. **Title tr.**: Materials on the physical anthropology of the western Tungus.

Comparative analysis of the ethnic composition based on the 1959 field work of the Evenki team, northern Ethnographic Expedition, headed by M.G. Vasilevich. In 30 clans in the Katanga District (upper Nizhnyaya Tunguska and Vilyuy basins) and the Ilimpeya District, studies were made on 64 males and 75 females. Data on pigmentation, hair cover, body and skull measurements, etc. are tabulated and compared with those for Lamuts, Samoyeds, Ostyaks, Yeniseians, Yakuts, Buryats, and other Tungus tribes. The Katanga variant of the Baykal race and the Paleoasiatic Yukaghir type are revealed as main formative elements of the Evenki-Tungus. The Katanga racial type, also present in the Ugro-Samoyed groups of the Ob-Yenisey region, is considered an autochthone substrate characterized by proto-Mongoloid elements. (DSI.)

75294. **RYDBERT, AXEL.** Renens energibehog. (Samefolket, Jan. 1961, nr.1, p.17-20, illus.) Text

in Swedish. **Title tr.**: Energy needs in reindeer.

The reindeer requirement is considered similar to that of sheep. A 70 kg. animal needs about 700 megacalories during a seven-month winter, i.e. 900 kg. of lichen or almost 4.5 kg. daily. The winter fodder of reindeer is poor in protein and a loss in weight sets in about March, if the autumn intake has been insufficient. A supplementary fodder must contain protein, and carbohydrates as well if the autumn pastures have been unsatisfactory. (SPRI.)

RYKOVA, S. V., *see* Marfunin, A.S., & S.V. Rykova. Opticheskie . . . mikroklin-pertita iz pegmatitov. . . . 1961. No. 73807

RYNEĬSKIĬ, S. V., *see* Zhmur, V.A., & *others*. ÈÈG nablīudeniīa . . . 1961. No. 76674

75295. RYNTŠYN, V. Pogruzka lesa s vody v suda. (Lesnaīa promyshlennost', Mar. 1961. god 39, no.3, p.14, illus.) Text in Russian. **Title tr.**: Loading timber from water to vessels.

Describes log-loading operations at Kem; only two vessels can be loaded at a time; wind and tide are troublesome, etc. (DLC.)

RYSER, FRED A., *see* Morrison, P.R., & F.A. Ryser. Metabolism and body temperature in a small hibernator. 1962. No. 74119

75296. RYTKHÈU, ĪŪRIĬ SERGEEVICH, 1930– . Nunivak. (Neva, 1962, no.11, p.5-111, illus.) Text in Russian.

Novelette about a group of Eskimos who moved from a small Bering Strait Island with the local (or fictional) name Nunivak and settled at the Leninskiy put' kolkhoz center Naukan, on Chukotka. Socio-economic conditions on the island since the 1920's, relations with natives and whites of both continents, visits to Alaska and Chukotka, advantages of the Soviet way of life, etc. are dealt with. Problems of Eskimo and Chukchi cooperation and adaptation are discussed. Social and technological improvements of the last decades are noted: mechanization of fishing boats, educational and medical facilities, postal service, supply and marketing, etc. (DLC.)

75297. RYTKHÈU, ĪŪRIĬ SERGEEVICH, 1930– . Omrytagin, traktor i milīsioner. (Druzhba narodov, July 1961, no.7, p.170-79.) Text in Russian. **Title tr.**: Omrytagin, a tractor, and a policeman.

Describes the introduction of mechanized equipment at Polyarnik kolkhoz on Chukotka, and a Chukchi reindeer herder's misadventures with a tractor. (DLC.)

75298. RYTKHÈU, ĪŪRIĬ SERGEEVICH, 1930– . Padenie shamana Yttykèīa. (Nauka i religiīa, Aug. 1962, no.8, p.59-61, illus.) Text in Russian. **Title tr.**: Fall of the shaman Yttykèĭ.

Short story on the inefficacy of shaman magic. After breaking through thin ice on a seal hunt, Yttykèĭ is eventually rescued, though he was known, as shaman, to have let others drown to pacify water spirits. Translated from Chukchi by A. Tverskoĭ. (DLC.)

75299. RYTKHÈU, ĪŪRIĬ SERGEEVICH, 1930– . Poēty Severa. (Druzhba narodov, Aug. 1961, no.8, p.24-31.) Text in Russian. **Title tr.**: Poets from the North.

Sketches the post-Revolutionary development of literature, especially poetry, among northern minorities. Chukchi, Ostyak, Vogul, Samoyed, Tungus, and Gilyak poems are cited in Russian translation. (DLC.)

75300. RYTKHÈU, ĪŪRIĬ SERGEEVICH, 1930– . Puteshestvie po zapisnym knizhkam. (Neva, 1961, no.5, p.142-52.) Text in Russian. **Title tr.**: Voyage by travel notes.

Reminisces about his trips to Chukotka with aid of a diary. Development of Pioner is described, the sea-mammal hunting and reindeer kolkhoz at Ryrkaypiy. Encounters with a former shaman and a Chukchi poet are noted. The return to his native Uelen, participation in a whale hunt, trip to the industrial center Iul'tin in the Amguyema basin, with a tour of its lead and wolfram mines, etc. are sketched. (DLC.)

75301. RYTKHÈU, ĪŪRIĬ SERGEEVICH, 1930– . Vremīa tanīaniīa snegov. Moskva, Izd-vo "Molodaīa gvardiīa", 1961. 415 p. illus. Text in Russian. **Title tr.**: The time of snow melt.

Semi-autobiographical novel about a Chukchi youth, Rintyn, from his childhood in a hunter's skin tent till he becomes a university student in Leningrad. The book deals mainly with assimilation and acculturation problems of modern Chukchis: the transition from the primitive culture of sea-mammal hunters and reindeer herders to the sophisticated civilization of European USSR. (DLC.)

RYTKHÈU, ĪŪRIĬ SERGEEVICH, 1930– , *see also* Romanenko, D. Polīarnye zvezdy. 1962. No. 75180

RYVLIN, A., *see* Buzuev, A., & A. Ryvlin. K raschetu soprotivleniīa ledokola . . . 1961. No. 70487

75302. RYZHAKOV, L. ĪŪ. K kharakteristike osnovnykh form atmosfernoĭ tsirkulīatsii nad severnym polushariem. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.240, Voprosy dolgosrochnykh prognozov pogody . . . p.52-67, maps, graphs.) 11 refs. Text in Russian. **Title tr.**: On the characteristics of basic forms of atmospheric circulation over the Northern Hemisphere.

This is an investigation searching for numerical characteristics of the atmospheric circulation mechanism on the ground of three basic forms of circulation: western (W) eastern (E), and meridional (C) developed by G. ĪA. Vangengeĭm, q.v. The values of such characteristics are needed for a further development of a 4-6 month weather forecast by applying empirical function of influence to synoptic statistics, and the hydro dynamical method. The circumpolar rotor and its correlation with the basic calculation form, peculiarities of circulation and temperature conditions in the lower stratosphere, and the sources of cold in the troposphere of the Northern Hemisphere are discussed. It was found that the variation of velocity rotor along a given latitude zone determines the type of circulation, and the numerical characteristics of the cold sources' differentiation in the Northern Hemisphere are determined. These characteristics make apparent the role of the continents and oceans in the process

of transformation of basic forms of atmospheric circulation. The effects of circulation and thermal conditions in the lower stratosphere on the tropospheric processes are considered. (CaMAI.)

75303. RYZHIKOV, K. M., *and* N. M. GUBANOV. *Lateriporus mathevossianae,* novyĭ vid testody ot gusinykh ptits. (Akademiia nauk SSSR. Gel'mintologicheskaia laboratoriia. Trudy 1962. t.12, p.106-108, illus.) Ref. Text in Russian. **Title tr.:** *Lateriporus mathevossianae,* a new species of tapeworm from geese.

Description of material found in the intestines of *Melanitta deglandi* Bp., killed on the Lena and Kolyma. Morphometry, differential diagnosis, degree of infection, etc. are noted. (DLC.)

75304. RYZHKOV, F. N., *and* A. A. ERMOLAEV. Rezul'taty vnedreniia vsasyvaiushchego sposoba provetrivaniia. (Bezopasnost' truda v promyshlennosti, Aug. 1962. god 6, no.8, p.22-23, table, diagr.) Text in Russian. **Title tr.:** The result of introduction of the suction method of ventilation.

Describes the suction method tested in 1959 at the Northern Ural 2nd bauxite mine, shafts no. 3 and 4, instead of the pressure ventilation method used previously. The scheme of suction air pumps installed in the mines is discussed, and the comparative survey of the suction and pressure pump efficiency reported. The aeration of the shafts ventilated by the suction method, was found to increase by 6.5-14 times, and an economy of 270,000 rubles was achieved. (DLC.)

75305. RZHONSNITSKAIA, MARIIA ADOL'FOVNA, 1912– . K biostratigraficheskomu raschleneniiu devona Severo-Vostoka SSSR. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyĭ sbornik 1961. no.42, Paleontologiia i stratigrafiia, p.71-83, fold. table.) 12 refs. Text in Russian. **Title tr.:** On a biostratigraphic separation of the Devonian in northeastern USSR.

Presents a stratigraphic division based on identification of brachiopod fauna, collected by various scientists in the Omulevka Mts., the middle course of the Kolyma, the Tas-Khayakhtakh and Sette-Daban Ranges, and other areas. Lower, Middle and Upper Devonian series and stages are reviewed, the brachiopods listed. Correlation is made with the Devonian deposits of Novaya Zemlya and the Ural. The Devonian marine basin of the northeastern USSR, together with the Taymyr, the Siberian platform and the Soviet Arctic islands represent a single arctic paleozoogeographic province. (DLC.)

75306. S., Th. Helikoptertransport av skogsplanter i Nordland. (Norsk skogbruk, Dec. 1960. årg. 6, nr.23-24, p.825-26, illus.) Text in Norwegian. **Title tr.:** Helicopter transportation of forest plants in Nordland.

Reports the successful transfer of 40,000 seedlings by military helicopter to an isolated community inaccessible by road. The operation required two hours from nursery bed to planting site, as compared with two days by regular commercial transport with eight transhipments' and final handcarriage. (DA.)

75307. SABBAGH, MICHAEL E., *and* R. A. BRYSON. Aspects of the precipitation climatology of Canada investigated by the method of harmonic analysis. (Association of American Geographers. Annals. Dec. 1962. v.52, no.4, p.426-40, maps.) Refs.

Investigates regional variations in precipitation by this method of determining (and mapping) separately each of the variance components of the annual precipitation curve. From such analysis of precipitation curves at 500 Canadian stations, the western, continental interior, and eastern regimes are delineated and characterized. The progressively earlier occurrence of the precipitation maximum along the Pacific coast northward into Alaska, the diffuse boundary of the western regime north of 57° N., and the change from a summer to a fall precipitation maximum leeward of Hudson Bay are described. (DI.)

75308. SABBAGH, MICHAEL E., *and* R. A. BRYSON. An objective precipitation climatology of Canada. Madison, Wisconsin, Apr. 1962. 33 l. 12 maps, tables. (Wisconsin. University. Dept. of Meteorology, Technical report no. 8.) 21 refs. Task no. NR 387-022, ONR contract no. 1202(07).

Describes regional and seasonal distribution of precipitation over Canada by means of variance components or harmonics. Total precipitation variance is established; its relationship to its two components and that of each component to the other are computed. Three major precipitation regimes are identified and characterized; western, continental interior, and eastern; the western clearly defined, eastern less so. Atmospheric circulation, and its association with water bodies or vegetation, is responsible for certain features of the annual march of precipitation. Data represent, among others, 8 Yukon Territory stations, 26 Northwest Territories, 12 Northern Manitoba, Ontario and Quebec, and 4 Labrador. (DWB.)

SABEAN, H. B., *see* Hart, J.S., *& others.* Thermal & metab. responses . . . Eskimos cold. 1962. No. 72054

75309. SABLE, EDWARD GEORGE, 1924– , *and* J. T. DUTRO. New Devonian and Mississippian formations in De Long Mountains, Northern Alaska. (American Association of Petroleum Geologists. Bulletin, May 1961. v. 45, no.5, p.585-93, maps, graph.) 3 refs.

Describes the Kugururok formation, of Late Devonian age, consisting largely of dolomite and limestone, probably more than 2,000 ft. thick, type locality on Mont Bastille, 68° 30′ N. 161° W., in the western Brooks Range; also three new marine formations in the Mississippian Lisburne group: the Utukok, the Kogruk, and the Tupik, whose type localities are on Tupik Mountain, 68° 35′ N. 161° 10′ W. Comparison is made with the Devonian and Mississippian sequence in the Shainin Lake area, central Brooks Range. Other unnamed Devonian and Mississippian units in and near the De Long Mts. are noted. Petroleum possibilities are suggested. (DGS.)

75310. SABLE, EDWARD GEORGE, 1924– . Recent recession and thinning of Okpilak Glacier, northeastern Alaska. (Arctic, Sept. 1961. v.14, no.3, p.176-87, illus., map.) 9 refs.

Compares Aug. 1958 photographs and observations of this valley glacier in the Romanzof Mts.

with those of Leffingwell in 1907, cf. No. 9835. The indicated recession and thinning of the glacier in 51 years are confirmed by aerial photographs and topographic maps. The 1000 ± 100 ft., mean rate 20 ft./yr., probably increased in the 1950's. Thinning, estimated at 150 ft. in the lower 1.2 miles of the glacier, occurred at about 3 ft./yr. The advance from which the ice is retreating is correlated with the Fan Mountain glaciation. Similar evidences of retreat and thinning are found in neighboring glaciers. (DI.)

SABLE, EDWARD GEORGE, 1924– , *see also* Chapman, R.M., & E.G. Sable. Geology . . . Alaska. 1960. No. 70652

75311. SABLINA, TAT'IANA BORISOVNA, 1911– . K ėkologo-morfologicheskoĭ kharakteristike pishchevaritel'nogo trakta severnogo lesnogo oleniā i losiā. (Akademiiā nauk SSSR. Doklady 1961. t.141, no.1, p.240-43, illus.) 4 refs. Text in Russian. **Title tr.:** Ecologic-morphological characteristic of the digestive tract of forest reindeer and elk.

Discusses food of these animals on the west coast of the White Sea, gross and comparative morphology of the digestive apparatus, morphometry, relation between the morphology and food. (DLC.)

75312. SABOURIN, R. J. E. Preliminary report on the Denys and Fagnant Lakes area. Quebec, 1961. 8 p. fold. map, table. (Quebec. Dept. of Natural Resources, P.R. no. 469.) 2 refs.

Reports on the geology, mapped at scale: 1:63,360 in 1960, of this 250 sq. mi. area (54° 52′- 55° 15′N., 76° 45′- 77° W.) extending south from Great Whale River, inland from Hudson Bay. Formations, all Precambrian, include metasedimentary schists and quartz-magnetite, andesitic lavas, granite gneiss, Koury Lake granite (the most extensively exposed rock), peridotite, and gabbro dykes. In structure, the granite is generally massive, the sedimentary rocks, schistose, and the volcanics varying from massive to schistose. A complex of folds occurs in sedimentary and volcanic rocks west of Fagnant Lake. Occurrences (three) of iron-bearing rocks are noted, also of sulfides and asbestos. Diamond-drilling west of Fagnant Lake by Great Whale Iron Mines, Ltd. in the late 1950's proved considerable tonnages from which a high-grade iron concentrate can be obtained. (DGS.)

75313. SADHU, DULAL P. Respiration of tissue slices in hypothermia. (Quarterly journal of experimental physiology, Oct. 1959. v.44, no.4, p.357-61, tables.) 14 refs.

Study of O_2-consumption of liver and kidney slices from rats, sparrows and toads at 38, 28 and 18° C. In both levels of hypothermia, a fall of Q_{O_2} was noted. Ratios of temperature characteristics with succinate or acetate oxidation are also analyzed and discussed, at the two levels of hypothermia and at normothermia. (DNLM.)

75314. SADIKOV, M. A. Opyt opredeleniiā mineralizatsii plastovykh vod severo-vostoka Zapadno-Sibirskoĭ nizmennosti po dannym ėlektrokarotazha. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'iā. Trudy, ser. neftianaiā geologiiā, 1961. vyp.17, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.185-91, charts, diagrs.) 4 refs. Text in Russian. **Title tr.:** Attempt at determining the mineralization of stratal waters in the northeastern part of the West Siberian plain according to electric logging data.

Describes changes of the mineralization of stratal waters in Cretaceous deposits in the Yenisey section. Chemical analyses were made in the Yeloguy key well and others, and the data compared with those obtained with the electric logging method developed by A.M. Nechaĭ. Formation of saline waters is discussed. Mixing of ground water with surface waters in areas of large rivers and in zones of disjunctive dislocations is noted. (DLC.)

75315. SADOVSKIĬ, A. I. Novye dannye po stratigrafii i tektonike mezozoĭskikh otlozheniĭ nizhnego techeniiā r. Kolymy. (Geologiiā i geofizika, 1962, no.8, p.114-17, map, diagr.) 9 refs. Text in Russian. **Title tr.:** New data on the stratigraphy and tectonics of Mesozoic deposits on the lower reaches of the Kolyma River.

Reports his 1959 study of facies of Mesozoic geosynclinal deposits east of the lower Kolyma and north of the Malyy Anyuy. The deposit complex is divided into several formations which are briefly characterized. A schematic picture of the tectonic structure of the great Anyuy anticline is presented and briefly interpreted. (DLC.)

75316. SADOVSKIĬ, A. I. Novye dannye po stratigrafii kaĭnozoĭskikh otlozheniĭ nizhnego techeniiā r. Kolymy i poberezh'iā Vostochno-Sibirskogo moriā. (Geologiiā i geofizika, 1962, no.5, p.120-25, illus., map.) 9 refs. Text in Russian. **Title tr.:** New data on the stratigraphy of Cenozoic deposits on the lower Kolyma River and the East Siberian Sea coast.

Reports a 1958-1959 study on the lower Kolyma and Chaunskiy plains. Distribution, types, lithologic properties and some flora and fauna of these deposits are described and the stratigraphic position is discussed. Spore-pollen analyses of lignified peat are reported. Buried birch (*Betula* sp.) is also noted and described. Geologic history of the region is discussed. (DLC.)

75317. SADOVSKIĬ, G. I., *and others.* Sovershenstvovanie tekhnologii razrabotki na Zapoliārnom rudnike Noril'skogo kombinata. (Gornyĭ zhurnal, Nov. 1961. no.11, p.31-38, tables, cross-sections, plans.) Ref. Text in Russian. *Other authors:* A.S. Pakhomov, A.I. Shalygin, etc. **Title tr.:** Technological improvements at the Zapolyarnyy mine of the Noril'sk Combine.

The Noril'sk polymetallic deposit is formed of stratified metallized gabbro-diabases; the 25-50 m. thick ore strata have a 200-300 m. overburden of gabbro-diabase. Irregular jointing of rocks and migratory methane from underlying coal seams considerably hampered underground mining in 1955-1957; but since 1958, the deposit has been experimentally worked by combined underground and open-pit operations, and this system has raised the output, also increased the efficiency of the work by about 50%. The methods of breaking the ore in compensation chambers, crumbling of the intervening ore blocks, and the benching order of their extraction are discussed, and text amplified with tables of technical-economic indexes. About 700,000 tons of ore were cut and 600,000 tons

extracted during the experimental period of 1958-1961. A single operation mining without block blasting technique is proposed for working the 40-50 ft. thick ore layer at a lower horizon, to eliminate the hazard of blasting in the presence of methane. (DLC.)

75318. SADOVSKIĬ, N. D. Podzemnye vody Kamchatki. (*In:* Akademiīa nauk SSSR. Komissiīa po problemam Severa. Syr'evye resursy . . . 1961, p. 115-22.) Text in Russian. **Title tr.:** Underground waters of Kamchatka.

Reviews the course and status of ground-water studies: in the program of hydrogeologic survey since 1951, 150 wells, 3300 springs, and 90 thermal springs have been registered. Water supply for 121 towns and villages has been studied, and some of these studies are outlined. For water supply purposes, three main regions are distinguished: mountain, intermountain depressions, and coastal plains. Each is characterized. (DLC.)

SADOVSKIĬ, N. D., *see also* Mokrousov, V.P., & N.D. Sadovskiĭ. Osnovnye dannye po stratigrafii . . . 1961. No. 74082

75319. SAECHNIKOV, V. Peredoviki v severnykh lesakh. (Master lesa, Mar. 1962. god 6, no.3, p. 8-9, illus.) Text in Russian. **Title tr.:** Outstanding workers in the northern forests.

Describes the work set-up of small teams of lumber-jacks in the Yasnog (61°09′N. 50°38′E.) lumbering establishment in Komi ASSR; planning, cutting technique, skidding, and saw and tractor maintenance are noted; outstanding team leaders are cited. (DLC.)

75320. SAECHNIKOV, V. V Komigipronilesprome; o rabotakh Gosudarstvennogo instituta Komi sovnarkhoza po proektirovaniīu predpriīatiĭ lesnoĭ promyshlennosti. (Lesnaīa promyshlennost', Oct. 1961. god 39, no.10, p.16.) Text in Russian. **Title tr.:** . . . On the work of the Komi National Economic Council's State Institute for Planning in the lumbering industry.

Reports on research projects: construction of a semi-automatic production line for log-cutting in the Pechorles Combine, carried out by the mechanization and automation laboratory; performance studies of small work parties by the economics lab., etc. (DLC.)

SAELEN, ODD HENRIK, *see* Lumby, J.R., & O.H. Saelen. Report . . . weather ships. 1957. No. 73620

75321. SAETERSDAL, GUNNAR SELMER, 1922– . Fiskeriene i Nord-Norge. Tromsø, 1960. 17 p., diagrs., tables. (Ottar, June 1960. nr.24, 1960: nr.2.) Text in Norwegian. **Title tr.:** The fisheries in north Norway.

Surveys the development of the industry. Of a 1,702 thousand ton national annual average during 1953-1957 (value 600 mill. kr.), North Norway contributed 462 thousand tons (value 215 mill. kr.). Cod, herring, capelin, coal-fish and haddock, in that order, are the most important species. In 1958 there were about 34,000 fishermen in North Norway, a 20% decline since 1948. Data of localities, seasons, gear, yield are given for the specific fisheries. The problem of overfishing, particularly of spawning cod, is discussed. The mortality for cod five years old or more, is about 65% per annum. Protective measures (increase in minimum mesh size, extension of the fishing limits) are also discussed. Declining profits due partly to low prices and difficulties in making a seasonal industry efficient are also touched upon. (DI.)

75322. SAETERSDAL, GUNNAR SELMER, 1922– . Resultater og oppgaver i fiskeriforskningen i nordlige farvann. (Studieselskapet for nord-norsk naeringsliv. Skrift, 1958. nr.22, p.58-97, illus., tables, graphs, diagrs., maps.) Text in Norwegian. **Title tr.:** Results and tasks of fisheries research in northern waters.

Reviews some practical results of recent years' investigations on fish concentrations, migration, etc. in North-Norwegian coastal waters, Greenland Sea and Barents Sea. Trends in the yearly volume of catch are discussed. Age and size composition (of cod in particular) is outlined, and the (favorable) results of increased mesh size on long-range fishing results are pointed out. Norwegian and foreign catch volumes of arctic cod are compared. Discussion is included, p.87-97. (SPRI.)

75323. SAETERSDAL, GUNNAR SELMER, 1922– , *and* **A. HYLEN.** Skreiundersøkelsene og skreifisket i 1959. (Fisken og havet, Dec. 1959. nr.1, 20 p. tables, graphs, diagrs., maps.) Text in Norwegian. **Title tr.:** Cod investigations and cod fishery in 1959.

Presents results of studies off the coast of Norway, in the Lofoten area particularly, also off Troms and Finnmark and in Barents Sea. Work prior to 1959 is discussed. Cod schools headed for the spawning grounds are traced and the distribution during and after the influx into Lofoten and Vestfjorden is mapped. Results of tagging experiments are presented. Official statistics on catch are analyzed for distribution and abundance, and the probable stock in 1960 is estimated. Data tables of participation and catch volume 1930-1959 are appended. (SPRI.)

SAETERSDAL, GUNNAR SELMER, 1922– , *see also*

Hylen, A., & G.S. Saetersdal. Beskatningen av fiskebestandene . . . 1961. No. 72283

Hylen, A., & *others*. Torskeundersøkelsene . . . 1961. No. 72285

75324. SAFONOV, V. Pered promyslom bobra. (Okhota i okhotnich'e khoziāĭstvo, Feb. 1962. god 8, no.2, p.24-27, illus., table.) Text in Russian. **Title tr.:** Before the beaver hunting season.

Includes data on the occurrence of beaver in the Soviet Union; of an estimated population of 30-40 thousand, half occur in White Russia, the rest in RSFSR, with over a thousand in Arkhangel'sk Province and almost a thousand in Komi ASSR and in Tyumen Province. (DLC.)

75325. SAFRONOV, VIKTOR PETROVICH. K voprosu o vremeni formirovaniīa rel'efa Kotui-Maĭmechinskogo mezhdurech'īa. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.121, vyp.18, Sbornik stateĭ po geologii i neftegazonosnosti Arktiki, p.130-31.) 5 refs. Text in Russian. **Title tr.:** On the time of relief formation in the Kotuy-Maymecha interfluve.

Reports discovery of the original bedding of marine and continental deposits in the valley of the Uksa, right tributary to Bol'shaya Romanikha.

The marine deposits are identified according to fauna and continental deposits by spore-pollen analyses, as Upper Jurassic-Lower Cretaceous. These evidences and the character of river valley development reveal that the relief of the interfluve (approx. 70°N. 103°E.) was formed not in the Quaternary period, but between Valanginian and Aptian-Albian times. (DLC.)

75326. SAGAR, R. BRIAN. Glacial-meteorological observations in northern Ellesmere Island during phase III, Operation Hazen May-August 1958. Montreal, Nov. 1960. x, 186 p., maps, graphs, tables. (Canada, Defence Research Board, Operation Hazen, Hazen 13.) Refs. *Also issued as:* McGill University, Arctic Meteorology Research Group, Publication in meteorology no.29.

Reports an expanded program of geophysical studies carried out by 19 men, six at Gilman Glacier, the others at Lake Hazen. Physical features and previous exploration of northern Ellesmere Island are outlined. Work at the re-established Gilman Glacier station, 82°08′N. 70°57′W., is compared to earlier glacial-meteorological work throughout the Canadian Eastern Arctic; instruments are noted. Synoptic analysis of the detailed meteorological observations is given and related to the ablation measured on Gilman Glacier, which appears to be decreasing in volume. Significant differences in meteorological conditions occur from year to year. (DWB.)

75327. SAGAR, R. BRIAN. Meteorological and glaciological studies, Ice Rise Station, Ward Hunt Island, May to September 1960. Montreal, July 1962. x, 87 p., maps, tables, graphs incl. fold. (Arctic Institute of North America. Research paper no.24; also Scientific report no.5, contract AF 19 (604)-8343, with the U.S. Air Force Cambridge Research Laboratories, *and* AFCRL-62-848.) 35 refs.

Describes surface climatic conditions on this northern Ellesmere Island Ice Shelf during the summer of 1960, when the 1959 meteorological camp was reoccupied. Relative importance of the ablation season heat-balance components is determined from accumulation and ablation data, subsurface temperature changes and microclimatological observations. Principal energy source is the net flux of radiation. The net energy gain due to turbulent transfer is considered to be small or even negative over the whole ablation season. Various observations are compared with those of the 1959 season and Alert weather station. Relatively small changes in the amount of accumulation and in the radiative energy flux, or in both, can have a marked effect on the mass balance of the Ward Hunt Ice Rise and Ice Shelf. –Author's abstract. (DGS.)

SAGAR, R. BRIAN, *see also*

Hattersley-Smith, G.F., & *others*. Ablation season Gilman Glacier . . . 1961. No. 72065

Lotz, J.R., & R.B. Sagar. N. Ellesmere arctic desert. 1962. No. 73599

75328. ***SAGUENAYENSIA.*** Chicoutimi, Québec, la Société historique du Saguenay, Petit Séminaire, v.1, no.1, Jan.-Feb. 1959– *in progress.*

Published six times yearly in approx. 24 pages per issue, with short articles in French of documentary, biographical, genealogical, and anecdotal nature; they depict or chronicle this region north of the lower St. Lawrence River. Occasional articles deal with localities in northern Quebec. (CaONM.)

75329. SAHLIN, C. *Orchis maculata* ssp. *Cricetorum* funnen i Torne lappmark. (Svensk botanisk tidskrift 1960. Bd. 54, H.1, p.275-77, tables.) Ref. Text in Swedish. **Title tr.:** *Orchis maculata* ssp. *cricetorum* found in Torne Lappmark.

Describes the morphology and morphometry of this subspecies; its location, occurrence and habitats; other plants found with this form, etc. (DLC.)

75330. SAIDOVA, KHADYZHAT MAGOMMETOVNA. Ėkologiia foraminifer i paleogeografiia dal'nevostochnykh morei SSSR i severo-zapadnoĭ chasti Tikhogo okeana. Moskva, Izd-vo Akademii nauk SSSR, 1961. 232 p. tables, charts, graphs, diagrs., 31 plates. (Akademiia nauk SSSR. Institut okeanologii.) 85 refs. Text in Russian. **Title tr.:** The ecology of foraminifers and paleogeography of the Far Eastern seas of the USSR and northwestern part of the Pacific Ocean.

Reports a study of bottom forams collected in 1949-1958 by the R/V *Vitiaz'* in the Bering and Okhotsk Seas and the northwest Pacific: 216 species are described, of which 33 are new; 179 live in the northwest Pacific, 114 in the Okhotsk, and 77 in the Bering Sea. In the systematic section, distribution areas and depths are indicated. Quantitative distribution is analyzed and mapped. Complexes of forams are reported according to depths: to 200-300 m., 200-300 to 3000-3500 m., 3000-3500 to 6500 m. and more. Paleogeography of investigated seas is described. (DLC.)

75331. SAIDOVA, KHADYZHAT MAGOMMETOVNA. Kolichestvennoe raspredelenie donnykh foraminifer v severo-vostochnoĭ chasti Tikhogo okeana. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.45, p.65-69, illus., tables, maps.) 5 refs. Text in Russian. Summary in English. **Title tr.:** Quantitative distribution of bottom foraminifera in the northeastern Pacific.

Reports on collections made at 82 stations, some in the Gulf of Alaska and the Aleutian waters. Largest quantities of calcareous foraminifera were located at depths of 3000-3500 m., agglutinated forams were confined to abyssal regions. (DLC.)

75332. SAIDOVA, KHADYZHAT MAGOMMETOVNA. Raspredelenie osnovnykh bentosnykh vidov sekretsionnykh (izvestkovykh) foraminifer v severozapadnoĭ chasti Tikhogo okeana. (Voprosy mikropaleontologii, 1962. vyp.6, p.31-63, tables, charts.) 24 refs. Text in Russian. **Title tr.:** Distribution of the main benthonic calcareous foraminifers in the northwestern part of the Pacific Ocean.

Reports results of the R/V *Vitiaz'* sampling of bottom sediments and forams in the Okhotsk (300 samples) and Bering (170) Seas and the northwest Pacific during 1949-1958. The abundant forms, fam. Pseudoparrellidae, Anomalinidae, Nonionidae, Elphididae, Buliminidae, Cassidulinidae and Bolivinitidae, were studied and the method used is described. The calcareous forams, 47 species and subspecies in 11 genera belong to three orders. The main factors affecting distribution of the bottom forams, such as relief of the bottom, depths, water

masses, precipitation, are characterized. Their distribution features are analyzed; most are found at 3000-3500 m. depth. (DLC.)

75333. SAIDOVA, KHADYZHAT MAGOMMETOVNA, *and* **A. P. LISITSYN.** Stratigrafiia osadkov i paleogeografiia Beringova moria v chetvertichnoe vremia. (Akademiia nauk SSSR. Doklady, Aug. 11, 1961. t.139, no.5, p.1221-24, map, cross-sections.) 6 refs. Text in Russian. **Title tr.:** Stratigraphy of sediments and paleogeography of the Bering Sea during Quaternary time.

Reports on the lithology and the distribution of foraminifers in the surface layer of bottom deposits, based on data from three stations, viz: 57°43′N. 166°17′E., 3655 m. depth, 1410 cm. long core; 59°13′N. 171°01′E., 910 m. depth, 588 cm. core; 60°03′N. 172°13′E., 2634 m. depth, 505 cm. core. Each is treated in turn as to the lithology and stratigraphy of the horizons, and distribution of forams. Nature of the bottom in the Quaternary is reconstructed, as well as past changes in bottom level and configuration. (DLC.)

75334. SAILA, S. B., *and* **R. A. SHAPPY.** Migration by computer. (Discovery, June 1962, v.23, no.6, p.23-26, map, diagrs.)

Authors discuss practical value of migration study; theories of direction finding and a hypothesis explaining the migration of Pacific salmon in the sea and to their natal streams. This theory (mathematical model) assumes a low degree of orientation and indicates a relatively direct route with little vertical excursion. (DLC.)

75335. SAINSBURY, CLEO LADELL, 1921– . Geology of part of the Craig C-2 quadrangle and adjoining areas, Prince of Wales Island, southeastern Alaska. (*In:* U.S. Geological Survey. Bulletin, 1961. no.1058-H, p.299-362, illus., tables, maps incl. col. fold. in pocket. Mineral resources of Alaska 1956.) 14 refs.

Describes and maps at scale 1:63,360, the geology of this copper-producing area, based on field work of 1954-55, supplemented by an airborne-magnetometer survey. Bedded rocks are composed of a great thickness of volcanic graywacke, tuff, conglomeratic volcanic graywacke, argillite, andesite, limestone, and conglomerate, ranging in age from Middle Ordovician to Early Silurian(?). Small deposits of Tertiary conglomerate lie unconformably on the older rocks. Surficial deposits are widespread. Postglacial uplift amounts to at least 50 ft. Older rocks are intruded by many stocklike bodies of probable middle Cretaceous age. Three distinct periods of ore deposition are recognized; the oldest and most important is related to Early to Late Cretaceous intrusive activity. Most of the copper-magnetite bodies of economic interest appear to be limited to the pyroxenite intrusive body near Salt Chuck, 55°38′N. 132°33′W., and the south shore of Kasaan Bay, 55°30′N. 132°30′W. (DGS.)

75336. SAINSBURY, CLEO LADELL, 1921– . A new occurrence of beryllium minerals on the Seward Peninsula, Alaska. Menlo Park, Cal. 1962. 10 p. illus., maps. (U.S. Geological Survey. Report, open file series no. 641.) 8 refs. Paper presented at meeting of American Institute of Mining, Metallurgical and Petroleum Engineers in Anchorage, Alaska, Apr. 27, 1962.

Revived interest in the beryllium in the tin districts of the Seward Peninsula may be attributed to its increasing use in space craft, etc. Geochemical reconnaissance of the three main tin-bearing areas in 1960 was followed by detailed geologic mapping of the Lost River district in 1961. Altered limestone containing beryllium was discovered near Rapid River, tributary to Lost River, 65°23′N. 167°09′W. The material was of ore grade, but further exploration and mapping are needed to determine mining possibilities. (DGS.)

SAINSBURY, CLEO LADELL, 1921– , *see also*
International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

Scholl, D.W., & C.L. Sainsbury. Subaerially carved seavalley . . . 1961. No. 75423

75337. ST. AMAND, PIERRE, 1920– . The role of lateral faulting in circum-Pacific orogeny; is the Pacific Basin rotating? (Pacific Science Congress. 9th. *Bangkok, Thailand,* 1957. Proceedings, *pub.* 1961. v.12, geology and geophysics, p.65.) Abstract of a paper presented at a symposium on nature, location, and origin of a circum-Pacific continental margin.

Lateral faults are the primary structural geologic forms of this orogeny occurring, probably since Mesozoic time, around the periphery of the Pacific. Examples of right lateral faulting in Alaska, the Aleutians, Kamchatka, etc., indicate that the Pacific Basin is rotating counter-clockwise; the velocity (on the eastern side) is over 20 ft./century. (DI.)

ST. ONGE, DENIS, *see*
International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

Lamothe, C., & D. St. Onge. . . . periglacial erosional process . . . 1961. No. 73288

75338. SAĬTBURKHANOV, SH. R. Mokritsa, *Stellaria media* L., Cyr., v zone lesotundry i mery bor'by s nei. (Botanicheskiĭ zhurnal, Feb. 1962. t.47, no.2, p.213-17, tables.) 10 refs. Text in Russian. **Title tr.:** Chickweed, *Stellaria media* L., Cyr., in the forest-tundra, and its control.

Account of the detrimental effects of this weed on arctic agriculture as reported from Murmansk Province, the Nar'yan-Mar, Igarka and Noril'sk regions. Its roots, germination, regrowth after mowing are described. Effect of low temperature on germination and viability of seeds in forest-tundra soils are discussed. Chemical killers of chickweed are noted. (DLC.)

75339. SAĬTBURKHANOV, SH. R. Opyt khimicheskoĭ propolki ovoshchnykh kul'tur na Kraĭnem Severe. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, May 1962, no.5, p.33.) Text in Russian. **Title tr.:** Experiment in chemical weeding of vegetables growing in the Far North.

Reports on eliminating chickweed from welsh onion, a four-year experiment using agricultural research stations. Calcium cyanamid, dinitrophytocreosol, solar oil and chlor-IFK (isopropyl N-(3-chlorophenyl) carbamate) were applied. Best results were obtained with calcium cyanamid and chlor-IFK. (DLC.)

SAKAEV, F. SH., *see* Maziĭa, L.V., & F.Sh. Sakaev. Modelirovanie ėlektroprivoda grebnoĭ ustanovki . . . 1959. No. 73898

75340. SAKAI, AKIRA. Effect of polyhydric alcohols to frost hardiness in plants. (Nature, Feb. 4, 1961. v.189, no.4762, p.416-17, table.) 5 refs.

Reports a study of bark or twigs or leaves from 19 species, submitted to natural or artificial frost hardening. In most species, polyhydric alcohols had no role in hardening. In four however, where these alcohols amount to some 40% of total sugar content, they are thought to play some part in cold resistance. (DLC.)

75341. SAKAI, AKIRA. The mechanism of frost injury in plant cells 1, effect of medium against frost injury. (Teion kagaku, 1961. v.19, ser. B, p. 1-16, illus., tables.) 22 refs. Text in Japanese. Summary in English.

Reports experiments with hardy-cabbage cells. In late fall, they resisted freezing in water at -15°C. for 16 hours. In hypotonic glucose they survived freezing at -30 and -70°C. After prefreezing in glucose, about 80% survived immersion in liquid N for a full day. Numerous other neutral solutes tried afforded protection against frost injury. The causes of this behavior are discussed. (DLC.)

75342. SAKAI, KENJI. Japan, world-wide growth. (Pacific fisherman yearbook, Jan. 25, 1962. v.60, no.2, p.101-109, illus., tables.)

Reviews 1961 Japanese fisheries including salmon, crab, bottomfishing and whaling operations and production (by species and areas) in the Bering and Okhotsk Seas and Aleutian waters. Winter trawling was initiated in Bering Sea; and the red salmon pack (2,087,512 cases) reached a new record. (DI.)

SAKHAROV, A. S., *see also*

Bussen, I.V., & A.S. Sakharov. Kompleks-pluton . . . 1962. No. 70478

Bussen, I.V., & A.S. Sakharov. Pervichnaĭa rassloennost' . . . 1962. No. 70479

SAKHAROVA, E. I., *see* Makkaveev, N.I., & *others*. Geomorfologicheskie issledovaniĭa . . . 1961. No. 73750

SAKHAROVA, M. A., *see* Akademiĭa nauk SSSR. Sravnitel'nyĭ slovar' . . . 1961. No. 69583

75343. SAKS, VLADIMIR NIKOLAEVICH, 1911– . *and* N. I. SHUL'GINA. Melovaĭa sistema v Sibiri; predlozheniĭa o ĭarusnom i zonal'nom raschlenenii. (Geologiĭa i geofizika, 1962, no.10, p.23-41, table.) 50 refs. Text in Russian. Summary in English. **Title tr.**: The Cretaceous system in Siberia; suggestions on its subdivision into stages and zones.

Presents a stratigraphic division into stages using the standard European time scale, and correlates the Cretaceous deposits of Siberia to those of western Europe, North America, Greenland, Spitsbergen, etc. This division and correlation are based on faunal, primarily ammonite complexes, and, under certain conditions, on floral complexes. It is suggested that the Berriasian stage equivalent to the lower Valanginian be distinguished as a separate stage. (DLC.)

75344. SAKS, VLADIMIR NIKOLAEVICH, 1911– , *and* S. A. STRELKOV. Mezozoĭ i kaĭnozoĭ Sovetskoĭ i zarubezhnoĭ Arktiki. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t.117, Geologiĭa . . . 1961, p.33-48, fold. tables.) 33 refs. Text in Russian. Pub. in English in International Symposium on Arctic Geology, q.v. **Title tr.**: The Mesozoic and Cenozoic of the Soviet and foreign Arctic.

Distribution and stratigraphy of Mesozoic and Cenozoic deposits are summarized. Tables of stratigraphic correlation for Cretaceous, Jurassic and Quaternary deposits are appended. Included are deposits of the Barents Sea area, West Siberian lowland, Yenisey - Lena depression, Verkhoyansk trough, Verkhoyansk-Chukotka province, Anadyr-Koryak region, Alaska, northern Canada, Greenland and Spitsbergen. (DLC.)

75345. SAKS, VLADIMIR NIKOLAEVICH, 1911– . Nekotorye problemy paleogeografii ĭurskogo perioda v sviāzi s izucheniem belemnitovykh faun Sibiri. (Geologiĭa i geofizika, 1961, no.10, p.74-88, plate.) 37 refs. Text in Russian. Summary in English. **Title tr.**: Some problems in the paleogeography of the Jurassic as related to study of the belemnite fauna of Siberia.

Reports some paleogeographic conclusions regarding arctic and Siberian seas, based on analysis of Jurassic belemnites and, in part, of ammonites. Possible cooling of temperature in Siberia in the Jurassic period caused a delay in the migration of some groups of belemnites into these seas, and even the dispersion of others to southern regions. Analysis of belemnites reveals also some connections existing between the Siberian seas and those of Europe, southern Asia, and North America. Two new species, *Dicoelites bidgievi* and *D. sibiricus,* are systematically described and illus., both found in lower Lena basin. (DLC.)

75346. SAKS, VLADIMIR NIKOLAEVICH, 1911– . Nekotorye voprosy stratigrafii i fatsial'noĭ kharakteristiki mezozoĭskikh otlozheniĭ Zapadno-Sibirskoĭ nizmennosti. (Geologiĭa i geofizika, 1961, no.3, p.3-17.) 26 refs. Text in Russian. Summary in English. **Title tr.**: Some problems of the stratigraphy and the characteristics of facies of Mesozoic deposits of the West Siberian lowland.

Outlines the local stratigraphic scale for these deposits as adopted by the joint stratigraphic conference in Novosibirsk, 1960, and advocates its use in further studies. Some questions which still need clarification are discussed. (DLC.)

75347. SAKS, VLADIMIR NIKOLAEVICH, 1911– . Novye dannye o nizhne- i srednetĭurskikh belemnitovykh faunakh Sibiri. (Akademiĭa nauk SSSR. Doklady, July 11, 1961, t.139, no.2, p.431-34, table.) 5 refs. Text in Russian. **Title tr.**: New data on the Lower and Middle Jurassic belemnite fauna of Siberia.

Reviews collections made by various institutions in the Anabar, lower Lena, Vilyuy, and Kolyma basins, and other areas. The 49 species identified are listed with their vertical distribution according to stages of Lower and Middle Jurassic deposits. Some new species are noted. (DLC.)

75348. SAKS, VLADIMIR NIKOLAEVICH, 1911– . O vozmozhnosti primeneniĭa obshcheĭ stratigraficheskoĭ shkaly dliā raschleneniĭa ĭurskikh

otlozhenii Sibiri. (Geologiia i geofizika, 1962, no.5, p.62-75, fold. table.) 42 refs. Text in Russian. Summary in English. **Title tr.**: On the possibility of using a general stratigraphic scale for division of the Jurassic deposits of Siberia.

Reviews the distribution of marine Jurassic deposits in the Yenisey and Lena depressions, Vilyuy syncline and elsewhere in Siberia and northeastern USSR. These deposits contain abundant fauna including ammonites which allow the division according to stages, substages and zones adopted in Western Europe. Stratigraphic correlation is made and index fossils cited for each unit. Endemic fauna of the Arctic Basin is noted. (DLC.)

SAKS, VLADIMIR NIKOLAEVICH, *see also* Basov, V.A., & *others*. Novye dannye . . . Khatangskoĭ vpadiny. 1962. No. 70061

SAKURAI, K., *see*

Maeda, H., & *others*. Solar-terrestrial relationships . . . 1962. No. 73736

Maeda, H., & *others*. Solar-terrestrial relationships IGY, IGC. 1962. No. 73737

SALA, ILMARI, *see* IUGG . . . Snow & Ice Comm. 1961. No. 72396

75349. SALAMONE, L., *and* **S. TOTARO.** Modificazioni dell' aldosemia da freedo. (Folia medica, 1961. anno 44, no.7, p.579-85, table.) 7 refs. Text in Italian. Summary in English. **Title tr.**: Changes in blood aldolase due to cold.

In rabbits exposed for various brief periods to cold, serum aldolase levels increased proportionately to the number and duration of exposures; after a few days, return to normal took place. No significant changes were noted in serum transaminase activities. (DNLM.)

SALAZKIN, ALEKSANDR ALEKSANDROVICH, 1927– , *see* Martynov, V.F., & A.A. Salazkin. . . . *Bithynia leachi* . . . 1962. No. 73852

SAL'E, MARINA EVGEN'EVNA, *see* Shurkin, K.A., & *others*. Belomorskiĭ kompleks . . . 1962. No. 75625

SALISBURY, FRANK B., *see* Spomer, G.G., & F.B. Salisbury. Instrument shelter . . . 1962. No. 75880

75350. SALMGREN, OLOF. Dika med plog. (Skogs-Norrland, Sept. 1961. nr.4, p.29-30.) Text in Swedish. **Title tr.**: Ditching with plow.

Describes this method of drainage as developed during the past ten years and now used almost exclusively by large lumbering companies. It is supplemented by machine digging or blasting if the drain needs to be enlarged, and annual inspection and regular maintenance are necessary. Ploughed ditches are more shallow than those manually dug, but far less costly. They would be economical also for farm wood lots if done cooperatively. (DA.)

75351. SALMI, MARTTI. Turve ja senkäyttö. (Finland. Geologinen Tutkimuslaitos. Geoteknillisiä julkaisuja, 1960. no.65, p.52-62, maps, graphs, table.) 13 refs. Text in Finnish. Summary in English. **Title tr.**: Peat and its utilization.

Presents map, based on a 1960 source, showing percentage of the various parts of Finland covered by bog. It ranges 11-20% in the extreme north and northwest, 51-60% in the northcentral portion. *Sphagnum* and *Carex* are the most common varieties of peat. Its use depends largely on the degree of humification and ash content. An estimated 300,000 hectares suitable for fuel, are available in the whole country, equivalent to some 600 million tons, though annual production is only 150,000 tons. It is currently used in the production of peat litter and peat mold, but a power plant is planned utilizing peat as fuel. (DLC.)

75352. SALOMONSEN, FINN, 1909– . The immigration and breeding of the fieldfare *Turdus pilaris* L. in Greenland. (International Ornithological Congress. 10th, 1950. Proceedings, *pub.* 1951, p.515-26, illus., maps.) 20 refs.

Reports a migration in great numbers, with a long ocean journey in Jan. 1937, and a subsequent successful occupation. The probable route of the birds' flight, weather factors affecting it, and their 1950 distribution and ecology in southwest Greenland are outlined. (DLC.)

75353. SALT, REGINALD WILSON, 1910– . Effect of electrostatic field on freezing of supercooled water and insects. (Science, Feb. 17, 1961. v.133, no.3451, p.458-59, illus.) Ref.

"Supercooled water and two species of insects froze at higher temperatures than normally when placed in an electrostatic field . . . The effect becomes more certain and occurs earlier as the amount of supercooling is increased." (DLC.)

75354. SALT, REGINALD WILSON, 1910– . Intracellular freezing in insects. (Nature, Mar. 24, 1962. v.193, no.4821, p.1207-1208.) 3 refs.

Discusses his earlier observations on ice formation in large cells, but not in small ones; ice formation between groups of cells and between tissues; mortality from freezing, etc. (DLC.)

75355. SALT, REGINALD WILSON, 1910– . Resistance of poikilothermic animals to cold. (British medical bulletin, Jan. 1961. v.17, no.1, p.5-8.) 23 refs.

General account of "principles that have become established" in the study of responses of these animals to various degrees of cold. Nonfreezing cold and acclimatization, avoidance of freezing (supercooling, nucleation, dehydration) and freezing tolerance are discussed in turn. (DNLM.)

SALTIN, B., *see* Andersen, K.L., & *others*. Physical fitness . . . Lapps. 1962. No. 69758

75356. SALYER, JAMES W. A bow-net trap for ducks. (Journal of wildlife management, Apr. 1962. v.26, no.2, p.219-21, illus.) 4 refs.

Describes a new trap for capturing incubating ducks. It is sprung from a distance. Fifty-eight hens were taken without injury, in as many tries. (DLC.)

75357. SALZANO, JOHN, *and* **F. G. HALL.** Effect of hypothermia on reflex activity in the anesthetized dog. (Society for Experimental Biology and Medicine. Proceedings, Jan 1961. v.106, no.1, p.199-202, table.) 5 refs.

Hypothermia of 27-28°C. in anesthetized dogs, potentiated the pressor response to injected epinephrine or norepinephrine (2μg/kg). Response

to the latter was greater than to the former. Additional observations indicate that the hypothermic dog retains reflex activity though to a lesser degree than in normothermia. (DLC.)

75358. SALZANO, JOHN, *and* **F. G. HALL.** Influence of vagal blockade on respiratory and circulatory functions in hypothermic dogs. (Journal of applied physiology, Sept. 1962. v.17, no.5, p.833-36, illus., table.) 15 refs.

Vagal blockade produced increased tidal volume, decreased respiratory frequency, and increased anatomic and physiologic dead space, in hypothermic and control animals. Alveolar ventrilation and heart output fell with body temperature. Arterial-alveolar CO_2-pressure differences were independent of temperature and vagal blockade. (DLC.)

SALZANO, JOHN, *see also* Hall, F.G., & J. Salzano. Hypothermia & response trachea obstruction. 1961. No. 71958

75359. SAMARTH, S. S., *and* **B. B. GAITONDE.** Effect of hypothermia on ECG pattern of isolated rabbit's heart. (Archives internationales de pharmacodynamie et de thérapie, May 1961. v.131, fasc. 3-4, p.397-420, illus., tables.) 20 refs.

Isolated rabbit heart under hypothermia showed bradycardia, increased QT interval and T duration. These symptoms were very pronounced below 25°C. and the hearts stopped at 19°C. or below. Adrenaline and noradrenaline produced response up to 25°C., but when released by acetycholine produced response below 25°C. and a few contractions when the heart stopped. Insulin and ATP, separate or together did not modify these findings and did not affect the ECG. (DNLM.)

75360. SAMOĬLOV, F. Rozy Severa. (Neva, 1961, no.5, p.153-59.) Text in Russian. **Title tr.:** Roses of the North.

Tells of the experiences of a horticulturist, plant acclimatization experiments at the Polar Alpine Botanical Garden in Kirovsk, cultivation of flowers for landscaping a town on the Barents Sea, etc. (DLC.)

SAMSONIIA, L. P., *see* Gakkel', IA. IA., & L.P. Samsoniia. Pervye . . . radiobui. 1961. No. 71555

75361. SAMSONOV, P., *and* **N. SAMSONOVA.** Chitateli vnosiat svoi predlozheniia. (Russkiĭ iazyk v natsional'noĭ shkole, 1961, no.2, p.48-50.) Text in Russian. **Title tr.:** Readers offer their comments.

Discusses the methods of teaching Russian in Yakut schools, and criticizes the emphasis on Russian-to-Yakut translation. Visual aids, illustrated text books, and more oral work are advocated. (DLC.)

75362. SAMSONOVA, T. P. Sravnitel'naia kharakteristika sistemy glasnykh russkogo i iakutskogo iazykov. (Akademiia pedagogicheskikh nauk RSFSR. Izvestiia 1960. vyp.111, Voprosy metodiki prepodavaniia rodnogo i russkogo iazykov v natsional'noĭ shkole, p.117-30, tables.) 10 refs. Text in Russian. **Title tr.:** Comparative characteristic of the vowel system in Russian and Yakut.

Comparative study of Yakut (16) and Russian (6) vowels, phones, harmony, and stress. Author's purpose is to help resolve methodological problems in teaching Russian to Yakut children. (DLC.)

75363. SAMYLINA, V. A. O melovoĭ flore Arkagalinskogo uglenosnogo basseĭna. (Akademiia nauk SSSR. Doklady, Dec. 11, 1962. t.147, no.5, p.1157-59.) 6 refs. Text in Russian. **Title tr.:** Cretaceous flora of the Arkagala coal-bearing basin.

Reviews previous studies and reports about fifty species of fossil flora collected in natural outcrops and drillings. Flora of the Arkagala series is of Cenomanian-Turonian age and about half are conifers belonging to fam. Pinaceae and Taxodiaceae. Angiospermae with *Querexia angulata* and *Trochodendroides arctica* are characterized, also others. The Dolginskaya series flora is also noted; it shows no new forms. (DLC.)

SANDER, G. W., *see* National Research Council. Symposium . . . International Upper Mantle Project. 1961. No. 74227

75364. SANDFORD, B. P. Enhancement of night-sky molecular nitrogen emission in polar cap absorption events. (Nature, *London,* Apr. 15, 1961. v.190, no.4772, p.245-46, graph.) Ref.

Plots, on a logarithmic scale, the relative intensity of the first negative band of ionized molecular nitrogen at 3914 Å, as observed at the South Pole Station during May 1959 and at Thule, Greenland, during Nov. 1960. Associated times of solar flares, polar cap absorption commencements, and sudden commencements of magnetic storms are shown. The onset of increased nitrogen emission is closely related to the beginning of the polar cap absorption. The source of emission is traced to near or below 100 km. (DLC.)

75365. SANDFORD, B. P. Polar-glow aurora in polar cap absorption events. (Journal of atmospheric and terrestrial physics, Mar. 1962. v.24, no.3, p.155-71, tables, diagrs., map.) 39 refs.

"During polar cap absorption events an extensive auroral type glow called the polar-glow aurora is observed. The geographical extent and time variations behave in the same manner as the polar cap absorption. The glow is primarily excited at heights below 100 km. by protons in the energy range 0.5 - 100 Mev. It is estimated that the energy of the incoming protons exceeds 2×10^{13} eV./cm² col. sec. There appear to be relatively few protons with energies below 1 Mev. and the maximum particle flux of about 10^7 protons/cm² col. sec. is in the energy range 1-10 Mev."—Author's abstract. (DLC.)

SANDFORD, KENNETH STUART, 1899– , *see* Holland, M.F.W. Geology . . . Spitsbergen. 1961. No. 72208

75366. SANDNES, RICHARD. Forsøksfiske med snurrevad på Helgelandskysten. (Fiskets gang, Jan. 19, 1961. årg. 47, nr.3, p.53-55, sketch map.) Text in Norwegian. **Title tr.:** Experimental fishing with a snurrevad on the Helgeland coast.

Reports trials with this type of drag or trawl, also called a Danish seine, in coastal waters 65°10′ - 66°55′N., Aug. 18 - Nov. 9, 1960. In the northern area, but not south of 65°50′N., the bottom (sandy) was suited to the trawl and fishing conditions were good; 19 fishing grounds were mapped. (DA.)

75367. SANDS, G. Arctic laundry. (North, Feb. 1962. v.11, no.1, p.15-17, illus.) Reprinted from Laundry and drycleaning journal.

Describes equipment and operations of a laundry and drycleaning plant in service at Frobisher since 1943; personnel (11 Eskimos, 2 whites), prices, etc. are noted, as are other, home and public laundry facilities in the community. (CaMAI.)

75368. SANDSTRÖM, ARNE ELD, 1905– , *and others.* Direction of the cosmic ray anisotropy. (Tellus, Feb. 1962. v.14, no.1, p.19-32, tables, graphs, diagrs.) 24 refs. *Other authors:* E. Dyring, *and* S. Lindgren.

Presents data obtained by means of inclined meson telescopes at Uppsala and Kiruna in Sweden and Murchison Bay in Svalbard. The six mean asymptotic directions are distributed between approx. 15°N. and 80°N. The flow of excess particles responsible for the anisotropy is shown to be parallel to the orbital plane of the earth. Atmospheric effects are considered as well as the partial smoothing out of the diurnal variation through the longitudinal distribution of the asymptotic directions. The yearly mean amplitudes fit a linear function of the cosine of the angle between the equatorial plane and the mean asymptotic direction. The direction of the anisotropy makes an angle of approx. 90° with the earth-sun line, the flow of excess particles overtaking the earth.—From authors' abstract. (DLC.)

SANDSTROM, N., *see* Weber, J.R., *&* *others.* Geophys. surveys Gilman Glacier . . . 1961. No. 76506

75369. SANFORD, BRUCE V. Sources and occurrences of oil and gas in the sedimentary basins of Ontario. (Geological Association of Canada, Proceedings, Oct. 1962. v.14, p.59-89, maps, graph, tables.) 29 refs.

Describes the geology and the production or possibility of oil and gas in three sedimentary basins, viz. southwestern Ontario, eastern Ontario lowland, and Hudson Bay lowland. An area of some 125,000 sq. mi. along Hudson and James Bays, is underlain by nearly-flat, sedimentary strata from Ordovician to Devonian, and Cretaceous in age; it includes about 10,000 sq. mi. at the southern end of James Bay considered prospective for oil and gas. Three stratigraphic test holes and 29 diamond drill holes have been made without indication of either. (DGS.)

75370. SAPIN-JALOUSTRE, JEAN. Gelures. Paris, Encyclopédie médico-chirurgicale, 1961. 6 p. illus., graphs. (Appareil locomoteur, no.9.) 37 refs. Publication no.225 of Expéditions polaires françaises, Mission Paul-Émile Victor. Text in French. **Title tr.:** Frostbite.

Discusses etiology, physiology, pathology, pathogenesis; clinical aspects; diagnosis; treatment; prophylaxis. (ExPF.)

SAPOZHNIKOVA, A. M., *see*

Markhinin, E.K., *&* A.M. Sapozhnikova. O soderzhanii Ni . . . 1962. No. 73821

Markhinin, E.K., *&* A.M. Sapozhnikova. O soderzhanii Zr . . . 1962. No. 73822

75371. SAPPORO. HOKKAIDO UNIVERSITY. The Institute of Low Temperature Science. Sapporo, Bunyeidc Printing Co., 1961. illus. pamphlet.

Outlines the history, from Nov. 25, 1941, of this facility for the study of natural phenomena occurring at low temperatures to be experienced in Hokkaido. Six research sections, with about 70 members, work in pure physics, applied physics, meteorology, oceanography, biology, and medicine. Major research deals with: snow, frost heaving, sea fog, sea ice, death from cold, hypothermia, extended forecasting of weather, etc. Facilities include three special-type cold boxes. Results are pub. in Japanese with English summary in *Teion kagaku: Low temperature science,* or in *Contributions from the Institute of Low Temperature Science.* (DWB.)

75372. SARAJAS, H. S. SAMULI. Heart damage in dogs subjected to hypothermia, with or without complicating cardiac operations. Helsinki, 1961. 230 p. illus. tables. (Suomalainen tiedeakatemia. Toimituksia: Annales Academiae scientiarum Fennicae, ser. A, 5, Medica, no.86.) About 500 refs.

Comprehensive monograph based on electrocardiographic and pathologic-anatomic observations on dogs. Uncomplicated hypothermia of 1-4 hrs. duration is shown to produce subendocardial interstitial edema, coagulative necrosis and slight fatty degeneration of muscle fibers. Increased cooling time generally sharpened the pathological picture. The latter is particularized with many, partly new techniques and abundantly illustrated with photomicrographs, some in color. Observations on circulatory and blood changes are included and cardiac irregularities, fibrillation and asystoles described. An introductory section (p.7-55) reviews responses of homeotherms to environmental temperature, techniques of inducing hypothermia, its physiology and pathology. (DLC.)

75373. SARIOLA, SAKARI. Drinking patterns in Finnish Lapland. Helsinki, The Finnish Foundation for Alcohol Studies, 1956. 88 p., illus., map, graphs. 24 refs.

Reports a study of the population of this northern province of Finland. The Lapps in the North, described separately, have no drinking problem. The Finns are treated in detail in the two cultural groups: the sedentary peasants and the migratory loggers. Factors pertaining to individual adaptation to the social environment and their interdependency with the drinking patterns are analyzed. Environmental effects of the wild forested country, the short summers and dark winters, and the geographical isolation resulting in lack of public institutions and services are discussed. Alcohol problems are present among one fifth of the group studied, mainly loggers; they are considered social in origin, and accessible to control, e.g. by means of religious activities, spare-time interests, physical mobility and family ties. As Lapland is developed and more opportunities are afforded the deprived sections of society, these problems may diminish. A concise geographical account of Lapland is included and a Lapp village described. Appended (p.83-87) are a statistical section and the questionnaire used. (CaONA.)

75374. SARKISIÂN, I. Iskra muzhestva. (Grazhdanskaîa aviaciîa, Oct. 1961. god 18, no.10, p.19.) Text in Russian. **Title tr.:** Spark of courage.

Describes flight hazards encountered in the resupply operations on the 560 km. Chukchi National District circuit: Lavrentiya Bay – Uelen-Inchoun – Enurmino – Neshkan – Lavrentiya Bay. Twice-daily flights are made in summer. In the absence of airfields, the planes use graded landing strips at kolkhozes; and for the reindeer herders' camps, a flat spot in the tundra. Ski (preferred) or wheeled landings and take-offs depend on ground conditions. Partial snow-melt in spring, fog, severe icing in storms, etc. pose special problems. The aircraft is manned by a pilot, co-pilot and mechanic. (DLC.)

SARSADSKIKH, N. N., *see* Blagul'kina, V.A., & *others.* K mineralogii . . . 1962. No. 70245

75375. SARUKHANOV, G. L. Pechora-Kaspiĭ; reki Severa potekut na iug. (Priroda, July 1961. god 50, no.7, p.53-57, illus., map.) Text in Russian. **Title tr.:** The Pechora-Caspian canal; the rivers of the North will flow south.

Describes earlier canal building in the European North of Russia; prospects of water diversion from the Pechora-Vychegda, south to the Volga and the Caspian Sea; drop in water level of the latter and its adverse consequences, details of the projected canal, its hydrological aspects, etc. (DLC.)

SASA, YASUO, *see* Durham, J.W., & Y. Sasa. Comparison of the fauna . . . 1961. No. 71154

75376. SASKATCHEWAN. UNIVERSITY. INSTITUTE FOR NORTHERN STUDIES. Annual report, 2nd. 1961-1962. Saskatoon, Saskatchewan, 1962. 12 p., map.

Reports progress in promoting graduate research in arctic and subarctic Canada. Ten projects carried out under Institute support are noted, three each in biology and plant ecology, in economics, and in geology and geophysics, one in radio communications. Field areas included parts of Northwest Territories and northern Saskatchewan. (CaONA.)

SATOSKAR, R. S., *see* Kumar, M.A., & *others.* Effect of cold . . . 1959. No. 73208

SAULNIER, J. M., *see* Canada. Northern welfare '62. 1962. No. 70539

SAVAGE, J. E., *see* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

75377. SAVARENSKIĬ, EVGENIĬ FEDOROVICH. Results of seismic investigations in the USSR. (International Union of Geodesy and Geophysics. Association of Seismology and Physics of the Earth's Interior. Travaux scientifiques, 1959. sér. A, fasc. 20, p.203-212, maps.) 9 refs. Presented at the Toronto meeting, 1957.

Includes seven maps (reduced) similar to those of the seismicity atlas of the USSR, under compilation: general USSR, Kuril-Kamchatka, Arctic, etc. Legend indicates: intensity and magnitude, errors and epicenters (accuracy), and depth of focus. (DGS.)

SAVARENSKIĬ, EVGENIĬ FEDOROVICH, *see also* IUGG. Seismol. proceedings 1960. 1961. No. 72397

Pacific Science Congress. 1961. No. 74619

75378. SAVATEEV, D. E. Iskopaemye stroitel'nye materialy Kamchatki. (*In:* Akademiia nauk SSSR. Komissiia po problemam Severa. Syr'evye resursy . . . 1961. p.91-97.) Text in Russian. **Title tr.:** Mineral construction materials of Kamchatka.

Reviews distribution and possible reserves in 12 groups of materials: building stone, sand-gravel, clays and loams, volcanic tuffs and slags, pumice stone, diatomites, carbonate rocks, gypsum, mineral colors, and others are briefly described. Some production problems are noted. (DLC.)

75379. SAVCHENKO, A. A. Shakhty Pechorskogo ugol'nogo basseĭna v bor'be za vypolnenie reshenii XXII S"ezda KPSS. (Ugol', Sept. 1962. god 37, no. 9, p.5-8.) Text in Russian. **Title tr.:** Mines of the Pechora coal basin in the struggle to implement decisions of the 22d Congress of the Communist Party of the Soviet Union.

Outlines the deposits and mining activities in this area: 30 coal deposits with resources estimated at several hundred billion tons; three of the deposits are being mined: Vorkuta, Inta, and Khalmer-Yu. Vorkutugol' combine with 19 pits and Intaugol' with ten produce up to 17 million tons a year and supply the northwestern and northern areas of European Russia, including Murmansk and Arkhangel'sk Provinces and Komi and Karelian ASSR. Various types of coal are produced. There is good coking coal, its resources amount to two billion tons, and the Vorga-Shor deposit (approx. 67°08′ N. 52°56′E.) is to start production by 1968 with 3 million tons/yr. Efficiency is improving with output up to 43.8 t./man/month, and production cost is 0.10 ruble/ton lower in 1960-61, etc. Author is chairman of the Komi National Economic Council. (DLC.)

75380. SAVCHENKOVA, ELIZAVETA IVANOVNA. Metodika dolgosrochnogo prognoza srokov ledostava na r. Lene. (Moskva. TSentral'nyĭ institut prognozov. Trudy 1961. vyp.114, p.87-100, tables, graphs, map.) 2 refs. Text in Russian. **Title tr.:** Method for long-range forecasting of freeze-up dates on the Lena River.

Reviews observation data for the Lena 1901-1958, Vitim 1914-1958, Aldan 1925-1958 and Vilyuy 1926-1958. Mean monthly air pressure anomalies, baric topography at 500 mb are analyzed for September, October and November. Ice formation and freeze-up on the Lena are described. Character of atmospheric circulation during September is the most important factor on the middle Lena and tributary streams. The relationship of various weather indexes to ice formation are determined and use in forecasting at least 15 days in advance is explained. (DLC.)

75381. SAVEL'EV, A. A. Nakhodka *Myophoria lingonensis* (Dum.) v srednelenasovykh otlozheniiakh Vostochnoĭ Sibiri. (Leningrad. Vsesoiuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologo-razvedochnyĭ institut. Trudy 1962. vyp.196, Paleontologicheskiĭ sbornik 3, p.171-81, illus. plate.) 21 refs. Text in Russian. **Title tr.:** Find of *Myophoria lingonensis* (Dum.) in middle Lias deposits in Eastern Siberia.

Discusses the systematic and stratigraphic interest in this fossil from the middle Lias deposits of France and England. It has now been found in the Tyung River (tributary to the Vilyuy), and the

specimen recognized from the shell as belonging to fam. Myophoriidae, therefore called *Myophoria lingonensis* Dum var. *obesa* Saveliev var. n. This variety is described in detail and a new interpretation given to the system of Trigoniacea. (DLC.)

SAVEL'EV, È. N., *see* Pavlov, F.A., & È.N. Savel'ev. Snegouplotniaiushchaia . . . 1962. No. 74681

75382. SAVEL'EVA, È. A. Nekotorye materialy po srednevekovoĭ arkheologii Vychegodskogo kraia. (*In:* Materialy po arkheologii Evropeĭskogo Severo-Vostoka, 1962. vyp.1, p.155-75, illus.) 17 refs. Text in Russian. **Title tr.:** Certain materials on medieval archeology of the Vychegda region.

Description of objects excavated in 1924 and 1925 at three burial sites in a town near the confluence of the Vychegda and Vym' Rivers (62°14′N. 50°24′E.), based on manuscript reports and collections at the Komi Republic Local History Museum. The artifacts are metal implements, ornaments, and pottery of the 12-14th century A.D., and are typologically akin to the coeval Permian upper Kama culture. No ethnogenetic attribution is attempted, though a Slavic influence is noted in the predominance of cremation over interment. (DLC.)

75383. SAVICH, LIDIIA IVANOVNA (LIUBITSKAIA), 1886– , *and others*. Opredelitel' listostebel'nykh mkhov Arktiki SSSR. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 714 p. illus. (Akademiia nauk SSSR. Botanicheskiĭ institut.) 9 refs. Text in Russian. *Other authors:* A.L. Abramova *and* Z.N. Smirnova. **Title tr.:** Identification keys to leafy mosses of the Soviet Arctic.

Extensive study of these mosses from the tundra and forest-tundra, comprising 510 species, 476 of them known from European and Asiatic Russia, gen. *Sphagnum* included. A general part (p.5-49) deals with the life cycles and the anatomy and function of the spores, protonema, stem, leaves, vegetative and reproductive organs. The main part (p.50-682) contains keys to orders, families, and genera, keys to the last being of two kinds, one based on the morphology of the sporophyte (and partly of the gametophyte), the other mainly on that of the gametophyte. Nearly all species and their organs are illustrated, many with originals. Appended are a glossary of technical terms, and alphabetical lists of Russian and scientific names. (DLC.)

SAVICH, LIDIIA IVANOVNA (LIUBITSKAIA), 1886– *see also* Abramova, A.L., & *others*. Opredelitel' . . . mkhov . . . 1961. No. 69467

SAVICH, VSEVOLOD PAVLOVICH, 1885– , *Editor*. Flora sporovykh rasteniĭ SSSR, t.4-6. In sequence to No. 42293. *See under:*

KUPREVICH, V.F., *and* V.G. TRANSHEL'.
KOSINSKAIA, E.K.
NIKOLAEVA, T.L.

75384. SAVICHEV, P. F. Ledianye zhily v rykhlykh otlozheniiakh ostrova Chetyrekhstolbovogo; arkhipelag Medvezh'ikh ostrovov. (*In:* Moskva. Universitet. Geograficheskiĭ fakul'tet. Voprosy geograficheskogo merzlotovedeniia . . . 1962, p. 75-80, cross-sections.) 10 refs. Text in Russian. **Title tr.:** Ice veins in friable deposits of Chetyrekhstolbovoy Island; Medvezh'i Islands archipelago.

Describes this island, 70°38′N. 162°18′E. in the East Siberian Sea, 7 km. in length, 1.5-2 km. wide and 14-15 km² in area, as studied by the author in 1957-58. Its climate and permafrost conditions are briefly characterized. Exposures of friable material are described. Special attention is given to the ice veins, and one 2.15 m. thick is treated in some detail and illus. Its measurements, surrounding material, vertical section, and other features are reported, and considered typical for all. The formation conditions of ice veins are discussed. (DLC.)

75385. SAVILE, DOUGLAS BARTON OSBORNE, 1909– .Bird and mammal observations on Ellef Ringnes Island in 1960. Ottawa, Dept. of Northern Affairs and National Resources, Apr. 13, 1961. 6 p. tables. (Canada. National Museum. Natural history papers no.9.) 4 refs.

Notes wildlife on this central high arctic island during June 15-Aug. 12: collared lemmings, arctic weasels, Peary caribou, possibly a white-faced musk-ox; ringed seals were seen, also seven or eight breeding birds: snow bunting, brant, etc.; their density was low approx. 0.15 adults/10 acres near Isachsen, less in sandy parts of the island; breeding success of some was probably aided by the abundant lemmings diverting predators. (DI.)

75386. SAVILE, DOUGLAS BARTON OSBORNE, 1909– . Some fungi from Spence Bay, Boothia Isthmus. (Canadian field-naturalist, Apr.-June 1961, v.75, no.2, p.69-71.)

Describes characteristics and locations of 20 specimens collected in the course of general botanical work, Aug. 15-22, 1959, approx. 69° 30′N. 93° 30′W. in northern Keewatin. (CaOGB.)

SAVILE, DOUGLAS BARTON OSBORNE, 1909– , *see also* Pacific Science Congress. 1961. No. 74619

SAVINOVA, E. N., *see* Volkov, V.P., & E.N. Savinova. O sootnoshenii kaliia i rubidiia . . . 1961. No. 76421

75387. SAVINYKH, V. K., *and* **V. A. KHOKHLOV.** Mashina dlia ustroĭstva produvaemykh snezhnykh stenok. (Atvomobil'nye dorogi, Mar. 1962. god 25, no.3, p.33, illus.) Text in Russian. **Title tr.:** Machine for constructing walls consisting of spaced snow pillars.

Describes a new snow compacting machine for building of snow wall of spaced pillars 75 cm. high and 20 cm. at the base. When drawn by the DT-54A tractor, the machine can build the wall at the rate of one pillar per 6.1 sec., compacting it to a density of 0.49-0.59 gm./cm³ The pillars can last until the spring thaw. When drawn by an S-80 tractor, the machine can build pillars 1.2 m. high, and 60 cm. at the base. With the pillars spaced their own width apart, 234 m. of wall can be built per hour. —From CRREL. (DLC.)

75388. SAVINYKH, V. K. *and* **V. A. KHOKHLOV.** Mekhanizatsiia ustroĭstva snezhnykh stenok. (Avtomobil'nye dorogi, Jan. 1962. god 25, no.1, p.22-23, diagrs., cross-sections) Text in Russian. **Title tr.:** The mechanized installation of snow fence.

Reports a combination snow-collector and -compactor successfully tested in March 1961 at

Ogurtsovo (54° 53′ N. 83° E.): under -6° to -2° C. air temperature conditions, snow was compacted into an .8 m. high wall at a rate of 16.1 km. in 7 hrs. and a cost of 3 rubles/km. The barrier thus erected protects roads from wind and snowdrift at one-eighth the cost of manually-built snow wall. (DLC.)

75389. SAVITSKIĬ, V. E. Novye dannye o stratigrafii aldanskogo iarusa Anabarskoĭ anteklizy i ego granitsa s dokembriem. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Informatsionnyĭ sbornik 1962. vyp. 27, p.14-21, text map.) 7 refs. Text in Russian. **Title tr.:** New data on the stratigraphy of the Aldan stage in the Anabar anticline and its boundary with the Precambrian.

Reports a field study in the Khatanga River region of Krasnoyarsk Province in 1959-1960. New data are outlined concerning the relationship between Cambrian and Precambrian in the northern, northwestern and eastern slopes of the Anabar massif. In the Aldan stage three local biostratigraphic zones are established and characterized. (DGS.)

75390. SAVRASOV, D. I. Nekotorye svedeniia o fizicheskikh svoĭstvakh kimberlitov. (Geologiia i geofizika, 1962. no. 12, p.79-86, tables, graphs.) 3 refs. Text in Russian. **Title tr.:** Some data on the physical properties of kimberlites.

Reports on some fifty kimberlite bodies of western Yakutia from magnetic measurements. In almost all the known pipes, kimberlite is magnetic and displays on the surface an anomalous field of more than 30 gamma amplitude. Magnetic properties of kimberlites vary substantially, with a general increase in magnetization from south to north. Their magnetic susceptibility depends on their secondary magnetite. Their magnetic density, is also reported as ranging 2.20-2.70 gm./cm^3. (DLC.)

75391. SAVRASOV, D. I. Nekotorye svedeniia ob èffektivnosti primeneniia metodov magnitorazvedki pri poiskakh korennykh mestorozhdeniĭ almazov. (Geologiia i geofizika, 1962. no.8, p.96-103, tables, diagrs., graphs.) 4 refs. Text in Russian. **Title tr.:** Some information on the effectiveness of using magnetic survey methods in the search for primary diamond deposits.

Reports on a survey of kimberlites in the Aldan, Malaya Botuobuya, Muna, Daldyn-Alakit and Olenek basins of Yakutia. The magnetic properties of kimberlite pipes are characterized, kimberlite identification by surface and by aerial magnetic survey at 1:10,000, 1:25,000, 1:200,000 scales and by other instrumentation is reported. Magnetic survey was found effective for diamond-deposit prospecting. (DLC.)

SAVVAITOV, PAVEL IVANOVICH, 1815-1895, *see* Mikushev, A.K. Iz istorii . . . 1959. No. 74002

75392. SAVVAITOVA, K. A. O pitanii dal'nevostochnykh gol'tsov. (Rybnoe khoziaĭstvo, 1961. god 37, no.1, p.9-11, tables.) Text in Russian. **Title tr.:** Nutrition of Far-Eastern chars.

Study of two species of these fish, one in Kamchatka, during June-September. The variety of food according to age and habitat is noted. It consists of insects, molluscs, and fish eggs and fry, including those of salmon. (DLC.)

75393. SAVVAITOVA, K. A. O sistematicheskom polozhenii kamchatskikh gol'tsov roda *Salvelinus*. (Zoologicheskiĭ zhurnal, Nov. 1961. t.40, vyp.11, p.1696-1703, tables.) 38 refs. Text in Russian. Summary in English. **Title tr.:** The taxonomic position of Kamchatka chars of the genus *Salvelinus*.

Morphometric study indicating the presence of only two species of char in Kamchatka: *S. leucomaenis* Pallas and *S. alpinus* L. The latter, the arctic char, (first described as *S. malma* by Walbaum) is a very variable and polymorphous species, a claim also supported by biological aspects. (DLC.)

75394. SAVVAITOVA, K. A. O sistematike gol'tsov roda *Salvelinus*, Salmonidae, iz basseĭna Vostochno-Sibirskogo moria. (Nauchnye doklady vysshei shkoly, biologicheskie nauki, 1961, no.2, p.37-41, tables.) 9 refs. Text in Russian. **Title tr.:** Taxonomy of chars, genus *Salvelinus*, Salmonidae, from the basin of the East Siberian Sea.

Reports a study of 47 fishes from Chaunskaya Guba and from two nearby lakes on the mainland and one on Ayon Island. Morphometric, meristematic and anatomic analyses indicate that these fishes belong to a single species: *S. alpinus*, the arctic char. (DLC.)

75395. SAVVAITOVA, K. A. O vnutrividovykh biologicheskikh formakh *Salvelinus alpinus* L. Kamchatki. (Voprosy ikhtiologii, 1961. t.1, vyp.4(21), p.695-706, tables.) 27 refs. Text in Russian. **Title tr.:** Intraspecific biological forms of *Salvelinus alpinus* L. in Kamchatka.

Presents a comparative morphological and morphometric analysis of the migratory, lake, and lake-river forms of the arctic char. Color and sexual dimorphism, food, migrations, etc. are also considered. (DLC.)

75396. SAVVAITOVA, K. A., *and* **IU. S. RESHETNIKOV.** Pitanie razlichnykh biologicheskikh form gol'tsa, *Salvelinus malma* Walb. v nekotorykh vodoemakh Kamchatki. (Voprosy ikhtiologii, 1961. t.1, vyp. 1 (18), p.127-35, tables.) 21 refs. Text in Russian. **Title tr.:** The diet of different biological forms of char, *Salvelinus malma* Walb. in some water bodies of Kamchatka.

Deals with the lake-river form, the migratory and lake forms, and with the diet of young stages and stunted males. The investigation covers the period June-September. Species found in the stomachs, their numbers and percentage of all forms are considered. (DLC.)

75397. SAVVINOV, E. Novoe v IAkutskom kolkhoze. (Sel'skoe khoziaĭstvo Sibiri, Nov. 1961. god 6, no.11, p.83.) Text in Russian. **Title tr.:** New features of a collective farm in Yakutia.

Sketches progress on the Stalin cattle-breeding collective at Toybokhoy (62° 11′ N. 116° 47′ E.) in the Suntarskiy District. Activities of five scattered settlements have been centralized; fodder preparation has been improved and conifer needles introduced; the milk yield has risen from 500-600 to 2,500-3,000 liters/yr./cow, etc. (DLC.)

SAWYER, P. N., *see* De Jong, P., & *others*. . . . sympathectomy . . . cold injury. 1962. No. 70944

75398. SAYEN, ANN, *and* **C. BOLAND.** Changes in blood flow and temperature of muscle in the chilled limb of the rabbit. (Clinical science, Apr. 1961. v.20, p.217-21, illus.) 7 refs.

Venous occlusion plethysmography demonstrated a decrease in blood flow to the chilled mus-

cle of a limb immersed in 2° C. water. Transient rises in temperature of such muscle were associated with motion of the limb and an increase in its blood flow. (DNLM.)

75399. SAYEN, ANN, *and others.* Experimental immersion foot, observations in the chilled leg of the rabbit. (Clinical science 1960. v.19, no.2, p.243-56, illus., table.) 10 refs. *Other authors:* B.R. Meloche, G.C. Tedeschi, *and* H. Montgomery.

Account of macro- and microscopic changes in the leg immersed in water of 3° C. for 4-120 hrs. Phasic increases of temperature of muscle were evident throughout that period, changes evident in the rewarmed limb included foot drop, loss of muscle strength, edema, subcutaneous hemorrhage, muscle and myelin degeneration, etc. (DNLM.)

SAZONOV, N.V., *see* Vasserman, B. IA., & N.V. Sazonov. K voprosu o parallelizatsii poddomanikovykh otlozhenii . . . 1961. No. 76352

75400. SCHAEFER, HEINZ. A biochemical contribution to the redfish problem. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.150 ICES/ICNAF Redfish Symposium, p.104-110, illus., tables, map.) 17 refs.

Reports on analyses of skeletal muscle extracts for free amino acids. No qualitative differences in the pattern of these substances were found in the *marinus* and *mentella* forms from Greenland-Iceland waters. Quantitative differences however indicate that the two forms do not represent homogenous populations. (DI.)

75401. SCHAEFER, OTTO. Incidence of neoplastic diseases in Canadian Eskimos. (Canadian Medical Association. Journal, Jan. 30, 1960. v. 82, no.5, p.280-81.)

Discusses further five cases in addition to 25 reported *infra.* The histology of all 32 is dealt with. The prevalence of disgenetic tumors, and absence of those common among whites, like breast or prostate carcinomas are noted. (DNLM.)

75402. SCHAEFER, OTTO. Medical observations and problems in the Canadian Arctic, 1. (Canadian Medical Association. Journal, Aug. 15, 1959. v.81, no.4, p.248-53, illus.)

Account based on four years' experience in different localities of this region. Medical facilities, including transportation and communication; infectious diseases and their combat; tuberculosis and its forms; influenza and other viral and bacterial epidemics, and parasitic diseases are dealt with. (DNLM.)

75403. SCHAEFFER, OTTO. Medical observations and problems in the Canadian Arctic, 2. (Canadian Medical Association. Journal, Sept. 1, 1959. v.81, no.5, p.386-93, illus.) 23 refs.

Deals with nutrition and nutritional (vitamin) deficiences; degenerative diseases and those caused by civilization; psychosomatic and neurohormonal disorders; neoplastic diseases, congenital diseases; malformation; traumatic diseases due to climate and local conditions. Tuberculosis and the effects of the white man's civilization are considered the two most important medical problems of the population studied. (DNLM.)

75404. SCHAEFER, THEODORE, *Jr., and others.* Temperature change: the basic variable in the early handling phenomenon? (Science, Jan. 5, 1962. v.135, no.3497, p.41-42, illus.) 10 refs. *Other authors:* F.S. Weingarten *and* J.C. Towne.

Rats handled during the first week of life showed reduction of adrenal ascorbic acid when stressed. Exposure to cold without handling produced similar results. It is suggested that exposure to cold with a consequent hypothermia is the crucial factor in the handling effect. (DLC.)

75405. SCHAEFER, VINCENT JOSEPH, 1906– . Condensed water in the free atmosphere in air colder than -40° C. (Journal of applied meteorology, Dec. 1962. v.1, no.4, p.481-88, illus.) 10 refs.

Describes results of observations of atmospheric clouds formed by hot springs and geysers carried out at Yellowstone Park, Wyo. in Jan. 1962, with free atmospheric temperatures warmer and colder than -40° C. No evidence was found of the formation of supercooled clouds at temperatures below -40° C. Replicas were made of the cloud particles existing under varying atmospheric conditions; these showed that clouds which were formed in air colder than -40° C. consisted mostly of frozen, irregularly shaped particles, whereas liquid droplets were commonly found at temperatures above -40° C. Strong evidence is found for the presence in the free atmosphere of a transition state in the property of water at about -40° C., at which point homogeneous nucleation transforms all liquid water to ice particles. Disagreement among investigators as to the precise transition temperature seems to depend on measuring techniques rather than on the absence of the fundamental phenomenon. (DWB.)

SCHAIRER, JOHN FRANK, *see* Wager, L.R. Note . . . Skaergaard intrusion. 1961. No. 76461

SCHANTZ, EDWARD J., *see* Pacific Science Congress. 1961. No. 74619

75406. SCHEFFER, VICTOR BLANCHARD, 1906– Pelage and surface topography of the northern fur seal. Washington, D.C., 1962. 206 p. illus. tables. (U.S. Fish and Wildlife Service. North American fauna, no.64.) About 90 refs.

A study of gross and microscopic aspects of the skin and fur, in relation to age, sex and season. Following introductory information on earlier work and methods, successive sections deal with the skin layers and their structures; the pelage, in the fetus and at successive stages of growth; pelage of adults, males and females; variation with season (including the first four molts, and molt in adults); sensory vibrissae; fur anomalies in color, or due to disease, sexual deviation, etc. The Pribilof Island seals, on which this study is based, and that sealing industry are described. The remainder of the work is concerned with the surface anatomy: oral region, eyes, ears, mammary gland, sex organs, limbs, etc., and the blubber. Attached tables cover the quantitative aspects of the investigation and appendices deal with colors of fur and the professional terminology. Over 100 well-chosen photographic plates illustrate the study. (DLC.)

SCHEFFER, VICTOR BLANCHARD, 1906– , *see also* Thomas, R., & V.B. Scheffer. Records of ringed seals . . . 1962. No. 76120

75407. SCHELL, IRVING ISRAEL, 1906– . The ice off Iceland and the climates during the last 1200 years, approximately. (Geografiska annaler, 1961. v.43, no.3-4, p.354-62, tables.) 39 refs. *Also issued as:* Tufts Univ. Meteorological studies no.4.

Limited evidence shows that the duration and extent of ice off Iceland, when considered by longer, i.e. 100-year intervals, are indicators of the climate of Iceland, Greenland, Europe, North America, and other areas. Such intervals with little ice off Iceland appear to be associated with higher temperatures, generally less precipitation and lower lake level and river discharge; intervals with much ice are associated with lower temperatures, generally more precipitation, etc. Comparison is made with mean annual temperature of Jakobshavn in Greenland, Vardø in Norway, and Arkhangel'sk among other stations. (DWB.)

75408. SCHELL, IRVING ISRAEL, 1906– . On the iceberg severity off Newfoundland and its prediction. (Journal of glaciology, June 1962. v.4, no. 32, p.161-72, table, graph, charts.) 13 refs. Summary in French and German.

Analysis of the iceberg count off Newfoundland for 1880-1925 shows that stronger than usual NW. winds off the Labrador and Newfoundland coasts and relatively low temperatures over Newfoundland during Dec.-March lead to greater than average berg counts off Newfoundland Apr-June. Conversely, lighter NW. winds and higher temperatures lead to lower berg counts in the following months. The relative strength of winds can be measured by the pressure difference between Belle Isle and Ivigtut. The relationship investigated provides a basis for predicting the berg count each year at the end of March, and computed values compared with actual values on scale 0 to 10 for the following period in 1927-1961 show marked agreement. A more detailed representation of wind, temperature and other elements during the winter and early spring in the area would lead to a closer relationship with the berg count and a broader basis for its prediction. (DLC.)

75409. SCHELL, IRVING ISRAEL, 1906– . Recent evidence about the nature of climatic changes and its implications. (New York Academy of Sciences. Annals, Oct. 1961. v.95, art. 1, p.251-70, maps, graphs, tables.) 42 refs. *Also issued as:* Tufts Univ. Meteorological studies no.2. Paper resulting from a conference on Solar variations, climatic change, and related geophysical problems, New York, Jan. 24-28, 1961.

Attempts to reconcile, in the case of the ice age, the seeming paradox of a steeper equator-to-pole temperature gradient, increased circulation, evaporation and precipitation, with a decreased solar output that apparently calls for opposite conditions. Essential requirements for an ice age are exemplified by three theoretical cases, which would produce very much lower temperatures at the poles, a steeper equator-to-pole temperature gradient, greatly increased circulation and evaporation, and greater precipitation except over the ice areas. Three actual cases illustrate the significance of temperature changes; one for a short period 1901-20 to 1921-40, one for a long period from a glacial to an interglacial, and one for the 1851-1900 to 1901-50 period for a limited area, based on 165 selected station records. General effects expected from increasing and decreasing solar output are discussed and compared with the evidence concerning climatic changes from a glacial to an interglacial. High-latitude decrease in temperature and greater precipitation near the ice edge took place during the glacial; temperatures, precipitation and evaporation followed opposite trends in the interglacial. Lack of ice in northernmost Greenland and Canada is explained by lack of precipitation and rapid evaporation. Further warming is indicated, with possibly one or more severe coolings and other less severe coolings before the end of this interglacial. (DLC.)

SCHERRER, J., *see* Fourment, A., & J. Scherrer. Réponses électrocorticales . . . 1961. No. 71469

75410. SCHEUMANN, K. H., *and others.* Versuch einer genetischen Deutung der lappländischen Granulite. (Finland. Geologinen Tutkimuslaitos. Bulletin de la Commission géologique de Finlande, 1961. no.196, p.327-36, 5 plates.) 13 refs. Text in German. Summary in English. *Other authors:* R. Bossdorf *and* T. Bock. **Title tr.:** Attempt at a genetic explanation of the Lapland granulite.

Notes the extensive outcrops, near Lake Inari and elsewhere of migmatic garnet gneisses containing minerals or mineral combinations in the amphibolite facies or in the granulite facies. Differences in mineral content of the two facies are explained by the crystallization of the migmatic gneisses under changing conditions, first those of amphibolite formation, later and deeper those of granulite formation. Some shearing movement took place, resulting in the creation of true, fine-grained granulites, commonly found in central Europe. All of formation stages may be noted in this extensive granulite area. (DLC.)

75411. SCHEUREN, J. J., *Jr.* Arctic construction. (Boston Society of Civil Engineers. Journal, Apr. 1962. v.49, no.2, p.120-42, illus., diagrs., map.)

Discusses problems of logistics, personnel, equipment, materiel, and construction related to the development of sites in Greenland and Baffin Island. The three main factors which influence arctic work are relative inaccessibility, climate, and terrain. Arctic construction of the last ten years is reviewed to illustrate the value of staging procedures and air support in overcoming inaccessibility. The use of staging areas for aircraft and ships supporting the construction of Thule Air Base in 1951 is discussed, and the subsequent use of Thule Air Base as a staging base for construction of the weather station at Nord, two Loran stations, two stations on the Greenland icecap, as well as other arctic sites is reported. The climatic problems include low temperatures, darkness, winds, and blowing snow. Variables of production for outside or partially outside work range from 100% max. for mid-June to mid-Sept. to 20% min. during mid-Nov. to mid-March. Terrain characteristics are treated in detail. Successful techniques of road and building construction, tunneling, drilling, and piling in permafrost are examined. Suggestions are offered for selecting personnel, maintaining comfortable living conditions, and improving safety factors. –From CRREL. (DLC.)

75412. SCHEVILL, WILLIAM E. Whale music. (Oceanus, Dec. 1962. v.9, no.2, p.2-13, illus., graphs.) Ref.

Reviews cases of vocal sounds of whales overheard by men aboard 19th century sailing vessels, also by sonar and hydrophone operators during World War II. Notes own study of whale sounds, and release of a 33 1/3 RPM phonograph record *Whale and porpoise voices*, by W.E. Schevill and W.A. Watkins, Woods Hole, Mass., Oceanographic Institution, 1962. This record contains selections from author's recordings on magnetic tape; it is accompanied by a 24-page booklet containing spectrograms of some of the sounds, illus. of the animals, and general remarks in elucidation of the record. (DLC.)

SCHGAL, N., *see* Westin, B., & *others*. Regional blood flow . . . 1961. No. 76537

75413. SCHLACHTER, WOLFGANG. Zum Problem des Nominativs in den finnisch-ugrischen Sprachen. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . p.493-521.) Refs. Text in German. **Title tr.:** The problem of the nominative in Finno-Ugric languages.

Comparative morphological and syntactic analysis including Zyryan, Ostyak, Vogul, and Lappish. A general uniformity is noted in the structure and use of the nominative case in all Finno-Ugric languages. (DSI.)

75414. SCHLEISTROEN, ARNE. Prognoser over tilgang til skogindustriene på mindre tynnings virke av bartraer og på lauvtrevirke. (Norway. Norske skogforsøksvesen. Meddelelser, 1961. bd. 17, hefte 2 (nr.60), p.107-180, tables, graphs.) 35 refs. Text in Norwegian. Summary in English. **Title tr.:** Forecast of amounts of hardwood and small-sized softwood available to the wood industries.

Discusses the current situation and probable trends over the next 60 years, citing M. Kleppen, (q.v.) on hardwood and dealing himself chiefly with small-sized softwood; this is defined as wood from Norway spruce and Scotch pine which cannot be barked by common manual methods and must be bundled for economical transportation. Probable amounts available 1960-2020 in individual counties are graphed, as are those for 1960-2000 in the three chief wood-producing areas: East Norway, Telemark and Agder, Trøndelag and Nordland. Other parts of North Norway are not included in the study. (DA.)

75415. SCHLOSS, MILTON. Cloud cover of the Soviet Union. (Geographical review, July 1962. v.52, no.3, p.389-99, maps, graphs.) Refs.

Analyzes characteristics of the cloud cover and discusses the seasonal and regional distribution in detail; based on data in the U.S. Weather Bureau, heretofore not published in English; translated by N. Stepanova. Monthly means of cloudiness over European and Asiatic USSR are graphed; maxima are found over Kola Peninsula in Aug.-Dec. and the arctic littoral in June and Sept. Minimum cloudiness appears over eastern Siberia in Jan., spreads across central Siberia in Feb., and over northeast Siberia, the arctic littoral and the west Siberian lowland in Mar. Average winter and summer cloud cover for the entire USSR, including the Baltic states, is mapped, as is the annual average probability of clear skies over European Russia; in the northwest clear skies are probable 20% of the time. (DLC.)

75416. SCHLÜTER, BENT, *and others*. Redegørelse om politiet i Grønland. København, Ministeriet for Grønland, 1962. 58 p. (Denmark. Beretninger vedrørende Grønland, 1962, nr.7.) Text in Danish. *Other authors:* A. Pedersen *and* E. Hesselbjerg. **Title tr.:** Report on the police force in Greenland.

Reports their 1961 inspection tour in West Greenland: in 1959 and 1960, 1,154 and 1,300 criminal cases were dealt with, also 497 and 795 infringements of special regulations. Police personnel are insufficient to cope with work load; as population increases, its concentration increases and the visits of foreign vessels increase. For practical purposes, West Greenland is divided into seven police districts; each is treated in turn as to details of work, recommendations, etc.; suggestions are made for personnel selection, training and pay. Additional police districts are required and the entire force, at present under the Ministeriet for Grønland, should be transferred to the ministry of justice. A brief retrospective survey introduces the report on current conditions. (CaMAI.)

SCHMIDT, JEROME P., *see*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Metcalf, T.G., & J.P. Schmidt. Immunol. study respiratory viruses, Alaska. 1961. No. 73955

Metcalf, T.G., & J.P. Schmidt. Upper respiratory disease . . . 1961. No. 73956

75417. SCHMIDT, KLAUS. Neue Eisenerze bei Kolari, Lappland. (Zeitschrift für angewandte Geologie, Jan. 1960. Bd. 6, Heft 1, p.11-13, illus., maps.) 2 refs. Text in German. Summary in Russian and English. **Title tr.:** New iron ores at Kolari, Lapland.

Reports discovery, prospecting and estimates of iron ores north of Kolari, approx. 68°N. in Finnish Lapland: hematite and magnetite ores with reserves to 60 million tons, associated with Lapponian quartzites and amphibolites. These ores are believed to be of sedimentary origin. Transportation must be established prior to production. (DLC.)

75418. SCHMIDT, ROBERT F., *and* **J. J. CHANG.** Aktionspotential und Mechanogramm von Purkinje-Fäden in tiefer Temperatur. (Pflügers Archiv für die gesamte Physiologie, 1961. Bd. 272, Heft 4, p.393-99, illus.) 16 refs. Text in German. Summary in English. **Title tr.:** The action potential and mechanogram of Purkinje fibers at low temperature.

Study of isolated fibers of the dog showed that lowering the temperature prolonged the action potential more than the contraction, whilst contraction amplitude increased. At very low temperature, the action potential lasted several minutes, but contraction relaxed in a few seconds, to be followed by a very slow "second contraction." Duration of action potential does not appear to control duration of contraction. (DLC.)

SCHMIDT, STANLEY J., *see* Waite, A.H., & S.J. Schmidt. Gross errors in height indication . . . 1961. No. 76464

75419. SCHNEIDER, OTTO. Aktivitäts-Indizes für das Polarlicht. (Polarforschung, Bd. 5, 1960. *pub.* Nov. 1961. Jahrg. 30, Heft 1-2, p.44-54, tables, graphs, diagrs.) 15 refs. Text in German. Summary in English. **Title tr.:** Auroral activity indices.

Defines the concept and reviews indices applied by various scientists to describe auroral intensity, forms, brightness, motion, etc. An *S*-index is introduced to provide information on all-sky camera records obtained at the General Belgrano station in the Antarctic during 1958. (CaMAI.)

75420. SCHNEIDER, RENÉ. Expédition Glaciologique Internationale au Groenland, E.G.I.G. 1957-1960; étude du puits glaciologique de Jarl-Joset, 1ère partie: implantation et observation de base des repères de déformation; travaux effectués en juillet 1960. Paris, 1960 38 p. illus., tables, Mimeo. typescript. Text in French. **Title tr.:** International Glaciological Expedition to Greenland 1957-1960; study of the Jarl-Joset glaciological pit, pt.1: installation and observations at the base of the deformation markers; work performed in July 1960.

Presents results of observations in a 41 m. deep pit, of longitudinal deformation and lateral deviation, and settling (measured by deflectometers). A Kern DKM2 theodolite and a 50-m. long steel band were used; the method is described and illus. Measurements and results of calculations are tabulated so as to be easily comparable with future measurements. (ExPF.)

SCHOEN, BEATRICE, *see* Friedman, I., & *others.* Deuterium . . . sea ice. 1961. No. 71501

75421. SCHOLANDER, PER FREDRIK, 1905– , *and others.* Radio-carbon age and oxygen-18 content of Greenland icebergs. København, C.A. Reitzel, 1962. 26 p., illus., map, diagr., graphs, tables. (Meddelelser om Grønland, bd. 165, nr.1.) 23 refs. *Other authors:* W. Dansgaard, D.C. Nutt, H. de Vries, L.K. Coachman, *and* E. Hemmingsen.

Contains further results of the Arctic Institute Greenland Expedition of 1958 (No. 60592). One radiocarbon dating was obtained from CO_2 in the gas enclosures in the melting of 6-16 tons of ice from 11 West Greenland icebergs. Melt water was also sampled for O^{18} determinations. Age of the ice ranged from recent to over 3000 yrs., the oldest ice having the least O^{18}, i.e. having been formed at the lowest temperatures. Most samples originated fairly near the coast; overall rate of movement, calculated from age and distance, ranged 110-270 m./yr., figures in agreement with other estimates. Simultaneous C^{14} and O^{18} determinations may yield valuable flow information, especially if applied to single drainage systems. Operations were carried out aboard the Norwegian sealer *Rundøy;* C^{14} and the O^{18} determinations were made at the Univ. of Groningen and the Univ. of Copenhagen, respectively. (DGS.)

SCHOLANDER, PER FREDRIK, 1905– , *see also*

Gordon, M.S., & *others.* Freezing resistance . . . fishes. 1962. No. 71773

Hamilton, T.H. The adaptive significances . . . 1961. No. 71972

Nutt, D.C., & *others.* Dissolved nitrogen. 1961. No. 74445

Nutt, D.C., & P.F. Scholander. Gases in Greenland icebergs. 1961. No. 74446

75422. SCHOLANDER, SUSAN IRVING, *and* J. T. KANWISHER. Latitudinal effect on respiration in some northern plants. (Plant physiology, Sept. 1959. v.34, no.5, p.574-76, illus., table.) 12 refs.

Reports a study of respiratory rate of leaves or shoots from nine plant species growing in northern Labrador and from identical species of the temperate zone. Only two, a *Lycopodium* and *Equisetum,* showed higher respiratory rates in the northern specimens. (DLC.)

75423. SCHOLL, DAVID W., *and* C. L. SAINSBURY. Subaerially carved arctic seavalley under a modern epicontinental sea. (Geological Society of America. Bulletin, Sept. 1961. v.72, no.9, p.1433-36, chart.) 4 refs.

Describes the Ogotoruk Seavalley, investigated during summer 1958. It has an average 6 ft. relief and extends from the mouth of Ogotoruk Creek, approx. 68°05′N. 165°45′W., 15 mi. across the floor to the 135 ft. depth of the Chukchi Sea. It is considered to be a drowned subaerial valley of Pleistocene age, which was excavated on a eustatically emerged epicontinental shelf during periods of glacially depressed sea level. –From authors' abstract. (DGS.)

SCHOLL, DAVID WILLIAMS, 1934– , *see*

International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

Kachadoorian, R., & *others.* Geologic investigations . . . Project Chariot . . . 1961. No. 72604

75424. SCHREIBER, SIDNEY S., *and others.* Effect of ouabain on potassium exchange in hypothermic mammalian heart. (American journal of physiology, Nov. 1962. v.203, no.5, p.834-38, illus., tables.) 6 refs. *Other authors:* M. Oratz *and* M.A. Rothschild.

Account of experiments on isolated guinea-pig hearts, using K^{42}. Two processes of K-exchange were detected: one acting fast the other slowly or not at all when temperature was lowered to 20°C. Ouabain had no effect on the fast K exchange, but affected specifically the slow process. (DLC.)

75425. SCHULERT, ARTHUR R. Strontium-90 in Alaska. (Science, Apr. 13, 1962. v.136, no.3511, p.146-48, tables, map.) 8 refs. Columbia University. Lamont Geological Laboratory Contribution no.537.

Reports a study of tundra caribou, local farm foodstuffs, native fish, and Eskimo bone and urine. Caribou were found to carry 10-20 times more strontium-90 than domestic cattle. Eskimos (who subsist mainly on caribou) showed four times the Sr-90 content average for the North Temperate zone. (DLC.)

75426. SCHULTZ, KURT. "Moskwa." (Orion, Jan. 1960. Jahrg. 15, Nr.1, p.67-71, illus., diagrs.) Text in German. **Title tr.:** Moskva.

Brief description of this Soviet icebreaker. It is also described by another writer in English in *Shipbuilding and shipping record,* Sept. 8, 1960, p.311-12. (DLC.)

SCHUPP, R. G., *see* U.S. Geol. Survey. Surface waters Alaska. 1962. No. 76271

75427. SCHUSTER, MEINHARD. Bemerkungen zum nordamerikanischen Wildbeutertum. (Paideuma, Dec. 1962. Bd. 8, Heft 2, p.115-23.) 16 refs. Text in German. **Title tr.:** Notes on the North American subsistence economies.

Discusses the cultural aspects of Indian hunting, fishing, and gathering economies: specialization, mixed forms, evolution, adaptation, etc. Ocean fishing of the Pacific Northwest, river fishing of the hinterland, and hunting of northeast Canadian tribes are included in the study, exemplifying primitive specialized economic types unspoiled by extraneous contact. (DSI.)

SCHUSTER, RUDOLF MATHIAS, 1921– , *see* Steere, W.C., & R.M. Schuster. Hepatic genus Ascidiota . . . 1961. No. 75916

75428. SCHWARTZKOPF, KARL-AAGE, *and* T. ABRAHAMSSON. En fjälldal, två årstider: det tropiska Tjuolta, det arktiska Tjuolta. (Till fjälls 1960-61. årg. 32-33, p.26-35, illus.) Text in Swedish. **Title tr.:** A mountain valley, two seasons: the tropical Tjuolta, the arctic Tjuolta.

Describes two visits to Tjuolta-vuopme, northwest of Kvikkjokk (66°58′N. 17°45′E.), north Sweden, Schwartzkopf's in summer 1961, Abrahamsson's in September. Some notes on animal life, particularly elk and bear, are included. (SPRI.)

SCHWARZ, H. F., *see*

Bernhard, W.F., & *others*. Alterations in myocardial metabolism . . . 1961. No. 70168

Bernhard, W.F., & *others*. Elective hypothermic cardiac arrest . . . 1961. No. 70169

Bernhard, W.F., & *others*. Studies in balanced hypothermic perfusion. 1961. No. 70170

SCHWARZACHER, WALTHER, *see* International Symposium on Arctic Geology, 1960. . . . 1961. No. 72392

75429. SCHWARZENBACH, FRITZ HANS. Botanische Beobachtungen in der Nunatakkerzone Ostgrönlands zwischen 74° and 75°N. Br. København, 1961. 172 p. illus., maps. (Meddelelser om Grønland, bd. 163, nr.5.) 43 refs. Text in German. Summary in English. **Title tr.:** Botanical observations in the nunatak zone of East Greenland between 74° and 75°N.

Summarizes the botanical research of Danish expeditions under L. Koch since 1931; and reports own work in 1952 and 1956 at 18 localities in the Waltershausen and Wordies Glacier areas and the intervening highland. The 129 species of vascular plants identified from these investigations are described in turn; several represent extensions of known distribution; about two thirds belong to six families. The nunatak zone has markedly fewer species than the adjoining fjord areas; the limit of vegetation is at about 1600 m., considerably higher than on the outer coast. Effects of aridity and geology, especially a belt of calcareous rocks, are discussed, also problems of plant sociology. No identifiable relict species were found. (DGS.)

75430. SCHWARZENBACH, FRITZ HANS. Spring in the arctic mountains. (Mountain World 1960/61, *pub.* 1961. p.244-51, illus.)

Describes botanical observations on Cumberland Peninsula with the Arctic Institute of North America – Swiss Foundation for Alpine Research Baffin Island Expedition of 1953. First blooms (June 9) of cinquefoil, a 27-year old arctic willow, and saxifrage are noted, as are lemming diet, and a so-called "hedgehog desert" containing clumps of arctic sedge cut off from moisture supply. Several unusual methods of seed propagation are described, also fauna noticed, wind, water, etc. (DGS.)

75431. SCHWERDTFEGER, PETER, *and* E. R. POUNDER. Thermal properties of sea ice, and Energy exchange between the ice and atmosphere. Montreal, Dec. 1962. ii, 74 p., map, diagr., graphs, tables. (McGill University. Dept. of Physics, Ice Research Project, Report S-10 under Contract DRB, HQ, DEV 35.)

Contains two papers, the first: *Energy exchange* . . . by both authors (p.1-37) deals with the instrumentation, procedures, and 1961 results from micrometeorological measurements at Button Bay, 58°49′N. 94°14′W. near Churchill, Man. Energy balances in Feb. and March agreed within about 5%, but the theoretical and experimental methods used failed completely in April. An average thermal conductivity for the sea ice of 5.26×10^{-3} cgs units was found. During winter months, radiation was the chief mode of heat loss from the ice cover.

In *The thermal properties of sea ice,* the senior author, re-examines the question of specific and latent heats, thus distinguishes between the freezing and melting points. Anderson's suggested sea-ice model (No. 49289) is extended to include saline ice containing air bubbles, thus completing the calculations of density and conductivity. The theoretically calculated values are illus. by measurements on samples of Hudson Bay ice to determine specific heat, density, and thermal conductivity. (CaMAI.)

75432. SCHYTT, S. VALTER. Mass balance studies in Kebnekajse. (Journal of glaciology, Oct. 1962. v.4, no.33, p.281-88, graphs, diagrs.) Ref. Summary in French and German.

Reports studies of Storglaciären, since 1946: of 16 budget years, 14 showed a deficit, one a surplus, and one was in balance. Accuracy is emphasized for significant mass balance studies. At present the density of the observation network on Storglaciären is 120 observations/sq. km. for accumulation and 13/sq. km. for ablation measurements. The net loss during the 16 years of observation amounts to nearly 10% of the total glacier volume, caused mainly by the increase in the mean summer temperature. Discussion on the paper is appended. (DLC.)

75433. SCHYTT, S. VALTER. A new field station in Kebnekajse. (Geografiska annaler, 1961. v.43, no.3-4, p.422-23, illus.)

Reports construction of Tarfala station for glaciological research, field courses, etc. of the Stockholm University Geography Dept., though the facilities may be made available to other scientists. Photo shows the station, with Isfallsglaciären in the background. (DWB.)

75434. SCHYTT, S. VALTER. Regime studies on Storglaciären, Kebnekajse during 1961. (Geografiska annaler, 1961. v.43, no.3-4, p.420-21, maps, graph.) Ref.

Presents results of 371 snow-depth observations (May 9-15), summarized on an accumulation map of this glacier; also results (map) of May-

Sept. ablation measurements. Total deficit amounted to 3.4 x $10^6 m^3$. Front retreat continued: Storglaciären 12 m., Isfallsglaciären 9 m., etc. (DWB.)

75435. SCIENCE COMMUNICATION, Inc. A guide to Antarctic information sources. Washington, D.C., Feb. 1, 1962. 47 l. Compiled for Survey of the Informational Resources and Requirements of the Antarctic Community, Contract NSF C-214, 1 February 1962. Mimeo., loose leaf.

Contains list of 20 topics with sources of antarctic information on each; annotated directory of 36 U.S. agencies or institutions containing significant antarctic sources; also a list of 13 publications including six dealing also with the arctic or related subjects. (DLC.)

SCOTT, EDWARD MARION, 1917– , *see*
Alaskan Science Conference 1960. 1961. No. 69643

Pacific Science Congress. 1961. *E.* No. 74619

75436. SCOTT, JAMES W. Alaska fire danger rating. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.148-55.)

Discusses forest-fire work by the Bureau of Land Management in Alaska especially efforts toward a system for rating the various factors in fire inception, spread, control, and damage. The U.S. Forest Service Intermountain Fire Danger Rating System adopted in 1956, does not suit Alaskan conditions: fuel moisture is the major element in rating fire danger and a more sensitive instrument for its measurement is needed. Local studies and research requirements are cited. (CaMAI.)

75437. SCOTT, PETER MARKHAM, 1909– .
Geese in the Canadian Arctic. (International Ornithological Congress. 10th, 1950. Proceedings, *pub.* 1951, p.611-12.)

Notes on the Perry River Expedition of 1949, three colonies of Ross's geese, and their total stock: upward of two thousand individuals; average brood size, etc.; the white fronted, Canada, and snow geese, ducks. (DLC.)

SCOTT, ROBERT F., *see* Pacific Science Congress. 1961. No. 74619

SCULL, WILFRED E., *see* Ludwig, G.H., & W.E. Scull. Orbiting geophys. observ. 1962. No. 73616

75438. SEABROOK, PHILIP THOMAS. The effect of low temperature on the strength of concrete. Edmonton, Alberta, 1961. 227 p. tables, graphs, plates. 39 refs. Typescript. M. Sc. thesis to University of Alberta, Dept. of Civil Engineering.

Reports a study of the flexural strength of standard cured concrete to explain observations of a concrete test road in northern Alberta. Determinations were made of the ultimate compressive strength, the static modulus of elasticity in compression and the modulus of rupture. The test program is explained. At temperatures above freezing, strength remained approx. constant; below freezing, large increases were obtained. The maximum increase was 880% for flexural strength and 350% for compressive. The percent strength increase was a function of the moisture content of the specimens and was about twice as high for flexural strength as for compressive strength. The secant and chord moduli of elasticity were found to increase at a decreasing rate for increasing compressive strength. Appendices (p.118-227): physical properties of aggregates, explanation of data sheets, summaries of test values from the original test data sheets, explanation of stress-strain curves. (CaAU.)

75439. *SEALIFT MAGAZINE*. Arctic inspection tour finds America alert. (Sealift magazine, Nov. 1961. v.11, no.11, p.5-9, illus.)

Describes, with photos, the 1961 inspection of the U.S. Military Sea Transport Service cargo and petroleum supply activities in the far North. Eight sites in Newfoundland, Labrador and Greenland were visited in a five-day, 6500-mi. tour, the flight supplemented by snow cat, Army tug, automobile travel and by foot under the ice at Camp Century, Greenland Inland Ice. (DN-HO.)

SEALY, WILL C., *see* Lesage, A.M., & *others*. Study . . . hypothermic dog. 1960. *E.* No. 73436

SEATON, R., *see* Levin, A., & *others*. Systems research . . . 1961. No. 73459

75440. SEBESTYÉN, IRÉN NÉMETHNÉ. Über die Heilkunst der samojedischen Schamanen. (Ural-altaische Jahrbücher, Aug. 1961. Bd. 33, Heft 1-2, p.149-55.) Refs. Text in German. **Title tr.:** Medical art of the Samoyed shamans.

Linguistic analysis of Yurak-Samoyed (Nenets) shaman songs used in healing rites. Male shamans (only) possessed an ecstatic power to communicate directly with the higher spirit world; female shamans used magic and acted through auxiliary spirits. (DLC.)

75441. SEBESTYÉN, IRÉN NÉMETHNÉ. Zum Problem des samojedischen und des uralischen Genitivs. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . p.529-48.) Refs. in text. Text in German. **Title tr.:** The problem of the genitive in Samoyed and Uralic.

Comparative morphological and syntactic analysis on the formation and use of a possessive structure in Nenets, Selkup, Enets, Kamasinets and their dialects. The lack of a genuine genitive case in Samoyed and other Ugric languages is considered a characteristic syntactic feature preserved from proto-Uralic. (DSI.)

75442. SEDEL'NIKOV, L. M. Iz bor'by za likvidatsiiu natsional'no-kolonial'nogo gneta i ustanovlenie vlasti Sovetov na krainem Severo-Vostoke SSSR. (Moskva. Moskovskii oblastnoi pedagogicheskii institut. Sbornik studencheskikh nauchnykh rabot po gumanitarnomu tsiklu, 1960. t.4, p.215-41, tables.) 20 refs. Text in Russian. **Title tr.:** Struggle to liquidate national-colonial subjugation and to establish Soviet rule in the far northeast of the USSR.

Summarizes political events following World War I. The social and economic conditions in Kamchatka and Chukotka are discussed, the American and Japanese intervention, their seizure of the local traffic in furs, etc. Comparative statistics, based on late 19th century data and the 1926 census, are given for Chukchis, Koryaks, Kamchadals, Gilyaks, Yukaghirs, Aleuts, Asiatic Eskimos, etc. The numerical decline of Aleuts, Chukchis, and Koryaks during 1911-1924 is attributed to economic and political factors: their exploitation by foreign imperialists and Russian white-guardists. (DLC.)

75443. SEDYKH, K. A. O sezonnykh i mnogoletnikh izmeneniiakh solenosti v iuzhnoĭ chasti Barentseva moria. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy 1960. t.10, vyp.1, Fizicheskaia okeanografiia, p.90-95, map, diagr.) 12 refs. Text in Russian. **Title tr.:** Seasonal and long-term variations of salinity in the southern part of the Barents Sea.

Reports on the salinity of the 0-50 m. layer based on data from several sections made: Nordkap - Medvezhiy Island, along the Kola meridian (70°30′ - 72°30′N. 33°30′E.), and others. The Norwegian Current, coastal currents, formation and thawing of ice, precipitation, and river discharge are considered briefly as factors influencing salinity distribution in this sea. The salinity regime of the Murmansk Current depends mainly on the coastal part of the Norwegian Current and on Norwegian rivers. Influence of Kola River water is limited to a narrow coastal zone. (DLC.)

75444. SEELEY, SYLVIA. The Thompson project. (Canadian geographical journal, Nov. 1961. v.63, no.5, p.158-69, illus.)

Describes this International Nickel Co. Canada plant and townsite in northern Manitoba. The plant, to produce 75,000,000 lbs. of nickel a year, began production in March 1961. Planning and construction of the project, complicated by permafrost, are reviewed from 1956. The mining and milling processes are noted, as well as living conditions in the town which is expected to reach 8,000 population. (DGS.)

75445. SEGERSTRÅLE, SVEN G. *Gammarus pulex* och *Gammarus lacustris* i Norden. (Svensk faunistisk revy, 1955. årg. 17, nr.2, p.56-62, illus., 3 text maps.) Text in Swedish. **Title tr.:** *Gammarus pulex* and *Gammarus lacustris* in Fennoscandia.

Reviews distribution of two of these freshwater amphipods, and relates them to geographic history. The former may have spread by means of ice-marginal waters in the Baltic region. The latter, widespread in northern Fennoscandia and the Kola Peninsula, may have survived the Glacial period in ice-free refuges along the north Norwegian coast. For more complete discussion, see No. 54666. (DLC.)

75446. SEGERSTRÅLE, SVEN G. Istidsrelikternas invandring och förhistoria. (Zoologisk revy, 1959. årg. 21, nr.1, p.3-17, 7 text maps.) Text in Swedish. **Title tr.:** Immigration and prehistory of glacial relicts.

Reviews the incidence in northern Eurasia of certain marine and fresh-water fauna transported during the Glacial period, and thereby delineates the paleogeography of the time. Maps of northern Siberia, Russia, and Finland illustrate the conditions under which transport occurred. (DLC.)

75447. SEGERSTRÅLE, SVEN G. Synopsis of data on the crustaceans *Gammarus locusta, Gammarus oceanicus, Pontoporeia affinis,* and *Corophium volutator;* Amphipoda Gammaridea. Helsinki, 1959. 23 p. 5 diagrs. (Finska vetenskaps-societeten. Commentationes biologicae. t.20, nr.5.) 91 refs.

Deals with the taxonomy and morphology, ecology, growth and longevity, reproduction, predators, and parasites of these four species of amphipods. They are of economic importance as food for commercial fish and waterfowl. Three are found in arctic locations. *Gammarus oceanicus* Segerstråle 1947 is almost circumpolar but has not been found off northernmost Greenland, northern Franz Joseph Land, and northeastern Siberia. North of its range it is replaced by *G. setosus* (not described) and south of its range in European waters by *G. locusta,* which is found off northern Norway. A key and descriptive diagrams are included for the *Gammarus* species in the coastal waters of northern Europe. *Pontoporeia affinis* Lindström 1855 is found in brackish and fresh water in arctic sections of both hemispheres, and as a glacial relict in lakes where it commonly has experienced morphological reduction. (DGS.)

SEGOVIA, ANTONIO V., *see* Lattman, L.H., & A.V. Segovia. . . . fracture trace pattern . . . 1961. No. 73339

75448. SEHER, ARTUR. Fragen der Ernährung unter extremen Klimabedingungen. (Polarforschung, Bd. 5, 1960 *pub.* Nov. 1961. Jahrg. 30, Heft 1-2, p.54-58.) 7 refs. Text in German. **Title tr.:** Problems of nutrition under extreme climatic conditions.

Discusses principles of food transport, local food sources, optimal food composition for arctic conditions, caloric requirements, rations, digestibility and preferred foods, processed food, vitamins, etc. (CaMAI.)

75449. SEHEULT, LOUIS R. What is Canada doing to muskeg? (Timber of Canada. Dec. 1962, v.23, no.12, p.30-33; illus.)

Reviews developments and applications of research on 300 million acres of muskeg, much of it in northern Canada. Major problems are moving over this poorly drained accumulation of vegetable matter, and utilizing it for a profit. In 1947 the National Research Council of Canada Associate Committee on Soil and Snow Mechanics, formed a subcommittee on muskeg research under Dr. Norman Radforth: provincial and university groups participate in research. Several vehicles developed are described, and possible uses of muskeg areas in forestry, agriculture, and peat harvesting are discussed. (CaONA.)

75450. SEISKARI, PERTTI. On the winter ecology of the capercaillie *Tetrao urogallus,* and the black grouse *Lyrurus tetrix,* in Finland. Helsinki, 1962. 119 p. illus., diagrs., maps, tables. (Suomen Riistanhoito-säätiö: Finnish Game Foundation. Riistatieteellisiä julkaisuja: Papers on game research, 22.) About 250 refs.

Analyzes the winter habitat requirements of the two species and the factors influencing them in Finland, with attention mainly to feeding ecology and feeding activities. In each species the habitat requirements are specialized because of adaptation to a single food plant. The black grouse and northern Finnish capercaillie require openness of environment in the shelter habitat, as they roost in the snow; the southern capercaillie shelters among branches of spruce. The male capercaillie chooses habitat convenient to pines of a certain structure, the female according to structural features in the environment, the black grouse, where catkins occur. The shift to winter food is more clearly correlated with the temperature than with snow cover. Feeding activity of both species increases in March, and is stimulated by cold weather

and high pressure. In the winter community, many species have adapted to the pioneer stages in the natural forest succession, but only the capercaillie to one (pine and spruce) of the two types of climax. The effect of man's activities and recent alterations in the structure of the forests have had a marked effect on the capercaillie and black grouse populations. (DA.)

SEISKARI, PERTTI, *see also* Siivonen, L., & *others.* Arfugle. 1961. No. 75659

SEISMOLOGICAL BULLETIN, see under Canada

75451. SELEZNEV, K. L. Revoliutsionnaia rabota bol'shevikov v voiskakh interventov, 1918-1919 gg. (Istoriia SSSR, Jan.-Feb. 1960. god 4, no.1, p.125-37.) Refs. Text in Russian. **Title tr.:** Revolutionary activities of Bolsheviks in armies of the interventionists, 1918-1919.

Describes communist agitation and propaganda among soldiers of the allied intervention forces; subversive activities on the northern and Far Eastern fronts, etc. (DLC.)

75452. SELEZNEV, N. Primenenie vintovykh iakorei pri vozvedenii vypravitel'nykh sooruzhenii. (Rechnoi transport, Feb. 1961. god 20, no.2, p.49-50, illus.) Text in Russian. **Title tr.:** Use of screw anchors in the construction of corrective structures.

Describes two kinds of steel screw devices to be tested for anchoring stones in dam constructions on the Severnaya Dvina and Pinega Rivers during the 1960/1961 winter work season. (DLC.)

75453. SELIGMAN, GERALD, 1886– . Snow structure and ski fields, being an account of snow and ice forms met with in nature and a study on avalanches and snowcraft; with an appendix on Alpine weather by C.K.M. Douglas. London, Macmillan, 1936; reprinted Brussels, Adam, 1962. xii, 555 p., illus., diagrs., graphs, tables. About 400 refs.

Describes and explains in practical terms for skiers and mountaineers, the prime causes of snow phenomena. In consecutive sections, snow structure and the physical and mechanical changes which take place in snow fields are outlined; conditions favoring avalanche development and snow movement in an avalanche, are analyzed, various types of avalanches are described, practical advice is offered on avoiding them. Experience of F. Loewe on the Deutsche Grönland-Expedition Alfred Wegener 1930-1931 was utilized, and photos taken by Wegener are included. (DGS.)

75454. SELING, T. V., *and* **D. K. NANCE.** Sensitive microwave radiometer detects small icebergs. (Electronics, May 12, 1961. v.34, no.19, p.72-75, illus., diagrs., graphs.)

Describes U.S. Coast Guard experiences in developing a method better suited than radar for detecting icebergs from aircraft. The difference in apparent temperature between ice and the sea (about 100°C.) was utilized in designing the comparison radiometer. Equipment and test results are described showing that bergs (in particular growlers) which may not be visible to radar, make good targets for a radiometer. (DLC.)

75455. SELIVANOV, M. Eshche raz o prosedanii sudov. (Morskoi flot, Nov. 1962. god 22, no.11, p. 16-17, graphs.) Text in Russian. **Title tr.:** Further information on the settling of ships.

Presents echograms of the atomic icebreaker *Lenin:* the keel settles deeper as speed increases, a factor to be kept in mind when navigating in shallow (critical depth) waters: a settling of 0.9 to 1.5 m. was measured as speed increased from 10 to 17 knots. (DLC.)

SELIVANOV, V. A., *see* Morozov, S.S., & V.A. Selivanov. Sostav i svoistva produktov vyvetrivaniia . . . 1961. No. 74115

75456. SELLERS, EDWARD ALEXANDER, 1916– . Cold and its influence on the worker. (Journal of occupational medicine. Mar. 1960. v.2, no.3, p.115-17.) 9 refs.

Discusses the great development of cold research since World War II, and the main American institutions fostering it; sociological adaptation of man to the Arctic, laboratory vs. field investigation, advances in acclimation research, local resistance to cold injury, clothing, and body temperature. (DNLM.)

SELLERS, EDWARD ALEXANDER, 1916– , *see also* Baker, D.G., & E.A. Sellers. Electrolyte metabolism in the rat . . . low temperature. 1957. No. 69965

SELLEVOLL, MARKVARD A., *see* Bergen. Universitet. Seismological bulletin. 1959. No. 70150

SELLMANN, PAUL V., *see*

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

75457. *SEL'SKOE KHOZIAISTVO SEVERO-ZAPADNOI ZONY.* Leningrad, 1961. god 3- *in progress.* Text in Russian. **Title tr.:** Agriculture of the northwest zone.

Monthly journal of approx. 100 pages the issue, on field and animal husbandry in European USSR, north of about 55°N. About one tenth of the content concerns arctic-subarctic areas or problems, and the papers are abstracted in this Bibliography under their authors' names. Editorial etc. comment also is occasionally on those areas, e.g.: establishment of three new fur farms (one at Kem') making 14 such sovkhozes in Karelia, increasing their mink and fox population by 8,000 (*1961,* no.1, p.90); Institute of Agricultural Microbiology activities are outlined in no.5, p.11-12, noting production of the bacterial fertilizer "nitragin" and AMB and their utilization on northern farms; reindeer herd of the Zavety Il'icha kolkhoz in Komi ASSR increased from 9,770 to 13,080 in 1958-1960 with an 82% survival of calves and 1140 cwt. meat delivered to the state (no.5, p.88); 1961 agricultural aims are summarized in no.6, p.12, including Arkhangel'sk Province: 2,570 kg. milk/cow on state farms and 2,000 kg. on collective farms, 100 cwt. potatoes and 150 cwt. vegetable/hectare; in Murmansk Province: 3,500 kg. milk/cow, 130 cwt. potatoes and 250 cwt. vegetables/ha.

The 350% increase in fur farming in Karelia with a 1961 yield of 140,000 pelts was celebrated by a special exhibit at Petrozavodsk (*1962,* god 4, no.2, p.62); northwestern RSFSR economic council to coordinate work of local national economic councils is noted in no.2, p.92, with Murmansk and Arkhangel'sk Provinces, Karelian and Komi ASSR under its jurisdiction; use of aircraft in weed and pest control, fertilizer application, etc. in Ar-

khangel'sk Province and Karelia is sketched in no. 6, p.87. (DLC.)

75458. *SEL'SKOE KHOZĬAĬSTVO SIBIRI.* Omsk, 1961, god 6- *in progress.* Text in Russian. **Title tr.:** Agriculture of Siberia.

Monthly journal of approx. 90 p. each issue. About 20% of its papers deal with fur farming, stock raising, and agriculture in arctic or subarctic regions and are abstracted in this Bibliography under their authors' names. Editorials, mainly on economic and administrative measures, occasionally refer also to northern areas, e.g. Conferences on Siberian agricultural development held in March and November 1961: the kolkhoz and sovkhoz production plans for 1961 and 1962, including Yakutia, Tyumen and Krasnoyarsk Provinces are reported in the April 1961 (p.2-13) and January 1962 (p.3-6) issues; newly established regional administrations of collective and state farms with their jurisdictional areas as listed in 1962: no.5, p.3-4, no.6, p.6-7 include seven in northern Krasnoyarsk and Tyumen Provinces, and Yakutia, viz: the Evenki and Taymyr, the Yamal-Nenets and Khanty-Mansi, the Vilyuysk, Kolyma-Indigirka and Northern administrations; the non-commercial fishing regulations of April 1962 for West Siberia, summarized in no.11 of 1962, p.94-95, cover the Ob basin and the Ob, Taz, Gydan, Baydaratskaya, and Yuratskaya Bays, etc. (DLC.)

75459. SELVAG, ODD. Forsøksfiske etter raker på Helgelandskysten. (Fiskets gang, Jan. 19, 1961. årg. 47, nr.3, p.56-58, sketch map.) Text in Norwegian. **Title tr.:** Experimental shrimp fishing on the Helgeland coast.

Reports a North Norway Development Fund project to explore possibilities in the area 65°10′-66°55′N., July 27-Sept. 1, 1960. Except for grounds near Traena lighthouse (66°30′N. 12°E.) and Myken Island (66°48′N. 12°20′E.), the hard bottom of the outer area lacks nutrients for shrimp; the inner area has three grounds near Tjøtta (65°50′N. 12°20′E.) found worth while. Map shows areas with good, stony, and polluted bottom conditions, old and new shrimp grounds. (DA.)

SEM, L. I., *see* Nauchnaĭa konferentsiia po istorii . . . Dal'nego Vostoka. 1960. No. 74233

75460. SEMAGIN, V. N. O sne liūdeĭ v Arktike. (Fiziologicheskiĭ zhurnal SSSR, Aug. 1961. t.47, no.8, p.950-57, illus., tables.) 19 refs. Text in Russian. **Title tr.:** On human sleep in the Arctic.

Study of sleep and wakefulness during the arctic day and arctic night. Neither of them caused substantial changes in the diurnal rhythm among healthy or convalescent subjects. Amongst sick people, the period of falling asleep in the evening was prolonged during the arctic day. (DLC.)

75461. SEMENENKO, N. P. Dokembriĭskaia geokhronologicheskaia shkala SSSR. (Akademiia nauk SSSR. Komissiia po opredeleniiū absoliūtnogo vozrasta geologicheskikh formatsiĭ. Trudy sessii 10, 1961 *pub.* 1962, p.10-39, tables incl. fold.) 28 refs. Text in Russian. **Title tr.:** Precambrian geochronologic scale of the USSR.

Reports absolute age determinations of Precambrian formation, including the Aldan Shield, Yenisey Ridge, Anabar shield, Ural, and Kola Peninsula. The Precambrian period is divided into four megacycles and each megacycle into several groups. (DLC.)

75462. SEMENIKHIN, S. F. Podgotovka dorozhnykh mashin k rabote zimoĭ. (Avtomobil'nye dorogi, Oct. 1962. god 25, no.10, p.31-33, diagrs. graph, tables.) Text in Russian. **Title tr.:** Conditioning of road machinery for winter work.

Describes the technical and mechanical servicing of road-construction equipment including such in the far North with air temperature below -35°C. Cold resistance of winterized fuels, lubricants, antifreeze solutions, density of battery electrolytes, etc. are discussed and tabulated. (DLC.)

75463. SEMENOV, A. Slovo Noril'chan. (Okhota i okhotnich'e khozĭaĭstvo, Dec. 1961. god 7, no.12, p.53.) Text in Russian. **Title tr.:** Noril'sk residents speak up.

Hunting is popular, despite the harsh climatic conditions of the Taymyr Peninsula; and the hunting grounds of the Noril'sk-Pyasina area are abundant in wild reindeer, hare, arctic fox, wolverine, ermine and muskrat. A Noril'sk hunters association was set up in 1959. The scarcity of suitable hunting garments is criticized. (DLC.)

SEMENOV, B. T., *see* Lund, H.M.K. Elgtaksering . . . 1960. No. 73621

75464. SEMENOV, E. I., *and* **M. E. KAZAKOVA.** Ankilit v shchelochnykh pegmatitakh Kol'skogo poluostrova. (Akademiia nauk SSSR. Mineralogicheskiĭ muzeĭ. Trudy 1961. vyp.11, p.196-98, table, graphs.) 3 refs. Text in Russian. **Title tr.:** Ancylite in alkaline pegmatites of the Kola Peninsula.

Describes the mineralogy of ancylite found first by Flink in Greenland, and in 1937 by Fersman in the Kola Peninsula. Its chemical composition and physical properties (specific weight, optical axes) and heat test results are presented. Ancylite is considered to be a hydrothermal mineral and its formation is discussed. (DLC.)

75465. SEMENOV, E. I. Novye dannye o nordite. (Akademiia nauk SSSR. Mineralogicheskiĭ muzeĭ. Trudy 1961. vyp.11, p.199-201, tables.) 5 refs. Text in Russian. **Title tr.:** New data on nordite.

Presents a mineralogic description of this mineral found in ussingite pegmatites in the Motchisuay River valley in Lovozero massif of Kola Peninsula. Its color, specific weight, optical properties and results of chemical analyses and X-ray diffraction are reported; zinc content is noted; comparison is made with nordite found also in Lovozero massif by V.I. Gerasimovskiĭ in 1941. (DLC.)

75466. SEMENOV, F. D. K voprosu fiziologii laktatsii korov v kolkhozakh IAkutii. (Yakutsk. Universitet. Uchenye zapiski 1959, vyp.6, seriia sel'skokhozĭaĭstvennykh nauk, p.19-24, tables.) Text in Russian. **Title tr.:** Physiology of lactation of cows on collective farms in Yakutia.

Reports on average yield on the collectives, ranging from 531.7 kg./cow/yr. (first lactation of the local breed) to 1,100.9 kg. (third lactation of the Yakut-Kholmogory cross-breed); at the Yakut livestock experiment station these figures are: 1,102 kg. and 1,894.8 kg.; and the subsidiary farms get 3,162 kg. in Sangary and 4,049 kg. in Tiksi at

72°N. A direct relationship is claimed between size of udder and amount of milk yield. Selection of stock, diet, protection from frost are discussed and recommendations made. (DLC.)

75467. SEMENOV, L. S. O svīāzi postmagmaticheskogo orudeneniīa s intruziīāmi trappov povyshennoĭ shchelochnosti. (Leningrad. Vsesoĭūznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyĭ sbornik 1960. no.40, Geologiīa i poleznye iskopaemye Vostochnoĭ Sibiri, p.109-122, map.) 10 refs. Text in Russian. **Title tr.**: On the connection between postmagmatic mineralization and trap intrusions of increased alkalinity.

Discusses this problem based on own studies in the Nizhnyaya and Podkamennaya Tunguska interfluve and evaluation of the literature. Criteria supporting a paragenetic connection between dolerite intrusions with increased alkalinity and postmagmatic mineralization (sulfides, magnetites) are outlined and demonstrated. Three zones are noted where this connection actually exists, and a practical conclusion is drawn that search for ore deposits should be concentrated on dolerites of increased alkalinity. (DLC.)

75468. SEMENOV, N. Osnovnye napravleniīa v razvitii olenevodstva. (Sel'skoe khozīāĭstvo Sibiri, Apr. 1962. god 7, no.4, p.70-71, tables.) Text in Russian. **Title tr.**: Basic trends in development of reindeer husbandry.

Three trends are distinguished according to their main purpose: hide and meat production, meat production, transportation. The effect of each is discussed in relation to structure of the herd, using as example the experience of Pobeda collective farm in the Tompon District of Yakutia. It is concluded that meat production should be considered the chief concern of reindeer raising. (DLC.)

SEMENOV, N. V., *see* Soboleva, V.I., & *others*. Vosstanovlenie . . . 1962. No. 75787

75469. SEMENOV, S. A. Proiskhozhdenie abrazivnoĭ tekhniki i ee znachenie v drevnem khozīāĭstve. (Akademiīa nauk SSSR. Institut arkheologii. Kratkie soobshcheniīa, 1961. vyp.86, p. 3-10, illus.) 8 refs. Text in Russian. **Title tr.**: Origin of the abrasive technique and its importance in the prehistoric economy.

Discusses the use and development of stone scraping and rubbing to produce artifacts and tools as found in neolithic burials by A.P. Okladnikov's Angara Expedition in 1957. Author's experiments in duplicating stone age production techniques (No. 61507) are noted. (DLC.)

75470. SEMENOV, V. A. O neopublikovannykh rukopisīākh Kīūndė, obnaruzhennykh v arkhivakh. (Akademiīa nauk SSSR. Sibirskoe otdelenie. Īākutskiĭ filial. Nauchnye soobshcheniīa 1961. vyp.6, p.75-81.) 3 refs. Text in Russian. **Title tr.**: Some unpublished manuscripts of Klīūndė, discovered in archives.

Reviews three short-stories and three plays written in the 1920- early 30's by the prominant Yakut writer and journalist, A.A. Ivanov-Kīūndė, 1898-1934. They came to light in the course of Semenov's searches in Yakutsk archives in 1959, for biographical materials on Kīūndė. All six works deal with social upheavals, reconstruction, and collectivization in Yakutia. Their author's realistic style and gift for satire are discussed. (DLC.)

SEMENOV, V. P., *see* Turobova, Z.V., & V.P. Semenov. Granit-porfiry . . . 1961. No. 76231

75471. SEMENOVA, N. I. Gidrokhimicheskiĭ ocherk Malogo i Bol'shogo Pulozera i nekotorykh vodoemov ikh vodosbornoĭ ploshchadi. (Leningrad. Vsesoĭūznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khozīāĭstva. Izvestiīa 1959. t.48, p.25-32, illus., tables.) 3 refs. Text in Russian. **Title tr.**: Hydrochemical outline of Little and Great Pulozero and of some reservoirs in their catchment area.

Describes these two lakes, and some water bodies in the Kola River valley. Their temperature and water-level fluctuation during the year are outlined. Transparency, O_2-content, pH and acidity are determined as well as mineral and organic matter content. The water is considered suitable for oxyphilic fishes. (DLC.)

75472. SEMENOVA, N. I. Gidrokhimicheskiĭ ocherk nizov'ev r. Varzugi. (Leningrad. Vsesoĭūznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khozīāĭstva. Izvestiīa 1959. t.48, p.18-24, tables.) 3 refs. Text in Russian. **Title tr.**: Hydrochemical outline of the lower Varzuga River.

Describes the river of south-central Kola Peninsula and its banks, depth, and water level. Data on temperature, pH, O_2 and CO_2 are given. Cl, Ca, Mg, Na, K and total ions at different locations and seasons are reported. The chemical composition of some springs and tributaries are also considered. (DLC.)

SEMIKHATOV, MIKHAIL ALEKSANDROVICH, *see* Grigor'ev, V.N., & M.A. Semikhatov. Osnovnye tipy . . . 1961. No. 71860

75473. SEMINA, E. V. Serye lesnye pochvy Krasnoīārskoĭ lesostepi i nekotorye voprosy ikh genezisa. (Pochvovedenie, Jan. 1961, no.1, p.29-39, tables.) 19 refs. Text in Russian. Summary in English. **Title tr.**: Gray forest soils of the Krasnoyarsk forest-steppe and some questions as to their genesis.

Reports a study of soils on left bank of the Yenisey north of the town of Krasnoyarsk. Occurrence conditions and morphology of typical sections are described. Physical-chemical characteristics are analyzed and data tabulated. High humus content, profound leaching of carbonates, and seasonal gley in the lower part of the profile are considered as regional peculiarities. The genesis of these soils is at present hard to determine. (DLC.)

75474. SĖMINA, G. I. Kachestvennyĭ sostav fitoplanktona Beringova morīa, 1; Zolotistye, Peridinievye i Raznozhgutikovye vodorosli. (Akademiīa nauk SSSR. Botanicheskiĭ institut. Otdel sporovykh rasteniĭ. Botanicheskie materialy, 1960. t.13, p.35-43.) 27 refs. Text in Russian. **Title tr.**: Qualitative composition of the Bering Sea phytoplankton, 1; Chrysophyta, Pyrophyta and Xanthophyta.

Discusses earlier studies of this phytoplankton and lists 35 species collected in the western Bering Sea at all seasons in 1950-1953. Distribution, frequency of occurrence, phytogeographic nature, size, etc. are noted. (DLC.)

75475. SEMKO, ROSTISLAV SAVVICH, 1913– Sovremennye izmeneniīa chislennosti ti-

khookeanskikh lososeĭ i ikh osnovnye prichiny. (Akademiĭa nauk SSSR. Ikhtiologicheskaĭa komissiĭa. Trudy soveshchaniĭ 1961. vyp.13, p.117-29, illus., tables.) Text in Russian. **Title tr.**: Current numerical changes of Pacific salmon and their basic causes.

Author submits to a quantitative analysis, the major salmon populations of Kamchatka at their developmental and physiological stages, and also the salmon catches in the NW Pacific since 1926. Implying that Japanese marine catches are the main cause of the numerical decline of Kamchatka salmon, he recommends, in addition to an extensive study of marine salmon, certain restrictions on its fisheries, to ensure easier return to the spawning grounds, prevent mass injuries to, and limit the catch of, immature fish. (DLC.)

SEMKO, ROSTISLAV SAVVICH, 1913– , *see also* Egorova, T.V., & *others*. Prichiny . . . 1961. No. 71211

SENDAROVICH, B. P., *see* Rozhkov, A.S., & *others*. Ob izmenenii soderzhaniĭa polisakharidov . . . 1961. No. 75241

75476. SENIOR, CHARLES W. A model describing the physical processes of Project Polynya. (*In:* National Research Council of Canada . . . Symposium on Air Bubbling, 1961. p.47-57, map, diagrs., tables.) *Its:* Technical memorandum no.70.

Discusses results from the air bubbling system installed at DeLong Pier in Thule harbor northwest Greenland by the Military Sea Transportation Service in 1959. Data on temperature, density, and salinity were obtained from three locations in the harbor: the "polynya" area, the end of the pier 15 ft. from the bubbled area, and another site 200 ft. from the pier. At the time of initial ice formation, the water in an imaginary column was cooled to the freezing point. Although there was no temperature gradient in the water, the bubbling system maintained an open area of water, the induced currents dispersing and eroding ice, and preventing growth of crystals. By the end of Dec. the "polynya" ranged 12 ft. - 50 ft. in width, the latter where the bubbling activity was increased by use of an auxiliary hose. The efficiency of the system varied directly with the vigor of the induced currents. When the sea-ice temperature drops below -9.2°F., the tensile strength increases markedly, due to the precipitation of NaCl from the brine pockets. This explained the observed decrease in size of the "polynya" by mid-winter. The erosive action of the induced currents was not significant when the ice had a high tensile strength, although the vertical growth of the ice cover was inhibited because the temperature of the undersurface of the ice was relatively high and therefore the ice was weak and susceptible to erosion. (DN-HO.)

SENIOR, CHARLES WARD, *see* Wittmann, W.I., & *others*. Proposed arctic drift ship . . . 1961. No. 76589

75477. SENKEVICH-GUDKOVA, V. V. Ėlementy improvizatsii i traditsionnosti na rannem stadii razvitiĭa fol'klora; po materialam pesennoĭ liriki kol'skikh saamov. (Russkiĭ fol'klor, materialy i issledovaniĭa, 1960. t.5, p.127-45.) 5 refs. Text in Russian. **Title tr.**: Elements of improvisation and tradition in the early development stage of folklore; based on lyric songs of the Kola Lapps.

Reports improvisations in text and melody are customary except for magic, religious and conjuring songs and incantations among these reindeer-herders. Repetitions, elaborate epithets, imitation of animal and bird voices, alliterations, etc. are introduced by the singer. Some of these elements are retained and become traditional. (DLC.)

75478. SEPPANEN, MAUNU. On the accumulation and the decreasing of snow in pine-dominated forest in Finland. Helsinki, 1961. 51 p. plate, map, graphs, diagrs., tables. (Fennia 86, no.1.) 42 refs.

Reports on how forest density and tree position affect the snow, from linear course and fixed stake measurements made at selected locations in connection with work of the Hydrological Office. Heavy weights of snow and damage resulting from selected storms are discussed. Freezing of soil and formation of permanent snow cover generally are earlier in open areas than in the forest. The ratio between the water equivalent of snow cover in forest and on open areas is greater in northern than in southern Finland. The amount of snow in pine-dominated forest compared to open areas increased northward; and in the 64°-70°N. zone, the amount was about equal. Results of variations in forest density and spacing are analyzed, and reasons for the several variations in accumulation and decrease are related to atmospheric and solar effects. (DLC.)

75479. SERBA, B. I. Sallanlatvinskiĭ massiv shchelochnykh porod i karbonatitov. (*In:* Akademiĭa nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniĭa . . . 1962, p.58-64, tables, map.) 3 refs. Text in Russian. **Title tr.**: The Sallanlatva massif of alkaline rocks and carbonatites.

Describes alkaline rocks and carbonatites of this massif, discovered in 1957, 25 km. southeast of the Kuolayarvi station, 66°58′N. 29°12′E., Kola Peninsula. They occupy 90% of the massif surface and consist of melteigite-ijolite-urtite rocks. Chemical analyses are tabulated. Two types of carbonatites are also described. (DLC.)

75480. SEREBRENNIKOV, BORIS ALEKSANDROVICH. Eshche raz o proiskhozhdenii okonchaniĭa 3-go litsa edin. chisla nastoĭashchego vremeni v permskikh iazykakh. (Nyelvtudományi közlemények, 1958. kötet 60, p.173-76, table.) 7 refs. Text in Russian. **Title tr.**: Further contribution on the origin of the third person sing. present tense ending in Permian languages.

Morphological study including modern and old Zyryan. (DLC.)

75481. SEREBRENNIKOV, BORIS ALEKSANDROVICH. Iz istorii padezhnoĭ sistemy permskikh iazykov. (*In:* Akademiĭa nauk SSSR. Institut iazykoznaniĭa. Voprosy finno-ugorskogo . . . 1962, p.9-32.) 18 refs. Text in Russian. **Title tr.**: The declension system in Permian languages.

Comparative analysis of the eleven-case declension of Zyryan and Udmurt and their dialects. (DLC.)

75482. SEREBRENNIKOV, BORIS ALEKSANDROVICH. K probleme klassifikatsii tiurkskikh iazykov. (Voprosy iazykoznaniĭa, July-Aug. 1961. god 10, no.4, p.60-73.) Refs. Text in Russian. **Title tr.**: Classification of Turkic languages.

Discusses various classification systems based on phonetic, morphologic, lexical, historical, etc. criteria. The isolation of Yakut into a separate class is suggested rather than its inclusion into the northern group of Turkic languages. (DLC.)

75483. SEREBRENNIKOV, BORIS ALEKSANDROVICH. O finno-ugorskikh ėtimologiiākh v "Ėtimologicheskom slovare russkogo iāzyka" M. Fasmera. (Leksikograficheskiĭ sbornik, 1962. vyp.5, p.30-35.) Text in Russian. **Title tr.:** Finno-Ugric etymologies in M. Vasmer's Russian etymological dictionary.

Disagrees with the analysis by Vasmer (q.v.) of about 10% of the common words of Finno-Ugric origin absorbed by various north Russian dialects. Cited examples include corrected etymologies for some 25 words from Lappish, Samoyed, Zyryan, Ostyak, and Vogul. Vasmer's monumental work is considered of high linguistic merit on the whole, but it suffers from his reliance on literature sources at the expense of personal observation. (DLC.)

75484. SEREBRENNIKOV, BORIS ALEKSANDROVICH. O metodakh izucheniiā toponimicheskikh nazvaniĭ. (Voprosy iāzykoznaniiā, Nov.-Dec. 1959. no.6, p.36-50.) Approx. 20 refs. Text in Russian. **Title tr.:** Study methods of toponymic nomenclature.

Reviews linguistic laws governing the formation of substrate stemwords and compounds, dialectal and heterolingual corruption, superstrate morphological and phonetic adaptation, changes in typological patterns, etc. Topo- and hydronymics of Zyryan, Lappish, Ostyak, and Nenets-Samoyed origin are included. Their transitional and final Russian forms used in the Karelian and Komi ASSR, Arkhangel'skaya Province and West Siberia are indicated. Various methods of etymological analysis and classification, use of chronicle and folkloristic materials, etc. are presented. (DLC.)

75485. SEREBRENNIKOV, BORIS ALEKSANDROVICH. Über die Herkunft der Akkusativendung *-sę* und *-ęs* im Syrjänischen und *-zɛ, -ez* im Wotjakischen. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . p.549-52.) 3 refs. Text in German. **Title tr.:** Origin of the accusative ending *-sę* and *-ęs* in Zyryan and *-zɛ, -ez* in Votyak.

Comparative analysis of the formation, development, and different semantic functions of the vowel (*-ę, -ɛ*) and consonant (*-s, -z*) endings of the accusative case. (DSI.)

75486. SEREBRENNIKOV, I., *and* I. STREPETOV. Na atomnom ledokole "Lenin." (Dekorativnoe iskusstvo, Apr. 1960, no.4 (29), p.10-12, illus.) Text in Russian. **Title tr.:** Aboard the atomic icebreaker *Lenin*.

Describes the deck plan and accommodations: sleeping quarters, and common rooms, their furnishing, lighting, decorations, wood carvings, murals, etc. (DLC.)

75487. SEREBRENY, SIDNEY M., *and others.* Some characteristic features of the jet stream complex during selected synoptic conditions. (Journal of applied meteorology, June 1962. v.1, no.2, p.137-53, maps, profiles, table.) 12 refs. *Other authors:* E.J. Wiegman *and* R.G. Hadfield.

Outlines some important features in an idealized jet stream complex and presents cross sections showing jet-stream structure during four synoptic situations. The arctic jet stream, usually an individual entity, sometimes combines with the Polar Front jet stream complex of middle latitudes. Typical values for certain arctic jet stream parameters: height of core, 25,000 ft.; height range of strong winds, 20,000 - 35,000 ft.; tropopause heights, cold side 22,000 ft., warm side 32,000 ft.; 500-mb. temp. below core center -35°C. A jet stream complex, Feb. 24, 1958, is illustrated as consisting of the arctic, polar, and subtropical jet streams distinctly separated; the arctic jet stream was near Seven Islands, Que. at about 22,000 ft.; 500-mb. temperatures were -38° to -45°C. at Goose Bay; tropopause height varied from 20,000 ft. at Goose Bay to 26,000 ft. at Seven Islands. Based on authors' experience and research under Pan-American World Airways. (DWB.)

75488. SEREBRÍÂKOV, I. G. Ritm sezonnogo razvitiiā rasteniĭ pripoliārnogo Urala. (Moskovskoe obshchestvo ispytateleĭ prirody. Biūlleten', otdel biologicheskiĭ, 1962. t.67, vyp.3, p.65-81, illus.) 7 refs. Text in Russian. Summary in English. **Title tr.:** Rhythm of seasonal development in plants of the subpolar Urals.

Study of seasonal cycles in flowering plants of coenoses, of the forests, meadows, and the swampy and mountain tundras. For comparison, conditions in the Khibiny Tundra and in the Moscow area are considered. Types of buds, flowers and inflorescences; number of sprout generations per year (mostly one in the tundra), and the presence or absence of evergreens are used as main criteria of this study. (DLC.)

75489. SEREBRÍÂKOV, V. A. Okhandzhinskiĭ granitoidnyĭ massiv i sopostavlenie ego s massivom Ch'orgo; bassein verkhov'ev r. Kolymy. (Izvestiiā vysshikh uchebnykh zavedeniĭ. Geologiiā i razvedka, Jan. 1961, no.1, p.41-57, illus., tables, map, diagrs.) 6 refs. Text in Russian. **Title tr.:** The Okhandzhinskiy granitoid massif and its correlation with the Ch'orgo massif; upper Kolyma River basin.

Describes the geology, petrography and mineralogy of the Okhandzhinskiy massif in the Berelekh-Omulevka interfluve, approx. 63°30'N. 148°E. in Magadan province, as studied in 1958-1959. This massif, 700 km² in area, is typical of the batholith-like bodies of the Verkhoyansk-Kolyma folded belt. Granites in its eastern and western parts differ due to a different intensity of postmagmatic recrystallization. Comparison is made with the Ch'orgo massif to the southeast. (DLC.)

SEREBRÍÂKOV, V. P., *see* Baranenkova, A.S., *& others.* Shipokhvostyĭ skat . . . 1962. No. 70007

75490. SERGEANT, DAVID E. The biology of the pilot or pothead whale, *Globicephala melaena* Traill, in Newfoundland waters. Ottawa, 1962. 7, 84 p. illus. tables, map. (Canada. Fisheries Research Board. Bulletin no.132.) About 50 refs.

Comprehensive study of representative samples from herds driven ashore during the summer fishery. Consecutive sections deal with age determination and age; size, weight and growth; food and feeding; predators; parasites; reproduction, including gestation period, season of birth, weaning and teething, sexual maturation and cycles. Produc-

tivity and mortality also are dealt with; and a final chapter discusses the size and composition of herds, behavior, and intraspecific fighting. (DLC.)

75491. SERGEANT, DAVID E. Ecological relationships of the guillemots *Uria aalge* and *Uria lomvia*. (International Ornithological Congress. 10th, 1950. Proceedings, *pub.* 1951. p.578-87, maps.) 25 refs.

Reports a study of the mixed colonies of the two species in the arctic and subarctic Atlantic and Pacific based on observations on Bjørnøya in 1948, and on the literature. The two were found to breed together and competition (rare) exists only where nesting space is restricted. The food is probably the same and feeding is gregarious. Food is apparently a factor limiting size and distribution of breeding colonies. (DLC.)

75492. SERGEANT, DAVID E. On the external characters of the blackfish or pilot whales, genus *Globicephala*. (Journal of mammalogy, Aug. 1962. v.43, no.3, p.395-413, illus., tables.) 23 refs.

Description and morphometry of 32 males and 25 females of *G. melaena melaena* from Newfoundland and comparisons with forms from southern seas and the North Pacific. No morphometric differences were found between the Atlantic northern and southern forms. Growth rates of the Newfoundland whales and their organs are extensively analyzed and compared with those of other forms. (DLC.)

75493. SERGEEV, A. I. Razrabotka merzlykh gruntov. (Mekhanizatsiia stroitel'stva, Jan. 1956. t.13, no.1, p.6-10, illus.) Text in Russian. English translation, by N.T. Zikeev, issued as: U.S. Army. Corps of Engineers. SIPRE translation 65, Jan. 1961. Copy at CaMAI. **Title tr.:** Digging frozen ground.

Evaluates tests with four types of machinery for excavating trenches: disc saw; drop hammers and wedges; 12-bladed cutter and wedges; a modified trench excavator with chain conveyor. None proved satisfactory; but on the basis of these experiences an excavator was designed: it cuts trenches in 30% of the frozen ground and chops the remaining 70% into clods. During tests, this excavator cut trenches 1.8 m. deep and 0.85 m. wide at a speed of 5-6 m./hr. (DLC.)

75494. SERGEEV, A. S. Fenitizirovannye porody Kovdorskogo massiva. (Leningrad. Universitet. Uchenye zapiski, 1962. no.312, ser. geologicheskikh nauk, vyp.13, Geokhimiia, p.94-114, illus., table, diagr.) 25 refs. Text in Russian. **Title tr.:** Fenitization of rocks of the Kovdor massif.

Reports investigation of the processes of alkali metasomatism in the contact zone in this Kola Peninsula massif of ultrabasic, alkaline and carbonate rocks. Through fenitization (a kind of alkali metasomatism), gneisses and granites have been changed into syenites, and nepheline syenites. Stages of the process, especially its physical and chemical aspects are described. (DLC.)

75495. SERGEEV, A. S. Oksonievyĭ pirokhlor iz fenitov Kol'skogo poluostrova. (Vsesoiuznoe mineralogicheskoe obshchestvo. Zapiski 1961. ser.2, chast' 90, vyp.4, p.400-407, illus. tables, graphs.) 12 refs. Text in Russian. **Title tr.:** Oxonic pyrochlore from fenites of the Kola Peninsula.

Describes pyrochlore in albite-acmite veins. Its crystals, physical and optical properties, X-ray analyses, heat tests, chemical composition and origin are discussed, and data tabulated. Oxonic pyrochlore occurred in fenites as a primary mineral under conditions of low concentration of Na ions and low alkalinity of the mineral-forming solutions. (DLC.)

75496. SERGEEV, A. V. Dinamika soderzhaniia karotina v silosnykh kul'turakh. (Yakutsk. Universitet. Uchenye zapiski 1959, vyp.6, seriia sel'skokhoziaĭstvennykh nauk, p.65-84, tables.) 11 refs. Text in Russian. **Title tr.:** Dynamics of the carotene content in silage crops.

Reports on analysis of leaves, blossoms, stalks, etc. at various stages of growth for alfalfa, lupine, cowpea, peavine, soybean, chick pea, peas, oats, corn, sunflower, sorghum, rye grass, etc. The work was done on experimental farms at Chuchur-Muran 7 km. from Yakutsk, Sergelyakh (62°02′N. 122°03′E.), and elsewhere in central Yakutia. Data on cultivated species (147 analyses) and pasture grasses (73) are tabulated and discussed. The carotene content ranged 1-139 mg./kg. but in almost all cases, regardless of plant part, the maximum was found to occur when the plant was in bloom. (DLC.)

75497. SERGEEV, A. V. Nekotorye materialy po silosovaniiu kormov v usloviiakh vechnoĭ merzloty. (Yakutsk. Universitet. Uchenye zapiski 1959, vyp.6, seriia sel'skokhoziaĭstvennykh nauk, p.61-63, table.) Text in Russian. **Title tr.:** Some materials on silage under permafrost conditions.

Presents data on the moisture, carotene and pH content, the odor and color of 15 types of pit silage in permafrost areas of Yakutia. Natural grass, sunflower, corn, oats, corn with straw, and fodder cabbage were used. Results in all cases were satisfactory. Details are given on the experiments on several collective, state, and subsidiary farms at Sergelyakh, and elsewhere in central Yakutka. (DLC.)

75498. SERGEEV, DORIAN ALEKSEEVICH. Perezhitki ottsovskogo roda u aziatskikh eskimosov. (Sovetskaia etnografiia, Nov.-Dec. 1962, no.6, p.35-42, tables.) 10 refs. Text in Russian. Summary in English. **Title tr.:** Vestiges of a patrilineal clan pattern among Asiatic Eskimos.

Identifies some thirty exogamic, patrilineal clans among the Sireniki, Chaplino, and Naukan Eskimos studied in 1953-1956 and 1958-1961. Each consists of several nuclear families and is headed by a clan elder. The cohesive settling pattern and organization of basic production units (artel') were determined by clan affiliation to the 1930's. The clan (9) and family (13) composition is tabulated to 1960 for the 43 Eskimos of Naukan, also the kinship links within the baydara artels of two of its clans in 1934. Clan structure, levirate, habitation and burial clustering, rituals and legends are discussed. (DLC.)

SERGEEV, DORIAN ALEKSEEVICH, *see also* Arutiunov, S.A., & D.A. Sergeev. Novye nakhodki . . . 1961. No. 69888

75499. SERGEEV, E. M., *and others.* Osobennosti litologicheskogo sostava i inzhenerno-stroitel'nykh svoĭstv chetvertichnykh otlozheniĭ nizhnego techeniia doliny r. Obi. (*In:* Vsesoiuznoe soveshchanie

po izucheniiū chetvertichnogo perioda. Materialy . . . 1961, t.3, p.77-82.) Text in Russian. *Other authors:* S.S. Poliākov. L.I. Odintsova, *and* N.N. Sheveleva. **Title tr.**: Features of the lithologic composition and engineering-construction properties of Quaternary deposits in the lower Ob valley.

Reports on an engineering-geological study along the 600-700 km. stretch between Salekhard and Bol'shoy Kamen'. It has glacial, marine, lacustrine, alluvial and other Quaternary deposits, differing in composition and age. Their mineral composition, granularity, colors, texture, consolidation and other properties are described. For construction purposes, the moraines of the Samarovo glaciation are the most suitable. (DLC.)

75500. SERGEEV, G.N. O sezonnykh izmeneniiākh vynosa l'dov iz Arkticheskogo basseĭna v Grenlandskoe more. (Problemy Arktiki i Antarktiki. Sbornik statei 1962. vyp.10, p.33-38, diagrs., tables, maps.) 4 refs. Text in Russian. **Title tr.**: Seasonal variations of ice drift from the Arctic Basin into the Greenland Sea.

Analyzes data on the rate of southward drift of the *Fram* in 1896, *G. Sedov* in 1939, and drifting station North Pole-6 in 1959; and establishes presence of a surface current moving at 2 km./day from the Arctic Basin toward the strait between Spitsbergen and Greenland. The observed fluctuations in the speed of ice drift, with a winter max. and summer min., are explained as the effect of wind. (DLC.)

SERGEEV, G. N., *see also* Kudriavtsev, N.F., & G.N. Sergeev. K metodike izmereniiā techenii so l'da . . . 1961. No. 73178

75501. SERGEEV, I. TSifry obviniaiūt. (Okhrana truda i sotsial'noe strakhovanie, Dec. 1962. god 5, no.12, p.22-24.) Text in Russian. **Title tr.**: Figures accuse.

Denounces the poor safety record in the Arkhangel'sk wood industry: the accident rate is high, and the number of injuries reported in 1961 was up 6.2% from 1960. Equipment is in dangerously bad condition, basic safety rules are disregarded, steps are being taken by management and trade-union officials to remedy matters. (DLC.)

75502. SERGEEV, IŪ. N. Opyt izucheniiā voln bol'shikh periodov v more. (Leningrad. Universitet. Uchenye zapiski 1961. no.309, ser. geograficheskikh nauk, vyp.16, okeanologiiā, p.55-77, tables, graphs, charts.) 6 refs. Text in Russian. **Title tr.**: Attempt at study of long-period waves at sea.

Reports oceanographic studies in the Kara Sea during summer months of 1956 and 1957. Tidal fluctuations on the open sea surface were studied using Graafen mareograph data at two stations, 78°30′N. 93°E. and 77°02′N. 80°44′E., with comparative data supplied from coastal stations at Dikson Island, Cape Zhelaniya and Balvanskiy Nos. Besides the tidal waves, secondary waves of an unknown nature were detected, and these are known also in the Chukchi Sea. Special attention is given to these secondary waves. Their occurrence, movements, size, amplitudes and periods are analyzed and methods of studying them described. For investigation of the long period waves, mareographic observations of 1956-1959 at nine polar stations were used. These waves are widely distributed; they occur in both summer and winter seasons. Their amplitudes and periods and their connection with atmospheric pressure, and other features are analyzed. (DLC.)

75503. SERGEEV, IVAN. Kuda tech' rekam? (Sovetskiĭ soiūz, 1961, no.2 (133), p.6-11, illus., graph, col. map.) Text in Russian. **Title tr.**: Where should rivers flow?

Describes current hydrologic projects, diversion of the Pechora and Vychegda toward the Caspian Sea, etc. Sketch map indicates hydroelectric stations on Kola Peninsula, the Pechora, Ob, and Yenisey Rivers, projected water resources in the Pechora and the Ob-Irtysh River systems, etc. (DLC.)

75504. SERGEEV, L. V struĭnom techenii samolet An-2 letel so skorost'iū 480 kilometrov v chas. (Grazhdanskaiā aviatsiiā, Jan. 1961. god 18, no.1, p.12.) Text in Russian. **Title tr.**: Caught in a jet stream, an An-2 aircraft at 480 km./hr.

Notes a plane flying from Kolguyev Island to Nar'yan-Mar, at 3,000 m., which was caught in a jet stream: its speed of 180 km./hr. increased by 300 km. A jet stream had not previously been recorded below 6-5,000 m. in high latitudes. (DLC.)

75505. SERGEEV, MIKHAIL ALEKSEEVICH. Literatura narodov Severa. (*In:* IAnovskiĭ, N.N. Literatura narodov Sibiri, 1956, p.131-68.) 13 refs. Text in Russian. **Title tr.**: Literature of the peoples of the North.

Describes the meager beginnings, development, and the present flourishing condition of the literature, fine arts, and music: Tungus, Samoyed, Ostyak, Vogul, Chukchi, and Koryak. Works of contemporary prose writers, poets, and playwrights are discussed. (DLC.)

75506. SERGEEV, MIKHAIL ALEKSEEVICH. Literatura narodov Sibiri; materialy k bibliografii. (*In:* IAnovskiĭ, N.N. Literatura narodov Sibiri, 1956, p.169-83.) Text in Russian. **Title tr.**: Literature of the peoples of Siberia; bibliographic materials.

Lists, without comment, books, articles, poems, etc. mostly pub. in Russian in the 1940-1950's; 47 are the work of Yakuts, 5 Ostyaks and Voguls, 21 Nenets-Samoyeds, 26 Evenkis, 27 other Tungus, 9 Chukchis, and 13 are by Koryaks; 24 collections of tales by different northern nationals are included and about 60 Russian publications on the literature and folklore of north Siberian aborigines. (DLC.)

75507. SERGEEV, V. N. O shestovatykh kristallakh magnezioferrita iz basseĭna Nizhneĭ Tunguski. (Izvestiiā vysshikh uchebnykh zavedeniĭ. Geologiiā i razvedka, June 1961, no.6, p.97-100, illus.) 2 refs. Text in Russian. **Title tr.**: On columnar magnesioferrite crystals from the Nizhnyaya Tunguska basin.

Reports a study of polished sections of this mineral made with the reflecting microscope. Etching of the polished sections is described. Growth of the crystals is analyzed; their optical properties are reported. (DLC.)

SERGEEVA, G. A., *see*

Dorman, L.I., & *others.* Issledovanie . . . kosmicheskikh luchei . . . 1961. No. 71081

Kolomeets, E.V., & *others.* Issledovanie . . . magnitnoĭ buri 25 marta 1958g. 1961. No. 72902

SERGIENKO, V. A., *see* Arkhipova, A.P., & *others*. Dorozhnye ėmul'sii . . . 1962. No. 69860

75508. SERGIEVSKAĬA, E. V. Zametka o dvukh novykh vidakh roda *Viola* L. (Akademiĭa nauk SSSR. Botanicheskiĭ institut. Botanicheskie materialy gerbariĭa 1961. t.21, p.281-88, map.) 12 refs. Text in Russian and Latin. **Title tr.**: Note on two new species of the genus *Viola* L.

Reports on two new forms of violet, with Latin description: *Viola glaberrima* (Murb.) C. Serg. comb. nova, and *V. pobedimovae* C. Serg. n.sp. Both extend northward into the Murmansk and Arkhangel'sk Provinces. Related forms, habitat, etc. are noted. (DLC.)

75509. SERLAPOV, S. T. Arkticheskie antitsiklony i ikh svīaz' s VPFZ i struĭnymi techeniĭami. (*In:* Leningrad. Arkticheskiĭ . . . institut. Trudy 1961. t.235, Sbornik stateĭ po sinoptichesko ĭ meteorologii, p.5-36, tables, graphs, maps.) 25 refs. Text in Russian. **Title tr.**: Arctic anticyclones and their relation to the upper air planetary frontal zone and jet streams.

Discusses the frequency and distribution of anticyclones, features of their formation, and relation to types of atmospheric circulation and other synoptic conditions, on the basis of synoptic and upper air charts of isobaric levels for 1939-1957 and aerological observations at Soviet drifting stations 1954-1958. Areas of formation and weather characteristics within arctic anticyclones are outlined. The results of this study are expected to aid short- and medium-range weather forecasts for arctic areas. (SPRI.)

75510. SERLAPOV, S. T. V farvatere dreĭfuīushchikh l'dov. (*In:* Burkhanov, V.F. Na ledianom ostrove, 1962, p.74-97, illus., plate, map.) Text in Russian. **Title tr.**: On the route of the drifting ice.

Reviews the 370-day drift of the ice island station North Pole-6, of which author was the third team leader, April 8, 1958-April 12, 1959: observations carried on, personnel and work of the visiting parties are sketched. N.V. Cherepanov brought a group to make ice studies and A.G. Kolesnikov one to study heat exchange between the atmosphere and the ice and water surface. The station drifted 1220 km. point to point in the year at a greater speed than other known drifts. The effects of the peculiar conditions of station life on the behaviour and psychic state of individuals are noted. Visiting polar bears are mentioned: 42 in 1956-57, while the station drifted in the Vrangel Island area, only three in 1957-58 and five in 1958-59, also arctic foxes probably living permanently on the island. Underwater explorations were carried on at depths to 20 m. by specially trained divers, V.G. Savin and IU. G. Pyrkin, who made hydrological observations and examined the under-surface of the ice island. A sea mount, Pik Severnyy Polyus-6 was discovered 728 m. deep on Feb. 15, 1959, in an area where the sea was over 4000 m. deep (no coordinates are given). (DLC.)

75511. SEROVA, M. IA. Mikropaleontologicheskoe obosnovanie razreza tretichnykh otlozheniĭ zapadnogo poberezh'īa Kamchatki. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.166-69.) Text in Russian. **Title tr.**: Micropaleontologic substantiation of the Tertiary deposit section on the west coast of Kamchatka.

Reports general and preliminary results of a foraminifera investigation: percentage of various subseries in samples, where found, etc.; predominant complexes are summarized for some series. The importance of foram study for Tertiary stratigraphy and paleogeography is stressed. (DLC.)

SESĪAGIN, SERGEĬ MATVEEVICH, 1912– , *see* Krasikova, V.A., & S.M. Sesīagin. . . . *Coregonus nasus* . . . 1962. No. 73078

SEVAST'IANOV, G. N., *see* Parovshchikov, V.IA., & G.N. Sevast'ianov. Materialy po . . . biologii sov . . . 1960. No. 74661

75512. SEVERIN, S. E., *and others*. Razobshchenie okisleniīa i fosforilirovaniīa pri vykhode iz sostoīāniīa gipotermii. (Akademiīa nauk SSSR. Doklady 1962. t.147, no.6, p.1489-92, illus., tables.) 16 refs. Text in Russian. *Other authors:* V.P. Skulachev, V.G. Sivkova, *and* S.P. Maslov. **Title tr.**: Separation of oxidation and phosphorylation during cessation of hypothermia.

Account of study of mitochondria from the breast-muscle of pigeons, shorn and exposed to -17° C. for 1.5 hrs. A sharp drop of the P/O coefficient was noted 1-2 hrs. after cessation of cooling. This was found to represent a reversible disengagement of phosphorylation from the respiratory chain. It takes place during a period of most active heat production. (DLC.)

75513. SEVIL'GAEV, G. Vseobuch v raĭonakh Krainego Severo-Vostoka. (Narodnoe obrazovanie, Nov. 1961, no.11, p.27-32, illus.) Text in Russian. **Title tr.**: Compulsory education in districts of the far Northeast.

Discusses the large number of drop-outs from schools and suggests remedial measures, particularly for the Koryak and Chukchi National Districts. Boarding schools are favored at the elementary level, and should be increased. Curricula, Russian and native language instruction, role of the preparatory grades, kindergarten facilities, physical fitness programs, parent-teacher cooperation, etc. are dealt with. Traditional techniques as reindeer breeding, hunting, fishing, fur farming should be incorporated into the school program to ensure development of the native economies. (DLC.)

75514. SEVOST'IANOV, B. A. Izvlechenie gipofizov iz tsel'nykh kitovykh golov. (Rybnoe khoziĭaĭstvo, 1962. god 38, no.9, p.78-80, illus.) Text in Russian. **Title tr.**: Extraction of hypophyses from whole heads of whales.

Discusses the importance of endocrine organs as source of certain pharmaca, and describes an extractor and its use in salvaging hypophyses. (DLC.)

SHABLINSKAĬA, N. V., *see* Dedeev, V.A., & *others*. Stroenie dosredneīurskogo fundamenta . . . 1962. No. 70932

75515. SHABYNIN, L. I., *and others*. Shpinelevo-piroksenovye porody kak metasomaticheskie obrazovaniīa. (*In:* Akademiīa nauk SSSR. Institut geologii rudnykh mestorozhdeniĭ, petrografii, mineralogii i geokhimii. Fiziko-khimicheskie problemy . . . 1961, t.1, p.440-83, illus., map, cross-sections, diagrs.) 39 refs. Text in Russian. Summary in English. *Other authors:* M.A. Litsarev, N.N. Pertsev, *and* B.M. Shmakin. **Title tr.**: Spinel-pyroxene rocks as metasomatic formations.

Reports a petrologic study mainly in the Aldan crystalline shield, where these rocks occur in the contact zone between metasomatic iron ore and phlogopite deposits. Their geologic, structural, textural and mineralogic features are analyzed. They are considered typical metasomatic rocks formed in active contacts between dolomites and alumosilicate rocks. (DLC.)

75516. SHACKLETTE, HANSFORD THRELKELD, 1914– . Biotic implications of Alaskan biochemical distribution patterns. (Ecology, 1962, v. 43, no. 1, p. 138-39, tables.) 3 refs.

Reports on chemical analyses of 32 species of trees and two herbs for copper, lead, zinc, and nickel and some other elements. The ecological value of such studies is discussed. (DLC.)

75517. SHACKLETTE, HANSFORD THRELKELD, 1914– . Influences of the soil on boreal and arctic plant communities. Washington, D.C., 1962. ix, 349 l., illus., map, diagrs., tables. (U.S. Geological Survey. Reports, open file no. 670.) 114 refs. Mimeographed.

Reports results of field studies of 1948, 1957, 1958, and 1960, in 13 areas in Alaska and Canada, in conjunction with geochemical and biogeochemical investigations to determine amounts of certain elements in vascular plant and bryophyte tissues as well as in associated substrates. Particularly noted was the effect of acidity or alkalinity in the substrate upon the plant communities; only three-four % of the species are alkaline. Substrates have less influence than other environmental factors on bryophytes. Plants are believed to exert a greater influence on soil type development than do parent materials, though both factors are less important than climate. Arctic and boreal species generally exhibit a wide tolerance in element absorption and element toxicity, but low temperature is the predominant environmental factor in growth. Inhibiting factors and compensating influences on growth are outlined. Data confirm that temperature, exposure, frost action, and water relationships are more important factors in determining plant species and community composition than are the chemical properties of the soil or other substrate. (DGS.)

75518. SHADRIN, P. I. Iz istorii pedagogicheskogo obrazovaniĭa v ĬAkutii dorevoliūtsionnyĭ period. (Yakutsk. Universitet. Uchenye zapiski 1960. vyp. 7, seriĭa obshchestvennykh nauk, p. 19-33, table.) 4 refs. Text in Russian. **Title tr.:** History of pedagogical education in Yakutia; pre-Revolutionary period.

Describes the foundation and growth of teachers' colleges in Yakutsk, with statistics on students, including number of Yakuts. A two-year course was given from 1909, a three-year teachers' seminary began in 1914. The large percentage of Yakut drop-outs is ascribed to inadequate basic schooling. The progressive scholastic reforms of 1918-1920 are sketched. (DLC.)

SHAFER, G. V., *see*

Kuz'min, A.I., & *others.* Iīūl' 1959 g. . . . 1962. No. 73250

Kuz'min, A.I., & *others.* Nekotorye rezul'taty . . . kosmicheskikh luchei. 1962. No. 73251

Kuz'min, A.I., & *others.* Vspyshki kosmicheskikh luchei . . . 1961. No. 73253

75519. SHAFER, IŪ. G. Ėffekt "den'-noch'" v intensivnosti kosmicheskikh luchei po izmereniĭam v stratosfere. (Akademiĭa nauk SSSR. ĬAkutskiĭ filial. Trudy, ser. fizicheskaĭa 1962. vyp. 4, Variatsii intensivnosti kosmicheskikh luchei, p. 111-12.) 10 refs. Text in Russian. **Title tr.:** The "day-night" effect in cosmic ray intensity as measured in the stratosphere.

Discusses the theories advanced in explanation of a diurnal variation: the "day-night" effect. It was found to be 1% at the 500 mb level, and 10% at the maximum of Pfotzer's curve. The mean difference of the variation in the stratosphere was found to be 2%, a value commensurable however, with intensity and with the experiments performed to test the theories. To clarify the indecisive results obtained by different investigators, over 20 night and day flights into the stratosphere were made in 1958, to measure the observational error. The results are considered to favor the corpuscular theory of diurnal variation in intensity of cosmic rays, based on L. Janossy's hypothesis in relation to the magnetic dipole of the sun. More high latitude stratospheric flights are planned during the Year of the Quiet Sun. (DLC.)

SHAFER, IŪ. G., *see also*

Kuz'min, A.I., & *others.* Iīūl' 1959 g . . . 1962. No. 73250

Kuz'min, A.I., & *others.* Nekotorye rezul'taty . . . kosmicheskikh luchei. 1962. No. 73251

Kuz'min, A.I., & *others.* Vspyshki kosmicheskikh luchei . . . 1961. No. 73253

SHAFER, J. E., *see* Alaskan Science Conference 1961. 1962. No. 69644

SHAGIN, V. A., *see* Stepanov, V.N., & V.A. Shagin. Tipy izmeneniĭa solenosti . . . 1961. No. 75931

75520. SHAĬDUROV, V. S. O radiatsii i fotosinteze v Zapoliār'e. (Mezhvedomstvennoe soveshchanie po aktinometrii i atmosfernoĭ optike, 2d, *Leningrad,* 1959 *pub.* 1961. Aktinometriĭa i atmosfernaĭa optika, p. 22-24.) Text in Russian. **Title tr.:** On radiation and photosynthesis in the polar regions.

Observations at the Apatity station in Kola Peninsula, July 16-17, 1958 established that the coefficient of plant utilization of energy in photosynthesis was 2.8-3.1% during 11 p.m.-6 a.m., and during 9 a.m.-5 p.m. only 1.2-1.6%. Thus during the "night" period in the arctic summer, plants utilize solar energy twice as effectively as in the "day." Transpiration is also briefly discussed. (DLC.)

75521. SHAKHOV, F. N. Osnovnye napravleniĭa nauchnykh issledovaniĭ v zolotonosnykh raĭonakh Sibiri. (Geologiĭa i geofizika, 1961, no. 10, p. 89-101, diagrs.) 23 refs. Text in Russian. Summary in English. **Title tr.:** Principle trends of scientific investigations in the gold-bearing regions of Siberia.

Outlines problems of gold chemistry and the geology of gold-bearing deposits based on praxis obtained by prospecting in Siberia. Migration of gold, genetic types of gold-bearing deposits, their connection with magmatic processes, and other problems are discussed. Attention is given to the possible association of primary gold deposits with granitic batholiths. Methods of gold searching are summarized. (DLC.)

SHAKHUNIANTS, GEORGII MIKHAĬLOVICH, *see* International Conference on soil mechanics . . . 1961. No. 72383

75522. SHALAMOV, B. S. Izmerenie vlazhnosti pochvy po soprotivleniiu gipsovykh blokov. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniia 1959. vyp. 2, p.46-50, illus., graph.) 8 refs. Text in Russian. **Title tr.:** Measurement of soil moisture according to resistance of gypsum blocks.

Reports 1956 field observations at the Chuchur-Muran biological station of the Yakut Branch of the Academy of Sciences of the USSR, where a method was tested of estimating moisture content of soils from the electrical resistance of a buried block of gypsum. Calibration techniques, installation of nickel electrodes, and other instruments are described, and the calibration curve obtained for the gypsum block is presented. The method is considered of value under field conditions, but somewhat wanting in exactness, for which improvements are suggested. (DLC.)

75523. SHALAMOV, I. Sovkhoz v Zapolia'r'e. (Sel'skoe khoziaĭstvo Sibiri, May 1961. god 6, no.5, p. 77-78.) Text in Russian. **Title tr.:** State farm beyond the Arctic Circle.

Describes the Salekhard State Farm, which supplies the town with milk, getting over 3,300 kg./cow in 1959. Achievements in fur farming and reindeer raising are cited, plans for improving livestock outlined. Poor organization is scored: fish meal imported from Odessa, etc. to feed the stock, and Salekhard canning combine fish meal sent elsewhere. (DLC.)

SHALYGIN, A. I., *see* Sadovskiĭ, G.I., & *others.* Sovershenstrovanie . . . 1961. No. 75317

75524. SHAMONT'EV, V. A. Dreĭfuiushchaia stantsiia "Severnyĭ Polius-9". (Problemy Arktiki i Antarktiki. Sbornik stateĭ 1962. vyp. 10, p.95-96, table, map.) Text in Russian. **Title tr.:** Drifting station North Pole-9.

Reviews the 352-day drift of this station set up on Apr. 28, 1960 at 77° 23′ N. 163° E. and evacuated on Mar. 29, 1961 at 86° 36′ N. 176° W. In the course of the 2610 km. (1341 km. point-to-point) drift, 186 coordinates and 406 depths were determined, 2684 meteorological and 1236 actinometric observations made, 555 radiosondes released, etc. Author was head of the station. (DLC.)

SHAMURIN, V. F., *see* Panfilov, D.V., & *others.* Eshche . . . 1962. No. 74633

75525. SHAN'KO, V. V. Kovdorskiĭ gorno-obogatitel'nyĭ kombinat. (Gornyĭ zhurnal, Apr. 1961. no.4, p.11-14, diagrs., table, plan.) Text in Russian. **Title tr.:** The Kovdor Mining and Concentration Combine.

Describes the southern part of iron ore deposit near the Kovdor railroad station (67° 34′ N. 30° 28′ E.) in Kola Peninsula. Its resources are evaluated at approx. 300 million tons of magnesite. Its open-pit mining operations are outlined, author being chief engineer of the combine. Removal of the alluvial cover, breaking down the rocks, ore transportation and processing in the concentration plant are diagrammed and discussed. (DLC.)

75526. SHAPAEV, V. M. O brizovoĭ tsirkuliatsii na poberezh'iakh okrainnykh moreĭ Sovetskoĭ Arktiki. (Leningrad. Glavnaia geofizicheskaia observatoriia. Trudy 1961. vyp. 123, p.70-78, tables, graphs.) 9 refs. Text in Russian. **Title tr.:** On breeze circulation on coasts of the peripheral seas of the Soviet Arctic.

Reports study of possible occurrence conditions of local daily winds on these coasts. Local changes of total solar radiation are established and evaluated from the actinometric observations at Dikson 1938-1947 and at Cape Shmidta 1937, 1940-1942, 1947-1949, 1953. Despite the periodicity of this phenomenon, the low solar radiation, the ice cover of the seas, and the prevalence of cyclonic circulation create conditions in which the on- and off-shore breezes do not occur. The pattern of such breezes in the temperate latitudes is also discussed. (DLC.)

75527. SHAPAEV, V. M. Vliianie Karskogo moria na izmenenie temperatury vozdukha v nizhneĭ troposfere. (Leningrad. Glavnaia geofizicheskaia observatoriia. Trudy 1961. vyp. 122, p.12-18, tables, graphs.) Ref. Text in Russian. **Title tr.:** Influence of the Kara Sea on change of air temperature in the lower troposphere.

Discusses vertical change of air temperature for the summer-fall months, July-September. Ice cover of the Kara Sea for ten-day periods of these months is characterized, and baric field analyzed. Air temperature at the 0.0, 0.2, 0.5, 1.0, 2.0, 3.0, 4.0 and 5.0 km. levels is established by radiosonde at Dikson Island. Influence of the open-sea surface is shown to reach to 0.2-0.5 km., and when ice-covered to 1.0-1.5 km. (DLC.)

75528. SHAPALIN, B. F. Prirodnye resursy Kamchatskoĭ oblasti i problemy kompleksnogo razvitiia ee khoziaĭstva. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia 1961, no. 11, p.19-32.) Text in Russian. **Title tr.:** The natural resources of Kamchatka Province and problems in the broad development of its economy.

Outlines briefly the resources of Kamchatka: 63 coal deposits with 58.9 million t. of known reserves and a 15-20 billion t. potential, only two of the deposits (Korfskoye and Krutogorskoye) under development; large peat deposits; indications of construction materials of various kinds and considerable value; mercury deposits; energy potential in hot springs; large water-power resources; forests with 98.1 million $m.^3$ of mature timber; a rich fauna for hunting and fishing. Lack of transportation and manpower hampers resource development. Construction plans for electric stations, roads, a railroad: Petropavlovsk-Bol'sheretsk-Krutogorovo, etc., involving an investment of up to one billion rubles, are discussed. (DLC.)

75529. SHAPEERO, WILLIAM L. The distribution of *Priapulus caudatus* Lam. on the Pacific Coast of North America. (American midland naturalist, July 1962. v.68, no.1, p.237-41, illus., map.) 8 refs.

Notes on the morphology of these vermiform coelomates, taxonomy, occurrence in depth, and distribution, which includes the Chukchi Sea as far east as Point Barrow and Glacier Bay, Alaska. (DLC.)

SHAPIRO, RALPH, *see* Ward, F.W., & R. Shapiro. Atmospheric temperatures . . . 1961. No. 76485

75530. SHAPOSHNIKOV, K. K., *and* **K. I. SHAPOSHNIKOVA.** Nekotorye voprosy tektonicheskogo

raĭonirovaniĭa Severo-Vostochnoĭ IAkutii po geofizicheskim dannym. (Geologiĭa i geofizika, 1961, no.3, p.42-47, graph, map.) 15 refs. Text in Russian. Summary in English. **Title tr.**: Some problems of the tectonic subdivision of northeastern Yakutia according to geophysical data.

Reports a gravitational and magnetic survey made along the route from the East Siberian Sea coast to the Sea of Okhotsk in 1960, including a traverse of the Polousnyy Ridge, Kolyma medial massif, Tas-Khayakhtakh anticline, Okhotsk massif, and other structures. Geologic interpretation of the geophysical data is given and the tectonic structures are characterized. Some data are included on the depth of Precambrian basement and Mohorovičić discontinuity. (DLC.)

75531. SHAPOSHNIKOV, K. K. Rel'ef kristallicheskogo fundamenta v IUzhno-Verkhoĭanskom sinklinorii. (Yakutsk. Universitet. Uchenye zapiski 1961. vyp. 9, ser. geologo-mineralogicheskikh i tekhnicheskikh nauk, p.121-27, map, graphs.) 3 refs. Text in Russian. **Title tr.**: Relief of the crystalline basement of the southern Verkhoyansk syncline.

Reports a gravimetric, magnetic and geologic survey during 1955-1959 in this area, also called the Eastern Verkhoyansk or Allakh-Yun' syncline. Over 500 km. long and 300 km. wide, it includes the Tyry, Yudoma and Kuydusun River basins. Gravimetric anomalies reveal the crystalline basement at 3-14 km. depth. The relief is described as well as deep faults extending in meridional and northwestern directions. (DLC.)

75532. SHAPOSHNIKOV, K. K. Stroenie zemnoĭ kory na Severo-Vostoke SSSR po geofizicheskim dannym. (Geologiĭa i geofizika, 1962, no.9, p.100-105, maps.) 14 refs. Text in Russian. **Title tr.**: Structure of the earth's crust in northeastern USSR according to geophysical data.

Reports deep seismic soundings in 1959 along the profile Magadan-Kolyma. Depths of the Mohorovičić discontinuity and the basaltic layer were determined and mapped for eastern Yakutia and Magadan Province. The Moho discontinuity varies from 34 to 38 km. in depth, and the basaltic layer 20-22 km. Regional distribution of these depths is characterized. The earth's crust of the Soviet Northeast is of platform type. (DLC.)

75533. SHAPOSHNIKOVA, K. I. Plotnostnaĭa kharakteristika gornykh porod iūgo-zapadnoĭ chasti Verkhoĭano-Kolymskoĭ skladchatoĭ oblasti. (Geologiĭa i geofizika, 1961, no.9, p.105-112, tables, diagrs., map.) 2 refs. Text in Russian. **Title tr.**: Density characteristics of rocks in the southwestern part of the Verkhoyansk - Kolyma folded zone.

Reports gravity measurements on over nine thousand samples different in age and lithology. Four main regions are distinguished, according to geologic structure and density of rocks: the scuth-eastern part of the Verkhoyansk foredeep, the Sette-Daban Range, the southern Verkhoyansk syncline, and the massif of Okhotsk. For each region, the density of various rocks is outlined as measured by the N.N. Samsonov system densimeter. (DLC.)

SHAPOSHNIKOVA, K. I., *see also* Shaposhnikov, K.K., & K.I. Shaposhnikova. Nekotorye voprosy tektonicheskogo raĭonirovaniĭa . . . 1961. No. 75530

SHAPPY, R. A., *see* Saila, S.B., & R.A. Shappy. Migration computer. 1962. No. 75334

75534. SHARABHAI, V. A., *and* **G. L. PAI.** Cosmic ray effects associated with polar cap absorption events. (*In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.2, p.286-89, graphs, table.) 3 refs.

Reports on the study of polar cap radio wave absorption by auroras (PCA) and the possible association of these events with daily mean cosmic ray intensity. Characteristics of the changes in the intensities of various components of cosmic rays associated with the recorded PCA events are given and discussed. (DLC.)

SHARAPOV, V. N., *see* Oleĭnikov, B.V., & V.N. Sharapov. Nekotorye voprosy trappovogo vulkanizma . . . 1961. No. 74511

75535. SHARBATIÂN, A. A. K istorii razvitiĭa mnogoletnemerzlykh gornykh porod; na primere severa Zapadno-Sibirskoĭ nizmennosti. (Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Trudy 1962. t.19, p.127-43, graphs, diagrs.) 14 refs. Text in Russian. **Title tr.**: On the development history of permafrost, as exemplified in the northern part of the West Siberian plain.

Discusses the formation and development of permafrost in the Quaternary period. The discussion is based on the evaluation of its present status, its composition, distribution, thickness, and temperature regime; on the geologic history of the region; the secular change of solar radiation; and on the heat flow from the earth. Each factor is briefly reviewed. Paleoclimatic conditions and calculation of the freezing of rocks are analyzed. Several stages in permafrost formation are distinguished and characterized. (DLC.)

75536. SHARGAEV, M. Dary Severa liūdiām. (Sibirskie ogni, Apr. 1962. god 41, no.4, p.149-53.) Text in Russian. **Title tr.**: Gifts of the North to men.

Criticizes the poor organization of the fur trade, a basic industry in the Khanty-Mansi National District. Professional hunters decreased in number from 870 in 1940 to 300 in 1960, and the resulting decline in take substantially lowered income in native kolkhozes as the hunters are mostly Ostyaks, Voguls, Zyryans, and Nenets-Samoyeds. Limited transport facilities result in the virtual extermination of wildlife in easily accessible areas, while the more remote regions remain untouched. Hunting and trapping equipment is primitive; hunting dogs are not raised any more. Subsidiary industries of low return absorb a large percentage of the labor force potential. Poaching and hunting during closed seasons, forest fires and deliberate burning of meadows for fertilizing, cause great destruction of litters and of bird eggs. A fundamental reorganization of the hunting and trapping industry is recommended. (DLC.)

75537. SHARGAEV, M. Obogashchat' i pravil'no ispol'zovat' okhotnich'iū faunu. (Sel'skoe khoziĭaĭstvo Sibiri, July 1961. god 6, no.7, p.44-45, illus.) Text in Russian. **Title tr.**: Enrichment and management of the hunting fauna.

Reports on acclimatization of fur animals in Khanty-Mansi National District: 1200 "Barguzin" sables released in 1952-59 on the right bank of the Ob River, American mink in 1935-1941, muskrat

in quantity since 1932. Sable and muskrat have been completely successful; mink was a failure at first but later introduced in the Samarovo and Berezovo Districts, did well. Geological and forestry investigations have proven disastrous to the "former" Konda-Sos'va beaver reserve. (DLC.)

75538. SHARGAEV, M. Pravil'no ispol'zovat' otchisleniia ot zagotovok pushniny. (Sel'skoe khoziaĭstvo Sibiri, Apr. 1962. god 7, no.4, p.76.) Text in Russian. **Title tr.:** Grants for skins delivered must be properly used.

Since 1957, collective farms have been allowed a subsidy for hunting-industry development, amounting to 20% of the value of the skins they deliver. These grants in the Khanty-Mansi National District in 1961 amounted to 500,000 new rubles. The money is put to improper use by various kolkhoz administrations, and some controls should be set up. (DLC.)

75539. SHARGAEV, M. V spetsializirovannykh promyslovo-okhotnich'ikh khoziaĭstvakh. (Sel'skoe khoziaĭstvo Sibiri, Feb. 1961. god 6, no.2, p.74-75.) Text in Russian. **Title tr.:** On specialized commercial hunting farms.

Reports 12 of this type of collective (promkhoz) organized in the Khanty-Mansi National District in 1957-1959; their broad and varied functions are stated. They lack qualified personnel however, and the promkhoz catch falls short of the objectives. (DLC.)

75540. SHARPLES, ADA WHITE. Two against the North. New York, Dial Press, 1961. 252 p. map.

Recounts experiences as the wife of a homesteader at Skilak Lake on the Kenai Peninsula of Alaska, from 1938 to 1944. Daily life, the problems, especially isolation, and the satisfactions of homesteading are described. Landscape, wildlife, and vegetation of the area are sketched. (DLC.)

75541. SHASHKO, DANIIL IVANOVICH. Klimaticheskie usloviia zemledeliia TSentral'noĭ IAkutii; s voprosami metodiki sel'skokhoziaĭstvennoĭ otsenki klimata. Moskva, Izd-vo Akademii nauk SSSR, 1961. 264 p. illus., tables, graphs, maps. (Akademiia nauk SSSR. Komissiia po problemam Severa.) Approx. 140 refs. Text in Russian. **Title tr.:** Climatic conditions of agriculture in central Yakutia, and methods of agricultural appraisal of climate.

Deals in pt. 1, with methods of investigating these climatic conditions. Tasks of agricultural meteorology are outlined, and agroclimatic indicators for development, growth and hibernation of plants are discussed. Temperature, transpiration, vegetation period, hibernation of cultivated plants are analyzed. In pt. 2, central Yakutia is considered, the surface structure, soils and vegetation, temperature and humidity are reported. Features of microclimate and agroclimatic conditions are treated in detail. Suggestions are given for agricultural expansion, in crop selection, watering during dry periods, and selection of land for cultivation. (DLC.)

SHASHMURIN, IU. A., *see*
Alekhichev, S.P., & IU. A. Shashmurin. O primenenii legkikh pnevmaticheskikh ventiliatorov . . . 1961. No. 69673

Alekhichev, S.P., & *others*. Puti uluchsheniia provetrivaniia . . . 1961. No. 69674

SHASHUN'KINA, V. M., *see* Ben'kova, N.P., & *others*. Ionosfernye vozmushcheniia . . . 1961. No. 70135

75542. SHASTKEVICH, IU. G., *and* Ė. O. TARASOVA. Nekotorye rezul'taty sopostavleniia laboratornykh opredeleniĭ uprugikh svoĭstv gornykh porod s dannymi seismokarotazha. (Materialy po geologii i poleznym iskopaemym IAkutskoĭ ASSR. IAkutskoe geologicheskoe upravlenie, 1961. vyp.5, p.110-23, map, diagrs., graphs.) 8 refs. Text in Russian. **Title tr.:** Some results of correlating the elastic properties of rocks as determined in the laboratory with those obtained by seismic logging.

Correlates speed distribution of supersonic vibrations in core samples from the Vilyuy mouth gas deposits with the velocity of seismic waves logged in beds of these deposits. The laboratory tests showed a lower velocity than that obtained in the field. Atmospheric pressure, depth of rocks and other components are analyzed to explain this discrepancy. (DLC.)

SHATALOV, EVGENIĬ TROFIMOVICH, *see* Nekrasov, I. IA., & E.T. Shatalov. Metallogeniia . . . 1960. No. 74268

75543. SHATSKIĬ, NIKOLAĬ SERGEEVICH, 1895–1960, *and* A. A. BOGDANOV. La carte tectonique de l'URSS. (*In:* International Geological Congress, 20th, *Mexico City,* 1956. Trabajos . . . sec. 5, t.1 . . . *pub.* 1957, p.267-87, fold. map.) Text in French. **Title tr.:** Tectonic map of the USSR.

Discusses the main principles used in compilation, and explains the terms used in the legend; general tectonic features of the USSR are also dealt with. Among regions treated are the Russian platform, Siberian platform, and other arctic areas. A small-scale reduction of the map is attached. The map itself and accompanying explanatory notes were described as No. 56338. (DGS.)

SHATSKIĬ, S. B., *see* Zemtsov, A.A., & S.B. Shatskiĭ. K geologii . . . 1961. No. 76655

75544. SHAVROV, A. L. O prichine nizkoĭ zimostoĭkosti nekotorykh drevesnykh rasteniĭ v usloviiakh poliarno-al'piĭskogo botanicheskogo sada. (Akademiia nauk SSSR. Doklady 1961. t.140, no.2, p.499-502, illus.) 9 refs. Text in Russian. **Title tr.:** The cause of low winter hardiness of some woody plants under conditions of the Polar-Alpine Botanical Garden.

Study of morphological traits indicating low frost resistance in six plants introduced into Kirovsk, Kola Peninsula. Continuation into late autumn of top-meristem, and cambium growth, failure of bud formation and of shedding of leaves were some traits noted in those plants. (DLC.)

75545. SHAVROV, L. A. Fastsiatsii u rasteniĭ v subarktike. (Moskva. Glavnyĭ botanicheskiĭ sad AN SSSR. Biulleten' 1961. vyp.41, p.58-66, illus., table.) 15 refs. Text in Russian. **Title tr.:** Fasciation in plants of the sub-Arctic.

Reports a study of the phenomenon in *Leucanthemum vulgare* L. and other plants, from the macro- and microscopic aspects. This malformation in the stem with resultant flattening and enlargement was found to be due to anomalous growth of the apical meristem of axial organs. The process

appears early and is not due to fusion of growth points or buds. (DLC.)

75546. SHAVROV, L. A. Nekotorye kharakternye cherty vnutrividovoĭ izmenchivosti pereselennykh v Polīarno-Al'piĭskiĭ botanicheskiĭ sad rasteniĭ. (Akademiīa nauk SSSR. Izvestiīa, ser. biologicheskaīa, 1961, no.4, p.582-90, illus.) 12 refs. Text in Russian. Summary in English. **Title tr.:** Some peculiar traits of intraspecies variability of plants introduced into the Polar-Alpine Botanical Garden.

Description of profound morphological changes appearing in such plants at this station in the Khibiny Tundra, by far exceeding normal variability. In addition to climatic factors, isolation, cultivation, lack of competition, etc. are considered responsible. Reproductive organs appear to be mostly affected. A high incidence of teratomata is also noted. (DLC.)

75547. SHAVROVA, N. N. O soderzhanii radiīa i toriīa v lavakh vulkana Bezymīannogo. (Akademiīa nauk SSSR. Vulkanologicheskaīa stantsiīa. Biūlleten' 1961, no.31, p.28-31, tables.) 12 refs. Text in Russian. **Title tr.:** Radium and thorium content of Bezymyannyy Volcano lavas.

Reports the chemical composition of six samples of ancient and recent (andesite) lavas from the slopes of Bezymyannyy. The radium content fluctuates between 0.33×10^{-12} and 0.51×10^{-12} /gm.; thorium: 0.75×10^{-6} - 1.6×10^{-6}/gm. and uranium 0.99×10^{-6} - 1.47×10^{-6}/gm. Comparisons are made with the active elements in lavas of Klyuchevskaya and Semyachinskaya groups and in the rocks of Kamchatka generally. (DLC.)

SHAW, CHARLES R., *see* Rodahl, K. Studies on the blood . . . 1954. No. 75157

SHAW, J. B., *see* McGill Univ. Sub-arctic Research Lab. field report. 1962. No. 73694

75548. SHAW, JAMES H. The bushy-tailed wood rat in southeastern Alaska. (Journal of mammalogy, Aug. 1962. v.43, no.3, p.431-32.)

Record of two specimens of *Neotoma cinerea* in the U.S. National Museum, one taken from the Unuk River in 1940, the other from the lower Taku 1925. The reported specimens extend the range of the species to Southeast Alaska. (DLC.)

75549. SHCHEGLOV, I. I. O sovremennom otlozhenii kinovari v istochnike Apapel'. (Akademiīa nauk SSSR. Doklady, Aug. 21, 1962. t.145, no.6, p.1373-74.) 5 refs. Text in Russian. **Title tr.:** The present cinnabar deposits in Apapel' spring.

Reports find of cinnabar, important ore of mercury, in the Apapel' spring area of the Sredinnyy Range in Kamchatka. This thermal spring, in existence since the Pliocene, is described, chemical analyses and other features are reported. Cinnabar occurrence, spectrum analyses and microscope investigations are briefly summarized. (DLC.)

75550. SHCHEGLOV, SERGEĬ L'VOVICH. Tundra otstupit! (*In:* Iokhimovich, D.I. Moīa Sibir', 1960, p.325-34.) Text in Russian. **Title tr.:** The tundra shall retreat.

Description of Noril'sk and its mining enterprises: iron ore at Noril'sk-1 and coal at Mt. Shmidta and Kayerkan deposits. Seven-year plan goals for urban and industrial construction, ore and mineral production by the Noril'sk metallurgical mining combine, expansion of trade, etc. are discussed. (DLC.)

SHCHELOKOV, V. K., *see* Porkhaev, G.V., & V.K. Shchelokov. Vliīanie zastroĭki . . . 1961. No. 74909

75551. SHCHENKOVA, M. S. Dikorastushchie mnogoletnie kormovye travy Komi ASSR v estestvennykh usloviīakh i v kul'ture. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 179 p. illus., tables, map. About 100 refs. Text in Russian. **Title tr.:** Wild, perennial feed grasses of the Komi ASSR in natural conditions and under cultivation.

Monograph based on ten years' study of clover, timothy, etc. both in nature and under experimental cultivation. Introductory account is given of the natural, conditions of the area, its vegetation and agriculture, of earlier work and scope of the present study. Then three main aspects of the subject are dealt with: feed grasses under natural conditions, including legumes and grasses proper (cereals); raising these plants in pure cultures; and the behavior of prospective populations in mixed cultivation. The two latter sections deal with problems of sowing, germination, growth, harvest, etc. The principal results are presented in a final section (p.167-74). The clover *Trifolium pratense* L. and timothy *Phleum pratense* L. appear the most important fodder grasses and their local varieties the most promising, especially in mixed culture. (DLC.)

75552. SHCHEPKIN, L. A. Struktura atmosfery na urovnīakh nizhneĭ chasti oblasti *F* ionosfery i osobennosti slozhnogo sloīa *F*. (Geomagnetizm i aėronomiīa, 1961. t.1, no.4, p.540-47, table, graph.) 16 refs. Text in Russian. **Title tr.:** The atmospheric structure on the levels of the lower part of F-layer of the ionosphere, and the specific features of the composite layer F.

Analyzes the time-altitude distribution of the intensity of ions formation I(z,t) in the ionosphere. The analysis of the data on the structure of the atmosphere at 150-210 km. indicates a possibility of formation of two maxima of I within a certain interval of the cosine values of the zenith angle of the sun, and to explain some characteristics in the behavior of F1 and F2 layers. The maximum I f(z) according to the rocket data of July 29, 1957 at Fort Churchill was found at the altitude of 190 km. (DLC.)

75553. SHCHERBACHEV, V. D. Lesnye resursy Krasnoīarskogo kraīa. (*In:* Krasnoīarskaīa . . . ėkspeditsiīa. Prirodnye usloviīa . . . 1961, p.188-230, table.) 20 refs. Text in Russian. **Title tr.:** Forest resources of Krasnoyarsk Province.

Reviews the forest areas and types. Those of larch, *Larix sibirica* and *L. gmelini*, the pines, spruce-fir, and the deciduous forests are described, their distribution, value classes, soils and other features noted. Forest resources are estimated according to area (in hectares) and m^3. (DLC.)

75554. SHCHERBAK, A. M. Ob altaĭskoĭ gipoteze v īazykoznanii. (Voprosy īazykoznaniīa, Nov.-Dec. 1959. no.6, p.51-63, tables.) Approx. 60 refs. Text in Russian. **Title tr.:** On the Altayan hypothesis in linguistics.

Discusses various 19th century and modern

theories concerning the prototype stock, branching pattern, and evolution of Ural-Altaic languages including Tungus and Finno-Ugric. Their morphologic, syntactic, lexical, and phonetic similarities and differences are cited. A convergent development of the Turkic, Mongolian, and Tungus-Manchu-Uralic families is tentatively favored over a genetic kinship. The complexity of the problem, paucity of comparable linguistic material, and insufficient study of geographic nomenclature are noted as possible sources of error. (DLC.)

75555. SHCHERBAK, A. M. On the methods of studying linguistic parallels; in connection with the Altaic hypothesis. Moskva, Izd-vo vostochnoĭ lit-ry, 1960. 18 p. (International Congress of Orientalists, 25th, Moscow, 1960. Delegation from the USSR, Papers.) 9 refs.

Favors a division of Ural-Altaic languages into two independent groups: Finno-Ugrian - Samoyed, and Turkic - Mongolian - Tungus-Manchu. Problems of reconstructing the Altaic parent-tongue and methods of identifying words of Mongolian or Turkic origin in Yakut, Evenki, Eveny, etc. languages are discussed. (DLC.)

75556. SHCHERBAKOV, DMITRIĬ IVANOVICH, 1893– . Aktual'nye zadachi sovremennoĭ geologii. (Akademiīa nauk SSSR. Vestnik, Jan. 1962. god 32, no.1, p.16-23.) Text in Russian. **Title tr.:** Urgent tasks in present-day geology.

Outlines the main problems under study: submarine mountain ranges and depressions, including the Kuril-Kamchatka depression; earth's core beneath oceans and continents; tectonic map compilation; paleomagnetic studies; geological dating; development of the earth; distribution laws of mineral resources. (DLC.)

75557. SHCHERBAKOV, I. P., *Editor.* Rastitel'nost' basseĭna reki Viliūīa. (Akademiīa nauk SSSR. ĬAkutskiĭ filial. Institut biologii. Trudy 1962. vyp.8, p.3-136, illus., tables, maps.) 51 refs. Text in Russian. **Title tr.:** The vegetation of the Vilyuy River basin.

Presents results of field work conducted on the 1956-1958 multipurpose expedition of the Academy of Sciences' Yakut Branch, and written up by T.F. Galaktionova, L.A. Dobretsova, A.A. Permīakova, V.M. Usanova, and V.A. Sheludīakova. Consecutive sections deal with the physical geography of the area 61-66°N. 109-122°E., including climate and hydrology, floral areas and elements; geobotanical areas and sub-areas; forests and forest types, their physiography, dominant forms of trees and ground vegetation; shrub-forests and their kinds. Meadows are treated extensively, including flood, alass, those of the river terraces, and of small valleys. Swamps, fragments of steppe vegetation, and the vegetation of the sand dunes are outlined. Appended (p.119-35) is a list in Latin and Russian of some 900 plants collected, arranged in taxonomic order, with notes on their frequency in the different areas of the Yana basin. (DLC.)

75558. SHCHERBAKOV, IŪ. G. Mezhvedomstvennoe soveshchanie po metallogenii zolota v Zapadnoĭ Sibiri i Krasnoīarskom krae. (Geologiīa i geofizika, 1961, no.2, p.130-31.) Text in Russian. **Title tr.:** Interdepartmental conference on the metallogeny of gold in Western Siberia and the Krasnoyarsk region.

Reviews this conference at Novosibirsk Nov. 24-26, 1960, with over a hundred geologists present and 16 papers delivered. Main attention was given to the formation and distribution of gold-bearing deposits of the Altay-Sayan folded zone, Yenisey Ridge, and other areas. (DLC.)

75559. SHCHERBAKOVA, ANNA MIKHAĬLOVNA. Budushchee vremiīa v nenetskom īazyke. (Leningrad. Gos. pedagogicheskiĭ institut. Uchenye zapiski 1955. t.111, Materialy Gertsenovskikh chteniĭ, p.159-61.) Text in Russian. **Title tr.:** Future tense in the Nenets language.

Notes only two tenses formerly recognized in Nenets Samoyed: the past and the aorist or incomplete i.e. present. Recent studies however, show that with special suffixes added, the aorist becomes a real future tense. (DLC.)

75560. SHCHERBAKOVA, E. M. Ob usloviīakh obitaniīa mamonta i nosoroga v basseĭne r. Angary. (Moskva. Universitet. Geograficheskiĭ fakul'tet. Materialy po paleogeografii, 1954. vyp.1, p.82-85, diagrs.) Text in Russian. **Title tr.:** On habitation conditions of the mammoth and rhinoceros in the Angara River basin.

Reports the find of Quaternary *Rhinoceros tichorhinus* and *Elephas primigenius*. Sites, development of the Angara terraces and spore-pollen analyses of the enclosing deposits are reported, and the conditions supporting former animal life are characterized. Fauna in great numbers ranged the area of forested landscapes with floodplain and dry meadows along the large rivers. In the forests, pine predominated: 50-60%, and birch was 10-30%. (DLC.)

75561. SHCHERBAKOVA, ELENA ĬAKOVLEVNA. Vostochnaīa Sibir'. Leningrad, Gidrometeorologicheskoe izd-vo, 1961. 300 p. graphs, tables, maps incl. fold. in pocket. (Leningrad. Glavnaīa geofizicheskaīa observatoriīa. Klimat SSSR, vyp.5.) 77 refs. Text in Russian. **Title tr.:** Eastern Siberia.

Presents a monographic account of the climate from the Yenisey to the eastern border of the Yakut ASSR; climate-forming factors such as solar radiation, heat budget, atmospheric circulation, influence of relief and water masses are described. General characteristics of the climate are outlined: the thermal regime, humidity, wind regime. A climatic regionalization of Siberia is presented and such regions as the North Siberian and the Yana - Indigirka lowland, Middle Siberian plateau, Central and Eastern Yakutia, the Kolyma lowland, etc. are described in detail. Appended are list of stations, climatic data tables and charts. (DLC.)

SHCHIGLOVSKIĬ, B., *see* Fogel', D.N., & B. Shchiglovskiĭ. Perebros stoka . . . 1961. No. 71450

75562. SHCHUKIN, V. N., *and others.* K voprosu o vzaimootnoshenii kimberlitov i trappov. (*In:* Akademiīa nauk SSSR. ĬAkutskiĭ filial. Almazy ĬAkutii . . . 1961, p.45-48, illus.) 2 refs. Text in Russian. *Other authors:* B.M. Krīatov *and* A.G. Volotovskiĭ. **Title tr.:** On the interrelation of kimberlites and traps.

Reports a geologic and petrographic study of the Leningradskaya kimberlite pipe of the Daldyn region of Yakutia, with special attention to relationship with dikes and sills of traps. The break of Leningradskaya by the trap dike indicates that kimberlite pipes, occurred earlier than traps. (DLC.)

SHCHUKIN, V. N., *see also* Bobrievich, A.P., & *others*. . . . Sibirskikh kimberlitov. 1961. No. 70263

75563. SHEARD, J. W. A note on the early discovery and inhabitation of Jan Mayen Island. (Geographical journal, Sept. 1962. v.128, pt.3, p.365-66.) 4 refs.

Describes evidences of settlement in the Lidhogda area, obtained by University of London expeditions in 1959 and 1961: discovery of a human, probably a woman's skull, ground markings similar to ancient field boundaries suggesting settlement and cultivation during a time of milder climate. (DGS.)

SHEARD, J. W., *see also*

Fitch, F.J., & *others*. Glacier re-advance Jan Mayen. 1962. No. 71430

Kinsman, D.J.J., & *others*. Glacial hist. Beerenberg. 1962. No. 72797

Lamb, H.H. Advance of the Jan Mayen glaciers . . . 1962. No. 73287

SHEBALIN, N. V., *see* Monakhov, F.I., & *others*. Seĭsmicheskie . . . nablīūdeniīā . . . 1959. No. 74097

75564. SHEFOV, N. N. Ėmissiīā OH po nablīūdeniīām v Zvenigorode. (Akademiīā nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniīū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: poliārnye siīāniīā i svechenie nochnogo neba. Sbornik statei 1961. no.5, p.18-24, tables, graphs.) 12 refs. Text in Russian. Summary in English. **Title tr.:** Observations of OH emission at Zvenigorod.

Presents a table of rotation-vibrational band intensities (λλ 5200-12,500 Å) of hydroxyl (OH) in the airglow recorded at Zvenigorod in 1957 and 1958-1960. Interdependence is shown between the OH band intensities and the rotational temperature T; between the seasonal variations of intensity and rational temperature of the (9,3) OH band; and the intensities of H_α emissions and the hydroxyl band (9,3). A weak correlation is found between OH band intensity and rotational temperature; the intensity ratio for (9,3) and (6,1) bands increase with rotational temperature, and dispersion at $T < 300°$ K is greater than at $T > 300°$ K. (CaMAI.)

75565. SHEFOV, N. N. Nepreryvnyĭ spektr v svechenii nochnogo neba. (Akademiīā nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniīū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: poliārnye siīāniīā i svechenie nochnogo neba. Sbornik statei 1961. no.5, p.39-41, graphs.) 6 refs. Text in Russian. Summary in English. **Title tr.:** Continuous spectrum in the night airglow.

Discusses the continuous spectrum of airglow for wavelengths up to 6900 Å, and a simultaneous enhancement of emission intensity for λ 4,000-5,000 Å, observed at Zvenigorod, at the end of January, 1960. An intensity enhancement of the Herzberg bands of O_2 molecule was observed to correlate with a rise of rotational temperature ($T > 260°$ K) at $v' > 6$ oscillation level of hydroxyl. bands. The origin of continuous emissions may be different for the red and the blue parts of the spectrum. (CaMAI.)

75566. SHEFOV, N. N. O prirode gelievoĭ ėmissii λ 10830 Å v poliārnykh siīāniīākh. (Akademiīā nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniīū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: poliārnye siīāniīā i svechenie nochnogo neba. Sbornik statei 1961. no.5, p.47-48.) 5 refs. Text in Russian. Summary in English. **Title tr.:** On the nature of λ 10830 Å helium emission in auroras.

Discusses the excitation mechanism of He I λ 10830 Å emission in sunlit auroras in an effort to explain the enhanced emission from the Q-branch of OH (5,2)-band observed several times at Zvenigorod and Loparskaya. The resonance fluorescence of metastable He atoms in 2^3S state is considered to take place in the sunlit region of aurora. These atoms are supposed to be formed in collisions of He in the ground state with electrons of 20-25 ev energy. (CaMAI.)

75567. SHEFOV, N. N., *and* **V. I. ĪARIN.** O zavisimosti vrashchatel'noĭ temperatury OH ot shiroty. (Akademiīā nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniīū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: poliārnye siīāniīā i svechenie nochnogo neba. Sbornik statei 1961. no.5, p.25-28, map, tables.) 19 refs. Text in Russian. Summary in English. **Title tr.:** On the relationship between OH rotational temperature and latitude.

Presents a table of data on OH rotational temperature for the Northern Hemisphere and a world map demonstrating a rise of rotational temperature with latitude. The data accumulated during 1950-1960 was reduced to a single system by using the Hill and van Fleck formula for determination of rotational temperature, and subsequent reduction by 8% of the temperatures calculated previously by Meinel's formula. Some examples are given of simultaneous measurements of rotational temperatures, and OH (9,3) band intensities at Zvenigorod and Yakutsk. (CaMAI.)

75568. SHEFOV, N. N. Ob opredelenii vrashchatel'noĭ temperatury polos OH. (Akademiīā nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniīū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: poliārnye siīāniīā i svechenie nochnogo neba. Sbornik statei 1961. no.5, p.5-9, tables, graphs.) 8 refs. Text in Russian. Summary in English. **Title tr.:** On determination of the rotational temperature of OH bands.

Considers the factors which affect measurements of OH rotational temperature of the airglow. The relative error in selecting a correct degree of photographic image density of continuous spectrum from airglow is determined as is that in the Boltzman distribution of population of radiating molecules in different OH emitting layers, elements of the upper atmosphere. The mean rotational temperature of 283° K from OH band determined during 6-7 Dec. 1959 was found to agree with that from other measurements. (CaMAI.)

75569. SHEFOV, N. N. On the nature of helium emission λ 10830 Å in aurorae. (Planetary and space science, Jan. 1961. v.5, no.1, p.75-76.) 5 refs.

Discusses the nature of this emission, recorded at Zvenigorod and Loparskaya (68° 38′ N. 33° 22′ E.) It is probably due to the fluorescence of helium atoms in the metastable state 2^3S from solar emission. Such atoms may originate as result of the bombardment of neutral helium atoms with electrons possessing energies close to that of the

excited state of He 2^3S (~20-25 ev). The number of light quanta with λ 10830 Å is estimated as 3×10^9 cm.$^{-2}$ (DLC.)

75570. SHEFOV, N. N., *and* **V. I. ĬARIN.** Shirotnye i planetarnye variat͡sii gidroksil'noĭ ėmissii. (Akademiĭa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polĭarnye siĭaniia i svechenie nochnogo neba. Sbornik statei 1962. no.9, p.19-23, table, graphs.) 37 refs. Text in Russian. Summary in English. **Title tr.:** Latitude and global variations of hydroxyl emission.

Compares the intensity of hydroxyl emission at Yakutsk and Zvenigorod and determines the latitude effect on the variation of rotational temperature of OH at latitudes of these two stations. It was found that rotational temperatures of OH bands depend on the geographical latitude rather than on the geomagnetic. The rotational temperatures of the band were found to vary simultaneously at Zvenigorod and Yakutsk. (DLC.)

SHEFOV, N. N., *see also* Krasovskiĭ, V.I., *& others.* OH airglow. 1961. No. 73088

75571. SHEĬKIN, I. V. Opredelenie veroĭatnykh summ gradusochasov vozdukha pri raschete glubin sezonnogo ottaivaniia gruntov. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Materialy k osnovam ucheniia o merzlykh zonakh zemnoĭ kory, 1961. vyp. 7, p.150-56, tables, graphs.) 4 refs. Text in Russian. **Title tr.:** Determination of probable sums of air degree hours for calculation of the depths of seasonal thawing of ground.

The variation in the value of the probable sum (Σ) of the products of air temperature degrees above 0° C. (θ), and the number of hours (t_v) such a temperature prevailed during a year's time at 17 points of the Soviet Arctic are analyzed for a number of (more than 9) years. This product ($\Sigma\theta t_v$) known, permits a determination of $\Sigma\theta t_p$, similarly calculated for the sums of degree hours at the surface of permafrost ground on which causeways or other fill embankments are built. The suggested equation, $\Sigma\theta t_p = K\Sigma\theta t_v$ helps in determining the depth of excavation to which the filling of the construction must be laid, to make it stable during seasonal and long-range climatic thawing, when the coefficient K in the equation is known. The paper develops a method for calculating this coefficient, and presents a table of its values for various climatic conditions. (DLC.)

75572. SHEĬKIN, I. V. Soveshchanie po teplovym izmereniiam v kriologii. (Pochvovedenie, Dec. 1961, no.12, p.117-18.) Text in Russian. **Title tr.:** Conference on thermal measurements in cryology.

Reports such a conference, held in Moscow Feb. 1961 with 32 participants and 28 papers delivered. Magadan, Vorkuta and Yakutsk organizations were represented. Methods, instruments and techniques of thermal measurement in frozen and thawing ground, and behavior of these instruments in snow and ice, had the chief interest. The main papers are briefly reviewed; some achievements and further tasks summarized. (DLC.)

75573. SHEKHTMAN, G. A. K voprosu o C-vitaminnoĭ obespechennosti v usloviiakh Arkhangel'ska. (Voprosy pitaniia, 1962. t.21, no.3, p.52-55, tables.) 10 refs. Text in Russian. Summary in English. **Title tr.:** The problem of adequate vitamin C supply under Arkhangel'sk conditions.

Reports on a two-year study of 150 young men engaged in medium-heavy work. The vitamin-C deficiency noted throughout the year could be eliminated by a daily addition of 75-90 mg. of the vitamin to the diet. A method for determining the vitamin requirement by examining the morning urine, is suggested. (DLC.)

SHELLEY, W. B., *see* Juhlin, L., *& W.B.* Shelley. Role of mast cell . . . 1961. No. 72597

SHELUDIAKOVA, V. A., *see* Shcherbakov, I.P. Rastitel'nost'. . . Viliuia. 1962. No. 75557

75574. SHEMIAKIN, F. N. K probleme slovesnykh i chuvstvennykh obobshchenii; na materiale nazvaniĭ t͡sveta v chukotskom iazyke. (Akademiia pedagogicheskikh nauk RSFSR. Izvestiia, 1960. vyp. 113, Trudy instituta psikhologii. Myshlenie i rech', p.72-75.) 11 refs. Text in Russian. **Title tr.:** The problem of verbal and sensory generalizations; based on names for colors in the Chukchi language.

Chukchi words for shades of red are older than those for blue. Names for yellows, greens, and blues derive from objects, but those for white, black, and red should be considered abstract terms. A relative increase in words for colors and for shades in animal pelage is observed in literary Chukchi. (DLC.)

75575. SHEMIAKIN, F. N. K probleme slovesnykh i chuvstvennykh obobshchenii; na materiale nazvaniĭ t͡sveta v nenet͡skom i sel'kupskom iazykakh. (Akademiia pedagogicheskikh nauk RSFSR. Izvestiia, 1960. vyp. 113, Trudy instituta psikhologii. Myshlenie i rech', p.49-61.) 40 refs. Text in Russian. **Title tr.:** The problem of verbal and sensory generalizations; based on the names for colors in the Nenets and Sel'kup languages.

Analysis of Samoyed, mainly Nenets, vocabulary refuting the theory that primitive peoples had no concept of abstract colors yet differentiated minutely between degrees of color especially in animal pelage. The Nenets language uses abstract names (some of ancient origin) to denote broad color groups, showing a greater awareness of the red-yellows than the green-blues (cf. No. 68172). It has fewer words for color in reindeer pelage than Russian and only thirty names for color hues (2/3 chromatic) against approx. 500 in German and 4,000 in English. Another paper in this series was contributed by E.D. Liubimova, q.v. (DLC.)

SHEPHARD, R. J., *see* Glaser, E.M., *& R.J.* Shephard. Simultaneous acclimitazation . . . 1961. No. 71707

75576. SHEPHERD, N. The mineralogy of a metamorphosed iron formation from Ungava, New Quebec. Toronto 1957. 93 p. illus., tables, maps. 17 refs. M.A. thesis to Univ. of Toronto, Dept. of Geological Sciences.

Presents a macroscopic and microscopic study of the rocks and corresponding thin sections from the Leaf Bay iron formation on the Labrador trough just southwest of Ungava Bay, to determine the properties of the suite of metamorphic minerals. Specimens were supplied by Oceanic Iron Ore Co. of Canada Ltd. In this area of Proterozoic sedimentary and volcanic formations invaded by concordant bodies of basic intrusive rocks, the four main mineral groups identified and described are

silica, oxides, carbonates, and iron silicates. Stratigraphy and structure of the iron formation, petrography, and metamorphism of this formation are discussed also. Drill hole data are appended. (CaOG.)

SHEPHERD, PETER E. K., *see* Alaskan Science Conference 1961. 1962. No. 69644

75577. SHER, S. D., *and* **A. V. DEMCHENKO.** O znachenii issledovaniĭ formy metakristallov pirita dlīa poiskov zolotorudnykh mestorozhdeniĭ v Lenskom raĭone. (Geologiīa rudnykh mestorozhdeniĭ, July-Aug. 1962, no.4, p.84-96, illus., diagrs.) 29 refs. Text in Russian. **Title tr.:** Importance of study of forms of pyrite metacrystals for prospecting of gold-bearing deposits in the Lena region.

Reports geologic mapping at 1:10,000 scale and search for gold-bearing deposits in an unidentified area of Yakutia, by mapping the distribution of morphologic types of pyrite metacrystals impregnated in old sedimentary rocks. Skeletal, cubic, cuboctahedral, pentagon-dodecahedral, and other forms of crystal are distinguished and their distribution and various intensities of pyritization are mapped. Two groups of pyrite metacrystals are separated and described in detail. The distribution of quartz veins, with which gold deposits are related, is established as connected with that of pentagon-dodecahedral pyrite crystals. (DLC.)

75578. SHERIDAN, WILLIAM L. Temperature relationships in a pink salmon stream in Alaska. (Ecology, Jan. 1961. v.42, no.1, p.91-98, illus., tables, maps.) 20 refs.

Study of air, stream, intragravel water, and bank ground-water temperatures of two spawning riffles in Cabin Creek, Southeast Alaska. Degree of temperature relationships varied with the seasons, but air temperatures dominated all water temperatures during a large part of the year. Ice and snow cover and melting snow subdued the effects of air temperature. (DLC.)

75579. SHERSHUKOV, V. V. Opyt izucheniīa treshchinovatosti gornykh porod v rudnikakh s tochki zreniīa otsenki ikh kollektorskikh svoĭstv. (Vsesoīuznoe soveschanie po treshchinnym kollektoram nefti i gaza, *Leningrad,* 1960. Trudy *pub.* 1961, p.251-59, diagr.) Text in Russian. **Title tr.:** Attempt at investigation of the jointing of rocks in mines from the viewpoint of appraising their reservoir properties.

Reports study of the position of joints in the effusive, sedimentary and intrusive rocks in the Zapolyarnyy mine of Noril'sk. Labradorite porphyrites, andesite diabases, amygdaloidal diabases and sedimentary rocks are studied, and dips, strikes, directions, densities, fillings and other features of joints are measured and reported. Prevailing patterns of joints in each type of rock are compared. The method for this type of study is discussed as well as the mode of presenting the data in diagrammatic form. (DLC.)

SHERSTNEV, NIKOLAĬ VASIL'EVICH, *see* Khokhlov, I.V., & *others.* Razrabotka ugol'nykh mestorozhdeniĭ . . . 1960. No. 72770

75580. SHERWOOD, GLEN. Chevak and the black brant. (Alaska sportsman, June 1962. v.28, no.6, p.23-26, +, illus.

Recounts experiences while studying nesting brants in summer 1961 near the Eskimo village of Chevak, West Alaska. In a 212-acre coastal tundra area along the Kashunuk River, 260 brant, and numerous other-waterfowl nests were found. The birds arrived about May 15, and hatching was completed by June 30. (DI.)

75581. SHESTAKOVA, IÛ. O romantike li. (Dal'niĭ Vostok, Nov.-Dec. 1961. god 29, no.6, p.181-84.) Text in Russian. **Title tr.:** Is it romanticism.

Sketches life in Magadan Province in a review of the almanac *Na Severe Dal'nem* (In the Far North), which appeared in 1961; and criticizes Boris Nekrasov's novel *Vstretch' solntsa* (Toward the sun) for deviations in representing Soviet life. (DLC.)

75582. SHESTALOV, IVAN. Idem. (Sibirskie ogni, Jan. 1961. god 40, no.1, p.89.) Text in Russian. **Title tr.:** Forward.

Poem, translated from Vogul by Oleg Shestinskiĭ. (DLC.)

SHESTOPALOV, P. I., *see* Lipanov, V.G., & P.I. Shestopalov. Beringovomorskaīa sel'd' . . . 1961. No. 73519

SHETH, U. K., *see* Kumar, M.A., & *others.* Effect of cold . . . 1959. No. 73208

SHEVALEEVSKIĬ, I. D., *see* Gerasimovskiĭ, V.L., & *others.* O tsirkonievo-gafnievom . . . 1962. No. 71649

75583. SHEVELEV, B. N., *and* **IÛ. F. VASIÛCHKOV.** V bor'be za deshevyĭ ugol'. (Ugol', Mar. 1961. god 36, no.3, p.45-47, tables.) Text in Russian. **Title tr.:** In the struggle for cheap coal.

Discusses the 1960 increase in efficiency at pit No. 36 of the Vorkuta coal works. In Jan.-March when the Donbass-1 cutting-loading machine was used, monthly production ranged 4,648-7,106 t. When the new Ural-2m machine was introduced, production rose from 6,236 t. in April to 12,017 t. in September. This increase was reflected in other phases of production also: transportation, unloading, timbering, concentration, etc. (DLC.)

SHEVELEV, L. V., *see* Fugzan, M.D., & *others.* K voprosu o forme . . . 1961. No. 71522

SHEVELEVA, N. N., *see* Sergeev, E.M., & *others.* Osobennosti litologicheskogo sostava . . . 1961. No. 75499

75584. SHEVNIN, A. D. O vneionosfernoĭ tokovoĭ sisteme. (Geomagnetizm i aėronomiīa, 1961. t.1, no.2, p.178-93, tables, diagrs., graphs.) 63 refs. Text in Russian. **Title tr.:** On the trans-ionospheric current system.

Discusses this electric current system with special reference to the observation data obtained by the first Soviet space rocket, the American satellite Explorer IV, and the rocket Pioner V. An assumption is made of a possible location of the trans-ionospheric electric current system in the external and the most external zones, from which particles come to the first and the second auroral zones. The two maxima in occurrence frequencies of auroras at $\Phi \approx 67°$ and $\Phi \approx 75°$ zones are considered to be effected by these particles. (DLC.)

SHEVNINA, N. F., *see* Fel'dshteĭn, IÀ.I., & N.F. Shevnina. Sezonnye variatsii . . . siīanii. 1961. No. 71376

SHIELDS, J. L., *see* Neubeiser, R.E., & *others.* Mg blood, tissues, cold acclim. 1961. No. 74306

75585. SHIKHORINA, K. M. Shchelochnye i shchelochno-ul'traosnovnye porody intruzii Sedete; Maimecha-Kotuiskaĭa provinfsiĭa. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.121, vyp. 18, Sbornik statei po geologii i neftegazonosnosti Arktiki, p.186-98, illus., tables, text map.) 10 refs. Text in Russian. **Title tr.:** Alkali-basic rocks of the Sedete intrusion; Maymecha-Kotuy region.

Describes this intrusion discovered in 1959 in the Maymecha-Kotuy interfluve. It is three-by-six km. in size and was formed in two phases. In the first, ankaratrites and malignites were intruded, in the second phase nepheline-syenites. A petrographic description of the rocks is given and characteristics of rock-forming minerals such as pyroxene, feldspar, nepheline biotite and others are reported. Chemical properties of the rocks also are outlined. The ankaratrites and malignites are presumed to have occurred through fractional crystallization. (DLC.)

SHIKHORINA, K. M., *see also* Leningrad. N.-i. Institut geologii Arktiki. Gulinskaĭa intruziĭa . . . 1961. No. 73413

75586. SHILIN, L. L., *and* **M. T. ĬANCHENKO.** O knopite iz apatito-nefelinovykh rud Khibinskogo massiva. (Akademiĭa nauk SSSR. Doklady, May 21, 1962. t.144, no.3, p.639-42, illus., tables.) 8 refs. Text in Russian. **Title tr.:** Knopite from apatite-nepheline ores of the Khibiny massif.

Reports a microscopic and chemical study of this mineral found in the Kukisvumchorr apatite-nepheline deposits of Kola Peninsula. Color, specific weight, hardness and other physical properties are described. Chemical analyses are presented. Comparison is made with perovskite, loparite, and others of the same group. Presence of rare earths is noted in knopite. Conditions of occurrence are summarized. (DLC.)

SHILO, NIKOLAĬ ALEKSEEVICH, *see* Baranova, ĬU. P., & S.F. Biskė. Monografiĭa N.A. Shilo . . . 1962. No. 70014

SHILOV, N., *see* Ptitsyn, A., & N. Shilov. Stroĭka . . . 1961. No. 74984

75587. SHIMAZAKI, TATSUO. A statistical study of occurrence probability of spread F at high latitudes. (Journal of geophysical research, Nov. 1962. v.67, no.12, p.4617-34, table, graphs.) 24 refs.

Discusses the occurrence probability of the radio-echo spread-F to appear at geomagnetic latitudes > 60° N. as studied from the records of 15 stations listed. Material and methods used in the study covering the IGY period are described. Diurnal variation of spread-F occurrence is shown in graphs for each station, year to year 1948-1960, and seasonal variations are given. Negative correlations between spread-F and geomagnetic activities, and a slight positive correlation between spread-F and auroras are found. The origin of spread-F is attributed to a bombardment of charged particles, which may, possibly, come to the ionosphere from Van Allen radiation belts. (DLC.)

75588. SHIMAZU, YASUO. A study of the geophysical and geodetic implications of gravity data for Canada. Ottawa, Queen's Printer, 1962. p.323-54, maps, diagr., graphs, tables. (Canada. Dominion Observatories. Publications, v.26, no.7.) 36 refs.

Presents results of 1957 investigations of the physical state of the earth's crust, the distribution of isostatic anomalies, etc. Densities of the crust and the subterranean mantle are assumed to be 2.67 and 3.27 gm./cm.^{3} respectively. Two-dimensional analysis is carried out of a 3400-km. profile of the Canadian Shield and (three dimensional) of an area 49°- 62° N. 90°- 113° W. Basic information is provided by Bouguer anomalies and corresponding surface elevations in Canada; a variation in the gravity is assumed to be caused by anomalous mass distributions at the base of the crust. Average crustal thicknesses which are derived from the condition Σ (isostatic gravity anomaly)^2 = minimum were found to be 36.4 km. for the Canadian Shield and 48 km. for the southern Cordillera. Both these regions are isostatically over-compensated. In the area of three-dimensional analysis, the isostatic gravity anomalies range from -30 mgals. in the north (62° N.) to +20 mgals. in the south. Deflections of the vertical do not exceed four sec. in the whole area with corresponding undulations of the geoidal heights varying from +5 m. in the south to -8 m. in the north, relative to a central grid-point near Flin Flon, Man. Mesozoic or younger sediments near the surface of the Prairie region appear to have slight effect upon the overall field. Thus an abnormally negative gravity field reflects an abnormally thick crust: for positive fields the reverse is true. (DLC.)

SHINEN, DAVID, *see* Alaskan Science Conference 1961. 1962. No. 69644

SHINEN, MARILENE, *see* Alaskan Science Conference 1961. 1962. No. 69644

75589. ***SHIPBUILDING AND SHIPPING RECORD.*** "Brita Dan," one of a series of polar ships. (Shipbuilding and shipping record, Nov. 16, 1961. v.98, no.20, p.634-36, illus., diagrs.)

Describes the sister ship of the *Ritva Dan* completed July 1961, and the *Saima Dan* under construction; she is a 3,700 t.d.w. cargo vessel built for the Finland and Greenland traffic. Special design features include an icebreaker stern, protection of propeller and rudder by means of ice fins and an ice knife projection, 25 mm. thickness of the foreship plate, and an 18 mm. ice belt. Engines, rig, navigational aids, and auxiliary equipment are described; diagrams of the general arrangement are included. (DLC.)

SHIPEK, CARL J., *see* Carsola, A.J., & *others.* Bathymetry . . . 1961. No. 70617

SHIPOSH, N. V., *see* Basova, L.G., & N.V. Shiposh. Raspredelenie plotnosti vozdukha . . . 1962. No. 70062

75590. SHIPOVICH, ĬU. Nad otrogami Timana. (Grazhdanskaĭa aviatsiĭa, Sept. 1961. god 18, no.9, p.21-22, illus.) Text in Russian. **Title tr.:** Over the spurs of the Timan Range.

Describes the operation of Mi-4 helicopters under winter conditions, with suggestions for starting procedures: pre-heating the motor, coupling and transmission gear, use of winterized fuel etc. Complete check-ups should be made after each flight. Author is an engineer at the Ukhta airport. (DLC.)

75591. SHIRTLIFFE, C. J., *and* D. G. STEPHENSON. Tables of σ T^4; -100 (0.1) 250°F, Btu/ft² hr.; 250 (1.0) 1250°F, Btu/ft² hr.; -50 (0.1) 150°C, Cal./cm² min. Ottawa, Nov. 1960. 16 l, tables. (National Research Council of Canada, Division of Building Research, Technical paper no.105.) 4 refs.

Presents values of the function σT^4, the amount of heat radiated per unit time from unit area of a black body at the absolute temperature T. Sigma, σ, is the Stephan-Boltzmann constant; its theoretical value is conceded to be most accurate. Such tables are commonly used in radiant energy exchange calculations, e.g., heat transfer problems in buildings. (DLC.)

75592. SHISHALOV, G. Rotornyĭ snegoochistitel'. (Master lesa, Dec. 1962. god 6, no.12, p.11, illus.) Text in Russian. **Title tr.:** Rotary snow remover.

Describes a portable snow remover, developed by the Northern Industrial Research Institute (SevNIIP); production is planned by the Arkhangel'sk National Economic Council for 1963. (DLC.)

75593. SHISHALOV, G. Snegoochistitel' na "Druzhbe". (Master lesa, Jan. 1962. god 6, no.1, p.11, illus.) Text in Russian. **Title tr.:** Snow remover for the Druzhba electric saw.

Describes a small portable device for clearing snow around trees, in culverts, etc.; it is powered by the electric motor which runs the saw. This snow remover was developed by the Northern Industrial Research Institute (SevNIIP) and successfully tested in lumbering establishments of Arkhangel'sk Province. (DLC.)

75594. SHISHKANOV, G. F. O migratsii vlagi v krupnozernistykh gruntakh. (Akademiia nauk SSSR. Dal'nevostochnyĭ filial, *Vladivostok.* Sbornik rabot po inzhenernomu merzlotovedeniiu, 1959, p.31-48, illus., tables, diagr.) Text in Russian. **Title tr.:** Migration of moisture in coarse-grained soils.

Reviews Soviet research on this problem, and describes four series of tests made under different conditions of migration and soil particle size. It was found that water was not noticeably redistributed during freezing of coarse-grained soils in a closed system. In an open system, moisture migrated along the path of freezing ("piston effect") only in the moisture range from full water capacity to capillary water capacity. When the moisture content was less than the capillary water capacity, the moisture (evidently, vapor) began to migrate toward the front of freezing in both the open and the closed system. Ice formation amounting to 2-5% can occur during the freezing of coarse-grained soils in both open and closed system.—From CRREL. (DLC.)

SHISHKIN, M. A., *see* Pakhtusova, N.A., & M.A. Shishkin. Novye materialy . . . 1962. No. 74626

75595. SHISHKIN, N. Bogatstva mirovogo okeana i ikh ispol'zovanie. (Geografiia v shkole, Sept.-Oct. 1961. god 24, no.5, p.83-84.) Ref. Text in Russian. **Title tr.:** Resources of the World Ocean and their utilization.

Summary of his articles in *Pravda Iuzhnogo Kazakhstana,* May 24, 1961: construction of an algae-processing plant at Belomorsk; a vessel to harvest algae at 4 m. depth, etc. (DLC.)

75596. SHISHKIN, NIKOLAĬ IVANOVICH. O perebroske stoka Vychegdy i Pechory v basseĭn Volgi. (Akademiia nauk SSSR. Izvestiia, ser. geograficheskaia, Sept.-Oct. 1961, no.5, p.86-94.) 8 refs. Text in Russian. **Title tr.:** On the diversion of the Vychegda and Pechora discharge into the Volga basin.

Discusses the arrangement, economic problems, potential use of Pechora and Vychegda waters routed through the Kama into the Volga basin. Construction of dams, electrical power stations, extent of the waterways (about 1000 km.), irrigation of steppes, the increased discharge into the Caspian Sea, and other problems are discussed. The possible effects, positive and negative, upon the economy of Komi ASSR are analyzed. Economic benefits for agriculture, communications, and power plants are emphasized. (DLC.)

75597. SHISHKINA, V. F. Teplyĭ istochnik u poliusa kholoda. (Priroda, Sept. 1961. god 50, no.9, p.113-14, illus.) Text in Russian. **Title tr.:** A warm spring at the Cold Pole.

Describes a mineral spring, temperature 26°C., near Lake Alykhardakh, in the upper Indigirka area near Oymyakon; it is 60-70 km. from the Arkagala-Khandyga road. The natives call it Sytagau-Sylba (Foul Ravine) and used it against rheumatism, etc. Animals are claimed by author to use it similarly. (DLC.)

75598. SHISHKOV, IU. A. Ledovitost' iugo-zapadnoĭ chasti Karskogo moria i meridional'nyĭ perenos tepla v atmosfere. (Problemy Severa, 1961, vyp.4, p.131-37, tables, maps.) 3 refs. Text in Russian. **Title tr.:** Extent of ice in southwestern Kara Sea and the meridional transfer of heat in the atmosphere.

Principles of long range ice forecasting in the area are discussed from the 1939-1956 records; with conclusion that data on the heat (or cold) transfer from the continent to the Sea (or vice versa) in pre-winter months of October-December determine the ice limit and conditions for the next year's navigation season. (DLC.)

75599. SHLIAKOVA, E. V. Rasprostranenie sornykh rasteniĭ v posevakh Murmanskoĭ oblasti. (Botanicheskiĭ zhurnal, June 1961. t.46, no.6, p.854-60, tables.) 8 refs. Text in Russian. **Title tr.:** Distribution of weeds in the grain crops of the Murmansk Province.

Reports a study of quantitative and species distribution conducted in four seasons of the period 1950-1959. Only larger forms are considered, with over 500 plots studied. (DLC.)

75600. SHLIAPNIKOV, A. A. Opyt primeneniia materialov aėrofotos"emki pri landshaftnom tipologicheskom kartirovanii prieniseĭskoĭ chasti Sredne-Sibirskogo ploskogor'ia. (*In:* Soveshchanie po primeneniiu aėrometodov . . . 1961, p.168-73.) 2 refs. Text in Russian. **Title tr.:** On the use of air-photo materials in typological landscape mapping of the Cis-Yenisey part of the Middle Siberian plateau.

Describes this mapping project at 1:1,000,000 scale, complexity of the work, need for background knowledge of landscape-forming factors, genesis, dynamics, natural boundaries, etc. Aerial-photographic mosaics, photos at 1:60,000 to 1:65,000 scales, their use and interpretation are summarized.

For more detailed investigation of certain characteristics and key areas, aerial photography at 1:20,000 to 1:25,000 is required. (DLC.)

75601. SHLYKOV, V. A. Rudniki Murmanskogo ėkonomicheskogo raiona. (Gornyĭ zhurnal, Oct. 1961, no.10, p.7-8.) Text in Russian **Title tr.:** Mines in the Murmansk economic region.

Notes over-fulfillment of the production plan for apatite, copper-nickel, iron and vermiculite ores, by the various mining combines of Kola Peninsula in the first half of 1961; increase in labor efficiency and workers' achievements in the Yena, Olenegorsk, Kirov, Lovozero, and Nittis-Kumuzh'ye mines are stressed. (DLC.)

75602. SHMAKIN, B. M., *and* **M. O. STEPPAN.** Dva sfena iz arkheĭskikh pegmatitov Aldanskogo shchita. (Izvestiia vysshikh uchebnykh zavedeniĭ. Geologiia i razvedka, Oct. 1961, no.10, p.59-65, illus., tables.) 10 refs. Text in Russian. **Title tr.:** Two sphenes from Archean pegmatites of the Aldan shield.

Reports chemical and X-ray analyses and other properties of two distinct varieties found in the Kuranakh region of southern Yakutia; one, a dark reddish, cinnamon-colored sphene having converted form of crystals; the other, a clear brown, with irregular form of crystals. They are described and compared; their occurrence is discussed. They differ in morphology and in chemical composition. (DLC.)

SHMAKIN, B. M., *see also*
Galiūk, V.A., & B.M. Shmakin. Shpineli . . . 1961. No. 71567

Shabynin, L.I., & *others*. Shpinelevo-piroksenovye porody . . . 1961. No. 75515

75603. SHMELEV, A. K. Rechnaia metodika seĭsmorazvedochnykh rabot. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaia geologiia, 1960. vyp.10, Materialy po geologii, gidrogeologii, geofizike i poleznym iskopaemym Zapadnoĭ Sibiri, p.49-59, illus., diagr.) Text in Russian. **Title tr.:** River methods of seismic prospecting work.

Describes the use of rivers as ways of communication and sites for explosions, by Tyumen geological survey parties over four years. Seismic prospecting was conducted along the Ob, Severnaya Sos'va, Syn'ya and others, in regions without roads. Methods, instruments, personnel equipment and techniques are described. Prospecting parties consist of 50-65 men, and have seismic, drilling and topographic teams. Their composition and functions are also described. The Tyumen geologic survey has six such parties at present (1960) and plans to cover a 3000 km. profile. (DLC.)

SHMEL'KOVA, IU. F., *see* Krasil'nikova, N.A., & *others*. Prognoznaia otsenka fosforitonosnosti . . . 1961. No. 73081

75604. SHMYGALEV, V. I., *and* **Ė. V. MUROVA.** Intruziia Kivakka. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Magmaticheskie obrazovaniia . . . 1962, p.65-73, map. diagr.) 5 refs. Text in Russian. **Title tr.:** Kivakka intrusion.

Describes the geologic structure, composing rocks and their chemical properties of this intrusion, 66°13′N. 30°32′E., in northern Karelia. Kivakka, about 15 km² in area and built by Lower Proterozoic magmatism, contains olivinites, peridotites, pyroxenites, norites, gabbro-norites and gabbro-pegmatites, which are described. Copper-nickel mineralization of the massif is outlined. Structural analysis of this intrusion is reported; primary layering and mechanism of differentiation are discussed. (DLC.)

75605. SHNIAGIN, N. Perspektivy razvitiia dnouglubitel'nykh rabot na vodnykh putiakh Obskogo Severa. (Rechnoĭ transport, Apr. 1961. god 20, no.4, p.39-40.) Ref. Text in Russian. **Title tr.:** Prospects for the increase of dredging work in the waterways of the northern Ob region.

Shoals and bars in the main waterways of the Yamal-Nenets National District present navigational hazards to freight and passenger traffic in the lower Ob-Taz basin. Some 2,850,000 m³ earth should be moved to clear 100 m. wide channels deep enough for vessels of 2.5-3 m. draft. Dredging in the mouth of the Poluy in 1952 and deepening the Vyl-Posl and Shamo-Posl channels of the Ob delta in the Labytnangi lumbering area in 1958-1959 are described. Plans for dredging in the Salekhard region in 1961 are noted, also the 1962 projects for cutting a passage through the Yam-Sale and Nadym bars in Ob Bay and through the Taz, Yurkharovo, and Yumbur-Sale shoals in Taz Bay. Technological problems created by permafrost or seasonal freezing, by weather, and current conditions, etc. are mentioned. (DLC.)

SHNITNIKOV, A. V., *see* IUGG . . . Snow & Ice Comm. 1961. No. 72396

SHODA, M., *see* IUGG . . . Snow & Ice Comm. 1961. No. 72396

SHOLITON, ROBERT, *see* Voĭtkovskiĭ, K.F. Experimental ice house. 1961. No. 76416

75606. SHOMYSOV, N. M. Petrografo-mineralogicheskoe izuchenie verkhnepermskikh otlozheniĭ basseĭna Verkhneĭ Pechory. (*In:* Akademiia nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.156-85, illus., map.) 24 refs. Text in Russian. **Title tr.:** Petrographic-mineralogic investigation of Upper Permian deposits in the upper Pechora basin.

According to lithologic-mineralogic composition, these deposits are divided into two types of rock: clastic and carbonates. The clastic rocks are grouped as breccias, conglomerates, arenaceous, silt, and argillaceous rocks. The carbonates are divided into calcareous rocks and concretions of marly limestones and limestones. All these are described, noting their distribution properties and formation conditions. (DLC.)

75607. SHOR, GEORGE G., *Jr.* Seismic refraction studies off the coast of Alaska: 1956-1957. (Seismological Society of America. Bulletin, Jan. 1962. v.52, no.1, p.37-57, tables, graphs, diagrs., maps.) 27 refs.

Presents data obtained from seismic refraction profiles in the Gulf of Alaska and Bering Sea. The Alaskan Abyssal Plain is a wedge of sedimentary material lying over normal deep-sea floor. Deep-ocean crustal structure continues beneath the sediment to a point close to the foot of the continental slope; a "buried trench" may exist at the foot of the slope. The eastern part of the Aleutian

Trench has a greater filling of sediment than other Pacific trenches. The shelf areas near Kodiak and Unimak have thick layers of sediments over a crust that has a velocity approaching continental values; near Dixon Entrance the sediment fill is less and of extremely variable thickness. Oceanic crust is at shallow depths in Dixon Entrance and northeast of Kodiak. The Aleutian Basin differs from normal oceanic structure in having thicker "second layer" and possibly lower than normal mantle velocity. The Aleutian Ridge has the appearance of a volcanic mass resting atop crustal material of normal oceanic velocity but greater than normal thickness.—From author's abstract. (DLC.)

SHOR, GEORGE G., *Jr.*, *see also* Shurbet, D.H. . . . sediment thickness G. Alaska . . . 1962. No. 75624

SHPAĬKHER, A. O., *see* Panov, V.V., & A.O. Shpaĭkher. Novye zadachi . . . 1962. No. 74635

SHTEGMAN, BORIS KONSTANTINOVICH, *see* Pacific Science Congress. 1961. No. 74619

75608. SHTEĬNBERG, G. S., *and others.* Magnitnaîa s"emka v raĭone Avachinskoĭ gruppy vulkanov na Kamchatke. (Geologiîa i geofizika, 1962, no.2, p.101-108, charts, graphs.) 8 refs. Text in Russian. *Other authors:* L.A. Rivosh *and* A.M. Chirkov. **Title tr.:** A magnetic survey in the region of the Avacha group of volcanoes on Kamchatka.

Reports the 1959-1960 airborne and ground survey. The influence of volcanic relief on magnetic anomalies is analyzed and magnetometric data are used for interpretation of rock distribution, structural features, and tectonic displacement. The step-like distribution of magnetic masses, composition of volcanic cones, distribution of lavas, and other features of this region are characterized. (DLC.)

75609. SHTEMPEL', B. M. Paleobotanicheskoe obosnovanie vydeleniîa Kirganikskoĭ svity. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.287.) Text in Russian. **Title tr.:** Paleobotanical substantiation for separation of the Kirganik series.

Notes identification of Late Cretaceous flora, collected in the eastern slope of the Sredinnyy Range of Kamchatka, the most important *Glyptostrobus, Metasequoia,* and *Equisetites,* which are considered paleobotanical substantiation for Kirganik series of Cretaceous deposits. (DLC.)

SHTERNBERG, LEV ÎAKOVLEVICH, 1861–1927, *see* Chard, C.S. Sexual life, Gilyak. 1961. No. 70670

SHTIL'MARK, FELIKS ROBERTOVICH, 1931– , *see* Syroechkovskiĭ, E.E., & *others.* Nekotorye izmeneniîa . . . 1962. No. 76058

75610. SHUBNIKOV, D. A., *and* **O. N. SHUBNIKOVA.** Morskie ptitsy i razvedka sel'di. (Priroda, Nov. 1961. god 50, no.11, p.108-109, map.) Text in Russian. **Title tr.:** Marine birds and herring reconnaissance.

Notes on herring-eating birds in the Norwegian and Greenland Seas: five species; their distribution; birds as indicators of herring shoals, etc. (DLC.)

75611. SHUBNIKOV, D. A. Nekotorye osobennosti lineĭnogo rosta atlantichesko-skandinavskoĭ sel'di v letniĭ period. (Akademiîa nauk SSSR. Ikhtiologicheskaîa komissiîa. Trudy soveshchaniĭ 1961. vyp.13, p.393-96.) 6 refs. Text in Russian. **Title tr.:** Some characteristics of linear growth of Atlantic-Scandinavian herring in the summer.

Reports a spring-summer 1956-1957 investigation in the Norwegian and Greenland Seas. Food conditions in the two years, as well as growth in length, and in weight (by fat deposition), are outlined in general terms and compared with each other. (DLC.)

SHUBNIKOV, D. A., *see also* Paraketsov, I.A., & D.A. Shubnikov. Gibrid . . . 1961. No. 74647

75612. SHUBNIKOVA, O. M., *and* **ÎU. V. MOROZOV.** O nekotorykh geograficheskikh osobennostîakh gnezdovaniîa ptits v tsentral'noĭ îAkutii. (Moskovskoe obshchestvo ispytateleĭ prirody, otdel biologicheskiĭ. Biûlleten' 1961. t.66, vyp.1, p.129-32, tables.) 9 refs. Text in Russian. **Title tr.:** Some geographical features of bird nesting in central Yakutia.

Deals with birds of the larch forests, specifically with terms of egg deposition, number of nests in different habitats, nest distribution of some species according to level (ground, bushes, trees), nesting in atypical places, etc. (DLC.)

SHUBNIKOVA, OL'GA NIKOLAEVNA, 1933– , *see* Shubnikov, D.A., & O.N. Shubnikova. Morskie ptitsy . . . 1961. No. 75610

75613. SHUĬSKAIA, F. K., *and* **V. G. TRUNOV.** O povedenii nekotorykh emissiĭ v luchakh polîarnogo siîaniîa. (Akademiîa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniîû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîarnye siîaniîa i svechenie nochnogo neba. Sbornik stateĭ 1962. no.9, p.31-33, graphs.) 2 refs. Text in Russian. Summary in English. **Title tr.:** On the behavior of certain emissions in auroral rays.

Analyzes the spectra of the strong aurora of Mar. 2-3, 1958 at the Loparskaya station, and discusses the distribution of emission brightness along the auroral rays. The emissions of λ6,300, λ5577, and 1 PGN_2 in the auroral rays were studied during their transition from the smeared to the well defined form. (DLC.)

75614. SHUĬSKAIA, F. K. Opredelenie otnositel'nykh naselennosteĭ kolebatel'nykh urovneĭ 1NG N_2^+ i vrashchatel'noĭ temperatury. (Akademiîa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniîû Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîarnye siîaniîa i svechenie nochnogo neba. Sbornik stateĭ 1961. no.5, p.49-52, tables, graphs.) 9 refs. Text in Russian. Summary in English. **Title tr.:** Determination of relative rates of population of 1NG N_2^+ vibrational levels and rotational temperature.

Presents relative rates of population for vibrational levels of $B^2\Sigma_g^+$ state of N_2^+ determined from spectrograms obtained at Murmansk, Roshchino, and Zvenigorod by measuring 1NG in the spectra of usual and sunlit auroras. Rotational temperature measured at Murmansk was found to be 230°K±70°K, and that at Zvenigorod 1800°K. (CaMAI.)

75615. SHUKHMAN, L. N. Verkhniîaîa kontaktnaîa zona apatito-nefelinovykh mestorozhdeniĭ Khibin.

(*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy geologii . . . 1961, p.53-76, illus., tables, diagr.) 14 refs. Text in Russian. **Title tr.:** Upper contact zone of the Khibiny apatite-nepheline deposits.

Reports the geologic features, petrography and mineralogy of rocks in the Kukisvumchorr and Yukspor Mountains of Kola Peninsula, studied to clarify the geologic history of rock formation and sphene mineralization in the upper contact zone, i.e., the zone between apatite-nepheline bodies and rischorrites. Development of sphene mineralization is treated in detail and considered applicable for detection of apatite-nepheline bodies. The postmagmatic processes which caused sphene mineralization are analyzed. (DLC.)

75616. SHUKHTINA, G. G. Sezonnye izmeneniia teploustoĭchivosti kletok nekotorykh khibinskikh rasteniĭ. (Botanicheskiĭ zhurnal, Jan. 1962. t.47, no.1, p.100-105, illus.) 8 refs. Text in Russian. **Title tr.:** Seasonal changes in thermal resistance of cells of some Khibiny plants.

Thermal resistance in the species studied was minimal in the summer, increased in the fall to a maximum in the winter, and dropped again during the melting of snow. There were some differences in this behavior between plants growing on the Kola Peninsula and those studied at Leningrad. In one species, resistance was raised by both heat in daytime, and night frost. (DLC.)

SHUKOLIUKOV, IU. A., *see* Gerling, È.K., & *others*. Opredelenie vozrasta . . . 1962. No. 71658

75616A. SHULEĬKIN, VASILIĬ VLADIMIROVICH, 1895– . Gidrodinamika prilivov na Belom more. (USSR. Gidrograficheskoe upravlenie. Zapiski po gidrografii 1925. t.50, p.241-66, tables, diagrs., graphs, fold. maps.) 2 refs. Text in Russian. **Title tr.:** Hydrodynamics of tides in the White Sea.

Investigates the characteristics of propagation of tidal waves of finite amplitude in a narrow, infinitely long channel of constant depth. The mathematical method of successive approximations proposed by G. Airy was applied to the case of tides which derive from the oceanic tide penetrating through the narrows to this sea. Cotidal lines are drawn for high and low tides, amplitudes at different points of the sea, and variation of the profile of tidal waves of finite amplitude are calculated. The tidal amplitudes and currents are determined from the horizontal and vertical components of the wave particles describing their displacement orbits. Forms of these orbits are determined, and the moments of maxima, and the moments of current reversals are calculated. The results of this theoretical investigation were found to be in agreement with most observed values, and the cotidal lines drawn permit the tide forecasts of accuracy comparable to G.H. Darwin's prediction of tides. Shuleĭkin's solution is discussed by V.I. Peresypkin, q.v. (DLC.)

SHULEĬKIN, VASILIĬ VLADIMIROVICH, 1895– , *see also* Peresypkin, V.I. Nekotorye voprosy . . . 1961. No. 74721

75617. SHUL'GINA, N. I. Novye pozdneiurskie ammonity Severnoĭ Sibiri. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.127. Paleontologiia i biostratigrafiia, vyp.3, p.197-209, plates.) 13 refs. Text in Russian. **Title tr.:** New late Jurassic ammonites in northern Siberia.

Discusses late Jurassic stratigraphy and ammonite distribution. In the arctic regions, four sites of *Craspedites* are noted. Two new genera and two new species are systematically described. *Chetaites chetae* and *Ch. sibiricus*, n. spp. of fam. Perispinctidae are found in the Kheta basin, Taymyr Peninsula. (DLC.)

SHUL'GINA, N. I., *see also*

Basov, V.A., & *others*. Novye dannye . . . Khatangskoĭ vpadiny. 1962. No. 70061

Saks, V.N., & N.I. Shul'gina. Melovaia sistema . . . 1962. No. 75343

75618. SHUL'GINA, N. V. Ionosfernye vozmushcheniia po nabliudeniiam na st. Murmansk. (Geomagnetizm i aéronomiia, 1962. v.2, no.5, p.878-85, graphs, tables.) 8 refs. Text in Russian. **Title tr.:** Ionospheric disturbances observed at the Murmansk station.

Reports on disturbances observed during 1954-1960, and relates their intensity to Wolf number. During the maximum of solar activity, the disturbances are of longer duration and affect all layers of the ionosphere; those observed during the minimum of solar activity appear almost always in the lower strata of ionosphere, and are moderate in duration. Ionospheric variations are classified according to their duration as small: 5-24 hrs., medium: 24-60 hrs., strong: 60-100 hrs., and extra strong: more than 100 hrs. duration. (DLC.)

SHUL'TS, N. È., *see* Boruchinkina, A.A., & *others*. Stratigrafiia . . . 1961. No. 70339

SHUMACKER, HARRIS B., 1908– , *see* Pantzer, J.G., & H.B. Shumacker. Coronary sinus blood flow . . . 1961. No. 74643

75619. SHUMILOV, IU. S. Volny bol'shikh periodov v Karskom more. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.210, Metodika okeanologicheskikh issledovaniĭ, Sbornik statei, vyp.1, p.277-83, maps, tables, graphs.) 2 refs. Text in Russian. **Title tr.:** Long period waves in the Kara Sea.

Discusses the sea waves of several-minutes to more than one hour periods, as observed with the Graafen system mareographs installed by the *F. Litke*, and *Astra* of the 1956-1957 expeditions of the Arctic Institute. Waves of 14 min. to 66 min. period and wavelength of 22-104 km. were recorded. Attempts are made to explain the origin of such waves, and change in wind direction and force, change in atmospheric pressure, and the passage of a cyclone over the sea were considered as possible causes. Analysis of these phenomena indicates that the observed long-period waves could have been produced either by irregularities of the wind stream in the storm zone, or by the storm wind driving sea water shoreward, with subsequent accumulation of sea water near the shore, and oscillations of its free surface. The long-period waves were noticed to have a 25 m./sec. velocity, three times that of the storm surge of the sea. Therefore long-period waves caused by the storm should reach shore prior to the surge, and serve to forecast the approaching storm. (CaMAI.)

75620. SHUMSKIĬ, PETR ALEKSANDROVICH. Mekhanizm deformirovaniĭa i perekristallizat͡siĭa l'da. (*In:* Materialy po laboratornym issledovaniĭam merzlykh gruntov, 1961. sbornik 4, p.129-36, illus., diagrs.) Text in Russian. **Title tr.:** Mechanism of the deformation and recrystallization of ice.

Summarizes studies at the Mirnyy base in the Antarctic during 1957, to determine the structure of glacier ice and to contribute to the theory of the movement of glaciers. Natural ice specimens were examined and tested, and six basic types of deformation were established. By comparing test specimens with glacier ice, it was possible to determine which mechanism of deformation predominates in the different parts of glaciers.—From CRREL. (DLC.)

75621. SHUMSKIĬ, PETR ALEKSANDROVICH. On the theory of glacier motion. (International Association of Scientific Hydrology. Pub. no.55, Symposium on Antarctic Glaciology 1961, p.142-49.) 9 refs.

Contains basic principles of author's dynamic theory that accounts for the main types of stresses and strains in ice masses and explains both elements of their motion, viz: block sliding along the bed and laminar flow. Solutions are proposed which make it possible to determine the distribution of the coefficient of friction against the bed of a glacier from measurements of its shape and movement. This coefficient varies in space and time according to presently available data. In proposed theory, equilibrium, shape and dimensions of a stationary glacier are much more intricately dependent upon the intensity of accumulation and ablation, the relief of the bed, and the force of external friction, than in previous hypotheses. The theory permits determination, separately, of values of overall movement of spreading-out, of stresses, deformations, hence it enables analysis of the role of relief and climatic conditions in the dynamics of glaciers. It is the first dynamic theory which accounts for the chief element in glacier motion, block sliding along the bed. (DGS.)

SHUMSKIĬ, PETR ALEKSANDROVICH, *see also*

Al'fman, É.A., & *others.* Svechenie l'da. 1961. No. 69711

Kotlĭakov, V.M. Kolebaniĭa. . . lednikov. 1962. No. 73030

SHUMWAY, GEORGE A., *see*

Carsola, A.J., & *others.* Bathymetry . . . 1961. No. 70617

Dietz, R.S., & G.A. Shumway. Arctic Basin geomorph. 1961. No. 71031

International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

75622. SHUNKOV, VIKTOR IVANOVICH. Razrabotka voprosov istorii Sibiri za rubezhom. (*In:* Nauchnaĭa konferent͡siĭa po istorii Sibiri i Dal'nego Vostoka. Voprosy istorii . . . *pub.* 1961, p.35-39.) Text in Russian. **Title tr.:** Studies of Siberian history abroad.

Evaluates the major works, journals, etc. published in Europe and the United States on this subject including colonization, ethnography, linguistics. Interest abroad in Siberian anthropology is increasing, and Soviet scientists should make closer study of the foreign publications. (DLC.)

75623. SHUNTOV, V. P. Migrat͡sii i raspredelenie morskikh ptit͡s v ĭugo-vostochnoĭ chasti Beringova moriĭa v vesenne-letniĭ period. (Zoologicheskiĭ zhurnal, July 1961. t.40, vyp.7, p.1058-69, table, maps.) 7 refs. Text in Russian. Summary in English. **Title tr.:** Migrations and distribution of marine birds in the southeastern Bering Sea during spring and summer.

Deals with habitat, frequency and distribution of over 20 species of birds. The distribution and time, direction and nature of migrations depend ultimately on the hydrographic conditions, but directly on the plankton, benthos, and especially fish. Main concentrations, and directions of migrations are located over areas of high productivity of the sea. (DLC.)

75624. SHURBET, D. H. Determination of sediment thickness in the Gulf of Alaska using Rayleigh-wave dispersion. (Geological Society of America. Bulletin, Mar. 1962. v.73, no.3, p.399-402, graph, map, table.) 3 refs.

Reports use of Rayleigh-wave dispersion measurements to determine the presence of abnormally thick sediments as evidence of regional subsidence. Methods and calculations are described. Dispersion data for the Gulf were similar to those of the Pacific, indicating similar sedimentary thicknesses. This refutes the possibility of subsidence. G.G. Shor in the Dec. 1962 issue of this *Bulletin,* p.1545, suggests a different interpretation of Shurbet's findings. (DGS.)

75625. SHURKIN, KIRILL ALEKSANDROVICH, *and others.* Belomorskiĭ kompleks Severnoĭ Karelii i ĭugo-zapada Kol'skogo poluostrova; geologiĭa i pegmatitonosnost'. Moskva - Leningrad, Izd-vo Akademii nauk SSSR, 1962. 306 p. illus., tables, graphs, diagrs. & maps incl. fold. (Akademiĭa nauk SSSR. Laboratoriĭa geologii dokembriĭa. Trudy vyp.14.) Approx. 180 refs. Text in Russian. *Other authors:* N.V. Gorlov, M.E. Sal'e, V.L. Duk, *and* IU. V. Nikitin. **Title tr.:** The White Sea complex of northern Karelia and southwest Kola Peninsula; geology and pegmatite-bearing properties.

Presents a monograph account of the geologic structure of mica-bearing and ceramic pegmatites, based on collective studies in these areas since 1951. Stratigraphy, metamorphism, tectonics and magmatism of the White Sea series of upper Archean are outlined. Geologic development of the region in one geosynclinal epoch is characterized. The pegmatites are considered to be ultra-metagenic formations, paragenetically connected with granites and migmatites. Patterns of their structural localization, their classification, inner structure and other features are reported. Their mineralogy and chemistry are analyzed. (DLC.)

SHUSTER, M., *see* Krasna, I.H., & *others.* . . . left atrial pressures . . . hypothermia. 1961. No. 73083

SHUTOV, VSEVOLOD D., *see*

Kossovskaĭa, A.G., & V.D. Shutov. O korreliat͡sii zon . . . 1961. No. 73016

Kossovskaĭa, A.G., & V.D. Shutov. Zonality terrigene deposits. 1959. No. 73017

75626. SHUTOVA-KORZH, I. V. Novye dannye o rasprostranenii malopozvonkovoĭ sel'di v Barent͡sevom more. (Akademiĭa nauk SSSR. Doklady 1961. t.137, no.4, p.954-56, tables, map.) 5 refs. Text

in Russian. **Title tr.:** New data on the distribution of herring with low vertebral numbers in the Barents Sea.

Reports on occurrence of this herring in the Barents Sea between 1946 and 1958; age composition and sexual maturity, its origin, migrations, etc. (DLC.)

75627. SHUTOVA-KORZH, I. V. Osobennosti raspredeleniia sel'di v Barentsevom more po vstrechaemosti ee v zheludkakh treski. (Murmansk. Poliarnyi nauchno-issledovatel'skii institut morskogo rybnogo khoziaistva i okeanografii. Nauchno-tekhnicheskii biulleten' 1959. no.2 (10), p.49-50, table, maps.) Text in Russian. **Title tr.:** Character of herring distribution in the Barents Sea according to its occurrence in codfish stomachs.

Reports on examinations during 1950-1960 with maps and tables for each year and season. Data are especially valuable for the winter when herring live near the bottom and are difficult to record. (DLC.)

75628. SHUTOVA-KORZH, I. V. Rezul'taty mecheniia sel'di v Barentsevom more. (Rybnoe khoziaistvo, 1961. god 37, no.2, p.27-29, maps.) Ref. Text in Russian. **Title tr.:** Results of herring tagging in the Barents Sea.

Reports on mass tagging of young herring on the Murmansk coast. Types of tags, recaptures, growth and migrations are described. (DLC.)

75629. SHUTYĬ, M. E., *and* **É. E. TEODORONSKAIA.** Reki i gidroėnergeticheskie resursy. (*In:* Krasnoiarskaia . . . ėkspeditsiia. Prirodnye usloviia . . . 1961, p.231-49, illus., tables, map.) 23 refs. Text in Russian. **Title tr.:** The rivers and water-power resources.

Describes the Yenisey and its main tributaries such as the Angara, the Podkamennaya and Nizhnyaya Tunguska, and others. The Khatanga, Pyasina and some other rivers of the Ob basin are also described. Annual, seasonal, and monthly discharge are reported for the Yenisey and its main tributaries; other features also, such as length, ice cover, etc. are noted. The potential energy resources are considered, with mention of the power stations being built at Bratsk on the Angara, and at Krasnoyarsk on the Yenisey. (DLC.)

75630. SHUVALOV, V. Po povodu okraski podvodnoĭ chasti sudov. (Morskoĭ flot, Aug. 1962. god 22, no.8, p.38, graph.) Text in Russian. **Title tr.:** On painting of vessels below the water line.

Criticizes the poor rust removal and painting job done in the Murmansk shipyards on the *A. Suvorov,* in July 1959. The resultant loss of speed and inability to complete 1960 assignment are discussed and graphed. Author is a captain of the Murmansk steamship line. (DLC.)

75631. SHVANEV, K. A. Vliianie parametrov burovzryvnykh rabot na pokazateli otboĭki malomoshchnykh zhil. (*In:* Akademiia nauk SSSR. Kol'skiĭ filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdeniĭ Kol'skogo poluostrova, 1961, p.50-54, illus., tables.) 3 refs. Text in Russian. **Title tr.:** Effect of the parameters of blasting on thin ore vein cutting.

The cutting of thin ore veins is usually done by small-hole (max. 2 m. long, 42-46 mm. diam.) blasting. The effect of increasing the length to 3.5-3.7 m. and decreasing the diameter to 36-39 mm. was studied on the sulfide copper-nickel veins of the Nittis-Kumuzh'ye deposits. Data are presented and discussed on the amount and size of ore pieces blasted in relation to the length and number of holes. (DLC.)

75632. SHVAREVA, IU. N. Klimat Pripoliarnogo i Poliarnogo Urala. (Issledovaniia lednikov i lednikovykh raĭonov, 1962. vyp. 2, p.176-99, tables, graphs, diagrs.) 19 refs. Text in Russian. Summary in English. **Title tr.:** Climate of the Subpolar and Polar Ural.

Describes conditions according to data of four meteorological stations in the Polar Ural: Ust'-Vorkuta, Polyarnyy Ural, Ray-Iz and Salekhard, and three in the Subpolar Ural: Ust'-Shchugor, Verkhniy Shchugor and Saranpaul'. The main climate-forming factors of the Ural: solar radiation, cyclone activity, mountain relief and its position, are characterized. The climate is described according to seasons; spring, summer, autumn and winter are treated in turn with extensive data on temperature, precipitation, wind and other elements. (DLC.)

SHVARTS, IA. B., *see* Davydova, N.I., & *others.* Volnovaia kartina . . . 1962. No. 70916

75633. SHVARTS, M. A. O nedostatkakh v nizovom planirovanii. (Ugol', Dec. 1962. god 37, no. 12, p.45-47, table.) Text in Russian. **Title tr.:** Shortcomings of lower-level planning.

Planning of work at the Intaugol' coal-mining combine is based on pit section estimates for the coming month, without any long-range view to increasing efficiency by better organization, mechanization and automation. Planning for a longer period with material rewards for raising output and reducing production cost is suggested. (DLC.)

75634. SHVARTS, STANISLAV SEMENOVICH, 1919– . O putiakh prisposobleniia nazemnykh pozvnochnykh, preimushchestvenno mlekopitaiushchikh k usloviiam subarktiki. (Problemy Severa, 1961. vyp. 4, p.75-94, diagr., tables.) 54 refs. Text in Russian. **Title tr.:** On the ways of terrestrial vertebrate, chiefly mammal, adaptation to conditions of the sub-Arctic.

Reviews studies of muskrat, lemmings, voles, arctic fox, birds and amphibia, by the author and colleagues (V.S. Smirnov, K.I. Kopen, and G.B. Livchak) during 1956-1958 in the Yamal National District. Morphological adaptation (color, hair density, body, size, leg adjustment for over-snow movement, etc.) was found to be greatly exceeded by physiological adaptation: greater aptitude in storing nutrients, high fecundity, brief maturation period in the young, increased capacity for physical and chemical thermal regulation, seasonal migration, capacity for utilizing microclimatic conditions in overwintering, etc. (DLC.)

75635. SHVARTS, STANISLAV SEMENOVICH, 1919– , *and* **V. N. PAVLININ.** Opyt glirogeograficheskogo raĭonirovaniia Urala. (Akademiia nauk SSSR. Ural'skiĭ filial. Institut biologii. Trudy 1960. vyp. 14, p.83-96, maps.) 27 refs. Text in Russian. **Title tr.:** Attempt at a glirogeographic zonation of the Urals.

Discusses the geographic distribution of ro-

dents of this area, commencing with its arctic and subarctic regions. Their general character there is marked by lack of grain-eaters and predominance of *Microtinae*. The leading forms, two species of lemmings, and others, their geographic limits of distribution, habitats, etc. are described. Introductory outline of earlier studies is included. (DLC.)

75636. SHVEDOV, N. A., *and others.* Novai͡a stratigraficheskai͡a skhema verkhnepaleozoĭskikh otlozheniĭ Taĭmyra. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik statei po paleontologii i biostratigrafii, 1961, vyp. 24, p.12-15, fold. table.) Text in Russian. *Other authors:* V.I. Ustritskiĭ, G.E. Chernai͡k, A.A. Gerke, *and* G.P. Sosipatrova. **Title tr.:** A new stratigraphic scheme of Taymyr Upper Paleozoic deposits.

Presents a chart showing the stratigraphic units of Permian deposits, based on recent studies of the authors and others. Two main regions of the Taymyr are distinguished as characterized by the Ust'-Pyasina depression and the East-Taymyr depression. The Permian deposits are treated in two divisions and five horizons. (DLC.)

75637. SHVEDOV, N. A. O nakhozhdenii *Paraschizoneura sibirica* (Neub.) Radcz. v permskikh otlozheniĭ͡akh poluostrova Taĭmyr. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik statei po paleontologii i biostratigrafii, 1961. vyp. 26, p.72-75, illus. on plate.) 7 refs. Text in Russian. **Title tr.:** A find of *Paraschizoneura sibirica* (Neub.) Radcz. in Permian deposits of Taymyr Peninsula.

Describes fragments of this fossil plant found in the Baykura series of Upper Permian deposits on the north shore of Lake Taymyr. The imprints in three pieces of clay are delineated. Distribution is given and comparisons made with related forms. (DLC.)

75638. SHVETS, V. M. Organicheskoe veshchestvo v gruntovykh vodakh severa Evropeĭskoĭ chasti SSSR. (Voprosy gidrogeologii i inzhenernoĭ geologii, 1961. Sbornik no.19, p.41-48, tables.) 3 refs. Text in Russian. **Title tr.:** Organic matter in ground waters of northern European USSR.

Reports analyses of 25 samples collected in Arkhangel'sk and Vologda Provinces in various water-bearing horizons of Quaternary deposits. Organic hydrocarbon, organic nitrogen, permanganic acid and petroleum acid determinations are tabulated. The waters of glacial, fluvioglacial, alluvial, lacustrine and other deposits are characterized according to organic matter content. Waters of the Severnaya Dvina and Syamzhina also were treated, and organic matter found highest in the river water. (DLC.)

75639. SHVETSOV, PETR FILIMONOVICH. Geokriologicheskie voprosy pri poiskakh nefti na subarkticheskikh nizmennostiakh. (Geologii͡a i geofizika, 1961, no.8, p.36-39.) 8 refs. Text in Russian. **Title tr.:** Geocryological problems in oil prospecting in the subarctic lowlands.

Reviews the prospecting carried out in Alaska, the Ust'-Yenisey region, Khatanga depression and other areas, and reports briefly on geothermic and hydrogeologic observations in the Nordvik and Kozhevnikova Bays. Depths of permafrost, physical properties of frozen grounds, ground-water conditions, water mineralization, geothermic conditions of permafrost areas are characterized. These specific conditions should be examined in oil prospecting. (DLC.)

75640. SHVETSOV, PETR FILIMONOVICH, 1910– . K istorii razvitii͡a I͡Ano-Indigirskoĭ primorskoĭ nizmennosti v antropogene; tezisy. (*In:* Vsesoi͡uznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.128-29.) Text in Russian. **Title tr.:** On the development history of the Yana-Indigirka maritime plain in the Anthropogene; summary.

Notes previous studies concerning the Quaternary deposits; and states three surface levels clearly discernible on this coastal plain. They correspond to the Yana and Indigirka River terraces: the third 40-50 m., second 8-12 m., and the first 4-6 m. above the average water level of the rivers. Each terrace is characterized and its age discussed. (DLC.)

75641. SHVETSOV, PETR FILIMONOVICH. Kriogennye geokhimicheskie poli͡a na territorii mnogoletneĭ kriolitozony. (Akademii͡a nauk SSSR. Izvestii͡a, ser. geologicheskai͡a, Jan. 1961, no.1, p.46-51, illus.) 15 refs. Text in Russian. **Title tr.:** Cryogenic geochemical fields in the territory of a perennial cryolithozone.

Describes taryns (icings or ice fields formed from the systematic discharge of ground water in permafrost regions) in the Tas-Khayakhtakh Mts., the Kolyma, Moma and Indigirka basins, and elsewhere. The great number of these taryns is noted, ranging in size from 1 km.^{2} to the 100 km.^{2} of the Ulakhan Taryn. The geochemical composition of their waters and the separated salts on the taryn surface are discussed and data presented for two of them. They are considered unique cryogenic geochemical fields; the concentration of elements is noted. Other such fields connected with migration of soil and ground solutions are also discussed, briefly. (DLC.)

75642. SI͡AGAEV, NIKOLAĬ ANDREEVICH. O neotektonike Leno-Khatangskogo severa. (*In:* Vsesoi͡uznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.130-37, map, diagr.) 5 refs. Text in Russian. **Title tr.:** On recent tectonics of the Lena-Khatanga North.

Outlines the main features of Quaternary tectonic movements in the Laptev Sea coastal areas, between the Khatanga and the Lena and north of 71° N. Their age is discussed and several stages are distinguished. Their types, regional distribution, velocity and intensity are treated. Regions of block-folded uplifts, undulated uplifts and undulated-block subsidence are determined, characterized, and mapped. (DLC.

75643. SI͡AGAEV, NIKOLAĬ ANDREEVICH. Sravnitel'nai͡a tektonika mezozoĭskikh progibov severa TSentral'noĭ Sibiri. Moskva, Izd-vo Moskovskogo universiteta, 1962. 346 p. fold. tables, maps & cross-sections incl. fold. (Moskva. Universitet. Geologicheskiĭ fakul'tet.) Approx. 200 refs. Text in Russian. **Title tr.:** Comparative tectonics of Mesozoic troughs in north-central Siberia.

Presents a study of a trough zone between the Yenisey and Lena, north of the Arctic Circle.

Stratigraphy and facies of the Mesozoic deposits are described, and the structure of the Taymyr, Lena-Anabar, and Lena troughs are analyzed. The Yenisey and Khatanga depressions are also treated. History of Mesozoic tectonic movements is collected. Sedimentary formations are described. An appraisal of Mesozoic troughs is offered as to their suitability for oil accumulation. (DLC.)

75644. SĬASIN, I. K primeneniĭu razlichnykh pravil pri ledovoĭ provodke sudov. (Morskoĭ flot, Apr. 1962. god 22, no.4, p.14-15.) 2 refs. Text in Russian. **Title tr.:** On the use of different rules when escorting ships through ice.

Comments on paper by Rozentals q.v. A collision between the icebreaker *Kapitan Voronin* and the freighter *Daugava* in the Baltic Sea in Feb. 1960 is analyzed. The captain of the former was navigating according to the special rules for icebreakers escorting ships through ice when he should have used the general PPSS, regulations for prevention of collision of vessels at sea. The difference between the two sets of regulations should be eliminated to prevent such accidents. (DLC.)

75645. *SIBIRSKAĬA ZHIVAĬA STARINA.* Pervyĭ Vostochno-Sibirskiĭ kraevedcheskiĭ s"ezd, 11-18 ĭanvarĭa 1925 g.; obzor rabot, tezisy, rezoliūtsii. (Sibirskaĭa zhivaĭa starina, 1925. vyp. 3-4, p.243-385.) Text in Russian. **Title tr.:** First East-Siberian Regional Study Congress, Jan. 11-18, 1925; review of papers, précis, resolutions.

Describes the scope of this Congress held at Irkutsk and attended by 97 delegates. Informative summaries (of a page or two each) are given of some 75 papers presented. Sections meetings were held on: general regional studies, economics, physical geography, biology, and history and ethnography. Papers dealing with Northern peoples or problems (mainly in Yakutia) are listed below with titles translated:

The role of the Northern Sea Route for the supply of the north of East Siberia, by I.F. Molodykh. Some factors in the economy of Yakutia, by M.P. Sokolov. Committee for the aid of peoples of northern fringe areas, by IA. N. Khodukin. Results and future tasks of archeological work in East Siberia, by V.I. Podgorbunskiĭ. Survey of East Siberian rivers, by I.F. Molodykh. Results of East Siberian cartography, by A.S. Gerasimov *and* I.F. Molodykh. Bottom ice and its formation in the Angara River, by S.N. Laptev. Permafrost as geological factor, by A.V. L'vov. Geographic distribution and annual course of auroras in Siberia, by A.IŪ. Pedder. Ice thickness on inland water bodies of eastern Siberia, by V.B. Shostakovich. Meteorology in East Siberia, by V.B. Shostakovich. (DSI.)

SIDLOFSKY, S., *see* Bigelow, W.G., & S. Sidlofsky. Hormones . . . 1961. No. 70208

75646. SIDORENKO, ALEKSANDR VASIL'EVICH, 1891– Nekotorye voprosy izucheniĭa osadochnogo pokrova Kol'skogo poluostrova. *(In:* Voprosy geomorfologii . . . Kol'skogo poluostrova, 1960. no.1, p.5-31.) 23 refs. Text in Russian. **Title tr.:** Some investigation problems of the sedimentary cover of the Kola Peninsula.

The sedimentary cover consists of Quaternary deposits and of preglacial crust weathering and preglacial continental deposits. Genetic connection is noted between loose rocks and the crystalline basement, whose structure is disclosed in study of the unconsolidated cover. Useful placers may be detected through study of friable material. Placers of moraines, fluvial-glacial, alluvial, interglacial and other deposits are evaluated. New approaches and improvements for studying the sedimentary cover are summarized. (DLC.)

75647. SIDORENKO, ALEKSANDR VASIL'EVICH, 1891– . Novye dannye po rossypĭam Kol'skogo poluostrova. (Akademiĭa nauk SSSR. Komissiĭa po probleme zakonomernosti razmeshcheniĭa poleznykh iskopaemykh. Zakonomernosti razmeshcheniĭa poleznykh iskopaemykh, 1960. t.4, Rossypi, p.112-16.) 3 refs. Text in Russian. **Title tr.:** New data on Kola Peninsula placers.

Notes the saturation of accessory and ore minerals in magmatic and metamorphic rocks, the long continental period, active weathering processes and other conditions favorable for placer occurrence. Precambrian sedimentary-metamorphic, preglacial continental, glacial and postglacial deposits are analyzed: the Khibiny and Lovozero, Ponoy River depression, Keyvy upland and other promising regions for placer search are indicated. (DLC.)

75648. SIDORENKO, ALEKSANDR VASIL'EVICH, 1891– Problema kompleksnogo ispol'zovaniĭa mineral'nogo syr'ĭa. (Akademiĭa nauk SSSR. Vestnik, Feb. 1961. god 31, no.2, p.16-21.) Text in Russian. **Title tr.:** Problem of full utilization of the mineral raw materials.

General discussion of need for improvements in ore processing, based on studies of aluminum production, and processing of copper-nickel and iron ores in Kola Peninsula: only part of the metal content was utilized, valuable components of the ores were lost in the waste. (DLC.)

75649. SIDORENKO, N. I. O soprotivlenii gornykh porod rezaniiū. (Gornyĭ zhurnal, Mar. 1962, no.3, p.47-48, illus. diagrs.) Ref. Text in Russian. **Title tr.:** Resistance of rocks to cutting.

Describes a method of determining the hardness and abrasiveness of rocks used by the Pechora Coal Research Institute. The possibility is claimed of working out a classification of rocks according to their resistance to cutting, which depends on their hardness and abrasiveness. (DLC.)

75650. SIDOROV, ALEKSEĬ SEMENOVICH, 1892-1953. Novye pamiatniki drevnekomi pis'mennosti; s kommentariem, podstrochnymi primechaniiami i zakliūcheniem V.I. Lytkina. *(In:* Akademiĭa nauk SSSR. Institut ĭazykoznaniĭa. Voprosy finno-ugorskogo . . . 1962, p.178-211, facsim.) 25 refs. Text in Russian. **Title tr.:** New materials in Old-Permian script; with commentaries, footnotes, and conclusion by V.I. Lytkin.

Discusses the language and writing of several 14th-early 19th century texts described in an unpublished manuscript by the late A.S. Sidorov, a philologist. (DLC.)

75651. SIDOROV, D. P., *and* IŪ. L. SLASTENOV. K stratigrafii mezozoĭskikh uglenosnykh otlozhe-

nii Ust'-Vilʹuĭskogo gazonosnogo raĭona. (Leningrad. Vsesoĭuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp. 186, Geologicheskiĭ sbornik no.6, p.32-43, diagrs.) 7 refs. Text in Russian. **Title tr.:** Stratigraphy of the Mesozoic coal-bearing deposits in the Vilyuy mouth gas-bearing region.

Reports a study of Upper Jurassic and Lower Cretaceous deposits in the Kitchan uplift and this Vilyuy prospecting area where productive deposits of natural gas have been found. Sections are analyzed and correlated and a new stratigraphic interpretation is offered. Contrary to previous belief, the lower Cretaceous deposits prove to be thicker than the Upper Jurassic in the Vilyuy mouth region. (DLC.)

75652. SIDOROV, I. P. V rybolovetskikh kolkhozakh Zapoliar'ia. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Jan. 1961. god 3, no.1, p.71-73.) Text in Russian. **Title tr.:** In the fishers' collectives beyond the Arctic Circle.

Outlines the achievements of 14 collectives in Murmansk Province, which completed their 1960 catch three months ahead of schedule. Their new improved types of motor boats, mechanized fishing operations and proper shipboard organization are noted; the most successful collectives, trawlers and seiners are cited. (DLC.)

75653. SIEDLECKI, STANISŁAW. Culm beds of the SW. coast of Hornsund, Vestspitsbergen; preliminary communication. (*In:* Polska wyprawa na Spitsbergen, 1957-1958. Geological results . . .1960, pt. 1, *pub. as* Studia geologica Polonica, v.4, p.93-102, plates, profiles, text map, tables.) 5 refs. Summary in Polish.

Reports stratigraphic study of lower Carboniferous sediments in 1958. The Culm series is divided into two members. The lower, 750 m. thick and named the Hornsundneset beds, is characterized by predominance of sandstones; the upper member 180 m. thick, named the Sergeijevfjellet beds, is mainly composed of shales. Characteristic profiles are described, but further stratigraphic and petrographic investigations are needed. (DLC.)

75654. SIEGEL, WILLIAM, 1888– . Early Europeans: Lapps, Alpines, Lesghians, Semites, Hamites, Guti, Kelto-Phoenicians, Satem Indo-Europeans and the formation of the Kentum group. New York, 1961. 145 p. Refs. Typescript.

Study of the origin of Indo-Europeans and the role in their formation of other ethnic groups, including Lapps and Yeniseians (Kets and Kottians), attributed by the author respectively to the Alpine and Paleosiberian races. Their past and present, habitat, language, physical characteristics, also anthropological and linguistic parallels to other modern and extinct peoples are discussed. (DLC.)

75655. SIEGER, E. G. Fingerzählung im Tungusischen. (Deutsche Morgenländische Gesellschaft. Zeitschrift 1961. Bd. 110, n.F. Bd. 35, Heft 2, p.365-67.) 2 refs. Text in German. **Title tr.:** Finger counting in Tungus.

Etymological analysis of Tungus names for cardinal numerals; they are compound in form: 1-3, 7, 10 compounded with word for right hand, 4-6, 8-9, with that for the left, indicating use of both hands for counting. (DLC.)

75656. *SIERRA CLUB BULLETIN.* Conservation in 1960, the summing up. (Sierra club bulletin, Jan. 1961. v.46, no.1, p.13.)

Notes establishment of three national wildlife ranges in Alaska in 1960: the Arctic, the Kuskokwim, and the Izembek, together about 17,524 sq. mi. in area. The 9 million acre Arctic Range is home of the last great caribou herds; the 1.8 million acre Kuskokwim Range is probably the greatest waterfowl breeding ground in North America, and the 415,000 Izembek Range is an important migration concentration point for ducks and geese. (DGS.)

75657. *SIERRA CLUB BULLETIN.* Project Chariot, the long look. (Sierra club bulletin, May 1961. v.46, no.5, p.4 +, illus., map.) 10 refs.

Supports opposition expressed by the Governor of Alaska to the proposed nuclear test excavation in the Cape Thompson region: a more complete study of the effects, including damage to native people, wilderness and wildlife is required. (DGS.)

75658. SIGGERUD, THOR. The iron occurrence at Farmhamna, Vestspitsbergen. (Norway. Norsk Polarinstitutt. Årbok 1960 *pub.* 1962, p.86-89, illus.) 4 refs.

Contains geological and mineralogical description of this occurrence at 78° 10′N. 12° 30′E. It is a hematite mineralization in a breccia between limestone and quartz conglomerates. The deposit is of no economic importance, and the claim staked about 60 yrs. ago thought to be one of those made to establish land rights. (CaMAI.)

75659. SIIVONEN, LAURI, *and others.* Årfugle. (Naturens verden, Feb. 1961. årg. 45, nr.2, p.40-54, 5 illus.) Text in Danish. *Other authors:* P. Rajala *and* P. Seiskari. **Title tr.:** Grouse.

Reviews this family found only in the Northern Hemisphere, in coniferous and mixed forest, in mountains, and on tundra. Gen. *Lagopus* is circumpolar; *Tetrao, Lyrurus,* and *Bonasia* are Eurasian taiga fauna, best represented in central Finland. Appearance, similarities, differences, changes in dress, nesting and eating habits are described. The Norwegian ptarmigan, or white grouse, typically arctic, is common in Lapland and at its best in Norway. (DLC.)

SILKIN, ROMAN ALEKSEEVICH, 1885-1960, *see* Dolgikh, B.O. Bytovye rasskazy énetsev. 1962. No. 71058

75660. SILLIMAN, RALPH P. North Pacific fishery research vessels. (Commercial fisheries review, Jan. 1962. v.24, no.1, p.13-14, illus.)

Describes the vessels and their planned work during spring, summer and fall of 1961 along the Pacific coast. Research is concerned with high sea exploitation of salmon, king crab and bottom fish in the Bering Sea and North Pacific. It is the seventh season of the INPFC (International North Pacific Fisheries Commission) program. (DI.)

75661. SIM, VICTOR WALLACE, 1928– . Maximum postglacial marine submergence in southern Melville Peninsula, N.W.T. (Arctic, Dec. 1961. v.14, no.4, p.241-44, map, table.) 4 refs.

Maps the shore line during the peninsula's maximum submergence, from 1959 field observations south of approx. 68° N. The limit of the post-

glacial sea was determined by the lowest altitudes at which undistrubed ground moraines and perched boulders were found, also the highest altitudes of strandlines; locations and altitudes for each of these criteria are mapped and tabulated. The sea rose to about 507 ft. in the Lefroy Bay area of the west coast, and 550 ft. between Gore and Haviland Bays on the south coast. The east coast was inundated 10-15 miles inland; and, in the south, a major sound extended from Lyon Inlet to Ross Bay, thence to Haviland Bay. The Lefroy Bay area was much the same as at present, but Rae Isthmus and the northern shore of Repulse Bay were submerged. The marine limits in the southern part of the peninsula are higher than the 460-ft. limit determined for the north in 1957-1958, as reported in No. 68272. (DGS.)

75662. SIM, VICTOR WALLACE, 1928– A note on high-level marine shells on Fosheim Peninsula, Ellesmere Island, N.W.T. (Geographical bulletin, Nov. 1961. no.16, p.120-23.) 7 refs.

Reports an Aug. 1955 find in two areas on Fosheim Peninsula approx. six and 11 mi. south of Slidre Fiord: fragments and unbroken shells of marine molluscs, carbon-dated at 19,500 ± 1,100 yrs. Near the crest of Hare Cape Ridge (approx. 79°57′N. 86°22′W.) some were at 1,998 ft. elevation, considerably above heights reported for similar shell occurrences elsewhere in the Arctic. Several modes of deposition are possible. (DGS.)

SIM, VICTOR WALLACE, 1928– , *see also* Bone, R.M., & V.W. Sim. No. 70321-70326.

75663. SIMAKOV, G. V. Nekotorye osobennosti formirovaniia osnovnykh porod v Neroĭsko-Patokskom granitoidnom massive; Pripolĭarnyĭ Ural. (Akademiia nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp. 2, Materialy po geologii Komi ASSR, p.103-110, tables, map.) 3 refs. Text in Russian. **Title tr.:** Some features of basic rock formation in the Neroyka-Patok granitoid massif, Subpolar Ural.

Reports some results of summer 1958 field work in the Bol'shoy Patok River region of Komi ASSR. Petrographic characteristics of the basic rocks, mainly gabbro, are described. Their main minerals are plagioclase and amphibole. Chemical and spectral rock analyses are reported. These rocks were probably formed in the process of assimilation of basic granit magma. (DLC.)

75664. SIMINA, G. IA. Doslavianskaia toponimiia Pinezh'ia. (Voprosy geografii, 1962. Sbornik 58, Geograficheskie nazvaniia, p.85-99.) Refs. in text. Text in Russian. **Title tr.:** Pre-Slavic toponymics in the Pinega basin.

Morphological and semantic analysis of geographic terminology in northern Arkhangel'sk Province, based on data of several field parties during 1958-1960, from the University of Leningrad. The high proportion (85%) of non-Russian names for streams, glens, groves, etc. and the low (5%) for fields suggests origin in a pre-agricultural phase of culture. Three linguistic strata are recognized: an unidentified pre-Ugric (possibly Siberian or Volga-Oka) substrate (cf. No. 68099), followed by Finno-Ugric, and Russian. (DLC.)

SIMOJOKI, HEIKKI JUHANI, 1906– , *see* IUGG . . . Snow & Ice Comm. 1961. No. 72396

SIMONENKO, T. N., *see* Dedeev, V.A., & *others*. Stroenie dosredneĭurskogo fundamenta . . . 1962. No. 70932

SIMONOV, IU. G., *see* Voskresenskiĭ, S.S., & IU. G. Simonov. Geomorfologicheskiĭ analiz . . . 1961. No. 76438

SIMONSON, RUSSELL R., *see* Hazzard, J.C., & *others*. Search oil Alaska . . . 1962. No. 72078

SIMSON, L. R., *see* Black-Schaffer, G., & *others*. Protection . . . against 1800 G acceleration . . . 1961. No. 70236

SIMPSON, H. W., *see* Lobban, M.C., & H.W. Simpson. Diurnal excretory rhythms . . . 1961. No. 73568

75665. SIMPSON, MARSHALL A. Hypothermia and rapid rewarming; report of a case. (Alaska medicine, Mar. 1962. v.4, no.1, p.7-8, illus.)

Describes case in a 1.5 yr. old boy, white, hypothermic with mild local frostbite. Submersion in warm water for 90 minutes and brief application of oxygen led to full recovery. (DLC.)

75666. SIMPSON, ROBERT A., *and others*. The natural gas industry in Canada, 1960. Ottawa, Queen's Printer, 1962. 55 p. maps, graphs, tables. (Canada. Dept. of Mines and Technical Surveys. Mineral Resources Division. Mineral information bulletin MR 55.) Refs. *Other authors:* D.M. Nowlan, and D.W. Rutledge.

Reviews developments; the industry produced a record 573 billion cu. ft. and exported a record 110 billion cu. ft. of natural gas in 1960, accounting for nearly 13% of the Canadian energy supply. The Norman Wells field production, 39,785,000 cu. ft., was considerably less than in 1959. One important gas discovery was made in the Celibeta Lake region, Mackenzie District, a few miles north of the British Columbia boundary. In Yukon Territory, the Western Minerals Co. well, Chance no. 1, where oil and gas were found in 1959, was completed at deeper horizons in 1960. More than two-thirds of Northwest Territories' gas reserves occur in solution in the oil of the Norman Wells field. (DI.)

75667. SIMPSON, ROBERT A., *and others*. A survey of the petroleum industry in Canada in 1960. Ottawa, Queen's Printer, 1961. vi, 91 p. maps, graphs, tables. (Canada. Dept. of Mines and Technical Resources. Mineral Resources Div. Mineral information bulletin MR 52.) Refs. *Other authors:* D.M. Nowlan *and* D.W. Rutledge.

Includes data on Norman Wells field and refinery, Chance no. 1 well completed in the Yukon, a gas discovery in southern Mackenzie District. (DLC.)

75668. SINCLAIR, A. J. Preliminary report on Peppler and Cailleteau Lakes area, west half, Saguenay County. Quebec, 1961. 10 p. fold. map. (Quebec. Dept. of Natural Resources. Geological Surveys Branch. P.R. no. 451.) 5 refs.

Maps at scale 1 in.:1 mi. and describes the stratigraphic and structural geology of this area, 52°05′-30′N., 67°45′-68°W., northeast of Mt. Reed in northern Quebec. Precambrian rocks; over-

lain unconformably by Pleistocene and Recent deposits, include migmatized feldspar-quartz-biotite gneisses; a metasedimentary group of marbles, quartzites, and iron-bearing rocks; hornblende-bearing feldspathic gneiss; and igneous-appearing pegmatite, quartz diorite, and ultramafic rocks. The area has been complexly folded during at least two orogenies, and all the rocks subjected to high-grade metamorphism. A refolded, overturned syncline is described in the northwest part of the area, and a large, northwest-trending synclinal structure in the south. Iron-bearing rocks occur on claims held by Quebec Cartier and Jubilee Iron Corp. (DGS.)

75669. SINCLAIR, D. A., *and* V. TOPCHY. Chukotsk or Chukchi: some thoughts on the transposition of Soviet geographical names. (Arctic, Dec. 1961. v.14, no.4, p.244-46.)

Discusses problems of transposing Soviet geographical names into English and describes (with examples) methods evolved by the authors. Established and linguistically correct anglicized names and derivatives in their shortest form are preferred to transliterated Russian forms. Generic names in English, and adjectives expressing the geographical position of a feature in Russian are favored. Trend towards universal transliteration is deprecated. (DGS.)

SINCLAIR, D. A., *see also* Armstrong, T.E. Soviet place-names. 1962. No. 69869

75670. SINDING-LARSEN, HENNING. *Fram.* Oslo, Aas & Wahl, 1961. 62 p. illus. 4 refs. Text in English. Summaries in German and French.

Monograph published by the Committee for the Preservation of the Polar Ship *Fram,* describing the construction and history of the vessel. After her last trip, returning Amundsen from the Antarctic in 1914, the vessel was laid up in various harbors in Norway; was occasionally partly restored under the auspices of various committees until her complete restoration and use as the *Fram* museum at Oslo since 1936. (SPRI.)

SINGAL, S. A., *see* Ellison, R.G., & *others*. Further studies . . . hypothermia. 1960. No. 71247

75671. SINGITTUK, WILLIAM, *and others*. Letters from the North. (North, Sept.-Oct. 1961. v.8, no.5, p.12-14.) *Other authors:* J. Ayaruak *and* Oshweetuk.

Letters about local activities by Eskimos from Rankin Inlet, Keewatin District and Cape Dorset, Baffin Island, are translated by E. Erkloo, A. Spalding, and S. Ekoomiak. (DLC.)

SIN'KEVICH, M. S., *see* Gavrilenko, G.G., & M.S. Sin'kevich. Kak . . . lesa Karelii. 1961. No. 71607

75672. SINNO, KENJI. Characteristics of solar energetic particles which excite polar-cap blackouts. (Journal of geomagnetism and geoelectricity, 1961. v.13, no.1 & 2, p.1-10, tables, diagrs.) 19 refs.

Discusses the ejection and propagation of particles on the basis of statistical analyses of $I_{min.}$ and riometer records. Part of the energetic particles propagates to the earth with relativistic speed along solar magnetic lines of force and produces S-type polar-cap blackouts of sudden onset within a few hours after a flare. Another part is trapped in a slow-traveling ($\approx 10^8$ cm./sec.) corpuscular cloud, whence it leaks and impinges on the polar atmosphere to produce G-type blackouts with gradual onset about ten hours prior to the commencement of a geomagnetic storm. A list of PC ionization events with associated phenomena 1956-1960, as observed at six polar stations, is appended. (DLC.)

SINOR, DENIS, *see* Poppe, N.N. . . . Altaic linguistics. 1962. No. 74906

75673. SINTSOV, ALEKSANDR NAZAR'EVICH. Polīarnye olimpiady; zapiski lyzhnika, uchastnika-ochevidtsa traditsionnykh Prazdnikov Severa. Murmansk, Murmanskoe knizhnoe izd-vo, 1961. 142 p. illus. Text in Russian. **Title tr.:** Polar Olympics; sketches by a skier, participant and spectator of traditional festivals of the North.

Autobiographical account of winter sports activities on Kola Peninsula. Ski racing, skijoring behind a reindeer team, a traditional Lapp sport, figure skating, and other competitions at the 26 so-called Festivals of the North in 1934-1960 are described. Participants, including Lapps, and their achievements are cited. The 1960 Festival results are given by heats. (DLC.)

75674. SIRÉN, GUSTAF. Taka-Lapin metsien historiasta ja ilmastosta historiallisena aikana. (Lapin tutkimusseura. Vuosikirja, 1961. v.2, p.29-47, illus., diagrs., map.) Text in Finnish. Summary and captions in English. **Title tr.:** On the history and climate of forests in northern Lapland during historical time.

Examines annual rings and other phenomena as evidence of temperature trends in Finnish Lapland from 5000 B.C. to present. A 900±50 year periodicity is found, with temperature now in an upward trend from its last low in the 17th century. This trend should be utilized for forest development by modern methods. Forests in former times far beyond the present tree limit are indicated by burnt-out areas. (SPRI.)

SIRIN, A. N., *see* Markhinin, E.K., & *others*. Opyt vulkano-geograficheskogo raĭonirovaniīa . . . 1962. No. 73823

75675. SIRIN, NIKOLAĬ ANDREEVICH. Magmaticheskie gornye porody Pripolīarnogo i Polīarnogo Urala. (Moskovskoe obshchestvo ispytateleĭ prirody. Biūlleten', 1961. n. ser. t.66, otdel geologicheskiĭ, t.36, vyp.5, p.79-101.) 24 refs. Text in Russian. Summary in English. **Title tr.:** Magmatic rocks of the Subpolar and Polar Ural.

Reports magmatic processes and characterizes magmatic rocks of this part of the Ural, most studied in the Severnaya Sos'va basin. Three structural stages are distinguished on basis of tectonics, age and composition of rocks: the Proterozoic and Lower Paleozoic rocks including Ordovician, the middle and upper Paleozoic, and the Mesozoic-Cenozoic. The main effort is given to description of intrusive and effusive rocks of these three stages. (DLC.)

75676. SIRIN, NIKOLAĬ ANDREEVICH. Magmatizm i ego metallogenicheskie osobennosti na Pripolīarnom i Polīarnom Urale. Moskva, Gosgeoltekhizdat, 1962. 288 p. illus., tables, diagrs. incl. fold., graphs. About 200 refs. Text in Russian. **Title tr.:**

Magmatism and its metallogenic features in the Subpolar and Polar Urals.

Outlines the geologic structure, lithology and stratigraphy of these Urals rocks from the Proterozoic, lower Paleozoic and Mesozoic included. According to geologic-structural relationship, three structural stages are recognized differing in tectonic structure, geologic age, magmatic manifestations, petrographic composition of rocks, and character of metamorphism. The petrography and metallogeny of magmatic rocks, are treated in detail. The history of magmatism is outlined and the formation conditions of these rocks are analyzed. Ore occurrences of various metals and other useful minerals such as iron ore, tungsten, molybdenum, tin, rare metals, nickel, copper, gold and others are reviewed. Tables are included showing the chemical composition of various rocks. (DLC.)

SIROHI, G. S., *see* Hamner, K.C., & *others*. Biological clock . . . 1962. No. 71978

75677. SIROTIUK, G. N., *and* **L. I. BARON.** Sravnitel'noe issledovanie burimosti, drobimosti i prochnosti na razdavlivanie gornykh porod rudnikov Kol'skogo poluostrova. (*In:* Akademiia nauk SSSR. Kol'skii filial. Voprosy tekhnologii razrabotki rudnykh mestorozhdenii Kol'skogo poluostrova, 1961, p.124-30, diagrs., tables.) Ref. Text in Russian. **Title tr.:** Comparative study of rock resistance to drilling, breaking and crushing in Kola Peninsula mines.

Reports results of investigating ten types of rock from six ore deposits of Kola Peninsula, including the Kaula nickel ore, Yukspor apatite and Nittis-Kumuzh'ye nickel. Data on resistance of gabbro-diabase, olivine-pyroxenite, urtite, peridotite, phyllite, grey (nickel?) ore, foyaite, biotite-gneiss, apatite of poor zone, and apatite of rich zone are tabulated and discussed. (DLC.)

SIROTIUK, G. N., *see also*
Baron, L.I., & G.N. Sirotiuk. Ispytanie gornykh porod . . . 1961. No. 70037

Baron, L.I., & G.N. Sirotiuk. Vliianie pokazatelia vybrosa . . . 1961. No. 70039

75678. SISKO, R. K. Gidrologicheskie issledovaniia r. Gedenshtroma, o. Novaia Sibir'. (Problemy Arktiki i Antarktiki. Sbornik statei 1962. vyp.10, p.39-46, illus., diagrs.) 2 refs. Text in Russian. **Title tr.:** Hydrological investigations of the Gedenshtroma River on Novaya Sibir' Island.

Reports his June-Oct. 1960 observations on this 55 km. stream, 74°46′N. 149°15′E., its basin a 228 km² area in the southern part of the second-largest of the New Siberian Islands. Its total run-off at 26 km. from the mouth amounts to 0.01 km³, with average debit 1.1 m³/sec., and maximum during spring flood 11.0 m/sec. Detailed hydrological data are tabulated and discussed. (DLC.)

75679. SISSONS, JOHN HOWARD. The Territorial Court of the N.W.T. (North, Sept.-Oct. 1962. v.9, no.5, p.3-9, illus.)

Photos and brief text showing functions and procedures. The court (of which author is judge) has 40% of the land area of Canada in its jurisdiction and travels 25,000 mi. a year. (CaMAI.)

75680. SIVAK, A. S. Gazonosnost' uglenosnykh otlozhenii Noril'skogo raiona. (Leningrad. Nauchno-issledovatel'skii institut geologii Arktiki. Trudy 1962. t.121, vyp.18, Sbornik statei po geologii i neftegazonosnosti Arktiki, p.96-102, tables incl. fold.) 2 refs. Text in Russian. **Title tr.:** Presence of gas in coal-bearing deposits of the Noril'sk region.

Describes the distribution and composition of gases in the Kayerkanskiy coal deposits and elsewhere. Special attention is given to the methane distribution in gases, and according to it, four zones in the coal deposits are recognized and characterized. The fourth is considered a methane-gas zone where the methane rises to 70%. Other components of the gases such as nitrogen, hydrogen, hydrocarbon, etc. are described. Geologic and physical-chemical factors are indicated which effect different methane-saturations of the gases. Migration and filtration of gases in coal-bearing deposits are discussed. (DLC.)

75681. SIVERTSEN, DAGMAR. Laestadianismen og samene. (Sameliv, 1959-60, *pub.* 1961, p.92-140, port., tables.) Text in Norwegian. **Title tr.:** Laestadianism and the Lapps.

Reviews the impact on North Norway of this revivalist movement, started in 1845 by Lars Levi Laestadius; chronological data are given on its dissemination. The Lappish population, its distribution, and its penetration by the movement are described. Laestadianism is considered suited to the Lapp temperament; its cultic ecstacy is indigenous, not adopted from the Lapps; the emotions are emphasized, rationalism denigrated. Laestadianism had a unifying influence in the community and the Lapps became active proselytizers; it tended also to diminish abuse of alcohol. (SPRI.)

75682. SIVERTSEVA, I. A. Sporovo-pyl'tsevye kompleksy verkhnepaleozoiskikh otlozhenii iuzhnoi chasti Tungusskogo basseina. (Leningrad. Vsesoiuznyi nauchno-issledovatel'skii geologicheskii institut. Informatsionnyi sbornik 1961. no.42, Paleontologiia i stratigrafiia, p.91-104, illus.) 9 refs. Text in Russian. **Title tr.:** Spore pollen complexes of Upper Paleozoic deposits in the southern part of Tungusskiy basin.

Reports a palynological and stratigraphic study of coal-bearing deposits of the Angara basin. Of 304 samples analyzed, 147 contained spores and pollen. Five spore-pollen complexes were determined characterizing Middle and Upper Carboniferous and Lower Permian deposits. The plant composition of each complex is described, and the vegetation forming coal deposits reported. (DLC.)

75683. SIVERTZ, B. G. Administration for development of material and human resources. (Canadian public administration, Dec. 1960, v.3, no.4, p.363-66.)

Discusses material resources of the Yukon and Northwest Territories; minerals, recreational assets, etc. are being explored with government aid for surveys and transportation. For development of the human resources, educational facilities, health and welfare agencies are being expanded, vocational training introduced, wage employment extended. The natives are a key asset in northern development as they know how to live in the harsh climate. (CaOCU.)

75684. **SIVERTZ, B. G.** The North as a region. (*In:* Resources for Tomorrow Conference . . . 1961. v.1, p.561-77, maps.)

Divides the Canadian North, on the basis of geologic and climatological differences, and accessibility by land, water, and air, into five regions: Yukon Territory, Mackenzie valley, Keewatin Precambrian plain, the Eastern Arctic, and High Arctic islands. Each region is discussed in terms of its economic base in mineral resources, agriculture, forest and recreational potential, fish and game, small industries, and northern residents. Though mineral resources offer the greatest economic potential for the investor, the economy of the people as a whole depends also upon wage employment by government and upon their own small industries. (CaONA.)

SIVKOVA, V. G., *see* Severin, S.E., *& others.* Razobshchenie okisleniia i fosforilirovaniia . . . 1962. No. 75512

SJÖGREN, ANDREAS JOHAN, 1794–1855, *see* Mikushev, A.K. Iz istorii . . . 1959. No. 74002

75685. **SJÖRS, HUGO MATTIAS, 1915–** . Surface patterns in boreal peatland. (Endeavour, Oct. 1961. v.20, no.80, p.217-24, col. plates, map.) 20 refs.

Describes and illustrates in color the patterns occurring in bogs and fens of the northern coniferous forest zone. Distribution of peat (in Canada, USSR, Scandinavia and Finland) and development, possible origins and age of the patterns are discussed. Two types of peatland occur, ombrotrophic in which the vegetation receives nourishment from the atmosphere only, and minerotrophic in which it derives nutrients from both atmosphere and soil. The latter type has the richer flora and more extensive patterning. Peatland patterns differ in permafrost and non-permafrost areas, with spruce islands and frozen peat mounds (palsas) in the former areas, in the latter, bog-pools and flarks, i.e. shallow, horizontal pools, often in a stepped arrangement. (DI.)

75686. **SKACHENKO, N. G.** O neizvestnoĭ karte V. IA. Chichagova 1765 g. (Moskva. Universitet. Vestnik, ser. 5, geografiia, Sept.-Oct. 1961, no.5, p.69-71.) Text in Russian. **Title tr.:** The unknown 1765 map of V.IA. Chichagov.

Describes a map at scale 1:607,760, of the route of the Russian expedition of 1765 to the Greenland Sea; it is signed by the leader, Chichagov, and was recently found in the Cartographic Division of the State Historical Museum in Moscow. The role of M.V. Lomonosov in organizing this expedition to search for a northwestern passage to Bering Strait and Kamchatka is discussed. It set sail on three ships from Kola May 9, 1765, reached 80°26′N. in Greenland Sea, and turned back; a second try in 1766 had the same result. (DLC.)

75687. **SKALON, VASILIĬ NIKOLAEVICH, 1903–** . Zadachi okhotnich'ego khoziaĭstva k XXII s"ezdu KPSS. (Zoologicheskii zhurnal, Sept. 1961. t.40, vyp.9, p.1291-98, tables.) Text in Russian. Summary in English. **Title tr.:** Problems of the hunting economy at the 22d Congress of the Soviet Communist Party.

Reviews developments of the three years since the previous Congress in both the taiga and tundra, and the effects of the forest and plant cover upon the hunting economy. Problems of organizing the hunters, of increasing fur production, and reducing forest fires are considered; hunters' settlements, reindeer farming, etc. are discussed; needs and aims outlined. (DLC.)

SKARÉN, UOLEVI, *see* Kalela, O., *& others.* Seasonal change of habitat . . . 1961. No. 72618

SKARLAND, IVAR, 1899– , *see* Alaskan Science Conference 1960. 1961. No. 69643

75688. **SKAVEN-HAUG, SVERRE.** Frostsikker fundamenteringsdybde for byggverk og vannledninger. Oslo, 1961. 11 p. tables, graphs, diagrs., map. (Oslo. Norges geotekniske institutt. Publikasjon no.46.) 12 refs. Text in Norwegian. Summary in English. *Reprinted from* Teknisk ukeblad, 1961, årg. 108, no.38. **Title tr.:** Frost-free depths of building foundations and water pipes.

Presents results of statistical analysis of minimum depth requirements for foundations and water mains throughout Norway, as reported by 432 of 743 municipalities circularized. A frost-depth map is constructed on the basis of these data. Average depth of foundations is 1.4 m.; water mains: 1.54 m. normally, but 1.73 m. under snow-cleared roads and streets, 1.8 m. with particularly unfavorable conditions. A method is reviewed for calculating the depth of frost penetration on the basis of data on frost degree hours and type of soil. Effective methods of reducing frost penetration are described, using materials of high and low frost-susceptibility. (DLC.)

SKILES, FRANK LELAND, *see* Wittmann, W.I., *& others.* Proposed arctic drift ship . . . 1961. No. 76589

75689. **SKINNER, RALPH.** Mineral industry of Yukon Territory and southwestern District of Mackenzie, 1960, 1961. Ottawa, Queen's Printer, 1961, 1962. 2 v.: 52, 48 p. tables. (Canada. Geological Survey. Paper 61-23, 62-27.) Refs.

Reviews mining and exploration activities during the year. A high-grade tungsten deposit on Flat River, Mackenzie District; silver, lead, zinc, and cadmium production in Galena Hill mines of United Keno Hill Mines Ltd.; gold and silver dredges and sluicing plants near Dawson of Yukon Consolidated Gold Corp. Ltd.; the Tantalus Butte coal mine at Carmacks; small-scale operations in other areas are reported. The 1961 exploration exceeded every other year but 1955, and was marked by discovery of several high-grade silver-lead-zinc veins at approx. 61°09′N. 131°09′W., 105 mi. northwest of Watson Lake. Other lode mining and prospecting activities are noted. Production figures and recorded claims are tabulated. (DI.)

SKJENNEBERG, SVEN, *see* Hammel, H.T., *& others.* Thermal & metab. measurements reindeer . . . 1962. No. 71975

75690. **SKJERLIE, FINN J.,** *and* **T. H. TAN.** The geology of the Caledonides of the Reisa valley area, Troms-Finnmark, northern Norway. (Norway. Geologiske undersøkelse. Årbok 1960, *pub.* 1961, nr.213, p.175-96, illus., table, maps incl. 1 fold.) 14 refs. Summary in Norwegian.

Presents results of general geological reconnaissance in a 1500 km² area, with Precambrian

and Cambrian structures, the Hyolithus zone, and overthrust formations of the Jerta and Reisa valley nappes, which include Silurian rocks. Relationships between structures over a larger area are explained in some detail, correlating the work with earlier local, Finnish and Swedish studies of the Caledonide problems. Orogeny, sedimentology, metamorphism, and mineralogy are briefly considered. (DGS.)

SKJESEHK, S., *see* Padget, P., *& others*. Geochem. prospecting Norw. 1960. No. 74620

75691. SKJOLSVOLD, ARNE. Klebersteinsindustrien i vikingetiden. (Norveg: tidsskrift for folkelivsgransking, 1961. v.8, p.1-162, 27 illus., 2 diagrs., table, text map.) 57 refs. Text in Norwegian. Summary (8 p.) in English. **Title tr.**: The Norwegian soapstone industry during the time of the Vikings.

Describes historical evidence of the use of steatite for domestic articles, and discusses the quarrying techniques, skilled and unskilled workmanship, and its commercial importance. This industry flourished mainly during the 8-10th centuries, and produced mainly household utensils, weaving and fishing gear, etc. The occurrences of steatite are listed in detail by counties; it is found in several places in Troms and Nordland, and is less common, but known in Finnmark. (DLC.)

75692. SKOBNIKOV, M. L. Zhelezorudnaia baza chernoĭ metallurgii SSSR. (Gornyĭ zhurnal, Aug. 1962, no.8, p.3-9, tables.) Text in Russian. **Title tr.**: Iron ore resources of ferrous metallurgy in the USSR.

Outlines iron ore resources of the Soviet Union, including the Olenegorsk (900 million t.), Yena-Kovdor (300 million t.), and Pudozhgorsk (250 million t.) deposits in Kola Peninsula; Northern Ural (200 million t.); the Angara-Pit basin (850 million t.) in Krasnoyarsk Province; and the Aldan basin (842 million t.) in Yakutia. Possibilities of open mining are discussed and cost data are cited. (DLC.)

75693. SKÖLD, TRYGGVE. Einige germanische Lehnwörter im Lappischen und Finnischen. Uppsala, Almqvist & Wiksell, 1960. 78 p. (Uppsala. Universitet. Årsskrift 1960: 2.) Text in German. **Title tr.**: Some Germanic loanwords in Lappish and Finnish.

Reviews ten groups of Lappish words related in form and meaning to Finnish, Norwegian, German, etc. terms. Dialectal variants are compared for the Norwegian, Swedish, Finnish, Skolt, and Kola Lapps. (DLC.)

75694. *SKOGEIEREN*. Osuuskunta Metsäliitto. (Skogeieren, Dec. 15, 1960. årg. 47, nr.12, p.471-75, illus., sketch map.) Text in Norwegian.

Symposium on this cooperative marketing organization of small-forest owners of Finland. The cooperative, generally called Metsäliitto, has 16 stations throughout the country, to which the members deliver two-three million cu. m. timber a year. It owns and operates an extensive wood industry, exports lumber and forest products on a large scale, has a sulfite plant financed by the World Bank, and is beginning to buy its own ships for the export trade. Besides the plant personnel, it employs foresters, forest technicians and workers in the provinces. (DA.)

75695. *SKOGEIEREN*. Storstilet fylkesutstilling i Namsos åpner 27. juli. (Skogeieren, July 15, 1961. årg. 48, nr.7, p.327.) Text in Norwegian. **Title tr.**: Magnificent provincial fair opens in Namsos on July 27th.

Sketch of the North Trøndelag fair to be a decennial event exhibiting agriculture, forestry, industry, mining, fishing, and cultural life. The hunting and sport-fishing exhibits excel. A typical Lapp camp is to be shown, complete with reindeer corral, handicrafts, etc. (DA.)

75696. *SKOGEN*. Finlands utbyggnad av skogsindustrin. (Skogen, Apr. 14, 1961. årg. 48, nr.8, p.163.) Text in Swedish. **Title tr.**: Expansion of the lumbering industry in Finland.

Notes record production and export from sawmills and a 1.5 million ton increase in the pulp industry during 1959-1962, 0.8 - 0.9 million tons of it to be refined to paper and cardboard. Plant construction and expansion also are cited. (DA.)

75697. *SKOGEN*. Företagsnämndsfärd i skogskojans tecken. (Skogen, Apr. 28, 1961. årg. 48, nr.9, p.174-75, illus.) Text in Swedish. **Title tr.**: Labor-management study trip on forest huts.

Reports trip in the lower Norbotten region of a party concerned with living accommodations and rest huts of lumbering industry workers. Mobile (on runners) units and cabins of various types and sizes are under development, though problems of insulation, storage space, etc. are not yet solved. Living conditions are improving, with a trend to full-time employment, some apartment houses and private-housing loans becoming available. Technical improvements also are needed for this industry to attract qualified workers. Functions of labor-management committees are discussed, specifically for smaller units, and one suggested for each forest district. (DA.)

75698. *SKOGEN*. Havsflottning. (Skogen, Apr. 14, 1961. årg. 48, nr.8, p.158, illus.) Text in Swedish. **Title tr.**: Ocean floating.

Notes 3.5 million m^3 of birch towed in floats from Norrland to factories in the south in 1958. Mo och Domsjö lumbering company is developing special techniques for ocean floating, such as inclusion of 10-15% aspen in the floats for greater buoyancy. Some 60% (184,516 m^3 f) logs imported from Finland was floated across the Bay of Bothnia to Swedish ports. (DA.)

75699. *SKOGEN*. Nationalparker. (Skogen, June 9, 1961. årg. 48, nr.12, p.227.) Text in Swedish. **Title tr.**: National parks.

Quotes and comments on an article by Fredrik Ebeling in *Tidsspegeln*, May 17, 1961, on national parks, establishment of Padjelanta and expansion of the adjacent Sarek National Park (67°20'N. 16°30' - 17°E.). Development of these large Norrland wilderness areas for public use is discussed: making auto roads through them, and trails to scenic or biologically significant spots; providing camping grounds, etc. outside. Wildlife conservation benefits also from traffic and public use thus controlled. (DA.)

75700. *SKOGEN*. Nationalparker och vattenkraft. (Skogen, May 12, 1961. årg. 48, nr.10, p.198.) Text

in Swedish. **Title tr.**: National parks and water power.

Notes the Public Domains Agency protest against recommended stream damming and construction in Stora Sjöfallet National Park (67°30′N. 18°10′E.). The economic advantages expected by the Waterfalls Directorate are questioned. Roads are desirable to channel tourist traffic, but that proposed through Stora Sjöfallet to Suorva does not meet the needs. Investigation is recommended to determine the best utilization of Norrland rivers and mountain areas. (DA.)

75701. *SKOGEN.* De s.k. malmfonderna. (Skogen, May 26, 1961. årg. 48, nr.11, p.215.) Text in Swedish. **Title tr.**: The so-called iron-ore funds.

Notes the Swedish Parliament recommendation that part profits from the state-owned mines near Kiruna be converted into two public funds for research and development, one economic, for Norrland, with emphasis on Norrbotten; the other industrial: the iron ore fund. The Academy of Forestry and Agriculture protests the omission of these basic industries of the northern area, and cites problems requiring research and experimentation: regeneration, fertilizing and thinning; demarkation of unproductive tundra and mountain areas where forest development is feasible; climatic prerequisites for agriculture in far northern areas, etc. In the same journal, Aug. 18, 1961, p.296, E. Sillerström discusses establishment of a Norrland section of the Forest Research Institute to supervise research especially in labor problems under these funds. (DA.)

75702. *SKOGEN.* Snöpackade vägar. (Skogen, Feb. 17, 1961. årg. 48, nr.6, p.113-14, illus.) Text in Swedish. **Title tr.**: Snow-packed roads.

Reviews the essentials of snow compaction: low temperature, mixing snow to the bottom layer and bonding it by freezing. Compression with a roller provides bearing strength for a tracked vehicle with load. A vibrating compacting machine was developed for roads used by heavy logging trucks; flooding before compaction increases bearing strength. Maintenance also is sketched. (DA.)

75703. *SKOGEN.* Tärendögården, nordligaste skogsbruksskolan. (Skogen, May 26, 1961. årg. 48, nr.11, p.217, illus.) Text in Swedish. **Title tr.**: Tärendö Farm, the northernmost school of Forestry.

Describes this new training school at Tärendö (67°101′N. 10′E.) in the Torne valley, owned and operated by the Norrbotten Forest Service. It has 455 hectares of forest land, is built in traditional Torne valley architecture and utilizes locally handwoven textiles. Woodchip fuel is used (cost 60 crowns/day as compared to 90 cr. for oil) providing a market for forest waste. (DA.)

75704. *SKOGEN.* Virkestransport på järnväg. (Skogen, Mar. 3, 1961. årg. 48, nr.5, p.86-87, illus. sketch map.) Text in Swedish. **Title tr.**: Log transportation by railroad.

Reviews factors pertinent to development of log transport: expansion and centralization of wood pulp industries; increase in demand for raw materials which must be hauled longer distances to the plant; more use of types of logs which cannot be floated; the large investment involved in new floating lanes because of power-station development; investment for road-net expansion and road improvement for heavy-truck traffic. Railroads are recommended to complement floating and truck transportation. Railroad electrification, reloading equipment and transhipment facilities are cited; and railroads in Norrbotten and Västerbotten shown on map. (DA.)

75705. *SKOGEN.* Virkestransporter och avlägg på is. (Skogen, Jan. 20, 1961. årg. 48, nr.2, p.30-31.) Text in Swedish. **Title tr.**: Transportation and storage of logs on ice.

Reviews recent accidents, stressing need for control measures in use of frozen lakes and rivers for log transportation and storage. Ice-thickness measurements along the trail, where currents occur, and at landings are stressed. Ice properties are stressed in gaging bearing strength: clear ice (kärnis) has the best carrying capacity, dark ice (stöpis) can be used if frozen together with clear ice, and light clear ice should not be used. Trails and landings should be clearly marked as such, especially if flooding has been done. A 100-m. interval between vehicles, 50 m. when unloading, speed max. of 15 km./hr., truck and tractor doors kept open, and more lanes are recommended. Max. vehicle and wheel pressure are tabulated for ice 20 - 50 cm. thick. (DA.)

75706. *SKOGEN, Oslo.* Hardfør poppelart. (Skogen, *Oslo,* 1961. årg. 26, nr.3, p.34-35.) Text in Norwegian. **Title tr.**: Hardy poplar variety.

Notes success of the Norwegian Forest Research Institute with a poplar from the Matanuska valley in Alaska; the acclimatization experiments at the Rognan Nursery in Saltdal (67°07′N. 15°25′E.), where the plants may be purchased. (DA.)

75707. *SKOGEN, Oslo.* Troms skogselskap. (Skogen, *Oslo.,* 1961. årg. 26, nr.6, p.89.) Text in Norwegian. **Title tr.**: The Troms Forest Association.

Notes 53,000 decares planted in conifers by this organization during 1950-1960, as compared with 15,000 decares in 1901-1950. Pure pine forests occupy greater areas than at any time in history. The two provincial nurseries deliver 4-5 million plants a year. One, the Ervik Nursery, has been offered for sale to the State, because of the cost of cultivating forest plants in cold climate; the other has been moved to fresh land and renamed Bardufoss Nursery. (DA.)

75708. *SKOGS-NORRLAND.* Bävrar från Faxälvens vattenområde. (Skogs-Norrland, Apr. 1961. nr.2, p.21.) Text in Swedish. **Title tr.**: Beaver from the Fax River system.

Notes transfer of 50 beaver from this Västernorrland waterway to other localities in Norrland; two pair to the Arjeplog forest district just below the Arctic Circle. (DA.)

75709. *SKOGS-NORRLAND.* Björkfors, ny skogsbruksskola i Norrbottens län. (Skogs-Norrland, June, 1962. nr.3, p.25.) Text in Swedish. **Title tr.**: Björkfors, a new forestry school in Norrbotten County.

Reports the dedication of this, the second such school opened in a long-range modernization program of forestry education. The Björkfors school on a former manor has 1,200 hectares of forest land, machine shop and residence halls for faculty and students. (DA.)

75710. *SKOGS-NORRLAND*. Nyttan av att räkna innan man byggar sine vägar. (Skogs-Norrland, June, 1962. nr.3, p.4-13, graphs.) Text in Swedish. **Title tr.**: The usefulness of calculations before roads are built.

Notes forest roads as the critical factor in reducing lumber transportation costs in Norrland, and stresses advance planning from viewpoint of present and future uses, suitable density, terrain, construction experience, etc. Six faulty road projects are discussed. Factors to be considered in planning forest roads in Norrland are relative cost of transportation with or without roads, size of area to be served, population density, type of machinery and vehicle used, etc. (DA.)

75711. *SKOGS-NORRLAND*. Sibirisk gran. (Skogs-Norrland, Dec. 1961. nr.6, p.28.) Text in Swedish. **Title tr.**: Siberian spruce.

Reports study of *Abies sibirica* on a ten-hectare site of 430 m. altitude, at Tjusjön lake in the Åsele forest district, stands which grew after a forest fire in 1903, from seed of unknown origin; max. height is 14.5 m. (DA.)

75712. *SKOGS-NORRLAND*. Skogsvårdsstyrelsernas utbildningsprogram 1962-63. (Skogs-Norrland, June, 1962. nr.3, p.30-31.) Text in Swedish. **Title tr.**: Educational program of the Forest Services 1962-63.

Discusses courses offered by forestry schools in the six counties of Norrland province, including five schools in Norrbotten, five in Västerbotten and four in Jämtland. Basic one-year courses for prospective forest workers, owners and foremen, are offered as well as advanced courses in specialized subjects for active lumbermen and courses in professional forestry for selected foremen. (DA.)

75713. *SKOGSÄGAREN*. Ekonomi och marknadsfrågor. (Skogsägaren, Jan. 1960. årg. 36, nr.1, p.11.) Text in Swedish. **Title tr.**: Economic and marketing questions.

Reports the Swedish pulp industry with a five million ton/yr. capacity as of 1960, to be increased 40% by 1965. Raw materials are considered sufficient; profits on lumbering operations are low in many Norrland areas, but wider use of ocean floating is expected to reduce transportation costs. The Swedish industry represents 8% of world production, and the export 40% of world trade in pulp, with Great Britain main purchaser. (DA.)

75714. *SKOGSÄGAREN*. Ett händelsesrikt år som slutar i ovisshet. (Skogsägaren, Dec. 1961. årg. 37, nr.12, p.377-78.) Text in Swedish. **Title tr.**: An eventful year which ends in uncertainty.

Notes 1961 as the year when forest cooperatives (with state subsidies) were generally accepted, representing a serious effort by farm owners towards modernization, also formation of the long-needed Norrland Forest Owners' Pulp Company; 1961 prices were extended, though logging costs are rising. (DA.)

75715. *SKOGSÄGAREN*. Industriköp i Norrland. (Skogsägaren, July 1961. årg. 37, nr.7, p.194-95.) Text in Swedish. **Title tr.**: Industrial purchase in Norrland.

Reports two plants bought by the recently formed Norrland Forest Owners' Pulp Co. in summer 1961: the Sandviken sulfate factory in Kramfors and the Hörnefors sulfite and paper mills in Västerbotten. The plants are expected to process 20 million cu. ft./yr. of pulp wood and to give the forest owners a voice in setting timber prices. They also increase pressure on the owners to maintain high standards of forest cultivation and yield. The facilities and capacity of the two plants, the Sandviken at the Ångerman river mouth (about 63°N.) and the Hörnefors at 63°36'N. 19°55'E. are described in the same issue of the same journal, p.209-211; and in the Sept. 1961 issue, p.257-58, plans are presented to float a loan for plant expansion and further modernization of equipment. (DA.)

75716. **SKOOG, RONALD O.** The caribou, nomad of the North. (Alaska sportsman, Apr. 1962. v.28, no.4, p.18-21, illus.) Alaska wildlife library no. 24.

Describes the barren ground caribou, its migrations, food, predators, breeding, and desirability as a game species. Approx. 500,000 are distributed throughout Alaska, except the Southeast; the population is healthy and increasing. (DI.)

75717. **SKORIK, PETR IAKOVLEVICH.** Grammatika chukotskogo iazyka, chast' pervaia; fonetika i morfologiia imennykh chastei rechi. Moskva, Izd-vo Akademii nauk SSSR, 1961. 448 p. tables. (Akademiia nauk SSSR. Institut iazykoznaniia.) Approx. 45 refs. Text in Russian. **Title tr.**: Chukchi grammar pt. 1; phonetics and morphology of nominal parts of speech.

Analyzes phonetic laws, syntax, and morphology of nouns and pronouns of the eastern dialect, adopted as the literary language. Peculiarities in the grammatical structure of Chukchi, an incorporative language with strongly developed affixal forms, are noted; linguistic and lexicographic works of the 19th century to date are reviewed in the preface. The study is based primarily on field work in 1928-1934 and special expeditions in 1948-1956. (DLC.)

75718. **SKORNIAKOVA, N. S.** Donnye otlozheniia severo-vostochnoi chasti Tikhogo okeana. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.45, p.22-64, illus., tables, maps.) 37 refs. Text in Russian. Summary in English. **Title tr.**: Bottom sediments of the northeastern Pacific.

Account of survey made in 1958-59 by the *Vitiaz'* including the Gulf of Alaska and Aleutian waters. Material of 77 cores 10-375 cm. long, 42 bottom samples and 22 trawlings form the basis of this study. The following deposits are distinguished and their physical and chemical composition described: polygenic (red deep sea clay), organogenic (silicious and calcareous), terrigenic, terrigenic-volcanogenic, and chemogenic. The distribution of main chemical components in the surface sediments is dealt with in the final part of the study, calcium carbonate autogenic silica, organic carbon, iron, and manganese being considered. (DLC.)

75719. **SKOW, MILFORD L.** Mica, a materials survey. Washington, D.C., U.S. Govt. Print. Off., 1962. 241 p. tables. (U.S. Bureau of Mines. Information circular 8125.) Refs.

Surveys the characteristics, world resources, technology, production, etc. of this mineral group. Northern sources of muscovite are described or noted in Labrador, Southeast Alaska, four areas of northern Norway, also in Karelia, Kola Peninsula, the Urals, and elsewhere in Northern USSR. Alaskan deposits of economic potential occur near tidewater on Baranof Island and the Sitklan Passage area. (DGS.)

75720. SKRETTINGLAND, KERMIT R. Arctic field evaluation of vapor impermeable glove, flying. Fort Wainwright, Alaska, Feb. 1961. 9 p. illus. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical note 60-30.)

Evaluation by 115 selected aircrew personnel, of a glove, described and illus. by photographs and drawing, found it "unsatisfactory to a serious degree." Hence it should not be adopted for arctic use. (CaMAI.)

75721. SKRETTINGLAND, KERMIT R., *and others.* Evaluation of various types of boots in cold environments. Fort Wainwright, Alaska, Oct. 1961. 16 p. illus. tables. (U.S. Air Force Arctic Aeromedical Laboratory. Technical note 61-7.)

Reports on three phases of laboratory and field tests. The Chippewa alert boot was found to be superior to the Dehner boot, in the sitting and rest experiments. Considering heat loss, none of the four types tested proved adequate for temperatures below -12°C. (CaMAI.)

SKRIPIN, G. V., *see*

Kuz'min, A.I., *& others.* Nekotorye rezul'taty . . . kosmicheskikh luchei. 1962. No. 73251

Sokolov, V.D., & G.V. Skripin. V IAkutskoĭ laboratorii . . . 1958. No. 75806

75722. SKRIPINA, G. F. K palinologicheskoĭ kharakteristike mezozoĭskikh otlozheniĭ Viliuĭskoĭ vpadiny. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskiĭ filial. Nauchnye soobshcheniia 1962. vyp.7, geologiia, p.39-58, tables, plates, map.) 5 refs. Text in Russian. **Title tr.:** Palynologic characteristics of Mesozoic deposits of the Vilyuy depression.

Reports study of spore-pollen spectra in the western and northwestern part of Vilyuy depression, along the Linde, Irelyakh, Kempendyay, and some other rivers. Lower, Middle and Upper Jurassic, and Lower and Upper Cretaceous deposits, some subdivided in smaller stratigraphic units, were analyzed and the spore-pollen complexes obtained are described and compared. Prevailing plants are noted in each unit. (DLC.)

75723. SKROBOV, VASILIĬ DMITRIEVICH, 1910–
. . Dokhody ot okhotnich'ego promysla na ego dal'neĭshee razvitie. (Sel'skoe khoziaĭstvo Sibiri, Feb. 1961. god 6, no.2, p.70-72, table.) Text in Russian. **Title tr.:** The income from hunting must be used for its further development.

Since 1958, 20% of the value of the skins has been turned back to the hunting collective for development purposes. Distribution of the money among the hunters, as done in the Yamal-Nenets National District collectives is censured. The bonanza should be applied to feed for the wild fur-bearers, improvement of the hunting grounds, study of local fauna, aiding transportation and rewarding team leaders. (DLC.)

75724. SKROBOV, VASILIĬ DMITRIEVICH, 1910–
Metodika ustroĭstva okhotnich'ikh ugodiĭ v IAmalo-Nenetskom natsional'nom okruge. (Ratsionalizatsiia okhotnich'ego promysla, 1961, vyp.9, p.49-55.) Text in Russian. **Title tr.:** Methods of organizing hunting grounds in the Yamal-Nenets National District.

Reviews the industry which provides 20% of the collective-farm income, the 2500 hunters supplying skins, chiefly arctic fox, to the value of 15 million rubles/year. A Ministry of Agriculture RSFSR mission, with author a member, is engaged in surveying the hunting grounds and assigning them to collectives in a way to ensure due take. Methods are outlined for classifying tundras according to fox distribution and value of potential catch (50-800 rubles/1000 hectares); 17 types of hunting ground are established according to listed geomorphic conditions and vegetation. Similar efforts for the hunting industry of Bol'shezemel'skaya Tundra in the Nenets National District, in Yakutia and Magadan Province are mentioned. (DLC.)

75725. SKROBOV, VASILIĬ DMITRIEVICH, 1910–
Pesets. (Okhota i okhotnich'e khoziaĭstvo, Jan. 1961. god 7, no.1, p.17-20, illus., maps.) Text in Russian. **Title tr.:** Arctic fox.

Reports a recent study of this fox population in Bol'shezemel'skaya and Malozemel'skaya Tundras: its distribution, main areas of occurrence, construction of the den, variation in food with the fluctuation of the lemming and other rodent population; migration and its changes; biological notes on propagation are included. The arctic fox is being driven out of these areas by the common fox and measures to control the latter's expansion are required. (DLC.)

75726. SKROBOV, VASILIĬ DMITRIEVICH. Pesets i khoziaĭstvennaia deiatel'nost' cheloveka. (Priroda, Jan. 1961. god 50, no.1, p.104-105.) Text in Russian. **Title tr.:** The arctic fox and man's economic activities.

Notes that polar foxes become accustomed to noise from aircraft and railroads which at first make them hide; they live near human settlements and in bad years are noted to feed on garbage and on fish discarded by fishermen. Some farms place offal near their burrows, which increases their fertility and the income from pelts. (DLC.)

75727. SKROBOV, VASILIĬ DMITRIEVICH, 1910–
Rekonstruktsiia pestsovogo promysla. (Sel'skoe khoziaĭstvo Sibiri, Dec. 1961. god 6, no.12, p.74-75.) Text in Russian. **Title tr.:** Rehabilitation of arctic fox hunting.

Notes the 22.7 million hectare hunting grounds of the Yamal-Nenets National District, with some 65,000 arctic fox burrows, supply over 10% of these valuable fox skins to the Russian fur trade. At the low period of the three-year fox population cycle due to fluctuation in number of lemmings, supplementary feed is required. The fox stock is estimated at about 28,000 producing 54,000 pups/yr. To maintain this level in years of lemming scarcity 12,000 cwt. of feed should be supplied. (DLC.)

75728. **SKRYNNIKOV, R. G.** Korotkoperiodicheskie kolebaniĭa intensivnosti svecheniĭa polĭarnykh siĭaniĭ. (Geomagnetizm i aéronomiĭa, 1962. t.2, no.6, p.1080-83, graphs.) 7 refs. Text in Russian. **Title tr.:** Short period variations of brightness intensity in auroras.

Presents results of observations of variations of the integral flux of light emitted by auroras within the range of 0.25-0.01 cycles per sec. The observations made at Lovozero station in 1961-1962 by 180° photometers with a flat photocathode showed variations in the flux intensity analogous to those observed in the process and period of geomagnetic field, type sip. The spectrum of these variations, and their distribution in the time of the day are investigated. Some auroras showed flash variations analogous to wave train variations, and micro-bay forms of geomagnetic variation. No sinusoidal variations were observed within the frequency range investigated. (DLC.)

SKRYNNIKOV, R. G., *see also* Loginov, G.A., & *others*. Sutochnyĭ khod intensivnosti polĭarnykh siĭaniĭ . . . 1962. No. 73581

SKULACHEV, V P., *see* Severin, S.E., & *others*. Razobshchenie skisleniĭa i fosforilirovaniĭa . . . 1962. No. 75512

75729. **SKUM, NILS NILSSON, 1872–1951.** Nils Nilsson Skums självbiografi; inledning av Olov Isaksson. (Norrbotten. Norrbottens läns hembygdsförening. Årsbok 1961, p.45-53, illus.) Text in Swedish. **Title tr.:** Nils Nilsson Skum's autobiography; introduction by Olov Isaksson.

Contains this Lapp artist's reminiscences of his childhood, particularly his early interest in drawing. He was born in Jukkasjärvi parish north Sweden, withdrew from nomadic life in 1934, and entered upon an artistic career which is treated in some detail, in introduction. He became known through his book *Same sita-lappbyn* (No. 16202) and subsequently took part in many exhibitions. Six reproductions of his drawings are included. (SPRI.)

75730. **SKUNCKE, FOLKE.** Gradering av lavhedar och lavrika skogar; tillägg till meddelande 4 om Renbeten och deras gradering. 1960? 8 p., tables, 2 plates. (Lappväsendet. Renforskningen, meddelande, 5.) Text in Swedish. **Title tr.:** Grading of lichen heath and forests with large amounts of lichen; supplement to meddelande 4 on Reindeer pastures and their grading. Supplements No. 54950.

Presents results of analysis of two further sample areas in north Sweden. (SPRI.)

75731. **SKVORTSOV, A. K.** Materialy po morfologii i sistematike ivovykh, 9. (Akademiĭa nauk SSSR. Botanicheskiĭ institut. Botanicheskie materialy gerbariĭa 1961. t.21, p.83-92, illus., map.) 11 refs. Text in Russian and Latin. **Title tr.:** Materials on the morphology and taxonomy of the willows, 9.

Deals with six forms, two of them *Salix berberifolia* Pall. and *S. tschuktschorum*, n. sp. native to northeastern Asia and Kamchatka. In addition to the new species, a new subspecies of *S. berberifolia* ssp. *fimbriata*, is described. Morphology, type location, habitat, related forms, etc. are considered. (DLC.)

75732. **SLASTENOV, ĬU. L.** Stratigrafiĭa nizhnetriasovykh otlozheniĭ Kitchanskogo podniatiĭa, Zapadnoe Priverkhoĭan'e. (Leningrad. Vsesoĭuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp.186, Geologicheskiĭ sbornik no.6, p.23-31, diagrs.) 5 refs. Text in Russian. **Title tr.:** Stratigraphy of the Lower Triassic deposits of Kitchan uplift, western Verkhoyansk region.

Reports study of the Kitchan uplift between two right tributaries of the Lena: the Tumara and Dyanyshka. The Kel'ter series, its composing rocks, their distribution and paleontologic characteristics are described, and a stratigraphic division is presented, which differs from the previous one. (DLC.)

SLASTENOV, ĬU. L., *see also* Sidorov, D.P., & ĬU.L. Slastenov. K stratigrafii . . . 1961. No. 75651

SLATER WILLIAM, *Jr.*, *see* Noren, G., & *others*. Tolerance . . . atrial muscle hypothermia, anoxia. 1961. No. 74381

SLAUGHTER, MARVIN JOHN, 1906– , *see* Kachadoorian, R., & *others*. Geologic investigations . . . Project Chariot . . . 1961. No. 72604

SLAVIN, SAMUIL VENEDIKTOVICH, *see* Armstrong, T.E. . . . Terms N. USSR. 1961. No. 69870

SLEPAK, N. I., *see* Prokhorov, ĬU.D., & *others*. Issledovanie teplozashchitnykh svoĭstv odezhdy . . . 1961. No. 74961

75733. **SLIJPER, E. J.** Whales. London, Hutchinson & Co., 1962. 475 p. illus. tables, maps. About 800 refs. Revised translation by A.J. Pomerans, from the Dutch *Walvissen* pub. in 1958.

Comprehensive richly illus. study covering the great advances in whale biology in the past fifty years and the period of modern whaling. Following an historical introduction on man's knowledge of whales and practice of whaling, successive chapters deal with the evolution, morphology and anatomical peculiarities; locomotion and locomotory organs; respiration and respiratory system; heart, circulation, and blood. Behavior of whales, their hearing, sound production, senses and central nervous system, their feeding, and metabolism are treated. Distribution and migration are considered, also reproduction, and the future of whales and the whaling industry. Appended are an annotated, classified list of whales, living and extinct; names of the more common whales in seven languages, including Russian and Japanese; an extensive literature list; etc. (DI.)

SLIVKO, V. M., *see* Godlevskiĭ, M.N., & *others*. Voprosy teploobmena . . . 1962. No. 71718

SLOTNICK, HERMAN E., *see* Alaskan Science Conference 1961. 1962. No. 69644

75734. **SLOVITER, HENRY A.** Mechanism of haemolysis caused by freezing and its prevention. (Nature, Mar. 3, 1962. v.193, no.4818, p.884-85, illus., table.) 8 refs.

Reports on experiments with whole human blood, and some with erythrocyte suspensions, ethylene glycol, its polymer or salt being used as protective agents. The results indicate that cell destruction is not due to osmotic effects but due to mechanical forces of ice formation. (DLC.)

75735. **SLOVITER, HENRY A.,** *and* **R. G. RAVDIN.** Recovery and transfusion of human erythrocytes after freezing in polyglycol solutions. (Nature, Dec. 1, 1962. v.196, no.4857, p.899-900, table.) 9 refs.

Descriptions of the polyglycol solutions, of method of freezing and storage (at -79°C.) and of recovery. It was found that recovery of these cells decreases as storage time increases. The greatest cell losses occurred during washing after thawing. (DLC.)

SLUTSKIĬ, S. IA., *see* Kurashov, S.V. Kurorty SSSR. 1962. No. 73222

SLY, JOHN F., *see* Alaska. Revenue & taxation . . . 1962. No. 69628

75736. **SMED, JENS.** Monthly anomalies of the surface temperature in areas of the northern North Atlantic in 1958, 1959. (International Council for the Exploration of the Sea. Annales biologiques 1958-1959, *pub.* 1960-1961. v.15, p.14-15; v.16, p. 22-23; tables, maps.)

Reports on data from Danish and Icelandic ships, evaluated for each month and each 1°-square using Ryder's grand monthly means of 1876-1915. Evaluation and comparison with 1957 indicate that positive anomalies still predominate in all areas. (DI.)

75737. **SMETANIN, D. A.** Nekotorye cherty khimii vod severo-vostochnoĭ chasti Tikhogo okeana po nabliūdeniiām zimoĭ 1958-1959 gg. (Akademiia nauk SSSR. Institut okeanologii. Trudy, 1961. t.45, p.130-41, illus., maps.) 12 refs. Text in Russian. Summary in English. **Title tr.:** Some chemical traits of the northeastern Pacific according to observations in the winter 1958-1959.

Reports a study of oxygen distribution on the surface and at different levels, including 1000, 2000 and 3000 m. with a series of profiles. The layer of minimum oxygen is also surveyed and the surface distribution of phosphates and silica mapped. The Gulf of Alaska is included in the survey. (DLC.)

75738. **SMETANIN, G. F.** U ovtsevodov Severa. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Dec. 1961. god 4, no.12, p.50-52, table.) Text in Russian. **Title tr.:** With the sheepbreeders of the North.

Outlines sheep raising in the Ust'-Tsil'ma and Izhma Districts of Komi ASSR. The best results are achieved with a local semi-fine fleece breed; its specifications are given and methods of tending and feeding discussed; it produces 150 lambs/100 ewes. Sheep-raising collectives make 15-30 rubles (new currency)/head/yr. (DLC.)

75739. **SMETANNIKOVA, A. V.** Teploobmen mezhdu morem i atmosferoĭ v Arktike v zimniĭ period. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy, 1960. t.10, vyp.1, Fizicheskaia okeanografiia, p.82-89, tables, graphs.) 4 refs. Text in Russian. **Title tr.:** Heat-exchange between sea and atmosphere in the Arctic in the winter period.

Reviews observations and results of various scientists. D.L. Laĭkhtman's method (No. 59548) for calculating the heat balance for snow and ice covered sea surface is explained. Heat-exchange processes of the Kara Sea are analyzed, on the basis of Oct.-Nov., Apr.-May observations over several years from the Cape Chelyuskin, Dikson Island, Cape Zhelaniya and Tikhaya Bay stations. The heat budget data are given by month and station. Radiation, the interchange of sensible heat with the atmosphere, evaporation, and other factors are summarized. (DLC.)

75740. **SMETANNIKOVA, A. V.** Teploobmen mezhdu okeanom i atmosferoĭ v Arktike v zimniĭ period. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1961. t.229, Radiatsionnyĭ i teplovoĭ balans Arktiki, p.175-201, tables, graphs.) 18 refs. Text in Russian. **Title tr.:** Heat exchange between ocean and atmosphere in the Arctic during winter.

The problems of heat exchange are discussed, and characteristics of heat balance peculiarities of certain Kara Sea regions are obtained from data of the Cape Chelyuskin, Dikson, Cape Zhelaniya, and Tikhaya Bay polar stations. Analogous information is obtained for the Central Arctic from measurements of temperature gradient in snow, its heat conductivity, and radiation balance. Observational material of the drifting stations North Pole-2, -4, and -5 are used to show the temperature variation of ice cover and the underlying surface in terms of the thickness of the overlying layer of snow. The radiation balance for the Central Arctic is determined to be on the average 2.0 - 2.2 kcal/cm² per month. (CaMAI.)

75741. **SMIREĬ, V. A.** Gidrologicheskie usloviia severo-vostochnoĭ chasti Tikhogo okeana v osenne-zimniĭ period 1958-59 gg. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.45, p.86-97, tables, maps.) 2 refs. Text in Russian. Summary in English. **Title tr.:** Hydrological conditions in the northeastern Pacific during fall and winter 1958-1959.

Outlines investigations carried out during the 29th run of the *Vitiaz'* from October till February. Temperature and salinity at 1.50, 100, 250, 500, 1000, and 2000 m. were recorded and mapped. Distribution of water masses is reconstructed and currents at various depths determined and mapped. The Gulf of Alaska and the Aleutian waters are included. (DLC.)

SMIRNIAGIN, L. V., *see* Antonova, I.F., & L.V. Smirniagin. . . . razmeshcheniia gornodobyvaiushcheĭ promyshlennosti Kanady. 1961. No. 69823

SMIRNOV, A. A., *see also* Frolov, A.D., & A.A. Smirnov. . . . rasprostraneniia ul'trazvuka . . . merzlykh gornykh porod. 1961. No. 71518

75742. **SMIRNOV, A. D.** Pribor dlia laboratornykh i polevykh issledovaniĭ impul'snym zvukovym i ul'trazvukovym metodom gruntovykh sistem i gornykh porod. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Fiziko-khimicheskie protsessy v promerzaiushchikh i merzlykh gornykh porodakh, 1961, p.102-105, graphs, diagrs., incl. one fold.) 6 refs. Text in Russian. **Title tr.:** Instrument for laboratory and field studies of ground systems and rock by means of the impulse- and ultra-sonic method.

Describes instrument claimed applicable to a wide range of studies of frozen and unfrozen media. Block and schematic diagrams are included. (DLC.)

75743. SMIRNOV, A. S., *and others.* Konvertirovanie nikel'soderzhashchikh mednykh shteĭnov. (TSvetnye metally, Jan. 1962. god 35, no.1, p.31-37, illus., tables.) 3 refs. Text in Russian. *Other authors:* A.IU. Malevskiĭ *and* A.V. Vanīūkov. **Title tr.:** Conversion of nickeliferous copper matte.

In the copper-smelting plant at Noril'sk, the reverberating furnace produces matte of 2.8-3.0% Ni content, and the electric furnace, that of 3.5-4.0% Ni. The processing of copper, separation and extraction of nickel are described in technical detail; possibility of increasing efficiency is discussed. (DLC.)

75744. SMIRNOV, ALEKSEĬ PETROVICH, 1889–

, O rabote sektorov i grupp Instituta arkheologii AN SSSR v 1958 godu; gruppa finno-ugorskoĭ arkheologii. (Akademiīa nauk SSSR. Institut arkheologii. Kratkie soobshcheniīa, 1961. vyp.85, p.138-42.) Text in Russian. **Title tr.:** Work of sectors and groups of the Institute of Archeology, Academy of Sciences, USSR in 1958; Finno-Ugric archeology group.

Includes, p.141, summary of a report by V.I. Moshinskaīa on Ostyak mortuary portrait figurines of wood, stone, or metal. They were considered the repository of the "fourth soul" of the deceased. They appeared in the bronze age and attained greatest popularity in the iron age. (DLC.)

SMIRNOV, B. A., *see* Bordovskiĭ, O.K., & B.A. Smirnov. Strukturno-gruppovoĭ sostav . . . bitumov . . . 1962. No. 70328

75745. SMIRNOV, G. I. Kharakteristika mineralov-sputnikov almaza. (*In:* Akademiīa nauk SSSR. IAkutskiĭ filial. Almazy IAkutii . . . 1961, p.71-86, illus., tables.) 7 refs. Text in Russian. **Title tr.:** Characteristics of mineral-satellites of diamonds.

Satellites of diamonds are minerals whose formation took place in the same magmatic focus and under same physical and chemical conditions as the diamond. Such minerals are: pyrope, picroilmenite, olivine, chrome-diopside, magnochromite. Each is described, noting its occurrence in diamonds of Yakutia, its chemical composition and other properties. Pyrope is considered most characteristic for purposes of diamond search. (DLC.)

75746. SMIRNOV, G. I. Zhelezistyĭ palygorskit (ksilotil) v kimberlitakh. (Geologiīa i geofizika, 1962, no.1, p.129-34, illus., tables, graph.) 8 refs. Text in Russian. **Title tr.:** Ferriferous palygorskite (xylotile) in kimberlites.

Reports a mineralogic study of palygorskite found in the Mir and Leningradskaya kimberlite pipes in Yakutia. Physical properties are described and chemical, X-ray and thermic analyses are presented. This ferriferous palygorskite has an intermediate position between sepiolite, and typical xylotile. Its occurrence and origin are discussed. (DLC.)

SMIRNOV, G. I., *see also* Bobrievich, A.P., & G.I. Smirnov. Rogovaīa obmanka . . . 1959. No. 70264

75747. SMIRNOV, L. P. Stratigrafiīa melovykh kontinental'nykh otlozheniĭ Popigaĭskoĭ kotloviny. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Trudy 1962. t.121, vyp.18. Sbornik statei po geologii i neftegazonosnosti Arktiki, p.29-43, illus., map, cross-sections.) 2 refs. Text in Russian. **Title tr.:** Stratigraphy of the Cretaceous continental deposits of the Popigay basin.

Reports the structure and geomorphology of this 6000 km² basin in north-central Siberia, approx. 72°N. 105°-110°E. The volcanic and normal sedimentary rock is treated and divided into four horizons (in order from below): tuff-lava, agglomerate tuffs, volcanic and sedimentary rocks, and the uppermost horizon of lava and tuff-lava. Each is described in turn, as to distribution, area, deposition, thickness and other features, the volcanic and sedimentary rock horizon in greater detail, its various layers, minerals, spore-pollen complexes. The Popigay Cretaceous volcanism is characterized. (DLC.)

SMIRNOV, L. P., *see also* Gaĭnanov, A.G., & L.P. Smirnov. Stroenie zemnoĭ kory . . . 1962. No. 71545

75748. SMIRNOV, N. F. Stratigrafiīa permskikh otlozheniĭ nizhnego techeniīa r. Kotuĭ. (Leningrad. Vsesoīūznyĭ neftīanoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1962. vyp.190, geologicheskiĭ sbornik no.7, p.454-57.) 2 refs. Text in Russian. **Title tr.:** Stratigraphy of the Permian deposits on the lower course of the Kotuy River.

Reports new data on these deposits from study of them in 1959. Lower and upper Permian are distinguished and described, noting lithologic properties, fauna and flora. The distribution of chemical elements: Ba, Mn, Cr, V, Sr, etc. in these deposits is noted. (DLC.)

SMIRNOV, N. S., *see* Kuz'min, A.I., & *others.* Iīūl' 1959 g . . . 1962. No. 73250

75749. SMIRNOV, SERGEĬ SERGEEVICH, 1895–1947. Dopolnitel'nye materialy po rudoproīavleniīam Verkhoīanskogo khrebta. (*In his:* Rudnye mestorozhdeniīa . . . 1962, p.158-80, tables, text maps.) Text in Russian. **Title tr.:** Supplementary materials on ore manifestations in the Verkhoyansk Ridge.

Reports tin, copper-arsenic, zinc and other ore manifestations in the Echiy (66°05′N. 131° 25′E.) and Bol'shoy Endybal assemblies. The southern part of the Echiy unit and the tin-containing Imtandzha veins are treated and mineralization of the ore deposits is described. Hypogenic and supergene minerals of these deposits are analyzed. In the Bol'shoy Endybal River region ore manifestation is reported in 12 areas, stressing the Bezymyannyy deposits as possible source of silver ores. Brongniardite, mangan-siderite, cassiterite and sphalerite minerals are described. (DLC.)

75750. SMIRNOV, SERGEĬ SERGEEVICH, 1895–1947. K minerogenii Sredne-Sibirskoĭ platformy, Angaro-Ilimskie zhelezorudnye mestorozhdeniīa. (Problemy sovetskoĭ geologii, 1933, no.10, p.97-121, diagr., maps.) Reprinted in his *Rudnye mestorozhdeniīa,* 1962, p.242-66. 5 refs. Text in Russian. **Title tr.:** On the mineral genesis of the Middle Siberian platform; Angara-Ilim iron ore deposits.

Describes eleven deposits in these river basins, and analyzes their geologic position and main features. Composition and structure are treated in detail, and divided into Angara and Ilim groups. The magnetite composition is dealt with.

Genesis of the deposits is interpreted. Editorial note is added in the 1962 reprint, that twenty iron ore deposits are now known in this region, with reserves as of Jan. 1, 1959, of more than one billion tons. (DLC.)

75751. SMIRNOV, SERGEĬ SERGEEVICH, 1895–1947. Ocherk metallogenii i rudnye mestorozhdeniĭa Okhotsko-Kolymskogo kraĭa. (*In his:* Rudnye mestorozhdeniĭa . . . 1962, p.80-119, text maps.) Text in Russian. **Title tr.:** Outline of the metallogeny and ore deposits of the Otkhotsk-Kolyma region.

Characterizes the metallogenic province extending from the Lena and Aldan eastward to the Chukotka Peninsula and including several ore regions: the upper Kolyma, Dzhugdzhur, western Verkhoyansk region, and the Bezymyannyy, Orulgan, Tas-Khayakhtakh Mountain Ranges. The most important is the so-called Kolyma-Verkhoyansk belt with Lower Cretaceous metallogeny and development of gold, silver, tin, lead, zinc, arsenic and antimony deposits. The metallogeny of all lead and zinc deposits are an important element of Okhotsk-Kolyma metallogeny. Development of copper, antimony and molybdenum deposits also are noted. (DLC.)

75752. SMIRNOV, SERGEĬ SERGEEVICH, 1895–1947. Rudnye mestorozhdeniĭa i metallogeniĭa vostochnykh raĭonov SSSR. Moskva, Izd-vo Akademii nauk SSSR, 1962. 360 p. tables, maps incl. fold., diagrs. Refs. Text in Russian. **Title tr.:** Ore deposits and metallogeny of the eastern regions of the USSR.

Posthumous collection of his previously published and unpublished papers dealing with geology, ore deposits and metallogeny of Eastern Siberia, the Kolyma River region, Verkhoyansk Ridge, Transbaykal, etc. Special attention is given to the geology of tin, tungsten, iron ore and some other deposits. Smirnov did pioneering work in the region between the Lena and the Pacific and his papers have lasting value. Several have been abstracted in earlier volumes of this Bibliography: No. 16273, 26276, 26381, 32120 and 32124, and three others *supra.* (DLC.)

75753. SMIRNOV, V. V glub' netronutoĭ taĭgi. (Master lesa, Apr. 1961. no.4, p.16-17, illus. including col. illus. on front cover.) Text in Russian. **Title tr.:** Into the middle of the virgin taiga.

Describes construction of the railroad from the Ivdel' station in the Northern Ural to the Ob River (Narymkary?): it is to reach the Konda River (224 km.) in 1962, and the Ob in 1963; laying of the ties and rails in units 20 m. long is mechanized; a 186 m. bridge was put across Loz'va River in four days, etc. (DLC.)

75754. SMIRNOV, V. B. Samoletnye izmereniĭa dreĭfa i razmerov neodnorodnosteĭ sloĭa *E* v tsentral'noĭ Arktike. (Akademiĭa nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniĭu Mezhdunarodnogo geofizicheskogo goda, V razdel programmy MGG: ionosfera. Sbornik stateĭ 1961. no.9, p.14-17, graphs.) 2 refs. Text in Russian. Summary in English. **Title tr.:** Measurements from aircraft of the drift and size of layer *E* inhomogeneities in the Central Arctic.

Proposes a method for such measurements: an adapter for the ionospheric auto-recorder enables the amplitude of reflected radio signals having a fixed frequency in the 0.5-10 Mhz range to be registered. The method was used in four flights near the North Pole during April 1960. Velocities of the ionospheric inhomogeneities were found to be of the order of 70 m./sec., and their sizes equal to about 60 km. (DLC.)

75755. SMIRNOV, VLADIMIR IVANOVICH, 1910– . Essai de subdivision métallogénique du territoire de l'U.R.S.S. (Société Geologique de France. Bulletin, Apr. 1960. ser. 7, t.1, no.5, p. 511-26, maps, diagr.) 17 refs. Text in French. **Title tr.:** Attempt at metallogenic subdivision of the U.S.S.R.

Translation of No. 61741 from Russian into French by Service Information Géologique. (DGS.)

SMIRNOVA, L. I., *see* Petersil'e, I.A., & *others.* Opyt primeneniĭa gazovogo karottazha . . . 1961. No. 74750

75756. SMIRNOVA, O. K., *and* **M. M. ODINTSOVA.** Materialy k stratigrafii nizhneĭurskikh otlozheniĭ v doline r. Tĭung. (*In:* Akademiĭa nauk SSSR. IAkutskiĭ filial. Almazy IAkutii . . . 1961, p.165-71, sketch map.) 11 refs. Text in Russian. **Title tr.:** Materials on the stratigraphy of Lower Jurassic deposits in the Tyung River valley.

Reports a study of the fauna and microfauna (foraminifers) of these deposits, also palynological investigation. A stratigraphic scheme is presented, dividing the deposits into three horizons, which are briefly described in turn, noting the fauna. (DLC.)

75757. SMIRNOVA, Z. I. O neobkhodimosti povysheniĭa effektivnosti geofizicheskikh rabot pri poiskakh rudnykh mestorozhdeniĭ. (Sovetskaĭa geologiĭa, Nov. 1961, no.11, p.174-77.) Text in Russian. **Title tr.:** On the need to increase efficiency of geophysical work in the prospecting of ore deposits.

Reports conference at Leningrad Feb. 21-24, 1961, with some three hundred participants representing 73 organizations. Progress and development are reviewed, and the requirement for geophysical prospecting is dealt with: Kola Peninsula, the Ural and the Siberian platform are noted as critical areas. (DLC.)

SMIRNOVA, ZOIA NIKOLAEVNA, 1898– , *see* Abramova, A.L., & *others.* Opredelitel' . . . mkhov . . . 1961. No. 69467

Savich, L.I., & *others.* Opredelitel' . . . mkhov. 1961. No. 75383

75758. SMIRNOW, LEONID. Oil basins surround the Arctic Ocean. (World oil, Feb. 1, 1961. v.152, no.2, p.27-32, maps, graphs.) 6 refs.

Surveys structure of the Precambrian Arctic Mass or platform, and three adjacent platforms or shields: the Canadian-Greenland Shield, the Russian-Siberian Platform, and a possible Scandinavian platform. Possible arctic oil basins formed by movement of the Arctic Mass are shown on maps and sections and described briefly, with special attention to the Canadian Arctic Islands. (DGS.)

75759. SMITH, AUDREY URSULA. Cooling animal life. (Discovery, Oct. 1961. v.22, no.10, p.454-57, graphs, diagrs.)

Outline of main advances in hypothermic research and its application since 1948: techniques, including extracorporeal cooling and warming; hypothermia at near-freezing and at freezing temperatures with survival; physiology and pathology of hypothermia; low temperature effects on isolated tissues and cells. (DLC.)

75760. SMITH, CHARLES HADDON, 1926– . Notes on the Muskox Intrusion, Coppermine River area, District of Mackenzie, 86 J and 86 O (parts of). Ottawa, Queen's Printer, 1962. 16 p. diagr., tables; Map 36-1961, 5 sheets fold. in pocket. (Canada. Geological Survey. Paper 61-25.) Ref.

Describes, and maps on scale of 1 in = 0.5 mi., this layered basin intrusion which outcrops about 90 mi. northeast of Port Radium on Great Bear Lake and extends 74 mi. from 66°11′N. 114°42′W. to 67°14′N. 115°04′W. The four structural units of the intrusion contain a wide range of rock types formed by magmatic differentiation. The upper part has widened out near the unconformity between two major country-rock units; the unconformity has apparently exerted a structural control and caused the magma to spread into its present funnel-shaped form. Economic mineral deposits are of two types: sulfide deposits along the margins, and a chromite-sulfide horizon in a pyroxenite layer of the central layered series. (DGS.)

SMITH, CHARLES HADDON, 1926– , *see also* National Research Council. Symposium . . . International Upper Mantle Project. 1961. No. 74227

75761. SMITH, DAVID DWYER. Sequential development of surface morphology on Fletcher's Ice Island, T-3. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.896-914, illus., maps, graphs, table.) 18 refs.

Describes results of author's 3.5 months' work during the summer 1958, on detailed mapping also reconnaissance traverses, in connection with the IGY. Occupation of T-3, weather, the snow and ice conditions are briefly reported; and the ridges and valleys forming the gently undulating topography are delineated. Pack ice, driven aboard the island, forms an almost continuous ridge along the northeastern edge. Three orders of relief forms are distinguished, reflecting variations in melting or ablation. Modern lake ice seems to be most resistant to ablation, iced firn most susceptible. During successive seasons, surface forms caused by ablation characterize a successive reversal of relief. Life expectancy seems greatest for first-order ridges and valleys. Current work on the Ellesmere Ice Shelf is expected to provide data for comparison between the two areas. (DGS.)

75762. SMITH, DAVID INGLE. The glaciation of northern Ellesmere Island. (*In:* International Geographical Congress 1960. Physical geography . . . 1961. p.224-31, maps.) 12 refs.

Discusses problems of earlier glaciation of this part of the Island, based on studies of erratics and other glacial features on Operation Hazen 1957-1958. Author concludes that at one period, northern Ellesmere was completely covered by ice from a local glaciation and not from the Greenland Inland Ice. Evidence for post-glacial marine submergence was found in banded marine clays observed at 140 ft., marine shells, etc. (DGS.)

SMITH, FRED M., *see* Pettus, T. Expedition . . . 1962. No. 74764

75763. SMITH, GORDON W. The transfer of arctic territories from Great Britain to Canada in 1880, and come related matters, as seen in official correspondence. (Arctic, Mar. 1961. v.14, no.1, p.53-73.) 103 refs.

Reconstructs the negotiations of 1874-1880 on this transfer of territories not already under Canadian jurisdiction. Difficulties involved are discussed: determination of which terrirories were subject to the transfer especially in the islands north of the mainland; the most expedient means of effecting the transfer, by imperial act or order-in-council; etc. Delimitation of the northern and eastern boundaries of the transfer area was attempted, but the attempt ultimately abandoned. (DGS.)

SMITH, HARVEY R., *see* National Northern Development Conference. 1961. No. 74224

75764. SMITH, J. R. Developments in mining at Giant Yellowknife. (Canadian Institute of Mining and Metallurgy, Transactions, 1961. v.64, p.295-300, plans, sections, tables.) 2 refs. In sequence to No. 30602. Also reported in *Canadian mining and metallurgical bulletin* July 1961, p.494-99.

Summarizes operations at the gold mine near Great Slave Lake, mainly since 1955: shaft A is now used only for ventilation; B is in operation as a service shaft; C deepened to 2124 ft. in 1959, handles all ore and waste and most of the servicing. Development and extraction practices are outlined; all ore, except for pillar recovery, is now mined by horizontal cut and fill. A new ventilation-heating plant was installed in 1957, utilizing shaft A as the downcast airway and all other openings to surface as upcast, thus avoiding the usual problems of freezing air entry. Mining costs have been reduced during the past five years, largely because of improved techniques, more suitable equipment, stabilized and better-trained working force, and research. (DI.)

SMITH, J. W., *see* Fisher, B., *& others.* Temperature gradients . . . 1961. No. 71425

SMITH, PETER, *see* Imperial College. Spitsbergen Exped. 1960. No. 72357

75765. SMITH, PHILIP EDWARD LAKE, 1927– . Solutrean origins and the question of eastern diffusion. (Arctic anthropology, 1962. v.1, no.1, p.58-67, illus.) 37 refs.

Study of the Solutrean period in Europe rejecting it as the source of the typologically upper-paleolithic traits in northeastern Asia and North America: bifacial foliates, New World pressure flaking, etc. (DSI.)

75766. SMITH, PREBEN V., 1916– . Den glaedelige utilfredshed. (Atuagagdliutit; Grønlandsposten, Jan. 1, 1961. Ukiut 101-iat, nr.1, p.76-77, 98-99, illus.) Text in Danish and Eskimo. **Title tr.:** Comfort in discomfort.

Sketches the history of medical services in Greenland. After colonization started in 1721, doctors came occasionally during the first century, and resident posts were established 1838, with

district doctors appointed to Godthåb and Jakobshavn. The first trained Danish nurse was appointed in 1906, but the training of native midwives was initiated in 1839. The first hospital was built in 1856. Present conditions are outlined. (CaMAI.)

SMITH, R. F., *see* Macksood, A.J., & *others*. Maintenance . . . kidney. 1961. No. 73714

SMITH, ROBERT A., *see* Alaskan Science Conference 1960. 1961. No. 69643

SMITH, ROBERT B., *see* Alaskan Science Conference 1960. 1961. No. 69643

SMITH, ROBERT EMRIE, 1913– , *see* Adams, T., & R.E. Smith. Effect chronic local cold exposure. 1962. No. 69483

75767. SMITH, W. E. T. Earthquakes of eastern Canada and adjacent areas 1534-1927. Ottawa, Queen's Printer, 1962. 271-301 p., graph, fold. map in pocket. (Canada, Dominion Observatories Publications, v.26, no.5.) 80 refs.

First in a series intended to cover earthquake history of the area east of 85°W. 40°-60°N. Of some three hundred quakes reported; four were in northerly localities; all were of moderate intensity. (DLC.)

75768. SMITH, W. E. T. Earthquakes of the Canadian Arctic. Ottawa, 1961. 9 p. table, map. (Canada. Dominion Observatory. Seismological series, 1961-2.) Ref.

Lists chronologically 184 events, giving strength and epicenter or distance from Resolute; 19 are plotted on the map. Most were recorded at Resolute. (SPRI.)

75769. SMITH, WILLIAM M., *and* **M. B. JONES.** Astronauts, antarctic scientists and personal autonomy. (Aerospace medicine, Feb. 1962. v.33, no.2, p.162-66, illus., table.) 7 refs.

The astronauts and scientists described themselves as far more individualistic in the Pensacola Z Scale than comparison groups of naval aviation cadets and retrainees. In the polar group, self-described individualism was positively associated with the performance rating of the leaders, made after antarctic wintering, and held only for men with previous polar experience. (DLC.)

SMITHSON, GEORGE A., *see* National Northern Development Conference. 1961. No. 74224

SMITHURST, ROY, *see* Oschinsky, L., & R. Smithurst. Odontology . . . E. Can. Eskimos. 1962. No. 74549

75770. SMOLIĀK, A. V. Magicheskie obrīady sokhraneniīa zhizni detei u narodov Nizhnego Amura. *(In:* Akademiīa nauk SSSR. Institut ėtnografii. Trudy t.78, Sibirskiĭ . . . 1962, p.267-75.) 14 refs. Text in Russian. **Title tr.:** Magic rites for child-life preservation among peoples of the lower Amur region.

Describes traditional acts believed by Ulchi-Tungus, Gilyaks, and Golds to have power to protect children; over 60 are discussed in turn from field work during 1947-1960. The rituals have a twofold purpose: to deceive evil spirits by subterfuge and ensure the infant's survival by contact magic. Despite socio-cultural development of recent decades and a sharp decrease in child mortality, some of the rites are still practised by oldsters. (DSI.)

75771. SMOLIĀK, A. V. Soveshchanie po fol'kloru narodnostei Krainego Severa. (Sovetskaīa ėtnografiīa, Nov.-Dec. 1961, no.6, p.127-28.) Text in Russian. **Title tr.:** Conference on the folklore of the peoples of the far North.

Reports the conference at Leningrad, May 30-June 3, 1961, with most of the papers on problems of collecting and treatment of the materials. Recently published collections of Chukchi and Eskimo poetry and songs are noted. (DLC.)

75772. SMOLIĀK, A. V. Vsesoīūznoe soveshchanie po voprosam nauchno-ateisticheskoĭ propagandy v svete reshenii XXII s"ezda KPSS. (Sovetskaīa ėtnografiīa, July-Aug. 1962, no.4, p.182-85.) 2 refs. Text in Russian. **Title tr.:** All-Union conference on problems of scientific atheistic propaganda in the light of decisions taken at the 22nd Communist Party Congress.

Notes, among other, insufficient concern with the eradication of pre-Christian and pre-Islamic creeds of the Siberian aborigines: worship of mountain, river, and forest spirits, bear festivals, shamanism, etc. (DLC.)

75773. SMOLIĀNITSKIĬ, S. Gorod bol'shoĭ nauki. *(In:* Marīagin, G.A. Goroda, kotorykh ne bylo na karte, 1960, p.112-31, illus.) Text in Russian. **Title tr.:** The town of great science.

Recounts the setting up of the Siberian Division of the Academy of Sciences of USSR in 1957, and the founding of a town, Akademgorodok, near Novosibirsk for its 14 main institutes, university and their personnel. The role of this scientific center in the economic, industrial and cultural development of Siberia is stressed. (DLC.)

75774. SMOL'NIKOV, IGOR'. O poėzii Severa. (Neva, 1961, no.3, p.202-203.) Text in Russian. **Title tr.:** Poetry of the North.

Analyzes poems by a Gold, Chukchi, Vogul and an Evenki-Tungus, viz: Andreĭ Passar, Viktor Keul'kut, IŪvan Shestalov, and Al'bert (Alitet) Nemtushkin. The verses are weak in dynamics and lyricism, poor in structure, stilted in imagery, and very wordy, but the poor translation may be partly responsible. (DLC.)

75775. SMORODOV, P. Karel'skaīa zemlīa daet vysokie urozhai kartofelīa. (Sel'skoe khozīaĭstvo Severo-Zapadnoĭ zony, July 1961. god 4, no.7, p. 6.) Text in Russian. **Title tr.:** Karelian land yields high crops of potatoes.

Reports the 1960 crop planned at 115 cwt./hectare, as harvested at 136 cwt., and the total crop 164%, above that expected; 6,668 hectares were in potatoes. The most successful state farms and the outstanding workers in various parts of Karelia are cited. (DLC.)

75776. SMORODOV, P. Pamīatka zverovodu. (Sel'skoe khozīaĭstvo Severo-Zapadnoĭ zony, Apr. 1961. god 4, no.4, p.94.) Text in Russian. **Title tr.:** Reference book for the fur farmer.

Reviews book of this title by N.N. Negreeva, published in Karelia, noting the rapid growth of the industry in that republic, where 13 state fur farms have been organized recently. (DLC.)

75777. SMYTH, J. D. The chromosome number of *Echinococcus granulosus.* (Journal of parasitology, Aug. 1962. v.48, no.4, p.544, illus.)

Discusses techniques for producing mitoses,

staining, chromosomes (2n = 18), chromosome numbers of related species. (DLC.)

75778. SNOWDEN, DONALD S. Eskimo commercial fisheries. (Polar record, Jan 1961. v.9, no.67, p.382-84.)

Describes the establishment, since 1958, of arctic char fisheries at George River and Port Burwell, in Quebec, and Frobisher Bay on Baffin Island. The first two are Eskimo cooperatives, the last is under the Dept. of Northern Affairs which sponsored all three and aids in marketing the fish as a luxury product in the south. About 46,000 lbs. of char were produced in 1960. (DI.)

75779. SNOWDEN, DONALD S. Eskimo fine crafts another arctic find. (North, Jan.-Feb. 1962. v.9, no.1, p.1-11, +, illus.)

Describes the Dept. of Northern Affairs' program for production and marketing of skin clothing, footwear, tapestries, stuffed animals, dolls, grass baskets, etc. hand-made by Canadian Eskimo women. Eskimo cooperatives handle marketing details; new items are tested on the market by the Dept. Imitation craft objects are produced by industrial concerns, so tags are used to authenticate the Eskimo-made articles. (CaMAI.)

SNOWDEN, DONALD S., *see also* Iglauer, E. . . . The People: Eskimo co-op. 1962. No. 72331

SNYDER, GEORGE LEONARD, 1927– , *see* Drewes, H., & *others*. Geology of Unalaska . . . shelf. 1961. No. 71108

SNYDER, M., *see* Bacharach, B., & *others*. Co_2 & brain cooling. 1961. No. 69953

75780. SOBININ, V. A. Primenenie èlektrosveta pri iarovizatsii kartofelia. (Sel'skoe khoziaistvo Severo-Zapadnoĭ zony, Mar. 1961. god 4, no.3, p.27-29, table.) Text in Russian. **Title tr.:** Use of electric light for potato vernalization.

Reports work of the Komi agricultural experiment station in 1960: potatoes vernalized by electricity for 55 days before planting yielded 190 cwt./hectare, those vernalized with natural light 147 cwt. The convenience of the electric light is noted and this method recommended for northern areas where, as in Komi, the vegetation period is short. (DLC.)

75781. SOBOLEV, K. N. Opyt Murmanskogo rybokombinata v izgotovlenii banok no.27. (Rybnoe khoziaistvo, 1962, god 38, no.9, p.81-83, diagrs.) Text in Russian. **Title tr.:** Experience of the Murmansk fish combine in manufacture of no. 27 cans.

Describes changes in the equipment for making these unusually large cans, and in its operation. These cans have been manufactured by the combine since 1958. (DLC.)

75782. SOBOLEV, N. V., *and* **N. V. LODOCHNIKOVA.** K mineralogii granatovykh peridotitov. (Geologiia i geofizika, 1962, no.6, p.52-59, illus., tables, diagrs.) 18 refs. Text in Russian. Summary in English. **Title tr.:** On the mineralogy of garnet peridotite.

Reports results of mineralogic investigation of samples from Czechoslovakia and compares them with garnet peridotites occurring in xenolith form in kimberlite pipes of Yakutia. The close similarity of garnet and olivine from these rocks is noted along with insignificant differences. (DLC.)

75783. SOBOLEV, VLADIMIR STEPANOVICH, 1908– . Osobennosti vulkanicheskikh proiavleniĭ na Sibirskoĭ platforme i nekotorye obshchie voprosy geologii. (Geologiia i geofizika, 1962, no.7, p.8-15.) 16 refs. Text in Russian. Summary in English. Paper was presented at the international Pacific Science Congress, 1961. **Title tr.:** Features of volcanic manifestations in the Siberian platform and some general problems of geology.

Distinguishes two main types: trap volcanism and volcanism which led to formation of alkaline and ultrabasic rocks, kimberlites included. The trap magma was formed as a result of regional melting of the basaltic layer in its upper parts, whereas ultrabasic magma was formed in deeper subcrustal peridotite horizons. Magma of kimberlites was formed in small chambers at 70-100 km. depth. The question of meteorite diamonds is discussed, noting possible disintegration of a large cosmic body. (DLC.)

75784. SOBOLEV, VLADIMIR STEPANOVICH, 1908– , *and* **V. V. REVERDATTO.** Vysokotemperaturnaia mineral'naia assotsiatsiia v kontaktah differentsirovannoĭ trappovoĭ intruzii na r. Nizhneĭ Tunguske. (Geologiia i geofizika, 1962, no.5, p.137-38.) Text in Russian. **Title tr.:** High temperature mineral association at contacts of differentiated trap intrusion on the Nizhnyaya Tunguska River. Summary of paper prepared for the International Mineralogical Congress, Washington, D.C., 1962.

Notes briefly the complex of contact minerals of the Anakit intrusion, which represents a typical example of metamorphism of larnite-merwinite-spurrite minerals. Presence of tridymite enables the temperature of contact metamorphism to be determined at over 870° C., spurrite and tillite indicate it up to 950-1000° C. (DLC.)

SOBOLEV, VLADIMIR STEPANOVICH, 1908– , *see also* Bobrievich, A.P., & V.S. Sobolev. Kimberlitovaia formatsiia . . . 1962. No. 70262

75785. SOBOLEV, Z., *and* **V. KOSTKO.** Pod kontrolem mass. (Sotsial'noe obespechenie, Apr. 1962. god 23, no.4, p.27-28.) Text in Russian. **Title tr.:** Control by the masses.

Describes the widening network of social security information agencies in Tyumenskaya Province, including the Khanty-Mansi and Yamal-Nenets National Districts. The 127 branch offices, 115 committees, and itinerant commissions have been organized to make local inhabitants aware of their pension and welfare rights, etc. (DLC.)

75786. SOBOLEVA, V. I. Vliianie obshchego okhlazhdeniia i gibernatsii na vosstanovlenie zhiznennykh funktsiĭ zhivotnykh perenesshikh klinicheskuiu smert' ot ostroĭ krovopoteri. (Patologicheskaia fiziologiia i èksperimental'naia terapiia, 1962. t.6, no.1, p.28-33.) 17 refs. Text in Russian. Summary in English. **Title tr.:** Effect of general hypothermia and hibernation upon restoration of vital functions in animals undergoing clinical death from severe blood loss.

When terminal state developed in dogs during chemically induced poikilothermia, alone, or combined with hypothermia, resuscitation through arterial pressure became difficult or impossible. The effect of neuroplegics applied, is considered responsible for failure of the nervous control of the cardiovascular system and of revival. (DLC.)

75787. **SOBOLEVA, V. I.,** *and others.* Vosstanovlenie zhiznennykh funkt͡siĭ zhivotnykh posle dlitel'nykh srokov klinicheskoĭ smerti v usloviĭakh izolirovannogo okhlazhdeniĭa golovnogo mozga. (Biŭlleten' éksperimental'noĭ biologii i medit͡siny, Oct. 1962. t.54, no.10, p.33-36.) 13 refs. Text in Russian. Summary in English. *Other authors:* N.V. Semenov *and* B.O. Gorokhovskiĭ. **Title tr.:** Restoration of vital functions in animals after prolonged periods of clinical death produced by local cooling of the brain.

Dogs made hypothermic to 32.9°- 29.5° C. with the brain cooler by 4 to 8.6° C. were resuscitated after 30 minutes of "clinical death". Results did not differ from those produced by general hypothermia except that revival was much more difficult. (DLC.)

SOBOLEVSKAĬA, R. F., *see* Obut, A.M., & R.F. Sobolevskaĭa. Graptolity rannego ordovika na Taĭmyre. 1962. No. 74461

75788. **SOBOLEVSKAĬA, V. N.** Osnovnye cherty struktury Zapadno-Sibirskoĭ plity. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geologicheskaĭa, Aug. 1961. no.8, p.104-105, fold. map.) 4 refs. Text in Russian. **Title tr.:** Main structural features of West Siberian plateau.

Presents a tectonic map of the folded basement of West Siberian plateau, including arctic areas between the Ural and the Yenisey. Some structures are described, gas-bearing structures of the Berezovo region are noted, a promising well (oil) in the Mulym'ya River (60° 11′ N. 64° 38′ E.) region is evaluated. (DLC.)

75789. **SOBOLEVSKIĬ, N.** Khudozhnit͡sa s Chukotki. (Dekorativnoe iskusstvo, July 1960, no.7(32), p.16, illus.) Text in Russian. **Title tr.:** A woman artist from Chukotka.

Describes bone engravings by Ėmkul' in the workshop at Uelen. Her traditional naturalistic style, superior craftsmanship, choice of subjects, "narrative" pictorial composition, etc. are discussed. The work of some fellow artists is noted also. By custom, engravings are done by women, and men carve in the round. (DLC.)

SOBOTKA, P., *see* Záhlava, J., & *others.* L'élimination du néopallium . . . 1961. No. 76623

75790. **SOBOUTI, Y.** The relationship between unique geomagnetic and auroral events. (Journal of geophysical research, Mar. 1961. v.66, no.3, p.725-47, diagr., graphs, maps.) 6 refs.

Sketches the ionospheric current pattern in the auroral zone during several magnetic storms from data obtained at 11 Canadian stations during the IGY. The predominant current patterns are determined for each phase of an average storm. It is found that the auroral displays tend to occur along current lines. High correlation exists between the geomagnetic latitudes of the southern extents of auroral displays and the most southerly current lines. A southward shift of the aurora accompanies the southward motion of ionospheric currents when the two sets of data are plotted against a storm phase.—From author's abstract. (DLC.)

75791. **SOCHAVA, VIKTOR BORISOVICH, 1905–** . Geographic study of the tayga and the transformation of its nature. *(In:* Akademiĭa nauk SSSR. Soviet geography . . . 1962, p.275-80.) 21 refs. Translation of No. 68383. (DGS.)

75792. **SOCHAVA, VIKTOR BORISOVICH, 1905–** Institut geografii Sibiri i Dal'nego Vostoka Sibirskogo Otdeleniĭa AN SSSR. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geograficheskaĭa, Nov.-Dec. 1961. no.6, p.127-29.) Text in Russian. **Title tr.:** The Institute of Siberian and Far Eastern Geography of the Siberian Branch of the Academy of Sciences of the USSR.

Reports the organization of this institute in 1957, its plans and activities: investigation of natural resources, economic planning, inhabitants, etc. Some publications are noted, studies in medical geography announced. (DLC.)

75793. **SOCIÉTÉ HYDROTECHNIQUE DE FRANCE.** Liste des termes sur la neige, les avalanches et sur les ouvrages de protection contre les avalanches, proposée par le Groupe de travail F.A.O. de la correction des torrents et de la lutte contre les avalanches. Paris, 1961. 21 l. diagrs. Mimeo. 4 refs. Text in French. **Title tr.:** List of terms on snow, avalanches, and protective structures against avalanches, proposed by the F.A.O. working group on the adjustment of torrents and struggle against avalanches.

Illustrated glossary of 256 terms with German and English equivalents. (ExPF.)

SOCIÉTÉ HYDROTECHNIQUE DE FRANCE, *see also* Lliboutry, M. Terminologie glaciologique et nivologique . . . 1960. No. 73561

SOCIETY FOR AMERICAN ARCHAEOLOGY, *see* Abstracts of New World archaeology. 1960-61, *in progress.* No. 69475

SOCIETY OF AMERICAN MILITARY ENGINEERS. SYMPOSIUM ON POLAR ENGINEERING, *Washington, D. C.,* May 1961, *see Military engineer.* Polar engineering . . . 1961. No. 74020

75794. **SOEN, OEN ING.** Hornblendic rocks and their polymetamorphic derivatives in an area NW. of Ivigtut, South Greenland. København, C.A. Reitzel, 1962. 84 p., illus., maps, diagr. graph., sections, tables. (Meddelelser om Grønland, bd. 169, nr.6.) 29 refs.

Presents results of field work carried out during summer 1959 and subsequent microscopic examination for the Geological Survey of Greenland, of amphibolites and hornblendic rocks in three gneiss areas on the island of Tornarssuk and the peninsula between Kuánit Fjord and Tigssalŭp ilua, roughly 25 km. northwest of Ivigtut. Two periods of metamorphism, the main and late Ketilidian, are recognized; the first period produced extensive hornblendic layers within the areas considered, the second was characterized by deformation and the formation of pegmatite and subsequently of gneiss. A third, minor, period had little effect on these rocks. Results of each metamorphism on the structure and petrology are discussed in some detail for each area in turn. Numerous photographs of structural features as well as drawings of thin sections supplement the text. (DGS.)

75795. **SØRENSEN, HENNING.** On the occurrence of steenstrupine in the Ilĭmaussaq massif, southwest Greenland. København, C.A. Reitzel, 1962. 251 p. illus., maps incl. fold., tables, 16 plates. (Meddelelser om Grønland, bd. 167, no.1.) 164 refs. Summary in Danish.

Reports in detail on this rare beryl-group mineral in three small areas in this massif, namely the island of Qeqertaussaq in Kangerdluarssuk Fjord, the head of the fjord north of Lilleelv, and the north coast of Tunugdliarfik; from the 1955 and 1957 field studies reported in No. 57540, No. 61766. Each area is described with maps and photos showing the geologic features, and the petrology discussed, expecially the naujaite, lujavrite, and associated minerals. The steenstrupine occurs in lujavrite, in late veins, and in adjacent naujaite. A magmatic origin of the lujavrite is favored, though some features seem to indicate a metasomatic one. The lujavrite is clearly later than the naujaite, its intrusion guided by the joints of the latter. A low temperature, about 400°C., is indicated for its formation. Occurrence of steenstrupine, britholite, monazite, lepidolite, sphalerite, etc., in analcitized lujavrite as well as in the late veins indicates that the formation of these rare minerals was connected with the later stages of the crystallization of the lujavrite. Chemical and physical properties of the late fluids and the movement and precipitation of the rare elements are dealt with. About 40 minerals found in the area are described, results of volumetric analyses of the lujavrites tabulated in appendices. Comparison is made with steenstrupine occurrences in other regions. Photomicrographs are included of samples deposited in the Mineralogical Museum of the University of Copenhagen. (DGS.)

SØRENSEN, HENNING, *see also* Buchwald, V., & H. Sørensen. Autoradiographic examination . . . Ilimaussaq . . . 1961. No. 70426

75796. SØRENSEN, JANUS. Da Østgrønland fik sin første radiostation, uddrag af dagbogsblade fra 1924-25. (Grønland, Aug. 1961, nr.8, p.289-99, illus.) Text in Danish. **Title tr.:** When East Greenland got its first radio station, extracts from a diary of 1924-25.

Describes the work at Angmagssalik under the author and three other Danes, particularly their transport and labor difficulties. Connection with Reykjavík was established on Nov. 25, 1924, and the installation was completed on July 15, 1925. (DLC.)

75797. SOFRONEEV, P. S. O Tamginskom zavode; dokument. (Akademiia nauk SSSR. Sibirskoe otdelenie. IAkutskii filial. Nauchnye soobshcheniia 1961. vyp.6, p.33-36.) 4 refs. Text in Russian. **Title tr.:** The Tamga mill; a document.

Cites and discusses the text of a document recently discovered in the Central State Archives of Ancient Documents, Moscow. Written in 1763, it describes efforts to restore an iron-smelting plant on the Tamga River, near Yakutsk. Built in 1732 to supply implements to the Second Kamchatka Expedition of 1733-1743, shut in 1744, damaged by the floods of 1746 and 1748, rebuilt in the 1760-70's, and finally closed down in 1782, this smeltery was of considerable importance to the nascent industry of Yakutia. (DLC.)

75798. SOKOLOV, A. L. Dreif l'dov v Arkticheskom basseine i izmenenie ledovykh uslovii na trasse Severnogo morskogo puti. (Problemy Arktiki i Antarktiki. Sbornik statei 1962. vyp.11, p.81-89, table, charts.) 12 refs. Text in Russian. **Title tr.:** Drift ice in the Arctic Basin and changes in ice conditions along the Northern Sea Route.

Reviews earlier and recent studies concerning the geographic distribution, direction, speed, and other features of drift ice in the Arctic Basin. Various patterns of drifting ice and various influencing factors such as wind, currents, and atmospheric circulation, are outlined. The contribution of the North-Pole drifting stations to knowledge of drift ice during the last 25 years is pointed out, and the local factors also are taken into account. Two types of charts constructed by Z.M. Gudkovich, to show circulation of the surface water in the Arctic Basin, are illustrated and explained. Ice conditions in the arctic seas, also drift ice effects on Northern Sea Route are briefly noted. (DLC.)

75799. SOKOLOV, BORIS SERGEEVICH, 1914– . Osnovnye voprosy dodevonskoi stratigrafii Sibirskoi platformy. (Geologiia i geofizika, 1961, no.10, p.60-73.) 49 refs. Text in Russian. Summary in English. **Title tr.:** Main problems of the pre-Devonian stratigraphy of the Siberian platform.

The Siberian platform belongs to a number of ancient (pre-Sinian) platforms and is characterized by a complete stratigraphic section of all the pre-Devonian sedimentary cover. Sinian-Riphean complex, Cambrian, Ordovician and Silurian systems of this platform are described, noting the principal problems of their stratigraphy such as biostratigraphic substantiations, correlation with other regions, etc. (DLC.)

75800. SOKOLOV, BORIS SERGEEVICH, 1914– . Le problème de la limite inférieure du Paléozoïque et les dépots les plus anciens sur les plates-formes antésiniennes de l'Eurasie. (France. Centre national de la Recherche scientifique, Colloques internationaux, v.76, 1958. Les relations entre Précambrien et Cambrien, Problèmes des séries intermédiaires, Paris, 1957, p.103-128, maps, diagr.) 48 refs. Text in French. **Title tr.:** The problem of the lower limit of the Paleozoic and the oldest deposits on the pre-Sinian platforms of Eurasia.

Correlates a sedimentary series exposed on the perimeter of the oldest Eurasian platforms in the folded zones, including the White Sea, Caledonian and Kanin-Timan zones, with early Paleozoic deposits. This series belongs to an independent system called the Sinian system. Since these Sinian formations cover the platforms, the latter are pre-Sinian and not Precambrian as usually called. (DLC.)

SOKOLOV, G. A., *see* Syroechkovskii, E.E., & *others*. Nekotorye izmeneniia . . . 1962. No. 76058

75801. SOKOLOV, I. A., *and* **T. A. SOKOLOVA.** O zonal'nom tipe pochv v oblasti mnogoletnei merzloty. (Pochvovedenie 1962, no.10, p.23-32, table, diagrs.) 23 refs. Text in Russian. Summary in English. **Title tr.:** On the zonal soil type in permafrost regions.

Outlines the main climatic and other conditions for soil formation in permafrost regions, as exemplified in the Transbaykal, Komi ASSR, and other northern areas of the USSR. Effects of permafrost

on soil formation are discussed. Cryogenic and noncryogenic soils are distinguished, the former completely affected by permafrost, the latter due to insignificant moisture preserve their infiltration properties. The vertical zonality of eastern Transbaykal soils also is considered, and mountain tundra, mountain taiga and mountain steppe are characterized. (DLC.)

75802. SOKOLOV, NIKOLAĬ IL'ICH, 1907–1960. Geomorfologicheskie issledovaniĭa v basseĭne Angary dlĭa gidrotekhnicheskogo, promyshlennogo i grazhdanskogo stroitel'stva. (Voprosy geografii 1961, sbornik 52. Prikladnaĭa geomorfologiĭa, p.61-76.) 54 refs. Text in Russian. **Title tr.:** Geomorphic investigations in the Angara basin for hydraulic, industrial and civil engineering constructions.

Reviews such investigations since 1931: studies of karst phenomena and of karst areas for proposed construction programs; site selection for hydroelectric power plants, industrial and urban areas. Geologic and geomorphic mapping, study of slopes, caves, core drillings, etc. are reported and the results evaluated. Study of terraces, permafrost, relief forms and other features is also summarized. Value of geomorphic studies for construction purposes is emphasized. (DLC.)

75803. SOKOLOV, NIKOLAĬ IL'ICH, 1907–1960. Nekotorye dannye o stratigrafii chetvertichnykh otlozheniĭ doliny rek Noril'skoĭ i Rybnoĭ; tezisy. (*In:* Vsesoĭūznoe soveshchanie po izucheniĭū chetvertichnogo perioda. Materialy . . . 1961, t.3, p.177-78.) Text in Russian. **Title tr.:** Some data on the stratigraphy of Quaternary deposits in the Noril'skaya and Rybnaya River valleys; summary.

Reports Lower, Middle and Upper Pleistocene deposits; tectonic movements, glaciations, moraines, and other Quaternary events are briefly stated. (DLC.)

75804. SOKOLOV, O. A. Vizual'nye podvodnye nabliūdeniĭa v pĭatom reĭse podvodnoĭ lodki "Severĭanka." (Okeanologiĭa, 1961. t.1, vyp.4, p.757-61, illus., diagrs.) Text in Russian. **Title tr.:** Visual underwater observations during the fifth expedition of the submarine *Severĭanka*.

Reports a fisheries research cruise in Motovskiy Bay (69°33′N. 32°28′E.) and coastal waters of the Barents Sea from late April to mid May 1960, at the peak of plankton abundance. To aid visibility, a 1000 kw. lamp was installed to project 4 m. off the observation window; it is described and data are presented on the visibility of illuminated objects at 10-90 m depth. (DLC.)

75805. SOKOLOV, S. G., *and* **TS. M. LEVITSKAĬA.** O vliĭanii nizkikh temperatur na ėlektrofizicheskie i mekhanicheskie svoĭstva ėpoksidnoĭ izoliātsii. (Akademiĭa nauk SSSR. Sibirskoe otdelenie. Izvestiĭa 1962. no.7, p.37-41, illus., diagrs.) 6 refs. Text in Russian. **Title tr.:** Effects of low temperature on electro-physical and mechanical properties of epoxy insulators.

Reports an investigation of the dielectric properties of epoxy compound used for insulating in high tension electric lines. This compound was found superior to porcelain insulators in the temperature range -70° to +20°C. It is recommended for use on electric lines under conditions of Siberia. (DLC.)

SOKOLOV, S. I., *see* Dolgin, I.M., & S.I. Sokolov. Aėrologiĭa . . . 1961. No. 71063

75806. SOKOLOV, V. D., *and* **G. V. SKRIPIN.** V IAkutskoĭ laboratorii kosmicheskikh lucheĭ. (Mezhdunarodnyĭ geofizicheskiĭ god. Informatsionnyĭ biūlleten' 1958, no.5, p.40-42.) Text in Russian. **Title tr.:** In the Yakutsk cosmic-ray laboratory.

Reports activities of this laboratory in connection with the IGY. Instruments and techniques, main leaders of the studies, net of stations, and other arrangements are briefly described. Purpose of the laboratory is research on cosmic ray intensity, variations, nature, origin, and other features above the atmosphere and in polar latitudes. (DLC.)

75807. SOKOLOV, V. E. Opredelenie stadii polovogo tsikla samok del'fina-belobochki *Delfinus delphis* L. metodom vlagalishchnykh mazkov. (Akademiĭa nauk SSSR. Ikhtiologicheskaĭa komissiĭa. Trudy soveshchaniĭ 1961. vyp.12, p.68-71, illus.) 16 refs. Text in Russian. **Title tr.:** Determination of the stage of sexual cycle in females of *Delfinus delphis* L. by vaginal smears.

Discusses the history of the problem and the five stages of the oestrous cycle; describes the results of his own method as used on 114 female dolphins. As it stands, the method has only supplementary character. (DLC.)

75808. SOKOLOV, V. E. Stroenie i prichiny vozniknoveniĭa kozhnykh narostov u ĭaponskikh kitov, *Eubalaena glacialis sieboldii* Gray. (Zoologicheskiĭ zhurnal, Sept. 1961. t.40, vyp.9, p.1427-29, illus.) 9 refs. Text in Russian. Summary in English. **Title tr.:** Structure and causes of the appearance of dermal excrescences in the whale *Eubalaena glacialis sieboldii* Gray.

Describes the histological structure of excrescences on the head, characterized by thickening of the derma and strong extension of the epidermis. The skin protuberances are assumed to be loci of earlier hair growth. (DLC.)

SOKOLOV, V. I., *see* Kirūshina, M.G., & *others*. Osobennosti proĭavleniĭa tektoniki . . . 1961. No. 72813

75809. SOKOLOV, VALENTIN NIKOLAEVICH, *and* **IŪ. N. KULAKOV.** Ispol'zovanie geologo-geomorfologicheskogo kartirovaniĭa v zakrytykh raĭonakh dlĭa neftepoiskovykh rabot. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik stateĭ . . . vyp.16, 1961, *its:* Trudy t.123, p.109-116.) Text in Russian. **Title tr.:** Utilization in oil prospecting of geologic-geomorphic mapping in regions covered by Quaternary deposits.

Prospecting in northern Siberia has not led to the discovery of productive deposits of oil and gas. This is due to insufficient knowledge of the geology and geomorphology of the territory and to the poor siting of drillings. Geologic-geomorphic mapping of the Ust'-Yenisey depression where bedrocks are covered with Quaternary deposits is reported. This mapping is carried out by making geomorphic and tectonic observations, digging 5-20 m. holes, also, where necessary, core drilling to

500 m. Such mapping in other areas also is reported, and the assistance it can afford to further oil prospecting is pointed out. (DLC.)

SOKOLOV, VALENTIN NIKOLAEVICH, *see also*
Atlasov, I.P., & V.N. Sokolov. Osnovnye cherty tektonicheskogo . . . 1961. No. 69907

Dedeev, V.A., & *others*. Stroenie dosredneĭurskogo fundamenta . . . 1962. No. 70932

SOKOLOVA, M. M., *see*
Zaks, M.G., & M.M. Sokolova. Immuno-serologicheskie razlichiĭa . . . 1961. No. 76637

Zaks, M.G., & M.M. Sokolova. O mekhanizmakh adaptatsii . . . 1961. No. 76638

SOKOLOVA, N. S., *see* Lazukov, G.I., & N.S. Sokolova. Osnovnye osobennosti paleogeografii . . . 1961. No. 73362

SOKOLOVA, T. A., *see* Sokolov, I.A., & T.A. Sokolova. O zonal'nom tipe pochv . . . 1962. No. 75801

75810. SOKOLOVA, Z. P. K voprosu o razvitii obsko-ugorskoĭ zemlianki. (Tyumen. Tiumenskiĭ kraevedcheskiĭ muzeĭ. Ezhegodnik 1959 *pub.* 1960. vyp.1, p.9-26, illus. diagrs., maps.) 30 refs. Text in Russian. **Title tr.:** Development of the Ob-Ugric sod house.

Describes 18 - to early 20th century semi-subterranean structures built for temporary or permanent use by Ostyaks and Voguls of the Ob River basin, approx. 58°30′ - 66°30′N. The prototype and its evolutionary forms, the regional variations adapted to needs of a reindeer, hunting, or fishing economy, the living conditions of nomadic, semi-nomadic or settled occupants, and the climatic conditions are discussed. Typical is a mud hut, its walls with a 20° - 30° slope supported by 4 - 12 poles and reinforced with rods, bark, and moss. Built over a pit 30-60 cm. deep, the sod house is round, oval, or rectangular in shape with a domed, pyramidal, gabled, or flat roof. Theories on its development from an above-ground conical tent are noted. From its structural similarities to the prehistoric Alaskan dwelling, ancient ethnic links between Ob-Ugric and Northwest Pacific tribes may be inferred. (DLC.)

75811. SOKOLOVA, Z. P. O nekotorykh etnicheskikh protsessakh, protekaiushchikh u sel'kupov, khantov i evenkov Tomskoĭ oblasti. (Sovetskaia etnografiia, May-June 1961, no.3, p.45-52, table.) 8 refs. Text in Russian. Summary in English. **Title tr.:** Some ethnic processes taking place among the Sel'kups, Ostyaks, and Evenki of Tomsk Province.

Discusses changes in the settlement pattern of the autochthonous population in the 19 - early 20th century caused by the influx of Russian migrants. Cultural and economic exchange, assimilation processes, intermarriages (tabulated) etc. are described from the 1958 field work of the Ob River team of the Institute of Ethnography's Northern Expedition. Despite acculturative trends, the upper Ob Ostyaks maintain strong ties with kindred groups of the north and the Evenki Tungus retain a nomadic way of life conditioned by their reindeer and hunting economies. The Sel'kup Samoyeds and the mixed Sel'kup-Evenki and Russian-aboriginal groups however, were more nearly assimilated. (DLC.)

75812. SOKOLOVA, Z. P. Soveshchanie po voprosam akklimatizatsii i pitaniia naseleniia na Krainem Severe. (Sovetskaia etnografiia, Mar.-Apr. 1961, no.2, p.122-23.) Text in Russian. **Title tr.:** Conference on problems of acclimatization and diet of the population of the far North.

Reports a conference on polar medicine, nutrition and housing problems associated with increasing development in arctic areas. Needs of new settlers were mainly discussed, but the autochthonous population also was treated by some speakers. The conference was in Moscow Nov. 28 - Dec. 1, 1960 under auspices of the Learned Medical Council and the Commission on Acclimatization and Regional Pathology of Man in the North, Ministery of Health, RSFSR. (DLC.)

75813. SOKOLOVA, Z. P. Zametki ob evenkakh basseĭna Keti. (*In:* Akademiia nauk SSSR. Institut etnografii. Trudy t.78, Sibirskiĭ . . . 1962, p.165-75, illus., map.) 10 refs. Text in Russian. **Title tr.:** Notes on Evenki of the Ket' basin.

Reports a study of Tungus nomadizing along the right tributaries of the upper Ket' River, by the Ob basin party of the Northern Ethnographic Expedition in 1958. This group, a branch of the Sym River Evenki, does fur hunting and pine-cone gathering under contract with the local consumer co-op, also guide and other work for forest survey parties. Reindeer are used in hunting as draft and pack animals. The migration cycle, two-family nomadic tents, diet, clothing, utensils, etc. are described. Traditional aspects prevail in material and spiritual cultures: ancient taboos, marital and mortuary rites, even shamanism have not disappeared. Close kin marriages are frequent, mingling with Sel'kup Samoyeds on the decrease, with Russians rare. The nomadic way of life is considered a main retardant of acculturation. (DSI.)

75814. SOKOL'SKAIA, NINA LEONIDOVNA, 1918–
. Materialy po faune presnovodnykh maloshchetinkovykh chervei Kamchatki. (Moskovskoe obshchestvo ispytatelei prirody; otdel biologicheskiĭ. Biulleten' 1961. t.66, vyp.1, p.54-68, illus., table.) 20 refs. Text in Russian. Summary in English. **Title tr.:** Material dealing with freshwater oligochaetes of Kamchatka.

Describes material, mainly from the Kamchatka River basin (with identification key). Of the ten species identified, three are new: *Peloscolex kamtschaticus, P. kurenkovi* and *P. ringulatus* n. spp. and three others are new for the area. Geographic distribution, habitat, development, etc. are noted. (DLC.)

75815. SOLANDT, OMOND McKILLOP, 1909–
. Research on Canada's Arctic, an address at dinner on board the *Homeric* in honour of the Arctic Institute of North America. Montreal, October 26, 1961. 8 p. Mimeo.

Reviews the role of the Institute in research, its capabilities, and aims. Reasons for arctic research are stated, and development of the Institute as an organization furthering basic research in the natural and social sciences is outlined. Its support since 1945 of over 500 field parties and aid to others, its research programs by contract for private companies and government bodies, its polar library in Montreal, its publications: the *Arctic Bibliography*, the quarterly journal *Arctic*,

etc. Organizations which have given major financial support to the Institute are cited. Need for further basic research to precede a predicted future of slow and steady economic growth in the Arctic, and for financial support from Canadian industry is stressed. The unique role of the Arctic Institute as catalyst in the cooperation of industry, government, and university is briefly discussed. (CaOGB.)

SOLANDT, OMOND McKILLOP, 1909– , *see also* National Northern Development Conference. 1961. No. 74224

75816. SOLBERG, AUL. Engvekster dyrket i blanding og i reinbestand. (Forskning og forsøk i landbruket, 1961. bd. 12, hefte 5, p.375-400, tables.) 7 refs. Text in Norwegian. Summary in English. **Title tr.:** Species and varieties of meadow plants cultivated at different altitudes.

Reports experiments during 1950-1960 on valley farms at average altitude of 630 m. and on experimental farms at 550 and 1,000 m. Varying amounts of seed of bent and meadow fescue grass (*Agrostis tenuis* and *Festuca pratensis*) were added either singly or combined, to the timothy (*Phleum pratense*), both with and without red clover. Addition of fescue grasses did not increase the yield, but improved the pastures; the amount used depends largely on environmental conditions. The Bodin and Engmo timothy strains cultivated in Nordland and Troms, show better results at high elevations than the South Norway strain Grinstad and the North Swedish strain Bottnia II. Red clover should continue to be used in mountain areas. (DA.)

75817. SOLĬANKIN, E. V. Nekotorye osobennosti gidrologii Datskogo proliva. (Moskva. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziĭstva i okeanografii. Trudy 1962. t.46, p.74-92, illus., tables, maps.) 8 refs. Text in Russian. **Title tr.:** Some hydrological characteristics of Denmark Strait.

Account of conditions in the summer 1958 as studied from the *Sevastopol'* in the areas between 65° - 67°N., and southward along the coastal waters of Iceland and Greenland. Two water masses with distinctive temperatures and salinities are described and the zone of their convergence is outlined. A third water mass of high temperature, with mixed Atlantic and runoff waters occupies the upper 30-50 m. in a narrow, coastal belt. The movements of these waters or their stability are described and the factors responsible for both analyzed. (DLC.)

75818. SOLĬANKIN, E. V., *and* **M. S. ĖDEL'MAN.** Nekotorye rezul'taty reĭsa è/s "Sevastopol'" vesnoĭ 1959 g. (Akademiĭa nauk SSSR. Okeanograficheskaĭa komissiĭa. Biŭlleten', 1961, no.8, p.24-28, table.) Text in Russian. **Title tr.:** Some results of the *Sevastopol'* expeditionary vessel cruise in the spring of 1959.

Reports the 5990-mi., Apr. 26 - June 13 cruise in the North Atlantic along latitudes: 69°20′, 67°30′, 65°45′ and 63°N. Temperature regime of the water, currents, their directions and speed, salinity and other features of the Norwegian Sea are briefly described. (DLC.)

75819. SOLĬANKIN, E. V. Nekotorye zamechaniĭa o vodoobmene cherez Datskiĭ proliv. (Moskva. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziĭstva i okeanografii. Trudy 1962. t.46, p.64-67, table.) 5 refs. Text in Russian. **Title tr.:** Some observations on the water exchange through Denmark Strait.

Reports briefly on IGY-IGC (R/V *Sevastopol'*) studies of currents on a profile at the entrance into Denmark Strait from the Greenland Sea. The volume of the current is estimated at 1.54 km³/hr., close to a 1956 estimate of 1.64 km³/hr. (DLC.)

SOLĬANKIN, I. V., *see* Gorshkova, T.I., & I.V. Solĭankin. Grounds, water masses . . . 1961. No. 71797

SOLLENBERG, SVEN, *see* Pousette, I., & S. Sollenberg. Långsele Mine. 1961. No. 74933

SOLLER, R. A., *see* Gustafson, P.F., & *others*. Fission-product radioactivity . . . stratosphere. 1962. No. 71934

75820. SOLLI, SVEIN. Skog i Troms. (Skogs-Norrland, Dec. 1961, nr.6, p.18-20, illus., sketch map.) Text in Norwegian. **Title tr.:** Forests in Troms.

The Troms forest area comprises 300,000 hectares of birch and 42,000 h. coniferous forest, chiefly pine native to the area, although geological and soil conditions are favorable for spruce. Forestation of conifers, started about 1900, increased in recent years with state aid. Some 30,000 hectares of birch are to be changed to spruce over a 30-yr. period. The Forest Research Institute works on problems of old pine forests, and of birch. The latter is used as wood-chip fuel, and a half-chemical pulp mill is projected. (DA.)

SOLOMATINA, E. K., *see* Fel'dshteĭn, ĬA. I., & E.K. Solomatina. Nekotorye voprosy . . . polĭarnykh siĭaniĭ . . . 1961. No. 71374

75821. SOLOMINA, R. V., *and* **G. E. CHERNĬAK.** O kamennougol'nykh otlozheniĭakh v raĭone ust'ĭa reki Leny. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii, 1961. vyp.26, p.5-9.) 7 refs. Text in Russian. **Title tr.:** On Carboniferous deposits in the Lena River mouth region.

Describes the Krestyakh conglomerates, other series of Carboniferous, and the Sakmarian stage of Permian, as studied in 1961 at Cape Krestyakh on the right bank. Composition, thickness, of the deposits and identified fauna are reported. (DLC.)

75822. SOLOMINA, R. V., *and* **G. E. CHERNĬAK.** *Orulgania,* novyĭ rod spiriferid iz verkhnego paleozoĭa Arktiki. (Paleontologicheskiĭ zhurnal, 1961, no.3, p.61-66, plates.) 11 refs. Text in Russian. **Title tr.:** *Orulgania,* a new genus of spiriferids from the Upper Paleozoic of the Arctic.

Reports a study of the internal structure and micro-sculpture of Upper Carboniferous brachiopods (spirifers) of the Taymyr Peninsula and Orulgan Range. They are distinguished from gen. *Licharewia,* known Permian spirifers, and described as *Orulgania* n. gen. represented by *O. naumovi* and *O. einori,* n. spp. the latter are differentiated and systematically described. (DLC.)

75823. SOLOV'EV, F. A. Kedr sibirskiĭ i ego narodnokhoziĭstvennoe znachenie. (Akademiĭa nauk SSSR. Ural'skiĭ filial. Institut biologii. Trudy 1955. vyp.6, p.3-34, illus., tables.) 58 refs. Text

in Russian. **Title tr.**: Siberian pine and its importance in the national economy.

Partial account of a ten-year study of *Pinus sibirica* forests in the Northern and Central Urals with discussion of the utilization of the pine cones, so-called cedar nuts, in the past and present as food and oil source, pine stands in relation to water conservation and flood protection. The decorative value is considered, also value as a source of resin. The vertebrate fauna of these forests, the timber, its characteristics and value, waste, etc. are dealt with in turn. (DLC.)

75824. SOLOV'EV, F. A. O geograficheskom rasprostranenii i razmeshchenii kedrovykh lesov na Urale. (Akademiia nauk SSSR. Ural'skii filial. Institut biologii. Trudy 1955. vyp.6, p.35-61, illus., tables, map.) 37 refs. Text in Russian. **Title tr.**: Geographic distribution and location of Siberian pine forests in the Ural.

Study based on author's observations and other sources. In the North, *Pinus sibirica* extends to 66°15'N., drops to 65°N. in the Ob valley and along the Ob reaches 65°40'N.; vertically, it reaches the upper tree limit. Conditions on the spurs are also considered; forest types are very varied in the northern part of the area studied. Important forest complexes and their quality are mapped and described; measurements for improvement are suggested. (DLC.)

75825. SOLOV'EV, F. A. Plodonoshenie kedrovykh lesov v Zaural'e. (Akademiia nauk SSSR. Ural'skii filial. Institut biologii. Trudy 1955. vyp.6, p.76-96, illus., tables.) 36 refs. Text in Russian. **Title tr.**: Fruit-bearing of pine forests in the Trans-Ural.

Discusses methods, value of the cones ("nuts") of *Pinus sibirica*, year-to-year fluctuations in fertility, and relation of the latter to climatic zones. The pine forests of the Northern Ural were found to produce rather low crops, the highest yields being found in the biologically and ecologically optimal areas of the more southerly Urals. (DLC.)

75826. SOLOV'EV, I. N. "Evrashka". (Okhota i okhotnich'e khoziaistvo, Aug. 1962. god 8, no.8, p.57, illus.) Text in Russian. **Title tr.**: Ground squirrel.

Notes occurrence of the long-tailed arctic ground squirrel, *Citellus undulatus*, in Chukotka, where it is called "evrashka." (DLC.)

75827. SOLOV'EV, P. A. Chetvertichnye otlozheniia severnoi chasti Leno-Amginskogo mezhdurech'ia. *(In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.186-94, diagr.) Text in Russian. **Title tr.**: Quaternary deposits in the northern part of the Lena-Amga interfluve.

Describes the stratigraphy: five complexes are identified and each described as to distribution, composition, spore-pollen analyses and other, paleontologic remains. Climatic fluctuations, tectonic movements, formation of river terraces, geomorphic features and other problems of Quaternary geology are summarized. (DLC.)

75828. SOLOV'EV, S. L. Katastroficheskaia morskaia volna na Aliaske. (Priroda, Mar. 1962. god 51, no.3, p.72-74, maps.) Ref. Text in Russian. **Title tr.**: Catastrophic sea-wave in Alaska.

Account of the earthquake of July 9, 1958; its epicenter and areas of maximal tremors: nature of the disturbance as revealed by expeditions of 1958 and 1959; effects on the coast; the gigantic landslide in Lituya Bay and its effects. (DLC.)

75829. SOLOV'EV, S. L. Nekotorye rezul'taty primeneniia shkaly intensivnosti zemletriasenii na seismicheskikh stantsiiakh SSSR. (Studia geophysica et geodaetica, *Praha,* 1958. ročník 2, no.1, p.40-46, map, table, diagr.) 9 refs. Text in Russian. Summary in English. **Title tr.**: Certain results of the use of an earthquake magnitude scale at Soviet seismic stations. Translated into English by R. Flagg, American Meteorological Society for Geophysics Research Directorate, U.S. Air Force Research Division, Bedford, Mass., contract no. AF 19(604)-6113, Oct. 1960. Copy at CaMAI.

Studies earthquake intensities recorded at the stations in the USSR according to the magnitude, M, formula proposed by S.L. Solov'ev. Values of M thus obtained are found smaller than the values of intensities of the same earthquakes recorded at the Prague seismic station. It is established that the value of M obtained at the "continental" stations of the USSR deviate systematically from the values of M of the same earthquakes obtained at the Far East stations (Vladivostok, Klyuchi, Kuril'sk, Magadan, Petropavlovsk, Uglegorsk, and Yuzhno-Sakhalinsk). A hypothesis is proposed that the deviations, δM, established are characteristic of any two stations, one located on the coast of the Pacific Ocean and the other on the continent. (DLC.)

SOLOV'EV, S. L., *see also* IUGG. Seismol. proceedings 1960. 1961. No. 72397

SOLOV'EV, V. K., *see* Lepeshkov, I.N., & *others*. Prirodnye soli . . . 1962. No. 73433

SOLOV'EVA, B. A., *see* Riabchikov, I.D., & B.A. Solov'eva. K geokhimii rubidiia . . . 1961. No. 75121

75830. SOLOV'EVA, N. A., *and* **N. G. NIKANOROV.** O nakhodke v basseine r. Viliuia piroklasticheskikh porod shchelochnogo sostava. *(In:* Vsesoiuznyi aerogeologicheskii trest. Materialy po regional'noi geologii . . . 1961, p.130-32, map.) 3 refs. Text in Russian. **Title tr.**: On the find of pyroclastic rocks of alkaline composition in the Vilyuy River basin.

This find on a Vilyuy tributary, the Markha, at first thought to be tuffs of quartz porphyry, is identified as tuffs of trachytes. Their mineralogic and chemical composition is reported, relation with traps discussed. Outpouring of alkaline magma is considered. (DLC.)

SOLOVKINA, LIUDMILA NIKOLAEVNA, 1929–, *see* Brattsev, A.P., & *others*. Glubokovodnoe ozero . . . 1962. No. 70370

SOMMARSTRÖM, B., *see* Mesch, B., & B. Sommarström. Lapska fjällbor. 1962. No. 73950

75831. SOMMERMAN, KATHRYN MARTHA, 1915–. Alaskan snipe fly immatures and their habitat; Rhagionidae: *Symphoromyia.* (Mosquito news, June 1962. v.22, no.2, p.116-23, illus.) 8 refs.

Description of eggs, larvae and pupae of four species based on material collected at various localities in Alaska. The habitats of larvae, pu-

pae and immatures are characterized in detail, including some "indicator" plants; and seasonal abundance, bionomics, collecting, rearing, etc. are outlined. (DLC.)

SOMMERMAN, KATHRYN MARTHA, 1915–, *see also* Alaskan Science Conference 1961. 1962. No. 69644

75832. SOMMERS, LAWRENCE M. Distribution of manufacturing in Norway: an approach to the delimitation of economic intensity regions. (Journal of geography, May 1962. v.61, no.5, p. 196-204, maps.)

Maps degrees of economic activity, as indicated in the distribution of population employed in manufacturing by countries, herreds (minor civil divisions) and cities. Four categories of manufacturing intensity are distinguished. In the second (21-30% employed), the Mo-i-Rana region of Nordland county is included; for the rest of northern Norway, the coastal area is in the third (11-20%) category, and the interior in the fourth with less than 10% gainfully employed in manufacturing. (DGS.)

SONG, S. H., *see* Rennie, D.W., & *others*. Phys. insulation Korean diving women. 1962. No. 75107

75833. SONIN, M. D. Nematody roda *Diplotriaena* ot ptits Sovetskogo Soiuza. (Akademiia nauk SSSR. Gel'mintologicheskaia laboratoriia. Trudy 1962. t.12, p.139-65, illus., tables.) 27 refs. Text in Russian. **Title tr.**: Nematodes of the genus *Diplotriaena* from birds of the Soviet Union.

Reports a study of materials from expeditions to Kamchatka, Yakutia, the Lena estuary, and elsewhere: 16 species are described with data on synonyms, host, and location of parasites; occurrence and geographic distribution, variability within the species, etc. Infection is treated as related to food, environment and season; specificity of members of this genus is dealt with. (DLC.)

75834. SON'KIN, L. R. O nekotorykh zakonomernostiakh zimnikh sinopticheskikh protsessov raiona dal'nevostochnykh morei. (Meteorologiia i gidrologiia, June 1961, no.6, p.21-27, diagrs., tables.) 10 refs. Text in Russian. **Title tr.**: On certain regularities in the winter synoptic processes in the region of the Far Eastern seas.

Discusses the interdependent atmospheric processes in this area: the characteristic circumpolar motion of cyclones in moderate latitudes of the Northern Hemisphere, coexistant with the Siberian maximum; and the relatively low variation of the frontal zone (VFZ) most active in the Hemisphere, and of the jet streams in it. These regularities confirmed by observations have allowed the transformation of synoptic processes to be used in forecasting weather in Kamchatka, the Kurils and adjacent seas. (DLC.)

SOPER, D. J. G., *see* Nelms, J.D., & D.J.G.Soper. Cold acclim. hands fish filleters. 1962. No. 74286

75835. SOPER, JOSEPH DEWEY, 1893– The mammals of Manitoba. (Canadian field naturalist, Oct. - Dec. 1961, v.75, no.4, p.171-219, map, illus.) 60 refs.

Reviews results of earlier work and records those from field work of 1934-1948 with the Canadian Wildlife Service. The physical geography of Manitoba and its five faunal life zones are described, including the Hudsonian life zone north of 55°N. on the east - 56°N. on the west, and the Arctic life zone on the shores of Hudson Bay. An annotated list is given of 119 species and subspecies grouped by order with geographic range. (CaOGB.)

75836. SORKIN, M. Rabota morskoĭ gruppy sudov Belomorsko-Onezhskogo parokhodstva. (Rechnoĭ transport, Apr. 1961, god 20, no.4, p.59.) Text in Russian. **Title tr.**: Operations of the sea-going unit of the White Sea - Onega steamship line.

Letter to the editor criticizing the poor performance record of tow-boat and lighter captains taking logs from Arkhangel'sk, Onega, and Keret' to Baltic Sea ports. Lack of attention to the timber in transit, safety infringements, etc. result in above-average losses. Closer observance of regulations, and better control of personnel are urged. (DLC.)

75837. SOROKIN, V. P. The redfish; gametogenesis and migrations of the *Sebastes marinus* and *Sebastes mentella* Travin. (International Council for the Exploration of the Sea. Rapports et procès verbaux des réunions 1961. v.150 ICES/ICNAF Redfish Symposium, p.245-50, illus., maps.) 14 refs.

Reports a study of interrelationship between migration of these fish in the Norway and Barents Seas and sexual maturation. Seasons of spermatogenesis and oogenesis, insemination and fertilization are described. Spawning and feeding migrations, their extent, periods and duration are discussed, also the effects of fishing. (DI.)

75838. SOROKOV, D. S. Perspektivy neftegazonosnosti Leno-Olenekskogo raiona. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei . . . vyp.16, 1961, *its:* Trudy t. 123, p.102-108.) Text in Russian. **Title tr.**: Prospects for oil and gas in the Lena-Olenek region.

Reports results of prospecting during 1939-1953 in the region between these rivers from 69°N. north to the Laptev Sea. Drillings are noted; composition of Sinian, Cambrian, Ordovician, Carboniferous, Permian and Mesozoic deposits is characterized. Tectonic structure of the region is described, and the Kuogastakh, Omuguyan and Kelimyar structures considered the most favorable for oil and gas accumulation. Permian and Sinian deposits are the most promising and their bitumen is characterized. Oil prospecting is urged and tasks for further studies are summarized. (DLC.)

SOROKOV, D. S., *see also*

Gramberg, I.S., & *others*. K voprosu o dal'neishem napravlenii neftepoiskovykh rabot . . . 1961. No. 71815

Vol'nov, D.A., & D.S. Sorokov. Geologicheskoe stroenie . . . 1961. No. 76425

SORVACHEVA, V. A., *see* Akademiia nauk SSSR. Sravnitel'nyi slovar' . . . 1961. No. 69583

75839. SOSEDKO, T. A., *and* **R. L. TELESHEVA.** K khimicheskomu sostavu milarita. (Akademiia nauk SSSR. Doklady, Sept. 11, 1962. t.146, no.2, p.437-39, tables.) 11 refs. Text in Russian. **Title tr.**: On the chemical composition of milarite.

Reports results of chemical analyses of mila-

rite found by the author (No. 68438) in a pegmatite vein of Kola Peninsula in 1958. It differs from the milarite found in Switzerland, with which it is compared, having more aluminium and less berylium. (DLC.)

75840. SOSHKINA, E. D. Turneĭskie korally Rugosa i ikh vzaimootnosheniiā s devonskimi. (*In:* Akademiiā nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.272-329, illus., plates.) 61 refs. Text in Russian. **Title tr.:** Tournaisian rugose corals and their relationship with Devonian.

Presents an ontogenetic study of Carboniferous (Tournaisian) rugose corals, and a comparison with Devonian. *Zaphrentite, Cyathoclisia, Caninia* and others from various parts of the world are analyzed and described, including some from the Pechora basin. (DLC.)

SOSIPATROVA, G. P., *see* Shvedov, N.A., & *others*. Novaiā stratigraficheskaiā skhema . . . 1961. No. 75636

75841. SOSKIN, V., *and* **V. VINOGRADOV.** Vekhi bol'shogo puti; iz istorii goroda nauki. (Sibirskie ogni, Oct. 1962. god 41, no.10, p.14-26, illus.) Text in Russian. **Title tr.:** Landmarks along the great road; from the history of the town of science.

Describes the foundation in 1957 of the Academy of Sciences' Siberian Division to comprise all scientific institutions east of the Urals, i.e. the West Siberian, East Siberian, Yakut, and Far Eastern Branches of the Academy, also several independent research institutes. Division personnel numbered over ten thousand in 1962. The first ten institutes set up, those of hydrodynamics, geology and geophysics, thermophysics, experimental biology and medicine, etc. and the University (opened in 1959) are sketched, and some of their directors cited. Illus. show residential streets, construction sites, etc. of Akademgorodok. (DLC.)

SOSNOVSKAIĀ, L. I., *see* Borisenko, L.F., & *others*. O korreliātivnoĭ sviāzi srednego soderzhaniiā skandiiā . . . 1961. No. 70329

SOULE, JOHN DUTCHER, 1920– , *see* Hulsemann, K., & J.D. Soule. Bryozoa . . . 1962. No. 72253

75842. SOUTH, FRANK E., *Jr.* Phrenic nerve-diaphragm preparations in relation to temperature and hibernation. (American journal of physiology, Mar. 1961. v.200, no.3, p.565-71, illus., tables.) 26 refs.

Study of preparations from hibernating and control hamsters and from rats, at temperatures ranging from 5° to 38°C. Neuromuscular blockade occurred at 10°C. in rat preparations, at 5° in controls, and not at all in material from hibernating hamsters. Similar differences were noted in irritability, tension production, contraction and relaxation rates of diaphragm muscle tissues. These, and other peculiarities indicate the presence of phylogenetic adaptations correlated with hibernation. (DLC.)

75843. SOUTHWARD, G. MORRIS. A method of calculating body lengths from otolith measurements for Pacific halibut and its application to Portlock-Albatross grounds data between 1935 and 1957. (Canada. Fisheries Research Board. Journal, Mar. 1962. v.19, no.2, p.339-62, illus. tables.) 18 refs.

Reports a study of fish taken from commercial catches of the Portlock-Albatross, Shumagin, and other grounds. An increase in size for the period 1920-1956 is indicated by otolith measurements and checked against tagged halibut. The size increase is observable from the age of 5 years; it is most pronounced in the older ages. Possible environmental causes for growth increase are discussed. (DLC.)

75844. SOUZU, HIROSHI, *and* **T. ARAKI.** Injury on nucleic acids synthesis due to the freezing and thawing of yeast cells. (Teion kagaku 1962. ser. B, v.20, p.69-79, illus., table.) 6 refs. Text in Japanese. Summary in English.

Rapid freezing of yeast cells to -196°C. followed by thawing caused disappearance of the P compound from the RNA fraction and a considerable slow down in nucleic acid synthesis and cell growth. None of these symptoms appeared when freezing to -196° was slow. Additional experiments indicate that the lag in NA synthesis and in growth of the cold-injured cells is due to the slow accumulation of the phosphorous compound. (DLC.)

75845. SOUZU, HIROSHI, *and others.* Water of microorganisms and its freezing; with special reference to the relation between water content and viability of yeast and coli cells. (Teion kagaku 1961. v.19, ser. B., p.49-57, illus.) 4 refs. Text in Japanese. Summary in English. *Other authors:* T. Nei *and* M. Bito.

Experiments with these cells frozen to temperatures as low as -70°C. showed that the percentage of frozen water increased with decreasing temperature until it reached 91%. Even at this degree of dehydration through cold, most cells survived. But death rate increased when dehydration exceeded 91% of the cells' water content. (DLC.)

75846. SOVESHCHANIE PO GLUBINNOMU SEĬSMICHESKOMU ZONDIROVANIIŪ ZEMNOĬ KORY, 1st, *Moskva,* 1960. Glubinnoe seĭsmicheskoe zondirovanie zemnoĭ kory v SSSR; sbornik dokladov. Leningrad, Gostoptekhizdat, 1962. 496 p. tables, diagrs., graphs, map. (Akademiiā nauk SSSR. Ministerstvo geologii i okhrany nedr SSSR.) Refs. Text in Russian. **Title, etc. tr.:** Conference on deep seismic sounding of the earth's crust, 1st, *Moscow,* 1960. Deep seismic soundings of the earth's crust in the USSR, a collection of papers.

Contains 36 papers and related discussions. Four of them refer to northern areas and are abstracted under their authors' names: N.I. Davydova, I.V. Litvinenko, A.G. Aver'ianov (two papers) q.q.v. (DLC.)

75847. SOVESHCHANIE PO PRIMENENIIŪ AĖROMETODOV V LANDSHAFTNYKH ISSLEDOVANIIĀKH, *Leningrad,* 1959. Primenenie aėrometodov v landshaftnykh issledovaniiākh; trudy soveshchaniiā. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1961. 306 p. illus. & maps incl. fold. (Akademiiā nauk SSSR, Geograficheskoe obshchestvo, Laboratoriiā aėrometodov.) Refs. Text in Russian. **Title, etc. tr.:** Conference on the application of aerial methods to landscape studies. Transactions.

Presents 22 papers delivered, the conference resolutions, and list of the 118 participants representing 37 organizations. Aerial methods and photogrammetry are discussed in terms of their

relation to practical studies in geography, geology and other earth sciences. Three of the papers directly pertinent to arctic areas are abstracted in this Bibliography under their authors' names, viz (titles tr.):

ANDREEV, V.N. Application of aerial methods to investigation of tundra landscapes and their agricultural utilization.

KROGIUS, F.V., *and* A.G. OSTROUMOV. Use of aerial methods in evaluating Pacific salmon spawning areas.

SHLIÂPNIKOV, A.A. On the use of air-photo materials in typological landscape mapping of the Cis-Yenisey part of the Middle Siberian plateau. (DLC.)

75848. SOVESHCHANIE PO RAZRABOTKE UNIFITSIROVANNYKH STRATIGRAFICHESKIKH SKHEM SAKHALINA, KAMCHATKI, KURIL'SKIKH I KOMANDORSKIKH OSTROVOV, *Okha,* 1959. Materialy soveshchaniia. Moskva, Gostoptekhizdat, 1961. 339 p. illus., tables incl. fold., maps, diagrs. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut.) Refs. Text in Russian. **Title etc., tr.:** Materials of the conference for working out unified stratigraphic schemes for Sakhalin, Kamchatka, the Kuril and Commander Islands.

Contains 44 papers delivered at this conference in Okha May 25-June 2, 1959. The 211 delegates represented 22 organizations. The 27 papers dealing with Kamchatka, the Koryak Range and other arctic-subarctic areas are abstracted in this Bibliography under their authors' names, viz (titles tr.):

VLASOV, G.M. History of the geological development of the Okhotsk geosynclines.

MOKROUSOV, V.P. Stratigraphy of the pre-Cretaceous deposits of Kamchatka.

MIKHAĬLOV, A.F. Paleozoic and middle-lower Mesozoic deposits of the Penzhinskiy Range.

VERESHCHAGIN, V.N. Paleontologic substantiation for the separation of Cretaceous deposits in the eastern areas of the Soviet Union and adjacent foreign countries.

MARCHENKO, A.F. Stratigraphy of the Kamchatka Mesozoic deposits.

DUNDO, O.P. Stratigraphy of the Cretaceous deposits in the middle reaches of the Velikaya River basin, Koryak Range.

PERGAMENT, M.A. The Cretaceous horizons of the Koryak-Kamchatka province.

ROTMAN, V.K. On the relation of the Iruney and Kirganik series of central Kamchatka.

KRISHTOFOVICH, L.V. Correlation of Tertiary deposits of the northern part of the Pacific ring of Cenozoic folding.

MARKIN, N.M. Stratigraphy of Tertiary deposits on the west coast of Kamchatka.

KLENOV, E.P. Stratigraphy of Tertiary deposits of western Kamchatka.

DRUSHCHITS, IU.G. New data on the stratigraphy of Tertiary deposits in the Palana region of Kamchatka.

ARKHANGEL'SKIĬ, N.K. Tertiary deposits of the Palana region on the west coast of Kamchatka.

SEROVA, M.IA. Micropaleontologic substantiation of the Tertiary deposit section on the west coast of Kamchatka.

KRISHTOFOVICH, L.V., *and* A.P. IL'INA. Biostratigraphy of the Paleogene and Neogene deposits in the Tigil' region of western Kamchatka.

GRIÂZNOV, L.P. Stratigraphy of Tertiary deposits of eastern Kamchatka.

TIKHONOV, V.I. New data on the stratigraphy of Tertiary deposits in the Yuzhno-Bystrinskiy Range of eastern Kamchatka.

SVIÂTLOVSKIĬ, A.E. Note occasioned by the theses of V.I. Tikhonov's paper, "Tertiary deposits of the Yuzhno-Bystrinskiy Range of Kamchatka."

IL'INA, A.P. Paleontologic substantiation of Neogene stratigraphy on the east coast of Kamchatka, Kronotskiy region.

GORIÂEV, M.I. Stratigraphy of Tertiary deposits in the central part of Kamchatka.

ZHEGALOV, IU.V. Stratigraphy of Tertiary deposits of the Commander Islands.

MENNER, V.V., *and* V.N. KULIKOVA. On the possibility of a detailed stratigraphy of the Pliocene deposits of Kamchatka.

DVALI, M.F. The border between the Tertiary and Quaternary periods in northeast Asia.

MOKROUSOV, V.P., *and* N.D. SADOVSKIĬ. Basic data on the stratigraphy of the Quaternary deposits of Kamchatka.

DEGTIÂRENKO, IU.P. On the stratigraphy of Quaternary deposits in the eastern part of the Koryak mountain system.

MIKHAĬLOV, A.F. On knowledge of the stratigraphy of the Koryak-Kamchatka folded zone.

SHTEMPEL', B.M. Paleobotanical substantiation for separation of the Kirganik series. (DLC.)

75849. SOVESHCHANIE PO UTOCHNENIIU UNIFITSIROVANNYKH STRATIGRAFICHESKIKH SKHEM PALEOZOIÂ VOLGO-URAL'SKOĬ NEFTEGAZONOSNOĬ PROVINTSII. *Moskva,* 1960. Trudy. Stratigraficheskie skhemy paleozoiskikh otlozhenii: dodevon, devon, karbon, perm'. Moskva, Gostoptekhizdat, 1962. 4 v. illus., tables, maps, cross-sections incl. fold. (Moskva. Vsesoiuznyi nauchno-issledovatel'skii geologorazvedochnyi neftianoi institut.) Refs. Text in Russian. **Title, etc. tr.:** Conference to improve the precision of unified stratigraphic schemes of Paleozoic deposits of the Volga-Ural oil-gas province, *Moscow,* 1960. Transactions; stratigraphic schemes of Paleozoic deposits: pre-Devonian, Devonian, Carboniferous, Permian.

The conference proceedings, with these four geologic periods treated in successive volumes, include several papers dealing with the Timan-Pechora region as an extension of the Volga-Ural province, and the papers, thus of arctic interest, are abstracted in this Bibliography under their authors' names, viz (titles tr.):

Pre-Devonian. NALIVKIN, A.B. On the stratigraphy and tectonics of the Timan metamorphic stratum.

TUMANOV, P.A. Devonian sedimentary strata of Eastern Timan.

Devonian. TSZIU, Z.I. Types of Devonian deposits of the Timan-Pechora oil-bearing region and unification of their stratigraphic schemes.

TUMANOV, P.A. On the stratigraphy of Middle Devonian in the southern part of the Timan-Pechora region.

POLENOVA, E.N., *and others.* Correlation of Middle Devonian deposits of the Ural, Timan and the Russian platform according to ostracod fauna.

Carboniferous. DURKINA, A.V. The boundary of the Devonian and Carboniferous in the Timan-Pechora province.

MARTYNOVA, G.P. Ostracods of the Devonian and Carboniferous bordering layers in the upper Pechora region.

PERSHINA, A.I. On the position of the upper boundary of the Devonian in the Pechora Ural.

BARKHATOVA, V.P. On some boundaries in the Carboniferous and Permian of Timan.

Permian. KONOVALOVA, M.V. The boundary of the Carboniferous and Permian systems in Southern Timan substantiated by foraminifer study.

USTRITSKIĬ, V.I. On the boundary of lower and upper Permian according to their investigation in the Arctic. (DLC.)

75850. *SOVETSKAIA GEOLOGIIA.* Sozdanie neftegazodobyvaiushcheĭ bazy v Zapadno-Sibirskoĭ nizmennosti. (Sovetskaia geologiia, Oct. 1961, no. 10, p.137-38.) Text in Russian. **Title tr.:** Creation of a base for obtaining oil and gas in the West Siberian lowland.

Reports an enlarged meeting of the Ministry for geology and of mineral resources conservation in Moscow, Aug. 17, 1961, to discuss the directions for further oil and gas prospecting in West Siberian lowland. Current status is briefly summarized: the first Siberian oil deposits were discovered in 1960 on the Konda River near Shaim (60°21′N. 64°10′E.); ten gas deposits were discovered during 1953-1961 in the Berezovo-Igrim region. Further prospecting is reviewed; the Ust'-Yenisey depression and Nadym-Yenisey interfluve are considered among the locations for concentrated effort. (DLC.)

75851. *SOVETSKIĬ SOIUZ.* Batsilly protiv vrediteleĭ. (Sovetskiĭ soiuz, 1961, no.5(135), p.52.) Text in Russian. **Title tr.:** Bacilli against pests.

Notes the rod-shaped bacillus, *Bac Dendrolimus pini,* discovered by E.B. Talalaev and found successful in controlling the Siberian egger, *Dendrolimus pini,* a moth destructive to coniferous forests. Harmless to men, mammals, and birds, this bacillus produces lethal septicaemia in egger larvae. (DLC.)

75852. *SOVETSKIĬ SOIUZ.* Pochti pri absoliutnom nule. (Sovetskiĭ soiuz, 1961, no.1(131), p.30.) Text in Russian. **Title tr.:** Almost at absolute zero.

Notes an experiment in plant hardening: black currant, ordinarily killed by -40°C., survived slow freezing to -253°C. (DLC.)

75853. *SOVETSKIĬ SOIUZ.* V godu minuvshem. (Sovetskiĭ soiuz, 1962, no.1(143), p.6-7, ports.) Text in Russian. **Title tr.:** In the year gone by.

Progress reports for 1961 include three northern towns: the port of Arkhangel'sk where 490 freighters (422 foreign) were loaded to Dec. 1, 1961; year-round operations are developing from diesel-electric vessels of the *Lena* type. Aldan is sketched, the educational and health facilities of this new town, its gold-mining industry. Anadyr, the new settlement in the center of the industrial district of Chukotka is described: the building activities, harbor construction, fish cannery, educational and cultural growth, including an agricultural school. (DLC.)

75854. SOWARD, KENNETH S. Geologic investigations of proposed powersites at Baranof and Carbon Lakes, Baranof Island, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1961. p.25-46. illus., maps incl. col. fold. in pocket. (U.S. Geological Survey. Bulletin 1031-B. Geology of waterpower sites in Alaska.) 14 refs.

Describes conditions at two proposed sites on the east coast of Baranof Island; the damsite of one at the outlet of Baranof Lake (57°05′N. 134°50′W.), the other on Coal Creek at the outlet from Carbon Lake (57°01′N. 134°48′W.). Powerhouse sites are available. The biotite-quartz diorite underlying the Baranof Lake site is suitable as a foundation for such structures, as is the strong migmatite which underlies the Carbon Lake damsite and probable tunnel route. Penstock and powerhouse sites are on a massive biotite-quartz diorite dike along the shore of Cascade Bay. Folded map, 10-ft. contour interval, shows rock types and sections. (DLC.)

75855. SOWARD, KENNETH S. Geology of waterpower sites on the Bradley River, Kenai Peninsula, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1962. p.47-70. illus., maps incl. col. fold. in pocket. (U.S. Geological Survey. Bulletin 1031-C. Geology of waterpower sites in Alaska.) 7 refs.

Describes the geologic settings of two powersites on this river which empties into Kachemak Bay on the southwest coast of the Kenai Peninsula. Field work was carried out June-Aug. 1955. Power could be developed by constructing a dam at the outlet of Bradley Lake, using the lake basin as a reservoir, and diverting water from it to one of several possible powerhouse sites near tidewater in either one or two stages. The massive graywacke at the Bradley Lake damsite provides strong foundation for a concrete dam. Tunneling conditions are outlined; possibility of earthquakes, noted. (DLC.)

75856. SPACH, C. Action de l'hypothermie sur les teneurs en eau, en sodium, en potassium et en chlore du plasma et de différents organes chez le rat. (Archives des sciences physiologiques, 1961. v.15, no.1, p.125-40, tables.) 37 refs. Text in French. **Title tr.:** The effect of hypothermia upon the water, sodium, potassium, and chlorine content of the plasma and different organs of the rat.

Reports on anesthetized animals cooled to temperatures as low as 10°C. Changes (described) in water and electrolytes were recorded when hypothermia reached 20°C. Minor changes also appeared at 15° and these became pronounced at 10°C. Only the plasma content in Na and K remained esentially unaltered. (DNLM.)

SPALDING, A. E., *see*

Canada. Northern welfare '62. 1962. No. 70539

Singittuk, W., & *others.* Letters. 1961. No. 75671

75857. SPALDING, ALEC E. "No frigate like a book," developments on the tentative standard orthography for Eskimos. (North, Mar.-Apr. 1962. v.9, no.2, p.17-20, illus.)

Reviews work since 1955 on a standard system of spelling for Canadian Eskimos. A tentative orthography, tested on selected individuals, has been found adequate for all the Canadian dialects and intelligible to Greenlanders. A standard orthography is expected to be a factor in unifying the Eskimos, also preserving and enriching their cultural heritage. (CaMAI.)

75858. **SPANGENBERG, EVGENIĬ PAVLOVICH,** 1898– . O ptitsakh nizov'ev Kolymy. (Ornitologiia, 1960. vyp. 3, p.106-111.) Text in Russian. **Title tr.:** On the birds of the lower Kolyma.

Report based on a field trip in late May-early June 1959. Four types of habitat are described and the birds observed in each recorded. Hunting and changes caused by it, are noted. (DLC.)

75859. **SPASSKAIA, I. S.** Kamennougol'nye plastinchatozhabernye iz uglenosnoĭ tolshchi Kokuĭskogo mestorozhdeniia v Tungusskom basseĭne. (Geologiia i geofizika, 1962, no.8, p.51-64, illus., plate, diagr.) 26 refs. Text in Russian. Summary in English. **Title tr.:** Carboniferous pelecypods from the coal-bearing stratum of the Kokuy deposits in theTungusskiy basin.

Describes systematically 15 species of freshwater pelecypods of gen. *Kinerkaella, Mrassiella, Anthraconauta, Anthracomya,* and others. The Kokuy is correlated with similar Kuzbas fauna; it is of middle-upper Carboniferous age. (DLC.)

75860. **SPASSKIĬ, A. A.,** *and others.* Rabota Kamchatskoĭ gel'mintologicheskoĭ ėkspeditsii, 317-ia SGĖ, v 1960 g. (Akademiia nauk SSSR. Gel'mintologicheskaia laboratoriia. Trudy 1962. t.12, p.201-221, tables.) 6 refs. Text in Russian. *Other authors:* V.I. Freze, IU. K. Bogoiavlenskiĭ, *and* V.A. Roĭtman. **Title tr.:** The work of the Kamchatka Helminthological Expedition, 317th Soviet Helminthological Expedition, in 1960.

Outlines the aims of the Expedition, work schedules and area, itinerary, amount of materials collected; personnel, research stations and periods are stated and a general review is given of the work performed. Tables (p.208-221) present systematized results on species investigated, numbers infested and general type of parasite. (DLC.)

75861. **SPASSKIĬ, A. A.,** *and* **L. P. BOBOVA.** TSestody semeĭstva *Hymenolepididae* ot vodoplavaiushchikh ptits Kamchatki. (Akademiia nauk SSSR. Gel'mintologicheskaia laboratoriia. Trudy 1962. t.12, p.172-200, illus.) 14 refs. Text in Russian. **Title tr.:** Cestodes of family *Hymenolepididae* from aquatic birds of Kamchatka.

Reports on material collected during the summer of 1959. Some 13 genera with 20 species are dealt with, and a new species, *Sobolevicanthus gladium,* is described in detail. Synonyms, host(s), location and time of find, degree of infection, morphometry and anatomy, development, etc. are covered. (DLC.)

75862. **SPASSKIĬ, N. N.** Litoral' iugo-vostochnogo poberezh'ia Kamchatki. (Akademiia nauk SSSR. Zoologicheskiĭ institut. Issledovaniia dal'nevostochnykh morei SSSR, 1961. vyp. 7, p.261-311, diagr., tables.) About 65 refs. Text in Russian. **Title tr.:** The littoral of the southeastern coast of Kamchatka.

A study of the intertidal zone of this area and its flora and fauna based on own work in the 1930's and others' subsequently. The geology, hydrography and ice conditions of the shore and bottoms are reviewed. General zonation in the distribution of organisms, and relations of geographic subdivisions of the area are outlined, including rocky, stony and sandy biotopes. Bionomic types are discussed, plants and animals and their biotopes listed, and biogeographic aspects considered. Two types of littoral are distinguished and their characteristics outlined: an Okhotskian and an Aleutian. The basic character of the population is temperate-boreal with a small admixture of arctic and American (Oregonian) elements. (DLC.)

75863. **SPEICHER, CARL E.,** *and others.* Cold injury of myocardium and pericardium in cardiac hypothermia. (Surgery, gynecology & obstetrics, June 1962. v. 114, no.6, p.659-65, illus., table.) 8 refs. *Other authors:* L. Ferrigan, S.K. Wolfson, Jr., E.H. Yalav, *and* A. J. Rawson.

Account of observations on four patients and of experiments with both having the heart exposed to saline slush. Gross and microscopic examinations showed myocardial damage with loss of sarcoplasmic structure, and, in the pericardium fibroblastic proliferation, leading to pericardial constriction and congestive failure. The lesions are attributed to cold injury. (DLC.)

75864. **SPENCE, IAN.** The trend toward settlement. *(In:* Canada. Dept. of Northern Affairs and National Resources. Northern welfare . . . 1962, p.15-16.) 3 refs.

Discusses the economic and ecological factors leading primitive hunters to band together and form communities. Differences in aboriginal concepts of community are exemplified in the Eskimo and Loucheux (Kutchin) Indian systems. (CaMAI.)

75865. **SPENCER, DAVID L.** The Alaskan moose. (Alaska sportsman, May 1962. v.28, no.5, p.14-16, illus.) Alaska wildlife library no.25.

Describes distribution, care of calves, breeding, antler development, food and management requirements of *Alces alces gigas.* It is found in many parts, especially the south-central, of Alaska and is extending the range. Five-six thousand are taken annually. (DI.)

SPENCER, DAVID L., *see also* Nelson, U.C., & D.L. Spencer. The Bureau of Sport Fisheries . . . 1962. No. 74292

SPENCER, L. V., *see*

Marcus, S., & *others.* Acute & chronic exposure low temp. & survival. 1961. No. 73801

Marcus, S., & *others.* Effect of low ambient temperatures . . . 1962. No. 73804

Marcus, S., & *others. K. pneumoniae* passed mice low temp. 1961. No. 73806

Marcus, S., & *others.* Low ambient temp. mice tumor. 1961. No. 73805

Marcus, S., & *others.* Low temp. stress & challenged mice. 1961. No. 73802

Marcus, S., & *others.* . . . Low temp. & develop. *S. pallida* . . . 1961. No. 73803

75866. **SPENCER, N. W.,** *and others.* Electron temperature evidence for nonthermal equilibrium in the ionosphere. (Journal of geophysical research, Jan. 1962. v.67, no.1, p.157-75, illus., tables, graphs, diagrs.) 14 refs. *Other authors:* L.H. Brace *and* G.R. Carignan.

Describes the "dumbbell" electrostatic probe and presents electron temperature and positive ion density data obtained with it during two rocket flights at Ft. Churchill, Manitoba, and two at Wallops Island, Va., 1960-1961. The electron temperature profiles exhibit large positive gradients

between 150 and 250 km., gradually changing to an approximately isothermal region above 250 km. The ion density profiles show only slight density maxima in the E region and the less distinct F_1 regions. The results are compared with data obtained by other techniques, showing good agreement. It is found that electons and neutral particles are not in thermal equilibrium in the daytime ionosphere to at least 420 km. altitude. (DLC.)

75867. SPERANSKAĬA, I. M. Kaĭnozoĭskaĭa format͡siĭa plato-bazal'tov severnogo poberezh'ia Okhotskogo morĭa. (Geologiia i geofizika, 1962, no.2, p.25-41, tables, sketch-maps, diagrs. incl. fold.) 20 refs. Text in Russian. Summary in English. **Title tr.:** Cenozoic formations of plateau basalts on the northern coast of the Okhotsk Sea.

Reports his 1959 study of the eastern part of the Yana basaltic plateau. A detailed stratigraphic description is given of the Cenozoic volcanic stratum and similar conditions noted as prevailing on the northern coast of the Okhotsk Sea. Petrographic and petrochemical characteristics of these basalts and acid lavas connected with them are given. They are shown to belong to the plateau basalts of the platform region. The basalts of the Okhotsk Sea coasts should be called leucocratic plateau-basalts of young platforms of the Pacific belt. (DLC.)

75868. SPERANSKAĬA, I. M. Melovoĭ vulkanizm Okhotsko-Chaunskogo poĭasa Severo-Vostoka SSSR. (Vsesoĭuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.280-83.) Text in Russian. **Title tr.:** Cretaceous volcanism of the Okhotsk-Chaun belt in northeastern USSR.

Reviews this rock two-three thousand meters thick extending from northern Okhotsk coast to the Chukchi Peninsula. Patterns of distribution and geologic conditions of volcanic formations are described. Early Cretaceous andesite and late Cretaceous liparite formations are distinguished, their main proper ties described and correlated. (DLC.)

75869. SPERANSKAĬA, I. M. Mestorozhdenie alunita tipa vtorichnykh kvart͡sitov na severo-vostoke SSSR. (Vsesoĭuznoe mineralogicheskoe obshchestvo. Zapiski 1961. ser. 2, chast' 90, vyp.3, p.307-310, illus., tables, diagr.) 3 refs. Text in Russian. **Title tr.:** Alunite deposits of secondary quartzite type in northeastern USSR.

Reports mode of occurrence and mineralogy of alunite discovered in 1948 in the Arman' River basin (59° 40′ N. 150° 12′ E.) in Magadan province. The veins are found in secondary quartzites. Optical properties, chemical composition, heat tests and X-ray analyses are described. Alunite-dickite rocks are also treated. (DLC.)

75870. SPERANSKAĬA, I. M. O sviazi intruzivnykh obrazovaniĭ s effuzivami na levoberezh'e reki Nilgysy. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Aug. 1962, no.8, p.78-89, tables, map, diagr.) 13 refs. Text in Russian. **Title tr.:** On the relationship between intrusive formations and effusive rocks on the left bank of the Nilgysyg River.

Reports geologic-petrologic data on magmatic rocks as studied in 1958 on the Nilgysyg, a tributary of the Inya. The geologic-tectonic position of these rocks is outlined, their petrographic and petrochemical features reported. Many similar features are found in the intrusive and effusive and it is concluded that both rocks were formed by the same magmatic source. (DLC.)

SPERANSKIĬ, A. P., *see* Kurashov, S.V. Kurorty SSSR. 1962. No. 73222

75871. SPERANSKIĬ, G. N., *and* **IŪ. M. PRATUSEVICH.** Élektroėnt͡sefalograficheskiĭ analiz vozdeĭstviia kholodovogo agenta na rebenka. (Akademiia nauk SSSR. Doklady 1961. t.139, no.3, p. 759-62, illus.) 7 refs. Text in Russian. **Title tr.:** Electroencephalographic analysis of the effect of a cold agent on children.

Reports on EEG responses of 45 children before and after a standard cold stimulus on the face and ears. In ten of the subjects, the presence in the blood of adrenalin-like substances and their dehydro forms, of acetylcholine, as well as pulse and arterial pressure, were determined. (DLC.)

SPILSBURY, HARRY P., *see* Norsk tindeklub. Fjellsport. 1958. No. 74388

SPINK, REGINALD, *see* Denmark. Greenland. 1961. No. 70974

75872. SPIRIDONOV, M. A. Chetvertichnye otlozheniia Kamsko-Vychegodskogo mezhdurech'ia. (Leningrad. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informat͡sionnyĭ sbornik 52, Materialy po chetvertichnoĭ geologii i geomorfologii, 1962, p.23-30, text map.) 7 refs. Text in Russian. **Title tr.:** Quaternary deposits of the Kama-Vychegda interfluve.

Reports the Quaternary, as studied in 1960 in the area roughly 59° - 62° N. 49° - 55° E., to be 60 m. or more thick and to consist of glacial, aqueous, alluvial, eolian and other deposits. A geologic section on the upper Vychegda is described. The center of glaciation, age and stratigraphy of the Quaternary deposits are reported. (DLC.)

75873. SPIRO, NIKOLAĬ SEMENOVICH, *and* **K. S. BONCH-OSMOLOVSKAIA.** Izuchenie sostava pogloshchennykh kationov glinistykh otlozheniĭ triasa. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei po geokhimii osadochnykh porod, 1961, vyp.2, p.39-54, tables, diagrs.) 10 refs. Text in Russian. **Title tr.:** Investigation of the composition of absorbed cations in Triassic argillaceous deposits.

Reports a geochemical study in the Cape Tsvetkova, Nordvik and Olenek regions, the Kharaulakh Mts. and elsewhere. The Triassic argillaceous rocks are revealed to have less potassium than the Permian, and in some deposits an increase of sodium content is noted. Chemofacies, and salt compositon of the Triassic marine basin are characterized, applying geochemical criteria of clay minerals. (DLC.)

75874. SPIRO, NIKOLAĬ SEMENOVICH, *and* **A. I. DANIŪSHEVSKAIA.** K razvitiiū novogo metoda ot͡senki liūminest͡sentno-kapillīarnykh kharakteristik neftei i bitumov; po sootnosheniiam konstant adsorbt͡sii. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei po geokhimii osadochnykh porod, 1961, vyp. 2, p.109-127, tables, graphs.) 12 refs. Text in Russian. **Title tr.:** On development of a new method for appraisal of the luminescence-capillarity characteristics of oils and bitumens; according to interrelation of adsorption constants.

Presents an extensive supplement for clarification of the new method described in No. 61824. Changes in adsorption constants in relation to the group composition of bitumens and their molecular weight are explained. Additional experimental data are reported on bitumen from the Sangar and Chay-Tumus coal deposits and Permian rocks of the Olenek region. (DLC.)

75875. SPIRO, NIKOLAĬ SEMENOVICH. O sviāzi khimicheskogo sostava karbonatov i pogloshchennykh osnovaniĭ glinistykh porod. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei po geokhimii osadochnykh porod, 1961, vyp. 2, p.55-64, tables, diagrs.) 3 refs. Text in Russian. **Title tr.:** On the connection of chemical composition of carbonates and absorbed bases of argillaceous rocks.

Presents a correlation of relative magnesium content (in equivalents) in the absorbed complex and carbonates of argillaceous rocks from Permian deposits of Cape Tsvetkova and the Nordvik region. Average value of relative content of magnesium is determined according to stratigraphic series and facies. Geochemical criteria are used to interpret formation conditions of these deposits. (DLC.)

75876. SPIRO, NIKOLAĬ SEMENOVICH, *and* **M. V. GOGOLEVA.** Opredelenie optimal'nykh uslovii dliā ustanovleniiā mineral'nogo sostava glin metodom okrashivaniiā. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei po geokhimii osadochnykh porod, 1961, vyp. 2, p.65-79, tables, graphs.) 11 refs. Text in Russian. **Title tr.:** Establishment of optimal conditions for determination of mineral composition of clays by the coloring method.

Reports on investigation of kaolinite, montmorillonite and hydromica clays of Leningrad Province by a new method worked out by the Institute of Geology of the Arctic. This coloring method is more applicable to field study conditions and helps to determine clay mineral composition. Preparation of material for coloring, coloring procedures, techniques and equipment are described in detail in the appendix to the volume. Results obtained are reported and compared with X-ray and thermal analyses. (DLC.)

75877. SPIRO, NIKOLAĬ SEMENOVICH, *and* **TS. L. VOVK.** Puti izmeneniiā solevogo sostava mirovogo okeana. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei po geokhimii osadochnykh porod, 1961, vyp. 2, p.23-38, tables, diagrs.) 20 refs. Text in Russian. **Title tr.:** The ways of changes in the salt composition of the world ocean.

Reports chemical investigations of sedimentary rocks carried out by the Institute of Geology of the Arctic. The mineral composition of the absorbed complex of argillaceous sedimentary rocks as studied from the Permian to the present discloses substantial changes in the salt composition of the oceans. Changes in potassium are especially notable. Various chemical analyses are presented and evaluated and geochemical criteria are applied to explain the physical-geographic causes of these changes. Decrease of calcium and magnesium salts and increase of sodium and potassium salts are noted. (DLC.)

75878. SPIRO, NIKOLAĬ SEMENOVICH, *and* **A. I. DANIŪSHEVSKAIĀ.** Sopostavlenie adsorbtsionnykh kharakteristik bitumov osadochnykh porod tsentral'nogo sektora Sovetskoĭ Arktiki. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei po geokhimii osadochnykh porod, 1961, vyp. 2, p.128-31, table, diagrs.) Text in Russian. **Title tr.:** Comparison of adsorbed characteristics of bitumen from sedimentary rocks in the central region of the Soviet Arctic.

Reports a geochemical study: 640 samples of bitumen from Permian, Triassic and Jurassic deposits, in the Nordvik, Olenek and lower Lena regions, were analyzed by distinguishing the luminescence and capillarity properties. Adsorption constants for Permian, Triassic and Jurassic bitumen are established, diagrammed and compared. (DLC.)

75879. SPIRO, NIKOLAĬ SEMENOVICH, *and* **I. S. GRAMBERG.** Sostav adsorbirovannogo kompleksa glinistykh porod kak pokazatel' rannei stadii usloviĭ osadkoobrazovaniiā. (Geologiiā i geofizika, 1961, no.9, p.30-34, table, diagr.) 8 refs. Text in Russian. **Title tr.:** Composition of an adsorbed complex of argillaceous rocks as indicator of an early stage of sedimentation conditions.

Reports geochemical investigation of clays conducted in the Institute of the Geology of the Arctic since 1952. About 500 analyses were made of Permian deposits from the Taymyr and Nordvik region, and a relationship between this rock composition and environmental deposition was established with reasonable certainty. Permian environments-Permian Sea in northern Siberia are evaluated. Results from this type of study are in good agreement with the data of paleontologic and lithologic studies. (DLC.)

SPIRO, NIKOLAĬ SEMENOVICH, *see also*

Daniūshevskaiā, A.I., & N.S. Spiro. Fizikokhimicheskaiā kharakteristika . . . 1961. No. 70877

Daniūshevskaiā, A.I., & N.S. Spiro. Spektrofotometricheskie kharakteristiki . . . 1961. No. 70879

Gramberg, I.S., & N.S. Spiro. Opyt ispol'zovaniiā goekhimicheskikh dannykh . . . 1961. No. 71816

75880. SPOMER, GEORGE G., *and* **F. B. SALISBURY.** An instrument shelter for alpine-arctic microclimatic studies. (Ecology, Summer 1962. v. 43, no.3, p.542-43, illus., diagr., table.) Ref.

Describes requirements, design and field tests of a hygro-thermograph shelter of 24 in. diam., in which the instrument is at ground level, instead of four feet up as in standard shelters. Tests were made in summer 1960 and in 1961 in Rocky Mountain National Park, Colo., at three alpine locations and near the tree limit. Insulation and ventilation of the shelter produced insignificant differences between inside and outside temperature readings. Resistance to rodents etc. lightweight (15 lbs.), and low cost ($35) are other favorable features. (DGS.)

SPRAGUE, GALE C., *see* Gartlein, C.W., & G.C. Sprague. Auroral absorption radio signals. 1962. No. 71599

75881. SPRATT, CHARLES A., *and* **D. L. MacDONALD.** Whitehorse metropolitan area transportation study. Ottawa, Dept. of Northern Affairs and

National Resources. 1962. 13 p., tables, map on cover.

Reports on a study by Canadian Coachways Ltd. and Edmonton Transit System, of the feasibility of a transit system within a ten-mile radius of the city center. There is no general public transport in this community of 7,000 population, though the military reserve has its own, and some school transport is provided by the city. Recommendation is made that a bus transit service be established as a Crown Corporation, as Federal and Territorial government support would be required. The military facility in operation (RCAF) should be utilized for general service with fare charged. Its equipment and local experience make this a relatively inexpensive but satisfactory initial system which could later become a commercial operation. (CaONA.)

75882. SPREITER, JOHN R., *and* **B. R. BRIGGS.** Theory of electrostatic fields in the ionosphere at polar and middle geomagnetic latitudes. (Journal of geophysical research, June 1961. v.66, no.6, p.1731-44, diagr., graphs.) 12 refs.

Analyzes the properties of the elongated electrostatic fields that provide the coupling mechanism required in the dynamo-motor concept of the E and F regions. The analysis is developed for an electrostatic field of arbitrary horizontal scale in a horizontally stratified, partially ionized gas, subject to an imposed magnetic field selected to be representative of conditions in polar and middle geomagnetic latitudes. The anisotropic character and continuous variation with height of the conductivity are retained, and numerical solutions are determined for the attenuation of the electric field with height above the dynamo region. The results show that the attenuation is much less than that which would be experienced in a homogeneous medium; it is possible for electrostatic fields having horizontal scale as small as 3-4 km. to extend 130-400 km. with a loss in magnitude of only about 25%. It is shown also that small changes in ionospheric conditions can result in substantial changes in the attenuation of the electric field with height.—From authors' abstract. (DLC.)

75883. SPRINGIS, KARL ĬĀKOVLEVICH. Effuzivnyĭ magmatizm i tektonika mezozoĭskoĭ skladchatoĭ oblasti Severo-Vostoka SSSR. (Vsesoĭuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.263-73.) 9 refs. Text in Russian. **Title tr.:** Effusive magmatism and tectonics of the Mesozoic folded zone in Northeastern USSR.

Outlines the distribution of effusive volcanism in space and time in Yakutia and Magadan Province: Precambrian, Cambrian, Devonian, Permian, Jurassic, Cretaceous, etc. Effusive magmatism of unusual intensity is shown in the Mesozoic geotectonic cycle. The structural role of the Cretaceous, Jurassic, and Tertiary periods is emphasized in the development of effusive rocks. Effusive magmatism is correlated with tectonic regime of this region. (DLC.)

75884. SPRINGIS, KARL ĬĀKOVLEVICH. Nekotorye priznaki proĭavleniĭa noveĭshikh tektonicheskikh dvizheniĭ v Verkhoĭansko-Kolymskoĭ skladchatoĭ oblasti. (*In:* International Association for Quaternary Research. Neotektonika SSSR . . . 1961, p.223-29.) 2 refs. Text in Russian. **Title tr.:** Some traces of the manifestation of recent tectonic movements in the Verkhoyansk-Kolyma folding region.

Outlines the structural-morphologic and geologic traces: tectonic movements have significantly affected the relief structures of various dimensions and the geologic setting of the region. Recent tectonic movements are more intensive along the jointing lines and contact zones with geosynclinal regions of the Soviet Far East. Morphologic signs are evident that some structures are at present under influence of tectonic movements. (DLC.)

75885. SPROULE, JOHN CAMPBELL. Arctic Islands exploration. (Canadian oil and gas industries, Jan. 1961. v.14, no.1, p.23-28, port, maps, section.)

Lists six factors favoring mineral development of the Canadian Arctic Islands compared with seven favoring development in southern areas. The Islands have better exposed rock sections, limited muskeg areas, low precipitation, exploration is facilitated by crown ownership, access to European markets, and favorable government policy. Some major oil companies' opposition is a powerful deterrent to development in the Arctic Islands. Exploration activity by oil companies, the Geological Survey of Canada, and independent survey companies, is noted. A geologic map of northwestern Canada, and a complete stratigraphic section of the Arctic Islands are included. (DGS.)

75886. SPROULE, JOHN CAMPBELL. Natural resources prospects of the Canadian Arctic. (Western miner and oil review, Jan. 1961. v.34, no.1, p.31-35, illus., map.)

Discusses mostly the potentialities, on the basis of the geology, for mineral discoveries. The Precambrian Shield and the mountains of Yukon Territory show promise of substantial metallic minerals deposits, and the Western Canadian Sedimentary Basin of oil and gas. Tectonic trends (some mapped) extending from the Shield out over the Sedimentary Basin are the most probable discovery areas. Thinness of glacial drift or other cover over much of the area facilitates minerals search and lessens the costs. The slow rate of discovery to date is due to weak effort. (DGS.)

75887. SPROULE, JOHN CAMPBELL. Regional geology and petroleum prospects: lower Mackenzie basin and arctic coastal area, Northwest Territories. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.1141-48, table, 2 maps & diagr. fold. in v.3.)

Outlines the historical background and present status of geological exploration in this part of northern Canada, particularly those aspects relating to oil occurrence. Stratigraphy and structure are compared with those of the better known parts of the western Canadian basin to the south and of the Arctic Islands basins to the north. Possible oil reserves are estimated, and potential domestic and foreign markets for Canadian arctic oil are indicated. (DGS.)

75888. **SPROULE, JOHN CAMPBELL.** The tectonics of the Canadian Shield and adjoining sedimentary basins in relation to oil and gas occurrences. (*In:* Royal Society of Canada. The tectonics . . . 1962. p.162-73, fold. maps & sections, photo mosaics.) 11 refs.

Deals with those zones and tectonic belts that extend from one geological province to another, as well as the effects of prolonged tectonic activity on the segregation and accumulation of mineral deposits, particularly oil. Usefulness of photogeology in detecting such belts within the sedimentary basins adjoining the Shield is stressed. Examples of possible mineral-bearing belts are given from Rankin Inlet-Athabasca, Hay River area, Coronation Gulf-Mackenzie Mts., Boothia Peninsula-Cornwallis-Ringness areas, etc. The photointerpretation method has proved in 15 years' use, an effective preliminary exploration technique. (DGS.)

SPROULE, JOHN CAMPBELL, *see also* Hale, J.D. . . . Can. Arctic Islands. 1962. No. 71952

75889. **SQUIRES, H. J.** Decapod Crustacea of the *Calanus* expeditions in Frobisher Bay, Baffin Island, 1951. (Canada. Fisheries Research Board. Journal, July 1962. v.19, no.4, p.677-86, illus., tables.) 9 refs.

Records 11 species collected on the Calanus Shelf and at Potter Island, with frequency distributions. *Lebbeus groenlandicus* was dominant; most species spawn annually and feed on the shelf benthos. (DLC.)

STACH, GREG J., *see Western miner.* Can. Tungsten Corp. 1962. No. 76533

75890. **STAERMOSE, CHR.** Forsøgsundervisning i dansk. (Grønland, Mar. 1962. nr.3, p.90-98, illus.) Text in Danish. **Title tr.:** Experimental teaching of Danish.

Describes this experiment in Greenland primary schools, teaching Danish exclusively during the first two years. The Greenlanders gave it full support. (DLC.)

75891. **STAKHROVSKIĬ, E.** Za kompleksnoe razvitie promkhozov. (Sel'skoe khoziaĭstvo Sibiri, Apr. 1961. god 6, no.4, p.74.) Text in Russian. **Title tr.:** For full development of commercial hunting farms.

Notes 94 promkhozes set up in northern Siberia and the Far East by consumers cooperatives. Their functions are broad: management and utilization of fur animals, protection of forests, gathering of berries, cones, mushrooms and medicinal herbs, fur farming, bee-keeping, catching fish, etc. Success of several promkhozes is noted. (DLC.)

75892. **STALEY, DEAN ODEN, 1926–** . On the mechanism of mass and radioactivity transport from stratosphere to troposphere. (Journal of the atmospheric sciences, Nov. 1962. v.19, no.6, p.450-67, maps, graphs, tables.) 20 refs. Contract Nonr 2173 (02), U.S. Office of Naval Research.

Describes features of atmospheric circulation disclosed by measurements of radioactivity produced by nuclear detonations: radioactive debris placed in suspension in the troposphere has a residence time of about a month; debris released in the stratosphere has a longer, but more variable residence time, ranging from a few months in the lower stratosphere in middle and high latitudes to several years in the upper stratosphere at low latitudes; debris injected into the stratosphere at any latitude mostly passes into the troposphere at middle, and to a lesser extent at high latitudes; this debris transport into the troposphere at all middle and high latitudes exhibits a spring maximum and an autumn minimum. Evidence from a tropospheric sampling program showed that downward mass and radioactivity transport by individual baroclinic disturbances is the most important mechanism, which allows prediction of specific regions of mass and radioactivity flow into the troposphere. (DWB.)

STALINSKI, P., *see*

Pounder, E.R., & P. Stalinski. Elastic properties . . . sea ice. 1961. No. 74929

Pounder, E.R., & P. Stalinski. General properties . . . ice. 1961. No. 74930

75893. *THE STAMPEDER.* Dawson, Yukon Territory, 1961-1962. Ed. by Alan Innes-Taylor. Mimeo. Pub. irregularly, approx. twice monthly. v.1, no.1-9, Nov. 7, 1961-May 3, 1962, *in progress.*

News sheet of 2-6 p. introducing the Dawson City Festival of July 1-Aug. 17, 1962. News of participants, distinguished visitors, and historic sites, the Festival program and short anecdotes are included; also editorials in promotion of the event. (CaONA.)

75894. **STANKEVICH, E. F.** Chetvertichnye otlozheniia vostochnoĭ chasti Bol'shezemel'skoĭ tundry. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, May 1962, no.5, p.93-103, tables, diagrs.) 48 refs. Text in Russian. **Title tr.:** Quaternary deposits in the eastern part of the Bol'shezemel'skaya Tundra.

Describes the thickness, types, distribution, lithology, flora and fauna of these deposits from own and others' studies. The Quaternary history of the region is outlined. Two glaciations in the area are recognized, the moraines of both and the interglacial deposits characterized. Marine transgression at the beginning of the Quaternary and Boreal transgression during the interglacial period are also described. (DLC.)

75895. **STANKEVICH, E. F.** O chetvertichnykh otlozheniiakh raĭona Vashutkinykh ozer i rek Labogeĭ-iu i Niarteĭ-iagi. (*In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.2, p.12-16.) Text in Russian. **Title tr.:** Quaternary deposits of the Vashutkiny Lakes and the Labogey-yu and Nyartey-yaga River region.

Describes the stratigraphy of a Quaternary deposit section, studied by the author in 1954 in this region (approx. 68°06′N. 61°36′E.) of the northern Bol'shezemel'skaya Tundra. Deposits of two glaciations, separated by interglacial marine deposits of the boreal transgression are distinguished. History of relief formation of the region is interpreted. (DLC.)

75896. **STANLEY, GLENN M.,** *and* **J. M. QUASHNOCK.** An evaluation of an electronic location

marker, SARAH, for arctic use. Fort Wainwright, Alaska, May 1962. 36 p. illus., tables, diagrs., maps. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-8.) Ref.

Reports modification and tests of the Search and Rescue and Homing System. Search equipment was mounted on H-21 helicopters, T-33 jet trainers, B-57 jet bombers and tested in flights in Alaska, using specially developed antenna systems. Signals of adequate strength for homing were received from the SARAH beacon transmitter at distances to 150 n. mi.; with modifications, the search area covered by a B-57 flight would be in excess of 400,000 sq. mi. Batteries have been found which are capable of operating the equipment for 20 hrs. at -40°F. A carrier vest has been developed for the beacon but not yet tested. (CaMAI.)

75897. STANLEY, KIRK W. Placer cassiterite of the "Manley Tin Belt," Alaska. (Economic geology, Jan.-Feb. 1961. v.56, no.1, p.213-14.) 3 refs.

Describes optical, chemical, and spectrographic analyses on several pounds of this mineral obtained from gold placer operations at Toffa and Eureka Creeks, adjacent to the Tanana River near its confluence with the Yukon. Results of analyses suggest that this cassiterite was derived from a lode source such as a contact deposit, rather than a chemical precipitate. (DGS.)

75898. STANLEY, KIRK W. Shore processes. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.64-70.)

Discusses engineering problems in connection with such processes as tidal and wave action, erosion of shore materials, littoral drifts, and currents, particularly in the Cook Inlet area of Alaska. Large amounts of water flow through a restricted opening, due to configuration of the Inlet, and cause strong tidal currents and a high tidal variation (approx. 30 ft.). Much of the shore consists of easily eroded glacial material, and the near shore area is comparatively shallow. Local data on these processes and conditions are needed to plan for construction of shore installations, breakwaters, etc., or dredging. A causeway built across either Turnagain or Knik Arms would alter the environment of the entire northern part of the Inlet. Currents might be utilized as zones in which winter ice could be most easily broken for shipping lanes. (CaMAI.)

STANLEY, KIRK W., *see also*

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

75899. STAQUET, M. Observations physiologiques et médicales d'une expédition au Pôle Sud. (Bruxelles-médical, May 1961. année 41, no.21, p.741-51.) 5 refs. Text in French. **Title tr.:** Physiological and medical observations from a South Pole expedition.

From experience as doctor of the Expédition Antarctique Belge 1958-1960, author deals with the "climatic aggression" encountered and its physiological effects on men and dogs; housing, food, clothing, for camp and travel; sanitation, accidents and diseases; general hygiene; psychic problems; research. The ease and good health on present-day expeditions are stressed, the main difficulties being loneliness and, in some individuals, unadaptability. (DNLM.)

75900. STARIKOV, G. F. Kedrovyĭ stlanik na Krainem Severo-Vostoke. (Lesnoe khoziaĭstvo, Feb. 1961. god 14, no.2, p.19-20, illus., map.) Text in Russian. **Title tr.:** Dwarf pine in the far Northeast.

Pinus pumila is the northernmost tree species, extending to 69°08'N. on the lower Kolyma. It covers over 15 million hectares with 35-40 m³ timber/hectare. Over large areas, it is the only source of fuel, protects the soil from erosion, shelters wildlife, yields valuable nuts. Methods of utilizing these resources are discussed; in view of regeneration, selective cutting of every second tree is recommended. The northern limits of dwarf pine and larch are indicated on map. (DLC.)

75901. STARIKOV, G. F. Lesa Magadanskoĭ oblasti i puti ikh vosproizvodstva. (Lesnoe khoziaĭstvo, Feb. 1962. god 15, no.2, p.19-23, illus.) Text in Russian. **Title tr.:** The forests of Magadan Province and means for their regeneration.

Magadan is 14% forest covered and 12% more has dwarfed shrubby growth. Larch extends to 69°18'N., the dwarf pine *(Chosenia macrolepis)* and poplar *(Populus suaveolens)* beyond that and dwarf alder *(Alnus fruticosa)* reaches almost to the arctic coast. These meagre resources are dwindling rapidly due to industrialization of the province and extensive cutting. Since 1932, 46.5 million m³ of timber have been taken off mostly by clear cutting, and on 500,000 hectares the forest has not regenerated. Forest fires have laid waste another two million. Conservation measures have been introduced since 1960: established preserves around Magadan and other cities; protective belts (25 km. wide) along the Okhotsk coast, main roads and spawning streams. Larch is protected in a 100 km. belt along its northern limit. Increased reforestation, fire control, cutting restrictions and transfer of collective farm forests to the state jurisdiction are discussed, and recommended. (DLC.)

75902. STARIKOV, VIKTOR. Sverkaiushchie grani. (Ogonek, Apr. 1961. god 39, no.15, p.10-15, illus.) Text in Russian. **Title tr.:** Sparkling facets.

Journalist describes a 1960-61 winter trip to Mirnyy, the diamond-mining center in Yakutia, thence to Chernyshevskiy on the Vilyuy where a hydroelectric station is under construction, and to the Aykhal or Slava kimberlite pipe, said to be the richest diamond-pipe discovered so far. Illus. by photos. (DLC.)

75903. STARIKOVA, N. D. Organicheskoe veshchestvo v zhidkoĭ faze morskikh i okeanskikh osadkov. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.50, Morskie geologicheskie issledovaniia, p.130-69, tables, charts, diagrs.) 47 refs. Text in Russian. **Title tr.:** Organic matter in the liquid phase of marine and oceanic sediments.

Reports study of 22 cores taken from the Pacific, 18 from the Black Sea, three from the Azov and two from the Sea of Okhotsk, the last from two stations in the southern part of the sea. Organic carbon data for various horizons and types of deposits are tabulated. It ranged 0.27 - 0.45% and 0.75 - 1.11% at the Okhotsk Sea stations. Comparison is made with the Pacific and other seas. (DLC.)

75904. STARITSKIĬ, IU. G. Osnovnye cherty metallogenii Sibirskoĭ platformy. (Vsesoiuznaia ob"edinennaia sessiia po zakonomernostiam razmeshcheniia poleznykh iskopaemykh i prognoznym kartam, 2d, *Kiyev,* 1960. Doklady sessii, chast' 2, p.5-13.) Text in Russian. **Title tr.:** Main features of the metallogeny of the Siberian platform.

Reviews the main tectonics structures of Siberian Platform. Several stages of structural development, magmatism, and metallogeny are distinguished and described. According to material and formation conditions, four ore complexes are separated and briefly characterized, noting the nickel deposits of the Noril'sk region, the Angara-Ilim iron ore deposits, diamond deposits of Yakutia, and others. (DLC.)

75905. STARKOV, G. V. Azimuty i skorosti dvizheniia odnorodnykh dug políarnykh siianiĭ. (Akademiia nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiu Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: políarnye siianiia i svechenie nochnogo neba. Sbornik statei 1961. no.7, p.22-26, tables, graphs.) 10 refs. Text in Russian. Summary in English. **Title tr.:** Azimuths and velocities of homogeneous arcs of auroras.

Reports on the studies of the orientation of homogeneous auroral arcs carried out during Dec. 17, 1957 - Jan. 28, 1958 at the Dikson, Cape Chelyuskin, Piramida (Spitsbergen), Murmansk, Vize, and the drifting North Pole-6 (79°N. 153°E.) stations. The following conclusions are drawn: *1,* diurnal changes of the arcs support the assumption that the arcs are oriented along spirals which are the isolines of the simultaneous occurrence of the corresponding magnetic disturbance maximum; *2,* within the limits of observational errors, the radii of the curves of auroral arcs are independent of their location latitude; *3,* two types of auroral arcs were discovered from their recorded displacement velocities: the arcs of the first type have velocities of 12 ± 6 km./min. and are displaced parallel to themselves; this type of auroral arc may appear independently of magnetic disturbances and their variations; arcs of the second type considered to be connected with geomagnetic and coincident with storms and with the linear electric current that causes them. Such auroral arcs may have 1,000 - 8,000 amperes current, have irregular displacements and velocities up to 85 km./min. (CaMAI.)

STARKOV, G. V., *see also* Nadubovich, IU. A., & G.V. Starkov. Voloknistaia struktura . . . 1962. No. 74200

75906. STARKOV, PAVEL MIKHAĬLOVICH, *and* **E. K. AGANIANTS.** Vosstanovlenie élektroéntsefalogrammy posle gipotermii. (Fiziologicheskiĭ zhurnal SSSR, June 1962. t.48, no.6, p.629-37, illus.) 24 refs. Text in Russian. **Title tr.:** Re-establishment of the electroencephalogram after hypothermia.

Reports on experiments with cats and rabbits cooled to 15° - 20°C. In cats restoration of the EEG began at 23°C., in rabbits at 25°C. Full restitution took place in cats at 35°C., in rabbits at normothermia. (DLC.)

75907. STARSHINOV, V. A. Opyt primeneniia rezinovykh buksirnykh krantsev na ledokolakh. (Sudostroenie, Feb. 1962. god 28, no.2, p.57-58, plan.) Text in Russian. **Title tr.:** Use of rubber tow fenders on icebreakers.

Describes the bumpers or shock-absorbers of rubber used for the first time on the atomic icebreaker *Lenin:* their shape, installation on bow and stern, cold-resistance, etc. No aging or other signs of deterioration were evident after three years' use on this vessel, including heavy duty in the Arctic in 1960. (DLC.)

75908. STARY, PETR. Notes on European species of the genus *Aphidius* Nees. Hym., Aphidiidae. (Entomologisk tidskrift, 1961. årg. 82, häfte 3-4, p.213-21, diagrs.) 11 refs.

Presents systematic description of three hitherto unsatisfactorily described or doubtful species. *A. cingulatus* Ruthe, known also from Greenland, is redescribed. (DLC.)

STATE, D., *see*

Dee, R., & *others.* Circulatory effects . . . 1961. No. 70935

Goetz, R.H., & *others.* Temp. changes & pulmonary circ. 1962. No. 71722

75909. STAUB, NORMAN C., *and* **W. F. STOREY.** Relation between morphological and physiological events in lung studied by rapid freezing. (Journal of applied physiology, May 1962. v.17, no.3, p.381-90, illus.) 34 refs.

Study of cats' lung frozen in the open thorax and in isolated lobes. Freezing advanced 1 mm. in less than ½ sec. 2 mm. in 2 sec. At this rate ice crystal formation was submicronic and tissue preservation good. Indirect observations suggest that reaction is little or absent. (DLC.)

75910. STAUBER, HANS. Alpine geologische, glaziologische und hydrologische Forschungen und Erfahrungen zur besseren Erschliessung der Polargebiete. (Polarforschung, Bd. 5, 1960 *pub.* Nov. 1961. Jahrg. 30, Heft 1-2, p.63-65.) Text in German. **Title tr.:** Alpine geological, glaciological, and hydrological research and experiences for better understanding of polar regions.

Lists about a dozen cases where experience in the Alps has been applied to the solution of problems in polar regions. (CaMAI.)

75911. STAUDER, WILLIAM. An application of S waves to focal mechanism studies. (Canada. Dominion Observatories, Publications 1961. v.24, no.10, p.343-53, diagrs., graphs.) 14 refs. Paper presented at the Symposium on Earthquake Mechanism, Helsinki, 1960.

Summarizes own earlier work and develops two methods for relating the direction of polarization of S waves to the mechanism at the focus of an earthquake. Application to two Alaskan earthquakes, and one or two others from which the fault-plane solutions from P waves were previously available, shows the S wave data in agreement with the P wave solution and conforming to a dipole with moment as the model of the focus. In three Kamchatka earthquakes, the same methods of analysis indicate a new type of focus, represented by a single force.—From author's abstract. (DLC.)

75912. STAUDER, WILLIAM. S-wave studies of earthquakes of the North Pacific, part I: Kamchatka. (Seismological Society of America. Bulletin, July 1962. v.52, no.3, p.527-55, tables, diagrs., map.) 15 refs.

Examines the polarization of S waves at stations distributed azimuthally about the source, for each of 23 earthquakes occurring in 1959-1960. In 19 of them the P and S wave data are in agreement, with a double couple source as the point model of the focal mechanism. The S waves indicate a uniform mechanism which repeats itself from earthquake to earthquake and from which it may be inferred that the axes of greatest and least stress at the foci tend to lie in a vertical plane normal to the trend of the Kamchatka-Kurils arc. The axis of least stress usually plunges almost vertically under the continent, but may also plunge less steeply, at angles as low as 45°. At least two earthquakes may be represented by a single couple source.—From author's abstract. (DLC.)

STAUDER, WILLIAM, *see also* Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

STAVTSEV, A. L., *see* Moralev, V.M., & A. L. Stavtsev. Osnovnye cherty tektoniki . . . 1961. No. 74109

STĄŻKA, W., *see* Hołobut, W., & W. Stążka. . . . effets hémodynamiques dans l'hypothermie . . . 1960. No. 72219

STEACY, H. R., *see* Lang, A.H., & *others*. Canadian deposits uranium & thorium. 1962. No. 73293

75913. STEBAEV, IGOR' VASIL'EVICH, 1925– . Zoologicheskaia kharakteristika tundrovykh pochv. (Zoologicheskii zhurnal, June 1962. t.41, vyp.6, p.816-25, illus., tables.) 15 refs. Text in Russian. Summary in English. **Title tr.:** Zoological characteristics of tundra soils.

Reports a study made at the Yamal experimental station, Salekhard. It concerns the distribution of invertebrates in tundra soils, and factors affecting it, including seasonal changes. Short duration of warm season, cooling action of the permafrost, and oxygen deficiency were the main inhibiting factors. (DLC.)

75914. STEEN, ADOLF. Samenes folkemedicin. Oslo, Norsk Folkemuseum, Universitetsforlaget, 1961. 62 p. (Samiske samlinger. bd. 5, pt. 2.) 67 refs. Text in Norwegian. **Title tr.:** Popular medicine among the Lapps.

Lists home remedies with details of their uses, based on literary sources as well as oral tradition, the latter particularly from Kautokeino in North Norway. Ailments also are listed with the various cures prescribed for each. An introductory sketch is given of the development of medical services in north Norway. (SPRI.)

75915. STEEN, E. A. Norges sjøkrig 1940-1945, bd. VII: Marinens operasjoner i arktiske farvann og i Island, på Grønland, Jan Mayen og Svalbard. Oslo, Gyldendal, 1960. 380 p. illus., tables, maps. About 50 refs. Text in Norwegian. **Title tr.:** Norway's war at sea, 1940-1945, v.7: the Navy's operations in arctic waters and in Iceland, Greenland, Jan Mayen, and Svalbard.

Describes Allied (in particular Norwegian) and German efforts to establish and maintain meteorological services in arctic regions, also the numerous raids against such stations and installations. Evacuation of the Norwegian and Russian populations from Svalbard in 1941 is described as are subsequent German activities on these islands and the reoccupation by the Norwegians in 1942. A detailed account is given of the German attack on Svalbard, Sept. 8, 1943, its results and conditions up to 1945. The contributions of British and Norwegian land and air forces are also discussed. Appendices (34) include name and expedition (operation) indices, lists of ships, etc. (SPRI.)

75916. STEERE, WILLIAM CAMPBELL, 1907– , *and* **R. M. SCHUSTER.** The hepatic genus *Ascidiota* Massalongo new to North America. (Torrey Botanical Club. Bulletin, May 1960. v.87, no.3, p.209-215, illus. table.) 10 refs.

Contains a key to the genera of Porellaceae and description of *Ascidiota blepharophylla* Massal. from the moss tundra of northern Alaska. Contrasting characteristics with the only other finds, in Chenysi Province in China, are tabulated. (DLC.)

75917. STEFANO, RALPH R. The return air heater for ventilation in northern Alaska. *(In:* Alaskan Science Conference 1960. Proceedings, *pub.* 1961, p.80-85.)

Describes a heating and ventilation system devised in 1956, for the severe and rapidly changing temperature conditions of interior Alaska. It supplies a maximum quantity of outside air which is mixed with superheated return air to attain a satisfactory temperature. Design criteria, advantages, and limitations of the system are discussed. Three typical installations, bowling alley, television studio, commercial building, are cited. (CaMAI.)

75918. STEFANOVICH, ARSENII NIKOLAEVICH. Pervaia arkticheskaia navigatsiia ledokola "Lenin". (Sudostroenie, 1961. god 27, no.8, p.8-10, illus.) Text in Russian. **Title tr.:** The first arctic voyage of the icebreaker *Lenin*.

Discusses a trip ending Oct. 24, 1960 at Murmansk: the vessel's operation in the unusually heavy ice encountered, arrangements aboard, construction features, electric generators, atomic steam-generators and regulating reactor system, safety provisions for atomic radiation, are reported by the author, an engineer, as having proved satisfactory. (DLC.)

STEFANSSON, KARL, 1914– , *see* Warner, L.A., & *others*. Iron and copper deposits . . . 1961. No. 76489

75919. STEFÁNSSON, UNNSTEINN. Hydrographic conditions in Icelandic waters in May-June 1958. (International Council for the Exploration of the Sea. Annales biologiques 1958, *pub.* 1960. v.15, p.15-19, illus., maps.)

Reports on a survey, excluding the southwestern waters. Temperature and salinity at 20, 50 and 100 m., ice conditions, water masses and movements are recorded and mapped. Comparisons are made with those of 1957. (DI.)

75920. STEFÁNSSON, UNNSTEINN. Hydrographic conditions in Icelandic waters in May-June 1959. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v.16, p.18-20, maps.)

Reports on temperature and salinity distribu-

tion west through north of this island, at depths of 20 and 100 m. Deviations from the normal and from 1958, as well as movements of water masses are noted. (DI.)

STEFÁNSSON, UNNSTEINN, *see also* Alekseev, A.P., & *others.* International investigations . . . 1961. No. 69692

STEFANSSON, VILHJALMUR, 1879-1962, *see* Todd, A.L. Abandoned . . . Greely Expedition . . . 1961. No. 76168

75921. STEIEN, OLAV. Lagring av poteter som er angrepet av tørråte. (Norden, Oct. 1, 1960. årg. 64, nr. 20, p.550.) Text in Norwegian. **Title tr.:** Storage potatoes attacked by dry rot.

Because of the unusually warm summer in North Norway in 1960 dry rot was prevalent in potatoes, and the fungi spread to storage where the temperature was too high. When the storage temperature drops to 4-5° C., the potatoes should be sorted, and the damaged ones buried or burned. Seed potatoes for 1961 should be obtained from other areas; but if locally grown ones must be used, they should be spread out to sprout. (DA.)

STEIN, THOMAS R., *see* Alaskan Science Conference. 1961. 1962. No. 69644

75922. STEINBACHER, GEORG. Zahnwale. (Orion, Feb. 1960. Jahrg. 15, no.2, p.109-115, illus.) Text in German. **Title tr.:** Toothed whales.

Outlines the phylogeny of these whales; their occurrence and hunt in Europe, anatomic adaptations to aquatic life, senses and vocalization, diving and respiration, diet, behavior, reproduction, taxonomy, and geographic distribution. (DLC.)

75923. STEINER, HAROLD A. The stratospheric wind regimes of the 1958-59 winter; *80W cross sections, sea level to 35 km.* Montreal, Apr. 1961. xi, 106 p. maps, graphs, tables, appendix. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no. 41. Contract no. AF 19(604)-8431, scientific report no.1.) 64 refs.

Reports results of intensive study of this period, marked by polar-night vortex activity. Vertical cross sections along the 80W meridian from the surface to 35 km. (about 5 mb.) and from near the Equator to Alert, northern Ellesmere Island, are presented for each fifth day. Synoptic features of the stratosphere, as shown by the 36 cross sections, are discussed in monthly summaries, showing general seasonal changes. An objective method for determining the peak winds in jet streams is formulated; results compare favorably with meso-scale data from aircraft probes. Particular attention is given to the crest of Ferrel westerlies in the lower stratosphere, found to be quasi-permanent. Data from 17 arctic stations (of 67) were considered. (CaMAI.)

STEINER, HAROLD A., *see also* Boville, B.W., & *others.* An atlas . . . 1961. No. 70343

75924. STEINITZ, WOLFGANG, 1905– Iz toponimiki severnogo Poob'ïa. (Voprosy geografii, 1962. Sbornik 58, Geograficheskie nazvaniïa, p.109-111.) 2 refs. Text in Russian. **Title tr.:** Toponymics of the northern Ob basin. Translated from German by V.A. Novikov.

Traces Zyryan river and place names in the lower Ob region to the Komi-Zyryan guides with Russian merchants traveling into Ostyak and Vogul country in the 14-17th centuries. Similarly Ostyak toponymics on the Ket' and Yenisey Rivers stem from Ostyak guides of the 16-17th century. (DLC.)

75925. STEINITZ, WOLFGANG, 1905– . Samojedisch - Obugrisches. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . p.567-75.) Refs. in text. Text in German. **Title tr.:** Samoyed, Ob-Ugric.

Comparative etymological analysis of two Nenets Samoyed words: *jāl* (fat, blubber) derived from an Ostyak tabu-name for bear fat or fatty animal liquid, also found in Lappish *jolle* (fat, plump); *śār* (tobacco) from an Ostyak (*šār*) or Vogul (*sār*) adaptation of an 18th century Siberian-Russian curruption (*shar-tabak*) of the Mongolian *sira tamaki:* yellow Chinese tobacco. (DSI.)

STELCK, CHARLES RICHARD, 1917– , *see* Warren, P.S., & C.R. Stelck. Pacific floodings . . . Rocky Mts. 1961. No. 76490

Warren, P.S., & C.R. Stelck. Western Canadian Givetian. 1962. No. 76491

STELJES, J. F., *see* Carmichael, H., & J.F. Steljes. Solar cosmic ray, Nov. 20, '60. 1962. No. 70614

STENAR', M. M., *see* Chernov, V.M., & M.M. Stenar'. Zhelezorudnaïa formatsiïa . . . 1961. No. 70718

75926. STENIN, A. Puchki idut po Pechore. (Master lesa, Aug. 1962. god 6, no.8, p.7, illus.) Text in Russian. **Title tr.:** Bundles of logs float on the Pechora.

Describes the floating of timber in Komi ASSR down the Pechora River to the Northern (Pechora) Railroad to go to Vorkuta and Inta, and to the sawmill in Nar'yan-Mar for export abroad. Successful experiments with floating logs tied in bundles, instead of rafts, each bundle comprising approx. 10 m^3 of timber, are discussed, also of floating large rafts comprising up to 10,000 m^3. Floating is expected to rise on the Pechora, because of the bottom clearance of the projected water reservoir on the upper river in connection with the diversion. (DLC.)

75927. STENSIÖ, ERIK. Permian vertebrates. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.231-47, illus.) 24 refs.

Presents a brief description of the fish fauna of the Upper Permian of East Greenland, noting the stratigraphic range of the individual forms, based largely on pre-1933 material. In addition, author discusses the arrangement of the scales of the East Greenland edestids (illus.) a significant factor in comparative anatomy. (DLC.)

STEPANOV, DMITRIĬ LEONIDOVICH, *see* Zavodovskiĭ, V.M., & D.L. Stepanov. O novom ïaruse . . . 1961. No. 76649

75928. STEPANOV, N. N. Klassik russkoĭ i mirovoĭ ėtnografii S.P. Krasheninnikov; k 250-letiiu so dnïa rozhdeniïa. (Sovetskaïa ėtnografiïa, Mar.-Apr. 1962, no.2, p.82-97.) Over 50 refs. Text in Russian. **Title tr.:** S.P. Krasheninnikov, a classic of Russian and world ethnography; on the 250th anniversary of his birth.

Reviews his contributions to the study of northern aborigines, mainly the Kamchadals, based in part on archival documents. Materials collected

in Kamchatka on the Great Northern Expedition of 1733-1743, his work as educator, and protagonist of the study of primitive cultures and peoples are discussed. (DLC.)

STEPANOV, S. I., *see*

Butenko, A.K., & S.I. Stepanov. Dolgovremennye avtonomnye ustanovki . . . 1961. No. 70485

Dem'ianov, N.I., & S.I. Stepanov. Sravnenie uslovii raboty samopistsev . . . 1961. No. 70953

Dvorkin, E.N., & S.I. Stepanov. Opredelenie glubiny pogruzheniia . . . 1961. No. 71163

75929. STEPANOV, V. I., *and* **V. A. MOLEVA.** O ral'stonite iz Il'menskikh gor, TSentral'nogo Kazakhstana i s Kamchatki. (Vsesoiuznoe mineralogicheskoe obshchestvo. Zapiski 1962. ser.2, chast' 91, vyp.5, p.556-72, illus., tables, graphs.) 35 refs. Text in Russian. **Title tr.:** On ralstonite from the Il'men Mts., central Kazakhstan, and from Kamchatka.

Describes the genesis and results of microscopic and X-ray investigations of this mineral found in the Klyuchevskaya volcano on Kamchatka Peninsula. Its chemical composition is reported and comparisons made with ralstonite found at Ivigtut, Greenland. Physical and optical properties of this mineral are also described in detail. (DLC.)

75930. STEPANOV, V. N. Osnovnye razmery Mirovogo okeana i glavneishikh ego chastei. (Okeanologiia, 1961. t.1, vyp.2, p.213-19, tables.) 13 refs. Text in Russian. **Title tr.:** Basic dimensions of the World Ocean and its most important parts.

Presents a new calculation based on recent data of the area, volume, mean depth and greatest depth of oceans, seas and some bays. Special attention is given to the Arctic Ocean, and data are given on each sea. (DLC.)

75931. STEPANOV, V. N., *and* **V. A. SHAGIN.** Tipy izmeneniia solenosti vody po vertikali v Mirovom okeane. (Akademiia nauk SSSR. Doklady 1961. t.136, no.4, p.927-30, illus., table, map.) Text in Russian. **Title tr.:** Types of vertical change in salinity of the World Ocean.

General outline based on data from approximately the same number of stations in the different seas. Arctic waters show a low salinity surface layer of 50-100 m., then they increase sharply in salinity which remains steady from 300-500 m. and down. Subarctic water show a similar condition but with the fresher water at a greater depth. (DLC.)

STEPANOV, V. N., *see also* Nekrasova, V.A., & V.N. Stepanov. Tipy izmeneniia temperatury . . . 1962. No. 74280

STEPANOVA, NINA ALEKSEEVNA, 1906– , *see* Schloss, M. Cloud cover Soviet Union. 1962. No. 75415

75932. STEPHEN, P., *and* **E. DUNN.** Directed culture change in the Soviet Union: some Soviet studies. (American anthropologist, Apr. 1962. v.64, no.3, p.328-39.) 17 refs.

Reviews acculturative trends among non-Russian minorities, including peoples of the far North. Establishment of cultural bases (*kul'tbaza*) for nomadic groups, collectivization, attempts to diversify traditional economies by (often unproductive) truck- and dairy-farming are discussed, as are efforts (poor) to improve technology and housing. Traditional clan structure was preserved until about 1950 in group organizations (*artel'*) for fishing, hunting, and reindeer herding. Economic problems and their solutions are similar in all parts of the Soviet Far North. (DSI.)

75933. STEPHENS, FRED H. Dedication at Thompson. (Western miner and oil review, Apr. 1961. v.34, no.4, p.56-59, illus.)

Reports ceremonies, Mar. 25, 1961, at the start of production of refined nickel from the International Nickel Co. mine in northern Manitoba. Its yearly production of 75,000,000 lb. of nickel will triple the Manitoba metal production and strengthen Canada's export position. The community of Thompson is expected to reach 8,000 population. (DI.)

STEPHENSON, D. G., *see* Shirtliffe, C.J., & D.G. Stephenson. Tables of σT^4. 1960. No. 75591

STEPPAN, M. O., *see* Shmakin, B.M., & M.O. Steppan. Dva sfena . . . Aldanskogo shchita. 1961. No. 75602

STEVENS, A. E., *see* Hodgson, J.H., & *others*. Direction faulting . . . earthquakes 1956-57. 1962. No. 72175

STEVENS, HARRY, *Jr., see Military Engineer.* Polar engineering . . . 1961. No. 74020

STEVENS, JACK D., *see* National Northern Development Conference. 1961. No. 74224

75934. STEVENSON, ALBERT H. Sanitary facilities construction program for Indians and Alaska natives. (U.S. Public Health Service. Public Health reports, Apr. 1961. v.76, no.4, p.317-22, illus.) Ref.

Discussion of the general health status; death rates and main causes; condition of sanitation, and past efforts to improve it; Public Law 86-121 aimed at encouraging native participation in water supply, sanitation and other health projects; implementation and realization of the law. (DLC.)

STEVENSON, ALBERT H., *see also* Alaskan Science Conference 1960. 1961. No. 69643

STEVENSON, JOHN SINCLAIR, 1908– , *see* Royal Soc. of Canada. Tectonics Can. Shield. 1962. No. 75237

75935. STEWARD, JULIAN H., 1902– . Alfred Louis Kroeber, 1876-1960. (American anthropologist, Oct. 1961. v.63, no.5, pt.1, p.1038-87.)

Obituary of this prominent American anthropologist. An evaluation of his scientific achievements is given and a listing of his (532) publications. (DLC.)

75936. STEWART, DON. Notes on drinking problems. (*In:* Canada. Dept. of Northern Affairs and National Resources. Northern welfare . . . 1962, p.29-30.)

A Yellowknife area social worker describes two types of alcoholism observed among the local Indians and metis: the addictive or bender type and the non-addictive, of psychological or emotional dependence. The effects upon the alcoholic's family, damage to inter-personal relations, depletion of livelihood, etc. are noted. Betterment in living standards and job opportunities is discussed as means of reducing psychological (non-

addictive) alcoholism. A study should be made of the Eskimos' use of liquor; it is a recently acquired custom and education in sensible drinking is possible. (CaMAI.)

STEWART, J. M., *see* Eydt, H.R., & *others*. Structural aspects peat. 1961. No. 71324

STEWART, TIM D., *see* Canada. Northern welfare '62. 1962. No. 70539

75937. STIGZELIUS, HERMAN, *and* **P. ERVAAMA.** Lapin kivennäisvarat. Helsinki, 1962. 60 p. 8 maps. (Finland. Geologinen Tutkimuslaitos, Geoteknillisiä julkaisuja no.67.) 59 refs. Text in Finnish. **Title tr.:** Mineral resources of Lapland. Text in Finnish; summary in English.

Summarizes data on ores and industrial minerals, also commercially useful rocks and soil deposits in this northernmost part of Finland, and surveys the mapping of pre-Quaternary rocks, surficial deposits, geophysical phenomena, and aerial photography, as of Dec. 31, 1961. Iron ore deposits are being worked in the Misi area, Kemijärvi parish; in the Kolari area of west Lapland estimated magnetite reserves of 21 million tons have been located, as well as some 30 million tons of lowgrade hematite. All indications of sulfide ores have proved insignificant. Placer gold occurrences, the best of which are exhausted, are mapped; repeated search for the parent rock has proved unsuccessful. Industrial mineral occurrences are generally not worked because of small size, poor quality, or remote location; dolomite is quarried at Kalkkimaa in Alatornio, also at Tervola, north of Kemi. Clays and clay-silts suitable for bricks, scarcer than in southern Finland, are limited to the Torne and Kemi Rivers. Peat resources of more than 30 billion m^3 are little used. Index maps show coverage of a general geological map on 1:400,000 scale; surficial deposits, planned for 1:100,000 scale; aerogeophysical mapping and prospecting by the Geological Survey and by the Otanmäki Co.; also aerial photography and maps. Index according to 22 main geographic areas concludes the report. (DGS.)

STIGZELIUS, HERMAN, *see also* Marmo, V., & H. Stigzelius. Bergshanteringen . . . 1962. No. 73836

STILTNER, ERNEST, *see* Little, C.G., & *others*. Scintillation . . . radio stars. 1962. No. 73540

75938. STIPA, GÜNTER. Impersonale Ausdrucksformen. (*In:* Suomalais-ugrilainen seura. Toimituksia, 1962. v.125, Commentationes . . . p.577-92.) Approx. 20 refs. Text in German. **Title tr.:** Impersonal forms of expression.

Comparative syntactic analysis of impersonal clause structure in Finnish and Zyryan. (DSI.)

75939. STIPA, GÜNTER. Der Ursprung der permischen Schrift. (Deutsche Morgenländische Gesellschaft. Zeitschrift 1961. Bd. 110, n. F. Bd. 35, Heft 2, p.342-64, illus., tables.) Approx. 55 refs. Text in German. **Title tr.:** The origin of Permian writing.

Suggests an Iranian basis for the old-Zyryan script, supposedly invented by the 14th century missionary Stefan Permskiĭ. Iranian letters in their Armenian-Georgian adaptation could have been introduced by Permiak merchants in the 11th-12th century and later used by Stefan as prototypes for his Zyryan alphabet. Comparative tables show phonetic values and evolutionary changes of letter forms in Iranian, Aramaic, old-Armenian, Georgian and Permian. (DLC.)

STITT, RICHARD L., *see* Pressman, A.E., & *others*. Terrain analysis . . . Canada. 1961. No. 74950

75940. STOCKINGER, CHR., *Jr., and* **F. W. GULBRANSON.** Skipsfarten som naering i Nord-Norge. Skipsfarten som arbeidsplass i Nord-Norge. Aktuelle problemer vedrørende nord-norsk skipsfart. (Studieselskapet for nord-norsk naeringsliv. Skrift, 1958. nr.22, p.32-57.) Text in Norwegian. **Title tr.:** Shipping as an industry in North Norway. The shipping industry as a place of work in North Norway. Current problems in North-Norwegian shipping.

Contains a paper by each author and round-table discussion. Trends in the development and present status of the coastal and (limited) foreign shipping on vessels registered in North Norway are reviewed. The problem of capital is considered. Education and personnel training are discussed; and the new employment offices established are noted. In the conference (p.44-57) W. Robertsen, R. Kaarbø, and E. Akelsen also participated. (SPRI.)

75941. STOCKWELL, CLIFFORD HOWARD, 1897– . A tectonic map of the Canadian Shield. (*In:* Royal Society of Canada. The tectonics . . . 1962, p.6-15, maps.) 10 refs.

Describes preparation and main features of a preliminary map being compiled by the Geological Association of Canada, the Alberta Society of Petroleum Geologists, and the Geological Survey of Canada. Three main orogenies are indicated: the Kenoran, 25 m.y.; the Hudsonian, 1700 m.y.; and the Grenville, 950 m.y. B.P. The Kenoran is typically developed in the Superior province, the Hudsonian in the Churchill, and the Grenville is prevalent throughout the Grenville province. Lesser orogenic movement took place in the Bear and Slave provinces. The Archaean-Proterozoic time classification is retained. Main structural units are shown on a map 1 in:250 mi. scale. Lower Proterozoic rocks folded during the Hudsonian and those also refolded during the Grenville to form the Labrador Trough or geosyncline, are shown. The picture of the tectonic history of the Shield is probably over-simplified by the potassium-argon age determination method used; precise dating of the age of deposition of sedimentary and volcanic rocks is needed. (DGS.)

STOCKWELL, CLIFFORD HOWARD, 1897– , *see also* Lowdon, J.A., & *others*. Age determinations . . . 2: isotopic ages. 1961. No. 73611

STØRMER, CARL, 1874–1957, *see*

Nikol'skiĭ, A.P. Sopostavlenie magnitnoĭ vozmushchennosti . . . 1962. No. 74353

Nikol'skiĭ, A.P. Struktura . . . 1962. No. 74354

Nikol'skiĭ, A.P. Teoriia Stërmera . . . 1962. No. 74355

75942. STOERTZ, GEORGE EIMERT, 1930– . Analogs of Fort Greely and Fort Churchill terrain in Alaska: evaluation of present areas and recommendation of alternative and supplementary test

areas in Alaska. Vicksburg, Miss., U.S. Army, Corps of Engineers, Waterways Experiment Station, June 1959. 224 p. illus. tables, maps; & 25 maps in folder. 31 refs.

Analyzes terrain factors selected for determining analogs of Fort Greely (Alaska) and Fort Churchill (Manitoba) terrain in all Alaska: slope, elevation, vegetation, geology, permafrost, river and lake ice, snow cover, streams and rivers, lakes, thermal factors, and duration of darkness. The suitability of these two localities for testing military equipment and personnel under the total range of terrain conditions found in Alaska is evaluated. A relatively large percentage of Alaska has terrain conditions analogous to some part of the Fort Greely test area for most terrain factors. Fort Churchill however, ranks fair to poor for testing on stable terrain conditions typical of Alaska or presumably of the Arctic and Subarctic as a whole. Areas near Fort Yukon, Alaska and Brønlunds Fjord, northern Greenland are discussed and suggested for supplementary testing areas. (CaOG.)

STOERTZ, GEORGE EIMERT, 1930– , *see also* Hartshorn, J.H., & *others*. Investigations of ice-free sites . . . 1961. No. 72056

75943. STOFFREGEN, WILLY. The east-west drift of auroral forms determined from all-sky camera films. (Journal of atmospheric and terrestrial physics, July 1961. v.21, no.4, p.257-60, table, diagrs., map.) 6 refs.

Presents results of a study of observations from a chain of stations lying in a north-south direction from Spitsbergen along the Scandinavian Peninsula and crossing the auroral zone. The mean drift of auroral forms is towards the west before midnight and towards the east after midnight at stations south of the auroral zone; the diurnal variation in the drift direction is reversed at stations north of the zone. A station south of the auroral zone shows east-west motions more often than stations in or north of the zone. A close resemblance is pointed out between the mean diurnal drift directions of auroral forms deduced from all-sky films and the drifts of ionized areas determined from studies of auroral echoes.—From author's abstract. (DLC.)

STOFFREGEN, WILLY, *see also* Omholt, A., & *others*. Hα in auroral glow. 1962. No. 74522

STOIBER, RICHARD EDWIN, 1911– , *see* Lyons, J.B., & R.E. Stoiber. Orientation fabrics in lake ice. 1962. No. 73654

75944. STOMMEL, HENRY MELSON, 1920– . On the smallness of sinking regions in the oceans. (National Academy of Sciences, Washington, D.C., Proceedings, May 1962. v.48, no.5, p.766-72, illus. table.) Ref.

Points out the smallness of areas where polar cold water sinks into the World Ocean: off Greenland and in the Weddell Sea of Antarctica. A convective model is presented which though "far removed indeed from the oceanic case . . . exhibits the asymmetry in striking form," and which may stimulate development of better models. (DLC.)

75945. STONE, KIRK HASKIN, 1914– . Swedish fringes of settlement. (Association of American Geographers. Annals, Dec. 1962. v.52, no.4, p.373-93, illus., maps.) Refs.

Delineates and characterizes zones within the region of discontinuous settlement, as part of research since 1954, on settlement in northern high latitudes. The zones, including three (middle, outer, and outermost fringes) in northern Sweden, are determined according to degree of isolation. Isolation, which increases northwestward from the coast, is measured by population distribution patterns and transportation routes. Though farm abandonment is a problem in the discontinuous settlement region, there is some possibility for permanent new settlement in the middle fringe zone. (DI.)

STONEMAN, D. G., *see* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

STONER, H. B., *see* Aldridge, W.N., & H.B. Stoner. Behavior of liver mitochondria . . . 1960. No. 69670

STOREVEDT, KARSTEN, *see* Bergen. Universitet. Seismological bulletin. 1959. No. 70150

STOREY, TARAS P., *see* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

STOREY, W. F., *see* Staub, N.C., & W.F. Storey. . . . lung studied by rapid freezing. 1962. No. 75909

75946. STOROZHEVA, M. M. K tipologii bolot Severnogo Zaural'ia. (Akademiia nauk SSSR. Ural'skii filial. Institut biologii. Trudy 1960. vyp.14, p.67-82.) 14 refs. Text in Russian. **Title tr.:** Typology of marshes of the northern Trans-Ural.

Contains information on temperatures and precipitation of the area (60°30′-63°N.), and its geologic - geomorphic zones. Of the marshes dealt with, those of the mountain-tundra and the mountain-taiga are of arctic nature. Their location, characteristics, and genesis, the vegetation and its component species are described. The ice conditions, peat, forests, etc. are also considered. (DLC.)

75947. STOTSENKO, A. V., *and* **A. M. CHEKOTILLO.** Voprosy terminologii v merzlotovedenii. (*In:* Moskva. Universitet. Geograficheskii fakul'tet. Voprosy geograficheskogo merzlotovedeniia . . . 1962, p.191-95.) Text in Russian. **Title tr.:** Problems of terminology in geocryology.

Compares the geocryologic terms worked out by M.I. Sumgin in 1940 (No. 17178) with those proposed by the Institute of Geocryology in 1956 (No. 49175). Several changes are criticized: merzlotovedenie (permafrostology) to geokriologiia (geocryology), vechnaia merzlota (permafrost) to zona mnogoletnemerzlykh porod (age-old frozen rocks), "naled" to "taryn", and others. The new proposed terminology already in use is considered unsatisfactory, and a return to Sumgin's is urged. (DLC.)

75948. STOVNER, JACOB. Effecten av avkjøling på synaptisk og nevromuskulaer transmisjon. (Nordisk medicin, 1960. bd. 63, no.11, p.315-20, illus.) 39 refs. Text in Norwegian. Summary in English. **Title tr.:** Effect of cooling on synaptic and neuromuscular transmission.

In cooled mammals, neuromuscular and ganglionic transmission failed around 15°C., central transmission at a somewhat higher temperature; in the frog, neuromuscular transmission stopped at

5°C. The activity of choline acytylase ceases at 15°C. in the rabbit and at 5°C. in the fish. Thus failing resynthesis of this enzyme at low temperatures may explain the synaptic block. Facilitation of transmission at 25°C. is also considered. (DNLM.)

75949. STRAKACH, ĬU. B. Detskie sady na Krainem Severe. (Doshkol'noe vospitanie, Nov. 1962. god 35, no.11, p.50-52.) 3 refs. Text in Russian. **Title tr.:** Kindergartens in the far North.

Describes advantages of pre-school education based on local traditions, as developed for the Dolgan, Evenki-Tungus and Samoyed (Nganasan, Enets, Nenets) children of the Taymyr National District. Home-made toys representing local domestic or wild animals, and household or hunting implements are preferred to imported toys. Games based on national folklore motifs and familiar trades (trapping, fishing, reindeer raising) are favored. Expansion of nursery-school program to include at least two primary grades is recommended for settlements with too few children to warrant a full-grade elementary school. (DLC.)

75950. STRAKACH, ĬU. B. Ėvenkiĭsko-russkaĭa promyslovaĭa artel' "Pobeda." *(In:* Akademiĭa nauk SSSR. Institut ėtnografii. Trudy t.78, Sibirskiĭ . . . 1962, p.122-36, illus., tables.) 5 refs. Text in Russian. **Title tr.:** Evenki-Russian production artel Pobeda.

Describes the current economic conditions of an ethnically mixed collective farm on the upper Nizhnyaya Tunguska River, one of the four treated broadly by G.M. Vasilevich, q.v. Its 31 households in 1959 included 16 Tungus and three mixed. Fur hunting and portaging, also transport-reindeer raising, are basic occupations; dairy farming introduced in 1948 is on the rise. Selective economic statistics are given for the late 1950's. The kolkhoz members suggest abandonment of reindeer raising: with its hard living conditions and low remuneration, herding does not attract young workers. Strong acculturation is noted in this Tungus group. (DSI.)

75951. STRAKACH, ĬU. B. K voprosu o proizvodstvennykh traditsiiakh ėvenkov. (Akademiĭa nauk SSSR. Institut ėtnografii. Kratkie soobshcheniĭa, 1962. vyp.37, p.46-56, tables.) 16 refs. Text in Russian. **Title tr.:** Occupational traditions of the Evenki.

Study of Tungus hunting and fishing methods based on the 1959 field work of a Northern Expedition team in the upper Nizhnyaya Tunguska basin. Local ways of tracking game and of trapping, seasonal variations in the hunting cycle (tabulated), clothing and provisioning, use of hunting dogs, etc. are described. The traditional work-and-play instruction of children in basic economic skills is discussed. Heritage is stressed as an important factor in the successful training of young labor. The teaching (in schools) of the modern scientific and technological methods in hunting should include also the traditional, rooted in the aborigine's knowledge of his milieu. (DLC.)

75952. STRAKACH, ĬU. B. Osobennosti trudovogo i proizvodstvennogo obucheniĭa v shkolakh Severa. (Shkola i proizvodstvo, Mar. 1962. god 6, no.3, p.21-23.) Ref. Text in Russian. **Title tr.:** Special features of shop and vocational training for schools in the North.

Describes the new programs in hunting, fishing, and reindeer husbandry decreed at the 21st Party Congress for the Zyryan, Yakut and 26 northern minorities schools: graduated programs for three age-groups: 1-4th, 5-8th, and 9-11th grades. (DLC.)

75953. STRAKACH, ĬU. B. Traditsii trudovogo vospitaniĭa u narodov Taĭmyra v nashe vremĭa. (Sovetskaĭa ėtnografiĭa, May-June 1962, no.3, p. 35-48, illus.) Approx. 50 refs. Text in Russian. Summary in English. **Title tr.:** Contemporary traditions in labor training among the peoples of Taymyr.

Describes the training program introduced among the Dolgan, Evenki-Tungus, and Samoyed population of the Taymyr National District in accordance with the law on shop and vocational education decreed by the 21st Party Congress: a three-year post-school apprenticeship for 14-16 yr.-olds in reindeer breeding, fishing or hunting at their collective farm. Results are commended from author's 1960 field trip. Traditional skills, games and sports are taught pre-school and school-age children by parents. (DLC.)

STRAKHOV, L. G., *see* Kosygin, M.K., & *others.* Struktury zhelezorudnykh mestorozhdeniĭ . . . 1960. No. 73025

75954. STRAND, TRYGVE. The Scandinavian Caledonides, a review. (American journal of science, Mar. 1961. v.259, no.3, p.161-72, map, diagr.) 14 refs.

Summarizes the stratigraphic and structural geology of this mountain range, composed of Eocambrian and Cambro-Silurian deposits of the Caledonian orogeny. On the west and north, the range extends beneath the sea; in the east, a tectonic succession of nappes is overthrust upon autochthonous Cambro-Ordovician sediments resting on Precambrian rocks. The nappes (described) are composed of a lower, eastern miogeosynclinal rock sequence, and upper, western eugeosynclinal sequences and crystalline rocks. Archean granite, appearing beneath the sediments (at 68°N.16°E.) in northern Norway, was apparently "rejuvenated" during the Caledonian orogeny. (DLC.)

75955. STRASBURGER, L. W. The remarkable rise and future of Alaska-Pacific N.W. shrimping. (Fish boat, Sept. 1960. v.5, no.10, p.39, +.)

Discusses present and potential production of small pink shrimp, made commercially feasible by development of a mechanical peeling machine in 1956. A large resource from the Shumagin Islands to Unalaska is indicated. Production in 1959 was 11,500,000 lbs., with catches averaging 30,000-50,000 lbs. for a three-day trip. Marketing and new products development are considered. (DI.)

75956. STRELKOV, S. A. O karte chetvertichnykh otlozheniĭ tsentral'noĭ chasti Severa SSSR masshtaba 1:2.500.000 i diskussionnykh voprosakh ikh stratigrafii. *(In:* Vsesoĭuznoe soveshchanie po izucheniĭu chetvertichnogo perioda. Materialy . . . 1961, t.1, p.99-103.) Text in Russian. **Title tr.:** On the map of the Quaternary deposits of north-central USSR at 1:2,500,000 scale and questions for discussion on their stratigraphy.

Reviews the map compiled by the Institute of Geology of the Arctic in 1956 (cf. No. 59629) covering the regions north of 66°N. between the

Polar Ural on the west and the Yana River in the east. Its arrangement, composition and symbols are summarized. The border between the Tertiary and Quaternary, number of glaciations, and other stratigraphic problems are noted. (DLC.)

75957. STRELKOV, S. A. O nekotorykh zakonomernostiakh obrazovaniia i razmeshcheniia lednikovykh otlozhenii Severa SSSR. (Akademiia nauk SSSR. Doklady, May 11, 1962. t.144, no.2, p.427-30.) 15 refs. Text in Russian. **Title tr.:** Some regularities in the formation and distribution of glacial deposits in northern USSR.

Compares the distribution and types of deposits of last extensive (67°-70°N. lat.) glaciation; reviewing in turn the centers in Kola Peninsula, Northern Ural, Putorana Mts. and the Verkhoyansk Range. A regular shrinkage from west to east is noted in the glacial deposits. Regional fluctuation of snow line and local topography are considered the main factors. (DLC.)

75958. STRELKOV, S. A. Raionirovanie severa Zapadnoi Sibiri po morfologii i genezisu lednikovogo rel'efa v sviazi s dinamikoi zyrianskogo oledeneniia. (Akademiia nauk SSSR. Doklady, July 21, 1962. t.145, no.3, p.642-45, map.) 8 refs. Text in Russian. **Title tr.:** Regionalization of northern West Siberia according to the morphology and genesis of glacial relief in connection with the dynamics of the Zyryanka glaciation.

Reviews relief features and structure of Quaternary deposits of Western Siberia between the Ural and the Yenisey. Four regions are distinguished and characterized: a northern, which was not covered by continental glaciation and represents a periglacial plain; a central with small mobile glaciers, which represents plain of aqueo-glacial accumulation. The northeastern region is characterized by Taymyr mountain glacier deposits and represents a hilly plain of aqueo-glacial and morainic accumulation. There are two marginal subregions characterized by the Ural and Putorana Mts. glaciers. (DLC.)

STRELKOV, S. A., *see also*

Ermolov, V.V., & *others.* Osobennosti geologicheskogo deshifrirovaniia . . . 1961. No. 71291

Kirushina, M.G., & *others.* Osobennosti proiavleniia tektoniki . . . 1961. No. 72813

Saks, V.N., & S.A. Strelkov. Mezozoi i kainozoi . . . 1961. No. 75344

75959. STREL'NIKOVA, N. I. Novye i redkie diatomovye vodorosli iz paleogenovykh otlozhenii Obsko-Purskogo mezhdurech'ia. (Akademiia nauk SSSR. Botanicheskii institut. Otdel sporovykh rastenii. Botanicheskie materialy 1962. t.15, p.39-41, illus.) 2 refs. Text in Russian and Latin. **Title tr.:** New and rare diatomic algae from the Paleogene deposits of the Ob-Pur interfluve.

Description of two new, and one rare form, with notes on location and frequency. (DLC.)

75960. STREL'SKII, V. I. Iz istorii dvizheniia narodov Krainego Severa pod rukovodstvom Vauli Piettomina. (Istoriia SSSR, Jan.-Feb. 1961. god 5, no.1, p.152-54.) 12 refs. Text in Russian. **Title tr.:** A page from the history of uprisings by the peoples of the far North under Vauli Piettomin.

Documented account of the Nenets-Samoyed and Ostyak struggles for independence in the 1820-1840's, supplementing No. 37156. Life of the insurgent leader Piettomin (Vavle Nenianga), a Nenets, is sketched: raids upon the well-to-do, conflicts with local officials, repeated arrests, and eventual exile or execution. (DLC.)

STREPETOV, I., *see* Serebrennikov, I., & I. Strepetov. Na atomnom ledokole . . . 1960. No. 75486

75961. STRIGIN, I. TSvetnaia metallurgiia k XXII s"ezdu KPSS. (TSvetnye metally, Nov. 1961. god 34, no.11, p.1-9.) Text in Russian. **Title tr.:** Nonferrous metallurgy at the 22d Congress of the Communist Party of the Soviet Union.

Outlines achievements in this industry in the three years since the 21st Party Congress; cites increase in nickel production at the Severonikel' and Pechenganikel' Combines of Kola Peninsula, in bauxite of the Northern Ural, copper and nickel at Noril'sk, etc. (DLC.)

75962. STRØM, KAARE MÜNSTER, 1902– . A second lake with old sea-water at its bottom. (Nature, *London,* Mar. 18, 1961. v.189, no.4768, p.913.) 2 refs.

Reports discovery of salt water in the lower 102 m. layer of the 113 m. deep Botnvatn (approx. 67°10′N. 15°45′E.), North Norway. The lake surface is 12 m. above sea level; evidence is found of a 10-m. land rise since the isolation of Botnvatn, probably about three thousand years ago. Chlorine content, salinity, and temperature of the salt water are given; methane content is very high. The other lake inferred in the title is Tokke in southern Norway. (DLC.)

STRØMME, S., *see* Andersen, K.L., & *others.* Metabolic and thermal responses . . . cold. 1962. No. 69757

75963. STROGOV, A. K. Etiologiia "dikovaniia" pestsov, lisits i sobak, obitaiushchikh v tundrovoi zone IAkutskoi ASSR. (Akademiia nauk SSSR. IAkutskii filial. Nauchnye soobshcheniia 1961. vyp.5, biologiia, p.101-108, illus.) 5 refs. Text in Russian. **Title tr.:** Etiology of distemper in polar- and red-foxes and dogs living in the tundra zone of the Yakut ASSR.

Describes periodic epidemic nature of the disease; method of preserving infected heads or brains and of experimentally infecting rabbits; cause of disease in the latter; effects on guinea pigs and mice. Tests indicate that a neurotropic virus is responsible for the syndrome. Some 20 lines of this virus were isolated. (DLC.)

75964. STROM, GORDON HAAKON, 1914– , *and others.* Scale model studies on snow drifting. Hanover, N.H., Sept. 1962. ix, 50 p. illus., diagr., graphs, tables. (U.S. Army. Cold Regions Research and Engineering Laboratory, Research report 73.) 15 refs. *Other authors:* G.R. Kelly, E.L. Keitz, and R.F. Weiss. Prepared by the Research Div., College of Engineering, New York University, under contract DA-11-190-ENG-31.

Describes criteria, equipment, methods and results of tests conducted in the NYU wind tunnel. Crystalline borax 0.01 cm. in diameter was found satisfactory "snow" for a 1:10 model scale. With geometrically and physically scaled synthetic materials drift patterns were produced in the wind-tunnel tests similar to those observed around full-

scale structures on the Greenland Inland Ice. Several years of arctic snow drift can thus be simulated in a few hours. Actual test results showed: close spacing of buildings will cause coalescence of drifts; rectangular buildings grouped in closely spaced units should have the long axis parallel to the predominant wind direction; snow erosion may occur beneath buildings erected on columns above the surface; a V-shaped snow fence produced a clear area downward for a distance equal to about 25 times the height of the fence; etc. (CaMAI.)

STROM, GORDON HAAKON, 1914– , *see also* Gerdel, R.W., & G.H. Strom. Scale model . . . blowing snow environ. 1961. No. 71654

IUGG . . . Snow & Ice Comm. 1961. No. 72396

75965. STRONG, JAMES T. The opening of the Arctic Ocean. (U.S. Naval Institute. Proceedings, Oct. 1961. v.87, no.10, p.58-65, illus., map.)

Describes voyage of the nuclear-powered submarine *Seadragon* in Aug. 1960, via the Northwest Passage to the North Pole and return through Bering Strait. Extensive underwater studies of ice were made on the trip, in particular in Baffin Bay where the shape and depth of icebergs were measured. Barrow Strait was charted and a channel deep enough for year-round navigation by submarine was located. Military and commercial implications of this voyage and previous ones by other submarines in the Arctic Ocean are discussed. (DLC.)

75966. STUART, C. I. J. M. American Indian languages at Haskell Institute. (International journal of American linguistics, Apr. 1962. v.28, no.2, p. 151.)

Tabulates aboriginal languages spoken by the students of Haskell Institute at Lawrence, Kansas, one of the oldest U.S. government schools for Indians. Among the thousand or more in attendance in 1960-1961, 274 were as fluent or more so, in their native tongue as in English; six of these were Alaskan Eskimos and one an Aleut. (DSI.)

75967. STUART, DOUGLAS G. Role of the prosencephalon in shivering. (*In:* Symposia on arctic biology and medicine, 1960. Proceedings, 1; neural aspects of temperature regulation, *pub.* 1961. p. 295-396, illus., tables.) 66 refs.

Account, comments, and discussion of the problem, with a review of nearly a century's research. Author's own experiments with cats "suggest that septal modulation of shivering is secondary to hypothalamic control of the function. There are probably other secondary control systems within the telencephalon that can also facilitate and suppress shivering by modifying hypothalamic activity. This is suggested by the fact that not all telencephalic projections to the hypothalamus traverse the septum." To further elucidate these problems the direction of future research is outlined. Brief discussion p.385-89, is appended. (CaMAI.)

STUART, DOUGLAS G., *see also* Freeman, W.J., & *others.* Nervous control shivering, 10 . . . 1961. No. 71490

75968. STUBBINS, JOHN B. Canada's largest iron mine. (Precambrian, June 1960. v.33, no.6, p.26-38, illus., map, table.)

Chief engineer of the Knob Lake operations of Iron Ore Co. of Canada notes severe climate of this central Quebec - Labrador area; high quality of ore; drilling, blasting, crushing methods, power supply, maintenance practices, etc . (DGS.)

75969. STUBBINS, JOHN B., *and others.* Origin of the soft iron ores of the Knob Lake Range. (Canadian mining and metallurgical bulletin, Jan. 1961. v.54, no.585, p.43-58, illus., map, sections, graph, tables.) 15 refs. *Other authors:* R.A. Blais *and* I.S. Zajac. Paper presented at the Canadian Institute of Mining and Metallurgy meeting, April 1960.

Describes the Knob Lake iron ores; their geological settings: petrology, stratigraphy, structure. Stratigraphy of the Knob Lake Range, and of the Sokoman iron formation are tabulated. The known iron deposits, 43 separate orebodies, are described in some detail and summarized in table. Type examples are illus. by sections of the Wishart, Gagnon, French, and Redmond mines. Physical and chemical properties, also mineralogy of the various ores, are noted. Form of the original Sokoman iron formation is unknown, but its present physical appearance and chemical composition are believed to be nearly the same as the original (late Precambrian) consolidated sediment. Most features of the ore-formation processes are explained; unsolved problems noted. (DGS.)

75970. STUDENIKINA, V. Blizhe k proizvodstvu, men'she oshibok. (Sotsial'noe obespechenie, Mar. 1962. god 23, no.3, p.10-11.) Text in Russian. **Title tr.:** The closer to production, the fewer mistakes.

Errors in granting privileged retirement pensions were substantially reduced in Murmansk in 1961, when pension inspectors began to familiarize themselves with on-job conditions. About 53-54 privileged pensions a month are granted in the local fishing, ship repair, mining, chemical and transport industries. (DLC.)

STUIVER, MINZE, *see* Washburn, A.L., & M. Stuiver. Radiocarbon-dated postglacial delevelling . . . 1962. No. 76493

STURGESS, T. F., *see Western Miner.* Can. Tungsten Corp. 1962. No. 76533

75971. STURKIE, PAUL D., *and* **K. TEXTOR.** Relationship of blood pressure level in chickens to resistance to physical stress. (American journal of physiology, June 1961. v.200, no.6, p.1155-56, tables.) 8 refs.

Reports on effects of forced exercise and high or low temperature. In the latter case, survival times of hypertensive males and females were considerably greater than in hypotensive birds. (DLC.)

75972. STURT, BRIAN A. Preferred orientation of nepheline in deformed nepheline syenite gneisses from Sørøy, northern Norway. (Geological magazine, Nov.-Dec. 1961. v.98, no.6, p.464-66, plate, diagr.) 3 refs.

Presents evidence, from metamorphosed Eo-Cambrian rocks on this island (70° 35′ N. 23° E.), that nepheline develops a prefered c-axis orientation in response to deformative stresses; a first record of this occurrence in nepheline. (DGS.)

SUBBOTINA, I. V., *see* Popolov, A.S., & I.V. Subbotina. Ustroĭstvo tsementobetonnogo pokrytiĭa . . . 1962. No. 74883

SUBLETT, CHARLES W., *see* Alaska. Statutes 1962. . . . 1962 No. 69625

75973. SUDAK, FREDERICK N., *and* **W. B. ESSMAN.** Maze acquisition and retention in hypothermic mice. (Journal of applied physiology, Sept. 1962. v.17, no.5, p.747-50, illus., tables.) 10 refs.

Account of experiments with mice made mildly hypothermic by injection of 2,4-D and cold exposure. These animals did not acquire an escape response from a water maze after ten trials, while controls showed an escape response after four trials. Retention was a function of acquisition and was unaffected by body temperature. (DLC.)

SUDAK, FREDERICK N., *see also* Essman, W.B., & F.N. Sudak. Effect of body temperature reduction . . . 1962. No. 71305

75974. SUDERKIN, A. I. Granitnye pegmatity raĭona zaliva Biruli, Taĭmyrskiĭ poluostrov. (Sovetskaĭa geologiĭa, Apr. 1962, no.4, p.114-19, table.) Text in Russian. **Title tr.:** Granitic pegmatites of the Birulya Gulf area, Taymyr Peninsula.

Describes Proterozoic intensive metamorphosed paragneisses, crystalline schists and igneous granitoids of this north-northwest Taymyr locality (76° 06′ N. 94° 45′ E.). Pegmatite bodies connected mainly with granitoids are described. Mica-bearing properties of pegmatite veins are outlined. Occurrence is noted of morion crystals. (DLC.)

75975. SUDILOVSKAĬA, ANGELINA MIKHAĬLOVNA, 1903– . Osnovnye cherty stroeniĭa i rasprostraneniĭa chistikov i pingvinov. (Nauchnye doklady vysshei shkoly, biologicheskie nauki, 1962, no.1, p.34-37, map.) Text in Russian. **Title tr.:** Main lines of structure and distribution of the auks and penguins.

Discusses the history of both groups; present distribution, including six arctic forms; migrations; morphological and anatomical similarities of the two groups; adaptation to aquatic life. (DLC.)

75976. *SUDOSTROENIE.* Atomnyĭ ledokol "Lenin," gordost' sovetskoĭ nauki i tekhniki. (Sudostroenie, 1961. god 27, no.8, p.1 & cover illus.) Text in Russian. **Title tr.:** Atomic icebreaker *Lenin,* pride of Soviet science and technology.

Introductory note to an 80-odd page issue mostly on the *Lenin:* 15 articles, which are described under their authors' names, q.q.v.: V.I. Neganov *and* B. ĬA. Gnesin, A.N. Stefanovich, A.I. Burnazĭan *and others,* O.A. Arnol'd, D.V. Liĭush, A.I. Brandaus *and* B.S. ĬUdovin, N.A. Agafonov, P.P. Berezin, N.S. Nosov *and* P.P. Berezin, V.I. Chervĭakov, B.P. Andrianov, A.A. Gaĭsenok *and* M.K. Glozman, M.M. Marĭsov, ĬU.S. Gershteĭn, V.M. Karasev. (DLC.)

75977. SUDOVIKOV, N. G., *and others.* Petrografiia dokembriia Aldanskogo gornopromyshlennogo raĭona. (Akademiia nauk SSSR. Otdelenie geologo-geograficheskikh nauk. Petrografiia Vostochnoĭ Sibiri, 1962. t.2, p.320-446, illus., tables, diagrs.) 56 refs. Text in Russian. *Other authors:* G.M. Drugova, M.D. Krylova, *and* D.A. Mikhaĭlov. **Title tr.:** Precambrian petrography of the Aldan mining industry region.

Reviews the investigations and geology of the region. Main attention is given to the petrographic description of Archean and Proterozoic metamorphic and intrusive rocks. Iron ore, phlogopite, and piezoquartz deposits are analyzed. Characteristics of petrologic processes such as regional metamorphism, metasomatism and ultrametamorphism are outlined. (DLC.)

75978. SUE, HIROKO. Report on ethnological field research at Fort Good Hope, N.W.T., Canada, summer 1961. Bryn Mawr, Penna., Bryn Mawr College, 1962. 59 p., tables, graph, map. Mimeo. 17 refs.

Reports a preliminary survey among the Athabaskan-speaking Hare Indians at the junction of the Mackenzie and Hare Indian Rivers: 340 are permanent residents at Fort Good Hope. The history of these Indians since white contact in 1789 is reviewed. Their subsistence economy of migratory summer fishing and winter trapping and hunting is described. The mammals, birds, fish, berries, trees and garden crops of the area are listed. Some seasonal wage employment is available. Information collected concerning social organization is indicated; demographic aspects, social groupings, and social interaction are discussed. Vocabularies and phrases in the k'asot'ine dialect were collected. Kinship terminology is tabulated. Problems for further research are discussed. Materials tape recorded are described in appendix. (CaONA.)

SUE, HIROKO, *see also* Hurlbert, J. Age as a factor in the social organization . . . 1962. No. 72273

75979. SUETOVA, I. A. Karta i ploshchadi drevnego oledeneniia territorii SSSR. (Moskva. Universitet. Vestnik, ser. 5, geografiia, Mar.-Apr. 1961, no.2, p.53-55, fold. map.) Text in Russian. **Title tr.:** Map and areas of ancient glaciation of the territory of the USSR.

Reports compilation of a map at 1:5,000,000 scale based on literature data. The areas of maximal and last glaciations are delineated; all Soviet arctic regions are involved. A map at 1:25,000,000 is included. (DLC.)

SUGDEN, JOHN C. G., *see* Hunt, *Sir* J., & J.C.G. Sugden. Exped. Staunings Alper . . . 1962. No. 72269

75980. SUGIURA, KANEMATSU. Frozen storage of 34 various solid and ascites tumors. (Cancer research, May 1961. v.21, no.4, p.496-501, tables.) 19 refs.

Lists transplantable mouse, rat, hamster and chicken tumors "successfully stored" at -76° C. Transplantability of mammary type tumors was greatly damaged by this storage, and that of slowly growing tumors (listed) was completely, or nearly so, abolished by three months' storage. Other tumors (listed) were even less resistant to cold. (DNLM.)

75981. SUGIURA, MASAHISA. Evidence of low-frequency hydromagnetic waves in the exosphere. (Journal of geophysical research, Dec. 1961. v.66, no.12, p.4087-95, table, graphs, diagrs.) 28 refs.

Discusses damped waves of a period of several minutes with amplitudes to several hundred

gammas, found in the geomagnetic field in the auroral zones. They occur simultaneously in magnetically conjugate regions (e.g. College, Alaska, and Macquarie Island, Pacific Ocean), and are nearly elliptically polarized in the plane approximately perpendicular to the magnetic field. The waves are interpreted as low-frequency hydromagnetic waves generated in the exosphere at an altitude of several earth radii and transmitted to the earth along the lines of magnetic force in the longitudinal mode of propagation. The number of occurrences has a distinct local time variation that appears to vary with season.—From author's abstract. (DLC.)

75982. SUGIURA, MASAHISA. Some evidence of hydromagnetic waves in the earth's magnetic field. (Physical review letters, Mar. 15, 1961. v.6, no.6, p.255-57, diagrs.) Refs.

Analyzes damped oscillations observed with rapid-run magnetometers at College, Alaska. Remarkably regular polarization of the magnetic waves suggests that they are transverse hydromagnetic waves, generated in the outer atmosphere and propagated along the lines of magnetic force. Various other supporting evidence is cited, from study of geographic distribution and relation to magnetic storms. (DLC.)

SUGIURA, MASAHISA, *see also* Alaskan Science Conference. 1961. 1962. No. 69644

75983. SUKHANOVA, R. D. Ionosfernyĭ éffekt solnechnogo zatmeniĭa 15. II.1961 g. po nabliūdeniiam v Salekharde. (Geomagnetizm i aèronomiia, 1961. t.1, no.6, p.1016-17, graph.) Text in Russian. **Title tr.:** Ionospheric effect of the solar eclipse of Feb. 15, 1961 as observed at Salekhard.

Reports on the instrumentation and the observations during the day of the eclipse and the adjacent days. The effect of the eclipse on the ionosphere was clearly observed. (DLC.)

75984. SUKHAREV, M. A. Krasnogorskoe mednomolibdenovoe mestorozhdenie v Sredinnom Kamchatskom khrebte i perspektivy dal'neĭshikh poiskov rud redkikh metallov. *(In:* Akademiia nauk SSSR. Komissiia po problemam Severa. Syr'evye resursy . . . 1961, p.52-58.) Text in Russian. **Title tr.:** The Krasnaya Mountain copper-molybdenum deposits in the Sredinnyy Range of Kamchatka and the outlook in further rare metal ore prospecting.

Describes the geologic structure and petrography of these deposits. The Vershina and Krasnaya Mountain intrusions are characterized, noting their composing rocks and copper-molybdenum mineralization. Genesis of the deposits is analyzed. The molybdenum and copper content is not large on the surface of the Krasnaya deposits but the latter are extensive and the prospects good for finding copper-molybdenum of productive value. (DLC.)

75985. SUKHODROVSKIĬ, V. I. Dva goda gliatsiologicheskikh issledovaniĭ na Zemle Frantsa-Iosifa. (Issledovaniia lednikov i lednikovykh raĭonov, 1961. vyp. 1, p.55-69, illus., map.) 3 refs. Text in Russian. Summary in English. **Title tr.:** Two years of glaciological investigation in Franz Joseph Land.

Reviews work of the Institute of Geography expedition to Hooker Island, 1957-1959. From a base on Tikhaya Bay, main stations were established on the Sedova Glacier and Churlyanisa icedome and auxiliary stations on the Elena Glacier and Jackson icedome. Scope and extent of observations are described in meteorology, actinometry, hydrometeorology, also studies of ice and snow ablation and accummulation, temperature and structure, glacier motion and morphology, etc. Preliminary analysis of the data indicate recession in these glaciers; other results are stated briefly. (CaMAI.)

75986. SUKHODROVSKIĬ, V. L. Fizicheskoe vyvetrivanie gornykh porod v prilednikovoĭ zone Zemli Frantsa-Iosifa. (Issledovaniia lednikov i lednikovykh raĭonov, 1962. vyp. 2, p.215-28, illus.) 20 refs. Text in Russian. Summary in English. **Title tr.:** Physical weathering of rocks in the periglacial zone of Franz Joseph Land.

Reports his geomorphic investigations in 1957-1959 within the IGY program and describes various forms of physical weathering of magmatic rocks. Its main agents are temperature fluctuation and frost. Its intensity as evidenced in basalts, dolerites and gabbro dolerite of Jurassic and Cretaceous age is discussed. Deep fragmental and fine-grained forms of physical weathering are recognized and described. Its effects on the process of relief formation also are discussed. (DLC.)

75987. SUKHODROVSKIĬ, V. L. Geneticheskie tipy rel'efa prilednikovoĭ (periglîatsial'noĭ) zony Zemli Frantsa-Iosifa. *(In:* Akademiia nauk SSSR. Institut geografii . . . Materialy gliatsiologicheskikh . . . 1961. vyp. 2, p.34-36, illus.) Text in Russian. **Title tr.:** Genetic types of relief in the periglacial zone of Franz Joseph Land.

Distinguishes and briefly characterizes six genetic types of relief in the area, 12.9% that of the entire archipelago, free of glacier cover. There is the basaltic plateau surface covered by unconsolidated debris of frost weathering and solifluctions; the plateau slopes with gravitational and nival-solifluction effects; the surfaces composed of sedimentary rocks and worked over by erosion and solifluction; the marine terraces; the coasts; and the glacial forms of relief. (DLC.)

SUKHODROVSKIĬ, V. L., *see also* Akademiia nauk SSSR. . . . Zemliia Frantsa-Iosifa, gliatsiogeomorfologiia . . . 1962. No. 69559

75988. SUKHOIVANENKO, P. IA. Dopplerovskie skorosti protonov po nabliūdeniiam èmissii $H\beta$ v polîarnykh siîaniiakh. (Akademiia nauk SSSR. Mezhduvedomstvennyĭ komitet po provedeniiū Mezhdunarodnogo geofizicheskogo goda, IV razdel programmy MGG: polîarnye siîaniia i svechenie nochnogo neba. Sbornik statei 1961. no.7, p.7-13, table, diagrs.) 8 refs. Text in Russian. Summary in English. **Title tr.:** Doppler velocities of protons according to observations of the $H\beta$ emission in auroras.

Presents results of analysis of spectra obtained at the Tiksi Bay geographical station. Microphotograms (27) of $H\beta$ line contours are shown and the corresponding contour parameters tabulated. The velocities of intrusion of protons into the upper atmosphere, their velocities at the

maximum of H_β line contour, and the velocity of their departure were determined to be within the ranges of 2,200-3,400, 200-600, and 500-1000 km./sec. respectively. (CaMAI.)

75989. SUKHORUKOVA, E. V. Vertikal'noe raspredelenie èlektronnoĭ plotnosti nad Murmanskom. (Geomagnetizm i aèronomiia, 1962. t.2, no.5, p.904-908, graphs.) 14 refs. Text in Russian. **Title tr.:** Vertical distribution of electron density over Murmansk.

Electron density profiles of 1958 are plotted, and the total number of electrons in a vertical column of unit area calculated for the ionosphere over Murmansk. Equinoctial maxima in the number of electrons where found to be accompanied by a small minimum during the winter and a big minimum in summer. This number increases as the geomagnetic latitude decreases. (DLC.)

75990. SUKHOV, S. V. Verkhnepaleozoĭskie rasteniia s r. D'iavol'skoĭ v Tungusskom basseĭne. (Sibirskiĭ nauchno-issledovatel'skiĭ institut geologii, geofiziki i mineral'nogo syr'ia. Trudy, ser. neftianaia geologiia, 1961. vyp.15, Materialy po paleontologii i stratigrafii Zapadnoĭ Sibiri, p.97-116, plates, tables.) 23 refs. Text in Russian. **Title tr.:** Upper Paleozoic plants from the D'yavol'skaya River of the Tungusskiy basin.

Presents a systematic description of Middle and upper Carboniferous flora of the Kata series, collected by the author and others in the D'yavol'skaya River region, right tributary to the Sukhaya Tunguska. From more than 400 samples with plant prints, twelve plants are identified, described in detail, and illus., *Neuropteris djavolskiensis* and *Lepeophyllum parallelinervium* n. spp. for the first time. (DLC.)

SUKHOVA, V. G. *see* Kopylkov, B.N., & V.G. Sukhova. Kompleksnoe ispol'zovanie . . . 1962. No. 72960

75991. SUKRUTOV, N. I. Posol, khranenie i pererabotka morskogo okunia pri poluchenii polufabrikatov dlia kopchenykh balykov. (Rybnoe khoziaĭstvo, 1962. god 38, no.1, p.78-81, illus., tables.) Text in Russian. **Title tr.:** Salting, storage and processing of redfish as material for smoked fillet.

Reports experiments conducted in 1960 in the Flemish Cap region of the Grand Banks; with data on weight of fish, their chemical composition, color changes after catch, salting techniques, losses in weight during storage, and in further processing. (DLC.)

75992. SULLIVAN, BERNARD JEREMIAH, 1921– , *and* W. J. FIMIAN, *Jr.* The effect of inositol and rapid rewarming upon acute cold injury in the rabbit, 1; electrophoretic studies of serum and edema fluid. Fort Wainwright, Alaska, Oct. 1961. 16 p. illus., tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-29.) 28 refs.

Rabbits with one hind leg frozen for ten minutes and slowly or quickly rewarmed, developed less edema when pre-treated with inositol. Serum protein distribution in the pre-treated groups showed a decrease in serum albumin, with an increase in either alpha, beta or gamma globulin. No such changes were seen in controls, receiving inositol or cold injuries only. (CaMAI.)

75993. SULLIVAN, BERNARD JEREMIAH, 1921– , *and* W. J. FIMIAN, *Jr.* The effect of inositol and rapid rewarming upon acute cold injury in the rabbit, 2: radioactive tracer studies of circulatory return. Fort Wainwright, Alaska, Oct. 1961. 17 p. illus. tables. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 61-30.) 24 refs.

Account of experiments with the aid of a radioactive tracer (Cr^{51} Cl_3). Dates of circulatory return were faster in three experimental groups receiving inositol or rapid rewarming, than in a control without inositol and slowly rewarmed. Two groups treated with inositol, showed less swelling and bleb formation than two untreated groups. (CaMAI.)

75994. SULLIVAN, H. M., *and others.* Measurements of atmospheric ozone at Resolute Canada, 74°43′N. 94°59′W. July 7, 1957 to December 31, 1959. Toronto, 1961. 26 p. graphs, tables. (Canada. Meteorological Branch. Canadian meteorological memoirs no.7.) 6 refs. *Other authors:* W.D. Komhyr *and* C.L. Mateer.

Describes the operations, particularly the difficulties and final evaluation of results of total atmospheric ozone and Umkehr effect of observations at this station on Cornwallis Island. Inadequacy of standard correction methods was a serious problem. Final coded data are appended on WMO forms O-1 and O-2. Annual variation in total ozone was similar to that suggested for stations at this latitude, although the increase from the fall-early winter minimum to the late winter-early spring maximum appeared to be associated with the stratospheric warming of the 1957-58 winter. (DWB.)

75995. SULLIVAN, WALTER. The polar regions; the geography, climate, and life of the Arctic and Antarctic, and the explorers and scientists who discovered them. New York, Golden Press, 1962. 54 p. col. illus., maps.

Describes, for younger readers, the Arctic Ocean pack ice, ice islands, permafrost, air temperatures, birds, mammals, native peoples, explorers, scientific research, and sovereignty. (DLC.)

75996. SULTANAEV, A. A. O knige N.P. Malakhovoĭ "Stratigrafiia nizhnekamennougol'nykh otlozheniĭ Severnogo i Srednego Urala po faune foraminifer, Vizeĭskiĭ iarus." (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Aug. 1962. no.8, p.111-15.) 25 refs. Text in Russian. **Title tr.:** On N.P. Malakhova's book "Stratigraphy of Lower Carboniferous deposits of the Northern and Middle Ural according to foraminiferal fauna, Visean stage."

Reviews No. 66520, noting certain errors and shortcomings: disregard of some publications on foraminifers, failure to use brachiopod, coral, goniatitid and other fauna for stratigraphic division. Division of the Visean stage should not have been based solely on Foraminifera. (DLC.)

SUMGIN, MIKHAIL IVANOVICH, 1873–1942, *see* Stotsenko, A.V., & A.M. Chekotillo. Voprosy terminologii . . . 1962. No. 75947

75997. SUNDENE, OVE. Eksperimentelle studier over formvariasjon og økologi hos fingertare. (Norske videnskaps-akademi, *Oslo.* Årbok 1959, *pub.* 1960, p.30-31.) Text in Norwegian. **Title tr.:**

Experimental studies on form variation and ecology of finger algae.

Summarizes hybridization and transplanting experiments of an economically important seaweed which is cut and dried along the west and arctic coasts of Norway for production of alginate; and known from Svalbard to Morocco. Although commonly found below the lowest tide range, in many places where the range is great it is found on the lower level of the strand zone and subject to emergence at low water. Growth is greatest in February-April and ceases in summer when sea-water temperature is high. (DLC.)

75998. SUNDIKOV, B. I. Vozvedenie zemlīanogo polotna v vechnomerzlykh gruntakh. (Avtomobil'nye dorogi, Apr. 1962. god 25, no.4, p.8-9, illus., cross-sections.) Text in Russian. **Title tr.:** Construction of earth roadbeds on permafrost.

Describes techniques used in Yakutia for developing hard-surface roads on old dirt-roads: the earth-removal to 2-4 m. depth, the fill, the removal of the upper permafrost layers and artificial thawing of lower layers to 1.5 m depth, drainage, etc. Mechanized equipment is also briefly discussed. (DLC.)

75999. SUNDING, PER. Høydegrenser for høyere planter på Svalbard. Height limits for vascular plants in Svalbard. (Norway. Norsk Polarinstitutt. Årbok 1960, *pub.* 1962, p.32-59, illus., map.) 12 refs. Text in Norwegian. Summary in English.

Contains data on the altitude limit for 81 species of vascular plants growing at 150 m. or more above sea level around Adventfjorden and Adventdalen (approx. 78°15′N. 15°40′E.) and around Ny-Alesund (approx. 78°56′N. 12°0′E.) in 1960. *Papaver dahlianum* was found up to 940 m. On the north and east coasts, the height limits are thought to be somewhat lower. Previous observations from various parts of Svalbard are reviewed. Mosses and lichens are briefly considered also, with *Dicranoweisia crispula* found at 1,040 m. (CaMAI.)

SUNDSTEN, J. W., *see*

Andersson, B., & *others*. Activation of the thyroid . . . 1962. No. 69768

Andersson, B., & *others*. Effects of central cooling . . . 1962. No. 69769

76000. SUNIK, OREST PETROVICH. Glagol v tunguso-man'chzhurskikh īāzykakh; morfologicheskaīā struktura i sistema form glagol'nogo slova. Moskva-Leningrad, Izd-vo Akademii nauk SSSR, 1962. 363 p. tables. 112 refs. Text in Russian. **Title tr.:** The verb in Tungus-Manchu languages; morphological structure and form pattern of verbal words.

Comparative linguistic analysis of Tungus (Evenki, Negidalets, Ul'chi, Oroki, Udegeets, and Orochi), Lamut (Eveny), Gold (Nanaets) and Manchu languages and their dialects. Origin, formation, grammatical structure, etc. are considered in the verb, verbal adjective, and adverb. An extensive, 19th century-to-date literature is cited, including 19 non-Russian, mainly German, publications. (DLC.)

76001. SUNIK, OREST PETROVICH. Iz istorii grammaticheskogo stroīā tunguso-man'chzhurskikh īāzykov. (Akademiīā nauk SSSR. Institut īāzykoznaniīā, 1953, no.4, p.111-35.) Refs. Text in Russian. **Title tr.:** History of the grammatical structure of Tungus-Manchu languages.

Comparative study of the possessive phrase structure, mainly in the Nanaets-Gold language. (DLC.)

76002. SUNIK, OREST PETROVICH. O tipakh osnov i okonchaniĭ slova v tunguso-man'chzhurskikh īāzykakh. (Sovetskoe vostokovedenie, 1957, no.6, p.97-110.) 14 refs. Text in Russian. **Title tr.:** On types of stems and word endings in Tungus-Manchu languages.

Comparative study of stems and suffixes of positive verbal forms in Evenki Tungus, Eveny Lamut, Nanaets Gold, etc. (DLC.)

76003. SUNIK, OREST PETROVICH. Das Problem der Agglutination in den altaischen Sprachen. Moskva, Izd-vo vostochnoĭ lit-ry, 1961. 19 p. (International Congress of Orientalists, 25th, Moscow, 1960. Delegation from the USSR, Papers.) 20 refs. Text in German. **Title tr.:** The agglutination problem in Altaic languages.

Morphological study including Tungus-Manchu languages, characterized by both incorporation and polysynthetism. (DLC.)

76004. SUOMALAIS-UGRILAINEN SEURA. Commentationes fenno-ugricae in honorem Paavo Ravila. Helsinki, Suomalais-ugrilainen seura, 1962. 696 p. port. (*Its:* Toimituksia v.125.) Refs. Text in German or English. **Title tr.:** Finno-Ugric treatises in honor of Paavo Ravila.

Festschrift of 50 papers together with a roster (prepared by R. Jokinen) of this distinguished Finnish philologists' own works, some 180 pub. during 1929-1961, many of them on Lappish. Of the papers comprising the Festschrift, more than half are on northern Ugrians and are abstracted in this Bibliography under their authors' names, viz (titles tr.):

ARISTE, P. Votish *lappolain.*

BARCZI, G. Contributions to the history of Finno-Ugric explosives in proto-Hungarian times.

BERGSLAND, K. The Lapp dialects south of Lappland.

FOKOS, D. R. A characteristic ablative case construction.

HAJDÚ, P. Etymological notes.

ITKONEN, E.E. Observations on the development of the Cheremiss conjugation system.

ITKONEN, T.I. *Kuivi,* a sacred site of the Lapps.

ITKONEN, T. Lp. *binal.*

JOKI, A.J. Finno-Ugric in Ossetic?

JOKINEN, R. The illatives *tasā, tasi* in Lule Lappish.

KÁLMÁN, B. The role of filler-words and -syllables in Vogul.

KLEMM, A. Multi-particle phrases.

KORHONEN, M. Syntactic use of the Lappish verb *gâl'gât* "shall, must."

KUNZE, E. At the birth of Finno-Ugrology; unknown letters by M.A. Castrén, Ahlqvist, and Wiedemann.

LEHTISALO, T.V. Samoyed word for flour.

LEWY, E. Stress in Ostyak.

LIIMOLA, M.E. Etymologies in Ugric languages.

LYTKIN, V.I. Etymologies in Permian languages.

NESHEIM, A. The Lappish dialect of Ullsfjord and its relations to other Lappish dialects.

RAUN, A. Concerning the qualified grade of superiority in Uralic.

RUONG, I. The name Arjeplog.

SCHLACHTER, W. The problem of the nominative in Finno-Ugric languages.

SEBESTYEN, I.N. The problem of the Samoyed and Uralic genitive.

SEREBRENNIKOV, B.A. Origin of the accusative ending *-sę* and *-ęs* in Zyryan and *-zє, єz* in Votyak.

STEINITZ, W. Samoyed, Ob-Ugric.

STIPA, G. Impersonal forms of expression.

WICKMAN, B. Some remarks on the problem of Fenno-Ugric vocalism. (DSI.)

76005. SURIKOV, M. M. Nekotorye dannye o gruntovykh zhilakh v doline r. Tab-ÍÂkha; ĭug Tazovskogo poluostrova. (*In:* Moskva. Universitet. Geograficheskiĭ fakul'tet. Voprosy geograficheskogo merzlotovedeniĭa . . . 1962, p.89-93, cross-sections.) 5 refs. Text in Russian. **Title tr.:** Some data on ground veins in the Tab-Yakha River valley, southern Taz Peninsula.

Describes three ground veins in the first terrace above the floodplain of the Tab-Yakha River. Lateral sections are presented and treated in detail. These veins developed above the boundary of permafrost. Their filling and their enclosing rocks are reported. They have been built in hummock-block relief of polygonal pattern. They are primordial ground veins: rock fissures filled at the beginning with ground, not with ice. (DLC.)

76006. SURKOV, S. S. Chislennost' stada lysuna v Belom more po aėrofotos"emkam 1959 goda. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biŭlleten', 1960. no.3 (13), p.26-29, tables, maps.) Text in Russian. **Title tr.:** Size of the herd of Greenland seals in the White Sea, according to air photographs of 1959.

Reports earlier estimates from aerial photographs; accumulations and relocations in 1959, changes in size of rookeries, estimated number of animals according to April reconnaissances, size of kill. (DLC.)

76007. SURKOV, S. S. Istoriia i sovremennye zadachi izucheniia morskikh mlekopitaiŭshchikh na Severe. (Akademiia nauk SSSR. Ikhtiologicheskaia komissiia. Trudy soveshchaniĭ 1961. vyp.12, p.18-22.) Text in Russian. **Title tr.:** The history and current tasks of research of marine mammals in the North.

Sketches the pre- and post-Revolution activities of Russian scientists and institutions. Aims of research: distribution and herds in the White Sea and Jan Mayen areas, stock taking, rational exploitation, etc. (DLC.)

76008. SURKOV, S. S., *and* **M. ÍA. ÍAKOVENKO.** O rezul'tatakh zveroboinogo promysla i provedenii aėrofotos"emok detnykh zalezhek belomorskogo lysuna v 1959 g. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biŭlleten' 1959. no.2 (10), p.45-48, illus., map.) Text in Russian. **Title tr.:** Results of sealing and air-photography of rookeries of White Sea harp seals in 1959.

Following a critique of air photography, authors report such activities over the White Sea narrows during Feb. 28-Mar. 5, 1959. Number of females and pups, and peaks of whelping on different rookeries are estimated as well as the take of the sealing parties in the area. (DLC.)

76009. SURKOVA, E. I. Redfish, growth and age. (International Council for the Exploration of the Sea. Rapports et procès verbaux des réunions, 1961. v.150, ICES/ICNAF Redfish Symposium, p.285-90, illus., tables, map.) 22 refs.

Discusses two opposing views on growth rate, maturation and life span of these fish, size composition of fry from the Norwegian and Barents Seas, size and age composition of young and mature fish, etc. A slow growth rate and long life span are indicated. (DI.)

76010. SURKOVA, E. I. Vozrast morskogo okunia v raĭone Kopytovskoĭ banki. (Murmansk. Poliarnyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Nauchno-tekhnicheskiĭ biŭlleten' 1960. no.1 (11), p.21-23, tables.) Text in Russian. **Title tr.:** Age of redfish in the Kopytova bank area.

Discusses views on the life span of this fish and results of tagging. Its age composition and growth-rate are reported from studies made in the area 71°20′ - 73°30′N. 15° - 22°E. since 1953. Twenty-five years is considered the age limit, with 13-20 yr. olds comprising the bulk of catch in this area. (DLC.)

76011. SUSHKINA, A. P. Planktonnye organizmy-indikatory techeniĭ v farero-islandskikh vodakh i prilegaiŭshchikh raĭonakh. (Moskva. Vsesoiŭznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Trudy 1962. t.46, p.267-87, illus., tables, map.) 24 refs. Text in Russian. **Title tr.:** Plankton organisms as indicators of currents in the Faroe-Iceland and adjacent waters.

The study area includes the northern part of Denmark Strait and the Greenland Sea north of Iceland. Work was done between July 14 and Sept. 25, 1959, at 18 stations in stages down to the bottom. Some ninety forms of zooplankton are listed and (except two cosmopolitan) classified as warm, moderate, boreal, and cold-water forms. Their distribution and that of the water masses are described. (DLC.)

76012. SUSHKINA, A. P. Skorost' raskhodovaniia zhira pri razlichnoĭ temperature i zhiznennyĭ tsikl u *Calanus finmarchicus* Gunn i *C. glacialis* Jaschn. (Zoologicheskiĭ zhurnal, 1962. t.41, vyp.7, p.1004-1012, illus., tables.) 19 refs. Text in Russian. Summary in English. **Title tr.:** Rate of fat consumption at various temperatures and the life cycle of *Calanus finmarchicus* Gunn and *C. glacialis* Jaschn.

Reports a field and laboratory study of *C. glacialis* in the White Sea, with comparisons to the other spieces in the North Sea. A correlation between fat content of the body, development and developmental stage, and vertical migration, is outlined. (DLC.)

76013. SUSHKINA, A. P. Vertikal'nye migratsii i sutochnyĭ ritm pitaniia *Calanus finmarchicus* Gunn v sviazi s ego vozrastom i zhirnost'iu.

(Moskva. Vsesoĭuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khozĭaĭstva i okeanografii. Trudy 1962. t.46, p.235-53, illus., tables.) 39 refs. Text in Russian. **Title tr.:** Vertical migration and diurnal feeding rhythm of *Calanus finmarchicus* Gunn as related to its age and fatness.

Reports study of some 130 samples taken in the subarctic central Atlantic. Feeding took place in the upper 50 m., the layer of 50-100 m. showing only appox. 20% of fed animals. In the fourth and fifth stages, a nocturnal maximum of food content was noted, which is connected with the upward migration into the food-rich layers at night. In younger stages, which do not migrate, no diurnal feeding rhythm was found. Stage IV showed a high, and stage V the highest content of body fat; this and other observations indicate that they do not migrate nightly and so extensively as often claimed. (DLC.)

76014. SUSHON, A. R. Usloviĭa formirovaniĭa titanovykh rossypeĭ v srednedevonskikh otlozheniĭakh Timana. (Izvestiĭa vysshikh uchebnykh zavedeniĭ. Geologiĭa i razvedka, June 1962. god 5, no.6, p.87-98, table, maps, diagrs.) 4 refs. Text in Russian. **Title tr.:** Formation conditions of titanous placers in the Middle Devonian deposits of Timan.

Devonian sandstones of the Timan Ridge are rich in titanous minerals and especially in leucoxene. Three beds are distinguished according to the lithologic properties, grain size and distribution of the titanous minerals. The Eifelian sandstones are thought to have been formed in the coastal areas of an old basin among coarse-grained rocks. Conditions for titanium mineralization and development of placers are discussed. (DLC.)

SUSLOV, I. M., *see* Michael, H.N. Studies . . . ethnogenesis. 1962. No. 73967

76015. SUSOV, M. V., *and* **A. A. ARSEN'EV.** K geologii Kuoĭksko-Merchimdenskogo raĭona; IAkutskaĭa ASSR. (Geologiĭa i geofizika, 1962, no.6, p.25-38, maps incl. fold.) 14 refs. Text in Russian. **Title tr.:** On the geology of the Kuoyka-Merchimden region, Yakut ASSR.

Reports 1957 field work on these two tributaries of the middle Olenek. A geologic map of the region is presented and stratigraphy of the predominant Cambrian deposits, divided into four series, is described noting their thickness, lithologic properties and fauna. Tectonic structure of the region is characterized, Merchimden graben, horsts and other structures described. (DLC.)

76016. SUSOV, M. V. K petrokhimii kimberlitov Merchimdenskogo raĭona, bassein nizhnego techeniĭa r. Olenek. (Sovetskaĭa geologiĭa, Aug. 1962. no.8, p.40-47, diagrs.) Text in Russian. **Title tr.:** On the petrochemistry of the Merchimden region kimberlites in the lower Olenek basin.

Reports discovery of this new kimberlite area (70°11′N. 119°15′E.). Their mineral composition and structure show them altered to a significant degree by authometamorphic processes. Microscopic investigations are reported, mode of alteration and paragenetic associations of minerals distinguished and described. Merchimden kimberlites are compared with those of the Kuoyka (70°28′N. 121°30′E.) and the Olenek basins and with those of the Vilyuy. (DLC.)

76017. SUVOROV, V. V. Izmenenie gemodinamicheskikh pokazateleĭ pri kranio-tserebral'noĭ gipotermii. (Fiziologicheskiĭ zhurnal SSSR, Apr. 1962. t.48, no.4, p.464-69, illus., tables.) 10 refs. Text in Russian. **Title tr.:** Change of hemodynamic indices during cranio-cerebral hypothermia.

Comparison of the latter with general hypothermia showed it to produce more favorable hemodynamic changes and less cardiovascular complications. Notwithstanding much lowered body temperature, speed of circulation, arterial pressure and cardiac rhythm remain relatively high. The advantages of the method are also confirmed through clinical experience. (DLC.)

76018. SUVOROV, V. V. Ob"emnaĭa skorost' krovotoka pri kranio-tserebral'noĭ gipotermii. (Nauchnye doklady vyssheĭ shkoly, biologicheskie nauki, 1962, no.2, p.79-82, illus., tables.) 9 refs. Text in Russian. **Title tr.:** Volumetric rate of blood circulation during cranio-cerebral hypothermia.

Reports observations on dogs submitted to moderate hypothermia by cooling the head and brain. Volumetric speed (ml./min.) in the femoral artery, circulation time and pulse rate are recorded and evaluated against body temperature. (DLC.)

76019. SUZDAL'SKIĬ, O. V. Lednikovye otlozheniĭa Urala i prilegaĭushchikh k nemu territoriĭ pripolĭarnykh shirot. (Sovetskaĭa geologiĭa, Feb. 1962, no.2, p.144-48, map.) 12 refs. Text in Russian. **Title tr.:** Glacial deposits of the Ural and adjacent territories in the subpolar latitudes.

Presents a geologic map of Quaternary deposits of the Northern Ural and the region roughly from the Pechora east to the Ob. Their distribution, composition, and stratigraphy are analyzed. On both sides of the Ural pre-maximal, maximal, Taz and Zyryanka glaciations are in evidence; their limits and distribution are summarized. (DLC.)

76020. SUZDAL'SKIĬ, O. V. Nekotorye voprosy stratigrafii chetvertichnogo perioda severa Zapadno-Sibirskoĭ nizmennosti; tezisy. (*In:* Vsesoĭuznoe soveshchanie po izucheniĭu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.39.) Text in Russian. **Title tr.:** Some problems in the stratigraphy of the Quaternary period in the north of the West Siberian plain; summary.

States a stratigraphic division of the Quaternary deposits as lower, middle, upper and recent series, and briefly characterizes each. This proposed division allows a correlation to be made with glacial and interglacial deposits in north of the Russian plain. (DLC.)

76021. SVALOV, N. N. Nepreryvnoe lesopol'zovanie v neosvoennykh lesakh. (Lesnoe khozĭaĭstvo, Dec. 1961. god 14, no.12, p.27-31, diagr., tables.) Text in Russian. **Title tr.:** Uninterrupted exploitation of virgin forests.

Outlines problems in utilization of the virgin forests in northern European Russia. Data on age of spruce and pine in northern Komi and Arkhangel'sk Province are tabulated and discussed. Clear cutting of forests of 100-240 years maturity is considered to give the best results. (DLC.)

76022. SVATKOV, N. M. Changes in the accumulation regime on the ice cap in the Russkaya Gavan' area on Novaya Zemlya. (*In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.379-87, maps, section, table.) 16 refs. Summary in French.

Compares observations of Russian expeditions to this area in the Second International Polar Year 1932-33, and those during the IGY 1957-58. The earlier observations showed that deep glacier ice was exposed on the surface of Novaya Zemlya icecap; firn was absent. Tongues of this icecap, including Shokal'skogo Glacier 76°15′N. 62°35′E. exist at the expense of non-accumulating ice of the center of the icecap. This particular glacier retreated continuously during the next 25 years. The IGY observations showed firn nourishment at 570 m. and above however, with a 16-m. firn layer in one area. Firn structure indicates its age as 17-20 yrs. Continuation of the current regime of cyclonic activity to the 1980's should provide abundant nourishment for the icecap, and possibly end the retreat of the Shokal'skogo Glacier. (DWB.)

76023. SVATKOV, N. M. Dinamika lednika Shokal'skogo, o. Novaia Zemlia, i ee zavisimost' ot kolebanii klimata. Rezhim akkumuliatsii na lednikovom pokrove Novoĭ Zemli v raĭone Russkoĭ Gavani. (Akademiia nauk SSSR. Institut geografii. Materialy gliatsiologicheskikh issledovanii. Khronika obsuzhdenii, 1961. vyp.1, p.29-41, table.) 18 refs. Text in Russian. **Title tr.:** The dynamics of Shokal'skogo Glacier, Novaya Zemlya, and its dependence on climatic changes. The accumulation regime of the glacier cover of Novaya Zemlya in the Russkaya Gavan' region.

Presents two versions of the changes in glaciers and their firn type of nourishment, based on comparison of Novaya Zemlya glaciers during 1932-1955 and in 1957-1959. Comments of other scientists are appended to each version. The critics of the first one (p.29-36) urge complete rewriting of the paper; for second version correction of the errors is recommended. (DLC.)

76024. SVATKOV, N. M. Neskol'ko zamechanii ob osobennostiakh pitaniia novozemel'skogo lednikovogo pokrova v 1957-1959 gg. (*In:* Akademiia nauk SSSR. Institut geografii . . . Materialy gliatsiologicheskikh . . . 1961. vyp.3, p.37-38.) Text in Russian. **Title tr.:** Some remarks on feeding characteristics of the Novaya Zemlya glacial cover during 1957-1959.

Reports measurements of winter and summer precipitation and air temperature during 1957-1959. Other measurements since 1932 are compared. For the winter (Sept.-May) period, the sum of the mean monthly temperatures was -88°C.; the amount of moisture from the snow cover was 800 mm. (converted into water). Snow evaporation is calculated and the yearly snow accumulation on the glacial cover is found to be about 380-390 mm. (converted into water.) (DLC.)

76025. SVATKOV, N. M. O kolichestve oledeneniĭ o-va Vrangelia v antropogene i vozraste poslednego iz nikh. (Issledovaniia lednikov i lednikovykh raionov, 1962. vyp.2, p.86-111, illus., maps, diagrs.) 64 refs. Text in Russian. Summary in English. **Title tr.:** On the number of glaciations on Vrangel Island in the Anthropogene and the age of the last one.

Evaluates recent studies, present glaciers and physical-geographic conditions. Other areas of northeastern USSR and of Alaska also are reviewed. Absolute age of bottom sediments of the Pacific is considered. Planetary synchrony in respect to glaciations is recognized. Two-fold glaciation of Vrangel Island is rejected. A new stratigraphic division of Quaternary sediments is offered, with recognition of three-four glaciations, as is the case in Western Europe. (DLC.)

76026. SVATKOV, N. M. Priroda ostrova Vrangelia. (Problemy Severa, 1961, vyp.4, p.3-26, tables, 2 text maps.) 20 refs. Text in Russian. **Title tr.:** The nature of Vrangel Island.

Outlines the landforms, climate, drainage, soils, vegetation and wildlife of this largest island of the Soviet Eastern Arctic; it lies 70°-71°N. 178°E.-177°W. and covers 7673 km². Formerly part of the ancient continent of Beringia, it separated from the mainland not less than 50,000 years ago. It has three natural regions: a northern plain (Tundra Akademii), southern plain, and mountain ridges with three summits over 1000 m. separating the two plains. The climate is severe with annual average temperature of -11°C., February -24°, July +3°C. Three types of rivers, five of lakes, and the great variety of soils are briefly discussed. Vegetation is sparse though represented by 160 vascular plant species as against 76 in the New Siberian Islands, 44 on Severnaya Zemlya and only 36 on Franz Joseph Land. Indigenous fauna is only 4-5 species: the arctic fox, raven (*Corvus corax* L.), polar bear, etc.; 43 species of migratory birds appear in summer; entomological data are not yet published. Maps show land forms and soils. (DLC.)

76027. SVEDBERG, THE, 1884– . Några intryck från en botanisk resa till Spetsbergen. (Sweden. Statens naturvetenskapliga forskningsråd. Årsbok 1961. årg. 14, p.186-89, col. plates.) Text in Swedish. Summary in English. **Title tr.:** Some impressions from a botanical journey to Spitsbergen.

Reports on a four-week sojourn July-Aug. 1960 in the Isfjorden area. Specimens were collected and color photographs made for the Uppsala Botanical Museum. Some flowering plants observed are described, Swedish and Latin names given. (DLC.)

SVEE, ROALD, *see* Brandtzaeg, A. Rausmoloer . . . 1960. No. 70365

76028. SVEISTRUP, POUL PETER, 1892– . Begrebet ligestilling. (Grønland, Aug. 1961, nr.8, p.311-16.) Text in Danish. **Title tr.:** The concept of equality.

Discusses some of the problems connected with establishing equal status of Greenlanders and Danes in Greenland. An analysis is attempted of the concept of equality. Formal equality in Greenland may entail inequality in practice. (DLC.)

76029. SVENDSEN, K. L. United States magnetic tables for 1960. Washington, D.C., U.S. Govt. Print. Office, 1962. iv, 91 p., fold. maps, diagrs., graphs, tables. (U.S. Coast and Geodetic Survey, Publication 40-2.) 5 refs.

Combines and simplifies results of observations formerly pub. in part as No. 18289. Mean yearly values of declination at 11 magnetic

observatories, including three in Alaska, are tabulated for 12- to 26-yr. periods. Secular changes of declination, inclination, and horizontal intensity for Alaska are tabulated by 5-degree squares for the period 1900-1955. Results of magnetic observations accumulated since the last (1944) publication for Alaska are tabulated on p.54-70. Observed magnetic elements D, I, and H, also corrected values to epoch 1960 or 1955 are given for about 700 stations in Alaska. (DI.)

76030. SVENSSON, HARALD. Ice-wedges in fossil tundra polygons on the Varanger Peninsula. (Svensk geografisk årsbok 1962. årg. 38, p. 185-87, illus.)

Reports summer 1962 observations on the peninsula and along the south side of the Varangerfjord, where well defined frost polygons (tetragons) occur in raised beaches, deltas or terraces near the highest shore line. An air photo of the region is pub. with author's note in *Geografiska annaler* 1962, vol. 44, nr.3-4, p.413. In a gravel pit at Bussesund opposite Vardø, two lines of a polygon are cut through and the ice-wedges exposed. The shore-washed material is composed mainly of coarse fractions, such as stones and gravel of sandstone, slates and shales. The flat stones have a unitary orientation and the wedges stand out as discontinuity structures with material identical with the surrounding horizontal layers, although arranged more arbitrarily. A vertical orientation of the long axes of some stones is obvious in parts of the wedges. The depth of the studied ice-wedges is 1.70, 1.75 and 1.85 m. The occurrence of two smaller wedges in a larger one, indicating a repeated cracking, was noted. No permafrost was revealed but stone rings, etc. are seen on the surface. (SPRI.)

SVENSSON, SVERKER, *see* Hofsten, E., & *others*. . . . statsbidragen. 1961. No. 72193

76031. *SVERIGES NATUR*. Nya nationalparksreglementen. (Sveriges natur, årsbok 1961: årg. 52, nr. 5A, p.167-76, illus.) Text in Swedish. **Title tr.:** New regulations for national parks.

Certain regulations or waivers for northern parks are noted: the use of firewood, dogsleds, the killing of wildlife, landing aircraft, etc. in case of necessity: motor boats and vehicles, generally prohibited, may be used in Torneträsk and certain Abisko areas. Range rights of Lapps and their fishing, trapping and hunting rights are maintained. (DA.)

76032. *SVERIGES NATUR*. Resultatet. (Sveriges natur, Dec. 1961. årg. 52, nr. 6, p.198-201, maps.) Text in Swedish. **Title tr.:** The result.

Deals with the water systems in Norrland involved in the agreement between the Waterfalls Directorate and the Conservation interests in Oct. 1961. They are: the Stora and Lilla Lule, Skellefte and Ume Rivers, the Vindel, Angerman, and Indal Rivers. Maps, with explanations, show the areas within each water system to be excluded from regulation, areas on which decision is deferred and those areas which are subject to river regulation for hydro-electric power development. Newspaper editorials on the outcome of the dispute between conservation and power-development interests are cited in the same issue of this journal, p.202-203; and on p.187, the Padjelanta area (67° 20′ N. 16° 30′ E.) is noted as excluded from water-regulation and hydroelectric-power projects, an area unique in Norrbotten for its scenic beauty and biological importance, expected to be designated a national park. (DA.)

76033. SVESHNIKOV, VLADIMIR ALEKSANDROVICH, 1925– . Pelagicheskie lichinki polikhet Belogo moriā. (Zoologicheskiĭ zhurnal, Feb. 1961. t.40, vyp. 2, p.164-77, illus.) 26 refs. Text in Russian. Summary in English. **Title tr.:** Pelagic larvae of polychaetes of the White Sea.

Outlines the general morphology of these larvae, presents keys, and describes 17 species belonging to 14 families. Some developmental and ecological aspects are also noted. The occurrence of protrochophorous and trochophorous types is discussed. (DLC.)

SVESHNIKOVA, I. N., *see* Budantsev, L. IU., & I.N. Sveshnikova. Novye paleobotanicheskie nakhodki . . 1961. No. 70433

76034. SVIATLOVSKIĬ, ALEKSANDR EVGEN'EVICH. Geologicheskoe raĭonirovanie podzemnykh gorīachikh vod Kamchatki i perspektivy teplofikatsii Petropavlovska. *(In:* Akademiīa nauk SSSR. Komissiīa po problemam Severa. Syr'evye resursy . . . 1961, p.123-26, map.) Text in Russian. **Title tr.:** Geologic regionalization of the subsurface hot springs of Kamchatka and prospects for Petropavlovsk heating.

Presents a map showing five geologic regions of subsurface hot springs. The geologic structure of the Petropavlovsk area is sketched and three localities distinguished as having conditions favorable for finding hot springs. Geophysical and hydrologic investigations are recommended first for the Yelizovo area as a potential source of heat for Petropavlovsk. (DLC.)

76035. SVIATLOVSKIĬ, ALEKSANDR EVGEN'EVICH. K voprosu o gidrogeologicheskom raĭonirovanii i zadachakh prakticheskogo ispol'zovaniīa termal'nykh vod Kamchatki. (Vsesoīuznoe soveshchanie po geotermicheskim issledovaniīam. Trudy 1961. t.2, Problemy geotermii i prakticheskogo ispol'zovaniīa tepla zemli, p.296-304.) 2 refs. Text in Russian. **Title tr.:** On hydrogeologic regionalization and tasks for the practical use of Kamchatka thermal waters.

Reviews main features of the geologic structure and development history of Kamchatka. The artesian basins are characterized. Formation conditions of hot springs in the Quaternary and at present in volcanos are described. Further studies are recommended with a view to utilizing hot springs for electric power and for heating purposes in towns. (DLC.)

76036. SVIATLOVSKIĬ, ALEKSANDR EVGEN'EVICH. Thermal underground waters of the Kamchatka and the role of recent tectonics and volcanism in their dynamics. (International Association of Volcanology. Bulletin volcanologique, 1960. sér. 2, t.23, p.265-70, diagr.) 3 refs. Paper read at the 1959 symposium.

Outlines the structural geologic development of the peninsula, marked by several periods of upheaval, folding, etc. The present structure consists of an alpine folded system and two complex artesian basins in central and western Kamchatka and a complex geosyncline in the east and south.

The role of volcanism in creating, heating, and altering underground waters is discussed. Thermal waters in the center, east and south are the result of Quaternary volcanism; those in the west are in zones of extinct volcanoes. Diagram in Russian shows examples of structure. (DGS.)

76037. SVIATLOVSKIĬ, ALEKSANDR EVGEN'EVICH. Zamechaniia po povodu tezisov doklada V.I. Tikhonova "Tretichnye otlozheniia IUzhno-Bystrinskogo khrebta Kamchatki." *(In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.189.) Text in Russian. **Title tr.:** Note occasioned by the theses of V.I. Tikhonov's paper, "Tertiary deposits of the Yuzhno-Bystrinskiy Range of Kamchatka."

Notes V.I. Tikhonov's (q.v.) misuse in various ways of Sviatlovskiĭ's earlier work, No. 55273. (DLC.)

SVIATLOVSKIĬ, ALEKSANDR EVGEN'EVICH, *see also* Aver'ev, V.V., & A.E. Sviatlovskiĭ. Vulkanotektonicheskie struktury . . . 1961. No. 69920

76038. SVINUKHOV, G. V. Radiatsionnyĭ balans ostrova Shumshu. (Meteorologiia i gidrologiia, Apr. 1961, no.4, p.27-29, tables.) 4 refs. Text in Russian. **Title tr.:** Radiation balance of Shumshu Island.

Presents the data for this island, the nearest of the Kurils to Kamchatka: the total radion, albedo, absorbed radiation, effective radiation are given. The radiation balance was found to be negative Nov.-April, and positive during May-Oct., the annual balance positive: 10.2 kcal/cm.^{2} (DLC.)

SVINUKHOVA, R.È., *see* Karpova, L.A., & R.È. Svinukhova. Rezhim tsiklonicheskoĭ deiatel'nosti . . . 1962. No. 72671

76039. SVISTKOVA, A. M. Tsellîulozno-bumazhnaia promyshlennost' SSSR v 1959-1965 gg. (Geografiia v shkole, Nov.-Dec. 1961. god 24, no.6, p.23-27.) 2 refs. Text in Russian. **Title tr.:** The cellulose and paper industry in the USSR in 1959-1965.

Cites the 12-fold increase in paper production during the Soviet period, and that of cellulose as 55-fold. Further increase of 1.8-fold and 3-fold respectively is expected in the seven-year plan. Reconstruction and modernization of existing plants, including the Solombala Combine in Arkhangel'sk, and construction of 30 new plants, including combines at Bratsk, Yeniseysk and Krasnoyarsk, are noted. (DLC.)

76040. SWADESH, MORRIS, 1909– . Linguistic relations across Bering Strait. (American anthropologist, Dec. 1962. v.64, no.6, p.1262-91, table.) 49 refs.

Comparative morphological and phonological study of Eskaleutian and Chukotan (i.e. Chukchi, Koryak, and Kamchadal) languages. The high incidence of sound and structural equivalences suggests their ancient identity in a single speech community. Its vast territorial expansion involved the formation of various dialects by the time of final separation. Possible connections with pro-Altaian, Gilyak, etc. are under study. (DSI.)

SWADESH, MORRIS 1909– , *see also*

Bergsland, K., & H. Vogt. Validity of glottochronology. 1962. No. 70162

Poppe, N.N. . . . Altaic linguistics. 1962. No. 74906

76041. SWAIN, A., *and others.* Long-distance migration of salmon. (Nature, Sept. 15, 1962. v.195, no.4846, p.1122.) 2 refs. *Other authors:* W.G. Hartley *and* R.B. Davies.

Record, the second, of a fish tagged on Apr. 27, 1960, when 20 cm. long at the Usk River, England and recaptured Oct. 19, 1961 north of Sukkertoppen, Greenland, 73 cm. long. Distance covered: about 2000 miles point to point. (DLC.)

76042. SWAIN, FREDERICK MORRILL, 1916– . Ostracoda from the Pleistocene Gubik formation, Arctic Coastal Plain, Alaska. *(In:* International Symposium on Arctic Geology. Proceedings 1961, v.1, p.600-606, illus., map.) 13 refs.

Describes these fossil crustaceans obtained from drill cores and shot hole tests carried out in U.S. Naval Petroleum Reserve No. 4. Near Barrow, the Gubik ostracods are largely marine neritic, cold-water types; fresh-water or near-shore types however, occur in some horizons. Neritic species predominate in five other areas on the plain; but in two inland areas, all are fresh, standing-water types. The main shoreline during Gubik time evidently lay roughly parallel to the present coast and 30-50 mi. inland. Photos, magn. x40, show 40 specimens. (DLC.)

76043. SWANSON, L. M. Ice conditions in the Churchill area for the winter of 1960-61, 1961-1962, Fort Churchill, Oct. 11, 1961, July 24, 1962. 2 v.: 16, 15 p. tables, map. (Canada. Defence Research Board. Northern Laboratory. Technical note no. 8/61, 2/62.)

Presents tabulated data on ice thickness and snow cover at Farnsworth Lake (two sites), Churchill River (two sites), and at Button Bay, Oct. 1960-May 1961; Oct. 1961-Apr. 1962; also tabulated summaries of daily meteorological data Sept. 1, 1960-June 30, 1961 and Oct. 1, 1961-June 30, 1962. (CaOGB.)

76044. SWEDEN. GEOLOGISKA UNDERSOKNING. Karta över landisens avsmältning och högsta kustlinjen i Sverige. The deglaciation and the highest shore-line in Sweden. Stockholm, Generalstabens Litografiska Anstalts Förlag, 1961. 3 col. map sheets, folded to 5¼ x 11 in. *(Its:* Oversikts kartor med beskrivningar, ser. Ba, nr. 18.) Title & legend in Swedish and English.

Northern sheet covers area north of 64° 30′N. on scale of 1:1 million. Features showing the deglaciation and related inundation, also glacial striae and the main ice divide, etc. in northern Sweden, are depicted. Extent of late Quaternary flooding by the sea and of local ice lake flooding is shown, as is present elevation of highest shore line and elevation of glaciofluvial deltas. Numerous terminal moraines are shown near Lulea. The main ice divide formed an east-west arc from the Finnish border to the mountains, then extended southwestward along the eastern side of the range. Lines of recession with approximate datings B.C. (6900 & 6800), are indicated. Present glaciers, lakes, and mountain areas above the timber line, are shown, also the ice lake outlets. (DLC.)

76045. SWEDEN. *Meteorologiska hydrologiska institut.* Östersjökoden för isunderrättelser; the Baltic ice code; a description in Swedish and

English with illustrations. Stockholm, Kungl. Boktryckeriet, 1959. 59 p., illus. (*Its:* Meddelanden, ser. E, nr. 10.) Compiled by B. Rodhe and contributors.

Describes character of the ice: *i*, ice development: *j*, and the effect of the ice on navigation: *k*; indicating respectively, the extent or growth or relative obstruction by the code number 0-9. Terms are those of the International Ice Nomenclature adopted by the World Meteorological Organization in 1956 (No. 53675). Ice conditions in specific area are indicated by the combined code group, *ijk*, with the appropriate numbers. Photos (45) illustrate various situations viewed from air and surface craft. The code was worked out by Ice Reporting Services representatives in 1954, introduced in the Scandinavian countries, Finland and West Germany 1954-55, in Lithuania, Latvia, Estonia, Poland and East Germany 1955-56. Final text was presented at a Stockholm meeting of the Scandinavian Government Ice Breaker Authorities in 1957. (DLC.)

76046. SWEDEN. *Meteorologiska och hydrologiska institut.* Hydrological bibliography, Sweden, vol. 20-25, 1953-1958. Stockholm, 1961. 148 l. (*Its:* Meddelanden, ser. D., no. 10.) Refs. Sponsored by the International Association of Scientific Hydrology.

Lists 712 references to publications in some 60 Swedish periodicals, etc. grouped: hydrometeorology, watercourses, lakes, glaciers, underground water and springs, balance of water circuit, application of various sciences to hydrology, general. Most titles are translated into English and some have brief English summary. Author index is appended. Some 50-60 references are pertinent to the Arctic or arctic conditions. (DLC.)

76047. SWEDEN. *Regionvårdsturedningen.* Regionsjukvården, riksplan för samarbete inom specialiserad sjukhusvård. Stockhom, Idun, 1958. 338 p. tables, graphs, maps incl. 5 fold. col. (Sweden. Statens offentliga utredningar 1958:26.) Refs. Text in Swedish. **Title tr.:** Regional health service, national plan for cooperation in specialized hospital care.

Outlines Swedish regional, social, economic and welfare conditions, also the main health problems and existing services as background for a national plan for medical and hospital care. Basic factors affecting a health service are discussed by S. Godlund, p.250-336: distribution of population and economic capacity, pertinent geographic features of regions, accessibility to proposed and existing regional centers in travel cost, time, and distance, provision for specialized medical services, and existing health facilities. Changes anticipated in population and occupations in Sweden 1956-1970 are considered. Using 1955 statistics as a base of 100, Norrland county population is estimated to equal 103-106 by 1970. Principal gains are expected in Overtorneä, the region north to Karesuando, and Arjeplog. Average gains are expected elsewhere in the uplands, with some decrease in coastal regions. It is proposed that the regional medical center for northern Sweden be at Umeå, where there is now a hospital complex with specialized medical services and nurses' training school. This section by Godlune, entitled *Befolkning, regionsjukhus, resmöjligheter, regioner,* is summarized and translated into English by R. Cox, *Population, regional hospitals, transport facilities, and regions, planning the location of regional hospitals in Sweden,* pub. as Lund Universitet, Geografiska Institutionen, Studies in geography, ser. B., Human geography, no.21, *pub.* 1961 (32 p. illus.); the population and economic statistics are brought up to 1960, and the projections of population and occupational change, to 1975. (DLC.)

76048. SWEDEN. *Statens skogsforskningsinstitut.* Kottillgången 1961-1962. (Skogen, Stockholm, Nov. 24, 1961. årg. 48, nr.23, p.429, table, sketch maps.) Text in Swedish. **Title tr.:** The cone supply 1961-1962.

Maps average number of pine and spruce cones/tree in each of about 50 areas, and tabulates the 1946-1961 average/tree in five regions. The analysis was made in connection with the annual forest survey, and methods used are described. (DA.)

76049. SWEETMAN, WILLIAM J., *and* **A. L. BRUNDAGE.** Better forage for Alaska's dairy industry with particular reference to the Matanuska Valley. Palmer, Alaska, July 1960. 19 p. tables. (Alaska. University. Agricultural Experiment Station. Bulletin 30.) Refs.

Reports forage studies since 1948: oat-pea mixtures, bromegrass and other roughage crops were found to supply the needed nutrients, when supplemented by locally grown grain. Tested methods of cultivating these forage crops in Alaska are described. (DA.)

76050. SWINZOV, GEORGE K. Investigation of shear zones in the ice sheet margin, Thule area, Greenland. (Journal of glaciology, June 1962. v.4, no.32, p.215-29, tables, graphs, diagrs.) 9 refs. Summary in French and German.

Reports a study on the structure of sixty ice bands and the formation of their resulting shear moraines from study in 1958-1959 of two ice tunnels and additional surface investigations. Previous investigations are reviewed and a new interpretation is presented. The concept of a "bulldozing" edge of an ice sheet does not correspond to conditions found in Tuto. With the exception of a few outlet glaciers, the ice sheet propagates without bulldozing. The main action of the ice sheet on the ground surface is glacial plucking, abrasion, and incorporation of debris along shear planes. Formation of shear moraines is discussed. (DLC.)

76051. SWINZOW, GEORGE K. Tunneling in permafrost. (Military engineer, Jan.-Feb. 1962. v. 54, no.357, p.41-42, illus.)

Reviews experiences during excavation of 600 ft. of tunnel and three experimental rooms near Thule, North Greenland. Blasting with gelatin dynamites of medium velocities was most successful. To improve fragmentation, charged holes were backfilled with a very moist silt and coarse sand mixture which was allowed to freeze. Roof reinforcement was provided by spraying the permafrost with water until a coat of ice formed. Columns for roof support, beams, arches, and ties, have been manufactured from "permacrete", a frozen mixture of 1/3 gravel, 1/3 sand, and 1/3 clay, saturated with water. Permacrete is recommended for underground as well as surface construction. (DLC.)

76052. SWITHINBANK, CHARLES WINTHROP MOLESWORTH, 1926– . Motor sledges in the Antarctic. (Polar record, Sept. 1962. v.11, no.72, p.265-69, plates, tables.) 6 refs.

Describes with specifications, two types of motor sledge, the Eliason Model K-12 and the Polaris Model K-95, used by the University of Michigan sledging parties, U.S. Antarctic Research Program, and compares their performances over 1500 mi. of both smooth and rough terrain. The parts replacements, operating speeds, gas mileage, and load capacity of each are stated. The Eliason proved rugged, reliable, easy to start and to repair in the field; the Polaris was more rugged, smoother over ice and rough terrain, and required little maintenance, but was harder to start. Driving and operating procedures used by the sledging parties are noted, also advantages of motor sledges over Sno-cats. (DGS.)

76053. SYCHEV, KONSTANTIN ARSENT'EVICH. Na dreĭfuiushchem ledianom ostrove. Moskva, Izd-vo "Morskoĭ transport", 1961. 116 p. illus., tables, plan, 2 fold. maps. 16 refs. Text in Russian. **Title tr.:** On a drifting ice island.

Reports work of the North Pole - 6 station in its first year of drift, April 19, 1956-April 19, 1957, chiefly in excerpts from his diary: the flight from Leningrad to Tiksi and over the Arctic Basin searching for a suitable ice floe. Sighting of a 13.8 x 8.3 km. ice island and setting up the station at 74°24′N. 177°06′W. and 213 m. depth. Personnel of the station, day-to-day work and observations, radio connection with the continent and polar stations, including Mirnyy in the Antarctic, visit of the Main Administration of the Northern Sea Route chief, V.F. Burkhanov on Aug. 20, the summer, winter and spring routines, encounter with polar bears etc. are outlined. The 25-man team headed by the author was relieved on Apr. 19, 1957 at 75°59′N. 171°45′E. by another headed by V.M. Driatskii. During the first year, the station covered 2,400 km., its point-to-point drift 300 km. in a general northwesterly direction; 3010 meteorological and 2080 actinometric observations were made, astronomical coordinates determined 292 times, 720 radio-sondes over 21 km. altitude, and 606 pilot balloons released, 650 depth measurements and 600 drift determinations made. The drift was effected chiefly by the sea current, against the prevailing wind. Plan of the island and station, and map of its drift from Apr. 19, 1956 till abandonment on Sept. 13, 1959 at 82°06′N. 03°56′E., also map of the North Pole - 1 to North Pole-8 drifts are included. (DLC.)

76054. SYCHEV, KONSTANTIN ARSENT'EVICH. Na dreĭfuiushchem ledianom ostrove. *(In:* Burkhanov, V.F., Na ledianom ostrove, 1962, p.7-52, illus., plate, plan.) Text in Russian. **Title tr.:** On a drifting ice island.

Reports the drift, life and work of the North Pole-6 in 1956-1957: the flight from Leningrad via Arkhangel'sk, Amderma and Dikson to Tiksi; the search for suitable ice and visit to the North Pole-4 station at 88°N.; discovery of an ice island at 74°24′N. 182°50′E. i.e. 177°10′W.; construction of a provisional landing strip and the tent camp. The station with author as first head began operations on Apr. 19, 1956; prefabricated houses and 18 tents were set up as the base; plan of the island is given, p. 40. The current work, encounters with polar bears, radio communication with the mainland, meltwater and its control are described. Observations of fauna, gulls, snow buntings, ducks, seals are given. The sun disappeared Nov. 1 and reappeared on Feb. 15, etc. Brief summary is added of the work done on the station in the course of the first year. (DLC.)

SYCHEV, KONSTANTIN ARSENT'EVICH, *see also* Bakalov, S.A., *& others.* Radiatsionnyi i teplovoi balans . . . v Arktike. 1959. No. 69964

76055. SYMPOSIA ON ARCTIC BIOLOGY AND MEDICINE. Oct. 10-12, 1960. Proceedings, 1, Neural aspects of temperature regulation. *Editors:* J.P. Hannon *and* E. Viereck. Fort Wainwright, Alaska. Arctic Aeromedical Laboratory, 1961. vii, 399 p., illus., diagrs.

Contains nine papers delivered at the Symposium held at the Arctic Aeromedical Laboratory under the auspices of the Geophysical Institute, University of Alaska, in accordance with Air Force Contract AF41 (657)-356. Six discussants participated in the exchange following the authors' presentation. The papers are abstracted in this Bibliography under the latters' names, viz:

HEMINGWAY, A. The neural controls of the physiological responses to cold, historical review.

HENSEL, H. Recent advances in thermoreceptor physiology.

LIM, T.P.K. Central and peripheral mechanisms in temperature regulation.

RODDIE, I.C. The role of vasoconstrictor and vasodilator nerves in the control of the peripheral circulation.

CLARK, G. Heat dissipation functions following experimental anterior hypothalamic lesions in cats.

KAWAMURA, Y. Neuro-muscular organization of shivering.

CHATONNET, J. Nervous pathways in the chemical regulation against cold and their central control.

FREMAN, W.J. A critique of the doctrine of centers in temperature regulation.

STUART, D.G. Role of the prosencephalon in shivering. (CaMAI.)

76056. SYMPOSIA ON ARCTIC BIOLOGY AND MEDICINE, 2nd, 1961. Proceedings: Comparative physiology of temperature regulation. *Editors :* J.P. Hannon and E. Viereck. Arctic Aeromedical Laboratory, Fort Wainwright, Alaska, 1962. 3 pt: 455 p., illus., tables, 481 refs.

Contains text of papers presented at the Symposium held July 17-19, 1961 at the Arctic Aeromedical Laboratory under the auspices of the Geophysical Institute of the University of Alaska. Discussions following some papers are also recorded. The papers are abstracted in this Bibliography under the authors' names, viz:

PROSSER, C.L. Acclimation of poikilothermic vertebrates to low temperatures.

DAWSON, W.R. Evolution of temperature regulation in birds.

JØHANSEN, K. Evolution of temperature regulation in mammals.

IRVING, L. The heterothermous condition of the tissues of warm-blooded animals.

JANSKU, L .Maximal steady state metabolism and organ thermogenesis in mammals.

HART, J.S. Temperature regulation and adaptation to cold climates.

KLEIBER, M. Temperature responses and adaptations in domestic animals.

WEST, G.C. Responses and adaptations of wild birds to environmental temperature.

MILAN, F.A. Racial variations in human response to low temperature.

MORRISON, P.R. Thermoregulation in mammals from the Tropics and from high altitudes.

HUDSON, J.W. Temperature regulation desert birds and mammals. (CaMAI.)

SYREIGEOL, J., *see* Malméjac, J., & *others*. . . . rythme cardiaque en hypothermie . . . 1962. No. 73771

76057. SYROECHKOVSKIĬ, EVGENIĬ EVGENIEVICH, 1929– , *and* Ė. V. ROGACHEVA. Fauna ptits i mlekopitaiushchikh Eniseĭskoĭ lesotundry i vliianie na nee khoziaĭstvennoĭ deiatel'nosti cheloveka. (Problemy Severa, 1961, vyp.4, p.95-107.) Text in Russian. **Title tr.:** Avian and mammalian fauna in the Yenisey forest tundra and the effect on it of human economic activity.

Reports observations of an Institute of Geography biogeographical party in 1956 and 1957 on the right bank of the Yenisey around Ust'-Khantayka (68°15′N.) and Nikol'skoye (69°N.). In both areas, extensive timber cutting near the settlements, had caused a slight decrease in the wildlife population as compared with that of the surrounding virgin forest-tundra. The local fauna is chiefly two species of vole, lemmings, shrews, a weasel *Mustela sibirica,* three wagtails: *Motacilla citreola, M. flava* and *M. alba,* a goldfinch *Carduelis flammea,* a brambling *Fringilla montifringilla,* and ptarmigan. An outline of hunting in the Dudinka district is added, based on the arctic fox catch. (DLC.)

76058. SYROECHKOVSKIĬ, EVGENIĬ EVGENIEVICH, 1929– , *and others*. Nekotorye izmeneniia fauny Sibiri v zavisimosti ot kharaktera ispol'zovaniia okhotnich'ikh ugodiĭ i voprosy osvoeniia promyslovykh resursov taigi. (Zoologicheskiĭ zhurnal, 1962. t.41, vyp.10, p.1459-68.) 23 refs. Text in Russian. Summary in English. *Other authors:* G.A. Sokolov *and* F.R. Shtil'mark. **Title tr.:** Some changes in the Siberian fauna produced by the nature of utilization of hunting grounds, and the problem of restoration of the hunting resources of the taiga.

Reviews conditions as observed during 1954-1960. Earlier unrestrained hunting caused near-extinction of some species, like the marten. The latter, due to protection, became again a mass species, and seriously reduces the population of squirrels and others. Introduction of the muskrat has seriously affected the aquatic vegetation to its own detriment, and overcrowding of ungulates has a similar effect. A sound control of the taiga biocenoses is therefore recommended. (DLC.)

76059. SYROECHKOVSKIĬ, EVGENIĬ EVGENIEVICH, 1929– . Popolnenie kadrov okhotnikov-proizvodstvennikov. (Okhota i okhotnich'e khoziaĭstvo, Jan. 1962. god 8, no.1, p.31.) Text in Russian. **Title tr.:** Replenishment of the professional-hunter supply.

Reports a plan to teach hunting, trapping, fishing, reindeer breeding and fur farming in secondary schools in the North. It was proposed in 1961 by the Institutes of Geography and of Ethnography of the Academy of Sciences to the Ministry of Education of the RSFSR, and accepted; the Academy of Pedagogical Sciences of the RSFSR is to work out the teaching schedules. The plan is designed to train replacements for the professional hunters who have decreased drastically in northern areas, e.g. in the Turukhansk District from 1300 in 1940 to 366 in 1957; in the Evenki National District from 1000 in 1931 to 413 in 1956. (DLC.)

76060. SYROECHKOVSKIĬ, EVGENIĬ EVGENIEVICH, 1929– , *and* Ė. V. ROGACHEVA. Sobol' i dikie kopytnye Prieniseĭskoĭ Sibiri. (Priroda, Mar. 1961. god 50, no.3, p.102-104, illus.) Text in Russian. **Title tr.:** Sable and wild ungulates in Siberia west of the Yenisey.

Notes on sable, reindeer, elk and others in the area south of the Podkamennaya Tunguska. Early recent and present occurrence and distribution is outlined, and the economic aspects, etc. are considered. (DLC.)

76061. SYROMIATNIKOV, G. IAkutskaia proza na putiakh k sotsialisticheskomu realizmu. (Moskva. Akademiia obshchestvennykh nauk. Obraz polozhitel'nogo geroia v literaturakh narodov SSSR, 1962, p.43-86.) Refs. Text in Russian. **Title tr.:** Yakut prose on the road to socialist realism.

Discusses the trend toward realism in Yakut novels and short stories, of mainly the 1920-1930's, rather than development of a folk-lore genre. Biographical notes are given on various authors and their principle publications reviewed. (DLC.)

76062. SYSOEV, NIKOLAĬ NIKOLAEVICH. K izucheniiu pridonnoĭ zony v okeane. (Akademiia nauk SSSR. Doklady 1961. t.137, no.3, p.698-700, illus., map.) Text in Russian. **Title tr.:** Contribution to knowledge of the near-bottom zone of the Pacific.

Brief account of bottom configuration, and its nature; amount of benthos, temperature; O_2-content, and water transparency. The Gulf of Alaska is included. (DLC.)

SYSOEV, NIKOLAĬ NIKOLAEVICH, *see also* Pacific Science Congress. 1961. No. 74619

76063. SYSOEV, V. A. O nakhodke nizhnekembriĭskogo khiolita *Ceratotheca.* (Paleontologicheskiĭ zhurnal, 1961, no.2, p.124-25, illus.) 2 refs. Text in Russian. **Title tr.:** Find of a Lower Cambrian *Ceratotheca* hyolithid.

Describes a new gastropod *Ceratotheca cambriensis* n. sp. in the Aldan stage of the Lower Cambrian, found in the Kotuy River basin, Taymyr National District. It is considered the oldest form of gen. *Ceratotheca.* (DLC.)

76064. SYSOEV, VIKTOR ALEKSANDROVICH. Na Dal'nem Vostoke. (Okhota i okhotnich'e khoziaĭstvo, Jan. 1962. god 8, no.1, p.12-14.) Text in Russian. **Title tr.:** In the Far East.

Sketches the wildlife and the hunting industry in the Soviet Far East, including Magadan Province, with Chukotka, and Kamchatka Province. There are 110 kinds of commercial animals, among them sable, bear, ermine, Siberian weasel, and 220 kinds of birds. The annual catch is valued at

20 million rubles. Successful acclimatization of muskrat, introduced in 1928 on Karaginskiy Island, is noted. (DLC.)

76065. SZEGVARI, GYULA, *and others.* The effect of hypoxia on colonic and muscle temperatures in the rat; the localisation of thermoregulatory heat production. (Acta physiologica, *Budapest,* 1961. t.19, p.287-302, illus., table.) 23 refs. *Other authors:* I. Várnar *and* S. Donhofer.

Exposure of rats to 12% O_2 at 21°C. produced an immediate drop in heat production, and colonic and muscle temperature. Return to air promptly restored heat production and colon temperature, with muscle temperature still falling for some minutes. An interpretation of the results is offered. (DNLM.)

SZEGVARI, GYULA, *see also* Mestyán, G., & *others.* Effect of local thalamic heating . . . 1960. No. 73954

SZILAGYI, D. E., *see* Macksood, A.J., & *others.* Maintenance . . . kidney. 1961. No. 73714

TABER, BOND, *see* Alaskan Science Conference 1961. 1962. No. 69644

76066. TÄRNVIK, NILS. Seminverksamheten har startat i Västerbotten. (Västerbotten, Feb. 1961. årg. 34, nr.1, p.27-28, table.) Text in Swedish. **Title tr.:** The start of artificial insemination in Västerbotten.

Notes the association established in Dec. 1960 to conduct and promote artificial livestock insemination for the entire county. Membership is sought from northern areas. Organization; control measures, costs, etc. are stated. (DA.)

76067. TÄRNVIK, NILS. Stigande hästpriser bör stimulera till ökad avel. (Västerbotten, Mar. 1961. årg. 34, nr.2, p.35-40, illus., tables.) Text in Swedish. **Title tr.:** Higher prices for horses should stimulate breeding.

Notes decline of the horse population in the 1950's, as tractors replaced them in Västerbotten logging operations. At the end of the decade, horses were found to have been cheaper for skidding, more practical, less damaging to young trees, etc.; and raising horses became profitable again. Tables show number of horses and colts in Västerbotten 1948-1959, average prices 1958-1960, and cost estimate for feeding one-to-three-year olds. (DA.)

TAGG, A. R., *see* Grantz, A., & *others.* Saline springs Copper R. lowland. 1962. No. 71822

76068. TAIT, J. B. Hydrography of the Faroe Bank Channel. (International Council for the Exploration of the Sea. Annales biologiques 1959, *pub.* 1961. v.16, p.28-30, illus.) 7 refs.

Reviews research on the overflow of arctic water into the Atlantic through this channel, and 12 sections athwart the channel between 1929 and 1960. Eleven showed presence of Norwegian Sea water in the channel; one had mixed arctic and oceanic water. (DI.)

76069. TAIT, R. J. C. Recent progress in milling and gold extraction at Giant Yellowknife Gold Mines Limited. (Canadian mining and metallurgical bulletin, Apr. 1961. v.54, no.588, p.302-314, illus., diagrs., graphs, tables.) 2 refs. Paper presented at the Canadian Institute of Mining and Metallurgy meeting, Apr. 1960.

Describes replacement in Nov. 1958 of two roasters in service since 1949 and 1952, by a large, two-stage Fluosolids roaster of improved design. Operation is smooth and continuous with first and second stage temperature controlled at 925° and 875°F. respectively. Average recovery by roasting and calcine cyanidation rose from 58% in 1958 to 78.4% in 1959. Mill tonnage increased from 750 to 1030 tons per day. Importance of griding and flotation techniques is stressed. Precipitation capacity is being increased so that lower grade solutions can be precipitated and more solution circulated. Recovery is almost entirely dependent upon flotation, reacting of flotation concentrate, and cyanidation of calcine; direct cyanidation has never been feasible. (DGS.)

76070. TAKÁCS, ÖDÖN, *and others.* Über die Permeabilität der Blut-Liquor-Schranke bei Hypothermie. (Acta physiologica, *Budapest,* 1960. t.17, fasc. 1, p.75-80, illus., table.) 18 refs. Text in German. *Other authors:* I.T. Tomity and J. Gellén. **Title tr.:** On the permeability of the blood-liquor barrier during hypothermia.

Intravenous penicillin injected into hypothermic (30°) cats was recorded in the liquor 15 min. after administration, reached its maximum after 30 min. and remained at it for several hours. An explanation of the barrier breakdown during hypothermia is suggested. (DNLM.)

76071. TAKEHARA, ICHIRO, *and* **E. ASAHINA.** Glycerol in a slug caterpillar 1; glycerol formation, diapause and frost resistance in insects reared at various graded temperatures. (Teion kagaku 1961. v.19, ser. B., p.29-36, illus., tables.) 8 refs. Text in Japanese. Summary in English.

Prepupae of *Monema flavescens* formed little glycerol in the body at 0° C., most of it at 10° and none at 20° C. When the glycerol level reached 3-4% of body weight it remained static for about two months indoors, and for five months outdoors during the cold season. An increase of glycerol content to 2% made the insects cold-resistant even to temperatures of liquid gases. Glycerol increase was accompanied as a rule by termination of diapause. (DLC.)

76072. TAKSAMI, CHUNCR MIKHAĬLOVICH. Seleniia, zhilye i khoziaĭstvennye postroĭki nivkhov Amura i zapadnogo poberezh'ia o. Sakhalina; seredina xix-nachalo xx v. (Akademiia nauk SSSR. Institut ėtnografii. Trudy 1961. t.64, Sibirskiĭ ėtnograficheskiĭ sbornik 3, p.98-166, illus., diagrs., tables.) Approx. 40 refs. Text in Russian. **Title tr.:** Settlements, dwellings, and farm buildings of the Gilyaks of the Amur and the west coast of Sakhalin Island in the mid-19th to early 20th century.

Study of the traditional village and housing pattern in the Gilyak fishing and sea-mammal hunting-culture. Types, construction techniques and materials, furnishings, etc. of the winter and summer buildings are described for the sod, pit, plank, log, and stilt houses, the conical, domed, and double-sloped huts, some lean-tos, and the fish-curing and -storage structures, also dog and bear pens, special cabins for bear rites, etc. The former material and spiritual culture of the Gilyaks, their beliefs and religious tabus, are discussed; comparisons are made with their present conditions in kolkhozes. (DLC.)

TALALAEV, EVGENIĬ VASIL'EVICH, *see Sovetskiĭ soĭuz.* Bafsilly protiv vreditelei. 1961. No. 75851

TALANTI, S., *see* Kivalo, E., & S. Talanti. . . . Neurosecretory system camel, seal. 1962. No. 72828

76073. TALLGREN, AARNE MICHAEL (MIKKO), 1885–1945. The arctic Bronze Age in Europe. (Eurasia septentrionalis antiqua, 1937. v.11, p.1-46, illus., maps.) Refs.

Describes bronze artifacts (tools, weapons, ornaments) and ax molds from northern Fennoscandia and European Russia. The number and distribution of sites, the homogeneous products, similar ornementation, etc. indicate a local arctic manufacture based on metal from the Urals. This uniform civilization of nomadic hunters and fishermen, probably Lapps, is dated into the last centuries B. C. (CtY.)

76074. TAL'VIRSKIĬ, D. B., *and* **E. M. KHAKHALEV.** Stroenie poverkhnosti doĭurskogo fundamenta v nizhnem techenii r. Eniseĭ po dannym seĭsmorazvedki; stanok ÎAkuty, poselok Ust'-Port. (Geologiîa i geofizika, 1961, no.6, p.96-98, fold. profiles.) Ref. Text in Russian. **Title tr.**: Structure of the surface of the pre-Jurassic basement on the lower course of the Yenisey River according to seismic prospecting data; between Yakuty and Ust'-Port.

Reviews 1958-1959 work. Transmittal of elastic earth waves is reported to 1 - 2 km. depth, and subsurface structures of pre-Jurassic basement are analyzed. According to depth and age, the basement is divided into three parts and each is characterized. Some structures such as the Malaya Kheta anticline and Yenisey-Sukhaya Dudinka interfluve might yield oil and further prospecting is suggested. (DLC.)

76075. TAMAROVSKIĬ, V. Reĭsy k olenevodam. (Grazhdanskaîa aviafsiîa, July 1961. god 18, no.7, p.25.) Text in Russian. **Title tr.**: Flights to reindeer herders.

Notes food and medical supplies, mail, etc., regularly delivered by pilots of the Magadan Aviation Unit to herders on the outlying ranges. Difficulties of spotting suitable landing places are noted. (DLC.)

76076. TAMM, CARL OLOF, *and* **C. CARBONNIER.** Växtnäringen som skoglig produktionsfaktor. (Skogs- och lantbruksakademien. Tidskrift, 1961. årg. 100, nr.1-2, p.95-124, tables, graphs.) 17 refs. Text in Swedish. Summary in English. **Title tr.**: Plant nutrients and forest yield.

Reviews problems of site classification and fertilizing, based partly on unpublished results of Swedish research. Study of 200 plots in conifer stands in various parts of the country, showed a close relationship between mean yields and length of growing season, and suggests that the effects of amelioration measures are likely to decrease toward the north. Fertilizer trials in mature stands are reported, including spruce and pine which show good response to nitrogen. A few data are given on the effects of mineral fertilizers on the yield of peat sites, on the nutrient content of aerial parts of spruce stands and on the soil. Fertilizing at planting time is touched upon. (DA.)

76077. TAMM, OLOF, 1891– . Studier över klimatets humiditet i Sverige. 1959. 48 p., tables, graphs, maps. (Stockholm. Skogshögskolan. Skrifter, nr.32.) 28 refs. Text in Swedish. Summary in German. **Title tr.**: Studies on humidity of the climate in Sweden.

Presents equations for calculating mean annual evapotranspiration (E) from the mean annual temperature. Maps show distribution of E and H, a humidity value calculated as the difference between mean annual precipitation and E. On this basis, Sweden is divided into five humidity zones from sub-arid (H < 100 mm.) to superhumid (H > 600 mm.), and the western mountain range with variable humidity and ranging from 300 mm. in the far North to 1,500 mm. The normal humidity zone (H 200-400 mm.) covers half the country including almost all the Norrland forest area. (DA.)

TAMM, OLOF, 1891– , *see also* Hedlund, H., & O. Tamm. Guide to Swedish forestry. 1958. No. 72088

TAN, TEK HONG, *see* Skjerlie, F.J., & T.H. Tan. Caledonides . . . Troms-Finnmark. 1961. No. 75690

76078. TANASHEV, R. Verkhovskaîa potochnaîa. (Master lesa, Jan. 1961. no.1, p.4-5, illus.) Text in Russian. **Title tr.**: The Verkhovskiy production line.

Describes the first almost completely automated logging operation set up by the Northern Industrial Research Institute (SevNIIP) for the Verkhovskiy lumbering establishment at 63°32'N. 40°21'E. in Arkhangel'sk Province. Branches are removed and logs cut to size at the rate of 150 m^3/7 hr. shift. (DLC.)

TANCHE, M., *see*

Chatonnet, J., & *others*. Action calorigénique de l'adrénaline . . . 1961. No. 70678

Descotes, J., & *others*. L'hypothermie . . . 1960. No. 70988

76079. TANEVSKIĬ, ÎA. K. Arkhangel'skiĭ sel'skomu khoziîaĭstvu. (Master lesa, Mar. 1961, no.3, p.19.) Text in Russian. **Title tr.**: Contribution of Arkhangel'sk residents to agriculture.

Subsidiary farms of Arkhangel'sk industrial plants and lumbering concerns have 2,500 hectares under cultivation and 6,000 hectares of meadow land. Their achievements and plans for further development by industry and collective farms working together are outlined. (DLC.)

TANNER, J., *see* Luyet, B.J., & *others*. X-ray diffraction . . . 1962. No. 73647

76080. TARABRIN, V. P. Osobennosti vyrashchivaniîa posadochnogo materiala na Severe. (Lesnoe khoziîaĭstvo, Apr. 1962. god 15, no.4, p.44-46, tables.) Text in Russian. **Title tr.**: Peculiarities of growing seedlings in the North.

Reports results of Arkhangel'sk Forestry Institute experiments; soil preparation by fertilizing, manuring, and adding 30-60 t. peat/hectare, soaking pine seed 5-10 hrs. and spruce 20 hrs., early spring sowing, mulching, etc. are described. Data on effect of soaking the seeds and mulching the beds are tabulated and discussed. (DLC.)

76081. TARABRIN, V. P. Predposevnaîa podgotovka semîan kedra sibirskogo. (Lesnoe khoziîaĭstvo, Feb. 1961. god 14, no.2, p.32-33, tables.)

Title tr.: Pre-sowing preparation of seeds of Siberian pine.

Five methods of stratification of Siberian pine seed were tested at the Arkhangel'sk Forestry Institute, and found unsatisfactory. A modification of the method proposed by E.P. Zaborovskiĭ is recommended as the best so far. (DLC.)

76082. TARADANKIN, A. Sestrenka s atomnogo. (Sovetskaīa zhenshchina, 1962, no.2, p.1-3, illus.) Text in Russian. **Title tr.:** The little nurse from the atomic ship.

Describes the 8,000 mi. voyage of the icebreaker *Lenin* in fall 1961 with personnel and equipment to set up drifting station North Pole-10: life aboard, work of the ship's nurse, construction of the station and airstrip, etc. (DLC.)

76083. TARAKANOV, G. P., *and* **L. I. KHOROVICH.** Mashina dlīa bureniīa skvazhin v merzlykh gruntakh. (Transportnoe stroitel'stvo, June 1960, god 10, no.6, p.40-42, illus.) Text in Russian. **Title tr.:** A machine for drilling in frozen ground.

Describes a drilling rig mounted on the DT-54 goose tractor to bore into frozen ground preparatory to loosening the soil for construction work. Tests made in frozen clays and argillites on a railroad construction site near Bratsk: 1800 holes 60 mm. diam.; an average drilling speed of 0.86 m./min. A single bit was used to 270 m. depth. (DLC.)

TARAKANOV, R. Z., *see* Kondorskaīa, N.V., & R. Z. Tarakanov. Kurilo-Kamchatskie zemletriaseniīa. 1961. No. 72913

76084. TARASEVICH, M. N. Sravnenie sostava stad vodnykh i nazemnykh mlekopitaīushchikh. (Moskva. Vsesoīuznyĭ nauchno-issledovatel'skiĭ institut morskogo rybnogo khoziaĭstva i okeanografii. Trudy 1957. t.33, p.199-218.) 87 refs. Text in Russian. **Title tr.:** Comparison in the composition of aquatic and terrestrial herds of mammals.

Discusses herd composition and behavior during the cold and warm season. Reindeer and mountain goat are included among the land mammals; whales, belugas, walruses, etc. among the marine forms. Problems of snow, food, proportion and relation of sexes in the herd, the young, migration, etc. are reviewed. (DLC.)

TARASOVA, E. O., *see* Shastkevich, IŪ. G., & E.O. Tarasova. Nekotorye rezul'taty . . . seismokarotazha. 1961. No. 75542

TARASOVA, K. F., *see* Kolomeets, E.V., & *others*. Issledovanie . . . magnitnoĭ buri 25 marta 1958 g. 1961. No. 72902

TARBAEV, B. I., *see* Kniazev, S.A., & B.I. Tarbaev. . . . geol. griady Chernysheva. 1961. No. 72866

76085. TAREEVA, A. M. Radiatsionnyĭ balans o-va Vrangelīa. (Issledovaniīa lednikov i lednikovykh raionov, 1962. vyp.2, p.210-14, tables, graphs.) 2 refs. Text in Russian. Summary in English. **Title tr.:** Radiation balance of Vrangel Island.

Reports actinometric observations of 1958 in Rodzhersa Bay on the southeast side of the island. The yearly radiation balance is 28.0 kcal./cm^2. Its monthly changes, direct dispersed and total radiation, and other components are characterized. (DLC.)

TARKHOV, A. F., *see* Bondarenko, V.M., & *others*. Pervye rezul'taty . . . 1961. No. 70317

76086. TARKHOVA, M. A., *and* **K. G. CHESHIKHINA.** Melovye intruzii tsentral'noĭ chasti khrebta Dzhugdzhur. (*In:* Vsesoīuznyĭ aerogeologicheskiĭ trest. Materialy po regional'noĭ geologii . . . 1961. p.103-111, tables.) 8 refs. Text in Russian. **Title tr.:** Cretaceous intrusions in the central part of the Dzhugdzhur Range.

Lower-Upper Cretaceous and Upper Cretaceous intrusive complexes are distinguished and described, their mineral composition analyzed. Evolution of Cretaceous magmatism and metallogeny features of the Dzhugdzhur intrusions are briefly evaluated. Based in part on 1957 field work in this northern Khaborovsk area. (DLC.)

TARKKONEN, H., *see* Lagerspetz, K., & *others*. . . . cold & succinic dehydrogenase liver, brain. 1962. No. 73276

TARNOGRADSKIĬ, V. D., *see* Kaplīanskaīa, F.A., & V.D. Tarnogradskiĭ. K paleogeografii . . . 1961. No. 72651

76087. TARUNIN, M. P. Ptitsy reki Maloĭ Sos'vy. (Tyumen. Tiūmenskiĭ oblastnoĭ kraevedcheskiĭ muzeĭ. Ezhegodnik 1959 *pub.* 1960. vyp.1, p.124-48.) Text in Russian. **Title tr.:** The birds of the Malaya Sos'va River.

Contains a description of this river in the lower Ob system, its banks and soil, vegetation, etc.; followed by a record of 141 species of birds studied during Feb. 1931 - July 1932 in the Konda-Sos'va wildlife preserve. For each species, its Latin and local names are supplied and it is considered as to distribution in the area, pairing, nesting, and reproduction, periods of oviposition and nesting, development of young, habitat, habits, etc. (DLC.)

TARVERDIEVA, MINNA ISAEVNA, 1935– , *see* Mironova, N.V., & *others*. Raspredelenie . . . ryb . . . 1958 g. 1962. No. 74053

TAST, JOHAN, *see* Kalela, O., & *others*. Seasonal change of habitat . . . 1961. No. 72618

76088. TAYLOR, CHARLES BRUCE, 1915– , *and* **W. D. HARRIS.** Measurement of tidal currents at Lituya Bay Alaska, introducing aerial photogrammetric methods. (International hydrographic review, Jan. 1961. v.38, no.1, p.89-98, illus., maps, diagr.) 5 refs.

Describes first tidal-current observations at the entrance to Lituya Bay (58°37′N. 137°40′W.), made by the U.S. Coast and Geodetic Survey ship *Bowie* in the summer of 1959. Three methods of measurement were used: the Roberts radio current meter; free floats with masts tracked by observers on opposite shores (unsatisfactory); free floats and use of an aerial photographic camera. Detailed description is given of the last method; results showed a max. flood current of 5.4 knots, max. ebb current of 4.7 knots, values considered slightly lower than true velocities. (DN-HO.)

76089. TAYLOR, F. C. Interglacial (?) conglomerate in northern Manitoba, Canada. (Geological Society of America. Bulletin, Jan. 1961. v.72, no.1, p.167-68.) 7 refs.

Describes a conglomerate, possibly the first interglacial deposit recorded in northern Canada,

which was found in the Seal River valley (58°58′N. 96°38′W.) in 1957. It is overlain by glacial till, and consists of sub- to well-rounded boulders, up to two ft.; of sericite schist, basalt, gneissic granite, pegmatite, gabbro, and quartzite in a matrix of geothite. Casts and impressions of leaves and twigs in a geothite matrix occur in two 6-in. layers. These layers, according to J. Terasmae, originally consisted of woody peat composed of plants similar to those now present in the area. They were impregnated by iron-rich waters, which caused replacement of plant matter by mineral compounds and preservation as part of the rock. As such replacement has not yet taken place in similar post-glacial deposits, an interglacial age is probable. (DGS.)

76090. TAYLOR, HUGH P., *Jr.*, *and* S. EPSTEIN. Relationship between O^{18}/O^{16} ratios in coexisting minerals of igneous and metamorphic rocks. (Geological Society of America. Bulletin, Apr. June, 1962. v.73, no.4, p.461-80; no.6, p.675-93; graphs, tables, diagrs.) Refs. California Institute of Technology. Publications of the Division of Geological Sciences. Contributions no.1062 and 1063.

Describes, in pt.1 on principles and experimental results, a procedure for analyzing oxygen isotopic compositions of rocks and their constituent minerals. Among specimens analyzed, are two gabbros of the Skaergaard intrusion of East Greenland; a gabbro, ultramafic rocks, and a pegmatite from Duke Island, Southeast Alaska; and ultramafic rocks from Point Frederick and Union Bay, Southeast Alaska. Their petrography and geologic settings are described. Consistencies in oxygen isotopic relationships were found in all the analyzed rocks. In pt.2 on application to petrologic problems, the O^{18}/O^{16} variations in the individual analyzed rocks are correlated with their crystallization sequences. Oxygen isotopic ratios in genetically related rock suites, e.g. the Duke Island ultramafic complex, are compared. (DGS.)

76091. TAYLOR, K. I. The construction and use of kayaks in north-west Greenland: preliminary report. (Polar record, May 1961. v.10, no.68, p.494-500.)

Reports summer 1959 field work mainly at Igdlorssuit, in a long-term study of kayaks and their significance among Greenlanders in the Umánaq area. Construction and equipment of a kayak, are described, also methods of rolling it, of which 21 are known in the area, and seal hunting by kayak. (DI.)

76092. TAYLOR, PHYLLIS M. Dog-team and school-desk. London, Jenkins, 1960. 160 p., illus.

Describes her 1953-1955 sojourn as a teacher in Aklavik, Mackenzie District, one year at the All Saints Anglican Residential School, the other at the Federal Day School. The school system, the trapping business, daily life in and around this Mackenzie delta town, the Eskimo and Loucheux children etc. are dealt with in detail. (CaONA.)

76093. TAYLOR, WILLIAM E., *Jr.* A distinction between blades and microblades in the American Arctic. (American antiquity, Jan. 1962. v.27, no.3, p.425-26, diagr.)

"Width frequencies plotted for 293 microblades and blades from the pre-Dorset Arnapik, site on Mansel Island, N.W.T., produce a bimodal curve which suggests a maximum width of 11 mm. as a criterion for distinguishing microblades from blades."—Author's abstract. The term "macroblade" is suggested for larger microblades. (DSI.)

TAYLOR, WILLIAM E., *Jr.*, *see also* Birket-Smith, K. Eskimos, comments. 1961. No. 70219

76094. TCHERNIAKOFSKY, PAUL. Considérations d'anthropologie physiologique sur les Esquimaux; alimentation, maladies des voies respiratoires, groupes sanguins. (Société d'Anthropologie de Paris. Bulletins 1942. t.3, sér.9, p.44-55, tables.) 29 refs. Text in French. **Title tr.:** Notes on physiological anthropology of the Eskimos; nutrition, respiratory diseases, blood groups.

Reviews conditions among the East Greenland and other Eskimos from own observations, and from the literature. Problems of food composition, its physiological (or pathological) effects on metabolism, caloric value of diet, vitamins, plant food, etc. are considered as well as Tb, somatic characteristics, racial types, blood groups (O, A, B, AB). (DLC.)

TEDESCHI, G. C., *see* Sayen, A., & *others.* Immersion foot . . . 1960. No. 75399

76095. TEDROW, JOHN CHARLES FREMONT, 1917– , *and* J. BROWN. Soils of the northern Brooks Range, Alaska: weakening of the soil-forming potential at high arctic altitudes. (Soil science, Apr. 1962. v.93, no.4, p.254-61, illus., maps, profile, tables.) 27 refs. *Also issued as:* New Jersey Agricultural Experiment Station, Rutgers Univ. Dept. of Soils, Journal series paper.

Discusses the concept expressed in the subtitle, based on five vertical transects: near the Okpilak and the Killik Rivers, Peters and Porcupine Lakes, and Anaktuvuk Pass. Probable effect of decreasing air temperature on soil formation is emphasized, but other factors are considered. Climatic, vegetation, and soil conditions are outlined at various altitudes from 1000 to 5000 or more ft. Dry, shallow, stony, barren-like conditions above 5000 ft. and a July temperature near 40°F. indicate polar desert the appropriate term for this type of high mountainous country in the Arctic or sub-Arctic. (DLC.)

TEDROW, JOHN CHARLES FREMONT, 1917– , *see also*

Brown, J., & *others.* Mineral composition . . . drainage waters . . . 1962. No. 70399

Drew, J.V., & J.C.F. Tedrow. Arctic soil classification . . . 1962. No. 71106

Hill, D.E., & J.C.F. Tedrow. Weathering, soil form . . . 1961. No. 72148

Mikhaĭlov, I.S. Pochvennye issledovaniĭa na severe Aliaska. 1961. No. 73981

76096. TEGNER, J. V. Søopmålingen på Grønland. (Søens verden, 1959-1960. årg.1, p.233-41, illus., maps.) Text in Danish. **Title tr.:** The Greenland hydrographic survey.

Sketches work in coastal waters since 1947 when the first Decca chain was established to aid navigation and surveying. New boats (2) were acquired in 1959; four series of charts on various scales are to be produced. (AIKøbenhavn.)

TELEGADAS, KOSTA, *see*

List, R.J., & *others*. Fallout . . . 1961. No. 73532

Machta, L., & *others*. Survey of radioactive fallout . . . 1962. No. 73700

TELESHEVA, R. L., *see* Sosedko, T.A., & R.L. Telesheva . . . milarita. 1962. No. 75839

76097. TEMNOEV, N. I. Geobotanicheskie obsledovaniia na severe IAkutii v sviazi s zemleustroistvom olen'ikh pastbishch. (Botanicheskiĭ zhurnal, Oct. 1961. t.46, no.10, p.1497-1503.) 22 refs. Text in Russian. Title tr.: Geobotanical investigations in northern Yakutia connected with the utilization of reindeer pasture.

Reviews earlier methods and studies and outlines current techniques in the preparatory phase of investigation; field work, aero-visual surveys, preparation of maps and tables, etc. The utilitarian purpose of such work is emphasized. (DLC.)

76098. TEMPLEMAN, WILFRED R., 1908– . Redfish distribution in the North Atlantic. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.150, ICES/ICNAF Redfish Symposium, p.154-56.)

Reviews distribution of the two forms of *Sebastes marinus* and, to a lesser degree of *S. viviparus*, inclusive of arctic waters. Larvae and young, catches according to country and fishing area, seasonal fluctuation in catch and fish size, etc. are utilized to form a picture of horizontal and vertical distribution and relative abundance. (DI.)

76099. TEMPLEMAN, WILFRED R., 1908– . Redfish distribution off Baffin Island, northern Labrador, and in Ungava Bay in August-September 1959. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.150, ICES/ICNAF Redfish Symposium, p.157-62, tables, map.) 6 refs.

Reports on results from experimental trawling down to 400 fathoms conducted by the *A. T. Cameron* during Aug. 18 - Sept. 14, 1959. Sizes, types (*mentella* or *marinus*), state of maturity, and larvae are considered from standard drags, and tabulated with notes on location and bottom temperature. Size frequencies in young and females are also recorded; some general deductions on migrations are presented. (DI.)

76100. TEMPLEMAN, WILFRED R., 1908– , *and* **T. K. PITT.** Vertebral numbers of redfish *Sebastes marinus* L. in the North-West Atlantic, 1947-1954. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.150, ICES/ICNAF Redfish Symposium, p.56-89, illus., tables, maps.) 43 refs.

Includes study of material from Labrador waters and southward. *Mentella* type were compared mainly as to vertebral numbers in relation to geographic distribution, environment (temperature) and season, climatic changes, salinity, light, sex and size. (DI.)

TEMPLEMAN, WILFRED R., 1908– , *see also* Clark, G.R., & *others*. International Fisheries . . . 1961. No. 70763

TEMPLETON, J. Y., *see*

Bacharach, B., & *others*. CO_2 & brain cooling. 1961. No. 69953

Ballinger, W.F., & *others*. Accumulation . . . excess lactate . . . 1962. No. 69991

Pierucci, L., & *others*. Profound hypothermia. 1960. No. 74795

76101. TENCH, C. V. Ghost ship of the Arctic. (Shipbuilding and shipping record, Dec. 15, 1960. v.96, no.24, p.797, illus.)

Reviews the history of the Hudson's Bay Co. steamship *Baychimo*, abandoned in the ice off Pt. Barrow in 1931, later sighted and boarded several times in its drift. (DLC.)

TEODORONSKAIA, È. E., *see* Shutyĭ, M.E., & È.E. Teodoronskaia. Reki . . . 1961. No. 75629

76102. TERASMAE, JAAN. Notes on late-Quaternary climatic changes in Canada. (New York Academy of Sciences. Annals, Oct. 1961. v.95, art.1, p.658-75, graph, table.) 123 refs. Paper resulting from a conference on Solar variations, climatic change, and related geophysical problems, New York, Jan. 24-28, 1961.

Reviews the various sources of paleoclimatic information on Canada, under meteorology, glacial geology, oceanography, paleontology, botany, soils, and palynology. Edaphic, genetic, and geologic factors are suggested for consideration in reaching paleoclimatologic conclusions. Palynological studies in Northern Ontario and Quebec indicate a possible recurrence of glaciation with a 5° - 10°F. fall in mean summer temperatures. More paleoclimatic information may be found in the Canadian Arctic than hitherto expected. Unusual atmospheric circulation may contribute to the small ice caps on Baffin, Devon, and Ellesmere Islands; presence of unglaciated areas is not completely explained. Time equivalence of late-Quaternary climatic changes is the basic requirement for all correlations using palynological and paleontologic evidence. Migration rates for plants and animals constitute a factor important in paleoclimatology. (DLC.)

TERASMAE, JAAN, *see also*

Baldwin, W.K.W., & *others*. Botanical excursion . . . 1959. No. 69979

Baldwin, W.K.W., & *others*. Report on botanical excursion . . . 1962. No. 69980

National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

Taylor, F.C. Interglacial conglomerate. 1961. No. 76089

76103. TERBLANCHE, J., *and others*. Renal function during and immediately after profound hypothermia. (Surgery, Dec. 1961. v.50, no.6, p.869-76, illus., table.) 25 refs. *Other authors:* L.C. Isaacson, L. Eales, *and* C.N. Barnard.

During hypothermia with bypass in dogs, tubular function became progressively impaired, and blood pressure dropped despite the high and constant rate of perfusion. Reversal led to a prompt reversal of changes. Proteinuria appeared during rewarming, but was not evident during hypothermia. (DLC.)

TEREKHOV, M. I., *see*

Pepeliaev, B.V., & M.I. Terekhov. Novye dannye . . . 1962. No. 74717

Pepeliaev, B.V., & M.I. Terekhov. O nakhodkakh psilofitovoĭ flory . . . 1962. No. 74718

TERENT'EVA, L. N., *see* Krupīanskaīa, V.IU., & *others*. Osnovnye problemy ėtnograficheskogo izucheniīa . . . 1961. No. 73163

76104. TERESHCHENKO, NATAL'ĪA MITROFANOVNA. O vyrazhenii possessivnykh otnosheniĭ v samodiĭskikh īazykakh. (*In:* Akademiīa nauk SSSR. Institut īazykoznaniīa. Voprosy finno-ugorskogo . . . , 1962, p.81-93.) 9 refs. Text in Russian. **Title tr.:** Expression of possessive relationship in Samoyed languages.

Discusses the 14-case Samoyed declension system, especially the morphological and phonetic structure and grammatical function of the genetive or possessive case. (DLC.)

TERESHKOV, G. M., *see* Morozov, S.S., & *others*. Pochvy . . . 1961. No. 74114

TERLEŤSKIĬ, PETR EVGEN'EVICH, 1882–, *see* Kushner, P.I., & P.E. Terleťskiĭ. Karta . . . 1953. No. 73236

76105. TERUMOTO, ISAO. Frost resistance in a marine alga *Enteromorpha intestinalis* (L.) Link. (Teion kagaku 1961. v.19, ser. B., p.23-28, illus., table.) 10 refs. Text in Japanese. Summary in English.

This seaweed, frozen in sea water, withstood temperatures of -20° C. for at least 24 hrs. Freezing up to -25° C. was fatal to all cells. Excessive dehydration of the protoplasm was found to be the immediate cause of death. Another species, *Ulva perutusa,* showed a lesser frost resistance. (DLC.)

76106. TERUMOTO, ISAO. Ice crystals formed in intercellular space in root tissue of table beet. (Teion kagaku 1961. v.19, ser. B, p.17-22, illus., tables.) 7 refs. Text in Japanese. Summary in English.

Account of experiments with hardy, medium and non-hardy beet roots, frozen to -4° or -5° C. Hexagonal crystals constituting the ice mass collected from the material were largest in the hardy, smallest in the non-hardy varieties. The difference in crystal size is assumed to be caused by differences in cell permeability by water. (DLC.)

76107. TEWELES, SIDNEY. Time section and hodograph analysis of Churchill rocket and radio-sonde winds and temperatures. (U.S. Weather Bureau. Monthly weather review, Apr. 1961. v.89, no.4, p.125-36, diagrs., charts.) 18 refs.

Reports wind and temperature measurements in the stratosphere and mesosphere to above 80 km. at Churchill, northern Manitoba, in July, Aug., Dec. 1957 and Jan.-Feb. 1958. Results are discussed in reference to 10-mb constant pressure charts showing the horizontal circulation near the 30-km. level. In summer, irregular wind flow, predominantly from the east, appears in the middle and upper stratosphere. Strong easterlies in the lower and middle mesosphere are bounded in the upper mesosphere above 75 km. by a sharp vertical wind shear layer with highly variable west winds above, suggesting the existence of rapidly moving, intense cellular circulations near the mesopause. In winter these circulations extend into lower layers, occupying the entire mesosphere in Jan. Strong west winds develop in the mid-stratosphere. —From author's abstract. (DGS.)

TEXTOR, K., *see* Sturkie, P.D., & K. Textor. Relationship of blood pressure . . . 1961. No. 75971

76108. TEZIKOV, S. D. K stoletiiu lesozashchity na transporte. (Put' i putevoe khoziĭstvo, Jan. 1961. god 5, no.1, p.20-22, illus., diagr.) Text in Russian. **Title tr.:** A hundred years of forest belts protecting roads from snow.

Tree plantings for railroad shelterbelts were started in Russia in 1861 and by the eve of the Revolution, there were 3,000 hectares in shelterbelts along 3,170 km. of roads. After the March 1921 decree on planting snow fences, the practice has increased and by 1960, some 300,000 hectares were laid out in shelterbelts along 62,000 km. of roads. The management, maintenance and improvement of existing shelterbelts, and their extension to 18,000 km. roads protected only by movable shields are briefly outlined. (DLC.)

76109. THAUER, RUDOLF. Mécanismes périphériques et centraux de la régulation de la température. (Archives des sciences physiologiques, 1961. v.16, no.1, p.95-123, illus.) 31 refs. Text in French. **Title tr.:** Peripheral and central mechanisms of temperature regulation.

Review and discussion of the subject, based largely on work of the preceding five years. It is concluded that both cold and heat receptors are located in the skin, and they respond to a decrease or increase of dermal temperature. In the brain, only heat receptors are found and these react to a temperature rise of the blood. The existence of central cold-receptors is not yet proven. (DNLM.)

76110. THERKILSEN, KJELD RASK. Greenland looks ahead. (Geographical magazine, Feb. 1961. v.33, no.10, p.545-55, map, illus., incl. 1 col.)

Describes social and economic changes resulting from the Danish policy initiated in 1950 to open up and develop Greenland. The Danes are attempting to modernize the Greenlander's ways of life and thinking, while preserving the essentials of their culture. (DLC.)

THERKILSEN, KJELD RASK, *see also* Denmark. Greenland. 1961. No. 70974

76111. THIBERT, ARTHUR. Journal de l'esquimeau Makik, Southampton Island, 1925-1931; 2, 1er janvier au 19 août 1926. (Anthropologica, 1961. n. ser. v.3, no.1, p.95-110.) Text in French. **Title tr.:** Diary of the Eskimo Makik, Southampton Island, 1925-1931; pt. 2, January 1 to August 19, 1926. Translated from the Eskimo, and in sequence to No. 68701.

Describes his hunting trips by dog sledge and canoe, visit to the trading post at Repulse Bay, construction work for the Hudson Bay's Co. on Southampton, etc. (DSI.)

76112. THIERET, JOHN W. A collection of plants from the Horn Plateau, District of Mackenzie, Northwest Territories. (Canadian field-naturalist, Apr.-June 1961, v.75, no.2, p.77-83.) 4 refs.

Reports observations and collections made during July 31-Aug. 2, on the 1959 Northern Great Plains Botanical Field Trip, sponsored by Chicago Natural History Museum. The physical geography and geology of the plateau, and the vegetative cover of its eastern tip, in the vicinity of Lake-on-the-Mountain (62°08′N. 118°07′W.) are described. The plant specimens, the first collected in the area, are listed in three major groups: 14 lichen species, 15 bryophytes, and 78 tracheophytes. (CaOGB.)

76113. THIERET, JOHN W. New plant records for southwestern District of Mackenzie. (Canadian field-naturalist, July-Sept. 1961. v.75, no.3, p.111-21.) 16 refs.

Summarizes records of specimens collected on the 1958-59 Northern Great Plains Botanical Field Trips, representing taxa hitherto unrecorded from the area or significant extensions of known range. Some 111 species are listed by family, with data on locality, substrate, and significance of the find in this area. (CaOGB.)

76114. THOMAS, BRUCE IRA, *and others.* Placer mining in Alaska: methods and costs at operations using hydraulic and mechanical excavation equipment with nonfloating washing plants. Washington, D.C., 1959. 34 p. illus., diagrs., tables. (U.S. Dept. of the Interior. Bureau of Mines. Information circular 7926.) Refs. *Other authors:* D.J. Cook, E.N. Wolff, *and* W.H. Kerns.

Presents data from 14 opencut gold placer mining operations using methods developed during the last 30 yrs. for regions of permafrost. They include various hydraulic-bulldozer arrangements by operations having sluices on bedrock or above bedrock. Volume of material moved during a mining season and the unit cost per cu. yd. ranges from 3,000 cu. yd. at $2.54 for a bulldozer-sluiceplate combination to 260,000 cu. yds. at $0.16 for a bulldozer-dragline-hopper combination. (DGS.)

76115. THOMAS, BRUCE IRA, *and* **R. V. BERRYHILL.** Reconnaissance studies of Alaskan beach sands, eastern Gulf of Alaska. Washington, D.C., 1962. 38 p. tables, maps incl. 6 fold. (U.S. Dept. of the Interior. Bureau of Mines. Report of investigations, 5986.)

Reports investigations in 1957 and 1958 of the heavy-mineral content in sands from beaches between Icy Point (58° 25′ N. 137° 10′ W.) and the Kiklukh River (60° 01′ N. 143° 50′ W.). Results of auger-hole and shovel sampling in eight key areas are given, also those of petrographic analyses. Concentrations of possible significance were found in the Yakutat and Lituya Bay regions. Samples from a 20-mi. area at Yakutat averaged 35 lbs. of iron with max. over 300 lbs. and 20.5 lbs. of titanium dioxide, max. over 100 lbs./cu. yd. of beach material. At Lituya Bay, samples contained 20 - 52 lbs. of ilmenite per cu. yd. (DGS.)

THOMAS, D., *see* Fitch, F.J., *& others.* Glacier re-advance Jan. Mayen. 1962. No. 71430

THOMAS, FRANK R., *see* Int. Comm. NW. Atlantic Fisheries. Statistical bull. 1959. 1961. No. 72379

76116. THOMAS, GORDON WADDELL, 1919– . Air ambulance service in northern Newfoundland and Labrador. (Canadian geographical journal, Jan. 1962, v.64, no.1, p.16-19, illus.)

Describes use of aircraft, since 1955, to transport the Grenfell Mission medical personnel on their rounds, and their patients to and from hospital. An Otter aircraft is stationed at the Mission hospital headquarters at St. Anthony on the north tip of Newfoundland, and a Beaver at North West River on the Labrador coast. Both are equipped with ski-wheels for winter, floats for summer, as well as gear and rations for emergency landings. In 1961, the Otter transported 2,429 and the Beaver 1,730 passengers. (DGS.)

THOMAS, J. ALAN, *see* Lindman, E.L. Foundation for Alaska's public schools . . . 1961. No. 73512

76117. THOMAS, L. The distribution of E_s ionization at high latitudes. (Journal of atmospheric and terrestrial physics, July 1962. v.24, no.7, p.643-57, tables, graphs, diagrs.) 17 refs.

Discusses the occurrence of dense E_s, over the Arctic and Antarctic on the basis of IGY vertical incidence ionospheric data. At any Universal Time there is a tendency for E_s to occur in each hemisphere along an arc extending from the region of the magnetic poles to lower latitudes with a gradual increase of easterly longitude. The times of maximum occurrence of E_s are similar at magnetically conjugate points. Data from the Northern Hemisphere are examined for changes with season and magnetic activity. The time of the diurnal peak occurrence of E_s is later in summer than in winter except at stations in a sector near 300° geomagnetic longitude; the peak occurs earlier as magnetic activity increases. An increase in magnetic activity is accompanied by an increase in E_s occurrence at geomagnetic latitudes below 70° - 75° and by a decrease at higher latitudes. Data (limited) from the Southern Hemisphere give similar results and show a close relationship between phenomena at magnetically conjugate points. Data obtained during ten years at Canadian stations show that the maximum occurrence of dense E_s near the auroral zone coincides with the minimum of the solar cycle. The results are briefly discussed in relation to similar studies of the behavior of auroral blackouts and visual aurora.–From author's abstract. (DLC.)

THOMAS, LOWELL JACKSON, 1923– , *see Alaska sportsman.* Requiem Akutan. 1961. No. 69640

THOMAS, M. A., *see Western miner.* Can. Tungsten Corp. 1962. No. 76533

76118. THOMAS, MORLEY K. A bibliography of Canadian climate 1763-1957. Ottawa, Queen's Printer, 1962. 114 p. *Pub.* jointly by the Meteorological Branch of the Dept. of Transport and the Division of Building Research of the National Research Council. NRC 6521.

Contains 1400 references, arranged chronologically and then alphabetically by author. Subject-geographic and author indexes are added, also lists of periodicals, the subject and geographic index headings, and Canadian climatic-data periodicals. Supplements are planned at two-year intervals for the next decade, with a revision of current work at that time. (DWB.)

76119. THOMAS, MORLEY K., *and* **H. A. THOMPSON.** Heavy rainfall in the Canadian Arctic during August 1960. (Weatherwise, Aug. 1962. v.15, no.4, p.153-57, 167, maps, tables.) 7 refs.

Discusses the exceptional rainfall (excluding snowfall) measured this month at a dozen Canadian arctic stations, citing a total of 1.88 in. for Aug. 19 at Mould Bay. The synoptic situation of the period, with large amounts of moist air brought in by deep cyclones over Hudson Bay and Labrador, is described, also spectacular drainage and flooding phenomena in some places. (DWB.)

THOMAS, MORLEY K., *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

76120. THOMAS, REX, *and* V. B. SCHEFFER. Records of ringed seals from the Pribilof Islands. (Journal of mammalogy, Aug. 1962. v.43, no.3, p.428.)

Two records of young *Pusa hispida* from 1961, one captured, photographed and measured by the authors. These seals, unusual on the Pribilof rookeries, are believed to have come on drift ice. (DLC.)

THOMAS, S. F., *see* Robertson, O.H., & *others*. Physiological changes . . . spawning. 1961. No. 75142

THOMPSON, H. A., *see* Thomas, M.K., & H.A. Thompson. Heavy rainfall . . . 1962. No. 76119

76121. THOMPSON, RAYMOND. Dogs in harness. (Alaska sportsman, Apr. 1959-Feb. 1960. v.25, no.4–v.26, no.3, illus., diagrs.)

Series of eleven articles, under different titles, on sled dog training, equipment, and breeding, written by a custom maker of dog-raising equipment. Suggestions are given for training dogs to harness and building sled-dog strains. Harnesses, hitches, packsacks, sleds, toboggans, and wheeled rigs for dogs are described and directions given for their construction. Four breeds of arctic sled dogs and several types of sleds are described, also use of dogs by trappers, and sled-dog racing. In the Apr. and May 1960 issues of this journal, author presents and explains charts on inbreeding, crossbreeding, and line breeding; color crosses and results are also discussed, and an experiment in crossbreeding of Eskimo and Samoyed dogs reported. (DI.)

76122. THOMPSON, RAYMOND. The wolf and the dog. (Alaska sportsman, Oct. 1960. v.26, no.10, p.41+, illus.)

Describes the physical characteristics and habits of wolves, how they resemble and differ from dogs, especially northern sled-dogs. The latter are descended from wolves and have been interbred with them; but the present tendency among sled-dog breeders is to eliminate traces of wolf. Because of predatory animal control, wolves are becoming scarce in northern Canada and Alaska. (DI.)

76123. THOMPSON, WARREN C. A genetic classification of continental shelves. (Pacific Science Congress, 9th, *Bangkok, Thailand,* 1957. Proceedings pub. 1961. v.12, geology and geophysics, p.30-39, map.) 25 refs.

Divides shelves into three main types: polar, middle-latitude, and tropical. Polar shelves are differentiated according to modification by glacial ice or by sea ice, i.e. glaciated, or non-glaciated. Each type is described: its history from the late Wisconsin glaciation, topography, sediments. Glaciated shelves have irregular topography, with relief of over 300 fathoms in places. Off mountainous coasts they have greater relief and are narrower; off lowland coasts they are broader, and have more subdued relief. Non-glaciated shelves have relatively slight relief, with small mounds and depressions caused by grounding of sea ice. (DI.)

76124. THOMPSON, WILL FRANCIS, *Jr.*, 1916–

Preliminary notes on the nature and distribution of rock glaciers relative to true glaciers and other effects of the climate on the ground in North America. (*In:* International Association of Scientific Hydrology. Pub. 58, Symposium of Obergurgl 1962, p.212-19, illus.) 24 refs. Summary in French.

Discusses the imperfectly understood relationships between rock glacier distribution and such climatic controls as mean annual temperature, temperature variation, outgoing radiation, etc. Relationship with other geomorphic processes, such as frost action, also is discussed. Wahrhaftig and Cox's study of nearly 200 rock glaciers in the Alaska Range (No. 62577) showed them essentially a form of glacier, their gradual flow caused by the ice they contain; also confirmed Spencer's suggestion of the ice being mostly interstitial within the detritus rather than a continuous matrix enclosing the moraine debris. Climatic controls and distribution of climates suited to rock glacier development are much less studied than similar features of true glaciers. (DGS.)

THOMPSON, WILL FRANCIS, *Jr.*, 1916– , *see also* Robison, W.C., & *others*. Muskeg research. 1962. No. 75152

76125. THOMPSON, WILLIAM FRANCIS, 1888– . The research program of the Fisheries Research Institute in Bristol Bay 1945-58. (*In:* Koo, T.S.Y. Studies of Alaska red salmon . . . 1962, p.3-36.) 9 refs.

Outlines research into the biology of anadromous red salmon of Bristol Bay, Alaska. Small spawning populations from lakes and streams form more complex mixtures on the seaward migration and segregate again when returning to spawn. The main problem is to determine an optimum of fishing the ascending salmon without causing damage to the stock. A variety of approaches should be considered, and such a program research is outlined. (DI.)

76126. THÓRÐARDÓTTIR, THÓRUNN. Measurements of primary production in Icelandic waters. (International Council for the Exploration of the Sea. Annales biologiques 1958, *pub.* 1960. v.15, p.50-52, illus., maps.)

Reports study made in May-June 1958 with the C^{14} technique, covering all but the southeastern waters, at levels of 0, 10, 20 m., and density sections down to about 100 m. The highly divergent conditions of the area are described and seasonal fluctuations tentatively reconstructed. (DI.)

76127. THORMAN, GEORGE E. An early map of James Bay. (Beaver, spring 1961. outfit 291, p. 18-22, map.)

Reproduces and describes a 13 x 16.5 in. map in the British Museum; it depicts the west coast of James Bay from Cape Henrietta Maria to Moose River, and was made by one Thomas Moore during 1674-1678. Four individuals of that name in Hudson's Bay Co. employ and another with the Compagnie du Nord are discussed, their activities in Canada, the English-French conflicts in the Hudson Bay area, etc. (DI.)

76128. THORSTEINSON, FREDERIK V., *and others*. Experimental harvest of the Steller sea lion in Alaskan waters. Washington, D.C., Jan. 1961. 3, 15 p. illus., tables, map. (U.S. Fish and Wildlife Service. Scientific report: fisheries, no. 371.) 6 refs. *Other authors:* R.W. Nelson *and* D.F. Lall.

Reports an experiment in utilizing *Eumetopias jubata* conducted during the summer of 1959. Boat, gear and equipment are described; hunting and retrieving, reactions of the animals to the hunt, processing of meat and liver, and their proximate analysis are dealt with. The animals are claimed to be predators of salmon, and reduction of their number is expected to benefit the fishing industry. (DI.)

76129. THORSTEINSSON, RAYMOND, *and* **E. T. TOZER.** Banks, Victoria, and Stefansson Islands, District of Franklin, Northwest Territories. 77, 78, 87, 88, and parts of 67, 68, 97, and 98; report and map 20-1961. Ottawa, Queen's Printer, 1961. 7 p. map and table fold. in pocket. (Canada. Geological Survey. Paper 61-12.) 13 refs.

Presents preliminary results of a four-man geological reconnaissance survey carried out June-Sept. 1959, with transportation in the field by specially equipped aircraft. Banks and Victoria are the southwesternmost of the Canadian Arctic Islands; Stefansson Island, uninhabited, lies off northeastern Victoria. Precambrian, Paleozoic, Mesozoic, and Cenozoic rocks are represented in nine, four, two and three map units respectively; most are of sedimentary origin. Five distinct concordant successions of layered rocks are separated from each other by major unconformities. Main features of these successions and of the intrusive rocks are outlined in No. 76132. (DGS.)

76130. THORSTEINSSON, RAYMOND. The history and geology of Meighen Island, arctic archipelago. Ottawa, Queen's Printer, 1961. xi, 19 p. illus., maps. (Canada. Geological Survey, Bulletin 75.) 10 refs.

Reviews the exploration of this small arctic island at 79°56′N. 98°45′W. about 27 mi. west of Axel Heiberg, from its discovery by V. Stefansson in 1916; and reports own six-day visit by dog sledge in May-June 1957. Though only some 300 sq. mi. in area and low, 730 ft., in relief, the island has a central icecap of 25 sq. mi., and radial drainage. Bedrock consists of a sequence of unconsolidated clastic sediments called the Beaufort formation of post-Eocene age. Diagnostic fossils have not been found, thus its precise age is unknown. Geomorphic and glacial features are noted and illus. A very sparse growth of mosses and other plants occupies the ice-free parts of the island. (DLC.)

76131. THORSTEINSSON, RAYMOND, *and* **E. T. TOZER.** Structural history of the Canadian Arctic Archipelago since Precambrian time. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.339-60, maps incl. 2 fold. in v.3, section). 52 refs.

Outlines two periods of Paleozoic tectonism in the Archipelago: the first, in late Silurian or early Devonian time, produced north-trending structures on Cornwallis and eastern Bathurst Islands. Contemporary movements in Europe were part of the Caledonian orogeny. The second period, between the Upper Devonian and Middle Pennsylvanian (Variscan), produced the Parry Island fold belt, apparently unrelated to mainland structures. Tertiary folding and thrusting resulted in northerly to northeasterly trending structures on Ellesmere and Axel Heiberg Islands. Some enclosed blocks, e.g. Lake Hazen Plateau were unaffected by these Tertiary movements. The Ringnes and northwestern Queen Elizabeth Islands form a synclinorium, with transverse Tertiary folds. The Sverdrup Basin of Pennsylvanian - Tertiary sediments is also unrelated to mainland structural features. Normal faults probably later than the Tertiary structures noted above, are widespread in the Queen Elizabeth Islands. The islands south of Parry Channel appear to have been tectonically quiet since Precambrian time, with few exceptions. Relatively recent faulting has probably helped form the present-day sounds and straits in the Archipelago. Alberta Society of Petroleum Geologists' medal of merit was awarded to the authors for this paper; cf. its *Journal* Nov. 1962, p.581-83. (DLC.)

76132. THORSTEINSSON, RAYMOND, *and* **E. T. TOZER.** Summary account of structural history of the Canadian Arctic Archipelago since Precambrian time. Ottawa, Queen's Printer, 1960. 25 p. graph, maps incl. 2 fold. in pocket. (Canada. Geological Survey, Paper 60-7.) 50 refs. Presented at the First International Symposium on Arctic Geology, Calgary, Alta., 1960.

Reports provisional structural provinces established, seven in all, including such major structural features as the Arctic Lowlands, the Franklinian geosyncline, the Sverdrup Basin, shown on map at scale 1 in.: 150 mi. Structural types are shown on a 1 in.: 100 mi. map. (DGS.)

THORSTEINSSON, RAYMOND, *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

76133. THUNBORG, FOLKE, 1909–1957, *and* **B. ANDERSSON,** *Editors.* Norrbotten, land of the Arctic Circle; a book about the far North of Sweden. Stockholm, P.A. Norstedt, 3rd ed. 193 p. illus., maps incl. fold., diagrs., graphs, tables. Translation of *På en fjärdedel av kartan; en bok om Norrbotten.* Revised and enlarged edition of the senior editor's geographic handbook, *pub.* 1953, of this northern county of Sweden.

Contains chapters by 18 contributors as well as representative statistics to 1959, edited by Andersson. The area has barren mountains with desolate wastes in the northwest, and a fertile farming district in the southeast; forest land with sparse population of simple culture, and modern built-up areas with many technical conveniences, etc. Capital, communications, and experienced personnel are needed for future development. Introduction by Hans Beskow, provincial antiquarian, is followed by chapters on: Soil by E. Arwidsson, Forest by M. Näslund, Ore by R. Alin, Hydroelectric power by S. Parding, Forest industry by C. Breitholz, Iron industry by G. deGeer, Fishing by P. Enequist, Trade and small-scale industry by B. Rothelius, Reindeer-keeping by E. Hedbäck, Handicrafts by E. Arwidsson, Labour market by G. Karlsson, The county council by K.G. Viklund, Municipal matters by I. Jansson, Roads by N.G. Lenas, Railways by A. Carlstedt, National defence in Norrbotten by N. Björk, The Church by I. Hylander, Cultural matters by K. -E. Wikholm, Tourism by B. Härdelin. Statistics, p.187-93, and a small-scale fold. map conclude the volume. (DLC.)

TIBBITTS, G. C., *Jr., see* Cederstrom, D.J., & G.C. Tibbitts. Jet drilling . . . Fairbanks. 1961. No. 70631

76134. TIEDEMANN, KARL HEINZ. Neue Ergebnisse der Polarforschung; Symposium über wissenschaftliche Probleme der Grönlandforschung. (Polarforschung, Bd. 5, 1960 *pub.* Nov. 1961. Jahrg. 30, Heft 1-2, p.1-2.) Text in German. **Title tr.:** New results of polar research; symposium on scientific problems in the study of Greenland.

Describes briefly conference arranged by the Deutsche Gesellschaft für Polarforschung in Münster, Mar. 11-14, 1961. Over a hundred scientists participated; 26 papers (listed) were presented, of which 11 appear in this issue of *Polarforschung,* the remainder to be printed in the following issue. Next meeting is to be held in Karlsruhe Oct. 6-9, 1963. (CaMAI.)

76135. TIFFANY, WARREN I. This land, an adult education booklet. Juneau, U.S. Bureau of Indian Affairs, 1960. 29 p. illus.

Describes for Alaskan Eskimos, Indians and Aleuts, the procedures and requirements for securing a 160-acre native land allotment from the U.S. Bureau of Land Management. (DI.)

76136. TIKHOMIROV, BORIS ANATOL'EVICH. Aktual'nye voprosy izucheniia prirody Krainego Severa SSSR. (Akademiia nauk SSSR. Vestnik, Aug. 1962. god 32, no.8, p.46-50.) Text in Russian. **Title tr.:** Urgent problems for study on the nature in the Far North of the USSR.

Reviews the research requirement and research institutions active in the area, which has a 25,000 km. coastline, and the forestless tundra which covers 15% of the Soviet mainland. Unsolved problems relating to the feasibility of melting the ice cover of the Arctic Basin, to heat exchange in micro- and mezzo-relief, to soils and erosion, to the snow cover, to plant and animal physiology, etc. are cited. The work of other countries in the far North is noted, as well as 17 Canadian and 68 American institutions active on problems of the area. (DLC.)

76137. TIKHOMIROV, BORIS ANATOL'EVICH, *and* **E. V. DOROGOSTAISKAIA.** Bugry pucheniia v zone vechnoi merzloty. (Priroda, Jan. 1961, no.1, p.102-103, illus.) Ref. Text in Russian. **Title tr.:** Frost mounds in the permafrost zone.

Describes and illus. hydrolaccoliths or pingos as observed in the vicinity of Tiksi Bay. These mounds 5-10 m. in diameter and up to 2.5 m. in height are in the valley of a small creek falling into the Bay and are covered by turfy sedge. In the northern zones of tundra, where the thawed layer of permafrost is negligible, frost mounds normally are not seen. In this case, their presence is explained by man's activity in the damming of the lake, from which the creek flows. (DLC.)

76138. TIKHOMIROV, BORIS ANATOL'EVICH. Glavneishie teoreticheskie zadachi i problemy izucheniia rastitel'nogo pokrova krainego severa SSSR na sovremennom ėtape. (Botanicheskii zhurnal, May 1962. t.47, no.5, p.613-25.) 8 refs. Text in Russian. **Title tr.:** The most important theoretical tasks and problems in the study of the plant cover of the far northern USSR at the present stage.

Outlines research required for the coming two decades, apparently in connection with the resolutions of the 22nd Party Congress. The study of species components of this arctic and subarctic vegetation, its biology and physiology, problems of environment, and of plant associations are discussed in their current and future aspects. Emphasis is placed on practical application in forestry, soil science, etc. (DLC.)

76139. TIKHOMIROV, BORIS ANATOL'EVICH. Osnovnye ėtapy razvitiia rastitel'nosti severa SSSR v sviazi s klimaticheskimi kolebaniiami i deiatel'nost'iu cheloveka. (Moskovskoe obshchestvo ispytatelei prirody. Biulleten', otdel biol. 1962. t.67, vyp.1, p.34-58, table, maps.) About 90 refs. Text in Russian. Summary in English. **Title tr.:** Basic stages in the development of the vegetation of the Soviet North, as related to climatic fluctuations and man's activity.

Study based on own work and the literature. Phytogeographical conditions of preglacial times, and of the maximal glacial, interglacial and postglacial epochs are reconstructed, utilizing paleobotanical and phytocoenological data. The present vegetation zones and the effects of recent rewarming are also considered. The northward penetration of agriculture and livestock is noted, and its effects analyzed. English translation, JPRS: 18,517, available. Copy at CaMAI. (DLC.)

76140. TIKHOMIROV, BORIS ANATOL'EVICH. Poezdka v kanadskuiu Arktiku. (Vsesoiuznoe geograficheskoe obshchestvo. Izvestiia, Jan.-Feb. 1961. t.93, vyp.1, p.34-45, illus., map.) Text in Russian. **Title tr.:** A trip to the Canadian Arctic.

Describes a ten-day trip by the author and others following the International Botanical Congress in Montreal 1959. The itinerary: Labrador, Hudson Bay, Baffin Island, Resolution Harbour, Coral Harbour and other localities is indicated and the vegetation of features noted. Living and working conditions in northern Canada, activities of the Arctic Institute of North America, etc. are mentioned. (DLC.)

76141. TIKHOMIROV, BORIS ANATOL'EVICH. The treelessness of the tundra. (Polar record, Jan. 1962. v.11, no.70, p.24-30, plate, map.) 25 refs.

Discusses climatic, human, and biological causes of treelessness, and some measures to the northern tree limit (mapped) in the USSR. Shortage of viable seed and unfavorable physical conditions for germination and development of seedlings are apparently important factors in restricting tree growth in the tundra. Cold-resistant seeds are being planted at favorable sites (mapped) in the forest-tundra and southern tundra. Expected benefits to agriculture and reindeer husbandry are noted. (DGS.)

76142. TIKHOMIROV, IU. P. Sovremennoe sostoianie i zadachi razvedki na neft' i gaz v IAkutii. (Geologiia nefti i gaza, Nov. 1961. god 5, no.11, p.9-13, map.) Text in Russian. **Title tr.:** The present status and the tasks of oil and gas prospecting in Yakutia.

Reviews the recent geologic and geophysical prospecting in the Verkhoyansk downwarp, Vilyuy syncline, and Anabar anticline. Their tectonics and structures are analyzed in respect to possible oil and gas accumulation. The Ust'-Vilyuysk gas deposits discovered in 1956, the first in Yakutia, and those found at Sabo-Khaya in 1960 are described, noting extent of the areas, component rocks, depths, composition, and yield. The Ust'-Vilyuysk daily yield ranges from 420,000 to 5

million m³, Sabo-Khaya 420,000 - 460,000 m³. Both are in Mesozoic deposits. In the Berge and Oloy anticlines light oil pools have been discovered and their properties are described. Oil and gas finds in Yakutia are hampered by insufficient geophysical, especially seismic investigations. (DLC.)

76143. TIKHOMIROV, L. I., *and* È. N. ÈRLIKH. Nekotorye cherty metallogenii Kamchatki. (*In:* Akademiîa nauk SSSR. Komissiîa po problemam Severa. Syr'evye resursy . . . 1961, p.43-51, fold. map.) Text in Russian. **Title tr.:** Some features of Kamchatka metallogeny.

Presents metallogenic forecast map based on prospecting data. Six structural-facies zones are distinguished and each described, noting occurrence of ore deposits in relation to age, tectonics and petrography. Occurrence of copper, mercury, lead, gold, silver and other metals is characterized. The metallogenic features of Kamchatka are compared with those of Japan, Armenia, and other countries. (DLC.)

76144. TIKHONENKOV, IGOR' PETROVICH, 1927–1961. Ob odnom tipe poslemagmaticheskikh metasomaticheskikh protsessov v shchelochnykh massivakh. (Akademiîa nauk SSSR. Doklady, Feb. 1, 1961. t.136, no.4, p.917-20, diagrs.) 2 refs. Text in Russian. **Title tr.:** On one type of postmagmatic metasomatic processes in alkaline massifs.

Reports examples of zonality from the Khibiny, Lovozero, and other alkaline massifs of the USSR. The following stages in metasomatic processes of alkaline rocks are disclosed: carbonatization, microclinitization, albitization and quartzitization. The processes by which metasomatic rocks are converted into syenites are proposed to be called syenitization. (DLC.)

76145. TIKHONENKOVA, R. P., *and* M. E. KAZAKOVA. Vlasovit, novyĭ silikat tsirkoniîa iz Lovozerskogo massiva. (Akademiîa nauk SSSR. Doklady, Apr. 1, 1961. t.137, no.4, p.944-46, tables, graph.) Ref. Text in Russian. **Title tr.:** Vlasovite, a new zirconium silicate from the Lovozero massif.

Describes this rare mineral found 1958 in nepheline-syenites. Mode of occurrence, specific weight, optical properties, chemical analyses, powder and heat tests are reported. Chemical analyses show that vlasovite (so-named in honor of K.A. Vlasov) differs from other zirconium silicates, and has no water content. Chemically, it resembles narsarsukite. (DLC.)

76146. TIKHONOV, V. I., *and* L. A. RIVOSH. Novye dannye o tektonicheskom stroenii IUzhnoĭ Kamchatki; po rezul'tatam geologicheskikh i aeromagnitnykh rabot. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, June 1961, no.6, p.59-67, maps.) 8 refs. Text in Russian. **Title tr.:** New data on the tectonic structure of southern Kamchatka; on the basis of geological and aeromagnetic studies.

Reports recent geologic mapping, prospecting and geophysical work. An aeromagnetic survey is noted and fields of magnetic anomalies are tectonically interpreted. Two directions of folded structure are distinguished: meridional and southeasterly in the Mesozoic and Tertiary, northeasterly in the Pliocene - Quaternary. These structures are described and summarized on tectonic map. (DLC.)

76147. TIKHONOV, V. I. Novye dannye po stratigrafii tretichnykh otlozheniĭ IUzhno-Bystrinskogo khrebta vostochnoĭ Kamchatki. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.186-88.) 4 refs. Text in Russian. **Title tr.:** New data on the stratigraphy of Tertiary deposits in the Yuzhno-Bystrinskiy Range of eastern Kamchatka.

Describes a section of these deposits, noting distribution of series, their lithologic properties, and age; based on field study in 1957. Criticized by A.E. Sviatlovskiĭ, q.v. (DLC.)

TILL, W. M., *see* Evans, G.O., & W.M. Till. Gen. *Dermanyssus* . . . 1962. No. 71308

76148. TILMAN, H. W. *Mischief* in Greenland. (Geographical magazine, Feb. 1962. v.34, no.10, p.559-67, maps, illus. incl. 6 col.)

Recounts a voyage by small boat along the west coast of Greenland to Umanak Fjord at approx. 71°N. Godthaab and the Eskimo settlement of Igdlorssuit were visited, and some mountains climbed on the Qioqe peninsula and Upernivik island. Scenery, sailing and ice conditions, weather, and Greenlanders are described. (DLC.)

TIMERBAEVA, D. M., *see*

Markhinin, E.K., & *others.* Izuchenie sostoîaniîa vulkanov . . . 1961. No. 73819

Markhinin, E.K., & *others.* Opyt vulkano-geograficheskogo raionirovaniîa . . . 1962. No. 73823

76149. TIMMERMAN, JAY C., *and others.* Day-night differences of body temperature and heart rate after exercise. (Quarterly journal of experimental physiology, July 1959. v.44, no.3, p.258-63, illus. table.) 7 refs. *Other authors:* G.E. Folk, Jr. *and* S.M. Horvath.

Reports a study of ten men, including a spell of moderate exercise at 11 a.m. and 11 p.m. The results indicate that body temperature and heart rate are governed by environmental factors as well as by intrinsic factors. In some subjects, temperature and heart-rate rhythms were found to be normally dissociated. (DNLM.)

76150. TIMOFEEV, VLADIMIR TIMOFEEVICH. Formation of the bottom waters of the Central Arctic Basin. Translated by E.R. Hope. Ottawa, Jan. 1961. 6 p. tables. (Canada. Defence Research Board. Directorate of Scientific Information Service. Translation T 349 R.)

English translation of No. 55447. (CaMAI.)

76151. TIMOFEEV, VLADIMIR TIMOFEEVICH. K voprosu o vodoobmene Arkticheskogo basseĭna s Atlanticheskim okeanom. (Okeanologiîa, 1962. t.2, vyp.2, p.365-67.) 9 refs. Text in Russian. **Title tr.:** On water exchange between the Arctic Basin and Atlantic Ocean.

Presents a critical analysis of G.N. Zaĭtsev's paper, No. 69345, and corrections of calculated values found erroneous. Special attention is given to the Denmark Strait. (DLC.)

76152. TIMOFEEV, VLADIMIR TIMOFEEVICH. Postuplenie atlanticheskoĭ vody i tepla v arkticheskiĭ basseĭn. (Okeanologiîa, 1961. t.1, vyp.3, p.407-411, tables, graphs.) Text in Russian. **Title tr.:** The inflow of Atlantic water and heat into the Arctic Basin.

Presents calculation of water volume and

heat transferred via the Greenland Sea, based on observations during 1933-1960 at 78°N. by Russian and Norwegian vessels. Yearly, seasonal and monthly discharge of water and heat are reported. Average yearly amplitude of Atlantic water flow is 36,969 km³, and heat 101.492.10¹² Cal. Trans-Translated in part in *Deep-sea research* July/Oct. 1962, p.358-61. (DLC.)

76153. TIMOFEEV, VLADIMIR TIMOFEEVICH. Vliianie glubinnykh atlanticheskikh vod na gidrologicheskiĭ rezhim Karskogo moria. (Problemy Severa 1961. vyp.4, p.46-58, tables, maps.) 7 refs. Text in Russian. **Title tr.:** The effect of deep Atlantic waters on the hydrological conditions of the Kara Sea.

Presents data on current velocity, water mass and temperature of Atlantic water (temperature 0°C. and over, salinity 32-34.6 ‰) as collected since 1930 by 119 hydrological stations, and research vessels in Kara Sea. The mass of Atlantic water extends between 68° and 78°E. from Franz Joseph Land to northern Novaya Zemlya; as a rule, its upper boundary is 50 m. deep, and the lower 200-500 m.; 9461 km³ of Atlantic water flows annually into Kara Sea, bringing 7971.10¹² Cal. of heat. (DLC.)

76154. TIMOFEEV, VLADIMIR TIMOFEEVICH. Vliianie glubinnykh atlanticheskikh vod na obrazovanie i taianie l'da v moriakh Karskom i Laptevykh. (Okeanologiia, 1962. t.2, vyp.2, p.219-25, tables.) 5 refs. Text in Russian. **Title tr.:** The influence of Atlantic deep waters on ice formation and melting in the Kara and Laptev Seas.

Notes the current controversy regarding Atlantic deep-water influence. Attempt is made to demonstrate how the heat of Atlantic deep water comes to the surface of the Laptev and Kara Seas and how it influences ice regime of these seas. Data from five Kara Sea and three Laptev Sea stations were analyzed and elements of convection and vertical stability of layers calculated. The data are tabulated and methods described for calculating how much ice melts from the heat of Atlantic deep water, the amount of heat consumed by the ice, and total amount of heat brought yearly by Atlantic deep water into arctic seas. (DLC.)

TIMOFEEV, VLADIMIR TIMOFEEVICH, *see also* Zaĭtsev, G.N. O vodoobmene . . . 1961. No. 76625

TIMUSHEV, DMITRIĬ ANDREEVICH, *see* Akademiia nauk SSSR. Komi-russkiĭ slovar'. 1961. No. 69581

76155. TIMUSHEV, S. V letnem lagere dlia svineĭ. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, July 1961. god 4, no.7, p.58-59.) Text in Russian. **Title tr.:** In the summer camp for hogs.

Discusses the work of a woman who raises pigs on a state farm at Ust'-Vym' (62° 14′ N. 50° 24′ E.) in Komi ASSR; in the first year she had 509 and produced 438 cwt. of meat. (DLC.)

76156. TIRÉN, OLOF. "Kryddgrovan," et naturreservat. (Västerbotten, Feb. 1961. årg. 34, nr.1, p.10-14, illus., sketch map.) Text in Swedish. **Title tr.:** Kryddgrovan, a nature reservation.

Describes a 1.6-hectare forest area of unusual beauty, approx. 65° N. 20° E. in Norsjö parish northeast of Lycksele, designated for protection as a nature memorial. It is virgin mixed-forest land with mosses, flowering and herbaceous plants, many rare species, and some used by Lapps for medicinal or other purposes. (DA.)

76157. TIRON, K. D. Neperiodicheskie kolebaniia urovnia v Belom more. (Leningrad. Universitet. Uchenye zapiski 1961. no.309, ser. geograficheskikh nauk, vyp. 16, Okeanologiia, p.78-91, tables, graphs, text map.) Text in Russian. **Title tr.:** Non-periodic fluctuation of the surface in the White Sea.

Reports analysis of mareograph data registered for Nov. 1933-Nov. 1936 at Malaya Pir'yu Bay (66°40′N. 34° 20′E.). Non-periodic fluctuations of level in the northwestern part of the sea are discussed and attributed mainly to meteorologic effects: atmospheric pressure and wind regime. Wind directions, changes of barometric gradient are analyzed in relation to variation of average sea level and some tentative results are offered as to characteristics of the non-periodic fluctuations. For prediction of such fluctuations, more data and for longer period are required. (DLC.)

TIRRI, R., *see* Lagerspetz, K., & *others*. . . . cold & succinic dehydrogenase liver, brain. 1962. No. 73276

TISHLER, B., *see* Holland, M.G., & *others*. Ocular distensibility . . . 1961. No. 72209

TITAEVA, N. A., *see* Baranov, V.I., & N.A. Titaeva. Soderzhanie urana . . . 1961. No. 70013

76158 TITOV, V. A. Obshchie cherty geologicheskogo stroeniia i poleznye iskopaemye Koriakskogo nagor'ia; zadachi dal'neĭshikh issledovatel'skikh rabot. *(In:* Akademiia nauk SSSR. Komissiia po problemam Severa. Syr'evye resursy . . . 1961, p.35-42.) Text in Russian. **Title tr.:** Main features of geologic structure and useful minerals of the Koryak highland; tasks of further investigations.

Summarizes geologic investigations of the last five years by various institutions. Pre-Cretaceous, Cretaceous and Tertiary folded structures are recognized and characterized. Magmatism and tectonics of the Koryak highland are described. The region is still insufficiently explored and mineral resources data are only preliminary. Occurrence of coal, mercury, antimony, platinum, tin and some other minerals is reported. Further work required is summarized. (DLC.)

TIURMINA, L. O., *see* Dolginov, Sh. Sh., & *others*. Nekotorye . . . postoiannogo magnitnogo polia . . . 1962. No. 71066

76159. TIUTIUNOV, IVAN ALEKSEEVICH. Fiziko-khimicheskoe izmenenie gornykh porod na Krainem Severe. *(In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Fiziko-khimicheskie protsessy v promerzaiushchikh i merzlykh gornykh porodakh, 1961, p.7-27, tables, diagrs.) 49 refs. Text in Russian. **Title tr.:** Physiochemical changes in rocks in the far North.

Theoretical problems in the weathering of rock formations due to thin films of water are examined and the practical importance of this phenomenon, as in mining, is noted. The reduction of the bearing strength of frozen rock on thawing is attributed primarily to the interaction of rock with thin adsorbed films of water. This interaction leads to a change in primary crystallochemical bonds. The boundary phase water-ice produces a wedge effect

in the process of migration, breaking down the rock in the transition; one gram-molecule of water does an amount of work equal to about 4,099 kg.-m. Data obtained near Mirnyy, Yakut ASSR form the basis of this study.—From CRREL. (DLC.)

76160. TĪŪTĪŪNOV, IVAN ALEKSEEVICH. Inzhenerno-geologicheskie osobennosti mnogoletnemerzlykh skal'nykh porod v raĭone trubki "Mir." *(In:* Materialy po laboratornym issledovaniĭam merzlykh gruntov, 1961. sbornik 4, p.216-41, tables.) 12 refs. Text in Russian. **Title tr.:** Engineering and geological characteristics of permanently frozen rock in the region of the Mir pipe.

Reports studies during 1956-1957 on sedimentary, igneous, and metamorphic rocks. All revealed physical and chemical modifications varying irregularly with depth and attributable largely to periodic cryogenic conditions. Cores taken to a depth of nearly 100 m. were subjected to physicochemical analysis. Cracks and migration of thin films if water were found to be important even at considerable depths. The study produced some recommendations concerning the use of these rocks in construction.—From CRREL. (DLC.)

76161. TĪŪTĪŪNOV, IVAN ALEKSEEVICH. Migratsiĭa vody v gruntakh. *(In:* Materialy po laboratornym issledovaniĭam merzlykh gruntov, 1961. sbornik 4, p.7-21.) 40 refs. Text in Russian. **Title tr.:** Migration of water in the ground.

Reviews water migration and examines the physical nature of the migration process based on the interrelationship between solid and liquid phases in a soil system. It is shown that the migration of water and the growth of crystals, including ice, stem from the gradient of chemical potentials of phases of a cryogenic system. This force is the most important characteristic of the system. The redistribution of water in soils and the nature of frost heaving are discussed.—From CRREL. (DLC.)

76162. TĪŪTĪŪNOV, IVAN ALEKSEEVICH, *and* **M. M. DERBENEVA.** Nekotorye fiziko-khimicheskie i morfologicheskie svoĭstva pochv i mnogoletnemerzlykh porod na Kraĭnem Severe. *(In:* Materialy po laboratornym issledovaniĭam merzlykh gruntov, 1961. sbornik 4, p.86-99, tables.) 8 refs. Text in Russian. **Title tr.:** Some physical, chemical, and morphological properties of soils and permanently frozen ground in the far North.

Reports studies in the Mirnyy region of Yakut ASSR. Soil profiles from borings more than 2 m. deep are analyzed; the physical-chemical properties such as water-soluble matter, content of iron, exchange of Ca and Mg, oxidation and deoxidation zones, color, and other characteristics are outlined. Morphologic analysis of these soils is noted. The permafrost stratum to a depth of approx. 60 m. at three sites in the area of the Mir diamond pipe is similarly described. Effects of that exchange with the atmosphere and of cryogenic changes with depth of permafrost are evaluated. (DLC.)

76163. TĪŪTĪŪNOV, IVAN ALEKSEEVICH. Protsessy izmeneniĭa i preobrazovaniĭa pochv i gornykh porod pri otritsatel'noĭ temperature; kriogenez. Moskva, Izd-vo Akademii nauk SSSR, 1960. 144 p. tables, graphs, diagrs. (Akademiĭa nauk SSSR. Institut merzlotovedeniĭa.) Approx. 200 refs. Text in Russian. **Title tr.:** Alteration and transformation processes in soils and rocks under subfreezing temperature; cryogenesis.

Author opposes the prevailing opinion that permafrost conserves rocks and halts chemical processes in them. In the far North rocks undergo deep chemical and mineralogical alteration and transformation, but these processes have not been a subject of investigation by geochemists, geologists and hydrogeologists. Cryogenesis is emphasized as the combination of physical, chemical and mineralogical processes of alteration and transformation of the upper lithosphere. Rock alteration and transformation mainly proceed under the action of thin water films, which adsorb the rock and mineral surface, and do not freeze under very low temperature. A theoretical approach is made to explain bases of these processes from author's own investigations in Kola Peninsula, Bol'shezemel'skaya Tundra and the Polar Ural. The six chapters deal in turn with: factors of cryogenesis, its qualitative features, migration of fluid phase in the ground system, coagulation and structural changes, some quantitative patterns of cryogenesis, its stages and heat exchange with atmosphere. (DLC.)

76164. TĪŪTĪŪNOV, IVAN ALEKSEEVICH. Vvedenie v teoriiū formirovaniĭa merzlykh porod. Moskva, Izd-vo Akademii nauk SSSR, 1961. 107 p. tables, graphs, diagrs. (Akademiĭa nauk SSSR. Institut merzlotovedeniĭa.) 118 refs. Text in Russian. **Title tr.:** An introduction to the theory of permafrost formation.

Deals with the chemical weathering of rocks and minerals under conditions of positive and negative temperatures: degradation and the associated increase in surface energy, the nature of the interaction of water with rocks and minerals during chemical weathering, changes in the composition of weathered materials, and the interaction of permafrost with ground water. The crystallization of water in soils and rock formations is discussed, including the formation of ice due to cooling of free water and of earth material. Processes active in the formation of cryogenic structures and in heaving are outlined. Water migration, along with crystallization the most important factor in the formation of permafrost, is discussed at length. Changes in the composition of soils and rocks during freezing, dynamics of structural bonds during freezing and thawing, and coagulation and the theory of bonding are also treated.—From CRREL. (DLC.)

TĪŪTĪŪNOV, IVAN ALEKSEEVICH, *see also*

Akimov, A.T., & I.A. Tīūtīūnov. Mnogoletnemerzlye porody . . . 1961. No. 69599

Al'fman, È.A., & *others*. Svechenie l'da. 1961. No. 69711

76165. TIZDEL', R. R. Issledovaniĭa skal'nogo osnovaniĭa plotiny Bratskoĭ GÈS. (Soveshchanie po inzhenerno-geologicheskim issledovaniĭam skal'nykh osnovaniĭ gidrotekhnicheskikh sooruzheniĭ, *Moskva,* 1960. Problemy inzhenernoĭ geologii v stroitel'stve. Materialy *pub.* 1961, p. 13-29, illus., tables, diagrs.) Text in Russian. **Title tr.:** Investigation of the rock foundation for the Bratsk hydroelectric station dam.

Describes engineering-geologic conditions of the area. Its component rocks: sandstones, aleurites, argillites of Ordovician age, dissected by

traps are analyzed, their physical and mechanical properties outlined. Tests made of the resistivity and deformation of the rock foundation for concrete dam construction are described in detail. Water permeability and water absorption of the rocks were analyzed. Their mineralogic and chemical composition is also reported. (DLC.)

TKACHENKO, B. V., *see* Markov, F.G., & B.V. Tkachenko. Paleozoĭ . . . 1961. No. 73831

76166. TOBLER, W. R. The polar case of Hammer's projection. (Professional geographer, Mar. 1962. v.14, no.2, p.20-22, map, table.) 5 refs.

Illustrates preparation of a transverse version of this equal-area projection, specifically the north polar aspect. The projection is easily drawn and suited to teaching. In the polar aspect, parallels are ellipses, meridians are straight lines. Computation is abstracted in the table. The oblique Hammer projection is easily computed, but is more difficult to draw. (DLC.)

76167. TOCHILIN, M. S. Geologo-mineralogicheskiĭ ocherk Olenegorskogo zhelezorudnogo mestorozhdeniīa. (*In:* Akademiīa nauk SSSR. Kol'skiĭ filial. Flotatsiīa . . . 1961, p.62-78, illus., table, maps.) 6 refs. Text in Russian. **Title tr.:** A geologic-mineralogic outline of the Olenegorsk iron ore deposits.

Describes ferruginous quartzites of these deposits northwest of Lake Imandra discovered in 1933. Their geologic position, Lower Proterozoic age, geomorphic conditions, distribution and origin are discussed. They are found in gneisses and their contact with the enclosing rocks is characterized. Ferruginous quartzites consist of magnetite, hematite, quartz with admixture of amphibole, mica, garnet, etc. Magnetite, hematite and quartz are described in greater detail. The Olenegorsk iron ores are processed at present at Cherepovetsk plant. Reserves, exploration, and development are summarized. (DLC.)

76168. TODD, ALDEN L. Abandoned, the story of the Greely Arctic Expedition 1881-1884. New York, McGraw-Hill, 1961. xx, 323 p. illus.

Account of the Lady Franklin Bay Expedition (cf. No. 58847) based in part on hitherto unused unpublished material, papers of Greely, D.L. Brainard, Dr. O. Pavy, and G.W. Rice. Personal aspects and controversial matters are salient in the treatment: with extensive quotation from the new mss sources; discussion on the charge of cannibalism, the post-expedition uproar, investigations, etc. and honors to Greely in later life. Introduction by V. Stefansson. Reviewed by G.W. Smith in *Arctic* Sept. 1961, p.201-203. (DLC.)

76169. TODD, ALDEN L. Edward Israel: Michigan arctic pioneer. (Michigan alumnus, Spring 1961. v.67, no.18, p.204-212, port.)

Presents a character study of this astronomer with the ill-fated Lady Franklin Bay Expedition of 1881-1884. His scientific observations during the stay at Fort Conger are noted. His death from starvation on May 27, 1884 at Camp Clay, Ellesmere Island, and burial in Kalamazoo, Mich. are discussed. Excerpts from Greely's correspondence, journals, and reports on the outstanding performance of Israel are cited. (DLC.)

76170. TOIVONEN, YRJÖ HENRIK, 1890–1956. Wortgeschichtliche Streifzüge. (Finnisch-ugrische Forschungen, 1951. Bd. 30, p.340-66.) Refs. in text. Text in German. **Title tr.:** Linguistic forays.

Comparative etymological analysis of several words including an Ostyak, some Lappish and Zyryan. (CtY.)

TOKAR, ROMAN A., *see* International Conference on soil mechanics . . . 1961. No. 72383

76171. TOKAREV, P. I. Énergeticheskaīa otsenka sily zemletriāseniĭ vulkana Bezymīannogo. (Akademiīa nauk SSSR. Vulkanologicheskaīa stantsiīa. Biūlleten' 1961. no.31, p.38-45, illus., table.) 3 refs. Text in Russian. **Title tr.:** Estimating the amount of energy in Bezymyannyy Volcano earthquakes.

Outlines the course of these earthquakes from the first weak tremor on Sept. 29, 1955, through their maximum from Oct. 22, when the shocks occurred almost continuously, till after the major explosion on Mar. 30, 1956; they ceased by the end of 1956, recurring during the eruptions of 1958 and 1959. The total number of shocks exceeded 30,000, they were recorded by seismograph at Klyuchi (56°18′N. 160°51′E.) and in Kozyrevsk (56°03′N. 159°52′E.). The velocity of longitudinal waves was estimated at 3.30 km./sec., transverse waves 2.08 km./sec., and Love waves 1.87 km./sec. The amount of energy, causing seismic displacements, was estimated for nine earthquakes and it was established that 0.2% was represented by longitudinal, 3% by transverse, and 96.8% by surface waves. The stream of energy of surface waves fluctuated from 0.6 to 59,900 ergs./cm². (DLC.)

76172. TOKAREV, P. I., *and* **V. N. BORISOVA.** Izverzhenie vulkana Bezymīannyĭ v aprele 1960 g. (Akademiīa nauk SSSR. Vulkanologicheskaīa stantsiīa. Biūlleten' 1961, no.31, p.23-27, illus., table.) Text in Russian. **Title tr.:** Eruption of Bezymyannyy Volcano in April 1960.

Describes observations from the Klyuchi Station and visits to the area. From Mar. 21, seismic indications increased, to a maximum on April 13, then tapered off. The eruption, the strongest since Mar. 30, 1956, was manifested by ejection of ash over a 1,000 km² area, lavas, and a new agglomeratic stream estimated as 900,000 m³ in volume. (DLC.)

TOKAREV, P. I., *see also*

Markhinin, E.K., & *others.* Izuchenie sostoīaniīa vulkanov . . . 1961. No. 73819

Markhinin, E.K., & *others.* Izuchenie sostoīaniīa vulkanov . . . 1962. No. 73820

Markhinin, E.K., & *others.* Opyt vulkano-geograficheskogo raĭonirovaniīa . . . 1962. No. 73823

76173. TOKAREV, SERGEĬ ALEKSANDROVICH, 1899– . K voprosu o znachenii zhenskikh izobrazheniĭ ėpokhi paleolita. (Sovetskaīa arkheologiīa, 1961. god 5, no.2, p.12-30, illus.) Approx. 40 refs. Text in Russian. **Title tr.:** The meaning of female statuettes of the paleolithic era.

Suggests that they are not ancestor or mother-cult idols, but represent the "protector of the hearth." Such figurines were known to prehistoric and recent peoples of temperate or cold climates but not among primitive tribes of the tropics. This interpretation is supported by examples from the religious beliefs and art of Gilyaks, Golds, Evenki-Tungus, Nganasan-Samoyeds, Ostyaks, Voguls,

Yeniseians, Chukchis, Asiatic Eskimos, etc. The female personification of the home fire originated during the matriarchate and survived into patriarchal clan society. (DLC.)

TOKAREVA, L. A., *see* Zaporozhtseva, I.V., & L.A. Tokareva. Rezul'taty sverki . . . 1962. No. 76644

TOKODY-KRÜGER, H., *see* Kálmán, B. Die russischen Lehnwörter im Wogulischen. 1961. No. 72632

TOLLEY, H., *see* Blair, E., & *others*. Serum glutamic oxalacetic transaminase hypothermia. No. 70246

76174. TOLSTIKHIN, O. N. K voprosu o kolichestve yuvenil'noy vody, vydelyayushcheysya pri obrazovanii effuzivnykh porod. (Geokhimiya, 1961, no.11, p.1005-1008, table, diagr.) 9 refs. Text in Russian. Summary in English. **Title tr.:** On the amount of juvenile water isolated during the formation of effusive rocks.

Presents a diagram of the quantitative variation of water in Kamchatka and Kuril Islands volcanoes, based on 265 analyses. The data are compared with the results of experimental investigations on dissolution in silicate melts. The possibility is considered that during crystallization of magmatic rocks, a considerable amount of juvenile water remains free and may penetrate into the near-surface layers of the earth's crust. (DLC.)

76175. TOLSTIKHIN, O. N. O soderzhanii bora v vodakh mineral'nykh istochnikov Kamchatki i Kuril'skikh ostrovov. (Sbornik statey po voprosam gidrogeologii i inzhenernoy geologii, 1962, p.259-64, table.) 9 refs. Text in Russian. **Title tr.:** On the boron content of the mineral spring waters of Kamchatka and Kuril Islands.

Reports on the Nalycheva, Pushchino and other springs of Kamchatka and on the crater lake of Ebeko volcano. High boron content ($4 \cdot 10^{-4}$%) is found in the carbonate springs. Boron-bearing waters are connected with volcanic exhalations, the boron supply caused by magmatic processes, and they are concentrated in areas of granitoid intrusions. (DLC.)

76176. TOLSTIKHIN, O. N. Perspektivy neftenosnosti yuzhnoy chasti Kamchatki. (*In:* Akademiya nauk SSSR. Komissiya po problemam Severa. Syr'evye resursy . . . 1961, p.86-90.) Text in Russian. **Title tr.:** Prospects for oil in the southern part of Kamchatka.

Analyzes sections of Tertiary deposits and tectonic structure of the area. The Savan thermal waters (approx. 52°14′N. 156°58′E.) under chemical analysis indicate presence of oil and combustible gas. Carbon dioxide and methane distribution in subsurface water and other signs of possible oil accumulation are summarized, and some areas recommended for geologic, geophysical and geochemical prospecting. (DLC.)

76177. TOLSTIKOV, EVGENIY IVANOVICH. Severnyy morskoy put' stanet trassoy massovykh perevozok. (Morskoy flot, Oct. 1961. god 21, no.10, p.13-15, illus.) Text in Russian. **Title tr.:** The Northern Sea Route will become a mass-transportation route.

Discusses achievement and prospect in light of results of the 1960 shipping season. Larger icebreakers and ships, intensified oceanographic and meteorological research, aerial ice reconnaissance, have contributed to the extension of the shipping season. Tribute is paid to (named) navigators and other personnel. (DLC.)

76178. TOLSTOV, A. N. Oblast' bol'shikh razmyvov i termokarsta. (Problemy Severa, 1961. vyp.4, p.151-56, plan, maps.) 16 refs. Text in Russian. **Title tr.:** A region of great wash-outs and thermokarst.

Describes the large-scale erosional process on the northern coastal tundra of Yakutia between the lower Yana and Indigirka Rivers; based in part on field observations of 1952-53. The great mass of fossil ice beneath the thin ground cover is melting and in the degradation thermokarst ravines, tundra pools and lakes form. Battered by the sea, the shore is washed out and in some spots is receding as much as 7 km./yr. (DLC.)

76179. TOLSTOV, A. N. Treshchinnye l'dy v srednem i nizhnem techenii r. Pyasiny. (*In:* Akademiya nauk SSSR. Institut merzlotovedeniya. Igarskaya merzlotnaya stantsiya. Trudy 1961. vyp.2, p.140-51, illus., map, tables, diagrs.) 4 refs. Text in Russian. **Title tr.:** Fissure ice wedges on the middle and lower course of the Pyasina River.

Reports large polygonal ice wedges, or "fissure ice", found in many spots along the Pyasina, primarily in peaty formations. The tundra in this area is characterized by distinct polygons, the sides of which measure 15 m. or more. The cracks between them are as much as 1.5 m. wide and 50 cm. or more in depth. A number of ice wedges formed in recent times in these cracks in the flood-plain and next higher terraces are described. Older ice formations found in the banks of the Pyasina River are also mentioned. -From CRREL. (DLC.)

TOLSTOY, PAUL, *see* Rudenko, S.I. Ancient culture . . . 1961. No. 75253

TOMITY, ILONA T., *see* Takács, Ö., & *others*. Über die Permeabilität . . . No. 76070

TOMLIN, GENE W., *see* Alaskan Science Conference 1960. 1961. No. 69643

TOMMASI, M., *see* Lapras, A., & M. Tommasi. À propos des gelures . . . 1961. No. 73312

76180. TONEY, ROBERT D. Multiple-use management and its effect on logging practices. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.156-61.)

Describes the U.S. Forest Service policy of multiple-use of national forest resources, and its application in Southeast Alaska. Because of the higher value of the salmon industry, spawning streams must be protected or benefited from logging. Other resource uses in the area are still negligible. (CaMAI.)

TOPCHY, V., *see*

Armstrong, T.E. Soviet place-names. 1962. No. 69869

Sinclair, D.A., & V. Topchy. . . . transposition of Soviet geog. names. 1961. No. 75669

76181. TOPORKOV, L. G. Mozhno li unichtozhit' ledovyy pokrov Severnogo Ledovitogo okeana? (Priroda, Nov. 1961. god 50, no.11, p.93-97, illus.,

maps.) 2 refs. Text in Russian. **Title tr.:** Is it possible to eliminate the ice cover of the Arctic Ocean?

Critical analysis of the P.M. Borisov plan to ameliorate Arctic Basin conditions by pumping 150,000 km.³/year of its water over a dam (to be built) across Bering Strait, into the Pacific. The idea that this will cause greater influx of warm water from the Atlantic into the Arctic and thus improve its climate, is contested on grounds of primary sea and air currents, and many unknown factors, which make success questionable. (DLC.)

76182. TORSUEV, N. P. Karst basseĭna reki Mekhren'gi. (Vsesoĭuznoe geograficheskoe obshchestvo. Izvestiĭa, Nov.-Dec. 1961. t.93, vyp.6, p.531-37, profiles, map, diagrs.) 5 refs. Text in Russian. **Title tr.:** The karst of the Mekhren'ga River basin.

Reports a 1959 study of the karst topography of this river basin (63° 15′ N. 41° 20′ E.): the underground relief, structure of the region, component rocks, and climatic conditions are described. Morphology of present karst forms is analyzed, from measurement of 372 karst depressions. Present development of karst depends on the physical-geographic conditions, chemical composition of the Holocene stratum, and character of the Quaternary deposits. (DLC.)

TOTARO, S., *see* Salamone, L., & S. Totaro. Modificazioni dell' aldosemia . . . 1961. No. 75349

TOVAROVA, I. I., *see* Gorshkov, G.S., & I.I. Tovarova. Geochem. Bezymianny eruption. 1961. No. 71738

76183. TOWER, ELIZABETH A. Mid-air midwifery in Alaska. (Alaska medicine, Mar. 1962. v. 4, no.1, p.9-11, illus.)

Describes four successful deliveries in single-engine planes. Two others also are noted, all without complications to mother, infant, or to aircraft. (DLC.)

76184. TOWER, ELIZABETH A. Report from Valdez. (Alaska medicine, Sept. 1961. v.3, no.3, p.64-68, illus.)

Well illustrated description of the Harborview Nursing Home for mentally defective Alaskans; its staff, medical, technical, administrative; the patients: 25 men and 25 women, their age, ailments (severe); relations with the Valdez community. Also described by Millicent Tschaepe in *Alaska's Health and Welfare*, Aug. 1961, p.2-3. (DLC.)

76185. TOWER, JOHN C. Hypertonic dehydration; diarrhea with a difference. (Alaska medicine, Mar. 1961. v.3, no.1, p.8-11.) 8 refs.

Describes local treatment of diarrhea in children and a case of hypertonic (hypernatremic) dehydration in an infant, white, six months old. Symptoms and therapy of this dangerous syndrome are described. (DNLM.)

TOWNE, J. C., *see* Schaefer, T., & *others*. Temperature change . . . 1962. No. 75404

TOWNES, HENRY KEITH, 1913– , *see* Pacific Science Congress. 1961. No. 74619

76186. TOWNSEND, CHARLES P. The Polecat tractor. (Military engineer, May-June 1961. v.53, no.353, p.185, illus.)

Describes this 120 hp. International Harvester machine; it has a rated payload of 2,000-3,000 pounds and can carry six passengers. Composed of two fully-tracked units integrated by a hydraulically controlled joint, power can be transmitted to all tracks from one engine. It is steered by hydraulic actuation of the steering joint with direct mechanical-servo follow-up control (DLC.)

76187. TOZER, EDWARD TIMOTHY, 1928– . Summary account of Mesozoic and Tertiary stratigraphy, Canadian Arctic Archipelago. *(In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.381-402, maps, sections incl. fold. in v.3.) 50 refs.

Summarizes results of extensive work, mainly by the Geological Survey of Canada. Preserved chiefly in the Queen Elizabeth Islands, these Mesozoic-Tertiary rocks are best developed in the Sverdrup Basin, centered on Axel Heiberg and the Ringnes Islands; stratigraphically they contain an essentially conformable Pennsylvanian to early Tertiary Sequence. Marine and non-marine formations alternate; four Triassic, a dozen Jurassic, and three Cretaceous marine formations alternate with a half dozen non-marine formations. Tertiary beds are entirely non-marine and are mainly sandstone, shale, and coal. Within the Sverdrup Basin, Triassic formations are 17,500 ft. thick, Jurassic 1500, Cretaceous 12,000, Tertiary about 10,000. Small-scale maps show distribution of rocks; sections indicate stratigraphy of the Sverdrup Basin, and of west-central Ellesmere Island before the Tertiary orogeny. Correlation of Mesozoic and Tertiary formations of the entire archipelago is graphed. (DLC.)

76188. TOZER, EDWARD TIMOTHY, 1928– . Triassic stratigraphy and faunas, Queen Elizabeth Islands, arctic archipelago. Ottawa, Queen's Printer, 1961. 116 p. illus., maps, diagrs., tables. (Canada. Geological Survey. Memoir 316.) 151 refs.

Describes field data and fossil collections obtained mainly during 1955-1958 by Geological Survey of Canada personnel, establishing the main features of the rock and faunal succession of these formations. Exposures are found on ten or more of the Queen Elizabeth Islands; approximate limits of the Sverdrup Basin are defined by the south and east limits of Triassic rocks. Sequence of formations is given for the axial part of the basin and on the margins, the former mainly shale, the latter arenaceous, near-shore deposits. The sequence of marine faunas is described, including *Arctosirenites* n. gen. and 14 new species of ammonoids, and three new pelecypods. Correlation is suggested with the *Arctoceras* fauna of Spitsbergen and another from Idaho, formerly considered of different ages. Discoveries since 1930 in northeast Siberia, northern Alaska, and in these islands, indicate a wider distribution of Lower and Middle Triassic rocks than formerly believed. In most arctic areas, Triassic sections record generally continuous sedimentation, the sediments mostly were in shallow, marine waters, some above the strand line, but in late-Triassic time, non-marine conditions prevailed. (DGS.)

TOZER, EDWARD TIMOTHY, 1928– , *see also* Thorsteinsson, R., & E.T. Tozer. Banks, Victoria, Stefansson Islands . . . 1961. No. 76129

Thorsteinsson, R., & E.T. Tozer. Structural history . . . 1961. No. 76131

Thorsteinsson, R., & E.T. Tozer. Summary account . . . 1960. No. 76132

TRAILL, R. J., *see* Canada. Raw materials . . . 1962. No. 70566

76189. TRAINER, FRANK WILSON, 1921– . Eolian deposits of the Matanuska valley agricultural area, Alaska. (U.S. Geological Survey. Bulletin, 1961. no.1121-C, p.C1-C35, maps, graphs. Contributions to general geology.) 43 refs.

Discusses the deposition and stabilization of the modern sediment, the sedimentary facies in some of the deposits, and their significance in the interpretation of the late Quaternary history of the surrounding region. Deposition of the eolian sediment began during or after recession of the last glacial ice that covered this area, 11,600 - 8,000 yrs. B.P., and has continued to the present. Character of the deposits indicates that wind direction and intensity, source areas, and the environment of deposition have been similar throughout. Deposition has continued without major interruption, an indication that the chief source glaciers did not melt completely and the glacial-outwash streams have flowed continuously. Observations were made in the course of a geological and ground-water investigation in 1949-1951. (DGS.)

76190. TRANS-CANADA TELEPHONE SYSTEM. A study of communications in northern Canada. Toronto?, 1962. 86 p., maps incl. 5 fold.

Reviews climate, distance, terrain, maintenance of facilities, and unpredictability of markets as factors to be considered in planning communications beyond the limit of population concentration. A coordinated, improved and expanded communication network is required for exploration, development, and production in the North. High frequency radio systems appear to be the most economical and effective means of connecting its sparsely settled areas with the national telephone system. The primary resources: metals, minerals, oil and gas, hydroelectric power, and the secondary resources: arable land, forests, fish, fur, and tourism are reviewed *in extenso*. The influences on development of resources, markets, incremental costs, transportation, and government policy are discussed. A forecast of resource development and population growth to 1980 is given for all provinces with northern territory, and for the Yukon Territory and Northwest Territories. The existing scanty communications system north of 60° is described: the major centers are serviced by land lines, microwave or scatter; and the outposts and remote locations by high frequency radio. (CaONA.)

TRANSHEL', VOLDEMAR GENRIKHOVICH, 1868–1942, *see* Kuprevich, V.F., & V.G. Transhel'. Rzhavchinnye griby . . . 1957. No. 73217

TRAVEN', F., *see* Mukhin, A.A., & F. Traven'. Lesovedy-puteĭt͡sy . . . 1961. No. 74151

76191. TRAVIN, V. I. A brief survey of Soviet investigations in redfish, genus *Sebastes*. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.150, ICES/ICNAF Redfish Symposium, p.90-93.) 24 refs.

Discusses earlier work on this group, and studies since the early 1930's in taxonomy and morphology, geographical distribution, migrations at various ages, reproduction, growth, food. (DI.)

TRESHCHEVA, V. I., *see* Davydova, I͡U. S., & V.I. Treshcheva. Ispol'zovanie kitovogo mi͡asa . . . 1962. No. 70915

TRESHNIKOV, ALEKSEĬ FEDOROVICH, *see*

Burkhanov, V.F. Na ledi͡anom ostrove. 1962. No. 70461

Dolgin, I.M., & *others*. Itogi meteorologicheskikh . . . 1962. No. 71064

TRETTIN, H. P., *see*

Fricker, P.E., & H.P. Trettin. Pre-Mississippian succession Axel Heiberg. 1962. No. 71499

Kerr, J.W., & H.P. Trettin. Mississippian rocks & mid-Palaeozoic movements . . . 1962. No. 72746

TREVES, SAMUEL B., *see* Loewe, F., & *others*. Reconn. Sukkertoppen Tasersiaq. 1962. No. 73580

TRØIM, J., *see* Harang, L., & J. Trøim. Studies of auroral echoes, I. 1961. No. 72018

76192. TROFIMENKO, V. I͡A. Materialy po gel'mintofaune presnovodnykh i prokhodnykh ryb Kamchatki. (Akademii͡a nauk SSSR. Gel'mintologicheskai͡a laboratorii͡a. Trudy 1962. t.12, p.232-62, illus., tables.) 25 refs. Text in Russian. **Title tr.:** Materials to the helminth fauna of the fresh-water and migratory fishes of Kamchatka.

Study of endoparasitic worms, from some 500 fish, collected by the Kamchatka Helminthological Expedition in 1960. Some 37 forms of trematodes, cestodes, nematodes and acanthocephalans are recorded, including host(s), location and degree of infection, geographic occurrence, etc. This is followed by a list of fishes with their parasites and a zoogeographical analysis of the worms studied. (DLC.)

76193. TROFIMOV, G. A. Promkhozy Rossiĭskoĭ Federat͡sii. (Okhota i okhotnich'e khozi͡aĭstvo, Oct. 1962. god 8, no.10, p.1-3, illus.) Text in Russian. **Title tr.:** Commercial hunting farms of the Russian Federation.

Characterizes the hunting farm as the principal facility for utilizing of fur bearers and other byproducts of the forest. There were 111 hunting farms with 218 million hectares of assigned hunting grounds in the northern areas of RSFSR at the beginning of 1962. They delivered 56% of the sable, 33% muskrat, and 19% of the squirrel skins of 1961, as well as 1500 tons of pine nuts, and 170 t. of edible mushrooms. Fur farming and bee-keeping are also sources of income on these hunting farms. But shortage of personnel, especially in Komi and Yakut ASSR, hamper their development. (DLC.)

76194. TROFIMOV, VLADIMIR SERGEEVICH. Nekotorye zakonomernosti razmeshcheniI͡a almaznykh mestorozhdeniĭ na Sibirskoĭ platforme. (*In:* Akademii͡a nauk SSSR. I͡Akutskiĭ filial. Almazy I͡Akutii . . . 1961, p.142-53, tables, map, graphs.) 12 refs. Text in Russian. **Title tr.:** Some distribution laws of diamond deposits in the Siberian platform.

Outlines the structural patterns, magmatism, and distribution of kimberlite pipes of the Siberian platform between the Yenisey and Lena, and between the Arctic Ocean and northern slopes of the Sayan Mts. Kimberlite distribution extends over 1000 km., more than a hundred pipes have been discovered. Platformic depression, jointing directions, independence of kimberlite and trap magma, and other features are summarized, delineating the general patterns in diamond deposit distribution. (DLC.)

76195. TROFIMOV, VLADIMIR SERGEEVICH. Ob istochnike almazov v rossypiākh r. Markhi. (*In:* Akademiiā nauk SSSR. IAkutskiĭ filial. Almazy IAkutii . . . 1961, p.136-41, illus., tables, diagrs.) Text in Russian. **Title tr.:** On the source of diamonds in placers of the Markha River.

Reports a study of diamond-bearing properties in bed and terrace deposits of the Markha valley, based on own study in 1954 and those of others. Two diamond-bearing regions are distinguished as the upper and the lower Markha, the latter treated in detail. Content of diamonds, composition and weight of placers are analyzed. Material composition of the diamond placers indicates the rubble content silificated by oölitic limestones, source of which is the Anabar massif. Watershed gravel distribution in the region of left tributaries of the middle Markha is also analyzed. Source of the diamond placers is considered Cambrian and Jurassic clastic rocks. (DLC.)

76196. TROITSKAIĀ, VALERIIĀ ALEKSEEVNA. Pulsation of the earth's electromagnetic field with periods of 1 to 15 seconds and their connection with phenomena in the high atmosphere. (Journal of geographical research, Jan. 1961. v.66, no.1, p.5-18, tables, graphs, diagrs.) 24 refs.

Analyzes data from 17 Russian stations including six in the Arctic and two in the Antarctic. Several characteristic types of pulsations are identified and discussed in relation to upper atmosphere phenomena. Short irregular pulsations (T~1-15 sec.) composing the microstructure of several forms of macroscopic disturbances show close correlation with aurorae, pulsations of the pearl type (T~1-4 sec.) with cosmic-ray bursts in the stratosphere. The occurrence of pulsations with diminishing periods is discussed. The dependence of the fine structure of SSC on local time is analyzed. (DLC.)

76197. TROITSKIĬ, L. S. Ledniki iūzhnoĭ chasti Poliārnogo Urala. (Issledovaniiā lednikov i lednikovykh raĭonov, 1962. vyp.2, p.34-40, illus., map, table.) 8 refs. Text in Russian. Summary in English. **Title tr.:** Glaciers in the southern part of the Polar Ural.

Reports the discovery in 1960 of 44 glaciers, together about 6.5 km² in area; 16 of them in the Voykar-Syn'ya and Pay-Yer massifs; 12 in the Ray-Iz massif, and 16 in the Kharbey-Khoy, Khanmey-Khoy and Malyy Paypudinskiy Ridges. Several, considered typical, are described and traces of ancient corrie-valley glaciation characterized. The newly discovered glaciers are listed with statement of location, measurements, absolute height, exposure, and type. Throughout the Urals there are at present about 120 glaciers, their combined area more than 25 km². (DLC.)

TROITSKIĬ, L. S., *see also*

Akademiiā nauk SSSR. . . . Poliārnyĭ Ural; gliātsiogeomorfologiiā. 1962. No. 69554

Kemmerikh, A.O., & L.S. Troitskiĭ. Sovremennoe oledenenie . . . 1961. No. 72727

76198. TROITSKIĬ, S. L. Sovremennaiā i iskopaemaiā *Macoma baltica* L. na poberezh'e moriā Laptevykh. (Akademiiā nauk SSSR. Doklady 1961. t.136, no.2, p.449-52.) 13 refs. Text in Russian. **Title tr.:** Contemporary and fossil *Macoma baltica* L. on the coast of the Laptev Sea.

Discusses the present boreal and subarctic distribution of this bivalve in the Atlantic and Pacific and describes finds of shells in the Anabar and Olenek Bays several thousand km. from the two oceans. Fossil remnants indicate that the species penetrated into the Anabar and Olenek areas during a postglacial warm period. (DLC.)

76199. TROSHEV, ZH. Po Tunguske-reke. (Nash sovremennik, 1961, no.3, p.126-34.) Text in Russian. **Title tr.:** Down the Tunguska River.

Nine sketches depicting an early spring boat trip 1,000 km. down the turbulent Nizhnyaya Tunguska River. (DLC.)

TROTTER, A. D., *Jr., see* Hyman, C., & *others.* Distensibility of digital blood vessels . . . 1961. No. 72286

76200. TROUT, GEOFFREY C. A bibliography of the North Atlantic redfish. (International Council for the Exploration of the Sea. Rapports et procès - verbaux des réunions 1961. v.150 ICES/ICNAF Redfish Symposium, p.300-311.)

Contains some 400 references preceded by a subject index with six broad headings: statistics, biology, taxonomy, population studies, etc. Excluded are checklists, mimeographed or interim reports, administrative or rare material. (DI.)

76201. TROUT, GEOFFREY C. The growth of immature *Sebastes viviparus,* Krøyer from the North Norwegian coast. (International Council for the Exploration of the Sea. Rapports et procès - verbaux des réunions 1961. v.150, ICES/ICNAF Redfish Symposium, p.291-95, illus., tables.) 9 refs.

Reports on analysis of some otoliths collected on the Malangen Bank. Size and age distribution is analyzed; a growth rate suggested: "very slow" compared with the two other forms of the Barents Sea. (DI.)

76202. TROWELL, IAN D. Hello operator. (North Mar.-Apr. 1962. v.9, no.2, p.29-31, illus.)

Describes the Bell Telephone Co. system: radio-telephone facilities in northern Quebec, Labrador, and (experimentally) Southampton Island linked with the general telephone network through Alma, Quebec; and in northern Ontario with similar links. The Frobisher-Gagnon-Goose Bay telephone directory lists 1500 including 25 Eskimo subscribers. Services to northwestern Canada and defense installations, aircraft and vessels in the North are noted. (CaMAI.)

76203. TROYER, WILLARD A. The Alaska elk. (Alaska sportsman, June 1960. v.26, no.6, p.10-12, illus.) Alaska wildlife library, no.1.

Describes the appearance, mating and food habits of Roosevelt elk, introduced to Afognak Island from Washington State in 1929. Habitat

conditions on the island are ideal; the original eight animals have increased to a thousand and are expected to spread to Kodiak Island. This article initiates a series by experts on Alaskan animals, birds, and fishes with natural photographs as obtainable. (DI.)

76204. TROYER, WILLARD A. The brown bear. (Alaska sportsman, Aug. 1960. v.26, no.8, p.10-12, illus.) Alaska wildlife library, no.3.

Describes the physical characteristics, diet, habits, and playful disposition of this inhabitant of the coast and islands from Southeast Alaska to the Kuskokwim River. Alaska is the only state with a wild brown bear population, and there it is an asset to the tourist industry. Approx. 350 animals are taken annually by sportsment for trophies. Good photos. (DI.)

76205. TROYER, WILLARD A. The weasels of Alaska. (Alaska sportsman, Apr. 1961. v.27, no.4, p.30, illus.) Alaska wildlife library no.12.

Describes the distribution, physical characteristics including extreme agility, food, predatory habits, etc. of the ermine *Mustela erminea* and the least weasel *M. rixosa.* Beauty of the winter pelage and its value to trappers are noted. (DI.)

TROYER, WILLARD A., *see also* Alaskan Science Conference 1961. 1962. No. 69644

76206. TRUBE, L. Kak vliiaet Severnyĭ Ledovityĭ okean na klimat Vostochnoĭ Sibiri. (Geografiia v shkole, Mar.-Apr. 1961. god 24, no.2, p.64-65.) Text in Russian. **Title tr.:** How the Arctic Basin affects the climate of Eastern Siberia.

Discusses the causes of severe winter in Eastern Siberia with the Cold Pole in the Verkhoyansk-Oymyakon area. Proximity of the Arctic Basin is rejected as accounting for the low winter temperature and an explanation is sought in the geographical situation, the vast area, its geomorphic structure, the mountain barriers excluding from the Verkhoyansk-Oymyakon area, the moderating influence of oceans. (DLC.)

TRUBITSYNA, G. A., *see* Isaakian, L.A., & *others.* O vliianii temperaturnykh . . . 1962. No. 72412

TRUDEAU, JOHN, *see* Liebow, E., & J. Trudeau. Preliminary study . . . Winisk. 1962. No. 73492

76207. TRÜMPY, RUDOLF. Triassic of East Greenland. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.1, p.248-54.) 22 refs.

Summarizes the distribution and stratigraphy of the ammonite-bearing strata of lower Eotriassic age, which in central East Greenland (70°30′ - 74°30′N.) overlie the marine Permian formations conformably. Above them are the poorly fossiliferous arkoses, and red beds representing the upper Eotriassic as well as the Middle and Upper Triassic. Marine upper Scythian and Anisian deposits are known from Peary Land, North Greenland. (DLC.)

TRUNOV, V. G., *see* Shuĭskaia, F.K., & V.G. Trunov. O povedenii nekotorykh èmissiĭ . . . 1962. No. 75613

TRUSH, N. I., *see*

Kondrat'eva, K.A., & N.I. Trush. K voprosu . . . protaivaniia gruntov. 1961. No. 72918

Kondrat'eva, K.A., & N.I. Trush. . . . Sale-khardskikh stafionarnykh ploshchadok. 1961. No. 72920

76208. TRUSHCHELEV, M. G. Polimetallicheskie mestorozhdeniia basseina r. Ilycha; zapadnyĭ sklon Severnogo Urala. (*In:* Akademiia nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.220-42, illus., maps incl. fold.) 7 refs. Text in Russian. **Title tr.:** Polymetallic deposits of the Ilych River basin; western slope of the Northern Ural.

Describes the structural features of the Ilych deposits where polymetallic mineralization is established: in the Sotchem-Iol' deposits, copper and zinc; in Shantym-Priluk, lead and zinc; and in Zakola-Iol', lead-zinc and lead. Structure of the ore field and composition of the ore are treated in detail. The genesis of the deposits is analyzed. The Ilych basin is considered a good prospect for these minerals, and the lithologic and structural criteria are outlined for further studies. (DLC.)

TRUSHCHELEV, M. G., *see also* Prizhimova, L.P., & M.G. Trushchelev. Geologo-petrograficheskaia kharakteristika . . . 1962. No. 74959

TRUSLOW, FREDERICK KENT, *see* Gregg, M. Alaska's bald eagles. 1961. No. 71839

76209. TRYGGVASON, EYSTEINN. Crustal structure of the Iceland region from dispersion of surface waves. (Seismological Society of America. Bulletin, Apr. 1962. v.52, no.2, p.359-88, tables, graphs, diagrs., map.) 14 refs.

Analyzes Icelandic records of earthquakes originating in the Mid-Atlantic Seismic Belt between 52° and 70°N. The surface waves on the records, chiefly in the period interval 3-10 sec., are first mode Love and Rayleigh waves. Surface wave dispersion can be explained by a three-layered crustal structure: a surface layer of S-wave velocity about 2.7 km./sec. covering the entire region, a second layer of S-wave velocity about 3.6 km./sec. covering Iceland and extending several hundred km. off the coasts, and a third layer of S-wave velocity about 4.3 and P-wave velocity about 7.4 km./sec. underlying the whole region. Northwest of Iceland, the thickness of the surface layer appears to be about 7 km. The second layer is apparently of similar thickness; the third is thick. —From author's abstract. (DLC.)

TRYGGVASON, EYSTEINN, *see also* Båth, M., & E. Tryggvason. Deep seismic reflection . . . 1962. No. 69943

76210. TSCHAEN, LOUIS. Groenland 1948-1949-1950. Astronomie, nivellement géodésique sur l'Inlandsis; nouveau calcul. Paris, 1959. 113 p. maps, graphs, tables. (Expéditions Polaires Françaises. Missions Paul-Émile Victor. Pub. no. 207.) Refs. Text in French. **Title tr.:** Greenland 1948-1949-1950. Astronomy, geodetic levelling on the Inland Ice; new computation.

Contains results of complete check of 1949 and 1950 observations, previously reported by J. Nevière (No. 36447), and new calculations of elevation and position from Port Victor, north of Jakobshavn to Station Centrale (70°54′50″ N. 40°37′20″W., 2970.7 m.) and Terme Nevière (69°58′18″ N. 35°01′04″W., 2960 m.). Three methods of measurement are compared as to accuracy and the calculations followed are explained. Coordinates and altitudes of the route markers are tabulated, based on the original data. Aerial

photography, flown during August, is recommended for geodetic surveys on the crevasse zone. Beyond Camp VI, Weasels travelled without difficulty. (DLC.)

TSCHAEPE, MILLICENT, *see* Tower, E.A. Report Valdez. 1961. No. 76184

76211. TSEEB, RIMMA IAKOVLEVNA, 1929– . O sposobe pitaniia pikshi bentosom. (Zoologicheskii zhurnal, Jan. 1962. t.41, vyp.1, p.110-15, illus.) 10 refs. Text in Russian. Summary in English. **Title tr.:** The way haddock feeds on benthos.

Discusses the food spectrum of this fish on the Murman coast; and describes from laboratory observations, its ways of taking up and sorting food. Photographs illustrate these processes. (DLC.)

TSEEB, RIMMA IAKOVLEVNA, 1929– , *see also*

Mironova, N.V., & *others*. Raspredelenie . . . ryb . . . 1957 g. 1962. No. 74052

Mironova, N.V., & *others*. Raspredelenie . . . ryb 1958 g. 1962. No. 74053

76212. TSEITLIN, S. M. O nekotorykh zakonomernostiakh razmeshcheniia almazonosnykh rossypei v tsentral'noi chasti Tungusskoi sineklizy. (Akademiia nauk SSSR. Komissiia po probleme zakonomernosti razmeshcheniia poleznykh iskopaemykh. Zakonomernosti razmeshcheniia poleznykh iskopaemykh, 1960. t.4, Rossypi, p.172-78, map.) 11 refs. Text in Russian. **Title tr.:** On some distribution laws of diamond-bearing placers in the central part of the Tungusskiy synclise.

Reports a geologic and geomorphic study in the Nizhnyaya Tunguska, Ilimpeya, Taymyra and Chuna River basins, where diamond-bearing placers have been discovered, though of no practical value. The rivers are characterized by various features considered pertinent: the amount of diamonds is greater on the upper than on the lower reaches; the grain size of the diamond increases from south to north. A structural, geomorphic and geologic analysis is given of the entire region, and three areas indicated as the best for prospecting kimberlites, with which diamond placers are connected. (DLC.)

76213. TSEITLIN, S. M. Osobennosti razvitiia pleistotsenovykh oledenenii na severo-zapade Sibirskoi platformy. (Akademiia nauk SSSR. Doklady, June 1, 1961, t. 138, no.4, p.920-23.) 6 refs. Text in Russian. **Title tr.:** Development features of Pleistocene glaciations in the northwest of the Siberian platform.

Correlates Quaternary deposits in glaciated and non-glaciated zones of the Putorana Mts. and widespread adjacent areas. Maximal, Taz, Zyryanka and Sartan glaciations are described; previous depressions, the distribution and thickness of the deposits and other features are reported. All these glaciations are compared, noting prevailing patterns in their development. (DLC.)

76214. TSEITLIN, S. M. Ozerno-lednikovye gliny severo-zapada Sibirskoi platformy i ikh vozrast. (*In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p. 171-76, diagrs.) 3 refs. Text in Russian. **Title tr.:** Lacustrine-glacial clays in the northwestern Siberian platform, and their age.

Analyzes the mechanical composition, granularity, and lithologic characteristics of the bluish-grayish clays in the Bakhta, and Nizhnyaya Tunguska River basins, the Putorana massif, and elsewhere in glaciated areas of Siberian platform. The sections are described and correlated. Insufficient paleontologic data preclude exact age determination; they are considered tentatively as upper Pleistocene, and possibly Recent. (DLC.)

76215. TSEPLIAEV, VASILII PETROVICH. Lesa SSSR; khoziaistvennaia kharakteristika. Moskva, Gos. izd-vo sel'skokhoziaistvennoi lit-ry, 1961. 456 p. illus., tables, fold. maps in pocket. 45 refs. Text in Russian. **Title tr.:** Forests of the USSR, an economic outline.

Monographic study, dealing with the forest reserve, its distribution by provinces; the natural zones and their forests, coniferous and deciduous types, etc. and exploitation. Data are given (p.41-45) by province and national district on the forest cover in relation to their total area, and population, e.g. Tyumenskaya Oblast', 73%, 11 hectares/inhabitant; Krasnoyarskiy Kray, 72.1%, 25 ha.; Komi ASSR, 67%, 33 ha.; etc.; the arctic islands are unforested. (DLC.)

76216. TSIKULIN, M. A. Priblizhennaia otsenka parametrov Tungusskogo meteorita 1908 g. po kartine razrusheniia lesnogo massiva. (Meteoritika, 1961, vyp.20, p.87-94, illus., graphs.) 3 refs. Text in Russian. **Title tr.:** Approximate estimate of the parameters of the Tunguska meteorite of 1908 according to the picture of destruction of the forest massif.

Recent studies and material obtained concerning the direction of the meteorite's trajectory, its approximate angle with the earth's surface, and the map of intensity of destruction of the forest massif allows some parameters of this meteorite to be estimated. The wave produced by the fall was a ballistic wave. The full kinematic energy of fall is considered to be $(2\pm0.5)\cdot10^{23}$ erg. (DLC.)

76217. TSINTSIUS, VERA IVANOVNA. Voprosy perevoda na russkii iazyki publikatsii proizvedenii ustnogo tvorchestva narodov Severa. (Leningrad. Gos. pedagogicheskii institut. Uchenye zapiski, 1955. t.111, Materialy Gertsenovskikh chtenii, p.144-47.) Text in Russian. **Title tr.:** Problems of Russian translation and publication of oral literature of northern peoples.

Discusses the bilingual publication of Ugro-Samoyed, Tungus, and Peleosiberian texts. Arrangement of the original material and translations, footnotes and references, use of accepted literary vernacular versus phonetic rendering of dialectal forms, etc. are considered. A close yet free translation is preferred to a literal one. (DLC.)

TSUGULIEV, V., *see* Fogel', D.N., & V. Tsuguliev. Perspektivy ekspluatatsii lesov . . . 1961. No. 71451

76218. TSVETKOVA, S. G. Termicheskii rezhim gruntov pod ozerami v raione Igarki. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Materialy k osnovam ucheniia o merzlykh zonakh zemnoi kory, 1961. vyp.7, p.36-65, illus., tables, graphs, diagrs.) Text in Russian. **Title tr.:** Thermal regime

of ground beneath lakes in the Igarka region.

Reports study of the lithology of the soils, chemical composition of the lake and ground water, and the water and soil temperatures from own field work and records of the Igarka research station. The ground beneath lakes, even small lakes, and the saddles and troughs connecting these lakes were found to thaw to depths of 4-6 m. and more. In hilly lake shores, the permafrost layer breaks off abruptly at water level; the temperature of frozen ground in the center of such lake-shore mounds is 0° to -0.3°C., 10-15 m. from water level. The great depth of thawing beneath lakes cannot be due to the heat of the water alone, but certain factors act here as in the formation of thermokarsts in dry troughs and saddles, viz, deep and very irregular distribution of the snow cover, moist ground, and active ground water. The thawing of fine clayey soil beneath lakes to a depth of 5-6 m. follows the laws of conductive heat transfer. –From CRREL. (DLC.)

TSYKIN, EVGENIĬ NIKOLAEVICH, *see* Razumeĭko, N.G., & *others*. Marshrutnoe termozondirovanie . . . 1962. No. 75081

76219. TSYKINA, G. A. O vozmozhnosti primeneniia termistorov v kachestve datchikov temperatury pri gliatsiologicheskikh issledovaniiakh. (Issledovaniia lednikov i lednikovykh raĭonov, 1961. vyp.1, p.218-25, tables.) 10 refs. Text in Russian. Summary in English. **Title tr.:** On the possibility of using thermistors as temperature transmitters in glaciological investigations.

Discusses the degree of stability of thermistors, i.e. the change of nominal resistance values with time, under different field (temperature) conditions. One instrument, the MMT-4, is found well suited to extended-period remote-control observations when used with platinum thermometers; another, the TOS-M, should be checked for accuracy at least every 20 days. (CaMAI.)

TSYKINA, G. A., *see also* Razumeĭko, N.G., & *others*. Marshrutnoe termozondirovanie . . . 1962. No. 75081

76220. TSYMEK, ADOL'F ANTONOVICH, 1901– . Bogatstva taĭgi cheloveku. (Master lesa, Sept. 1961, no.9, p.13, illus.) Text in Russian. **Title tr.:** Resources of the taiga at man's disposal.

The forests of the Soviet Far East, from the northern forest-tundra southward contain some three hundred species of trees and shrubs, over 11 billion m³ of timber, including 60% of commercial hardwood species of the Soviet Union. The lumbering industry, sixty concerns, produces nearly 20 million m³/yr. Work of the leading forest research institute in the Far East is noted. (DLC.)

76221. TSYTOVICH, NIKOLAĬ ALEKSANDROVICH, 1900– . Stanovlenie, razvitie i prakticheskie prilozheniia mekhaniki merzlykh gruntov. (*In:* Materialy po laboratornym issledovaniiam merzlykh gruntov, 1961. sbornik 4, p.113-28.) 52 refs. Text in Russian. **Title tr.:** Origin, development, and practical applications of the mechanics of frozen ground.

Reviews highlights in the study of frozen ground and permafrost in the USSR, in particular such studies dealing with the mechanical properties of frozen ground. Future research objectives are proposed. (DLC.)

76222. TSZIU, Z. I. Tipy devonskikh otlozheniĭ Timano-Pechorskoĭ neftenosnoĭ oblasti i unifikatsiia ikh stratigraficheskikh skhem. (*In:* Soveshchanie po utochneniiu unifitsirovannykh stratigraficheskikh skhem paleozoia . . . Devon, 1962, t.2, p.98-114, table, cross-sections.) 16 refs. Text in Russian. **Title tr.:** Types of Devonian deposits of the Timan-Pechora oil-bearing region and unification of their stratigraphic schemes.

Correlates stratigraphic sections of Devonian deposits distributed in Middle and Southern Timan and the Troitsko-Pechora region. Stratigraphic correlation is also made between the Devonian of the Timan-Pechora and the Volga-Ural regions. Physical and especially paleontologic evidences indicate that a unified-standard stratigraphic section is possible for the Devonian deposits of these two regions, as demonstrated. (DLC.)

76223. TUGANOVA, E. V. O rudonosnykh intruziiakh basseĭna r. Kureĭki. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ geologicheskiĭ institut. Informatsionnyĭ sbornik 1960. no.40, Geologiia i poleznye iskopaemye Vostochnoĭ Sibiri, p.93-108, tables, diagr.) 3 refs. Text in Russian. **Title tr.:** Ore-bearing intrusions in the Kureyka River basin.

Presents a geologic and petrographic description of three trap intrusions studied in 1956-1957 in the middle Kureyka basin. Copper-nickel mineralization is detected, connected with gabbro-dolerites. The main ore-forming minerals, pyrrhotite, pentlandite, chalcopyrite, kubanite and others are described. Origin of the copper-nickel mineralization is discussed. These ore-bearing intrusions and those of the Noril'sk region have many similar features, which are summarized. The ratio of nickel and copper in the Kureyka ores is less than the Noril'sk, as is the thickness of the intrusions also. (DLC.)

TUGARINOV, A. I., *see*

Knorre, K.G., & *others*. Vozrast gornykh porod . . . 1962. No. 72873

Zhirova, V.V., & *others*. O vozraste tsirkonov . . . 1961. No. 76673

76224. TUGOLUKOV, V. A. Vitimo-olekminskie ėvenki. (*In:* Akademiia nauk SSSR. Institut ėtnografii. Trudy t.78, Sibirskiĭ . . . 1962, p.67-97, illus., table, map.) 14 refs. Text in Russian. **Title tr.:** Evenki of the Vitim-Olekma basin.

Reports study of reindeer Evenki or Orochi of Chita Province, mainly on a field trip in 1958. The pre- and post-Revolutionary culture and economy of this Trans-Baykal Tungus group (approx. 1200 in 1959) are discussed: fur hunting, transport-reindeer raising, and fishing. Recently introduced cattle breeding, fur and truck farming are deficient. Poor kolkhoz organization and disregard for local economic potentials are criticized. Abortive subsidiary industries create a man-power shortage; this is typical of most northern collective farms, and such industries should be abandoned. Traditional customs and feasts, especially vestiges of bear and fire cults, survive despite strong acculturation. Intermarriage in mixed kolkhozes accelerates the Russification process. (DSI.)

TULINA, IU. V., *see* Aver'ianov, A.G., & *others*. Deep seismic sounding . . . 1961. No. 69921

TULINOV, V. F., *see*

Charakhch'ian, A.N., & *others*. Cosmic ray intensity bursts, Nov. '60. 1962. No. 70659

Charakhch'ian, A.N., & *others*. . . . o kosmicheskikh luchakh ot solntsa. 1961. No. 70660

Charakhch'ian, A.N., & *others*. Vspyshki intensivnosti kosmicheskikh luchei . . . 1961. No. 70661

76225. TULLY, JOHN PATRICK, 1906– . Assessment of temperature structure in the eastern subarctic Pacific Ocean. Nanaimo, B.C., Nov. 16, 1961. 22 p. 18 illus., maps, graphs. (Canada. Fisheries Research Board. Manuscript report series, oceanographic and limnological, no.103.) 21 refs.

Defines two important structures in the upper 700 ft. depth in the Gulf of Alaska, based on extension of available data; viz: a seasonal thermocline is formed between 100 and 200 ft. in April and remains fairly constant until September; convection, due to surface cooling, takes place from Sept. through March. A permanent halocline exists between about 330 and 660 ft. depth over the entire region throughout the year. Variations in temperature, in potential layer depth, also in the limits and magnitude of the seasonal thermocline have been found. An airborne radiation thermometer, especially designed for intensive research on the near surface temperature structure was successfully tested in 1960. Its effectiveness in oceanic areas of the subarctic Pacific is discussed. Some preliminary information is needed, as are some bathythermograph data. (DN-HO.)

76226. TUMANOV, I. I., *and others*. Polevaia ustanovka dlia opredeleniia morozostoikosti rastenii. (Akademiia nauk SSSR. Vestnik, July 1962. god 32, no.7, p.69-72, illus.) Text in Russian. *Other authors:* N.A. Isakov *and* N.N. Khvalin. **Title tr.:** Field apparatus for determining the cold resistance of a plant.

Describes with technical details such a dedevice developed by N.A. Isakov in 1961, at the Artificial Climate Station of the Plant Physiology Institute of the Academy of Sciences. It enables a branch or other part of a growing plant to be maintained at 0°- 50° C. as long as needed for experimental purposes. (DLC.)

76227. TUMANOV, P. A. Dodevonskie osadochnye tolshchi Vostochnogo Pritiman'ia. *(In:* Soveshchanie po utochneniiu unifitsirovannykh stratigraficheskikh skhem paleozoia . . . Dodevon, 1962, t.1, p.126-33.) 10 refs. Text in Russian. **Title tr.:** Devonian sedimentary strata of Eastern Timan.

Discusses the stratigraphic division and age of metamorphic and old sedimentary deposits of the Timan Ridge and Kanin Peninsula, from evaluation of own and others' studies. Various series and subseries are discussed and correlated with the Ural and Russian platform. Though a definitive conclusion is not possible, these deposits are rather considered to be lower and middle Paleozoic. (DLC.)

76228. TUMANOV, P. A. O stratigrafii srednego devona iuzhnoi chasti Timano-Pechorskoi oblasti. *(In:* Soveshchanie po utochneniiu unifitsirovannykh stratigraficheskikh skhem paleozoia . . . Devon, 1962, t.2, p.115-20, table.) 8 refs. Text in Russian. **Title tr.:** On the stratigraphy of Middle Devonian in the southern part of the Timan-Pechora region.

Reports a separation of Eifelian deposits into four horizons and Givetian into two. Each horizon is described noting its physical and paleontologic evidences. These Middle Devonian deposits are stratigraphically correlated with those of Russian platform and western slope of the Ural. (DLC.)

76229. TUMEL', N. V. O vliianii form mikrorel'efa na sezonnoe protaivanie. *(In:* Moskva. Universitet. Geograficheskii fakul'tet. Voprosy geograficheskogo merzlotovedeniia. . . 1962, p.52-58, tables, graphs.) 5 refs. Text in Russian. **Title tr.:** Influence of microrelief forms on seasonal thawing.

Reports summer observations in the Bol'shezemel'skaya Tundra, the Vorkuta area, and northeast of it. Microrelief forms: irregular spots 0.4 x 0.6 m. to 1.0 x 1.5 m. and the mounds around them are characterized, noting the vegetation cover and other features. Ground thawing beneath the mounds is substantially less than under these spots and this disparity is particularly evident at the beginning of the summer. Composition of the ground, moisture content are also noted as factors affecting seasonal thawing. (DLC.)

TURANSKAIA, N. V., *see*

Balishov, IU.,A., & N.V. Turanskaia. Redkozemel'nye elementy . . . 1961. No. 69974

Balashov, IU. A., & N. V. Turanskaia. Redkozemel'nye elementy . . . 1962. No. 69975

76230. TURL, L. H. Clothing for cold conditions. (Journal of occupational medicine, Mar. 1960. v.2, no.3, p.123-28.) 11 refs.

Deals with three aspects of the problem: the environment, physical and physiological considerations, and clothing materials and design. Some general principles are recommended, viz materials should be permeable to water vapor; the outer garment should be highly wind- and water-proof and the whole ensemble adjustable to varying weather and working conditions. An introductory review of earlier studies is included. (DNLM.)

TURNBULL, H., *see* McGill, P.C., & D.M. Loranger. Micropalaeontol . . . Mackenzie. 1961. No. 73687

76231. TUROBOVA, Z. V., *and* **V. P. SEMENOV.** Granit-porfiry Verkhne-Emkyrchanskogo massiva. (Yakutsk. Universitet. Uchenye zapiski 1961. vyp. 9, ser. geologo-mineralogicheskikh i tekhnicheskikh nauk, p.11-17, illus.) 3 refs. Text in Russian. **Title tr.:** Granite-porphyry of the Upper Emkyrchan massif.

Describes granite-porphyry in the granodiorite-porphyry of this massif of southeastern Verkhoyansk Range, roughly 62° N. 136° E. in the Tyry basin. The granite-porphyry occurs in dikes; beds and laccolith-like bodies of various sizes. Its contacts with the enclosed granodiorite-porphyry are described. It is considered a hypabyssal intrusive formation at no great depth from the earth's surface. (DLC.)

76232. TUROV, S. Est' li teterev na Kolyme? (Okhota i okhotnich'e khoziaistvo, Mar. 1961. god 7, no.3, p.60.) Text in Russian. **Title tr.:** Are there black grouse on the Kolyma?

Occurrence of *Lyrurus* in the Kolyma, as well

as the Yana and Indigirka basins, as claimed by several ornithologists, is discounted from recent observations. (DLC.)

TUZOVA, A. M., *see* Gerasimovskiĭ, V.L., & *others*. O tsirkonievo-gafnievom . . . 1962. No. 71649

76233. TVETEN, L. H. Long-distance one-hop F_1 propagation through the auroral zone. (Journal of geophysical research, June 1961. v.66, no.6, p.1683-84, diagr.) 3 refs.

Reports recording of F_1 propagation over a 4495-km. path between Barrow, Alaska, and Boulder, Colorado. (DLC.)

76234. TYCHININ, VIACHESLAV. Angarskiĭ politekhnik. (*In:* Marĭagin, G.A., Goroda, kotorykh ne bylo na karte, 1960, p.44-74, illus., plates.) Text in Russian. **Title tr.**: The polytechnical town on the Angara.

Describes the new town of Angarsk, the Irkutsk-Cheremkhovka industrial center, at the confluence of the Kitoy River with the Angara. It began as a workers' settlement in 1946, and achieved town status in 1951. It has a lumber mill and furniture, brick-making, cement, concrete, etc. plants, and machine shops. The modern aspect and facilities of Angarsk, its scenic environs, and favorable climate are noted. (DLC.)

76235. TYCHININ, VIACHESLAV. Severnaĭa Odisseĭa. (Angara, Jan.-March 1962, no.1(54), p.24-31.) Text in Russian. **Title tr.**: Northern Odyssey.

Deals with the delivery of seven 25 t. dump-trucks to the Mir kimberlite pipe: by rail from Minsk to the end-of-steel at the Lena, by barge to Mukhtuya, thence under their own power to Mirnyy. Maneuvering the heavy trucks, each with a 25 t. pay load (electric excavator parts) along the narrow winding dirt-road and over wooden bridges built for lighter burdens, etc. is described. The 200 km. trip took two weeks' time. (DLC.)

76236. TYCHINO, N. IA. O proiskhozhdenii rassolov Angaro-Lenskogo artezianskogo basseĭna. (Leningrad. Vsesoĭuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961. vyp. 186, Geologicheskiĭ sbornik no.6, p.122-27, table.) 5 refs. Text in Russian. **Title tr.**: On the origin of the brines of the Angara-Lena artesian basin.

The brines of this basin in southern part of the Siberian platform are of calcium chloride type and two subtypes which differ in chemical composition and origin. Their chemical composition is reported. They are found in carbonate and carbonate-terrigenous deposits of the Lower Cambrian. Geologic development of the region, climatic conditions, and presence of a large saliferous basin are discussed, and a possible explanation is offered as to the origin of these brines. (DLC.)

TYCHINO, N. IA., *see also* Il'ina, E.V., & *others*. Podzemnye vody . . . 1962. No. 72344

TYNER, J. M., *see* Alaskan Science Conference 1961. No. 69644

76237. TYRTIKOV, A.P. K voprosu o kartirovanii sezonnotalogo i sezonnomerzlogo sloev pochvy po rastitel'nomu pokrovu. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Igarskaia merzlotnaia stantsiia. Trudy 1961. vyp. 2, p.109-113, tables.) Text in Russian. **Title tr.**: Mapping seasonally thawing and seasonally frozen layers of soil on the basis of vegetation cover.

Reports this mapping investigated in 1957-1958 near the Yenisey River in the Igarka Permafrost Research Station area. Three types of seasonally thawing soils: peaty, peaty clayey loam and peaty sandy loam, were established along with the vegetation normally associated with each. The same three soils types were also established in the case of seasonally frozen layers, but with different botanical associations. Thickness and range of thawing and freezing in these layers are reported. Vegetation was found to be a reliable guide to the composition and thickness of such soils. Tables showing vegetation and soil relationships are provided for mapping purposes.—From CRREL. (DLC.)

76238. TYRTIKOV, A. P. Moshchnost' sezonnotalogo sloia pochvy v raĭone Igarki. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Igarskaia merzlotnaia stantsiia. Trudy 1961. vyp.2, p.91-96, tables.) 14 refs. Text in Russian. **Title tr.**: Thickness of the seasonally thawing layer of soil in the Igarka region.

Reports results of 1957 measurements at 220 points and those of 1958 at 404. They were made at ten-day intervals on the terrace and flood plain of the Yenisey and in different types of relief, vegetation cover, and soil composition. Average, min. and max. thickness of the seasonally thawing layer are reported and data tabulated. The effects of soil composition, moisture, vegetation and slope exposure are characterized and data given. Soil composition is found to be main factor determining thickness of the layer which is 2-2.5 times less in peats than in loam. (DLC.)

TYSSØ, JONAS, *see* Flovik, K.J., & J. Tyssø. Jordbruket . . . 1961. No. 71447

UGG. study of the earth's mantle, *see* Comtois, P. Participation du Canada . . . 1961. No. 70800

UDA, MICHITAKA, *see* Pacific Science Congress. 1961. No. 74619

76239. UDINTSEV, G. B. Rel'ef i tektonika dna dal'nevostochnykh morei i smezhnykh raĭonov Tikhogo okeana. (Okeanologiia, 1961. t.1, vyp.3, p.456-65, fold. maps.) 9 refs. Text in Russian. **Title tr.**: Relief and bottom tectonics of the Far Eastern seas and of adjacent Pacific Ocean areas.

Discusses the compilation, legend, representation of relief and tectonics of the sea bottom in general tectonic maps. The tectonic map of Eurasia published in 1960 at 1:2,500,000 scale is analyzed to show how the tectonics of the bottom of Bering and Okhotsk Seas and adjacent areas are represented; symbols used for various features are illus. and discussed. (DLC.)

UDINTSEV, G. B., *see also* Pacific Science Congress. 1961. No. 74619

UGOLINI, F. C., *see* Brown, J., & *others*. Mineral composition . . . drainage waters . . . 1962. No. 70399

U LI-ZHEN', *see* Polkanov, A.A., & U Li-zhen'. O genezise . . . Khibinskogo subvulkana. 1961. No. 74858

UMANETS, V. N., *see*

Plotnikova, M.I., & *others*. . . . o metodike kartirovaniia terras . . . 1962. No. 74828

Plotnikova, M.I., & *others*. Rezul'taty litologicheskikh issledovanii . . . 1960. No. 74830

UNDERWOOD, M. C., *see* Moore, R.E., & M.C. Underwood. . . . noradrenaline & heat production, newborn. 1960. No. 74106

76240. UNDERWOOD, MARTIN B. State police contractual policing services. (Alaska local government, June 1961. v.1, no.2, p.1-4.)

Police Commissioner discusses a program for local communities to obtain state police services by contract; the city of Douglas' contract with the state Dept. of Public Safety is described. (DLC.)

76241. UNGSTRUP, EIGIL. Undersøgelser over naturlige radioforstyrrelser på hørbare freqvenser i Godhavn, Grønland. København, Feb. 15, 1960. 4 l. 2 refs. Mimeo. Text in Danish. **Title tr.:** Investigations of atmospherics on audible frequencies at Godhavn, Greenland.

Summarizes studies since 1957 on whistlers, chorus and hiss. Chorus and hiss occur in the 500-1400 c./s. range. Chorus appears most frequently near 1100 L.M.T. and rarely at night, similarly to slant E_s, blackout, and magnetic disturbances. The frequency during 0900-1200 decreases linearly from 36% at K = 2 to 14% at K = 7. The time distribution supports the theory of particle radiation as the primary cause of low-frequency ionospherics. The nose frequency of whistlers observed at Godhavn is about 16 kc./s., corresponding to propagation along a line of force from about 53° geomagnetic latitude. (CaMAI.)

U.S.S.R. Glavnoe upravlenie geodezii i kartografii MVD, *see* Kushner, P.I., & P.E. Terletskii. Karta . . . 1953. No. 73236

76242. U.S.S.R. VOENNO-MORSKOE MINISTERSTVO. Morskoi atlas, tom. 3; voenno-istoricheskii, chast' 1, opisaniia k kartam. Pod obshchei redaktsiei admirala G.I. Levchenko. Moskva - Leningrad, Izd. Glavnogo shtaba voenno-morskogo flota, 1959. xxviii, 920 p. illus., tables, plates & maps, incl. fold. Refs. Text in Russian. **Title tr.:** Marine atlas, v.3; military history, pt.1, descriptions to the maps. Admiral G.I. Levchenko, general editor.

Text to accompany No. 55595, with several sections on Russian activities in the arctic and subarctic seas, viz: expansion toward the North and Siberia, p.89-91; 17th century discoveries, p.172-76; Pacific and Arctic Ocean discoveries in the first half of the 18th century, p.250-57; expansion in Alaska and the North Pacific in the latter 18 - early 19th century, p.342-55; Russian round-the-world voyages in the first half of the 19th century, p.480-96; expansion in the northwest Pacific in the latter 19th century, p.638-46; defense of Kola Bay in 1914-1917, p.849-51; German submarine activities in the Barents Sea, p.855-56. (DLC.)

76243. UNITED KENO HILL MINES LTD. Current operations at United Keno Hill Mines. (Canadian mining and metallurgical bulletin, Oct. 1961. v.54, no.594, p.722-39, map, diagrs., sections, tables.) Prepared by various staff members.

Outlines history of this operation from a silver-lead showing in Galena Creek in 1906, to present property of 625 claims centered approx. 63° 50'N. 135°30'W. in the Galena Hill - Keno Hill area. Topography, climate, access and communications, etc. are described; outbound transport is by road to Whitehorse, thence Alaska Highway or railway to Skagway, by air from Mayo to Whitehorse. Geology, vein systems, ore bodies, mineralization, are treated for the three producing mines: Hector, Calumet, and Elsa. Mining practices are described; large amounts of timber are needed to support the soft heavy ground. Other problems are caused by permafrost and icing in the entries. Plans and sections show examples of stopes, drifts, crosscuts and veins. Production statistics 1959-1960, mines and milling costs are tabulated. (DGS.)

U.S. AIR FORCE. ARCTIC AEROMEDICAL LABORATORY, *see*

Rodahl, K. Studies on the blood . . . 1954. No. 75157

Symposia on Arctic Biology and Medicine. No. 76055 & No. 76056

76244. U. S. AIR FORCE. *Cambridge Research Laboratories* (Center). Proceedings of the third annual arctic planning session, Boston, November 1960. Bedford, Mass., Apr. 1961, viii, 148 p. illus., maps, graphs, tables. (*Its:* Geophysics Research Directorate. GRD research notes no.55.) Refs. Edited by G.P. Rigsby and V.C. Bushnell. In sequence to No. 62247 and 62248.

Presents results of field investigations and laboratory studies carried out under the 1960 Arctic Terrain Research Program: an overview by Col. Louis De Goes, remarks by J. C. Reed, followed by 18 papers on six categories of arctic research.

Ice-free land research was reported by W.B. Davies: air field sites; and summarized by S.M. Needleman.

Airborne geoscience was discussed by T.D.N. Douthit: airborne surveys by ski-equipped C-130.

Ice shelves and ice islands were reviewed by J.B. Lyons, R.H. Ragle, R.G. Blair; also by F.A. Crowley, by R.B. Sagar: Ward Hunt Ice Shelf; and by G. Cabaniss: Fletcher's Ice Island, T-3.

Arctic Ocean research produced papers by K. Hunkins on drifting stations, J.A. Businger on the Univ. of Washington, J.G. Dyer on the U.S. Weather Bureau, and V.C. Bushnell on T-3 and Station Alpha.

Arctic lakes research was summarized by D.F. Barnes: Angiussaq in North Greenland, Peters in northern Alaska, Centrum Lake in Greenland, all near termination.

Engineering properties of ice were discussed by C.E. Molineux on the background, C.M. Adams Jr. on solidification, W.D. Kingery on processed ice, W.F. Weeks on tensile strength NaCl ice, C.S. Grove Jr. and A.R. Aidun on aqueous foam insulation, D.W. Klick: Project Ice Way. Appended is a panel discussion by about 15 experts on the problems of arctic research and the direction it should take; G.P. Rigsby moderator, and the discussion begun by H. Bader. (DGS.)

76245. U. S. AIR FORCE. *Cambridge Research Laboratories. Geophysics Research Directorate.* Annual report 1960. Bedford, Mass., 1961? 250 p. illus., maps, diagrs., graphs, tables. (*Its:* AFCRL 637.) Refs.

Reviews research activities for Mar. 1, 1959 -

June 30. 1960, including programs dealing with the Arctic or arctic conditions, the Terrestrial Sciences Laboratory: seismology, acoustics, geology, glaciology, oceanography, hydrology; Photochemistry Laboratory: aerospace composition; Ionospheric Physics Laboratory: arctic ionosphere. Lists of projects, contractors, GRD publications, papers by GRD scientists are appended. (DWB.)

76246. U. S. ARMY. *Corps of Engineers.* Improvement of rivers and harbors in the Alaska District. (U.S. 87th Congress, 2nd sess. House document no. 254, pt. 2. Annual report for the fiscal year ended June 30, 1961 of the Chief of Engineers, U.S. Army, Civil works activities, *pub.* 1961. v.2, p.1975-92, tables.) Refs.

Describes work done on navigation projects, at Nome, Dillingham, Ninilchik, Homer, Seldovia, Valdez, Juneau, Douglas, and Ketchikan harbors, on Naknek River, and Gastineau Channel; also status of each project at the fiscal year end. Five more on which surveys only were made, also 27 other, authorized projects are summarized in tables. Preliminary field surveys were begun on the Fairbanks flood control project, and ten others are authorized. (DGS.)

76247. U. S. ARMY. *Polar Research and Development Center.* Army Ice Cap swing takes 22 days for round trip of 276 miles. (Arctic, Mar. 1962. v.15, no.1, p.77-78, illus.)

Describes monthly supply trips from Camp Tuto to Camp Century on the Greenland icecap. The supplies are carried in trains (swings) of 20-ton sleds pulled by low-ground-pressure D-8 and D-9 tractors. Tractor breakdowns and adverse weather conditions prolonged a winter 1961-62 trip, which is reported in some detail. (DGS.)

76248. U. S. ARMY. *Polar Research and Development Center.* The construction of Camp Century, final report. Fort Belvoir, Va., Dec. 31, 1961. 129 p. illus., plans, sections, tables. Ref.

Describes in some detail, the small under-snow camp about 200 mi. east of Thule on the Greenland Inland Ice. Planned and built largely by U.S. Army Engineer personnel 1958-1961, it is intended for testing new ideas in construction for icecap installations, testing a portable nuclear power plant, and to provide a base in interior Greenland for year-round research and development. The camp complex consists of some 26 main trenches and passages, in all nearly 10,000 ft. in length. Most buildings are standard, prefabricated T-5 structures. Planning and design of the camp, supply, site selection, construction, chronology of events are outlined. Most problems encountered were caused by deformation and settlement of snow walls and roofs; and their solution found not in stopping, but in adapting to these movements. Six appendices summarize man and equipment hours, costs, and meteorological observations; data and recommendations for future construction, etc.: 53 photos illus. equipment, personnel in action, some completed structures. (CaMAI.)

76249. U. S. BOARD ON GEOGRAPHIC NAMES. Finland, official standard names approved by the United States Board on Geographic Names. Washington, D.C., U.S. Govt. Print. Office, Mar. 1962. vi, 556 p. *(Its:* Gazetteer no.62.) refs.

Contains about 39,800 entries for places and features in Finland. With each listing is given variant names, type of feature, latitude and longitude, also locational references including map source. Diagram and formulas for converting longitude based on Helsinki (24°57′16.5″E.) to Greenwich longtitude are provided. A glossary of about 140 generic terms in Finnish, Swedish, or Lappish, is included. (DGS.)

76250. U. S. BUREAU OF LAND MANAGEMENT. Establishing a farm in Alaska. Washington, D.C., 1961. 32 p. illus. Refs.

Presents data on homesteading: federal and state regulations, costs, community facilities, land selection and acquisition, clearing and cultivation, construction, etc. Establishing full-time commercial farm costs $40,000 - 60,000; annual net income to be expected is $5,000 - 10,000; the main problems to be solved are marketing and lack of community facilities. The woman's point of view is presented also, by a homesteader's wife. (DA.)

76251. U. S. BUREAU OF LAND MANAGEMENT. The forest resources of Alaska; the significance of their conservation in the growth and development of Alaska. Washington, D.C., Feb. 1958. 22 p. Mimeo. Report to the Secretary of the Interior.

Reviews the extent and potentialities of the interior also coastal forests, damage from forest fires and need for expansion of the fire control. Four-fifths of the interior forests have burned in the last 60 yrs., leaving 85 million acres understocked and with four-cord volume/acre as compared with average nine cord/acre on the remaining 40 million acres of commercial forest. Productive capacity of the interior forests is estimated at over two billion bd. ft./year, but approx. one billion bd. ft. are destroyed annually by forest fires. (DI.)

76252. U. S. BUREAU OF THE CENSUS. United States census of agriculture 1959, Alaska, districts. Washington, D.C., U.S. Govt. Print. Office, 1961. xviii, 77 p. map, tables. *(Its:* Final report v.1, pt. 49, districts.) Refs.

Presents statistics on farm acreage, production, and manpower in 21 tables, nine of which compare 1960 data with those of earlier censuses and 12 showing these data for the 19 Alaskan districts. Appended is the special version of the census questionnaire used in Alaska, to take account of regional and local differences in agriculture. (DLC.)

76253. U. S. COAST AND GEODETIC SURVEY. Magnetic poles and the compass. Washington, D.C., U.S. Govt. Print. Office, 1962. 9 p. maps, graph. *(Its:* Serial 726, 2nd edition.) Originally written by H.H. Howe.

Clarifies in non-technical terms, four misconceptions on the earth's magnetic poles and the action of the compas. *1*, the compass points in the direction of the horizontal component of the magnetic field wherever the compass is located, and not to any single point. *2*, secular change of the earth's magnetism is a "regional phenomenon," not caused by motion of the magnetic pole. *3*, the magnetic poles, 75°N. 101°W. and 67°S. 143°E. 1960, are not definite, determinable points; the the North Magnetic Polar Area is decidedly elongated NNW-SSE. *4*, the secular change of the

magnetic field cannot be predicted; the U.S.C.G. Survey estimates the magnetic declination five years ahead by using the present value corrected by the present rate of change. (DLC.)

76254. U. S. COAST AND GEODETIC SURVEY. Ninth supplement to United States Coast pilot 8, Southeast Alaska, Dixon Entrance to Yakutat Bay, tenth edition. Washington, D.C., U.S. Govt. Print. Office. Jan. 7, 1961. 41 p. table. Refs. Supplement No. 37899.

Contains changes reported from Aug. 30, 1952 through Jan. 7, 1961, including notes on Taku Glacier still advancing, its discharge filling in the head of Taku Inlet, its ice no longer a threat to navigation, etc. Snow fall data for eight stations are tabulated. (DLC.)

76255. U. S. COAST AND GEODETIC SURVEY. Seventh supplement to United States coast pilot 9, Alaska, Cape Spencer to Arctic Ocean, sixth edition. Washington, D.C., U.S. Govt. Print. Office, Jan. 6, 1962. 36 p. Refs. Supplements No. 48581.

Contains changes reported from Nov. 6, 1954 through Jan. 6, 1962: notes on the port at Whittier, port facilities at Anchorage, several Aleutian Islands, etc. (DLC.)

76256. U. S. COAST AND GEODETIC SURVEY. Surface water temperature and salinity, Pacific coast, North and South America and Pacific Ocean islands. Washington, D.C., 1962. 71 p., maps, graphs. tables.) (*Its.*: C & GS Publication 31-3.) Supersedes No. 32613 and 62276.

Includes monthly means and annual means and extremes of these parameters for each year of observation after 1954, for 18 stations in Alaska. Earlier observations are combined in five-year groups, notably those at Juneau 1937– , Ketchikan 1922– , Seward 1926– , and Sitka 1924– . Map shows station distribution. (DLC.)

76257. U. S. CONGRESS. HOUSE. *Committee on Interior and Insular Affairs. Subcommittee on Public Lands.* Alaska military land withdrawals, hearings Eighty-seventh Congress first session, March 2 and 21, 1961. Washington, D.C., U.S. Govt. Print. Off., 1961. 53 p.

Contains correspondence and testimony by officers and officials of the U.S. Army, the Depts. of Defense and Interior, and the State of Alaska on five bills providing for withdrawal of lands from the federal public domain in interior Alaska, viz: H.R. 2279 and 2283, 2281, 2282, and 2280, for respectively, the Fort Greely, Fort Richardson, Ladd-Eielson areas, and a Nike Range 40 mi. east of Fairbanks. (DLC.)

76258. U. S. CONGRESS. HOUSE. *Committee on Merchant Marine and Fisheries.* Oceanography 1961, phase 1; hearing before the Subcommittee on Oceanography . . . 87th Congress, first session, on H.R. 4340, to amend title 14 of the United States code to provide for an expansion of the functions of the Coast Guard. Apr. 27, 1961, Washington, D.C., U.S. Govt. Print. Office, 1961. iii, 100 p. fold. map., tables.

Reports testimony of officials of the Coast Guard, Coast and Geodetic Survey, and Hydrographic Office; outlines the national oceanographic program and oceanographic ship operating schedules for fiscal year 1962, showing proposed cruises of vessels in northern waters. Coast Guard vessels and operations available for oceanographic research are summarized, including several, also various light ships, in arctic and subarctic waters. (DLC.)

76259. U. S. CONGRESS. HOUSE. *Committee on Public Works.* Highway construction program for Alaska, hearing before the Subcommittee on Roads, Eighty-seventh Congress, second session, on H.J. Res. 572, February 28, 1962. Washington, D.C., U.S. Govt. Print. Off., 1962. 63 p. maps, tables.

Contains statements and letters by federal government and Alaskan officials on this resolution to authorize studies and surveys of road construction requirements and costs in Alaska. Testimony presented is substantially the same as that given in the Senate hearing No. 76264; in the discussions; greater emphasis is placed on problems of financing the proposed construction. (DLC.)

76260. U. S. CONGRESS. SENATE. *Committee on Commerce.* Study of Alaska transportation, hearings Eighty-seventh Congress, first session, October 20, 21, 23, 25, and 27, 1961. Washington, D.C., U.S. Govt. Print. Off., 1962. 191 p.

Records testimony and correspondence presented at Fairbanks, Anchorage, Juneau, and Ketchikan, by representatives of transportation companies, the Alaska Railroad, the port of Anchorage, federal and state governments, etc. Five bills are considered, including: S.1725 and S.1839 for the establishment and review of through routes and joint rates; S.1978 for terminal area exemption; S.2413 for the regulation of the Alaska Railroad under the Interstate Commerce Commission; and S.2484 for establishing a foreign trade zone and international reception and information center at the Anchorage International Airport. Effects of transportation on forest and mineral resources development are discussed. (DLC.)

76261. U. S. CONGRESS. SENATE. *Committee on Commerce. Merchant Marine and Fisheries Subcommittee.* Fishing research and rehabilitation, amendments to Saltonstall-Kennedy Act, hearing Eighty-seventh Congress first session on S.1230, June 15, 1961. Washington, D.C., U.S. Govt. Print. Off., 1961. 103 p.

Contains testimony and correspondence by the Director of the Alaska Division of Commercial Fisheries, various fishermen, cannery operators, federal and state officials, on Senator Gruening's proposal to establish an additional federal fund for fishery studies and development. The decline of the Alaska salmon fishery is described with statistics for 1905-1959; the need for federal funds to rehabilitate it is stressed. Editorial in *Fishboat,* Sept. 1961, p.25, 38, urges fishing industry to support for this bill. (DLC.)

76262. U. S. CONGRESS. SENATE. *Committee on Commerce. Merchant Marine and Fisheries Subcommittee.* North Pacific fisheries problems, hearings Eighty-seventh Congress first session, October 1961. Washington, D.C., U.S. Govt. Print. Off., 1962. 2 v.: 640 p. fold. map, tables. Refs.

Contains testimony and correspondence by representatives of federal and state agencies, the fishing industry, biologists, sportsmen, etc. on the salmon, halibut, crab, shrimp, and other fisheries; hearings in California and Seattle on Oct. 4 and 12 in v.1, in v.2, those in Alaska during Oct. 13-27

at Petersburg, Dillingham, Homer, Naknek, Kodiak, Fairbanks, Anchorage, Cordova, Juneau, and Ketchikan. Fishery research, rehabilitation and development needs are presented, with discussion of the declining salmon resource especially in the Bristol Bay area, the North Pacific Fisheries Treaty, competition from Japanese and Russian fisheries, sea lion depredations, Alaskan transportation, and local problems. Bills S.1230 and HR.7490 to provide federal funds for fishery research and for marine mammal protection on the high seas are considered. The Seattle hearings emphasizing the North Pacific halibut and Bristol Bay salmon fisheries, are reported in *Fish boat,* Nov. 1961, p.20-21. (DLC.)

76263. U. S. CONGRESS. SENATE. *Committee on Interior and Insular Affairs. Subcommittee on Public Lands.* Alaska military land withdrawals, hearings Eighty-seventh Congress first session. Fairbanks, Alaska, May 10, 1961, Anchorage, Alaska, May 15, 1961. Washington, D.C., U.S. Govt. Print. Off., 1961. 62 p. Senate and House bills S.353-357 and H.R.2280-2283.

Contains testimony and correspondence by the military, by federal and state agencies, private organizations and individuals on legislation to withdraw Federal public domain lands for 10-15 yrs. use by the U.S. Army. The proposed withdrawals are in the Fairbanks-Big Delta, and Anchorage areas. Decontamination of the land after military use, and effect of the withdrawals on natural resource development are discussed, as well as the proposed uses. (DLC.)

76264. U. S. CONGRESS. SENATE. *Committee on Public Works.* Study of highway program for Alaska, hearing before the Subcommittee on Roads, Eighty-seventh Congress, second session, on S.J. Res. 137, February 27, 1962. Washington, D.C., U.S. Govt. Print. Off., 1962. 65 p. fold. maps, tables.

Contains statements and letters on this bill authorizing the U.S. Secretary of Commerce and the State of Alaska to study highway requirements, financing, and possible Alaskan-Canadian road connections. The present road system is described, and estimates presented of construction and maintenance costs: $1,721,000, and needs during the next 15 years. Proposed additions (2300 miles) to the main roads, and recommended farm-to-market and access roads are listed. (DLC.)

76265. U. S. DEPT. OF AGRICULTURE. *Agricultural Estimates Division.* Alaska farm production 1960. Palmer, Alaska Division of Agriculture and Alaska Experiment Station, Cooperative Crop Reporting Service, 1961. 10 p. map, tables, graph. Mimeo. Annual report issued since 1953 though in less detail in previous years.

Reports quantity and value of production, sales volume and income tabulated by product and farming area for livestock and poultry products, vegetables, grain, roughages, and hay. Cattle, sheep, hogs and chickens are tabulated by age groups and by area; acreages planted and harvested are tabulated by crop. The 1960 production increased 8% above 1959 to $5,406,410 value: milk 40%, potatoes 13%, hay and silage 20%. Sales were 66.6% in the Matanuska - Susitna - Anchorage area, 17.7% Tanana valley, Kenai 4.6%, Southeast Alaska 5.6%, Kodiak and others, 6.2%. Data from the 1953-1957 reports are summarized by A.H. Mick, q.v. (DA.)

76266. U. S. DEPT. OF DEFENSE. The effects of nuclear weapons. Samuel Glasstone, editor. Revised edition. Washington, D.C. Atomic Energy Commission, 1962. xvi, 730 p. col. front., illus., diagrs., tables. Refs.

Includes (p.680-81) tabulated data on detonations on the Soviet arctic test site at 75°N. 55°E. on Novaya Zemlya: two in Sept.-Oct., 1957; eight in Feb.-Mar. 1958, 14 in Sept.-Oct. 1958; date and yield of each are noted. (DLC.)

76267. U. S. DEPT. OF STATE. *Office of the Geographer.* U.S.-Russia convention line of 1867. Washington, D.C., May 21, 1962. 4 p., col. map, table. (*Its:* International boundary study no.14.) 3 refs.

Contains the standard description for map representation of the Convention line establishing the so-called boundary in Chukchi Sea, Bering Sea and Strait, and the North Pacific. Key points shown are the starting point 72°N. 168°58′22.587″ W.; initial turning point 65°30′N. 168°58′22.587″ W.; second turning point 64°12.3′N. 172°W.; midpoint between Ostrov Mednyy and Attu Island: 53°45′N. 170°16′E.; and 50°36.4′N. 167°E. as end point. (DGS.)

76268. U. S. GEOLOGICAL SURVEY. Geological Survey research 1962, short papers in geology and hydrology, articles 60-119. Washington, D.C., U.S. Govt. Print. Office, 1962. p.C1-C146, illus., maps, sections, profiles, tables. (*Its:* Professional paper 450-C.) Refs.

Contains 60 short papers, two on Alaska: Variation in rank of Tertiary coals in the Cook Inlet basin, by F.F. Barnes, p.14-16. These coals range from lignite to anthracite; generally increase in rank with depth. Age, and load or regional metamorphism, also are related to increased rank.

Gravimetric determinations of ice thickness of Jarvis Glacier, Alaska, by N.A. Ostenso and G.W. Holmes, p.93-96. Reports five gravity traverses made across, and one along this retreating glacier on the north flank of the Alaska Range, Mar. 30-May 1, 1955. Maximum ice thickness of 1,055 ft. was found in the center of the cirque. (DLC.)

76269. U. S. GEOLOGICAL SURVEY. Geological Survey research 1961. Washington, D.C., U.S. Govt. Print. Office, 1961. 4 v.: 146, 344, 398, 408 p. illus., maps, diagrs., graphs, tables. (*Its:* Professional papers 424A-D.) Refs.

Research results presented include geologic mapping, geophysical and geochemical surveys and surface- and ground-water studies in Alaska, p.A40-44; permafrost studies in Greenland and Alaska p.A65-66. Investigations in progress dealing with Alaska are listed p.A111-13. Part B, 146 short papers, includes two on Alaska, viz: Reconnaissance of the Kandik and Nation Rivers, east-central Alaska, by E.E. Brabb, p.B218; Pennsylvanian rocks in southeastern Alaska, by J.T. Dutro *and* R.C. Douglass, p.B239-41.

Pt. C, also 146 short papers, has five on Alaska and two on Greenland, viz: Beryllium in stream sediments from the tin-tunsten provinces of the Seward Peninsula, Alaska, by C.L. Sainsbury *and others,* p.C16-17; The quartz diorite line in northwestern North America, by J.G. Moore, *and*

others, p.C87-90; Orientation of phenoclasts in laminated glaciolacustrine deposits, Copper River basin, Alaska, by H.R. Schmoll, p.C192-95; Sorting of beach sediment, northwestern Alaska, Project Chariot, by G.W. Moore, p.C198-200; Evidence for local glacier stagnation in East Greenland, by J.H. Hartshorn, p.C216-18; Thermal regime during the thaw of Centrum Sø, northeast Greenland, by D.B. Krinsley, p.C219-21; Correlation of the arctic Permian, by J.T. Dutro, Jr., p.C225-28.

Pt. D contains 143 additional short papers, among them ten on Alaska, one on Greenland, viz: Analyses of gas and water from two mineral springs in the Copper River basin, Alaska, by D.R. Nichols *and* L.A. Yehle, p.D191-94; Thrust faults in the southern Lisburne Hills, northwest Alaska, by R.H. Campbell, p.D194-96; Physiographic processes of sedge meadow pool formation on Latouche Island, Alaska, by H.T. Shacklette, p.D197-98; Regionally metamorphosed metalliferous contact metasomatic deposits near Nome, Alaska, by C.L. Hummel, p.D198-99; Multiple glaciation in the headwaters area of the Delta River, central Alaska, by T.L. Péwé, p.D200-201; Recession of Portage Glacier, Alaska, by R.A.M. Schmidt, p.D202-203; Polygonal features on bedrock, North Greenland, by W.E. Davies, p.D218-19; Early Cretaceous, Middle Neocomian, microfossils in south-central Alaska, by H.R. Bergquist, p.D236-37; Gravity low at Minto Flats, Alaska, by D.F. Barnes, p.D254-57; Geologic results of November 1960 Project Chariot high-explosive cratering experiment, Cape Thompson, Alaska, by R. Kachadoorian, p.D368-71; Engineering geology problems in the Yukon-Koyukuk lowland, Alaska, by F.R. Weber *and* T.L. Péwé, p.D371-73. (DGS.)

76270. U. S. GEOLOGICAL SURVEY. Plan and dam sites, Olive, Kunk, and Anita Lakes, Etolin Island, Alaska. Washington, D.C., 1960. map sheet 18 x 25 in.

Shows on a scale of 1 in.: 1000 ft., contour interval 20 ft., the topography, and capacity of these reservoirs; topography of the dam sites is shown on an inset at scale 1 in: 200 ft., contour interval 10 ft. on land and one ft. on water. Data are from aerial photography of 1948, and from plane table surveys 1959-1960. Anita, the middle lake, is located at approx. 56°15′N. 132°30′W., on northern Etolin Island, about 10 mi. south of Wrangell. (DGS.)

76271. U. S. GEOLOGICAL SURVEY. *Water Resources Division.* Quantity and quality of surface waters of Alaska 1961. Juneau, Alaska. 1962. 131 p. tables, illus.

Contains surface-water records for some 75 gaging stations, also discharge measurements at other points and miscellaneous analyses of streams. Terms are defined, data explained, and results evaluated for accuracy. Preparation was directed by R.E. Marsh and R.G. Schupp. This is the first of projected annual reports. (DGS.)

76272. U. S. HYDROGRAPHIC OFFICE. Oceanographic data report, NRL acoustic survey, August 1959, USS Rockville (EPCER-851.) Washington, D.C., Jan. 1960. 71., tables. (*Its:* H.P. Misc 16864.) Ref.

Tables of ocean temperature and salinity and derived sound velocity values are given from seven stations in the Labrador Sea, 51°30′ - 53° 30′N. 45°-49°W. (DN-HO.)

76273. U. S. HYDROGRAPHIC OFFICE. Oceanographic instrumentation, final report of the Committee on Instrumentation. 2d. ed. Washington, D.C., Oct. 1960. var. paging, diagrs., graphs, tables. (*Its:* Special publications SP-41.) Approx. 125 refs.

Evaluates existing as well as proposed new instruments, from viewpoint of design and development, test and evaluation, and maintenance. Conclusions and recommendations are stated. Appended are summary accounts, by various scientists, of geophysical data collections, sea-water temperature, salinity and density, pressure, currents, ocean waves, radiation, marine biological sampling, bottom material and strata, bathymetry, tide, gravity, geomagnetism, positioning, winches and hoists. (DN-HO.)

76274. U. S. HYDROGRAPHIC OFFICE. Oceanographic observations arctic waters: Task Force Five and Six, summer-autumn 1956, Washington, D.C., Oct. 1960. vi, 89 p. maps, tables. (*Its:* Technical report TR-58.)

Contains oceanographic data obtained in the Western Arctic by the USS *Requisite* in July-Aug., the USS *Eldorado* in Aug., and by the USS *Atka* in Aug.-Sept. 1956; also data obtained in the eastern sector, Baffin Bay - Davis Strait, by the USCGC *Eastwind* Oct. 1956, in support of the Hydrographic Office's ice forecasting program. Temperature, salinity, density, sound velocity, dynamic depth anomaly, current, and bottom sediment data are included in this report; ice data and bathythermograms are on file at the U.S. Hydrographic Office. In all 54 stations were occupied, providing 287 bathythermograms, 38 current stations, and 31 bottom samples. The *Requisite* occupied stations along the coast of Alaska and Canada from Cape Lisburne to Ross Strait; the *Eldorado* three sites off the Icy Cape - Point Barrow area; the *Atka* 11 stations in Chukchi Sea, Bering Sea and Strait. (DN-HO.)

76275. U. S. HYDROGRAPHIC OFFICE. Report of the ice observing and forecasting program, 1959. Washington, D.C., August 1961. vii, 121 p. maps, graphs, tables. (*Its:* Technical report TR-69.) Refs.

Summarizes this program, mainly in support of resupply operations in the Eastern Arctic by the U.S. Military Sea Transportation Service and by Canadian vessels: ice reconnaissance as carried out by long-range aircraft and helicopter, with data on southern Greenland waters from Danish Air Force flights and on Foxe Basin and Hudson Strait from Canadian flights. Forecasts of opening dates were made on the basis of No. 62293. Supplementary projects included: oceanographic observations, time-lapse photography of ice conditions in North Star Bugt; harbor freeze-up studies in Goose Bay, Søndre Strømfjord, Thule, etc. The Western Arctic is dealt with similarly in pt. 2: resupply was carried out mainly by commercial vessels, some under control of the Canadian Dept. of Transport. Supplementary projects included time-lapse photography of melting and freezing of ice-floes, made on drifting station Charlie (Alpha II). In general, observed data of harbor entry occurred earlier than those forecast in No. 62293. Observed ice conditions for six-day periods from Jan. through

Dec. are charted on fairly small scale for the various waters from Bering Sea to Denmark Strait; overall and unusual conditions in selected areas are also described in the text. (DN-HO.)

U. S. HYDROGRAPHIC OFFICE, *see also* U.S. Climatological . . . atlas . . . 1961. No. 76279

U. S. NAVAL MEDICAL SCHOOL, *see* Hedblom, E.E. Polar manual. 1962. No. 72085

76276. U. S. NAVY. *Weather Research Facility,* Norfolk, Va. Jet stream climatology at 500 mb north of 50°N. Norfolk, 1961. ix, 138 p. charts, diagrs., graphs, table. (*Its:* NWRF 20-0661-045.) 9 refs. Task 20, assigned to BUAer Project AROWA, 1952.

Summarizes earlier work, chiefly by Pan American World Airways' Pacific-Alaska Division, cf. No. 54697; and presents results of a study of jet stream conditions at 500 mb (approx. 5.5 km.) north of the 50th parallel during 1947-1953 and 1955-1957. The frequency of occurrence of jet streams are discussed on a seasonal and monthly basis, summarized on charts and graphs. Favored region throughout the year is the sector 50°-85°N. 15°-25°W. thus including the Greenland Sea. Favored seasons are spring and fall; dominant orientation of jet stream centrums, seasonally, is generally parallel to the mean 500 mb contours for that season. Chap. 2, p.38-137, discusses and maps the large-scale jet stream patterns that are apparent when blocking conditions exist in specific geographic regions, e.g., Kamchatka, Beaufort Sea, Bering Sea - Western Alaska, etc. Results and conclusions are based primarily on 500 mb data and should not be generally applied to other constant pressure surfaces. (DLC.)

76277. U. S. OUTDOOR RECREATION RESOURCES REVIEW COMMISSION. Alaska outdoor recreation potential; report to the ORRRC by the Conservation Foundation. Washington, D.C., U.S. Govt. Print. Office, 1962. viii, 63 p., maps, graphs, tables. (ORRRC study report 9.) Refs.

Reviews public policy relating to recreation in Alaska, and the present role of the state, and suggests a guide for future development. The three major Alaskan regions are described and early surveys of recreation resources discussed, e.g. the 1937 Alaska Resources Committee study. Five recreation potentials are noted: big game hunting and photography, seals and walrus, waterfowl breeding grounds, arctic wilderness, and fishing, boating, and sailing. Economic, political, and technological factors affecting recent recreational development are briefly stated: improved transportation, military spending and other governmental support of the economy, increased travel to Alaska, etc. Recreational vs. economic development is considered in relation to role of the federal government. The pattern of land control and its changes relative to recreation are outlined; land status in 1958-1960 is tabulated, indicating federal land reserves, etc. Current use of the recreation facilities and lands is described; programs and policies of federal and state agencies and future planning discussed. (DI.)

76278. U. S. SOIL CONSERVATION SERVICE. Soil survey of Kenai - Kasilof area, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1962. 56 p. illus., maps incl. 22 col. fold., graphs, tables. (*Its:* Soil survey series 1958, no.20.) 11 refs. Prepared in cooperation with the Alaska Agricultural Experiment Station.

Contains general survey of this part of the Kenai Peninsula in southern Alaska; its geology of mountains and lowland, transitional climate, and settlement with a little farming. Major soil areas and groups are indicated and descriptions given of the 28 soils series mapped, with representative profiles of some. Use and management of the soils, engineering applications, test data, physical properties, etc., also native vegetation are discussed. Distribution of soils types during fieldwork in 1957 is overprinted on 1950-51 aerial photography, scale 1 in.: 2500 ft. General distribution of the six main soils areas is mapped in color at approx. 1 in.: 5 mi. scale. (DGS.)

U. S. TREATIES, *see* U.S. Dept. of State. U.S.-Russia convention line of 1867. 1962. No. 76267

76279. U. S. WEATHER BUREAU, *and* **U. S. HYDROGRAPHIC OFFICE.** Climatological and oceanographic atlas for mariners, vol. 2, North Pacific Ocean. Washington, D.C., U.S. Govt. Print. Office, 1961. 6 p. tables & 159 col. charts. 59 refs. Looseleaf. In sequence to No. 62309.

Coastal stations providing data for surface climatic charts include six in Alaska, the Aleutians and Kamchatka; upper wind stations, nine in Alaska and the Aleutians. Charts cover the waters 105°W. - 100°E. to 70°N., including Bering Sea and Strait, Sea of Okhotsk and part of Chukchi Sea. (DWB.)

76280. U. S. WEATHER BUREAU. Key to meteorological records documentation: no.1,1 substation history and no.1,2 station history, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1958. 85 p., tables.

Records data for about 450 Alaskan stations and substations from their beginning through 1957, or to closing of the station. The 11 types of information include location, elevation, exposures, instrumentations, and observers. (DWB.)

76281. UNITED STATES NAVAL INSTITUTE, *Annapolis, Md.* The Northwest Passage. (*Its:* Proceedings, Mar. 1961. v.87, no.3, p.150-52, map.)

Lists, with comments, attempts upon the Passage from the 11th century to 1960. (DLC.)

76282. UNITED STATES NAVAL INSTITUTE, *Annapolis, Md.* Submarines in the Arctic. (*Its:* Proceedings, Apr. 1961. v.87, no.4, p.136-37, illus.)

Lists cruises 1946-1960, with comments. (DLC.)

76283. UNIVERSITETETS ARKTISKE STATION, *Godhavn, Greenland.* Check-list of vascular plants of Greenland. Odense, Andelsbogtrykkeriet, 1961. 39 p. (*Its:* Publication no.30.)

Lists about 500. (AIKøbenhavn.)

76284. UNTERSTEINER, NORBERT. On the mass and heat budget of arctic sea ice. (Archiv für Meteorologie, Geophysik und Bioklimatologie, ser. A, 1961. Bd. 12, Heft 2, p.151-82, map, diagrs., graphs, tables.) 38 refs. Summary in French and German. *Also pub. as:* Univ. of Washington, Seattle, Dept. of Meteorology and Climatology,

Contribution no.51. Condensed version pub. in: IUGG. Association of Scientific Hydrology, 1961. Pub. No.54, p.63.

Presents partial results of studies carried out on drifting station Alpha during the IGY. The floe's annual mass increase was 12.5 g/cm² snow and 52 g./cm² bottom accretion; loss by surface ablation in summer was 19.2 and 41.4g./cm² in 1957 and 1958 respectively. Bottom ablation by heat transfer from the ocean was found to be 22 cm. in July-Sept. Methods of measuring mass changes are described and their accuracy discussed in detail. The heat budget is computed for a selected period during the height of the melt season. Average daily totals are in cal./cm²: +142 from net short wave radiation, −8 from net long wave radiation, +9 from turbulent heat transfer, and −11 from evaporation. The mean daily surface ablation is 0.8 cm., about 90% caused by the absorption of short wave radiation. Only 62% of the total heat supply is transformed at the surface; 38% is transmitted into the ice, and mainly used to increase the brine volume. From the observed mass and temperature change, total heat exchange is estimated; the upper boundary received 8.3 kcal./cm² during May-Aug.; during Sept.-Apr. 12.8 kcal./cm² were given off to the atmosphere. Results disagree with some findings reported by ĬÂkovlev in No. 58792. (DLC.)

UNTERSTEINER, NORBERT, *see also* Hanson, K.J. Some aspects of the thermal energy exchange . . . ice pack. 1961. No. 72013

UPHOLT, W. M., *see* Durham, W.F., & *others.* Insecticide content of diet . . . 1961. No. 71155

76285. UPPSALA. UNIVERSITET. GEOGRAFISKA INSTITUTION. Geografiska studier tillägnade John Frödin den 16 April 1944. Uppsala, Appelberg, 1944. 501 p. illus., maps, incl. 10 fold. (*Its:* Geographica, Skrifter nr.15.) Text in Swedish. **Title tr.:** Geographical studies honoring John Frödin, April 16, 1944.

Contains 17 papers on various aspects of Scandinavian geography, presented to this Swedish botanist for his 65th birthday. Several are of arctic interest, and are abstracted in this Bibliography under the authors' names, viz (titles tr.):

HOPPE, G. The oldest permanent settlement in Norrbotten Lapland.

HULTBLAD, F. Some features of the earlier cultural geography of the forest Lapps.

RUONG, I. Note on the old forest-reindeer husbandry in Arvidsjaur parish.

WIK, H. The northern Swedish sawmill industry at the beginning of the 1860's. (DLC.)

76286. UPRAVLENIE ZAGOTOVOK. *Tyumen.* Promysloviki, priezzhaĭte k nam. (Okhota i okhotnich'e khozĭaĭstvo, May 1962. god 8, no.5, p.23.) Text in Russian. **Title tr.:** Hunters, come to us.

The Consumers' Cooperatives Procurement Administration recruits hunters for Tyumen Province; stating the abundance of game, need for hunters, etc., working conditions, wages, etc. (DLC.)

UPTON, A. C., *see* Gude, W.D., & *others.* . . . radiation-induced intestinal injury . . . chilling. 1959. No. 71895

76287. UPTON, B. G. J. Textural features of some contrasted igneous cumulates from South Greenland. (Meddelelser om Grønland, 1961. bd. 123, nr.6. p.1-32, plate, diagrs. map.) 15 refs.

Discusses five occurrences of layered plutonic rocks, mapped during four seasons in southwest Greenland. They include gabbro, anorthosite, syenite of larvikite-nordmarkite type, foyaite and eudialyte nepheline syenite. Each occurrence is thought to consist of cumulate rocks formed by bottom accumulation of the early mineral phases and the subsequent crystallization of the trapped interstitial liquid. The possible causes of banding and feldspar lamination in each intrusion are considered. The presence or absence of feldspar lamination is considered an indication of whether the settling of the early phases occurred through moving or still magma. Magmatic flow during the accumulation of the cumulus mush was important in controlling the degree of packing within the mush, hence influential in determining the ultimate bulk composition of the solidified rock.—From author's abstract. (DGS.)

76288 URALOV, N. S. Nekotorye osobennosti sezonnoĭ i mnogoletneĭ izmenchivosti polozheniĭa vneshneĭ granitsy l'dov Barentseva moriĭa. (Moskva. Gosudarstvennyĭ okeanograficheskiĭ institut. Trudy 1961. vyp. 64, p.39-77, tables, maps.) 13 refs. Text in Russian. **Title tr.:** Some characteristics of seasonal and long-term variability in the location of the outer limit of ice in the Barents Sea.

Presents an exhaustive account of the time of minimal ice cover, and location of ice edge before new ice formation in the fall; ice-edge locations in October-December, January, end of February, latter half of March, April; period of maximal ice cover; location of ice edge in May, June, July, August; changes in types of edge location during spring-summer; periodicity and repetitiveness in types of ice-edge location. Seasonal and long-term regularities in ice conditions are pointed out, with a view to their use for long-range forecasting of the ice-edge position. (DLC.)

URVANTSEV, NIKOLAĬ NIKOLAEVICH, *see* Vener, R.A., & N.N. Urvantsev. Geologicheskie i khimicheskie . . . 1961. No. 76370

76289. USACHEV, PETR IVANOVICH, 1892– . Fitoplankton u Severnogo Polĭusa; po sboram P.P. Shirshova na Pervoĭ dreĭfuĭushcheĭ stantsii "Severnyĭ polĭus" 1937-1938 gg. pod nachal'stvom I.D. Papanina. (Vsesoĭuznoe gidrobiologicheskoe obshchestvo. Trudy 1961. t.11, p.189-208, illus., tables.) 37 refs. Text in Russian. **Title tr.:** Phytoplankton at the North Pole, according to collections of P.P. Shirshov on the first North Pole drifting station 1937-1938 under the command of I.D. Papanin.

Reports on the material collected at 14 stations near the North Pole between June 26 and October 27, 1937. Quantitatively, the greatest biomass of phytoplankton in the upper 50 m. was found in August. Sixty-eight forms determined are listed: 61 diatoms, 5 peridinians and two silicoflagellates. Conditions are compared with those in the Barents and Kara Seas and the phytogeographic aspects of the polar material considered. Leading and characteristic forms are noted. (DLC.)

USADEL, MORGAN, *see* Okladnikov, A.P., & I.A. Nekrasov. Ancient settlements . . . 1962. No. 74493

USANOVA, V.M., *see* Shcherbakov, I.P. Rastitel'nost . . . Vilʹuĭa. 1962. No. 75557

USARDI, M., *see* Bernardelli, E., & M. Usardi. L'azione delle basse temperature . . . 1961. No. 70167

USHER, PATRICIA, *see* Klein, R., & P. Usher. Effect of external cooling . . . 1961. No. 72835

76290. USHIYAMA, J., *and* **C. McC. BROOKS.** Hypothermia and minimal gradient requirements for excitation of cardiac muscle. (American journal of physiology, Apr. 1961. v.200, no.4, p.718-22, illus., table.) 7 refs.

Isolated dog trabecular-muscle when made hypothermic to 24°- 27° C. showed a reduction in threshold to stimulation by a rectangular pulse and a prolongation of the minimal gradient requirement for stimulation. The condition suggests a suppression of an accommodative reaction present at normal temperatures. (DLC.)

USHKALOV, VIKTOR PAVLOVICH, *see* International Conference on soil mechanics . . . 1961. No. 72383

76291. USPENSKIĬ, A. N. O sovremennom zhelezistom konglomerate iz tsentral'noĭ chasti Koriakskogo khrebta. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik stateĭ . . . vyp. 16, 1961, *its:* Trudy t.123, p.184-87, illus., graph, map.) Text in Russian. **Title tr.:** On contemporary ferriferous conglomerate from the central part of the Koryak Range.

Describes alluvial conglomerate found in the valleys of three streams falling into the Tamanvayam River, all in the Opukha basin approx. 62° 05′ N. 173° E. in Kamchatka Peninsula. Sites, material and chemical composition of this conglomerate are reported. It consists of young alluvial boulders and coarse gravel cemented by hydrogeothite. The iron hydroxide is considered brought by ground water. Other features and origin of this conglomerate are interpreted in a preliminary way. (DLC.)

76292. USPENSKIĬ, M. S. O vybore mest dlia zakladki tsentrov i reperov v tundre. (Geodeziia i kartografiia, Apr. 1961, no.4, p.30-34, illus.) Text in Russian. **Title tr.:** On the selection of sites for centers and bench marks in the tundra.

Describes relief forms, permafrost conditions, seasonal ground-thaw, the vegetation cover, and other features of the Vorkuta, Igarka and Yakutia tundra. As sites for bench marks and other geodetic signs, large peat hummocks, spotted tundra, and the more stable elevations are considered suitable. Flood areas should be avoided. (DLC.)

76293. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Fauna Arktiki. (Priroda, Aug. 1961. god 50, no.8, p.33-41, illus.) Text in Russian. **Title tr.:** The arctic fauna. *Summarized in:* Polar record, May 1962, p.195-96.

Discusses area of the Arctic and its regions: animal distribution, geographical and seasonal; food chains in the sea and on land; factors causing changes in the fauna, including climatic and human; rational exploitation; preserves; need for protective measures. (DLC.)

76294. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Gusi. (Okhota i okhtnich'e khozĭaĭstvo, July 1961. god 7, no.7, p.20-22.) Text in Russian. **Title tr.:** Geese.

Describes them as among the most valuable wildfowl, chiefly in the far North: their external characteristic, habits, nests, egg-laying and brooding, feeding and migration. Nine species are distinguished: *Anser fabalis, A. albifrons, A. erythropus, A. anser, Cygnopsis cygnoid, Branta bernicla, B. leucopsis, Rufibrenta ruficollis,* and *Enlabeia indica.* (DLC.)

76295. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Kolichestvennyĭ uchet nazemnykh ptits v tundre. (Ornitologiia, 1960. vyp. 3, p.444-50, tables, map.) 6 refs. Text in Russian. **Title tr.:** Quantitative estimates of land birds in the tundra.

Discusses earlier Russian methods and estimates of this kind in the tundra; author's technique, with illustrative map and field notes; tundra biotopes; calculation of the number of nests per area unit. (DLC.)

76296. USPENSKIĬ, SAVVA MIKHAĬLOVICH. Shirotnaia zonal'nost' avifauny Arktiki. (Ornitologiia, 1960. vyp. 3, p.55-70, tables, map.) 32 refs. Text in Russian. **Title tr.:** Latitudinal zonation of the arctic avifauna.

Reviews earlier work and tabulates some hundred species from the European and West-Siberian Arctic with their geographic distributions. On the basis of this and of climatic-ecologic considerations, author discusses and classifies the the bird fauna of the area, from the high arctic southwards. Three zones are distinguished: arctic desert; arctic tundra, corresponding to the arctic and the mossy-lichen tundras of the geobotanists; and a transitional zone, corresponding to the geobotanists' shrub-tundra and northern forest tundra. (DLC.)

USPENSKIĬ, SAVVA MIKHAĬLOVICH, *see also* Chernov, IU. I., & S.M. Uspenskii. Rol' nasekomykh . . . 1962. No. 70717

76297. USTIEV, EVGENIĬ KONSTANTINOVICH. Aniuiskii vulkan i problemy chetvertichnogo vulkanizma Severo-Vostoka SSSR. Moskva, Gosgeoltekhizdat, 1961. 124 p. illus., tables, maps incl. fold., diagrs. Over 100 refs. Text in Russian. **Title tr.:** Anyuy volcano and problems of Quaternary volcanism in North-Eastern USSR.

Outlines the geology and petrography of this late Quaternary volcano, in the Monni valley detected in 1952 and studied by the author in 1953. He deals with the geology of the volcano and lava flows in the valley; the geology and geomorphology of the valley, the volcano and its cone, products of eruption bombs, lava, etc. Behavior of the volcanic flows is analyzed; the flow of basalts discussed. The Anyuy is compared with other similar volcanoes of the Soviet Northeast and general patterns of Quaternary volcanism are summarized. The second part of the study deals with the petrography and chemistry of the Anyuy volcano lava and fissure products of the Monni valley. Tectonic conditions of Quaternary volcanism are evaluated. (DLC.)

76298. USTIEV, EVGENIĬ KONSTANTINOVICH. Okhotskii vulkanicheskii poias i sviazannye s nim problemy. (Vsesoiuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962,

p.359-61.) Text in Russian. **Title tr.**: The Okhotsk volcanic belt and problems connected with it.

Summarizes the geologic history and tectonic structure of northeast Asia in relation to development of volcanism. The Kolyma-Chukotka geosynclines and the transition Okhotsk volcanic belt are characterized noting the tectonic conditions for volcanism display. Distribution and chemical composition of igneous rocks, their possible metallogeny, and other features are briefly noted. (DLC.)

USTIÛKOV, IÛ. S., *see* Lepeshkov, I.N., & *others*. Prirodnye soli . . . 1962. No. 73433

76299. USTIÛZHANIN, V. Kollektiv sozdan. (Okhota i okhotnich'e khoziĭstvo, June 1961. god 7, no. 6, p.55.) Text in Russian. **Title tr.**: An association is founded.

Notes a hunters' association with 150 members set up at Val'kumey (69° 35′ N. 170° 13′ E.) in Chukotka. One of its main functions is to foster observance of hunting regulations. (DLC.)

76300. USTRITSKIĬ, V. I. O fat͡sial'noĭ zonal'nosti srednepaleozoĭskikh otlozheniĭ Paĭ-Khoĭa i severnoĭ chasti Polĭarnogo Urala. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik stateĭ . . . vyp. 16, 1961, *Its:* Trudy t.123, p.41-60, maps.) 5 refs. Text in Russian. **Title tr.**: On zoning of facies in the Middle Paleozoic deposits of the Pay-Khoy and the northern part of the Polar Ural.

Describes complexes of facies of the Silurian, Devonian, and Carboniferous systems, and conditions of their formation. Two zones of facies, carbonate and schist, are distinguished and characterized. Correlation is made of Middle Paleozoic facies of the Pay-Khoy and those of the western slope of Polar Ural, similarities noted and described. (DLC.)

76301. USTRITSKIĬ, V. I. O granit͡se nizhneĭ i verkhneĭ permi na osnovanii izucheniĭa ėtikh otlozheniĭ v Arktike. *(In:* Soveshchanie po utochneniiû unifit͡sirovannykh stratigraficheskikh skhem paleozoĭa . . . Perm', 1962, t.4, p.210-15.) Text in Russian. **Title tr.**: On the boundary of lower and upper Permian, according to their investigation in the Arctic.

Reports his study of Permian deposits in the Pay-Khoy during 1949-1955, describing the sections and noting pelecypod, brachiopod and other fauna. A new stratigraphic division is proposed. No paleontologic evidences exist to support Kungurskiy and Ufimskiy stages of Permian in the Arctic. (DLC.)

76302. USTRITSKIĬ, V. I. Osnovnye ėtapy ėvoliût͡sii morskikh basseĭnov i fauny brakhiopod Azii v techenie permskogo perioda. (Sovetskaĭa geologiĭa, Jan. 1961, no.1, p.49-64, maps.) 35 refs. Text in Russian. Summary in English. **Title tr.**: The principal evolutionary stages of Asian marine basins and brachiopod fauna during the Permian period.

At the beginning of the Sakmarian stage, the Arctic and Tethys basins were connected through the Caspian Sea region. In the middle of that stage, the connection was closed and different brachiopod fauna developed in the two basins. At the beginning of the Upper Permian, the boreal sea transgression expanded far south and reached the Mongolian syncline. Wide areas were inhabited by fauna of arctic type. In the Kazanian stage, the sea retreated and the Arctic and Tethys basins again became almost isolated. (DLC.)

76303. USTRITSKIĬ, V. I. Rasprostranenie brakhiopod v verkhnem paleozoe Arkticheskoĭ zoogeograficheskoĭ oblasti. (Paleontologicheskiĭ zhurnal, 1961, no.3, p.3-13, table.) 19 refs. Text in Russian. **Title tr.**: Distribution of brachiopods in the Upper Paleozoic of the arctic zoogeographic province.

Describes Sakmarian, Artinskian, Pay-Khoy, Kazanian and Tartarian stages of Permian deposits, and lists the brachiopod fauna (about 77 genera), results of several scientists' work in various parts of the Soviet Arctic. Western and eastern areas are treated separately since the fauna in each stage is different. The evolution of brachiopod fauna is outlined. (DLC.)

USTRITSKIĬ, V. I., *see also* Shvedov, N.A., & *others*. Novaĭa stratigraficheskaĭa skhema . . . 1961. No. 75636

76304. UTKIN, A. I. K kharakteristike khoda rosta listvennit͡sy daurskoĭ v IAkutii. (Lesnoe khoziĭstvo, Mar. 1961. god 14, no.3, p.11-13, table.) 4 refs. Text in Russian. **Title tr.**: Outline of Dahurian larch growth in Yakutia.

Reports a study made on the Lena-Amga and the Lena-Vilyuy interfluve. *Larix dahurica* is the main species of the forests in Yakutia. (DLC.)

UTKIN, KONSTANTIN NIKOLAEVICH, *see* Eliseev, N.A., & *others*. Ul'traosnovnye i osnovnye intruzii Pechengi . . . 1961. No. 71238

76305. UTSU, TOKUJI. On the nature of three Alaskan aftershock sequences of 1957 and 1958. (Seismological Society of America. Bulletin, Apr. 1962. v.52, no.2, p.279-97, tables, graphs, diagrs.) 12 refs.

Discusses the frequency distribution of aftershocks with respect to magnitude and time. Constants are determined which fit equations of the distributions. They show the independence of magnitude-frequency relation on time and time-frequency relation on magnitude. The geographical variation in the mode of aftershock occurrence in the aftershock area appears to be different from sequence to sequence. (DLC.)

76306. V., E. Årsmøte og utferd i Nord-Norges skogmannsforbund 1960. (Skogen, *Oslo,* 1960. årg. 25, hefte 12, p.118-23, illus.) Text in Norwegian. **Title tr.**: Annual meeting and study trip of the North Norway Foresters' Association 1960.

Reports the Sept. 1960 meeting and trip in the Salten area (ca. 67°-68°N.) with the main subjects under study: forest planting and care of young stands. In Bodin a 30-yr. spruce planting program on 30,000 decares of land was observed, including 100,000 plants from the Rognan Nursery delivered by military helicopter and planted immediately. A 50-yr. pine-planting program on 30,000 hectares in Saltdal is noted. The Rognan Forest Nursery (67°20′N. 15°30′E.), the Rognan Ship Yard, producing wooden vessels for centuries and the new Salten chip board plant were visited. (DA.)

VAJS, E., *see*

Pantelić, D., & *others*. E.C.G. changes . . . 1960. No. 74640

Pantelić, D., & *others*. E.C.G. changes . . . hypotension . . . 1960. No. 74639

76307. VAKAR, V. A. Évolīūtsiīa Taĭmyrskoĭ geosinklinali. (Sovetskaīa geologiīa, Nov. 1961, no.11, p.109-120.) 42 refs. Text in Russian. Summary in English. **Title tr.:** The evolution of the Taymyr geosyncline.

Summarizes work to date on Taymyr-Severnaya Zemlya geology, including the tectonic and metallogenic maps at 1:2, 500,000 prepared in 1960. The geologic structure of the Taymyr-Severnaya Zemlya folded zone is outlined. Eight characteristic geotectonic zones are distinguished corresponding to the structural geologic stages. Six of these stages: Lower Proterozoic, Upper Proterozoic, Sinian, Lower Paleozoic, Middle Paleozoic and Upper Paleozoic are proper stages of Taymyr geosyncline development and each is characterized. The postgeosynclinal stages are also reported. Some mineral resource occurrences are mentioned. (DLC.)

76308. VAKAR, V. A. Trappovaīa formatsiīa Taĭmyra. (*In:* Akademiīa nauk SSSR. Otdelenie geologo-geograficheskikh nauk. Petrografiīa Vostochnoĭ Sibiri, t.1, 1962, p.256-340, illus., tables, fold. maps, fold. diagr.) Approx. 100 refs. Text in Russian. **Title tr.:** Trap formation of the Taymyr.

Distinguishes three tectonic-magmatic phases in development of trap formations in the Taymyr-Severnaya Zemlya folded province. Character, form and composition of magnetic bodies, especially trap intrusions are analyzed. Petrographic and chemical characteristics of traps are outlined. The Tulay-Kiryaka-tas differentiated trap intrusion in southeastern Taymyr folded zone is described in more detail. Differentiation and assimilation processes in trap formation are treated. The traps of Byrranga Ridge are described. Some ore occurrences: iron, sulfides, and others connected with traps are reported. The use of traps as construction material is also discussed. (DLC.)

76309. VAKAR, V. A., *and* **A. P. LEBEDEV.** Vulkanizm formatsii sibirskikh trappov i tektonika. (Vsesoīūznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.356-57.) Text in Russian. **Title tr.:** Volcanism of Siberian trap formation and tectonics.

Notes that Siberian trap formation has a wider distribution than was previously believed, and discusses the tectonic conditions for its development. Trap volcanism lasted from the Permian to the Jurassic. Three tectonic-magmatic phases are noted. Metallogeny of traps should be studied further. (DLC.)

76310. VAL'DMAN, K. N. Kol'skiĭ poluostrov na kartakh xvi veka. (Vsesoīūznoe geograficheskoe obshchestvo. Izvestiīa, Mar.-Apr. 1962, t.94, vyp.2, p.139-49, maps.) 18 refs. Text in Russian. **Title tr.:** Kola Peninsula on 16th century maps.

Reports on 37 known 16th century maps on which Kola Peninsula is indicated, and describes some of them noting their authors, date, scale, content, sources, geographic names and other features. Some 95 of these names refer to the Kola Peninsula localities, whose identity and present designation are discussed. (DLC.)

VALEUR, P., *see* Løvenskiold, H.L., & P. Valeur. Notes . . . 1960. No. 73579

76311. VALKIN, N. Murmansk. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Jan. 1961. god 3, no.1, illus. on inner front cover.) Text in Russian.

Sketches the growth of Murmansk in the Soviet period: its multi-story buildings, two harbors, recreational facilities, etc.; its importance as a fisheries center and starting point for arctic exploration is noted, also the activities of the Polar Research and Planning Institute of Marine Fisheries and Oceanography (PINRO). (DLC.)

76312. VALLEE, FRANK G. Kabloona and Eskimo in the central Keewatin. Ottawa, May 1962. 218 p. illus., tables, graphs, maps. (Canada. Dept. of Northern Affairs and National Resources. Northern Co-ordination and Research Centre. Report NCRC-62-2.) 62 refs.

Study based on summer 1959 and 1960 field work in the Baker Lake region on recent acculturative behavior trends. Their current sociological aspects conditioned by Eskimo-white (Kabloona) contacts are discussed: economic position and prospects, formal education, changes in social structure. Vital statistics on the Eskimo population (368) are presented from a household count in June 1959; in the winter 1958/59, 70 (of then 427) had been evacuated, mostly to the Keewatin Relocation Project at Ranklin Inlet. The kinship, family, settlement, and leadership patterns are outlined. Intra-generation stress, and adaptation of traditional culture elements to new living conditions are discussed. Conflict, competition, and cooperation with the Euro-Canadian element, social control, dangers of socio-economic discrimination, etc. are dealt with. The problem of Eskimo integration is considered soluble, and an Eskimo-Canadian ethnic entity likely to develop. (CaMAI.)

76313. VALMOT, ODD MARLOV. Tang og tare til mat og fôr. (Norden, Sept. 16, 1960. årg. 64, nr.18, p.498-99, illus.) Text in Norwegian. **Title tr.:** Seaweed for food and feed.

Describes the abundant seaweeds on the west and north coasts of Norway, the nutritional value of algae, research, Norwegian production and export of seaweed meal for animal feed. Half of the world output of the meal is in Norway but only 5% that of the chemical seaweed products. World production of seaweed meal is expected to increase. Only .5% of the annual growth is utilized at present, but marketing conditions are too uncertain for further industrial expansion. (DA.)

76314. VAMPILOV, B. Shamanizm. (Nauka i religiīa, July 1962, no.7, p.18-22.) Text in Russian. **Title tr.:** Shamanism.

Describes its origin among the Tungus in the religious functionary developed by a tribal class society, beyond the primitive communal stage. Spread of shamanism through Siberia, religious and spiritistic essence of this cult, its rites, magic practices, etc. are discussed. Surviving shamanistic superstitions are described; their deleterious effects on kolkhoz life and economy, especially among Chukchis, are stressed. (DLC.)

VAN ALLEN, JAMES ALFRED, 1914– , *see* O'Brien, B.J., & *others*. Measurements . . . electrons . . . 1962. No. 74457

76315. VAN ALLEN, WILLIAM HOWARD. International Ice Patrol. (Canadian geographical journal, Mar. 1961. v.62, no.3, p.76-87, illus., map, diagrs.)

Describes this ice observation and reporting service undertaken in the Grank Banks area by the U.S. Coast Guard for 16 contributing nations. Its organization after the *Titanic* sank from an iceberg collision and its history since 1913 are outlined. Its present operations, oceanographic studies (including the effects of ocean currents on iceberg drift), and experiments to demolish icebergs with thermite and carbon black are reviewed. Canadian contributions to the Patrol are noted. (DGS.)

VAN BUSKIRK, J. E., *see* National Northern Development Conference. 1961. No. 74224

VAN DEN BRENK, H. A., *see* Jamieson, D., & H.A. Van den Brenk. Mast cell changes . . . 1961. No. 72517

76316. VANGENGEĬM, GEORGIĬ ÎAKOVLEVICH, 1896–1961. Predskazanie sezonnykh raspredeleniĭ meteorologicheskikh ėlementov. (Akademiîa nauk SSSR. Izvestiîa, ser. geograficheskaîa i geofizicheskaîa, 1941. no.3, p.289-315, tables, maps.) 11 refs. Text in Russian. Summary in German. **Title tr.:** Forecasting of the seasonal distributions of meteorological elements.

Presents a prognostic investigation of the asynchronous relationship between seasonal atmospheric circulations of the western (W), eastern (E), and the central-European meridional or transitional (C) types, and the resulting complex meteorological and, in part, hydrological changes over middle-to-high latitudes in the Northern Hemisphere. These prognostic relationships based on a 50-year sequence of meteorological observations are discussed and presented in 36 maps of temperature and pressure anomalies prevailing over large areas, and of precipitation and other hydrological phenomena. Satisfactory prognoses were obtained by this method of W, E, and C circulations. (DLC.)

VANGENGEĬM, GEORGIĬ ÎAKOVLEVICH, 1896–1961, *see also*

Leningrad. Arkticheskiĭ . . . institut. Rukovodstvo . . . 1961. No. 73408

Leningrad. Arkticheskiĭ . . . institut. Voprosy dolgosrochnykh prognozov . . . 1961. No. 73411

VANÎUKOV, A. V., *see* Smirnov, A.S., & *others*. Konvertirovanie nikel'soderzhashchikh . . . 1962. No. 75743

76317. VAN SANT, F. N. Cold weather war. (Marine Corps gazette, May 1962. v.46, no.5, p.49-52, illus., diagrs., map.)

Questions the ability of the U.S. Marine Corps to fight a war in the Arctic. Cold-weather training is inadequate and unrealistic, being conducted at Bridgeport, Calif. Exercises, either battalion or regimental should be conducted in interior Alaska, with Alaska-based Army units serving as aggressors. Equipment, worn and carried, required for a rifleman to operate in arctic combat is proposed. Effects of low temperature (to -50°F.), wind, darkness, terrain, etc. on men and equipment are discussed. A windchill chart is presented and explained. (DLC.)

76318. VAN STEENBURGH, W. E. The scientific exploration of Canada's Arctic Islands. (New scientist, June 24, 1961, v.10, no.241, p.792-95, illus., map.)

Traces interest in these islands through search for the Northwest Passage and the North Pole, and recently for defense and weather prognosis. Geological and marine exploration topographical surveys and mapping are outlined. Special projects and expeditions, cosmic ray and auroral research, etc. are noted. (DLC.)

76319. VANSTONE, JAMES WILLARD, 1925– . Point Hope, an Eskimo community in northwest Alaska. Fort Wainwright, Alaskan Air Command, Mar. 1961, 165 p. map, diagrs. (U.S. Air Force. Arctic Aeromedical Laboratory. Technical report 57-22.) 35 refs.

Reports an ethnological study of an old, relatively isolated community of approx. three hundred, made during Sept. 1955-Aug. 1956. Its purpose is to depict present-day native life and its background for information of non-natives working in contact with Eskimos in Alaska. The physical environment and history of the village, its seasonal cycle of activity, its technology traditional and introduced, social structure, community life, the village economy, health and educational facilities, role of the church, etc. are outlined. The life cycle of the individual is described, and the effects of contacts with whites and influence of institutions and facilities are examined. Life in this coastal village is oriented primarily toward sea-mammal hunting as in pre-contact times; recently summer employment for wages has become a factor in the economy and it has been fitted satisfactorily into the seasonal cycle. The small nuclear family has replaced the large extended family, but family remains the basic unit of village social structure, and of economic activity. (CaMAI.)

VAN VOORHIS, GERALD, *see* Alldredge, L.R., & G. Van Voorhis. Source great arctic mag. anomaly. 1962. No. 69720

76320. VAN ZANDT, FRANKLIN K. Sheep Mountain cadastral survey. (Military engineer, May-June 1961. v.53, no.353, p.194-97, illus., diagr.)

Describes the use of aerial photogrammetry in surveying four townships along the Glenn Highway some 120 mi. from Anchorage, Alaska. Photographs were made from 14,000 ft. altitude; markers were photographed also by helicopter from 2,000 ft. Stereotriangulation work was done on a C8 stereoplanigraph. The procedure of computing and adjusting the coordinates is described as is the field operation of locating section corners. Spot checks for accuracy showed corner displacements of 2-12 ft. About 400 corner monuments (200 mi.) were set at a cost of $180 per mile. (DLC.)

76321. VAPAAVUORI, MATTI. Changes in the static elastance and hysteresis of the chest wall and lungs in normo- and hypothermia; an experimental study on cats. (Acta physiologica scandinavica 1962. v.55, suppl. 191, p.3-64, illus., tables.) About 90 refs.

Reports on study of cats (with some advance experiments on rabbits and cats) made hypothermic to stages as low as 10 to 8°C. with normothermia in each subject serving as control. Results indicate that the principal cause of static hysteresis was the difference in the number of open alveoli during inspiration and expiration. Changes in static elastance values for the chest wall and the lungs were highly significant when body temperature dropped from 20-18°C. down to 10-8°C. (DNLM.)

VARGA, F., *see* Mestyán, G., & F. Varga. Chemical thermoregulation . . . newborn infants. 1960. No. 73953

76322. VARIS, ANNA-LIISA. Kläckningen av imagines i Sydfinland och Nordfinland av *Hylemyia*-arter på korsblomstriga växter. (Nordisk jordbrugsforskning. Suppl. 1, 1960, p.307-310, tables.) Ref. Text in Swedish. **Title tr.:** Hatching *Hylemyia* sp. imagines on cruciferous plants in southern and northern Finland.

Reports work of the Finnish Agricultural Research Institute Pest Section between 1952 and 1958. The first generation of the adult cabbage root maggot, *H. brassicae*, hatched at the southern station (Dickursby) May 20-June 1, at Rovaniemi (66°63′N.), and Enare (69°5′N.) about a month later. Northern pupa and larva material taken south hatched earlier than usual but not as early as the native southern population. Hatching times for *H. brassicae, H. floralis, H. florilega* and *H. fuciceps* in the three localities in 1956 are tabulated. (DA.)

76323. VARIŪKHINA, L. M. Spory i pyl'tsa triasovykh otlozhenii ĭuga Pechorskogo bassei̯na. (Akademiĭa nauk SSSR. Doklady, May 21, 1961. t.138, no.3, p.631-34.) 7 refs. Text in Russian. **Title tr.:** Spores and pollen of Triassic deposits of the southern Pechora basin.

Reports on analyses of 66 of 131 samples collected during 1955-1959 in the Perebor, Zalaznaya, Malyy Aranets, Bol'shaya Synya and other river basins. Equisetales especially *Leiotriletes rotundus* mark the Lower Triassic deposits; the Keuper and Rhaetic series, particularly rich on spores and pollen, are described in more detail. The conifers, ferns and other fossil plants are listed. (DLC.)

VÁRNAR, I., *see* Szegvári, G., & *others*. Effect of hypoxia . . . 1961. No. 76065

76324. VARSANOF'EVA, VERA ALEKSANDROVNA, 1889– . Aleksandr Aleksandrovich Chernov. (*In:* Akademiĭa nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.5-28, illus.) Text in Russian.

Offers an extensive account of the life and work of this noted Russian geologist and paleontologist. Born 1877 in Solikamsk, he entered Moscow University in 1896 and studied geology till 1902. Subsequently he visited various areas in Russia, among them the Ural and Timan, and for several years he was engaged in railroad construction and in teaching in Moscow. In 1917 he organized two expeditions to the Timan and Pechora regions and all his work afterward was devoted to the Pechora region, Northern Ural, Pay-Khoy, Bol'shezemel'skaya Tundra, Timan; predominantly Komi ASSR. His studies of coal and other mineral resources described in detail, were carried out during 32 summer seasons. His other activities also are outlined. (DLC.)

76325. VARSANOF'EVA, VERA ALEKSANDROVNA, 1889– . Aleksandr Evgen'evich Fersman, 1883-1945. (*In:* Kuznetsov, I.V., *ed.* Lĭūdi . . . 1962, p.222-33, port.) Refs. Text in Russian.

Describes the course of his life and scientific activity, a famous mineralogist who significantly contributed to knowledge of the Kola Peninsula, the Ural, and other regions. His investigations of the Khibiny and Monche tundras, and discoveries of apatites, nickel, etc. are reported. His works on mineralogy and geochemistry are reviewed. List of his main published papers and articles about him is appended. (DLC.)

76326. VARSANOF'EVA, VERA ALEKSANDROVNA, 1889– , *and* **D. M. RAUZER-CHERNOUSOVA.** K kharakteristike srednekamennougol'nykh otlozhenii̯ r. Ilych. (*In:* Akademiĭa nauk SSSR. Komi filial. Sbornik trudov po geologii . . . 1960, p.94-126, illus., map, plates.) 9 refs. Text in Russian. **Title tr.:** Characteristics of the middle Carboniferous deposits of the Ilych River.

Describes the lithology, foraminifer fauna and stratigraphy of the Middle Carboniferous along the middle Ilych (tributary to the Pechora) valley. The general thickness of these deposits is about 350 m. The Bashkirian and Moscovian stages are distinguished and divided into substages, series, zones and horizons. Comparison is made with the Russian platform deposits. (DLC.)

76327. VARSANOF'EVA, VERA ALEKSANDROVNA, 1889– . O nekotorykh voprosakh stratigrafii i litologii kamennougol'nykh otlozhenii̯ zapadnogo sklona Severnogo Urala. (Akademiĭa nauk SSSR. Komi filial. Institut geologii. Trudy 1962. vyp.2, Materialy po geologii Komi ASSR, p.11-26.) 16 refs. Text in Russian. **Title tr.:** Some problems in the stratigraphy and lithology of the Carboniferous deposits of the western slope of Northern Ural.

Summarizes the pertinent problems which should be solved during the current seven-year period. The status of Carboniferous stratigraphy and lithology is evaluated; questions as to the boundary between Devonian and Carboniferous, stratigraphic division of Tournaisian and Visean stages, etc. are described. Lithologic types of the rocks, their formation conditions, development of the Carboniferous basin, its fauna and paleogeography are reviewed. (DLC.)

76328. VARSANOF'EVA, VERA ALEKSANDROVNA, 1889– . Tektonicheskoe i geomorfologicheskoe razvitie Uralo-Timanskoĭ oblasti. (Moskovskoe obshchestvo ispytatelei̯ prirody. Biūlleten' 1961. n. ser. t.66, otdel geologicheskiĭ, t.36, vyp.4, p.7-39.) 63 refs. Text in Russian. Summary in Russian. **Title tr.:** The tectonic and geomorphic development of the Ural-Timan area.

Outlines the tectonic development of the Ural-Timan Riphean geosyncline zone and the formation of the Epi-Baykal and Epi-Hercynian platforms within this area. The Timan Mountain fault block is characterized with epeirogenetic elevations during the Mesozoic-Cenozoic periods, and the Pechora syncline with its settling. Development of the Ural Mountains, Timan Range,

Pechora lowland, the Bol'shezemel'skaya and Malozemel'skaya tundras is summarized. (DLC.)

76329. VARSANOF'EVA, VERA ALEKSANDROVNA, 1889– . Voprosy geomorfologii Severnogo Urala i osnovnye ėtapy razvitiĭa ego rel'efa. (*In:* Vsesoĭuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.7-16.) 31 refs. Text in Russian. **Title tr.:** Geomorphic problems of Northern Ural and the main stages of its relief development.

Reviews recent studies, discusses the glaciation and planation of the Ural. Three levels of relief are distinguished: 250 - 350, 750 - 850, and 1100 - 1300 m. Three glaciations are recognized. The present Ural began to form in Upper Paleozoic. Its Permian, Triassic and Mesozoic history and its relief are evaluated. (DLC.)

76330. VARTAPETIAN, S. M., *and* ZH. F. ONOKHINA. Sutochnyĭ i sezonnyĭ ritm obmena azotistykh veshchestv v list'iakh cherniki i kipreĭa v polĭarnykh usloviiakh. (Akademiia nauk SSSR. Doklady 1962. t.145, no.6, p.1404-1407, illus., tables.) 9 refs. Text in Russian. **Title tr.:** Diurnal and seasonal rhythm of nitrogen metabolism in the leaves of *Vaccinium myrtillus* and *Chamaenerion angustifolium* under arctic conditions.

Reports on investigations conducted on the Kola Peninsula at altitudes up to 400 m. and various habitats. A diurnal rhythm of N metabolism is recorded and described. The rhythm is also dependent on the stage of development of the plant. (DLC.)

76331. VASHCHENKO, P. T., *and* B. O. DOLGIKH. Predaniia o totemicheskikh nazvaniiakh rodov u nganasan. (Sovetskaia ėtnografiia, May-June 1962, no.3, p.178-82.) 11 refs. Text in Russian. **Title tr.:** Legends about totemic clan-names of the Nganasans.

Cites two ancient myths and a 17th century tale about an Eagle (Lengkhe) and a Raven (Kuraki) clan, vanished names of totemic origin of two present-day clans; also a Crane (Kokary) clan of the Nganasan Samoyeds which persists. Brand marks of these three clans derive from their bird totems. The persistence of totemic (matriarchal) traits in patriarchal society is pertinent in study of ethnic substrata among the aborigines of North Asia. (DLC.)

76332. VASHUKOV, ANDREĬ PETROVICH. Nastoĭchivo itti vpered. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Dec. 1961. god 4, no.12, p.8-9.) Text in Russian. **Title tr.:** One must keep moving forward.

Cites achievements of the Novaya Zhizn' collective farm in Kholmogory District of Arkhangel'sk Province: 23 cows/100 hectares of cultivated land, average annual milk yield of 3,686 kg./cow, the fat content having risen from 3.72 to 4.08% in 1955-1961. (DLC.)

76333. VASILENKO, V. Bol'shoe iskusstvo malen'kogo naroda. (Dekorativnoe iskusstvo, 1957, iubileĭnyĭ nomer, p.47-48, illus.) Text in Russian. **Title tr.:** Great art of a small people.

Describes with illus. modern Chukchi bone carvings and engravings produced in Uelen. Their naturalistic style, workmanship, artistic merits, etc. are discussed and the more prominent sculptors cited. (DLC.)

76334. VASILENKO, V. P. Rezervy udeshevleniia proizvodstva produktov sel'skogo khoziaĭstva v Komi ASSR. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Oct. 1962, no.10, p.13-16, table.) Text in Russian. **Title tr.:** Reserves for reducing farm production cost in Komi ASSR.

Analyzes milk and meat production costs on collective and state farms in Komi ASSR in 1959-1961, including its northern areas; and recommends better manuring, fertilizing and seed selection, mechanization, improving the quality of fodder, etc. as means of reducing production costs. (DLC.)

76335. VASIL'EV, A. Naledi zlo. (Master lesa, Mar. 1961, no.3, p.9.) Text in Russian. **Title tr.:** Naleds are a nuisance.

Notes the damage to floating timber from river naleds in Siberia and the Ural area; they build up not only in winter but in late spring as well. A deep ditch cut through the naled in the direction of the current is the best method of control. (DLC.)

76336. VASIL'EV, IVAN MITROFANOVICH, 1891– . Wintering of plants. Washington, D.C., American Institute of Biological Sciences, 1961. 14, 300 p. illus. tables. About 1200 refs. English translation of No. 48691. (DLC.)

76337. VASIL'EV, L. I. O sel'di Pechorskoĭ guby i prilegaiushchikh k neĭ raĭonov; ocherk biologii i perspektiv promysla. (Problemy Severa, 1961, vyp.4, p.121-30, tables, map.) 10 refs. Text in Russian. **Title tr.:** Herring in Pechora Bay and adjacent regions; outline of the biology and prospects for this fishery.

The herring appear each year in large numbers to spawn and feed in Pechora Bay and vicinity to Yugorskiy Shar Strait; the main stock is *Clupea harengus pallasi n. suworowi* Rab. with small schools of the Murmansk - Norwegian herring *Clupea harengus harengus* L. Data on age (chiefly 4-5 years), size, weight and fat content are given, economic aspects discussed. (DLC.)

VASIL'EV, N. V., *see* Plekhanov, G.V., & *others.* O vliianii vzryva . . . 1961. No. 74820

76338. VASIL'EV, V. A. O gentgel'vine. (Vsesoiuznoe mineralogicheskoe obshchestvo. Zapiski 1961. ser. 2, chast' 90, vyp.5, p.571-78, illus., tables, diagrs.) 6 refs. Text in Russian. **Title tr.:** On genthelvite.

Reports a 1957 discovery of genthelvite in the Zapadnyye Keyvy region of Kola Peninsula. Geologic structure of the region and the pegmatite vein, where it was found are described. Comparison is made with the same mineral as known previously in El Paso County of Colorado, and the Lovozero massif, noting color, measurements, hardness, specific weight, chemical analyses, and other properties. (DLC.)

76339. VASIL'EV, V. I. Problema proiskhozhdeniia orudiĭ zapornogo rybolovstva obskikh ugrov. (*In:* Akademiia nauk SSSR. Institut ėtnografii. Trudy t.78, Sibirskiĭ . . . 1962, p.137-52, illus., diagr.) Approx. 60 refs. Text in Russian. **Title tr.:** Origin of Ob Ugric weir-fishery gear.

Etymological study of Ostyak and Vogul names for water-blocking devices and fishing gear: fences, weirs, traps, nets, drags, baskets, etc. Aboriginal equipment traced to ancestral

Finno-Ugrians is distinguished from objects acquired from ethnically unrelated groups. Similarities between Finno-Ugric and Dravidian terminology suggest ancient cultural or linguistic links; the Lake Aral region is considered the only possible contact area between these two racial stocks. This deduction supports the hypothesis of a Lake Aral origin of Uralian peoples. (DSI.)

76340. VASIL'EV, V. I. Sistema olenevodstva lesnykh ėntsev i ee proiskhozhdenie. (Akademiia nauk SSSR. Institut ėtnografii. Kratkie soobshcheniia, 1962. vyp.37, p.67-76, illus.) 27 refs. Text in Russian. **Title tr.:** Methods and origin of reindeer raising of the forest Enets.

Discusses the use of smudge huts for mosquito control in day-time on the range and at night in corral, a practice traced to the pack- and saddle-reindeer raising methods of ancestral Samoyed tribes of the central Siberian taiga. This form of herding, considered some two thousand years old, survives among the forest Enets and forest Nenets as a southern Samoyed substrate. Draft-reindeer raising with extensive summer ranging, typical for Ket-Yeniseian and Sel'kup-Samoyed fishers, is a recent, 17th century, development. The view of Bogoraz (cf. No. 33663) and others that this (extensive ranging) is the most ancient type of reindeer raising is refuted. This study is based on fieldwork in the Dudinka District, Taymyr National District, conducted in 1960 by the Taymyr team of the Northern Ethnographic Expedition. (DLC.)

76341. VASIL'EV, V. V., *and others*. Sergeĭ Dmitrievich Rakovskiĭ. (Geologiia rudnykh mestorozhdenii, May-June 1962, no.3, p.133-34, port.) Text in Russian.

Obituary and tribute by several friends of this talented self-educated geologist, 1899-1962, who was active during 1923-1959 in the Aldan, Kolyma, Berelekh, Indigirka River regions and other areas of the Soviet Arctic. He was engaged especially in search of gold placers. (DLC.)

76342. VASIL'EV, VIKTOR GRIGOR'EVICH, *Editor*. Geologicheskoe stroenie i perspektivy neftegazonosnosti Kamchatki. Moskva, Gostoptekhizdat, 1961. 344 p. illus., tables, maps incl. fold., diagrs. (Glavnoe upravlenie geologii i okhrany nedr pri Sovete ministrov RSFSR. Severo-Vostochnoe geologicheskoe upravlenie.) 154 refs. Text in Russian. **Title tr.:** Geologic structure and the oil and gas prospects of Kamchatka.

Presents a collective description of the orohydrography, stratigraphy and tectonics of Kamchatka and the Commander Islands. Regional structures of the Okhotsk Sea basin are also described. Search for oil and gas in the Bogachevka and Voyampolka areas and further prospecting plans are outlined. Occurrence of gold, copper, mercury, molybdenum, sulfur, coal, peat and construction materials is reported. The thermal waters of Kamchatka are described in considerable detail. The stratigraphy and tectonic regionalization of northeastern regions of the USSR (Yakut ASSR and Magadan Province) are reviewed and appraisal is given as to the areas and structures favorable for oil and gas prospecting. (DLC.)

76343. VASIL'EV, VIKTOR GRIGOR'EVICH, *and* G. L. GRISHIN. Osnovnye geologicheskie rezul'taty poiskovo-razvedochnykh rabot na neft' i gaz v Sibiri. (Geologiia nefti i gaza, Sept. 1962. god 6, no.9, p.12-16, tables.) Text in Russian. **Title tr.:** Main results of geologic exploration and prospecting for oil and gas in Siberia.

Notes discovery of 14 gas deposits and two of oil, the latter Shaim and Martym'inskoye, connected with basal deposits of Upper Jurassic and Lower Cretaceous. Other deposits of the West Siberian platform are noted also, region considered a future centrum of oil and gas production. Two gas deposits are reported found in Yakutia: the Ust'-Vilyuysk and Sabo-Khainskoye; and other regions are cited as having favorable conditions for oil and gas accumulation. Extent of the 1956-1960 and the 1961 drilling is indicated for various parts of Siberia including Tyumen Province and Yakut ASSR. (DLC.)

76344. VASIL'EV, VIKTOR GRIGOR'EVICH. Perspektivy neftegazonosnosti kontinental'noĭ chasti Dal'nego Vostoka i Severo-Vostoka SSSR. (Geologiia nefti i gaza. Oct. 1961. god 5, no.10, p.30-36, maps, cross-section.) Text in Russian. **Title tr.:** Prospects for oil and gas in the continental part of the Far East and northeastern USSR.

Notes that so far oil and gas have been discovered only in Sakhalin Tertiary deposits. More than 20 years prospecting in various regions of Kamchatka with no positive results are reviewed. An appraisal of prospects by a special commission is reported. The Amur and Khabarovsk region is treated in some detail. In the northeast, the Koryak upland, Penzhina and Anadyr depressions and Olyutorka-Khatyrka downwarp are cited for favorable conditions, also the Kolyma-Indigirka platform. (DLC.)

76345. VASIL'EV, VIKTOR GRIGOR'EVICH, *and others*. Problema proiskhozhdeniia almazov. Yakutsk, IAkutskoe knizhnoe izd-vo, 1961. 152 p. illus., tables, maps, diagrs. 35 refs. Text in Russian. *Other authors:* V.V. Koval'skiĭ *and* N.V. Cherskiĭ. **Title tr.:** The problem of the origin of diamonds.

Reviews present considerations regarding the genesis of diamonds, noting lack of agreement among scientists. Production of synthetic diamonds is analyzed and the importance of carbon stressed. Main features of the geologic structure of diamond-bearing areas are summarized. Structure of the Yakutia diamond-bearing province is reviewed, noting the stratigraphy and tectonics of the region. The source of carbon for formation of diamonds is outlined. Kimberlite pipes of Yakutia and their petrography are analyzed in greater detail. The mechanism of diatreme formation is outlined. An organic hypothesis for origin of diamonds is offered. (DLC.)

76346. VASIL'EV, VIKTOR NIKOLAEVICH, 1890– Botaniko-geograficheskoe raionirovanie Vostochnoĭ Sibiri. (Leningrad. Gos. pedagogicheskiĭ institut. Uchenye zapiski 1956. t.116, Kafedra fizicheskoĭ geografii, p.61-102, fold. map.) 98 refs. Text in Russian. **Title tr.:** Botanic-geographical regionalization of Eastern Siberia.

Divides the area approx. 80° - 168°E. into five phytogeographic provinces: the northeast, middle Siberia, central Yakutia, the Aldan basin, and Baykal-Olekma. Each is described in turn, noting its relief, climate and predominant flora.

The vegetation is considered also latitudinally, and eight zones are distinguished: the arctic, typical, underbrush, and forest tundras, the rare deciduous forest zone, etc. Characteristic plants are cited for each zone. (DLC.)

VASIL'EVA, Z. V., *see* Genkin, A.D., & *others.* Usloviia nakhozhdeniia apatita . . . 1961. No. 71627

76347. VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– . Evenki Katangskogo raĭona. (*In:* Akademiia nauk SSSR. Institut ėtnografii. Trudy t.78, Sibirskiĭ . . . 1962, p.98-121, illus., diagrs., table, map.) 16 refs. Text in Russian. **Title tr.:** Evenki of the Katanga District.

Reports on four predominantly Tungus collective farms (one treated in detail by IU. B. Strakach, q.v.) in the Nizhnyaya Tunguska basin approx. 58° - 64°N., as studied by the author's three-man Evenki party on the Northern Ethnographic Expedition in 1959. Data on ethnic affiliation (Evenki, Yakut, Russian) are tabulated and the main settlements depicted, including Nakanna and Khomakar. Transport-reindeer raising and fur hunting are the basis of the economy, fishing and dairy farming are also carried on. Traditional and introduced features in housing, furnishing, clothing and diet are described. Conservatism in marriage and social customs is noted. Ethnic differences and traces of ancient tribal mingling within the extended Katanga Evenki group are revealed by dialectal peculiarities and certain variants in material culture: construction of tent supports, cradle types, hunting sleds, reindeer saddles, etc. (DSI.)

76348. VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– Ugdan, zhilishche ėvenkov IAblonovogo i Stanovogo khrebtov. (Akademiia nauk SSSR. Muzeĭ antropologii i ėtnografii. Sbornik 1961. t.20, p.30-39, illus., diagrs.) 3 refs. Text in Russian. **Title tr.:** The *ugdan,* dwelling of the Evenkis of the Yablonovyy and Stanovoy Mt. ranges.

The classic *ugdan* is a rectangular hut made of tree roots and bark, its slightly inward tilting walls and flat or sloping roof supported by poles. Types adapted to temporary occupancy in seasonal lumbering, hunting, reindeer herding, and other activities are described, from field observations of 1947-1948 in the Dzhugdyr foothills in southwestern Yakutia and the Amur Province. Permanent log and plank houses derived from the same prototype are also dealt with. Construction techniques and materials, innovations and evolution of basic types, furnishings, etc. are discussed. The origin, ethnic history, material culture, and traditions of the Dzhugdyr Tungus are sketched. (DLC.)

VASILEVICH, GLAFIRA MAKAR'EVNA, 1895– , *see also* Akademiia nauk SSSR. Istoriko-ėtnograficheskiĭ atlas . . . 1961. No. 69544

76349. VASILEVSKIĬ, M. M. O kriteriiakh glubinnosti postvulkanicheskogo gidrotermal'nogo metamorfizma v TSentral'no-Kamchatskoĭ rudnoĭ zone. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Jan. 1962. no.1, p.66-84, tables, map, diagrs.) 12 refs. Text in Russian. **Title tr.:** On depth criteria of post-volcanic hydrothermal metamorphism in the central Kamchatka ore zone.

Characterizes vertical zonality of hydrothermal metamorphism established in the central Kamchatka ore zone. In the entire range of rock and ore alteration, three formations are distinguished: secondary quartzites, propylites and subalkaline orthoclase metasomatites. The variation of hydrothermal metamorphism according to depth is treated in detail, noting delivery and losses of various minerals and solutions. The genesis of altered rocks and ores is outlined. Depth criteria are considered of great value in search for metals. Such criteria have aided detection of polymetallic, copper-molybdenum and arsenic-antimony-mercury ore manifestations. (DLC.)

VASILEVSKIĬ, M. M., *see also*

Vlasov, G.M., & M.M. Vasilevskiĭ. Genezis . . . Kamchatskogo khrebta. 1962. No. 76403

Vlasov, G.M., & M.M. Vasilevskiĭ. Vysokoglinozemistye fatsii . . . 1961. No. 76406

76350. VASILEVSKIĬ, P. O pravilakh dlia sudov, provodimykh ledokolami cherez led. (Morskoĭ flot, Nov. 1962. god 22, no.11, p.15-16.) 4 refs. Text in Russian. **Title tr.:** The regulations for vessels in icebreaker convoy through ice.

Reviews problems of signalling, maneuvering, etc. experienced by navigators in convoy, and discusses the need to reconcile two standard sets of navigation rules, viz the regulations for ships in convoy through ice by icebreakers (called PLP), and the regulations for prevention of ship collision in ice (PPSS). (DLC.)

VASIL'EVSKIĬ, R. V., *see* Pankov, I.P. Obzor prenii . . . 1961. No. 74634

VASINA, A. I., *see* Lysenko, T.I., & A.I. Vasina. Neopublikovannye pis'ma . . . 1962. No. 73657

VASIUCHKOV, IU. F., *see* Shevelev, B.N., & IU. F. Vasiuchkov. V bor'be . . . 1961. No. 75583

VASIUKOVA, N. G., *see* Batalin, A.M., & N.G. Vasiukova. Opyt rascheta teplovogo balansa . . . 1960. No. 70066

VAS'KOVSKIĬ, A. P., *see* Biskė, S.F. O nekotorykh voprosakh stratigrafii . . . 1962. No. 70223

76351. VASSAL, PIERRE A. Observations ethnographiques et anthropologiques sur les Lapons de Norvège. (Société d'Anthropologie de Paris. Bulletins et mémoires, 1948. t.9, ser.9, p.33-61, illus., tables, map.) 36 refs. Text in French. **Title tr.:** Ethnographic and anthropological observations on the Norway Lapps.

Reports a study made in Aug. 1947 in Finnmark: the itinerary; physical conditions of the area, its population Norwegian and Lappish, since the 16th century, and their occupations; the nomadic Lapps, their physical, including facial, characteristics and craniology, structure of the ear, physiology and pathology, character, physical traits of the children. (DLC.)

76352. VASSERMAN, B. IA., *and* **N. V. SAZONOV.** K voprosu o parallelizatsii poddomanikovykh otlozheniĭ IUzhnogo Timana i Volgo-Ural'skoĭ oblasti. (Akademiia nauk SSSR. Doklady, Sept. 11, 1961. t.140, no.2, p.427-29, table.) 8 refs. Text in Russian. **Title tr.:** On the parallelism of the sub-Domanik deposits of the Southern Timan and the Volga-Ural province.

Domanik deposits, dark bitumen shales, named after the Domanik River in Timan, are Upper Devonian-Frasnian stage. From study of various drill logs, the stratigraphic successions

of Devonian deposits below the Domanik layer are correlated with the western slope of the Ural and the Volga-Ural province, and some differences from previous investigators are established. (DLC.)

76353. VATAGIN, VASILIĬ ALEKSEEVICH, 1884– Risunki. (Dekorativnoe iskusstvo, June 1962, no.6 (55), illus.) Text in Russian. **Title tr.:** Drawings.

Double-page insert containing drawings with brief captions by this prominent Russian painter and student of animalistic art: eight sketches of 18-19th century American Eskimo and Chukchi animal sculptures. (DLC.)

76354. VAUGHAN, DAVID A., *and* L. N. VAUGHAN. The effect of a pyridoxine deficiency on cold-adjusted rats. (Journal of nutrition, Jan. 1961. v.73, no.1, p.53-56, illus., tables.) 6 refs.

Pyridoxine-deprived rats, when fed again the substance showed a somewhat greater requirement of it in the cold (5°C.) than controls kept at 25°C. Food intake was depressed in the cold group by the vitamin deficiency but stimulated by the low temperature. (DLC.)

76355. VAUGHAN, DAVID A., *and others*. Interrelationships of diet and cold exposure on selected liver glycolytic enzymes. (American journal of physiology, July 1961. v.201. no.1, p.33-36, table.) 15 refs. *Other authors:* J.P. Hannon *and* L.N. Vaughan.

Reports a study of conditions in rats subsisting on carbohydrate-free diets or on a 65% glucose diet. In the first group imposition of cold led to increased reversal of pyruvate formation, while hexose monophosphate shunt activity and glycogenesis remained unaffected. On the high carbohydrate diet, hepatic glucose production also was apparently increased, possibly due to increased demand of non-hepatic tissues. (DLC.)

76356. VAUGHAN, DAVID A., *and others*. The post-cold behavior of riboflavin-deficient rats. (Journal of nutrition, Mar. 1962. v.76, no.3, p.291-97, illus., table.) 7 refs. *Other authors:* L.N. Vaughan *and* G. J. Klain.

Rats depleted of riboflavin for four weeks at 5°C., resumed slow growth when returned to 25°C. and did not show deficiency symptoms as soon as "warm" rats. The post-cold animals also maintained higher levels of liver and kidney xanthine, but total riboflavin losses were similar in the in the experimental and control groups. (DLC.)

VAUGHAN, DAVID A., *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Hannon, J.P., & D.A. Vaughan. Effect of exposure duration . . . 1961. No. 71988

Hannon, J.P., & *others*. Endogenous tissue respiration . . . 1961. No. 71989

Hannon, J.P., & D.A. Vaughan. Initial . . . glucose catabolism hibernator & nonhibernator. 1961. No. 71993

Hannon, J.P., & *others*. Tissue respiration. 1961. No. 71990

Klain, G.J., & *others*. . . . Cold exposures amino acid imbalances. 1962. No. 72830

VAUGHAN, LUCILE N., *see*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Klain, G.J., & *others*. . . . Cold exposures amino acid imbalances. 1962. No. 72830

Vaughan, D.A., & *others*. Interrelationships of diet . . . 1961. No. 76355

Vaughan, D.A., & *others*. Post-cold behavior riboflavin-deficient rats. 1962. No. 76356

Vaughan, D.A., & L.N. Vaughan. Pyridoxine deficiency & cold-adjust. rats. 1961. No. 76354

76357. VAUGHN, EUGENE H., *Jr.* Construction planning for Greenland. (Military engineer, May-June 1961. v.53, no.353, p.206-208, illus.)

Reviews work schedules of contractors engaged in U.S. Air Force and Army projects at Thule, Søndre Strømfjord, and four other sites on the west coast (DYE 1-4). Contracts are often awarded by Apr. 1; the outside working season extends from Apr. 15 - May 1 to Oct. 1; interior work may continue through December. Careful planning is required, in particular for transportation by ship of materials and equipment. Air freight costs are 8-9 times higher than those of sea tonnage. Construction equipment is owned by the U.S. Government, which also maintains small supplies of early-required materials as well as food. Work is performed on a two-shift, ten-hour day, seven-day week schedule. (DLC.)

76358. VAVILOV, P. P., *and* V. A. VITĬAZEVA. Komi filial Akademii nauk SSSR. (Akademiĭa nauk SSSR. Izvestiĭa, ser. geograficheskaĭa, Nov.-Dec. 1961. no.6, p.130.) Text in Russian. **Title tr.:** The Komi Branch of the Academy of Sciences, USSR.

Notes some recent geographic studies: development of industry and transport in this republic, the Pechora and Vychegda Rivers; a monograph on forests and the forest industry published, etc. (DLC.)

76359. VAVILOVA, M. V. Novyĭ sort rannego kartofelĭa. (Sel'skoe khozĭaĭstvo Severo-Zapadnoĭ zony, Oct. 1961. god 4, no.10, p.56-57.) Text in Russian. **Title tr.:** A new early potato strain.

Describes "Khibinskiĭ rannii," an early ripening, cold-resistant potato developed at the Polar Agricultural Experiment Station in the Khibiny by crossing the Imandra with the Empire State. Its good qualities are cited; it has been in use since 1955, and many farms had got over 300 cwt./hectare from it in 1959. It has been tested successfully in Arkhangel'sk, Komi, and Tyumen (Khanty-Mansi National District) Provinces. The general potato crop in Murmansk Province averages 202 cwt./hectare, and is better than that of the other northern and northwestern provinces. (DLC.)

76360. VDOVIN, INNOKENTIĬ STEPANOVICH. Ėskimosskie ėlementy v kul'ture chukcheĭ i koriākov. (Akademiĭa nauk SSSR. Institut ėtnografii. Trudy 1961. t.64, Sibirskiĭ ėtnograficheskiĭ sbornik 3, p.27-63.) Approx. 50 refs. Text in Russian. **Title tr.:** Eskimo elements in the culture of Chukchis and Koryaks.

Takes issue with M.G. Levin's statements concerning the origin, culture sequences, and initial distribution pattern of Paleosiberians and

Eskimos. The Chukchis and Koryaks are considered descendants of ethnically and linguistically related groups of tundra hunters and inland fishers. Archeological, anthropological, folkloristic and linguistic data are offered in support of this thesis. The recently discovered sites of approx. 1,500 B.C. in interior Chukotka correspond to this proto-Chukchi-Koryak culture stage. The advent of Eskimos about 1,000 B.C. resulted in the development of two culture forms: one settled, coastal, based on Eskimo-introduced sea mammal hunting; the other nomadic inland reindeer herding. Toponymics on the eastern coast of Kamchatka and the Bering Sea indicate an Eskimo occupancy. An Eskimo linguistic substrate is traced in Chukchi and Koryak, especially the latter's Alyutorskaya Bay dialect. Examples are cited of mutual borrowings in the Chukchi, Koryak, and Eskimo languages; also of parallels to Aleut. The seaward expansion of inland tribes in the first millennium A.D. coincided with the migration of Eskimos east to America. (DLC.)

76361. VDOVIN, INNOKENTIĬ STEPANOVICH. Vaegskie chukchi. (*In:* Akademiīa nauk SSSR. Institut ėtnografii. Trudy t.78, Sibirskiĭ . . . 1962, p.153-64, illus., diagr.) 7 refs. Text in Russian. **Title tr.:** Vayega River Chukchis.

Study of this small group (130 people in 1926) result of mid-18th century intermarriage between Chukchi and Koryak nomads. Most of them belong now to the Put' k kommunizmu collective farm along the Vayega, tributary to the upper Mayn River. Their basic reindeer-raising and subsidiary fishing and fur hunting, economy is described. Strong Koryak features are apparent in the material and spiritual culture, also in local phonetic peculiarities of their dialect. (DSI.)

76362. VEDERNIKOV, V. A. 2068 kilometrov na dreĭfuīushcheĭ l'dine po okeanu; na Poliūse otnositel'noĭ nedostupnosti. (*In:* Burkhanov, V.F. Na ledīanom ostrove, 1962, p.137-52, illus., plate, plan.) Text in Russian. **Title tr.:** 2068 kilometers on drifting ice upon the ocean; at the Pole of Relative Inacessibility.

Outlines the drift, life and work of the drifting station North Pole- 7 in 1957-58. Author was leader of the first party which manned it; the 18 members are stated. The search for suitable ice in April 1957; setting up the station at 82°09′N. 196°30′E. i.e. 163°30′W. in the least explored eastern part of the Arctic Basin, and beginning of its operations on May 1 are described. A 1500-km. helicopter flight over the Arctic Basin is noted. Construction of the camp, an emergency appendectomy in May, the struggle against meltwater in summer, by boring 60 holes in 3.5-6.0 m. thick ice, are reported. Oceanographic, aerological, and actinometric observations are noted. The party was relieved on Apr. 12, 1958 at 86°23′N. 209° 55′E. i.e. 150°05′W. after a 2068 km. drift. Plan of the camp of the station, showing the decrease in size of the ice from May 6 to July 15 and Aug. 1, is given on p.139. (DLC.)

VEDERNIKOV, V. A., *see also* Belov, N.A., & V.A. Vedernikov. Novoe . . . "Severnyĭ poliūs-7." 1962. No. 70120

76363. VEDERNIKOVA, G. A. Differentsirovannyĭ trappovyĭ massiv Padunskikh porogov r. Angary. (Geologiīa i geofizika, 1961, no.1, p.66-76, illus., tables, sections, diagr.) 16 refs. Text in Russian. **Title tr.:** The differentiated trap massif of the Padunskiy rapids on the Angara River.

Outlines the structure and composition of this massif, a suitable site for the Bratsk hydroelectric power station. From field studies in 1954 and 1955 and analysis of material from drillings, the petrography is described. The Padunskiy massif is considered a complicated sill formed by crystallized differentiation with participation of assimilation. (DLC.)

76364. VEDERNIKOVA, G. A. Petrografiīa differentsirovannogo trappovogo massiva Padunskikh porogov; na r. Angare. (*In:* Akademiīa nauk SSSR. ĪAkutskiĭ filial . . . Trudy, 1962. ser. geologicheskaīa, sbornik no.11, p.78-114, illus., tables.) 27 refs. Text in Russian. **Title tr.:** Petrography of the differentiated trap massif of the Padunskiy rapids on the Angara River.

Reports on the geologic structure of the rapids, according to which and to mineralogic composition, four varieties of traps are distinguished: poikilophytic diabases, prismatic-ophite diabases, pegmatoid gabbro diabases and dolerites. Their petrographic characteristics and mineralogic composition are analyzed. Trap genesis is discussed and hypotheses of volcanists, magmatists and metasomatists are considered, and further studies suggested for solving this problem. (DLC.)

76365. VEGHTE, JAMES H., *and* **P. WEBB.** Body cooling and response to heat. (Journal of applied physiology, Mar. 1961. v.16, no.2, p.235-38, illus.) 14 refs.

Prior body cooling increased human tolerance to high level of heat stress. The lower the body temperature at the onset of heat exposure, the longer was the tolerance time to heat. (DLC.)

76366. VEGHTE, JAMES H. Determining arctic clothing design by means of infrared radiometry. (Military medicine, Mar. 1962. v.127, no.3, p.242-46, illus.) 6 refs.

Describes accurate estimates of heat loss from nude and clothed subjects obtained by the use of a scanning infrared radiometer. Five various clothing assemblies were tested, and the critical importance of wrinkles and insulation compression is noted. (DLC.)

VEGHTE, JAMES H., *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Skrettingland, K.R., & *others.* Evaluation boots. 1961. No. 75721

76367. VEĬTSMAN, P. S., *and others.* On research of the earth's crust in the Pacific Coast area of Asia. (Pacific Science Congress. 9th, *Bangkok, Thailand,* 1957. Proceedings pub. 1961. v.12, Geology and geophysics, p.359-60.) *Other authors:* E.I. Gal'perin, I.P. Kosminskaīa *and* ĪU.V. Riznichenko.

Notes geophysical investigations from 1957, including the southern Okhotsk Sea and Kuril Trench. A demarcation line was established be-

tween the three-layered continental and the two-layered oceanic crust. The area, part of a modern geosyncline, is tentatively described: the Kuril Island arc, the 10 km.-deep depression, high seismicity indicated tectonic activity, volcanism, and a 500 mlg. positive gravity anomaly. (DI.)

VEĬTSMAN, P. S., *see also* Aver'ĭanov, A.G., & *others*. Deep seismic sounding . . . 1961. No. 69921

76368. VEKSHINA, V. N. Zona s *Ebria antiqua* Schulz nizhnego oligotsena Zapadno-Sibirskoĭ nizmennosti. (Akademiĭa nauk SSSR. Doklady, Feb. 11, 1961. t.136, no.5, p.1176-79, diagr.) 4 refs. Text in Russian. **Title tr.**: A zone with *Ebria antiqua* Schulz of the lower Oligocene in the West Siberian lowland.

Discusses problems in the stratigraphic division of Tertiary deposits. A zone with *Ebria antiqua* Schulz in various drill holes, including the Tyumen, Malyy Atlym and others, is considered lower Oligocene. Immediately below this zone the Eocene begins. Lithologic properties also support the stratigraphic position of *Ebria antiqua* zone. (DLC.)

76369. VELIKZHANINA, LIUDMILA STANISLAVOVNA, 1930– . Kompleksy peletsipod iz morskikh nizhneĭurskikh otlozheniĭ Vilĭuiskoĭ sineklizy i Priverkhoĭanskogo kraevogo progiba. (Leningrad. Vsesoĭuznyĭ neftianoĭ nauchno-issledovatel'skiĭ geologorazvedochnyĭ institut. Trudy 1961, vyp.186, Geologicheskiĭ sbornik no.6, p.78-83.) 9 refs. Text in Russian. **Title tr.**: Pelecypod complexes from marine Lower Jurassic deposits of the Vilyuy synclise and Verkhoyansk foredeep.

Describes pelecypod complexes according to their stratigraphic position in middle and upper Lias marine deposits, in the Vilyuy, Markha, and Tyung valleys, and other areas of Yakutia. Some gastropod and ammonite fauna also found is briefly described. (DLC.)

VELLE, W., *see* Kristoffersen, J., & *others*. Identification . . . whales. 1961. No. 73136

76370. VENER, R. A., *and* **N. N. URVANTSEV.** Geologicheskie i khimicheskie osobennosti noril'skikh ugleĭ. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik stateĭ . . . vyp. 16, 1961, *its:* Trudy t.123, p.117-40, tables, diagrs.) 8 refs. Text in Russian. **Title tr.**: Geologic and chemical features of Noril'sk coal.

Describes continental coal-bearing deposits of this region, 220-450 m. in thickness and of Middle Carboniferous - Upper Permian age. The geologic conditions and chemical properties of coal of the Schmidta and Nadezhdy Mountains near Noril'sk, and of the Kayyerkan deposits are reported. Moisture, volatile matter, ash, heating value and other properties are described. The ranks of the coal are discussed and compared with such of the Donets basin. (DLC.)

76371. VENGLINSKIĬ, D. I. Rybnye bogatstva ozer IAkutii. (Sel'skoe khoziaĭstvo Sibiri, July 1962. god 7, no.7, p.77-78.) Text in Russian. **Title tr.**: Fish resources of lakes in Yakutia.

Reports on a 1958-1959 survey by the Yakut Branch of All-Union Research Institute of Lake and River Fisheries (VNIORKh) in the Vilyuysk and Kobyay (63° 34′ N. 126° 30′ E.) districts. In lakes on the left bank of the middle Vilyuy and the right bank of its lower reaches, the most valuable fishes were crucian, salmon (*Coregonus peled),* perch and pike. Physical and chemical properties of the lake waters are noted, also the flora and fauna: 14,800-27,000 in a cu. m. of water, 550/m.² of the bottom. Means for increasing the catch are discussed. (DLC.)

VENKATACHALA, B. S., *see* Bharadwaj, D.C., & B.S. Venkatachala. Spore assemblage . . . Spitsbergen. 1961. No. 70195

VENTURA, L., *see* Aulisa, B., & L. Ventura. Considerazioni . . . ipotermia . . . 1960. No. 69915

76372. VERESHCHAGIN, NIKOLAĬ KUZ'MICH, 1908– , *and* **I. E. KUZ'MINA.** Raskopki v peshcherakh Severnogo Urala. (Priroda, Mar. 1962. god 51, no.3, p.76-78, illus.) Text in Russian. **Title tr.**: Excavations in the caves of the Northern Ural.

Describes exploration of the Medvezh'ya (Bear) cave, upper Pechora River, conducted by the Komi Branch of the Academy of Sciences in the summer of 1961. The abundance and diversity of faunal remains indicate the continued use of the cave as wild animal shelter for some fifty-sixty thousand years. Skeletal remains include cave bear, lion and fox, mammoth, saiga (northernmost find of this antelope), etc. Some bones show flint tool marks. Flint spalls, small lamellar blades, and scrapers were also found. Paleolithic and paleobiological conditions are reconstructed. (DLC.)

76373. VERESHCHAGIN, NIKOLAĬ KUZ'MICH, 1908– . Zabolevanie zubov u iakutskikh mamontov. (Akademiia nauk SSSR. Komissiia po izucheniiu chetvertichnogo perioda. Biulleten' 1960. no.24, p.109-111, illus.) Text in Russian. **Title tr.**: A tooth disease of Yakutia mammoths.

Reports on osteologic study of mammoth teeth in the Yakutsk Museum in 1954. Three cases are reported: two of an excrescence at the base of the tusk, both in Kotel'nyy Island mammoth, and one of abnormal folding and wear of the upper molars of a mammoth of unknown origin. (DLC.)

76374. VERESHCHAGIN, V. N. Paleontologicheskoe obosnovanie raschleneniia melovykh otlozheniĭ vostochnykh okrain Sovetskogo Soiuza i sopredel'nykh zarubezhnykh stran. *(In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.43-48.) Text in Russian. **Title tr.**: Paleontologic substantiation for the separation of Cretaceous deposits in the eastern areas of the Soviet Union and adjacent foreign countries.

Reviews the stratigraphy of these deposits over broad areas: Magadan Province, Alaska, Canada, etc. Biostratigraphic properties of Lower and Upper Cretaceous are briefly characterized, and the distribution noted of flora, various species of *Aucella, Inoceramus* and other fauna. Different stages are distinguished and correlated with those of the other regions. (DLC.)

76375. VERGE, R. W. A synoptic study of wind patterns at Frobisher Bay. Toronto, July 18, 1962. 27 p. maps, graphs, tables, 18 appendices. (Canada. Meteorological Branch, Circular CIR-3700, TEC-420.) 3 refs.

Discusses the strong relationship between surface winds and the orientation of Frobisher Bay; northwest and southeast are statistically predominant from the viewpoint of both total and strongest winds. The effect of the Bay and the

gradient aloft on the surface winds is described for three actual synoptic conditions, associated with "Hudson Strait Lows" Sept. 22, 1960, "Atlantic Coast Lows" May 29, 1961, and a third situation "Unclassified" May 22-26, 1960. Analysis of surface and 700 mb. conditions is mapped; tephigrams are provided for each situation. (DWB.)

76376. VERKHOTUROV, M., *and* **S. KLIMCHUK.** Tysi͡achniki v Kondinskoĭ taĭge. (Master lesa, Feb. 1961, no.2, p.4-5, illus.) Text in Russian. **Title tr.:** Outstanding loggers in the Konda River taiga.

Outlines achievements of the Konda Lumbering Combine toward a production goal of 1,100,000 m³/timber/yr. With increased efficiency, output rose from 433.7 m.³/man/yr. in 1958 to 538 m.³ in 1959; a 1000 m.³ output is expected by 1961, with greater mechanization. (DLC.)

76377. VERSHININ, A. A. Master okhotnich'ego promysla M.S. Ermachkov. (Ratsionalizat͡siia okhotnich'ego promysla, 1961, vyp.9, p.106-113, illus.) Text in Russian. **Title tr.:** Master hunter M.S. Ermachkov.

Outlines the activities of this noted hunter in the Penzhina District of Kamchatka Province; Mikhail Semenovich Ermachkov works a 80 km. by 5 km. hunting ground along the Penzhina River with a ten-dog sled for transportation. His equipment and snow shoes, 130 traps of three types, methods of setting and checking them, etc. are described. In the last decade, he caught 298 foxes, 322 ermines, 917 hares, 16 wolverines, and 7 arctic foxes; his 1958-59 catch was worth 16,813 rubles, 560% of the established hunter's norm. (DLC.)

76378. VERSHININ, N. V. Pitanie molodi sigovykh ryb v nizhneĭ Lene. (Voprosy ikhtiologii, 1961. t.1, vyp.3(20), p.542-51, tables.) 7 refs. Text in Russian. **Title tr.:** Food of young whitefish in the lower Lena.

Reports on stomach examinations of some 425 fish belonging to six species of gen. *Coregonus*. Species found in the stomachs, numbers and percentages, as well as mean weight of the food are considered. (DLC.)

76379. VÉRTES, EDIT. Beiträge zur Frage des finnisch-ugrischen bezeichneten Akkusativobjekts. (Acta linguistica, 1960. t.10, fasc. 1-2, p.181-94.) Refs. in text. Text in German. Summary in Russian. **Title tr.:** Finno-Ugric denoted accusative object.

Discusses the role of the personal possessive suffix in the formation of an accusative case, lacking in ancestral Uralic. Ostyak, Vogul, Samoyed, Lappish, and Zyryan languages and dialects are considered. (CtY.)

76380. VERYARD, R. G. The changing climate. (Discovery, Jan. 1962. v.23, no.1, p.8-15, illus., graphs.)

Discusses climatic fluctuations; evidence of past changes, causes, current changes, possible results. Effects on the Arctic are noted of warmer periods during the Climatic Optimum circa. 3,000 B.C., the Secondary Climatic Optimum of 800-1200 A.D. and from 1850 to 1940; influence of the colder periods around 500 B.C. and the Little Ice Age of 1500-1800 A.D. is also considered. The earth is about two-thirds along the way to a period of maximum inter-glacial warmth. An apparent trend since 1940 towards a moderately cooler climate in high and middle latitudes is probably transitory, to be followed by continued warming in the next decade. (DGS.)

VESEL'SKIĬ, I., *see* Frank-Kamenet͡skiĭ, V.A., & I. Vesel'skiĭ. Rentgenovskoe issledovanie . . . 1961. No. 71476

76381. VESTINE, E. H. Morphology of magnetic storms. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962. v.1, p.61-69, graphs, tables, maps.) 27 refs.

Summarizes major descriptive features of geomagnetic storms. An attempt is made to integrate some recent rocket and satellite magnetometer measurements into previous surveys of the morphology of disturbance. Some electric current configurations and their driving forces are discussed. It was found that the polar disturbance field during bays tends to rotate westward with time at a rate of the order of 5° - 10° of longitude per hour at, or just north of the auroral zone. Outside the zone, current-patterns appear to drift eastward. There is also evidence of a slow drift to the east of the eastward-directed electrojets formed at the auroral zone. Represented by the model of ionospheric current systems, the initial phase of storms at ground level is due to a world-wide, west-east circulation of current, plus two opposed atmospheric polar current circulations flowing away from the sun near each geomagnetic pole. (DLC.)

VESTINE, E. H., *see also* Kern, J.W., & E.H. Vestine. Theory of auroral morphology. 1961. No. 72744

VESTNES, G., *see* Møller, D., & *others*. Loddeundersøkelser . . . 1961. No. 74069

76382. VIÂLOV, OLEG STEPANOVICH. O znachenii nakhodki *Paleodictyon* na Chukotke. (Sovetskaia͡ geologiia͡, Aug. 1961, no.8, p.106-109, illus., map.) 11 refs. Text in Russian. **Title tr.:** On the significance of the *Paleodictyon* find on Chukotka.

Notes find of seven specimens in three locations. This hexagonal net-like fossil of undetermined origin is thought not to belong to Permian flora as hitherto considered. Artificial classification is briefly discussed. Its occurrence is closely connected with the lower surface of the layers, hence it has significance for the interpretation of folded zone tectonics. (DLC.)

76383. VIÂLOV, SERGEĬ STEPANOVICH. Vi͡azkoplasticheskoe techenie lednikovykh pokrovov i zakonomernosti deformirovaniia͡ l'da. *(In:* Materialy po laboratornym issledovaniia͡m merzlykh gruntov, 1961. sbornik 4, p.137-155, graphs.)8 refs. Text in Russian. **Title tr.:** Viscoplastic flow of ice sheets and features of ice deformation.

Reports studies during the Second Antarctic Expedition, 1956-1958, including measurements at the Mirnyy base on the creep, compression, shear, and hardness of ice under different conditions. Data are analyzed mathematically. Calculated data on the flow of ice sheets are compared with measurements made between Mirnyy and Vostok and are found to be in good agreement as regards surface configuration and in satisfactory agreement with respect to the rate of flow.—From CRREL. (DLC.)

VIBE, CHRISTIAN, *see Atuagagdliutit.* Vildrenbestanden . . . 1961. No. 69913

VIERECK, ELEANOR G., 1931– , *see*
Alaskan Science Conference 1960. 1961. No. 69643

Symposia on Arctic Biology and Medicine. No. 76055 & 76056

VIERECK, LESLIE A., *see* Alaskan Science Conference 1960. 1961. No. 69643

76384. VIEUCHANGE, JEAN. Conservation prolongée à -70° C. et survie de tissus de mammifère. (Académie de Medicine, Paris. Bulletin 1960. t.144, no.15-16, p.295-301.) 23 refs. Text in French. **Title tr.:** Prolonged conservation and survival of mammalian tissue at -70° C.

Account of freezing young and embryonic bovine tissues with addition of glycerol. The degree of survival depended on the glycerol concentration and, within certain limits, on the duration of freezing, and on the freezing and thawing method. (DNLM.)

VIGERUST, PER, *see* Norsk tindeklub. Fjellsport. 1958. No. 74388

76385. VIKELAND, NILS. Forsøk med forrådsgjødsling med superfosfat til eng. (Forskning og forsøk i landbruket, 1961. bd. 12, hefte 5, p.431-45, tables, graph.) 12 refs. Text in Norwegian. Summary in English. **Title tr.:** Experiments with superphosphate as storage fertilizer for grass land.

Troms and Finnmark soils are mostly phosphorus-deficient, particularly so in recently reclaimed and cultivated land. Experiments are reported which aimed at increasing the P content of soil and hay, and maintaining the level during two five-year rotation periods: 1946-50 and 1952-56. Superphosphate increased P during the first few years but P decreased towards the end of the rotation period. Despite the lack of control for the entire period however, first-time fertilizing with 600-1,000 kg. superphosphate/hectare and subsequent normal annual application of P are recommended. (DA.)

76386. VIKHERT, ALEKSANDR VOL'DEMAROVICH, *and others*. Geologicheskoe stroenie i rudonosnost' Zapadnogo Verkhoïan'ia. Moskva, Izd-vo Akademii nauk SSSR, 1961. 212 p. illus., tables, maps & cross sections incl. fold. (Akademiia nauk SSSR. IAkutskiĭ filial. Trudy ser. geologicheskaia, sbornik, 5.) Approx. 100 refs. Text in Russian. *Other authors:* V.F. Vozin, IU.P. Ivensen, A.S. Kashirtsev, *and* E.G. Proshchenko. **Title tr.:** Geologic structure and ore-bearing properties of the western Verkhoyansk region.

Presents extensive work on the stratigraphy, tectonics, historical geology and metallogeny of the region approx. 60°- 70° N. 126°- 136° E. Stratigraphy of the Permian, Triassic, Jurassic and Cretaceous deposits is described. Tectonics of the western Verkhoyansk anticline, Verkhoyansk foredeep, Yana synclinal zone, and Sette-Daban anticline are outlined. Development history and paleogeography are characterized. Distribution laws of magmatic and igneous rocks and ore deposits are analyzed. Mineral composition of the ore deposits is described. Spectrum analysis of sedimentary and igneous rocks is presented. Two stages of mineralization are distinguished and characterized. (DLC.)

76387. VIKHIREVA-VASIL'KOVA, V. V. O pochkakh vozobnovleniia arkticheskikh rastenii. (Botanicheskiĭ zhurnal, Aug. 1962. t.47, no.8, p.1141-51, illus., tables.) 15 refs. Text in Russian. Summary in English. **Title tr.:** Renewal buds of arctic plants.

Study of morphology and development of flowerbuds during the vegetative period in a series of plants of the Asiatic tundra. The formation of flowers in the buds is considered in relation to the dates of flowering in the species. In the common alp lily *Lloydia serotina,* one of the few Liliaceae in the Arctic, development was studied from bud initiation to flowering. Conditions of other parts of this plant are also described. (DLC.)

76388. VIL'CHEVSKIĬ, O., *and* E. BUTIN. IAmal'skie mastera "miagkogo zolota". (Sel'skoe khoziaĭstvo Sibiri, Aug. 1962. god 7, no.8, p.83-84.) Text in Russian. **Title tr.:** Yamal "soft-gold" experts.

Qutlines fur farming in Yamal-Nenets National District: mainly blue and silver fox. The returns rose from 70,000 rubles to 125,000 rubles in 1959-1961; achievements of the leading fur farm of Rossiya sovkhoz and the best workers are cited. (DLC.)

76389. VILENSKIĬ, A. M., *and* V. S. GOLUBKOV. Struktura i tektonicheskiĭ kontrol' nekotorykh nikelenosnykh intruziĭ basseĭna reki Kureĭki. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik stateĭ . . . vyp.16, 1961, *its:* Trudy t.123, p.158-65, map.) 7 refs. Text in Russian. **Title tr.:** Structure and tectonic control of some nickel-bearing intrusions in the Kureyka River basin.

Describes plicated and disjunctive dislocations in this basin, approx. 67°N. 90°E. in Kranoyarskiy Kray. Deep faults are characterized. Structural analysis of trap intrusions is made and differentiated intrusions are distinguished. Deep-seated differentiated intrusions, connected with deep faults are the most promising for nickel-copper occurrences. Search for useful minerals should be concentrated in areas of deep tectonic faults and fractures. (DLC.)

76390. VILLAKHOV, EVG. Tragediia v del'te Leny. (Sibirskie ogni, July 1962. god 41, no.7, p.144-49.) Text in Russian. **Title tr.:** Tragedy in the Lena delta.

Describes the rescue of eleven members of the ill-fated *Jeannette* expedition of 1879-81, Melville's search for De Long in the Lena River delta, burial of the bodies, etc., based on letters and documents now in the state archives of the Yakut ASSR. The help provided by Yakuts, political exiles, and local authorities is stressed. (DLC.)

76391. VINOGOROV, G. K. Nuzhny li agregatnye mashiny? (Lesnaia promyshlennost', Jan. 1961. god 39, no.1, p.13-17, diagrs., tables.) Text in Russian. **Title tr.:** Are multi-purpose machines needed?

Discusses logging equipment developed by the Komiles Combine, combining felling and skidding, felling-loading, felling-transportation, skidding-transportation. Tested by various lumbering concerns of Komi ASSR, it was found as a rule too complicated, too heavy and not up to expectations. It goes against the main principle of technological progress: division of a process into separate and simple operations. This article roused consider-

able discussion within the industry, both pro and con, which the journal summarized in its Dec. 1961 issue, p.15-17. (DLC.)

76392. VINOGRADOV, O. N. Nekotorye rezul'taty izmereniĭ poverkhnostnykh skorosteĭ dvizheniĭa l'da na lednikovom kupole Churlĭanisa. (*In:* Akademiĭa nauk SSSR. Institut geografii . . . Materialy glĭatsiologicheskikh . . . 1961. vyp.2, p.27-30, map.) Text in Russian. **Title tr.:** Some results of ice velocity measurements on the surface of Churlyanisa ice dome.

Describes the method and preliminary results of these measurements, which are plotted on a map. The speed varies substantially, with the maximum 8 m./yr. on the eastern slope of the dome, at the 300 m. level. Warm and cold seasons and other factors affecting the velocity are summarized. (DLC.)

VINOGRADOV, V., *see* Soskin, V., & V. Vinogradov. Vekhi . . . goroda nauki. 1962. No. 75841

76393. VINOGRADOV, V. A. Doverkhnepaleozoĭskaĭa istoriĭa geologicheskogo razvitiĭa Severnogo Verkhoĭan'ĭa i severo-vostochnoĭ chasti Sibirskoĭ platformy v svĭazi s perspektivami neftegazonosnosti. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik stateĭ . . . vyp.16, 1961, *its:* Trudy t.123, p.19-40, diagrs.) 14 refs. Text in Russian. **Title tr.:** Pre-Upper Paleozoic history of geologic development of the northern Verkhoyansk region and northeastern part of the Siberian platform in connection with oil and gas prospects.

Describes Sinian and Lower Paleozoic deposits of northern Verkhoyansk Range and the Lena-Olenek interfluve, based on study of the Tuora-Sis Range (71°24′N. 127°48′E.) in 1956-1958. Stratigraphy of Sinian, Cambrian, Silurian, and partly Carboniferous deposits is described. Structural-facies analysis of these deposits is given. Favorable conditions are noted for organic material forming in some of the facies. Sinian and Devonian deposits are considered most likely for accumulation of oil and gas. (DLC.)

76394. VINTS, B. D., *and* **L. A. PRIVALOVA.** O korrekture karty normal'nogo geomagnitnogo poliĭa naprĭazhennosti *T* ėpokhi 1950 g. dlĭa territorii SSSR, vostochnee Eniseĭa. (Geomagnetizm i ėronomiĭa, 1962. t.2, no.3, p.527-31, maps.) 4 refs. Text in Russian. **Title tr.:** Revision of the map of normal geomagnetic field intensity *T* of the epoch 1950 for the USSR territory, east of the Yenisey.

Discusses maps of the normal geomagnetic field of the epoch of 1950, prepared for the components *H, Z, T, D, I, X,* and *Y* in 1952, and augmented in 1960 with new aeromagnetic data on ΔT, for which new maps at 1:2,500,000 and 1:10,000 scale are prepared. The method of treatment of these new data of both land and airborne observations and their application are described. The revised map covering the entire USSR is illus. (fig. 2) as is the sector 52°-72°N. and 93°-123°E., which includes the region of the Siberian magnetic maximum, T_N of the normal field. It was found that the area of the maximum bound by the isodynamic line 0.61 was more than doubled in size compared with the 1952 data, and that the center of the maximum is displaced to the north. (DLC.)

76395. VIRTA, J. Evapotranspiration measurements in a string fen in northern Finland. (*In:* International Union of Geodesy and Geophysics, General Assembly of Helsinki, 1960, Association of Scientific Hydrology, 1960, Pub. no.53, p.438-41, illus., graph, tables.) 2 refs.

Reports a study at Korvanen, 67°56′N. 27°48′E., during June 5-Aug. 28, 1959, sketching the station site, instruments and procedure. Greatest evaporation occurred at the beginning of the period. Lowering the water level in the bog did not have the expected effect of increasing sensitivity of the measurements under conditions of slight evaporation. Measured daily evaporation was compared with computed values and the correlation coefficient was 0.84. The role of evapotranspiration decreased, while that of long-wave radiation increased, in the course of the summer. (DWB.)

VISHNEVSKAĬA, T. N., *see* Zaporozhtseva, A.S., & *others.* O posledovatel'nom zameshchenii kal'tsievykh tseolitov . . . 1961. No. 76643

VISHNEVSKIĬ, S. A., *see* Kurashov, S.V. Kurorty SSSR. 1962. No. 73222

76396. VISKOVA, L. A. Novye pozdnekamennougol'nye fenestellidy basseĭna reki Usy. (Paleontologicheskiĭ zhurnal, 1961, no.4, p.86-92, illus., plates.) 4 refs. Text in Russian. **Title tr.:** New late Carboniferous fenestellids from the Usa River basin.

Describes four new species of bryozoan gen. *Fenestella, F. komiensis, F.. ninae, F. sharyuensis, F. usaensis,* and one of gen. *Reteporidra, R. variocellata,* all fam. Fenestellidae. They were collected in Upper Carboniferous deposits in the southern part of the Chernysheva Ridge in Komi ASSR. (DLC.)

VITĬAZEVA, VALENTINA ALEKSANDROVNA, *see* Alampiev, P.M., & V.A. Vitĭazeva. Voprosy ėkonomicheskogo raĭonirovaniĭa . . . 1960. No. 69607

Vavilov, P.P., & V.A. Vitĭazeva. Komi filial . . . 1961. No. 76358

VITKINA, N. KH., *see* Kudrĭavtsev, V.A., & *others.* O kartirovanii . . . 1961. No. 73189

VIVITSKIĬ, G. N., *see* Akademiĭa nauk SSSR. *Institut geografii.* Dal'niĭ Vostok . . . 1961. No. 69546

76397. VLADIMIROV, APOLLON TIKHONOVICH, 1921–1960. Osobennosti dinamiki berega Zapadnoĭ Kamchatki v svĭazi s gidrotekhnicheskim i promyshlennym stroitel'stvom. (*In:* Akademiĭa nauk SSSR. Komissiĭa po problemam Severa. Syr'evye resursy . . . 1961, p.138-42.) Text in Russian. **Title tr.:** Features of the dynamics of the west Kamchatka coast in relation to hydrotechnical and industrial construction.

Analyzes the morphology and dynamics of this coast from Cape Khayryuzovyy south to the Ozernaya River. It tends to be flat and unbroken, with development of lagoons, marshes, peaty plains as common features. Northern middle and southern sections are distinguished and discussed as to suitability for port construction. The Ozernaya River region is the best for this purpose. (DLC.)

VLADIMIROV, APOLLON TIKHONOVICH, 1921–1960, *see also*

Budanov, V.I., & *others*. O priznakakh . . . morei. 1961. No. 70431

Budanov, V.I., & *others*. Present-day vertical movements . . . 1961. No. 70432

VLADIMIROV, O. A., *see* Al'tshuler, V.M., & O.A. Vladimirov. Vychislenie polusutochnogo priliva . . . 1961. No. 69732

76398. VLADIMIRSKAIA, MARIIA IVANOVNA, 1908– . Young salmon in the upper part of the river Pechora. (International Council for the Exploration of the Sea. Rapports et proces-verbaux des réunions 1959. v.148, Contributions to symposium on salmon and sea trout 1958, p.53-57, tables.)

Reports on spawning grounds of this river, hatching, habitat and migrations of the fry. Growth, age and size groups are described, descent to the sea, food, enemies, etc. are considered. (DI.)

76399. VLADIMIRSKAIA, MARIIA IVANOVNA, 1908– . Zavisimost' neresta semgi v reke Pechore ot gidrologicheskikh uslovii. (Voprosy ikhtiologii, 1960. vyp.16, p.111-20, illus., tables.) 3 refs. Text in Russian. **Title tr.:** Dependence of salmon spawning in the Pechora River on the hydrological conditions.

Of the two factors studied, water level determined how high in the river course spawning took place. Summer and fall temperatures affected the time of spawning, low temperatures causing an early start. A sharp drop of temperature in the late summer or fall speeded this process. (DLC.)

76400. VLADYKOV, VADIM D. Fishes of Quebec. Quebec, Que., Dept. of Fisheries, 1955? 6 albums, illus. Text in French and English.

Describes and illus. in separate albums of a few pages each: speckled trout, Atlantic salmon, American lobster, cod and tomcod, lake and sea sturgeon all found in northern coastal waters; also eels (not northern). (CaOG.)

76401. VLADYKOV, VADIM D., *and* **D. E. McALLISTER.** Preliminary list of marine fishes of Quebec. (Naturaliste canadien, Mar. 1961. v.88, no.3, p.53-78.) 72 refs.

Contains annotated list of 51 families and 123 species of marine fishes found in the St. Lawrence below Quebec city; nine species reported also from Hudson Bay. (DGS.)

76402. VLASENKO, M. M. Vtoraia nauchnaia konferentsiia po russkomu iazyku uchenykh Vostochnoi Sibiri i Dal'nego Vostoka. (Akademiia nauk SSSR. Sibirskoe otdelenie. Izvestiia, 1961, no.1, p.126-28.) Text in Russian. **Title tr.:** The Second Scientific Conference on the Russian Language for Scholars of Eastern Siberia and the Far East.

Reports the conference at Irkutsk Sept. 21-24, 1960, with 16 institutions represented; it dealt with methods of teaching, scientific study of the Russian language, Russian dialects in Yakutia, Kamchatka, the Kolyma basin, etc. (DLC.)

76403. VLASOV, G. M., *and* **M. M. VASILEVSKII.** Genezis i vzaimootnosheniia rudnykh formatsii vtorichnykh kvartsitov i propilitov Sredinnogo Kamchatskogo khrebta. (Vsesoiuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.286-92.) Text in Russian. **Title tr.:** Genesis and interrelation of ore formations of secondary quartzites and propylites in the Sredinnyy Range of Kamchatka.

Reports a study of ore-forming processes in young volcanic rocks and such currently discharged by the volcanoes of Kamchatka and the Kuril Islands. Those of the Sredinnyy Range are analyzed for hydrothermal mineralization. Secondary quartzites and propylites are considered the best possibilities for ore and non-ore raw materials. (DLC.)

76404. VLASOV, G. M. Istoriia geologicheskogo razvitiia Priokhotskikh geosinklinalei. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.7-15, text map.) Text in Russian. **Title tr.:** History of the geological development of the Okhotsk geosynclines.

Reviews the young folded areas surrounding the Sea of Okhotsk and Kamchatka, Koryak Range, Sakhalin and other areas. History of geosynclines, which started in the late Cretaceous-Tertiary is interpreted, noting tectonic movements, volcanic activity, transgressions and regressions, climatic fluctuations and other events. Some stratigraphic problems of the Upper Cretaceous and Tertiary periods are discussed. (DLC.)

76405. VLASOV, G. M. Obshchie cherty geologicheskogo stroeniia Kamchatki i zadachi dal'neishikh nauchno-issledovatel'skikh rabot. (*In:* Akademiia nauk SSSR. Komissiia po problemam Severa. Syr'evye resursy . . . 1961, p.18-26.) Text in Russian. **Title tr.:** Main features of the geologic structure of Kamchatka and tasks of further scientific work.

Reviews synclines and anticlines and other structures. Geophysical investigations, utilization of hot springs and volcanic heat, compilation of a geomorphic map and other tasks are discussed in connection with further studies. (DLC.)

76406. VLASOV, G. M., *and* **M. M. VASILEVSKII.** Vysokoglinozemistye fatsii vtorichnykh kvartsitov v sredinnom Kamchatskom khrebte. (Geokhimiia, 1961, no.7, p.630-33, table, diagrs.) 8 refs. Text in Russian. **Title tr.:** High aluminiferous facies of secondary quartzites in the Sredinnyy Range of Kamchatka.

Reports on the nature of the facies and the postmagmatic mineralization processes. Two different families of secondary quartzites are distinguished in the Sredinnyy massif: one formed at an early stage under high temperature and influence of halogen acid; it is characterized by high inertness of Al_2O_3 as compared with SiO_2. The other family comprising facies from sericite to alunogen, was formed at a later stage and comparatively low temperature. (DLC.)

VLASOVA, M. N., *see* Kukes, V.G., & M.N. Vlasova. Soderzhanie kholesterina . . . 1962. No. 73193

VLASOVA, TAT'IANA ALEKSANDROVNA, *see* Bratsev, A.P., & *others*. Glubokovodnoe ozero . . . 1962. No. 70370

76407. VLODAVETS, VLADIMIR IVANOVICH, *and others*. Zadachi izucheniia sovremennogo vulkanizma v SSSR. (Vsesoiuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.5-10.) Text in Russian. *Other authors:* G.S. Gorshkov *and* S.I. Naboko. **Title tr.:** Research needs on present volcanism in the USSR.

Reviews the areas involved: Kamchatka-Kuril volcanic arc, Yuzhnyy - Anyuy Ridge, possibly the Indigirka region, with 69 active and some 200 extinct volcanoes; the scope and problems of volcanology such as dynamics and chemistry of magma, formation of hydrothermal solutions, etc. Geothermal and seismic investigations in Kamchatka, are briefly described. (DLC.)

VLODAVETS, VLADIMIR IVANOVICH, *see also* Int. Volcan. Assoc. Catalogue . . . active volcanoes . . . 1959. No. 72398

76408. VODOLAZKIN, V. M. Prochnostnye kharakteristiki ottaĭavshikh glinistykh gruntov na razlichnykh stadiĭakh konsolidatsii. (*In:* Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.66-72, table, graphs.) 11 refs. Text in Russian. **Title tr.:** Strength characteristics of thawed clayey ground in various stages of consolidation.

Reports compression tests conducted on samples of thawed ground from various depths at three sites in the Vorkuta region. Compressive loads up to 6 kg./cm.^{2} were applied, and the coefficient of porosity was found to vary regularly with application of load. Strength characteristics of the soils in various stages of consolidation are tabulated, and formulas are offered for calculating the rate of settling beneath typical foundations. It is concluded that foundations can be erected on thawed clays, because most settling will have taken place by the time the building is completed. —From CRREL. (DLC.)

VÖGTLI, KURT, *see* Apollonio, S., & *others.* Devon I. Exped. 1961. No. 69832

76409. VOGAN, E. L., *and* **T. R. HARTZ.** Ionospheric absorption on November 12, 1960. (Canadian journal of physics, Apr. 1961. v.39, no.4, p.630-34, table, diagrs.)

Describes some features in riometer records from the Canadian stations Resolute Bay, Coral Harbour, Churchill, Cape Jones, Val d'Or, and Ottawa. A latitude-time profile showing start of PCA at 30 Mc./s. is included. (DLC.)

VOGAN, E. L., *see also* Hartz, T.R., & E.L. Vogan. Riometer observ. PCA events Nov. '60. 1962. No. 72058

VOGT, HANS, 1903– , *see* Bergsland, K., & H. Vogt. Validity of glottochronology. 1962. No. 70162

76410. VOGT, ROCHUS. Primary cosmic-ray and solar protons. (Physical review, ser. 2, Jan. 1, 1962. v.125, no.1, p.366-77, tables, graphs, diagrs.) 37 refs.

Analyzes observations made in Aug.-Sept. 1960 during three high-altitude balloon flights at Ft. Churchill, Manitoba. A significant flux of primary protons with energies below 500 Mev. was detected. The spectrum observed on quiet days may be represented by $dJ/dE = 2.3 \times 10^4 \times E^{-2}$ protons/m.^{2} sec. sterad Mev. for $78 \leq E \leq 200$ Mev. and flattens between 200 and 350 Mev. On Sept. 8 the proton flux at 70-350 Mev. was several times larger than on quiet days; these protons are believed to have been produced by a class 3 flare on Sept. 3. (DLC.)

VOGT, ROCHUS, *see also*

Meyer, P., & R. Vogt. Electrons . . . primary cosmic radiation. 1961. No. 73961

Meyer, P., & R. Vogt. The primary cosmic-ray electron flux . . . 1961. No. 73962

76411. VOĬCHAL', P. I. Geograficheskie kul'tury sosny v Arkhangel'skoĭ oblasti. (Lesnoe khoziaĭstvo, Nov. 1961. god 14, no.11, p.41-42, table.) Text in Russian. **Title tr.:** Pine from different geographical areas in Arkhangel'sk Province.

Reports on 49 seed samples from various parts of the Soviet Union sown in 1959 on the Isakogorka (64°32′N. 40°22′E.) forestry experiment farm. Germination and growth data are tabulated, compared and discussed. Best results were obtained with local seed from the northern taiga; seed from Krasnoyarsk Province gave satisfactory results also, but that introduced from southern areas, poor. (DLC.)

76412. VOĬNOVSKIĬ, V. M. O tekhnike bezopasnosti na polevykh topografo-geodezicheskikh rabotakh v slozhnykh gorno-taezhnykh raĭonakh. (Geodeziia i kartografiia, May 1961, no.5, p.52-55.) 2 refs. Text in Russian. **Title tr.:** On safety measures for topographic-geodetic field work in difficult mountain-taiga regions.

Gives some practical rules and advice on equipment, food supply and preservation, camp site, crossing of the taiga, orientation when lost, etc. (DLC.)

76413. VOĬNOVSKIĬ-KRIGER, KONSTANTIN GENRIKHOVICH, 1899– . K voprosu o stroenii severnoĭ okonechnosti Pripolĭarnogo Urala. (Akademiia nauk SSSR. Izvestiia, ser. geologicheskaia, Apr. 1961, no.4, p.99-102.) 9 refs. Text in Russian. **Title tr.:** On the structure of the northern extremity of the Subpolar Ural.

Offers some critical notes on two works by M.E. Raaben: No. 61073 and 61074. (DLC.)

76414. VOĬNOVSKIĬ-KRIGER, KONSTANTIN GENRIKHOVICH, 1899– . Silur Lemvinskoĭ fatsial'no-strukturnoĭ zony, zapadnyĭ sklon Polĭarnogo Urala. (Moskovskoe obshchestvo ispytateleĭ prirody. Biulleten' 1961, n. ser. t.66, otdel geologicheskiĭ, t.36, vyp.3, p.38-55, illus., map.) 11 refs. Text in Russian. Summary in English. **Title tr.:** The Silurian of the Lemva facies structural zone, western slope of the Polar Ural.

The Lemva structural zone extends about 250 km., approx. 65°30′- 67°30′N. Silurian deposits are represented by the Kharota series, which is described in detail, the lithology, stratigraphy, graptolites and other fauna, and formation conditions. Evidence is presented that these deposits accumulated under geosyncline conditions. A number of peculiar facies are reported. (DLC.)

76415. VOIPIO, AARNO. The iodine content of Barents Sea water. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v.149, Contributions to Special IGY Meeting 1959, p.38-39, table.) 12 refs.

Discusses methods of determination and re-

analysis of 30 water samples down to 400 m. depths. Total content of inorganic I was found to be about 0.50 mg. -at./m.^{3}, with surface water containing less. (DI.)

76416. VOĬTKOVSKIĬ, K. F. An experimental ice house. Translated by R. Sholiton. Sept. 1961. 18 p. illus., tables, diagrs. (American Meteorological Society. Translation T-R-374.)

English translation of No. 55855. (CaMAI.)

76417. VOĬTSEKHOVSKAIA, A. A. Predstaviteli semeĭstva Endothyridae (foraminifera) iz nizhnekamennougol'nykh otlozheniĭ Kraĭnego Severa. (Leningrad. Nauchno-issledovatel'skiĭ institut geologii Arktiki. Sbornik stateĭ po paleontologii i biostratigrafii 1961, vyp.24, p.16-45, plates.) 16 refs. Text in Russian. **Title tr.:** Representatives of fam. Endothyridae (foraminifera) from Lower Carboniferous deposits of the far North.

Presents taxonomic description of these forams in subfam. Endothyrinae and Plectogyrinae, collected in eastern Taymyr, the Nordvik region, the northern island of Novaya Zemlya, and Pay-Khoy: 22 new forms as well as some previously known species. (DLC.)

76418. VOKE, EDWARD M. Bone and joint tuberculosis clinic. (Alaska medicine, Dec. 1961. v.3, no.4, p.85.)

Reports on the activity of the clinic held in Anchorage, Oct. 23-27, 1961: selected cases, mainly with spinal and neurological changes; surgery; orthopedic problems. (DNLM.)

VOKES, FRANK M., *see* Padget, P., & *others*. Geochem. prospecting Norw. 1960. No. 74620

VOLKMANN, CAROL M., *see* Alaskan Science Conference 1961. 1962. No. 69644

76419. VOLKOV, N. A. Frit'of Nansen, velikiĭ polĭarnyĭ issledovatel' i gumanist; k 100-letiĭu so dnĭa rozhdeniĭa. (Vsesoĭuznoe geograficheskoe obshchestvo. Izvestiĭa, Nov.-Dec. 1961. t.93, vyp.6, p.479-86.) Text in Russian. **Title tr.:** Fridtjof Nansen, a great polar explorer and humanitarian; the centenary of his birth.

Outlines his life and work in Greenland, the Arctic Basin, Franz Joseph Land, etc.; and his humanitarian activities after the First World War. (DLC.)

76420. VOLKOV, P. D. Novye issledovaniĭa po rel'efu dna v Grenlandskom more. (Morskoĭ flot, Mar. 1961. god 21, no.3, p.35-37, maps.) Text in Russian. English translation, by E.R. Hope, issued as Canada, Defence Research Board. Directorate of Scientific Information Services. Translation T356R. Copy at CaMAI. **Title tr.:** Recent studies of bottom relief in Greenland Sea.

Summarizes results of hydrographic studies by the *Ob'* and *Lena* during 1956-1957 in the northern part of the Sea, approx. 77°-83°N. A bathymetric chart of the area on scale 1:2, 500,000 is presented and discussed. It shows, among others, the erroneous identification of the Nansen Rise, as extending to 80° or 81°N. between Greenland and Spitsbergen. Instead, the chart shows an elevation extending northwestward from Spitsbergen to 82°N. and about 0°longitude. A deep trough or channel (called Zhelob Leny) runs north-south near 1°E. carrying most of the deep water from the North Atlantic in a westward swing across the 0° meridian into the Arctic Basin. Another new bottom feature is a shoal near 81°N. 10°W. rising to 80-45 m. from the surface and named Otmel' Obi. A detailed chart is presented also of the Belgica Bank, centered near 78°15′N. 14°30′W. (DLC.)

76421. VOLKOV, V. P., *and* **E. N. SAVINOVA.** O sootnoshenii kaliĭa i rubidiĭa v protsesse ėvolĭutsii izvestkovo-shchelochnykh i shchelochnykh magm. (Geokhimiĭa, 1961, no.12, p.1099-1107, tables, graphs.) 17 refs. Text in Russian. Summary in English. **Title tr.:** On the potassium and rubidium ratio in the evolution process of lime-alkaline and alkaline magma.

Reports a geochemical study of nepheline syenites of the Lovozero massif, Kola Peninsula. Results are given of potassium rubidium distribution and ratio. 105 analyses reveal that the average rubidium content is $230 \cdot 10^{-4}$%, and the average K/Rb ration is 185. A comparison is made with the behavior of K and Rb in other genetically similar series of alkaline and lime-alkaline rocks. (DLC.)

76422. VOLKOV, V. P., *and others*. Petrokhimicheskie osobennosti i assotsiatsii aktsessornykh mineralov nefelinovykh sienitov differentsirovannogo kompleksa Lovozerskogo shchelochnogo massiva. (Geokhimiĭa, 1961, no.8, p.656-65, tables, diagrs.) 7 refs. Text in Russian. Summary in English. *Other authors:* A.I. Polĭakov, M.I. Karakhanova, *and* L.P. Voronina. **Title tr.:** Petrochemical features and associations of nepheline syenite accessory minerals of the differentiated complex of the Lovozero alkaline massif.

A differentiated complex of lujavrites-foyaites-urtites comprises 80% of the entire Lovozero alkaline massif. The chemical and mineralogic composition of this complex is studied in detail and obtained data are reported and evaluated. In the deepest horizons of rocks the Fe^{3+}/Fe^{2+} ratio decreases, the agpaitic character increases, the role of Mg and volatile components increases. For every variety of nepheline syenites, typomorphic associations of accessory minerals are reported. (DLC.)

76423. VOLKOVA, V. S. O paleogeografii poslednego mezhlednikov'ĭa v nizov'ĭakh Eniseĭa. (*In:* Vsesoĭuznoe soveshchanie po izucheniĭu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.167-70.) Text in Russian. **Title tr.:** On the paleogeography of the last interglacial in the lower Yenisey.

Reports a study of interglacial deposits collected in the basins of the Bol'shaya and Malaya Kheta, left tributaries of the Yenisey. Three layers are distinguished and described, noting composition, lithologic properties, fauna and other features. These deposits were formed in the marine basin and they belong to the last interglacial period. (DLC.)

VOLLENWEIDER, H., *see* Ballinger, W.F., & *others*. Accumulation . . . excess lactate . . . 1962. No. 69991

76424. VOLLOSOVICH, K. K. O stratigrafii chetvertichnykh otlozheniĭ Evropeĭskogo Severa. (*In:* Materialy po geologii . . . Evropeĭskoĭ chasti SSSR,

sbornik statei 1961, vyp.1, p.69-78.) 22 refs. Text in Russian. **Title tr.:** On the stratigraphy of the Quaternary deposits of the European North.

Reviews cross-sections of deposits in the Severnaya Dvina basin, Kanin Peninsula, coastal areas of Cheshskaya Bay, and elsewhere. A stratigraphic correlation between the western and eastern regions is given. The Quaternary stratigraphy worked out by S.A. Iakovlev (No. 65279), recognizing four glaciations and transgressions is considered misleading. Three glaciations and a marine-boreal transgression are recognized and evaluated. (DLC.)

76425. VOL'NOV, D. A., *and* **D. S. SOROKOV.** Geologicheskoe stroenie ostrova Bennetta. (*In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Sbornik statei . . . vyp. 16, 1961, *its:* Trudy t.123, p.5-18, illus.) 13 refs. Text in Russian. **Title tr.:** The geologic structure of Bennet Island.

Describes the stratigraphy of Cambrian, Ordovician, Cretaceous and Quaternary systems noting distribution, thickness, and their flora and fauna. Tectonic structure of these deposits is characterized. Deposition of sedimentary, coal-bearing and effusive formations is characterized. At present uplift is in progress. The glaciers are in recession stage. Based on 1956 field work on this island, 76°40'N. 149°24'E. in the New Siberian Islands group, as well as earlier work. (DLC.)

76426. VOLOGDIN, ALEKSANDR GRIGOR'EVICH, 1896– . Paleontologicheskoe obosnovanie vydeleniia siniia v predelakh Vostochnoi Sibiri. (Sovetskaia geologiia, May 1961, no.5, p.77-95, illus., tables incl. fold.) 25 refs. Text in Russian. Summary in English. **Title tr.:** Paleontological substantiation for the separation of Sinian deposits in Eastern Siberia.

Reports own studies since 1936 on late Precambrian deposits in the Turukhansk region, Yenisey Ridge and other areas. Attention was directed to the morphology and history of algae, the so-called stromatolites, studied by biological microscope and thin sections. The diagnostics of rock-forming algae were developed and their stratigraphic significance established. Based on this type of studies, a stratigraphic division of the Sinian complex is delineated. (DLC.)

76427. VOLOSHINOVA, N. A., *and* **A. I. BUDASHEVA.** Lituolidy i trokhamminidy iz tretichnykh otlozhenii ostrova Sakhalina i poluostrova Kamchatki. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy 1961. vyp. 170, Mikrofauna SSSR, sbornik 12, p.169-271, tables, plates.) 42 refs. Text in Russian. **Title tr.:** Lituolidae and Trochamminidae from Tertiary deposits of Sakhalin Island and Kamchatka Peninsula.

Presents the stratigraphic distribution and systematic description of Miocene and Oligocene foraminifers of fam. Lituolidae and Trochamminidae from Sakhalin and western coastal areas of Kamchatka, the Voyampolka - Tigil' River regions. Of some fifty species described, more than half are new. (DLC.)

76428. VOLOTOVSKAIA, N. A., *and* **G. A. IL'INSKII.** O stat'e L.S. Borodina "O perovskitovom orudenenii v massive Vuoriiarvi." (Geologiia rudnykh mestorozhdenii, Jan.-Feb. 1961, no.1, p.113-14.) 5 refs. Text in Russian. **Title tr.:** On L.S. Borodin's article, "On perovskite mineralization in the Vuoriyarvi massif."

Offers critical comment on No. 57058: a hydrothermal-metasomatic origin of perovskite, as claimed by Borodin, is contrary to known data; the chemistry of perovskite mineralization, secondary origin of perovskite and some other of his opinions also are criticized. Borodin replied to these comments in the July-Aug. 1961 issue (no.4, p.101-102) of the same journal. (DLC.)

VOLOTOVSKII, A. G., *see* Shchukin, V.N., & *others*. . . . kimberlitov i trappov. 1961. No. 75562

76429. VOLOVIK, ANATOLII. Desiat' millionov. (Ogonëk, Sept. 1962. god 40, no.37, p.12-13, illus.) Text in Russian. **Title tr.:** Ten millions.

Describes the library of the Academy of Sciences Siberian Division under construction in Akademgorodok near Novosibirsk; it is planned to accommodate ten million volumes, in three underground air-conditioned levels, and 1,100 readers in 12 reading rooms, etc. Author is chief architect. (DLC.)

VOLOVIKOVA, I. M., *see* Ginzburg, I.V., & *others*. Kolichestvenno-mineral'nyi sostav . . . 1962. No. 71694

VOL'PE, A. S., *see* Kurashov, S.V. Kurorty SSSR. 1962. No. 73222

VOLYNETS, M. P., *see* Polikakov, A.I., & M.P. Volynets. O raspredelenii toriia . . . 1961. No. 74853

76430. VOORHEES, G. D. "Observation at any hour angle on Polaris." (Utah. University, Engineering Experiment Station, Mar. 1961. Bulletin no.111, p.39-44, table.) *Also issued as:* Utah. University, Bulletin, Mar. 1961. v.52, no.23.

Demonstrates the method of using observations on the North Star to determine the direction of a line on the earth's surface. A second-magnitude star, it may be found in the day-time and has smallest apparent orbit of the circumpolar stars. These features, as well as the difference in size, permit greater accuracy in determining direction of a line on the earth, than is possible from use of the sun. Nine steps in a sample observation, made at Salt Lake City, Nov. 19, 1960, are described, noting the Gurley solar transit used, and requirements for a successful daytime observation, viz: an instrument in good adjustment, an Ephemeris and a good watch. An experienced observer can complete the nine steps including calculations in about ten minutes. (DI.)

76431. VOPROSY GEOMORFOLOGII I GEOLOGII OSADOCHNOGO POKROVA KOL'SKOGO POLUOSTROVA, no.1, *Apatity,* 1960. 196 p. illus., diagrs., tables & maps incl. fold. (Akademiia nauk SSSR. Kol'skii filial.) Refs. Text in Russian. **Title tr.:** Problems of the geomorphology and geology of the sedimentary cover of the Kola Peninsula, no.1.

Presents papers on local subjects, book reviews, etc. The papers are abstracted under their authors' names, viz (titles tr.):

SIDORENKO, A. V. Some investigation problems of the sedimentary cover of the Kola Peninsula.

ARMAND, A. D. Outline of the formation of relief and Quaternary deposits of the Khibiny tundras.

NIKONOV, A. A. Stratigraphy of sediments and paleogeography of the late glacial marine basins of the Lotta depression.

NIKONOV, A. A. On the stratigraphy of moraines and glaciations in the western part of Kola Peninsula.

ARMAND, N. N. On the last glaciation in northeastern Kola Peninsula.

AFANAS'EV, A. P. On composition of clay fraction of Quaternary deposits of the Kola Peninsula.

GRAVE, M. K. Relief of a region with developed preglacial crustal weathering south of Khibiny, and signs of old karst.

GARIFULIN, L. L. On a find of diatom deposits in the Magazin-Musyur Range region, northeastern Kola Peninsula. (DLC.)

76432. VOROB'EV, B. Kto zhe khozîaîn pripisnykh ugodiĭ? (Okhota i okhotnich'e khozîaĭstvo, July 1962. god 8, no.7, p.10.) Text in Russian. **Title tr.:** Who controls assigned hunting grounds?

Outlines activities of the Hunters' Association of the Kola experiment state fur farm and complains of legal confusion as to its rights in the 30,000 hectare hunting grounds assigned to it in the Kola District of Murmansk Province. (DLC.)

VOROB'EV, D. P., *see* Akademiîa nauk SSSR. *Institut geografii.* Dal'niĭ Vostok . . . 1961. No. 69546

76433. VOROB'EV, K. A. Belyĭ zhuravl'. (Okhota i okhotnich'e khozîaĭstvo, June 1961. god 7, no.6, p.19-20, illus., map.) Text in Russian. **Title tr.:** The Asiatic white crane.

Grus leucogeranus occurs only on the lower Ob and above 70°N. in Yakutia on the tundra and forest tundra between the Yana, Indigirka, and Alazeya Rivers. Author's 1960 study trip to Berelyakh (Tebyulekh, 70°26'N. 144°07'E.) is reported, an area where this bird is not rare but hard to catch, except when nesting, because of its shyness and the open country. Destruction of nests and collecting of the eggs so reduces their numbers, that these cranes should be protected. (DLC.)

VORONINA, L. P., *see* Volkov, V.P., & *others.* Petrokhimicheskie osobennosti . . . 1961. No. 76422

VORONKOV, A. A., *see* Pîatenko, IU. A., & A.A. Voronkov. Vlasovit . . . 1961. No. 74786

VORONKOV, N. A., *see*

Fugzan, M.D., & *others.* K voprosu o forme . . . 1961. No. 71522

Fugzan, M.D., & *others.* Modelirovanie liūkovykh ustroĭstv . . . 1961. No. 71523

VORONKOV, T. I., *see* Gukasîan, A.B., & T.I. Voronkov. Novyĭ bakterial'nyĭ preparat . . . 1961. No. 71906

VORONKOVA, L. S., *see* Alekhichev, S.P., & *others.* Puti uluchsheniîa provetrivaniîa . . . 1961. No. 69674

76434. VORONTSOV, P. A., *and* **V. I. SELITSKAÎA.** The vertical structure of summer fog in the Dickson Island region. Translated by B.J. Hobson. Boston, Mass., June 1961. 17 p. tables, diagrs. (American Meteorological Society. Translation T-R-368.)

English translation of No. 62539. (CaMAI.)

76435. VOSKOBOĬNIKOV, MIKHAIL GRIGOR'EVICH. Evenki severnoĭ Buriîatii. (Etnograficheskiĭ sbornik, *Ulan Ude,* 1960. vyp. 1, p.96-107, table.) 6 refs. Text in Russian. **Title tr.:** Evenki of northern Buryatiya.

Deals with several Evenki-Tungus groups living in the northwest part of Buryat ASSR. Their regional distribution, material culture, health and education, folklore and dialects (3) are described. The kolkhoz economy is discussed with data for 1950-1958 agriculture, animal husbandry and transport-reindeer breeding, fur hunting and fur farming. (DLC.)

VOSKRESENSKAÎA, V. B., *see* Menîailov, A.A., & V.B. Voskresenskaîa. Trubchatye tela . . . 1962. No. 73928

76436. VOSKRESENSKIĬ, A. I., *and* **K. I. CHUKANIN.** The meteorological conditions of icing in St and Sc clouds. Translated by B.J. Hobson and D. Kraus. Boston, Mass., Feb. 1961. 17 p. tables, graphs, maps. (American Meteorological Society. Translation F-R-348.)

English translation of No. 62552. (CaMAI.)

76437. VOSKRESENSKIĬ, KONSTANTIN PETROVICH. Norma i izmenchivost' godovogo stoka rek Sovetskogo Soîuza. Leningrad, Gidrometeoizdat, 1962. 546 p. tables, graphs, diagrs., maps. 112 refs. Text in Russian. **Title tr.:** Rate and variability of the annual runoff of rivers of the Soviet Union.

Outlines the main distribution patterns of river runoff in USSR. Factors affecting runoff and average values are discussed and a method of calculating them is demonstrated. Compilation of average-runoff maps is considered, and one such map is presented. Influence of local factors is discussed. Data are given on the water resources of streams throughout the USSR; included are the rivers flowing into the Barents, White, Kara, Laptev, East Siberian, Bering and Okhotsk Seas. Drainage area, period of observation, values of runoff, coefficient of variation, etc. are presented in appended tables. The Pechora, Vorkuta, Usa, Ob, Yenisey, Lena, and other northern rivers and their numerous tributaries are reported. (DLC.)

76438. VOSKRESENSKIĬ, SERGEĬ SERGEEVICH, *and* **IU. G. SIMONOV.** Geomorfologicheskiĭ analiz pri poiskakh galechnikov, peskov i glin v doline Angary. (Voprosy geografii, 1961. Sbornik 52. Prikladnaîa geomorfologiîa, p.45-55, tables, diagrs.) Text in Russian. **Title tr.:** Geomorphic analysis for prospecting pebble, sand and clay deposits in the Angara valley.

Reports use of a new method of searching for construction materials: five terraces below the flood surface of the Angara and 11 above it are identified, and their geomorphic structure analyzed. Spore-pollen analyses are evaluated noting climatic and sedimentation conditions of the terraces. Cross-sections of alluvium are demonstrated. In clay-

sand-and-pebble prospecting, the morphometric, morphostructural and paleogeomorphic methods are of great importance. (DLC.)

76439. VOSKRESENSKIĬ, SERGEĬ SERGEEVICH. Geomorfologiia Sibiri. Moskva, Izd-vo Moskovskogo universiteta, 1962. 352 p. illus., tables, maps, diagrs. Approx. 350 refs. Text in Russian. **Title tr.:** Geomorphology of Siberia.

Deals with the region between the Urals and the Verkhoyansk Range, including the arctic areas, in three sections: the West Siberian plain, the plateaus and plains of eastern Siberia, and the mountains of southern Siberia. Marine accumulative plain areas, such as the Yamal, Taz and Gydan Peninsulas, North Siberian plain, Byrranga Mts., the Severnaya Zemlya archipelago, Central Siberian plateau, the Lena-Vilyuy plain, etc., are treated in considerable detail. Various forms of relief, fluvial, glacial, karst, and those connected with permafrost, are analyzed. (DLC.)

VOTAKH, O. A., *see* Kosygin, IU. A., & *others*. Osnovnye strukturnye elementy . . . 1962. No. 73023

76440. VOUS, KAREL HENDRICK. Atlas of European birds. London, Nelson, 1960. 284 p. illus., maps. English edition, translated by the author, of *Atlas van de Europese vogels,* pub. in Amsterdam by Elsevier, 1960.

Maps the breeding ranges, worldwide, of 419 species which breed in Europe west of the Ural Mts., including Spitsbergen. Photo-illus. of each species is given together with zoogeographical descriptions: faunal type, i.e. fauna of which it is typically an element; distribution in relation to climate, including northern isotherm limits in July; habitat; food; nesting materials and sites; and migration. Species is treated as a zoogeographical concept, with breeding compatibility and a common distribution range the delimiting criteria. Range maintenance and extensions are especially noted. (DLC.)

VOVK, TS. L., *see* Spiro, N.S., & TS. L. Vovk. Puti izmeneniia . . . 1961. No. 75877

76441. VOWINCKEL, EBERHARD. Cloud amount and type over the Arctic. Montreal, June 1962. iv, 32 p. map, graphs, tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no.51.) 13 refs. *Also issued as:* U.S. Air Force, Cambridge Research Laboratories, Contract no. AF 19 (604)-7415, Scientific report no.4; AFCRL 62-663.

Attempts to evaluate cloud conditions north of 65°N. Amounts vary greatly seasonally in the north, are relatively stable in the south. Average cloud amount changes most over the whole Arctic in May and October. Three main regional types are discussed: Norwegian Sea type, cloudy all year; East Siberian type, summer maximum; and Polar Ocean type, winter/spring minimum, summer maximum. Winter and summer patterns of cloud amount and type are described and explained for the entire Arctic. Monthly maps of cloud amount based on data from about 200 stations, and seasonal maps of stratus + stratocumulus, cumulus + cumulonimbus, altocumulus + altostratus, and cirrus types, together with grid point tables are appended. (DGS.)

76442. VOWINCKEL, EBERHARD, *and* **S. ORVIG.** Insolation and absorbed solar radiation at the ground in the Arctic. Montreal, Oct. 1962. v, 32 1., maps incl. 18 in appendix, graph, tables. (McGill University. Arctic Meteorology Research Group, Publication in meteorology no.53.) 21 refs. *Also issued as:* U.S. Air Force Cambridge Research Laboratories, Contract no. AF 19 (604)-7415, Scientific report no.5. AFCRL-62-1068.

Presents the net results of four (cf. No. 76444, 73330, 76443, 76441) studies in this investigation of heat balance, combining an empirical and a physical method to obtain an estimate of the radiation available in areas of sparse coverage: about 30 stations provided data. Clear sky radiation was determined; then correction to actual insolation conditions was made according to cloud conditions. Finally, insolation figures were multiplied by (1-albedo). Insolation and absorbed solar radiation at the ground are tabulated for gridpoints for the months Feb. - Oct. Monthly mean maps show distribution of direct + diffuse-, also absorbed-, radiation, southward to about 65°N. with isopleth intervals of 20 langleys/day. (DGS.)

76443. VOWINCKEL, EBERHARD, *and* **S. ORVIG.** Relation between solar radiation income and cloud type in the Arctic. Montreal, Mar. 1962. iv, 26 p. diagr., graphs, tables. (McGill University. Arctic Meteorology Research Group. Publication in meteorology no.48.) 16 refs. Scientific report no.3, contract no. AF 19 (604)-7415. Abridged version pub. in *Journal of applied meteorology* Dec. 1962, p.552-59.

Presents measured values of radiation with different cloud types. Values in the Arctic of albedo of cloud tops, water content of clouds, ground albedo, and the effect of composite cloud types, are discussed. Tables can be constructed to show the depletion factor with 10/10 cloud cover for different combinations of cloud type frequencies. Then approx. radiation income with mean overcast conditions, can be obtained, provided that the clear-sky radiation is known. Results are applicable to the Arctic Basin and arctic coast only.—From authors' abstract. (DGS.)

76444. VOWINCKEL, EBERHARD, *and* **S. ORVIG.** Water balance and heat flux of the Arctic Ocean. Montreal, Sept. 1961. ii, 35 p. tables. (McGill University. Arctic Meteorology Research Group, Publication in meteorology no.44.) 51 refs. Scientific report no.1, contract no. AF 19 (604)-7415. Also reported in *Arctic* Sept. 1962, v.15, no.3, p.205-223.

Summarizes the literature on these two elements of the heat balance. Specific heat of water: 1 cal./g. degree, and density: 1 g./cm^3 are used in the calculations, and a resulting inaccuracy of about 3% is expected. Method of calculation is described; energy in- and outflux values and the mean temperatures are discussed for the various ocean currents into and out of the Arctic. Runoff and precipitation are also considered. Ice export by the various currents is dealt with, and the heat gain by formation and export of sea ice is calculated, for the 14,090,000 km^2 area of the central basin and adjacent seas, also for the 9,906,000 km^2 "polar ocean" excluding the Norwegian and Greenland Seas. Water balance and heat flux estimates are tabulated and briefly evaluated. (DGS.)

VOZIN, VALENTIN FEDOROVICH, *see* Vikhert, A.V., & *others*. Geologicheskoe stroenie . . . 1961. No. 76386

76445. VSESOIŪZNOE GEOGRAFICHESKOE OBSHCHESTVO. Konstantin Nikolaevich Balashov. (*Its:* Izvestiia, May-June 1962. t.94, vyp.3, p.270.) Text in Russian.

Obituary of Balashov, 1900-1961, hydrologist at the Arctic Institute 1936-1948 and since 1950 studying rivers of Kola Peninsula and their power resources. Of his published works (about 40), 15 were produced while he was with the Kola Branch of the Academy of Sciences of the USSR. (DLC.)

76446. VSESOIŪZNOE SOVESHCHANIE PO IZUCHENIIŪ CHETVERTICHNOGO PERIODA, *Moskva,* **1957.** Materialy Vsesoiūznogo soveshchaniia; t.1, obshchie voprosy izucheniia chetvertichnogo perioda; istoriia chetvertichnoĭ flory, fauny i iskopaemogo cheloveka. Moskva, Izd-vo Akademii nauk SSSR, 1961. 495 p. illus., tables, maps. & profiles incl. fold. (Akademiia nauk SSSR. Komissiia po izucheniiū chetvertichnogo perioda.) Refs. Text in Russian. **Title tr.:** Materials of the All-Union Conference; v.1, general problems of the investigation of the Quaternary period; history of Quaternary flora, fauna and fossil man.

Contains some sixty papers delivered at the All-Union Conference for Investigation of the Quaternary Period, held in Moscow in May 1957; six of them pertinent to arctic studies are abstracted in this Bibliography under their authors' names, viz (titles tr.):

STRELKOV, S. A. On the map of the Quaternary deposits of north-central USSR at 1:2,500,000 scale and questions for discussion on their stratigraphy.

ROZHKOV, I. S. The morphologic and genetic types of placers of Quaternary age and their comparative value.

BEZRUKOV, P.L., *and* A. P. LISITSYN. Main features of sedimentation in the Far-Eastern seas in Quaternary time.

BUDANOV, V. I., *and others*. On signs of contemporary vertical movements of shores of the Far-Eastern seas.

RUKHINA, E. V. Lithologic features of moraines of the last glaciation and their use for stratigraphic studies as exemplified by the northwestern part of the Russian platform.

ZAGORSKAIA, N. G. Some features of the Zyryanka glaciation in the Siberian North. (DLC.)

76447. VSESOIŪZNOE SOVESHCHANIE PO IZUCHENIIŪ CHETVERTICHNOGO PERIODA, *Moskva,* **1957.** Materialy Vsesoiūznogo soveshchaniia; t.2, chetvertichnye otlozheniia Evropeĭskoĭ chasti SSSR. Moskva, Izd-vo Akademii nauk SSSR, 1961. 502 p. illus., tables, maps incl. fold., graphs, diagrs. (Akademiia nauk SSSR. Komissiia po izucheniiū chetvertichnogo perioda.) Refs. Text in Russian. **Title tr.:** Materials of the All Union Conference; v.2, Quaternary deposits of the European part of the USSR.

Contains some seventy papers delivered at the conference, five of them with arctic materials are abstracted in this Bibliography under their authors' names, viz (titles tr.):

KALETSKAIA, M. S. Quaternary deposits and some features of relief development in the eastern part of the Pechora basin.

STANKEVICH, E. F. Quaternary deposits of the Vashutkiny Lakes and the Labogey-yu and Nyartey-yaga River region.

APUKHTIN, N. I. The Quaternary deposits of Murmansk Province.

DEVIATOVA, È. I. On the history of the Quaternary period of the North in the light of new data from the Onega River basin.

BISKÈ, G. S. Stratigraphy of the Quaternary deposits of Karelia. (DLC.)

76448. VSESOIŪZNOE SOVESHCHANIE PO IZUCHENIIŪ CHETVERTICHNOGO PERIODA, *Moskva,* 1957. Materialy Vsesoiūznogo soveshchaniia po izucheniiū chetvertichnogo perioda; t.3, chetvertichnye otlozheniia Aziatskoĭ chasti SSSR. Moskva, Izd-vo Akademii nauk SSSR. 1961. 442 p. illus., diagrs., tables & maps incl. fold. (Akademiia nauk SSSR. Komissiia po izucheniiū chetvertichnogo perioda.) Refs. Text in Russian. **Title tr.:** Materials of the All-Union Conference on investigation of the Quaternary period; v.3, Quaternary deposits of the Asiatic part of the USSSR.

Presents in full or summary the papers delivered at, or later submitted for publication by this conference which dealt with the Quaternary geology of the Urals, West and East Siberia and the Soviet Far East. Papers dealing with the arctic regions, about 40% of the volume, are abstracted in this Bibliography under their authors' names, viz (titles tr.):

VARSANOF'EVA, V.A. Geomorphic problems of Northern Ural and the main stages of its relief development.

BORISEVICH, D.V. Paleogeography and Quaternary deposits of the Middle and Northern Ural.

RABINOVICH, S.D. Quaternary deposits of the eastern slope of Northern Ural and the effects of recent tectonics; summary.

ZEMTSOV, A.A., *and* S.B. SHATSKIĬ. On the geology and stratigraphy of Quaternary deposits in the northeastern part of the West Siberian plain.

SUZDAL'SKIĬ, O.V. Some problems in the stratigraphy of the Quaternary period in the north of the West Siberian plain; summary.

ALIAVDIN, V.IA. Some problems in the paleogeography of the Quaternary period in the north of the West Siberian plain; summary.

NIKOLAEV, V.A. Recent tectonics of the West Siberian plain; summary.

GOLUBEVA, L.V. Paleophytological substantiation of Quaternary deposit stratigraphy in the northwestern part of the West Siberian plain, in the lower Ob River region; summary.

PANOVA, L.A. Palynological characteristics of Quaternary deposits in the northern half of the West Siberian plain; summary.

P'IAVCHENKO, N.I. On traces of the newest passive glaciation in the north of the European and West Siberian plains of the USSR.

LAZUKOV, G.I., *and* N.S. SOKOLOVA. Main paleogeographic features of the lower Ob basin in the Quaternary period.

LIDER, V.A. On the stratigraphy of glacial deposits of Trans-Ural and the boundary of Neogene and Anthropogene.

SERGEEV, E.M., *and others*. Features of the lithologic composition and engineering-construction

properties of Quaternary deposits in the lower Ob valley.

GUSEV, A.I. Stratigraphy of the Quaternary deposits of the maritime plain.

SHVETSOV, P.F. On the development history of the Yana-Indigirka maritime plain in the Anthropogene; summary.

SIAGAEV, N.A. On recent tectonics of the Lena-Khatanga North.

MEDIANTSEV, A.I. Quaternary glacial deposits in the Lena River valley near Zhigansk.

KASHMENSKAIA, O.V. Quaternary deposits in the Berelekh River basin, upper Kolyma.

KIRIUSHINA, M.T. Effects of recent tectonics within the limits of the Anabar crystalline shield and adjacent territories.

ARKHIPOV, S.A., *and others.* Stratigraphy of the Quaternary deposits in the Yenisey region of the West Siberian plain, the middle Yenisey basin.

ZUBAKOV, V.A. Stratigraphy and paleogeography of the Quaternary deposits of the Yenisey region of Siberia.

VOLKOVA, V.S. On the paleogeography of the last interglacial in the lower Yenisey.

TSEITLIN, S.M. Lacustrine-glacial clays in the northwestern Siberian platform, and their age.

SOKOLOV, N.I. Some data on the stratigraphy of Quaternary deposits in the Noril'skaya and Rybnaya River valleys; summary.

RAVSKII, E.I. On the stratigraphy of the Cenozoic deposits in the southern part of the Siberian platform: the Angara basin and some adjacent regions; summary.

ALEKSEEV, M.N. Stratigraphy of the Quaternary deposits of the Vilyuy depression.

SOLOV'EV, P.A. Quaternary deposits in the northern part of the Lena-Amga interfluve.

LEONOV, B.N., *and others.* Upper pebbles and Eyk deposits in the basin of the Markha and Tyung Rivers.

KORZHUEV, S.S. Structure of the middle Lena valley in the Quaternary period.

LUNGERSGAUZEN, G.F. Geologic history of the middle Lena and some problems of Quaternary deposit stratigraphy in Eastern Siberia.

CHEBOTAREVA, N.S., *and others.* Stratigraphy of the Quaternary deposits of the middle Lena and lower Aldan.

CHEMEKOV, IU.F. Stratigraphy and paleogeography of the Anthropogene of the Soviet Far East. (DLC.)

76449. VSESOIUZNOE VULKANOLOGICHESKOE SOVESHCHANIE, 1st, *Yerevan,* 1959. Voprosy vulkanizma. Moskva, Izd-vo Akademii nauk SSSR, 1962. 452 p. illus., tables incl. fold., maps, diagrs. (*Its:* Trudy.) Refs. Text in Russian. **Title tr.:** Problems of volcanism.

Presents some hundred papers and their discussion from the First All-Union Volcanological Conference Sept. 23-Oct. 2, 1959 at Yerevan, Armenia. Several of the papers deal with the arctic regions or Kamchatka Peninsula and are abstracted in this Bibliography under their authors' names: F.R. Apel'tsin, V.F. Belyi, E.L. Butakova, B.Kh. Egiazarov etc., E.N. Erlikh, M.L. Gel'man, G.S. Gorshkov etc., I.I. Gushchenko, S.I. Naboko, I.IA. Nekrasov, M.I. Rabkin etc., I.M. Speranskaia, K.IA. Springis, E.K. Ustiev, V.A. Vakar etc., G.M. Vlasov etc., V.I. Vlodavets etc., IU.V. Zhegalov. (DLC.)

76450. VSESOIUZNYI AEROGEOLOGICHESKII TREST. Materialy po regional'noi geologii. Geologiia Aldanskogo shchita i nekotorykh drugikh raionov Sibirskoi platformy. Moskva, Gosgeoltekhizdat, 1961. 183 p. illus., plates, tables & maps incl. fold. (*Its:* Trudy vyp.7.) Refs. Text in Russian. **Title tr.:** Materials on regional geology; geology of the Aldan shield and some other regions of the Siberian platform.

Presents twenty papers as listed below (titles tr.) dealing with the eastern and southeastern part of the Aldan shield, based on work of the Aldan expedition in 1956-1958. Seven* pertinent to the North are abstracted in this Bibliography under their authors' names.

*MORALEV, V.M., *and* A.L. STAVTSEV. The main tectonic features of the eastern margin of the Aldan shield and adjacent areas.

Shpak, N.S. New data on the stratigraphy of Archean and Proterozoic deposits in the eastern margin of the Aldan shield.

Nuzhnov, S.V. Sinian (Riphean) deposits of the eastern slope of the Aldan shield.

Kalimulin, S.M. On the stratigraphy of late Sinian deposits in the eastern margin of the Aldan shield.

Samozvantsev, V.A., *and* Z.M. Samozvantseva. Stratigraphy of the Lower Cambrian deposits in the southeastern margin of the Aldan shield in the light of new data.

Gol'denberg, V.I., *and* Z.M. Samozvantseva. Stratigraphy of the Mesozoic deposits of the Tokinskaya basin and some knowledge of its coal-bearing properties.

Zlenko, N.D., *and* N.S. Shpak. Early Sinian subvolcanic formations in the southeastern part of the Aldan shield.

Zlenko, N.D. Late Sinian central type intrusions in the eastern margin of the Aldan shield.

Stoialov, S.P. The Arbarastakhskiy massif of ultrabasic and alkaline rocks.

El'ianov, A.A. Some features of carbonatites of the Konderskiy intrusive massif, Aldan shield.

Zdorik, T.B., *and* B.E. Runov. New massif of alkaline rocks and carbonatites in the east of the Aldan shield.

Samozvantsev, V.A. The Lower Cretaceous intrusion of the Ket-Kap Range and adjacent parts of the Aldan shield.

*TARKHOVA, M.A., *and* K.G. CHESHIKHINA. Cretaceous intrusions in the central part of the Dzhugdzhur Range.

Kogen, V.S. Small granitoid intrusions of Cretaceous age in the upper course of the Maya basin, Aldan shield.

Popov, M.IA. Some deciphering of signs of sedimentary strata in the eastern margin of the Aldan shield.

*MILOSERDOVA, R.I. Find of petrified wood in the lava stratum of the Siberian platform.

*SOLOV'EVA, N.A., *and* N.G. NIKANOROV. On the find of pyroclastic rocks of alkaline composition in the Vilyuy River basin.

*ZORUCHINKINA, A.A., *and others.* Stratigraphy of the Devonian deposits in the Podkamennaya and Nizhnyaya Tunguska interfluve.

*KOSHELKINA, Z.V. *Inoceramus* and their stratigraphic importance for separating the Jurassic deposits of Siberia.

*LEONOV, B.N. Questions of relief genesis and geomorphic regionalization of the Middle Siberian plateau. (DLC.)

76451. VSESOIŪZNYĬ NAUCHNO-ISSLEDOVATEL'SKIĬ INSTITUT METODIKI I TEKHNIKI RAZVEDKI. Rukovodstvo po kompleksnoĭ metodike poiskov tsvetnykh i redkikh metallov v vostochnykh raĭonakh SSSR. Moskva, Gosgeoltekhizdat, 1961. 328 p. tables, graphs, maps incl. fold. (*Its:* Trudy, sbornik no.4.) 55 refs. Text in Russian. **Title tr.:** Manual on various methods for prospecting of non-ferrous and rare metals in the eastern regions of the USSR.

Outlines search methods for such metals attributed to the areas east of the Lena and Lake Baykal, including the Kolyma, Chukotka and Magadan regions. The manual, prepared by many specialists, is in two parts. The first deals with geologic structure of the areas concerned and outlines the geologic, geochemical, electric, magnetic, gravimetric, and radiometric methods for prospecting. The second part presents concrete examples of searching for non-ferrous and rare metals occurring in quartzose, skarn, sulfide and other types of deposits. (DLC.)

76452. VTIŪRIN, B. I. Pogrebennyĭ bulguniākh. (Priroda, Mar. 1961, no.3, p.107, illus.) Text in Russian. **Title tr.:** A buried frost mound.

Describes the phenomenon as observed on the bank and 45 km. from the mouth of the Tamara River, a right tributary of the Aldan in southeastern Yakutia: the ice body of this type of hydrolaccolith, the properties, crystals, and admixtures of the ice. Vein ice and injected ice are characterized. The buried ground-ice mound can serve to clarify the paleogeographic conditions of the region. (DLC.)

VTIŪRIN, B. I., *see also* Kuprina, N.P., & B.I. Vtiūrin. Stratigrafiia . . . 1961. No. 73220

76453. VTORUSHIN, A. V., *and others.* O khrome v bobovo-konglomeratovykh zheleznykh rudakh Serovskogo mestorozhdeniia, Severnyĭ Ural. (Izvestiia vysshikh uchebnykh zavedenii. Geologiia i razvedka, Apr. 1961, no.4, p.79-85, illus., tables.) 3 refs. Text in Russian. *Other authors:* N.A. Egorova *and* N.F. Obotnin. **Title tr.:** On chromium in the leguminous-conglomeratic iron ores of the Serov deposits, Northern Ural.

Reports chemical, X-ray and other investigation of these deposits having 2.62-5% chromium, with a view to their utilization for metallurgical purposes. The chromium is mainly connected with chrome-spinel and chromopicotite occurrence of the former due to weathering of the crust. The form of chromium occurrence is established and further studies are recommended for its enrichment and processing. (DLC.)

76454. VUORELA, LAURI A. Vilho Väisälä's 70th anniversary. (Geophysica, 1961. v.8, no.1, Meteorology, p.1-5, illus., port.)

Tribute to this meteorologist, author of eighty papers on aerological instruments and theoretical meteorology, inventor of the Väisälä radiosonde, used among others by an expedition to Spitsbergen in 1937. (CaMAI.)

76455. VUORINEN, ANTTI P. U., *and* **J. K. MIETTINEN.** Caesium 137 in Finnish grass and cow's milk. Helsinki, 1960. 6 p. tables, graph. (Suomalainen Tiedeakatemia. Toimituksia, ser. A, II, Chemica 102.) 9 refs.

Reports determinations of the amounts of this contaminating radionuclide in grass and milk samples from nine farms, including two in Lapland at 66°N. and 69°N. Samples from these farms show higher contamination than do the others. The reason is not known; more detailed study of Lapland conditions is required. On the basis of authors' determinations and those of O. Paakkola and others, q.v., of the strontium 90 content in the same samples, the Cs^{137}/Sr^{90} ratio is calculated. It is about three times as high for the Lapland samples as the average of the other samples. (DGS.)

76456. VYBOROV, V. Izuchenie russkogo glagol'nogo slovaria v nachal'nykh klassakh komi shkoly. (Russkiĭ iazyk v natsional'noĭ shkole, 1961, no.2, p.33-39.) Text in Russian. **Title tr.:** Study of the Russian verb vocabulary in elementary grades of the Komi school.

Discusses the difficulties Russian verb forms present to Zyryans. Visual aids, special exercises, etc. should be used and verb study continued through the middle (5-8th) grades of the secondary school. (DLC.)

76457. VYSOTSKIĬ, I. O soveshchanii po koordinatsii nauchno-issledovatel'skikh i neftepoiskovykh rabot v Krasnoiarskom krae. (Geologiia nefti i gaza, Apr. 1962, god 6, no.4, p.63-64.) Text in Russian. **Title tr.:** Conference on the coordination of scientific research and oil prospecting in Krasnoyarsk Province.

Reports this November 1961 conference in Krasnoyarsk, noting plans for studies in the lower Yenisey depression, drillings in the Dubches and Bol'shaya Kyksa basins, and geologic mapping at 1:200,000 scale in the arctic part of the West Siberian lowland. Studies in the Noril'sk and Turukhansk regions also are recommended. (DLC.)

76458. VZNUZDAEV, N. A., *and* **L. O. KARPACHEVSKIĬ.** Kharakteristika vodno-fizicheskikh svoĭstv i vodnogo rezhima lesnykh pochv tsentral'noĭ chasti doliny r. Kamchatki; na primere pochv Kozyrevskogo lesnichestva. (Pochvovedenie, Oct. 1961, no.10, p.30-43, tables, diagrs.) 15 refs. Text in Russian. Summary in English. **Title tr.:** Characteristics of the water-physical properties and water regime of forest soils in the central part of the Kamchatka River valley; as exemplified by those of the Kozyrevsk forest tract.

Describes the climatic conditions, temperature regime and water-holding capacity of soils which develop on volcanic deposits. These soils are characterized by a low water absorption capacity, small volume weight and large field capacity in soils with a light texture. The soil-water regime is classified as a seasonal-freezing subtype with capillary suspended moisture. (DLC.)

76459. W. M. O. BULLETIN. Isotope-powered automatic weather station. (W.M.O. bulletin, Jan. 1962. v.11, no.1, p.32-34, illus., diagr.)

Describes station on Sherwood Head, Axel Heiberg Island, to operate without attention for two years from Aug. 21, 1961. Power source, instrumentation, and radio transmission are explained; diagram shows power unit. (DWB.)

76460. WADMAN, ROGER D. The Alaskan cutthroat trout. (Alaska sportsman, Oct. 1962. v.28, no.10, p.18-20, illus.) Alaska wildlife library no. 30.

Describes the physical characteristics and appearance of *Salmo clarkii* Richardson, its distribution in Southeast Alaska, migrations, spawning, and habitats. It changes body color when moving from fresh and salt water. Fishing regulations are noted. (DI.)

76461. WAGER, LAWRENCE RICKARD, 1904– . A note on the origin of ophitic texture in the chilled olivine gabbro of the Skaergaard intrusion. (Geological magazine, Sept.-Oct. 1961. v.98, no.5, p.353-66, plates, diagrs., tables.) 18 refs.

Describes the textures of the chilled marginal gabbro of this East Greenland intrusion, also of the coarser marginal gabbros 25 yds. further in, and relates them to counts of the number of separate crystals of the chief mineral species per cu. cm. of the rock. The textures and number of crystal individuals are explained in terms of various degrees of supersaturation in the magma. The first-forming crystal phases, plagioclase and olivine, suffer most supersaturation and nucleate abundantly. The later phases, pyroxene and ilmenite, form under conditions of slower cooling, and relatively few nuclei develop. An addendum, July 1961, notes dry melting experiments on a sample of the gabbro by H.S. Yoder and J.F. Schairer. These indicate that the plagioclase formed first and that the olivine and pyroxene appeared later, approximately together. The explanation is modified in light of these findings. (DGS.)

76462. WAGNER, *Mrs.* F. G. 13 women in a five-twelve. (North, Sept.-Oct. 1962. v.9, no.5, p.22-25, illus.)

Describes a pilot class in Indian beadwork and embroidery, sponsored by the Dept. of Northern Affairs at Fort Smith, Mackenzie District in a standard 512 sq. ft. structure. Production for outside markets, steady income for the producers, and similar programs in other settlements of the District are the aims. (CaMAI.)

WAGNER, F. J. E., *see* Craig, B.G. Surficial geol. N. Keewatin. 1961. No. 70845

76463. WAGNER, FRANCES JOAN ESTELLE, 1927– . Faunal report, submarine geology program, Polar Continental Shelf Project, Isachsen, District of Franklin. Ottawa, Queen's Printer, 1961. 10 p. maps, tables. (Canada. Geological Survey. Paper 61-27.) 19 refs.

Deals with Recent organisms from the surface of the sea bottom at 15 of the 17 off-shore stations along the line 77°51.5′N. 115°36′W. to 80°04.5′N. 97°10′W., and northwest from Cape Isachsen on Ellef Ringnes Island to 80°42′N. 112°50′W. Foraminifera were the most important group, molluscs and ostracods next in abundance. Some forams have value as depth-indicator species for certain broad bathymetric zones, shelf, slope, etc.; some were also found to be zonally characteristic near ice island T-3; and others apparently serve as indicators only in this project area. The Atlantic or Pacific affinities of the arctic fauna should be indicated as work continues for some conclusion regarding water circulation, ocean currents, etc. (DGS.)

WAHL, R. R., *see* Plouff, D., *& others*. Geophysical studies . . . T-3, 1958 to 1959. 1961. No. 74831

76464. WAITE, AMORY H., *and* **S. J. SCHMIDT.** Gross errors in height indication from pulsed radar altimeters operating over ice or snow. (IRE international convention record, 1961. v.9, pt. 5, p.38-54, illus., tables, graphs, diagrs.) 26 refs.

Reports measurements of the electrical characteristics of thick ice at high and ultrahigh frequencies: dielectric constants, loss factors, scattering, and interface reflection. The data obtained were used to measure radio wave penetration in antarctic and the arctic continental ice to depths of several hundred feet. The results show that low-flying pilots relying on pulsed 400 Mc./s. altimeters in poor visibility over thick ice can be fatally misled under several sets of frequently prevailing conditions. Field work in Antarctica and Greenland is reviewed and data pertinent to radio wave transparency of thick ice are summarized. A table of estimated interface reflection coefficients and losses is included. The penetrating capabilities of the 400 Mc./s. SCR-718 are compared to those of the 4300 Mc./s. AN/APN-22 and two lower frequency sets. (DLC.)

WAITE, AMORY H., *see also* Piggott, W.R. Op. altimeters over snow. 1961. No. 74796

WALDHAUS, FRED H., *see* Alaskan Science Conference 1960. 1961. No. 69643

WALDMANN, T. A., *see* Cline, M.J., & T.A. Waldmann. Effect of temperature . . . 1962. No. 70771

76465. WALDRON, HOWARD HAMILTON, 1917– . Geologic reconnaissance of Frosty Peak volcano and vicinity, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1961. p.677-708, maps incl. col. fold. in pocket. (U.S. Geological Survey. Bulletin 1028-T. Investigations of Alaskan volcanoes.) 33 refs.

Describes results of summer 1947 field work. Area mapped at scale 1:250,000 is 54°55′-55°20′N. 162°30′-163°10′W., part of the western end of the Alaska Peninsula. It is a deeply glaciated and eroded section of the Aleutian Range, generally less than 1,000 ft. elevation but surmounted by 3,000 - 7,000-ft. volcanoes, bordering the Pacific Ocean; and a tundra-covered coastal lowland bordering the Bering Sea. Three general geologic units are recognized: a group of moderately deformed, probably middle to late Tertiary volcanic and marine sedimentary rocks that crop out along the Pacific coast; a series of younger volcanic rocks that make up the composite stratovolcanoes on the northern flanks of the older rocks; and the Pleistocene and Recent unconsolidated deposits along the Bering Sea lowlands. Frosty Peak volcano (approx. 6,700 ft.) dominates the area, in which abundant evidence of glaciation is found; its inferred structure is shown on cross section; its history is prolonged periods of volcanism, separated by periods of relative quiescence. A large icefield occupies the northern part of the Frosty volcano and a tongue extends down toward Morzhovoi Bay. (DGS.)

76466. WALIN, GÖSTA. Ett steg framåt. (Sveriges natur, Dec. 1961. årg. 52, nr.6, p.188-97, illus.) Text in Swedish. **Title tr.:** One step ahead.

Reviews the consultations between conservation organizations and the Waterfalls Directorate concerning the regulation of Norrland rivers and lakes for hydroelectric power stations. On long-range planning, a national survey, and the protection of certain nationally treasured areas, the conservation interests were successful. The Stora and Lilla Lule, the Skellefte and Ume Rivers and the Vindel, Ångerman and Indal River systems are to be kept free of power development installations. Areas so excluded, those scheduled for regulation, and those on which decision was deferred are described. Discussion of the large Torne and Kalix Rivers in the far North and the Pite was waived, pending a report from the Scandinavian Water Power Committee on economic development plans for the Scandinavian far North and further investigation the Pite by the Waterfalls Directorate. The conservation interests consider many valuable areas lost, exploitation of waterfalls still a danger, and continuance of the educational campaign essential. (DA.)

76467. WALIN, GÖSTA. Ohämmad exploatering eller allsidig planering. (Sveriges natur, årsbok 1961: årg. 52, nr.5A, p.7-17, plates.) Text in Swedish. **Title tr.:** Unrestricted exploitation or versatile planning.

Protests the unrestricted rights of the Waterfalls Directorate to exploit Norrland rivers and lakes for hydro-electric power purposes. A national planning committee should be set up to review policies and weigh immediate economic gains against long-range losses, to study other sources of power, and to determine areas to be excluded from exploitation because of their biological, recreational, etc. importance. Several such areas are to be sacrificed to power projects: Tärnas (65°44′N. 15°20′E.) and Torneträsk (68°14′N. 19°40′E.) lakes, Sarek National Park (67°20′N. 17°E.), and additional areas of Stora Sjöfallet National Park (67°30′N. 18°10′E.); the decision on areas in Sadjelanta (67°20′N. 16°30′E.) are postponed until 1965. These and other Norrland areas which should be spared are illus. (DA.)

WALKER, F. G., *see* Campbell, H.H., & F.G. Walker. Continuous epidural analgesia . . . 1961. No. 70503

76468. WALKER, HARLEY JESSE. Winter water sources in the American Arctic. (*In:* Alaskan Science Conference . . . 1961. Proceedings, *pub.* 1962, p.136-44.) 8 refs. Condensation of a chapter in a report for the U.S. Arctic Desert Tropic Information Center, Research Studies Institute, Maxwell Air Force Base, Alabama.

Discusses the qualities, availability and processing of fresh-water ice, freshened sea ice, and snow for use as water. Winter water shortage is caused rather by lack of processing techniques than of sources. Mass production techniques (described) developed during construction of the DEW Line are expensive. The most effective method is to store water procured during the summer in large tanks, and keep it from freezing by use of heat or agitation. (CaMAI.)

WALKER, HARLEY JESSE, *see also*

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

76469. WALKER, EDWARD R. A synoptic climatology for parts of the western Cordillera. Montreal, Que., Feb. 1961. xv, 218 p., maps, diagr., graphs, tables.) McGill University. Arctic Meteorology Research Group. Publication in meteorology no.35.) 105 refs. *Also issued as:* U.S. Air Force, Cambridge Research Laboratories, Contract no. AF 19 (604)-3865, Scientific report no.8. In sequence to No. 56759.

Attempts to explain and show effects of mountain terrain on distributions of precipitation and temperature. Past climatological studies, compilations of monthly or seasonal values of observed weather elements are unsuited to mountainous areas. Characteristics of the atmosphere over British Columbia are described by synoptic methods and data-processing techniques; dynamical and physical theory is used to interpolate climatic details in areas of complex relief and sparse data. Atmospheric characteristics were found to be sharply differientiated by the direction of the flow at the 700 mb (3 km.) level. Simple models of precipitation distributions over mountain ranges were derived to supplement observations, and improved precipitation charts for southern British Columbia were compiled. Previously undetermined characteristics of precipitation and temperature distributions, such as altitudinal variation, were elucidated; the relationships obtained between atmospheric characteristics and observed weather suggest the practicability of using a sparse weather station network to observe the climate of mountainous areas. (CaMAI.)

76470. WALKER, PAUL W., 1934–1959, *and* W. G. MATTOX, *Jr.* Glaciological observations in northern Ellesmere Island, 1959. Washington, D.C., May 1961. 139 p. illus., maps, tables. (Arctic Institute of North America. Research paper no.10. Contract AF 19 (604)-3073, scientific report no.13.)

Reports observations at the Ward Hunt Ice Shelf (83°10′N. 74°W.) during June-Sept. 1959, in connection with the U.S. Air Force Cambridge Research Center-Arctic Institute Ellesmere Island Shelf project. Temperatures, snow densities, hardness numbers are tabulated with descriptive remarks based on 14 pit studies made in early June and repeated in early July. Snow depths and densities are listed for a grid of 70 ablation stakes, also for a series of 44 stakes along an eleven-mile survey line across the north-south extent of the shelf. (DWB.)

76471. WALLACE, ANTHONY F. C. Mental illness, biology, and culture. (*In:* Psychological anthropology . . . edited by F.L.K. Hsu, Homewood, Ill., 1961, p.255-95.) Refs.

Includes; p.262-74, a study of *pibloktoq* among Polar Eskimos of the Thule District, northwest Greenland, based on descriptions made from 1765

to about 1940. Symptoms as gleaned from such variety of reports are outlined. Psychoanalytical explanation of the syndrome and its weakness are discussed. The calcium deficiency hypothesis, its pro's and con's, vitamin D3, and other theories are considered. Eskimo response and social attitude to the syndrome are described. (DLC.)

WALLACE, ANTHONY F. C., *see also* Biennial rev. anthrop. 1961. 1962. No. 70207

WALLACE, I. R., *see* Prescott, L.F., & *others*. Accidental hypothermia . . . 1962. No. 74949

76472. WALLER, ROGER MILTON, 1926– .
Data on water wells and springs in the Chugiak area, Alaska. Anchorage, Alaska, 1960. 28 l. map, tables. (U.S. Geological Survey. Water Resources Division, Ground Water Branch, open file report.) 11 refs.

Presents results of investigations since 1955, in an area rapidly being settled, mostly by people working in Anchorage. Glacial processes have determined the chief occurrences of ground water. Most wells penetrate sand and gravel deposited by former glacial melt-water streams. Many others, particularly the dug wells, obtain water from sandy zones in glacial till, a boulder clay locally called "hardpan." These and the wells drilled into the underlying metamorphic and sedimentary bedrock usually obtain only small quantities of water. The thickest sequence of unconsolidated deposits reported in well logs is over 400 ft. Chemical analyses show the water moderately hard to hard, but suitable for general domestic use. (DGS.)

76473. WALLER, ROGER MILTON, 1926– .
Groundwater and permafrost at Bethel, Alaska. Juneau, Alaska, 1957. 10 l. tables & maps incl. fold., sections. (Alaska. Dept. of Health and Welfare Section of Sanitation and Engineering, Water, hydrological data, no.2.) *Also issued as:* U.S. Geological Survey, Open-file report, prob. *pub.* 1957.

Presents details concerning ground water, permafrost and subsurface materials in and around this village on the northwest bank of the Kuskokwim River about 400 mi. west of Anchorage. Data were obtained from a test well drilled by the Alaska Dept. of Health in 1956 and from U.S. Geological Survey files at Anchorage and Palmer, as well as other sources. Results indicate the presence of ground water in ample amounts east of the river where the subsurface material is saturated and largely unfrozen. West of the river, the major aquifer lies beneath the permafrost (about 400 ft.); it is a non-flowing artesian bed. Removal of iron is required from water for domestic use. (DLC.)

76474. WALLER, ROGER MILTON, 1926– .
Ground-water reconnaissance in five Eskimo villages in the lower Kuskokwim-Yukon River area, Alaska. Washington, D.C. Sept. 1955. 12 l. sketch map. (U.S. Geological Survey. Reports, open file series, no.635.)

Describes surficial geology and topography, also possible sources of ground-water for Kwethluk with 275 population, 20 mi. east of Bethel; Hooper Bay with 400 pop.; Chevak 275 pop. 17 mi. east of Hooper Bay; Tununak on the west side of Nelson Island; and Kwigillingok with 300 pop. 30 mi. from Kuskokwim River mouth. Wells, properly located, could supply water. (DGS.)

76475. WALLER, ROGER MILTON, 1926– .
Ground water reconnaissance of six Eskimo villages in the Kobuk-Noatak area, Alaska. Juneau, Alaska, 1957. 8 l. map. (Alaska. Dept. of Health and Welfare. Section of Sanitation and Engineering. Water, hydrological data, no.4.) *Also issued as:* U.S. Geological Survey, open-file report, *pub.* 1957.

Contains reconnaissance reports on ground water possibilities in Kiana, Noatak, Noorvik, Point Hope, Selawik, and Shungnak, northwest Alaska, Point Hope is an old coastal village about 150 mi. northwest of Kotzebue; the others lie inland on major river valleys. River water constitutes the main source of supply, and other possible sources, as holes, dug wells, ponds, exist for five of the villages; improvement at Point Hope may be obtained only by delaying the freezing of the existing well. Permafrost is found generally except at Shungnak. (DLC.)

76476. WALLER, ROGER MILTON, 1926– .
Summary of ground-water conditions in Alaska as they affect private water supplies. Juneau, Alaska, 1958. 2 l. (Alaska. Dept. of Health and Welfare, Section of Sanitation and Engineering, Water, hydrological data, no.11.)

Discusses difficulty likely to be encountered in obtaining private ground-water supplies in the five main regions of Alaska. Most favorable, generally, is the southern coastal region; the others have several kinds and degrees of difficulty, chiefly: massive rock formations in the southeast, salt-water encroachment in the Aleutians, high iron content in the Interior and the west, permafrost in much of interior, northern, and western Alaska. (DLC.)

76477. WALLER, ROGER MILTON, 1926– .
Summary of test-drilling results in Last Chance Basin, Juneau, Alaska. Washington, D.C., 1959. 23 l. 2 maps, 4 tables. (U.S. Geological Survey. Reports, open file series, no.637.) 4 refs.

From a series of exploratory test holes, one test well was converted into a production well for a pumping test to determine the water-bearing potential of the deposits penetrated. Last Chance Basin just northeast of Juneau, extends about 4000 ft. east-west and has a maximum width of 700 ft. Information obtained from drilling, observations of streamflow and of ground-water-level fluctuations are presented, as well as a general estimate of the geohydrology of this basin. (DGS.)

76478. WALLER, ROGER MILTON, 1926– .
Water resources reconnaissance of Gambell and Savoonga villages, St. Lawrence Island, Alaska. Juneau, Alaska, 1957? 14 l. maps, table. (Alaska. Dept. of Health and Welfare, Section of Sanitation and Engineering, Water, hydrological data, no.6.) Ref. *Also issued as:* U.S. Geological Survey. Open-file report, prob. 1957.

Presents brief general remarks on this Bering Sea island and detailed description of the physical setting, geology, permafrost, and ground water of its two villages, based on a survey in July-Aug. 1957 and a few additional sources. Most villagers,

about 400 at Gambell, 270 in Savoonga, use polluted lake or stream water, though potable supplies for Gambell are available until freeze-up from the U.S. Air Force well. No simple method of obtaining a ground-water supply for Savoonga exists; digging several test pits to determine subsurface conditions is recommended. (DLC.)

76479. WALLER, ROGER MILTON, 1926– . Water utilization in the Anchorage area, Alaska, 1958-59. Juneau, Alaska. Dept. of Health, 1961. 19 l. graphs, tables & maps, incl. fold. 11 refs.

Prior to 1958, the city and the two military bases, Fort Richardson and Elmendorf A.F.B. pumped most of their water supply directly from Ship Creek. Commencing in 1958, eight large wells supplied ground water for the city and the two military bases; these and other wells, chiefly in the suburbs, provided about one-third of the 18 million gallons used daily by some 90,000 people. Excessive well pumping in 1958 reduced the water in the four city wells nearly to sea level, hence a change to pumping of alternate wells in 1959, which minimized drawdown. The two major streams entering the Anchorage area from the Chugach Mts. together have a minimum discharge of about 25 million gal./day in Mar., and maximum of over 150 million gal./day in June. This and some six million gal./day from wells are available to supply current needs. Maps show stream-gaging sites, selected well locations, and approx. ground-water-level contours in 1957, 1958, 1959. The investigation was carried out during 1958-1961 by the U.S. Geological Survey in cooperation with the city of Anchorage and the Alaska Dept. of Health and Welfare. (DGS.)

WALLER, ROGER MILTON, 1926– , *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

Kachadoorian, R., & *others*. Geologic investigations . . . Project Chariot . . . 1961. No. 72604

WALLERSTEIN, GEORGE, *see* Monk, D., & G. Wallerstein. First ascent Mt. McArthur. 1962. No. 74098

WALLIN, LARS, *see* Hansson, G., & L. Wallin. Invasionen av sidensvans . . . 1958. No. 72014

76480. WALSH, B. J. Beneficiation of Quebec-Labrador iron ores. (Precambrian-Mining in Canada, May 1960. v.33, no.5, p.32-33.)

Describes four methods of recovering hematite ordinarily not utilized in the magnetic separation process: roasting for magnetism, gravity concentration, electrostatic separation, and flotation. Experimental work on Quebec-Labrador iron ores at the pilot plant of the Quebec Dept. of Mines, q.v., has indicated possibilities and disadvantages of these methods. (DGS.)

WALSH, J. P., *see* National Research Council of Canada . . . muskeg research conference 1960. 1961. No. 74228

WALTER, D., *see* Oetliker, O., & D. Walter. Strukturerhaltungszeit . . . 1961. No. 74472

WALTERS, C. F., *see*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

WALTON, MATT SAVAGE, 1915– , *see* Warner, L.A., & *others*. Iron and copper deposits . . . 1961. No. 76489

76481. WAMBERG, KJELD. Grønland har to store arnesteder for hundegalskab, de to US-baser. (Atuagagdliutit: Grønlandsposten, Aug. 25. 1960. Ukiut 100-at, nr.16, p.4-5.) Text in Danish and Eskimo. **Title tr.:** Greenland has two big hotbeds of rabies, the two U.S. bases.

Surveys the history, diagnosis, and preventive measures of rabies in Greenland. The first regulations to control it were issued in 1859. Outbreaks have increased in recent years; the latest were in Upernavik district in 1957-58 and at Thule in 1958-59. (DLC.)

76482. WAMBERG, PETER. Knud Rasmussen og anlaeggelsen af handelsstationen Thule 1910. (Kronborg. Handels- og søfartsmuseet. Årbog, 1961. bd. 20, p.23-48, illus., map.) Text in Danish. Summary in English. **Title tr.:** Knud Rasmussen and the founding of the trading station Thule in 1910.

The last living member (chief mate) of this expedition recounts events of the voyage to North Greenland and return (to Denmark). The building of the station, where Rasmussen and Peter Freuchen remained, is described. (AIKøbenhavn.)

76483. WANGENSTEEN, STEPHEN L., *and others*. Physiologic effects of gastric hypothermia, I; estimated hepatic blood flow in the normal anesthetized dog. (Surgery, Oct. 1961. v.50, no.4, p.651-55, tables.) 12 refs. *Other authors:* R.C. Orahood, W.K. Luke *and* W.V. Healey.

Reports an estimated blood flow based on Bromsulphalein removal. Gastric hypothermia significantly reduced gastric blood flow in 20 dogs cooled with the gastric balloon method. (DLC.)

WANGENSTEEN, STEPHEN L., *see also* Orahood, R.C., & *others*. Physiologic effects of gastric hypothermia . . . 1961. No. 74527

WANLESS, R. K., *see* Lowdon, J.A., & *others*. Age determinations . . . 2: isotopic ages. 1961. No. 73611

76484. WANSBROUGH, V. C. The mining industry in northern Canada. (Western miner and oil review, Oct. 1961. v.34, no.10, p.58-60.) Paper presented at the 2nd National Northern Development Conference, Edmonton, Sept. 1961.

Discusses financing of mineral exploration and development, and suggests federal government policies to aid it: encouragement of needed investments by foreigners, and extension of the tax-free period for new northern mines. (DGS.)

76485. WARD, FRED W., *and* **R. SHAPIRO.** Atmospheric temperatures and solar activity II; 50 mb in the Northern Hemisphere auroral zone. (Journal of meteorology, Apr. 1961. v.18, no.2, p.256-58, graphs.) Ref. In sequence to No. 69191.

Reports on study of solar and meteorological data from 32 stations for Apr. 1953-Mar. 1958. No evidence is seen of a systematic solar effect on

temperature at these levels; the search for such an effect is being extended higher. (DA.)

WARD, WILLIAM H., *see Polar record.* News notes. 1961-62. No. 74847

76486. WARFIELD, ROBERT S. Bituminous coal deposits of the Matanuska coalfield, Alaska: central and western parts, Wishbone district. Washington, D.C., 1962. 190 p. tables, diagrs., maps incl. 2 fold. (U.S. Dept. of the Interior. Bureau of Mines. Report of investigations, 5950.) Refs.

Reports investigations of 1949-58, of the extent, quality, and character of coal deposits in this field northeast of Anchorage. Geologic exploration and mapping were supplemented by trenching, diamond-core and churn drilling, and benefication. The Jonesville coal group was proved in a new area; and reserve estimates were indicated and increased. Due to complex geological structure, coal measures in much of the study area were not definitely delineated or correlated. A map of the coal groups at scale 1 in:500 ft. is included, also logs of the drill holes and analyses of coal cores. Production through 1959 is tabulated. (DGS.)

76487. WARNECKE, GÜNTER. Über die Temperatur- und Zirkulationsschwankungen in der arktischen Stratosphäre. (Polarforschung, Bd. 4, 1959 *pub.* May 1961. Jahrg. 29, Heft 1-2, p.169-70.) 6 refs. Text in German. **Title tr.:** On temperature- and circulation fluctuations in the arctic stratosphere.

Notes the sudden temperature increases observed several times in late winter above Alert, Ellesmere Island. They are accompanied by stable highs over the North American Arctic which tend to distort the normal circulation pattern of the Arctic in summer. (CaMAI.)

76488. WARNER, GEORGE W. The grayling. (Alaska sportsman, July 1961. v.27, no.7, p.26-28, illus.) Alaska wildlife library no. 15.

Describes the distribution, habitats, seasonal migrations, spawning and food habits of the arctic grayling. It is a fresh-water fish, inhabiting both lakes and streams, and is excellent for sports fishing. The grayling is unusually sensitive to changes in environment from land and water utilization, pollution, etc.; conservation practices are required to protect its habitat. (DI.)

76489. WARNER, LAWRENCE ALLEN, 1914–, *and others.* Iron and copper deposits of Kasaan Peninsula, Prince of Wales Island, Southeastern Alaska. Washington, D.C., U.S. Gov't. Print. Office, 1961. 2 v. 136 p. illus., maps; & 28 fold. plates in separate vol. (U.S. Geological Survey. Bulletin 1090.) 30 refs. *Other authors:* E.N. Goddard, M.S. Walton, *Jr.*, C.T. Bressler, K. Stefansson, R.G. Ray, *and* G.M. Flint, *Jr.*

Presents results of investigations in summers 1942-1944. The deposits are mostly small and irregular but of relatively high grade. Chief ore minerals are magnetite, pyrite, and chalcopyrite. Total reserves are estimated at about four million long tons of iron ore averaging 50% iron, and 1.5 million short tons of copper ore, most if it less than 2% copper. Recoverable amounts of gold and silver are also present. Most of the country rock is greenstone of andesitic composition and probable Mesozoic age; the greenstone includes rocks of sedimentary origin believed to be Paleozoic. Folding and fracturing, also intrusion of igneous material took place. Later the region was faulted and ore-bearing solutions percolated upward along the faults and dikes. Limited copper mining, some promising iron-producing localities, diamond-drilling in 1943-1944 are mentioned, but the Kasaan Peninsula ores are considered not large enough to play a major role in the West Coast ferrous industry. (DGS.)

76490. WARREN, PERCIVAL SIDNEY, 1890–, *and* C. R. STELCK. Pacific floodings of the Canadian Rocky Mountains area. (Pacific Science Congress. 9th. *Bangkok, Thailand,* 1957. Proceedings pub. 1961. v.12, geology and geophysics, p.50-57, maps.) 19 refs. Presented at a symposium on nature, location, and origin of the circum-Pacific continental margin.

Reconstructs and maps from marine sediments, 16 transgressions of the Pacific Ocean from Late Precambrian to Mid-Lower Cretaceous times. Ordovician and Devonian floodings extended east to Great Bear and Great Slave Lakes. Pacific and Arctic Ocean waters coalesced at times, prior to a late Caledonian uplift of the arctic area. (DI.)

76491. WARREN, PERCIVAL SIDNEY, 1890–, *and* C. R. STELCK. Western Canadian Givetian. (Alberta Society of Petroleum Geologists. Journal, June 1962. v.10, no.6, p.273-91, map, graphs, profiles, tables.) 30 refs.

Revises authors' earlier Devonian correlation noting similarity of the Canadian range of *Stringocephalus* s.l. to that in Europe. The upper Middle Devonian, Givetian stage of western Canada, including localities in Mackenzie District and the Ogilvie Mts. of Yukon Territory, is characterized by a succession of 15 discrete stringocephalids. Total thickness of this stage is over 1500 ft. in parts of Western Canada. Three distinct horizons, the Ramparts limestone, the older Winnipegosan dolomite, and the younger Presqu'ile dolomite, all contain specimens of this brachiopod. A proposed sequence of *Stringocephalus* and *Geranocephalus* through the Givetian is given. Profiles of 30 specimens are shown. (DGS.)

76492. WARWICK, CONSTANCE S., *and* M. W. HAURWITZ. A study of solar activity associated with polar-cap absorption. (Journal of geophysical research, Apr. 1962. v.67, no.4, p.1317-32, tables, diagrs.) 20 refs.

Systematic examination of all unusual solar radio and optical emission before the onset of 43 PCA events shows which type of solar activity most frequently precedes PCA. This provides an objective basis for assignment of the solar event most probably associated with each PCA event. Relations among various characteristics of solar and PCA events are examined. These data present little evidence for association of PCA with solar flares occurring on the far side of the sun, nor do they indicate any significant dependence of occurrence or of delay time of PCA on position of the associated flare. Delay from flare to absorption varies from several minutes to several hours, appropriate to the energy of the solar particles. A definite relation is found between delay time and phase of the solar cycle, with long delay times near the time of maximum solar activity.—From authors' abstract. (DLC.)

76493. WASHBURN, ALBERT LINCOLN, 1911– , *and* M. STUIVER. Radiocarbon-dated postglacial delevelling in Northeast Greenland and its implications. (Arctic, Mar. 1962. v.15, no.1, p.66-73, map, graphs, table.) 12 refs.

Reconstructs the postglacial emergence from radiocarbon dating, at the Yale Geochronometric Laboratory, of shells and driftwood collected in the Mesters Vig area. Localities and altitudes at which the specimens were collected, species of the shells, and radiocarbon ages are tabulated, and the ages plotted against altitude. The evidence indicates that the area has been deglaciated since 9000-8500 B.P., and that the deglaciation is closely related in time and effect to the Hypsithermal. The emergence, primarily isostatic, decreased from an initial rate of 9 m./100 yrs. to approx. 0.6 m./100 yrs. in 6000 B.P. and, possibly, as little as 7 cm./100 yrs. since then. A local till-like material was determined, from the shells, to be an emerged fiord-bottom rather than glacial deposit. (DI.)

WASHBURN, ALBERT LINCOLN, 1911– , *see also*

Drew, J.V., & J.C.F. Tedrow. Arctic soil classification . . . 1962. No. 71106

Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

76494. WASHBURN, HENRY BRADFORD, 1910– . Aerial photography, Alaska and the Alps. (*In:* Mountain world, 1960-61. p.19-22, illus.)

Describes, and recalls incidents in the use of his 1928 model Fairchild K-6 camera, during mapping and mountaineering flights, many over Mt. McKinley. Nine oblique photos demonstrate the camera's capabilities. (DGS.)

76495. WASHBURN, HENRY BRADFORD, 1910– . Frostbite, what it is, how to prevent it, emergency treatment. (American alpine journal, 1962, v.13, no.1, p.1-26, illus., diagr.) 17 refs.

Summarizes primarily for the mountain climber, the causes, pathology, treatment and prevention of this form of cold injury, with examples of six cases from Alaska. (DGS.)

76496. WASHBURN, HENRY BRADFORD, 1910– . A new map of Mount McKinley, Alaska; the life story of a cartographic project. (Geographical review, Apr. 1961, v.51, no.2, p.159-86, illus., maps incl. col. fold. in pocket.) 14 refs.

Reports on preparation of this map, No. 69197, which accompanies the article: results of 15 years' work, seven trips to Alaska, flights at 40,000 ft. by the U.S. Air Force, photogrammetric work in Switzerland, theodolite observations at nearly 50 survey stations, etc., and Swiss-American cooperation in its production. Tribute to agencies and individuals, especially Swiss, who aided in preparation of the map was pub. in *Mountain world* 1960-61, p.260-62 and map accompanies this article also. (DLC.)

76497. WASHBURN, HENRY BRADFORD, 1910– . Opportunities on Mount McKinley. (American alpine journal, 1962. v.13, no.1, p.49-52, illus.) 4 refs.

Describes and illustrates unclimbed routes: via Wickersham Wall to North Peak, and via two basic routes up the Southeast Spur to South Peak; possible campsites, supply drops and routes are shown. (DGS.)

76498. WASHINGTON. UNIVERSITY. *Dept. of Oceanography.* Physical and chemical data, Bering and Chukchi Seas, summer 1960; a preliminary tabulation of oceanographic data collected during *Brown Bear* cruise 268, 12 July to 28 August 1960. Seattle, Apr. 1961. 3 l. map & approx. 50 l. tables. (*Its:* contracts Nonr-477 (10) and AT-45-1-540.)

Reports standard oceanographic data from a cruise as part of Project Chariot. Nearly 150 stations were made in Bering Sea and Strait and in Chukchi Sea east of the International Date Line especially near Cape Thompson, proposed site of the Project Chariot test. (DN-HO.)

76499. WASMUTH, JANE. Flu vaccine given in villages. (Alaska's health and welfare, Oct. 1962, v.19, p.6, illus.)

Notes on type A and B vaccination conducted as a result of the 1961 outbreak in the Craig-Klawock-Hydaburg area. Collaborators in the program, staff, dosages, etc. are also mentioned. (DLC.)

WASSON, H. R., *see* Knight, W.E., & *others.* Response requirements . . . radiacs. 1961. No. 72869

76500. WATERHOUSE, ROBERT W. Analysis of data from a snow profile. Hanover, N.H., Feb. 1962. iv, 22 p. illus., tables, graphs. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Research report 90.) 7 refs.

Analyzes density and permeability data using new graphical methods which distinguish the separate effects of densification and thermal metamorphism on permeability. The snow profiles were obtained at Site 2 on the Greenland icecap, at about 7,000 ft. elevation. The following conclusions are reached for polar pack under conditions of no melting and assumed continuous accumulation: the permeability for a given density increases with depth and time except near the surface and below 30 m. depth; the rate of permeability change with depth for given densities decreases in a calculable way relative to the density; mean permeability changes with depth in a complex manner. (CaMAI.)

76501. WATERS, D. J., *and* W. W. MAPLESON. Mechanism of heat loss during hypothermia. (Anaesthesia, Apr. 1961. v.16, no.2, p.135-50, illus.) 7 refs.

Reports study of 46 anesthetized patients cooled in water. Of the factors affecting drop in body temperature, the following were considered: metabolism, conductivity of body tissues, effect of body fat, effect of circulation and the ratio of body surface to body weight. This ratio was found to be "the dominant factor." Temperature records suggest that the theory of heat transfer in inanimate bodies is qualitatively applicable to surface cooling of the human body. Other aspects of the process are also analyzed. (DNLM.)

76502. WATHNE, FRED, *and* H. C. JOHNSON. Shrimp exploration in central Alaskan waters by the M/V *John N. Cobb,* October-November 1959. (Commercial fisheries review, Jan. 1961. v.23, no.1, p.1-8, illus., maps.) 9 refs.

Reports a study conducted from mid-October

to mid-November with Gulf-of-Mexico-type trawl, aimed at assessing the prospects of shrimp fishing in the fall. Over a hundred drags were made; with few exceptions, they showed poor catches. Weather, hydrographic and bottom conditions were recorded. (DI.)

WATKINS, N. D., *see* Deutsch, E.R., & N.D. Watkins. . . . geomagnetic field during the Triassic . . . 1961. No. 70991

WATKINS, WILLIAM A., *see* Schevill, W.E. Whale music. 1962. No. 75412

76503. WAYLAND, RUSSELL GIBSON, 1913– . The Alaska Juneau gold ore body. (Neues Jahrbuch für Mineralogie, Abhandlungen, *Stuttgart,* June 1960. Bd. 94, Festband Paul Ramdohr, Heft 1, p.267-79.)

Reviews development of this body, discovered in 1880, which underwent large scale development by the Alaska Juneau Gold Mining Co. 1913-1945; in the mid 1930's it produced 80% of all lode gold mined in Alaska. The gold, found in quartz veins, was mined by block caving. The geology of the area, regional metamorphism, hydrothermal alteration, microstructures, quartz veins, ore zones, metallization, and sulfide minerals and zoning are discussed. (CaOG.)

76504. WAYLAND, RUSSELL GIBSON, 1913– . Tofty tin belt, Manley Hot Springs district, Alaska. (U.S. Geological Survey. Bulletin 1961, no.1058-I, p.363-414, illus., tables, sections, maps incl. 2 fold. in pocket. Mineral resources of Alaska, 1956.) 10 refs.

Describes and maps at scale 1:96,000, the geology of this 8 x 1 mi. area near Manley Hot Springs, from which a few hundred tons of cassiterite have been obtained as a byproduct of the recovery of placer gold. Field examination was made in 1941, but the mining problem and most of the estimates of tin reserves are considered still valid. Besides the geologic map, a detailed 1:24,000 plan of the Tofty placers, and 13 sections along selected drill lines are folded in pocket. The cassiterite placer deposits were mostly subeconomic in 1941; recoverable tin-belt reserves would be but a fraction of the total indicated or inferred. (DGS.)

WEBB, PAUL, *see* Veghte, J.H., & P. Webb. Body cooling & response to heat. 1961. No. 76365

WEBB, R. L., *see*

Jacob, S.W., & R.L. Webb. An experimental approach to the supercooling . . . 1960. No. 72505

Rastegar, M.J., & *others.* Influence of hypothermia. 1961. No. 75051

WEBBE, RUSSELL, *see* Goodhart, J., & *others.* Goose-ringing in Vestspitsbergen. 1954. No. 71755

76505. WEBER, FLORENCE MARIE ROBINSON, 1921– . Reconnaissance engineering geology for selection of highway route from Talkeetna to McGrath, Alaska. Washington, D.C., 1961. map 57 x 42 in. graphs and table on sheet 50 x 44 in both fold. in pocket. (U.S. Geological Survey. Reports, open file series, no.624.) 11 refs.

Reports on possible highway routes from Talkeetna to McGrath, 62°20′N. 150°09′W. - 62° 58′N. 155°40′W., based on aerial photography supplemented by 1959 and 1960 field checks, together with pub. and unpub. sources. A general basis for selection of road routes is provided, considering geological factors only as they would affect construction. Eighteen soil and rock units are described and evaluated. Results of samples analysis by the U.S. Bureau of Public Roads, Fairbanks laboratory are graphed. Proposed route crosses part of the Susitna valley, the Alaska Range and Kuskokwim valley. (DGS.)

WEBER, FLORENCE MARIE ROBINSON, *see also* Alaskan Science Conference 1960. 1961. No. 69643

WEBER, G. PHILIP, *see* McCue, R.J. Weather note . . . 1961. No. 73680

76506. WEBER, J. R., *and others.* Geophysical surveys on Gilman Glacier, northern Ellesmere Island. *(In:* IUGG. Association of Scientific Hydrology. Helsinki, 1960, Pub. no.54, *pub.* 1961. p.500-511, map, diagrs., graphs, table.) 16 refs. Summary in French. *Other authors:* N. Sandstrom *and* K.C. Arnold.

Summarizes results of authors' work on Gilman Glacier in connection with the Canadian IGY work on Operation Hazen. Seismic refraction and reflection measurements showed that a maximum compressional wave velocity of 3795 m./sec. was reached at 50 m. depth on the glacier. Ice thickness varied from 380 m. at five km. from the terminus, to 760 m. at 19 km. from the terminus. Regional Bouguer anomaly was calculated at a few selected sites, then extrapolated for the whole area. Measurements of surface movement indicated a maximum velocity of 25 m./yr. Map shows location of profiles, glacier, movement, etc. (DWB.)

WEBER, J. R., *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

WEBSTER, C. G., *see* Hammerschmid, L.J. Rearward communications BMEWS. 1961. No. 71977

WEBSTER, DONALD H., *see* Alaskan Science Conference 1961. 1962. No. 69644

WEBSTER, DONALD ROBERTSON, 1902– *see*

Lawson, R.N., & *others.* Thermographic assessment of burns and frostbite. 1961. No. 73358

McGraw, J.Y., & D.R. Webster. Cooling technique . . . frostbite. 1962. No. 73696

76507. WEBSTER, WILFRID. The American Geographical Society's serial atlas of the marine environment. (Geographical review, Oct. 1961. v.51, no.4, p.570-74.) Ref.

Announces commencement of this long-range project, directed by the Society, with the cooperation of the National Academy of Sciences-National Research Council, and other organizations. A new series of outline base maps is being prepared: sheets 1 to 14 cover the North Atlantic and adjacent seas; 15 and 16 the Arctic Basin and adjacent seas on a scale of 1:5,000,000; sheet 17 combines 15 and 16 on a scale of 1:10,000,000. Sheet 19 is expected to complete this part of the project; it will cover the entire North Atlantic and the Arctic Basin. The atlas is to consist of a series of folios, each a study of some aspect of the marine environment. The first folio to be published is on the sea surface temperature regime in the western North Atlantic 1953-1954, and is by Robert L. Pyle. Others in preparation are noted. (DGS.)

76508. WEEDEN, ROBERT B. Alaska's ptarmigan. (Alaska sportsman, Aug. 1961. v.27, no.8, p.12-14, illus.) Alaska Wildlife Library, no.16.

Three species of *Lagopus* found in Alaska are the rock, willow, and white-tailed ptarmigan. Appearance, habitat, and courtship, nesting, and flocking habits are described for each. Ptarmigan is Alaska's official bird. (DGS.)

WEEDEN, ROBERT B., *see also* Alaskan Science Conference 1961. 1962. No. 69644

76509. WEEDFALL, ROBERT O. Microclimatology of Ogotoruk valley; interim report no.2. Washington, D.C., U.S. Weather Bureau, June 15, 1961. 25 l., map, tables. (U.S. Atomic Energy Commission. Project Chariot Environmental Study Program.) 3 refs. Loose leaf. Continues study reported in No. 63012.

Covers the period Oct. 1960-Apr: 1961. Daily microscale observations in the valley were discontinued during the winter; about 15 trips were made to read soil thermometers; daily readings were resumed Mar. 25. Instrumentation is described. Precipitation readings were of value only at the base station, because of blowing snow. Tabular summaries are given of each parameter observed: winds, sea ice, precipitation, and temperature. A monthly regional weather summary, Oct. 1960-Apr. 1961, is appended, with 1959-60 data for comparison. (DWB.)

WEEDFALL, ROBERT O., *see also* Allen, P.W., & R.O. Weedfall. Microclimatol. . . . Ogotoruk valley. 1962. No. 69725

76510. WEEKS, WILFORD FRANK, *and* **W. L. HAMILTON.** Petrographic characteristics of young sea ice, Point Barrow, Alaska. (American mineralogist, July-Aug. 1962. v.47, no.7-8, p.945-61, illus., diagr., graphs, table.) 17 refs.

Pilot study of structural features of a sea ice sheet which formed on Elson Lagoon during Sept. 30 - Oct. 26, 1960, features readily observed with low magnification in this section. A three-inch core 31.4 cm. long was taken, thin sections 0.25 - 0.75 cm. thick photographed, and data obtained by direct measurements on photo enlargements. Most pronounced effect is the systematic increase in crystal size with depth. A fairly constant 2:1 ratio between crystal length and width was also observed. Comparisons are made with recent observations on crystal growth in metals. The packings of the sub-plates in sea ice are found similar to those observed in zinc, a closely-packed hexagonal metal. Cold-room facilities of the Arctic Research Laboratory Point Barrow, were used for the study. (DGS.)

WEEKS, WILFORD FRANK, *see also* Geological Soc. of Am. Abstracts 1961. 1962. No. 71635

76511. WEERTMAN, JOHANNES. Catastrophic glacier advances. (*In:* International Association of Scientific Hydrology. Pub. no.58, Symposium of of Obergurgl 1962, p.31-39, graphs, table.) 16 refs. Similar to and based on author's report of same title, pub. Sept. 1962 as Research report 102 of U.S. Army Corps of Engineers Cold Regions Regions Research and Engineering Laboratory.

Presents an extension of author's glacier sliding theory (No. 55968), introducing the effect of the thickness of the water layer found at the bottom of a temperate glacier, producing rapid advances like those of Black Rapids Glacier (5 km. in 5 months) and Muldrow Glacier (7 km. in less than a year). For such advances, glacier length should be 10-30 km. and bottom surface should be at the melting point; glacier bed water should flow as a sheet with negligible flow in stream channels; shear stress should be above average, ca. 2 bars, at the bed; glacier bed should have few large obstacles. Daily hourly fluctuations in surface velocity may be explained with this theory. Lliboutry's mechanism to explain rapid glacier advances is considered inadequate. (DGS.)

76512. WEERTMAN, JOHANNES. Mechanism for the formation of inner moraines found near the edge of cold ice caps. Hanover, N.H., Feb. 1962. iv, 12 p. diagrs., graph. (U.S. Army. Cold Regions Research and Engineering Laboratory. Research report 94.) 22 refs.

Offers a new explanation for the formation of moraines such as those observed near Thule, North Greenland, and on Baffin Island. The mechanism involves freezing onto the icecap bottom surface, of melt water produced by geothermal heat and heat created by the sliding of ice over the bed. The shear hypothesis of moraine formation is criticized. The amount of field data available is insufficient to prove the proposed mechanism. (CaMAI.)

76513. WEERTMAN, JOHANNES. Stability of ice-age ice sheets. (Journal of geophysical research, Nov. 1961, v.66, no.11, p.3783-92, diagrs., graphs.) 12 refs.

The stability of large ice sheets investigated by using the present-day theory of the flow of ice in glaciers and ice sheets. The type of instability considered is that first mentioned by Bodvarsson (No. 44064.) It is concluded that a small arctic icecap can become unstable and expand into a large ice-age ice sheet as a result of moderate changes in the regime of the icecap. A large continental ice sheet can also become unstable and shrink to nothing if the snow accumulation is reduced or the ablation rate increased. The results obtained fit well into the Ewing-Conn theory of ice ages (No. 44828). There is the possibility that the inherent instability of ice-age ice sheets is in itself sufficient to explain both the formation and the disappearance of these ice sheets.—From author's abstract. (DLC.)

76514. WEGENER, KURT, 1878– . Die Verdunstung im Schnee Grönlands. (Geofisica pura e applicata, 1962. v.52, no.2, p.227-28, graph.) Ref. Text in German. Summary in English. **Title tr.:** Evaporation the Greenland snow.

Reviews Sorge's data on density vs. depth and on mass vs. unit volume for Eismitte of the Deutsche Grönland-Expedition Alfred Wegener 1929 u.1930-31. Difference between these two relationships yielded the evaporation loss, which was found to be one liter in seven years from 70 liters resting on a snow column of 10 sq. cm. Author concludes that evaporation in the Greenland snow is not merely a surface phenomenon. (DLC.)

76515. WEIDEMANN, HARTWIG. Results of current measurements by towed electrodes in the northern North Atlantic during the IGY. (Interna-

tional Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.149, Contributions to Special IGY Meeting 1959, p.115-17, illus., table.) 4 refs.

Reports on measurement made between Iceland and Greenland with three types of instruments. Great turbulence was observed in this area of mixing waters, and the records often suffered from magnetic disturbances. The mean relation between wind and surface current is investigated and mathematically formulated. (DI.)

WEILL, GILBERT, *see* Barbier, D., & *others.* Mission aérienne . . . 1962. No. 70023

WEINGARTEN, F. S., *see* Schaefer, T., & *others.* Temperature change . . . 1962. No. 75404

76516. WEINSTEIN, K. Wind chill. (Canadian aeronautics and space journal, Feb. 1962. v.8, no.2, p.39-40, table, diagrs.)

Describes the difference between "wind chill temperature" and "wind chill factor" and shows how they are computed. (DLC.)

WEINSTEIN, W. J., *see* Lourie, H., & *others.* Effect of hypothermia . . . 1960. No. 73609

WEISS, H. S., *see* Fisher, H., & *others.* Environ. temp. & comp. body fat. 1962. No. 71426

76517. WEISS, L. Alterations in radiosensitivity of the haematopoietic system of the mouse produced by extreme hypothermia. (International journal of radiation biology, Oct. 1960. v.2, no.4, p.409-423, illus. tables.) 18 refs.

Study of mice fully exposed to X-irradiation of 0-950 r, after or prior to being cooled to 1°C., with normothermic, irradiated mice as controls. The results show that hypothermia protects the leucocytes and their precursors, the protection being largely due to the concomitant hypoxia. (DNLM.)

76518. WEISS, L. Some effects of hypothermia and hypoxia on the sensitivity of HeLa cells to X-rays. (International journal of radiation biology, Jan. 1960. v.2, no.1, p.20-27, illus. tables.) 24 refs.

Account of investigation of the effects of hypothermia (1°C.) or hypoxia upon the radiosensitivity of mammalian cells *in vitro.* The results indicate that while hypoxia reduces their X-ray sensitivity, hypothermia has no detectable effect. (DNLM.)

76519. WEISS, L., *and* **J. A. ARMSTRONG.** Structural changes in mammalian cells associated with cooling to -79°C. (Journal of biophysical and biochemical cytology, July 1960. v.7, no.4, p.673-77.) 21 refs.

Microscopic study of HeLa and S37 cells cooled in stages to -79°C., held at that temperature for 30 min. and thawed. The proportion of altered cells was lowest when glycerol was added to the cell suspension. But even in them, electron microscopy revealed vesiculation and disruption of intracellular membranes. (DNLM.)

76520. WEISS, LEONARD L. Relative catches of snow in shielded and unshielded gages at different wind speeds. (U.S. Weather Bureau. Monthly weather review, Oct. 1961. v.89, no.10, p.397-400, map, graphs, table.) 5 refs.

Compares results with four pairs of standard 8-in. gages, one of each pair equipped with an Alter-type windshield. Daily catch over five years at four sites in northern Michigan was recorded together with concurrent max. and min. temperature and daily wind movement. A generalized relationship between the ratio of the unshielded to shielded gage catch of snow and the wind speed at the orifice is plotted, indicating a decrease in the ratio as the wind speed increases. (DWB.)

WEISS, ROBERT F., *see* Strom, G.H., & *others.* Scale model studies . . . snow drift. 1962. No. 75964

76521. WELCH, HAROLD F., *and others.* Effect of hypothermia on blood ammonia formation. (Surgery, Aug. 1961. v.50, no.2, p.390-94, tables.) 12 refs. *Other authors:* R. Affifi *and* C.L. Rosano.

Dogs cooled to 30°C. showed a reduced ammonia production as indicated by fecal examinations. Blood from the inferior mesenteric vein showed a reduction of 50%; peripheral blood showed an insignificant increase of ammonia. (DLC.)

76522. WELLENSIEK, S. J. Dividing cells as the locus for vernalization. (Nature, July 21, 1962. v.195, no.4838, p.307-308.) 2 refs.

Account of experiments with the satinpod or honesty *Lunaria ciennis.* When vernalization (at 5°C.) of leaf cutting was preceded by two weeks at greenhouse temperature so as to initiate mitosis, vernalization takes a short time. Similar results with root cuttings, and removal of the lower petioles, indicate that vernalization takes place in dividing cells. (DLC.)

76523. WELLENSIEK, S. J. Leaf vernalization. (Nature, Dec. 16, 1961. v.192, no.4807, p.1097-98.) 7 refs.

Account of experiments with leaf cuttings of *Lunaria ciennis* exposed to 5°C. Only cuttings from adult plants flowered. Regeneration of sprouts was much better in leaves from juvenile plants. (DLC.)

76524. WELLS, JOSEPH VAN BRUNT, *and* **S. K. LOVE.** Quantity and quality of surface waters of Alaska, 1959. Washington, D.C , U.S. Govt. Print. Office, 1961. vi, 114 p. tables. (U.S. Geological Survey. Water-supply paper 1640.)

Contains results of measurements of the flow and the chemical and physical quality of streams during the water year ending Sept. 30, 1959; data from 68 gaging stations, discharge measurements from many other points, also chemical composition records from about 40 sites are included. Material is arranged, as in earlier reports, in two sections: Southeast Alaska, and the area west of 141°W. (DGS.)

76525. WELLS, VIRGINIA L., *and* **P. KEMPTON.** The germs *Amanita* in Alaska. (Alaska medicine, Mar. 1961. v.3, no.1, p.5-7, 20.) 12 refs.

Describes this genus of mushrooms and, in detail, the species *A. muscaria* very common, *A. porphyria* not common and *A. phalloides* probably found in Alaska. Symptoms and treatment of poisoning with the first and third species and with mushrooms in general, are discussed. (DNLM.)

WENDEL, BERTIL, *see* Hannerberg, D., & *others.* Migration in Sweden . . . 1957. No. 71987

76526. WENK, EDUARD. Tertiary of Greenland. (*In:* International Symposium on Arctic Geology.

Proceedings 1961. v.1, p.278-84.) 33 refs.

Tertiary rocks of central East Greenland are almost entirely igneous; they consist chiefly of basaltic extrusives and basic dikes. Locally, gabbroic, syenitic, and granitic intrusions occur. Floras of the intercalated sediments are interpreted as Paleocene or oldest Eocene. The much scarcer marine faunas have been variously interpreted as to age. The Tertiary terrain of this part of Greenland is part of the Brito-Arctic province (northern Ireland, western Scotland, Wyville-Thompson submarine ridge, Faroes, Iceland and East Greenland). It appears that the Brito-Arctic magmatic province originated in similar manner to the geologically related blocks of Greenland, Spitsbergen, Norway and Scotland. (DLC.)

WERBOFF, J., *see* Caldwell, D.F., & *others*. . . . environ. temp. & conditioning newborn rat . . . 1962 No. 70495

WERENSKIOLD, WERNER, 1883–1961, *see* Hoel, A., & W. Werenskiold. Glaciers snowfields Norw. 1962. No. 72180

WERFF TEN BOSCH, J. J. VAN DER, *see* Beugen, L. van, & J.J. van der Werff ten Bosch. Rat thyroid activity and cold response after removal of frontal . . . brain. 1961. No. 70189

76527. WERTH, E. Zur Verbreitung und Geschichte der Transporttiere. (Gesellschaft für Erdkunde zu Berlin. Zeitschrift, Aug. 1940, Heft 5/6, p.181-204, maps.) Text in German. **Title tr.**: Distribution and history of transport animals.

Sled-dog and -reindeer raising is described, p.197-203, and their area of distribution mapped. Though of independent origin, both belong to the cultural sphere of nomadic herding, regarded as an agricultural-fringe culture. Reindeer raising evolved from central Asian horse breeding; while north Siberian and Eskimo dog-breeding was borrowed from east Asian and Mongolian agricultural tribes. (DLC.)

76528. WESCOTT, EUGENE M., 1932– . Magnetic activity during periods of auroras at geomagnetically conjugate points. (Journal of geophysical research, Apr. 1962. v.67, no.4, p.1353-55, graphs.) 2 refs.

Analyzes magnetic variations at Kotzebue in Alaska, and Macquarie Island in the South Pacific, during two days in Mar. 1958 when auroras occurred simultaneously and in similar forms at these nearly conjugate stations. Very good correlation is found of variations in *H* and *D* during the two 24-hr. observation periods, indicating that ionospheric events in the Northern and Southern Hemispheres are closely linked by magnetic field lines, at least during certain periods. (DLC.)

76529. WESCOTT, EUGENE M., 1932– . Magnetic variations at conjugate points. (Journal of geophysical research, June 1961. v.66, no.6, p.1789-92, graphs, map.) 4 refs.

Compares magnetograms from Macquarie Island in the South Pacific with such from nine Alaskan IGY stations and Ft. Churchill, Canada, and Cape Chelyuskin, USSR. The variations at Macquarie Island corresponded very well in universal time with those at several Alaskan stations. An area between Healy and Kotzebue is defined accordingly as that magnetically conjugate to Macquarie Island. (DLC.)

WESCOTT, EUGENE M., 1932– , *see also*

Alaskan Science Conference 1960. 1961. No. 69643

Alaskan Science Conference 1961. 1962. No. 69644

Mather, K.B., & E.M. Wescott. Telluric currents geomag. conjugate stns. 1962. No. 73870

WESLEY, GORDON, *see* Rudkin, A. We lived on Arctic I. 1961. No. 75257

WESOLOWSKI, S. A., *see* De Jong, P., & *others*. . . . sympathectomy . . . cold injury. 1962. No. 70944

76530. WEST, GEORGE C. Responses and adaptations of wild birds to environmental temperature. (*In:* Symposia on arctic biology and medicine. Proceedings 1962. p.291-333, illus.) 50 refs. Issued also by National Research Council of Canada as NRC 6629.

Reviews recent work, with emphasis on the effects of cold. Chief means for preventing heat loss were found to be: insulation by plumage, drop in peripheral circulation with heat retention in the body core, shivering, and increased metabolism. The last is especially well developed in the winter, and tolerance to cold in non-migratory birds is also higher. The adaptation to a wide range of environmental temperature in birds, is pointed out. (CaMAI.)

76531. WESTBROOK, JANE HOWE. A method of predicting the frequency distribution of windchill. Natick, Mass. Jan. 1961. viii, 42 p. map, graphs, tables. (U.S. Quartermaster Corps. Environmental Protection Research Division, Technical report EP-143.) 23 refs.

Presents a chart, based on eight years of simultaneous recordings of Jan. temperature and windspeed from 20 North American stations, seven in the arctic. The chart combines the Siple nomogram (cf. No. 16133) used to derive the windchill index based on average temperature and windspeed, and the prediction model based on the windchill frequencies. Reliability of the chart is tested by frequency records from 34 additional stations, 13 in the Arctic. Deviations of actual windchill values from predicted values average 20 windchill units greater than deviations in the model; pattern of error deviation is similar to that of actual values. Probability of a specified level of windchill can be estimated from the chart; an example is given for Fort Churchill, Man. (DWB.)

WESTERBERG, GÖSTA, 1886– , *see* Rusck, Å., & G. Westerberg. Underground hydro-elec. power stn. 1950. No. 75268

WESTERMAN, R., *see* Kozak, W., & *others*. Long-lasting reversible changes . . . cold. 1962. No. 73053

76532. ***WESTERN MINER AND OIL REVIEW.*** Beryllium in the Northwest Territories. (Western miner and oil review, May 1961. v.34, no.5, p.34-41, illus.)

Describes a beryllium development at Blaisdell Lake, Mackenzie District, approx. 35 miles northeast of Yellowknife, and presents the 1960 reports of mining engineers W.L. McDonald and

E.P. Chapman, Jr. The technology and commercial applications of beryllium are reviewed by C.J. Marsel. Several pegmatite dikes containing beryl, possibly of high grade, have been found. Active development is planned for summer 1961 by Imperial Metals and Power Ltd. (DGS.)

76533. *WESTERN MINER AND OIL REVIEW.* Canada Tungsten Mining Corporation. (Western miner and oil review, Dec. 1962. v.35, no.12, p.28-39, illus.)

Presents several short articles about this company's operation at Tungsten in the Flat River valley of western Mackenzie District, with editorial comment, p.9, and photographs by T.F. Sturgess and K. Baumkirchner. Development and financing of the project are described from a paper by S.J. Hunter and information provided by J.J. Crowhurst (p.28-33), also geology of the ore body, plant facilities, equipment, and operations, and personnel. The project has ore reserves estimated at 1,176,400 tons, an open-pit mine, a 300-ton concentrator, an all-weather airstrip, a 197-mi. road to Watson Lake in Yukon Territory, etc. Production, begun in Nov. 1962, is expected to reach nine tons of high-grade tungsten concentrate and three tons of copper concentrate daily. The flow of mining and milling processes is diagrammed, p.35. The plant-buildings design, described p.34, incorporates special features for protection against frost, permafrost, and heavy snowfall. Building materials include local northern spruce milled at the plant site. Work of Isbell Construction Co. 1961-1962 for stripping and open-pit mining operations is described, p.36-37, by G.J. Stach and J. Amberson. The diesel power plant and heat-recovery system is discussed by M.A. Thomas, p.38-39. Other articles on this operation were pub. in the Nov. 1961 issue of the same journal (its production, reserves, etc.), and in the Apr. 1962 issue p.128: its fiberglas acid tanks which weigh 1200 lbs. as compared with 3500 lbs. for the usual steel-lined tanks. (DGS.)

76534. *WESTERN MINER AND OIL REVIEW.* The Great Slave Lake Railway. (Western miner and oil review, Apr. 1962. v.35, no.4, p.36, 38, map.)

Describes construction conditions along the proposed route (mapped) of the Canadian National Railways line from southwest of Grimshaw in Alberta to Hay River in Mackenzie District, with a 53-mi. branch to the Pine Point lead-zinc mine. Favorable topography and terrain facilitate construction; but severe spring ice-flow conditions require steel-on-concrete bridges over eight rivers. Track laying is to start by Aug. 1962, and the railroad to be completed in 1964. (DGS.)

76535. *WESTERN MINER AND OIL REVIEW.* Millions for aeromagnetic surveys. (Western miner and oil review, Mar. 1961. v.34, no.3, p.56.)

Describes a 12-year federal-provincial project starting in summer 1961, to survey 1,800,000 sq. mi. of heretofore unsurveyed areas in Canada. The program is to cost $18 million: $12 million in the Canadian Shield of the provinces, $6 million in the Yukon and Northwest Territories. It will aid in delimiting favorable mineral areas, especially in thickly glaciated regions with few rock exposures or where potential mineral-bearing rocks are covered by younger sediments. (DGS.)

76536. *WESTERN MINER AND OIL REVIEW.* Rail connection provided in record time. (Western miner and oil review, Apr. 1961. v.34, no.4, p.60-61, illus.)

Describes construction by Aklavik Constructors Ltd. in 1957, of the 30-mi. Sipiwesk-Thompson branch line of the Canadian National Railway in northern Manitoba. Problems of permafrost, solid rock, and transporting supplies before the spring break-up are cited. (DI.)

76537. WESTIN, BJORN, *and others.* Regional blood flow and vascular resistance during hypothermia in dog. (American journal of physiology, Sept. 1961. v.201, no.3, p.485-91, illus. table.) 19 refs. *Other authors:* N. Sehgal *and* N.S. Assali.

In dogs with shivering intact, cooling produced a fall in renal and carotid blood flow due to increase, and a rise in femoral flow due to a decrease, in vascular resistance. Cardiac output rose or remained unchanged. In animals with shivering suppressed, a fall in cardiac output and, due to increased vascular resistance, a drop in renal and femoral blood flows took place. (DLC.)

WESTIN, BJORN, *see also* Assali, N.S., & B. Westin. Effects of hypothermia . . . 1962. No. 69898

WESTPHALL, POVL, 1907– , *see* Denmark. Greenland. 1961. No. 70974

76538. WEYER, EDWARD MOFFAT, 1904– . Art of the Eskimo. (Natural history, Feb. 1960. v. 69, no.2, p.34-45, illus.)

Discusses early Eskimo carving; influence of Russians, and recently of James Houston and the Canadian Handicraft Guild in stimulating artistic carving; attempt to foster "purist" Eskimo style; character of recent carvings; dominant motifs; etc. Well illus. with photos by Lee Boltin. (DLC.)

76539. WHALEY, HELEN S. Status of childhood tuberculosis in Alaska. (Alaska medicine, June 1962. v.4, no.2, p.46-48.)

Comment on the recent increase of TB in children, some as old as 8-12 years. A measles epidemic in 1961, laxity in chemotherapy and in treatment generally, possible drug resistance, etc., are considered responsible for TB increase. Recommendations are made. (DNLM.)

WHALEY, ROBERT D., *see* Alaskan Science Conference 1960. 1961. No. 69643

76540. WHEELER, JOHN OLIVER. Mesozoic tectonics of the northwestern Canadian Cordillera. (Pacific Science Congress. 9th. *Bangkok, Thailand,* 1957. Proceedings *pub.* 1961. v.12, geology and geophysics, p.128-35, maps.) 30 refs.

Reconstructs (as in No. 56012) history of the upper Yukon Mesozoic belt in south-central Yukon Territory: from late Triassic sedimentary and volcanic rocks accumulated in the Whitehorse trough, approximately coincident with the present belt area. During mid-Cretaceous, the trough was deformed into a synclinorium (its present form) and intruded by granitic rocks. (DI.)

76541. WHEELER, JOHN OLIVER. Whitehorse map-area, Yukon Territory, 105D. Ottawa, Queen's Printer, 1961. xiv, 156 p. illus., tables, fold. diagr., maps & graphs incl. fold. (Canada. Geological Survey. Memoir 312.) 135 refs.

Describes the general physical geography and glaciation of this 4,800 sq. mi. area in southwestern Yukon Territory 60°- 61° N. 134°- 136° W.; within

it is the town of Whitehorse, also parts of the Alaska Highway and the White Pass and Yukon Railway. Stratigraphic and economic geology are treated in considerable detail, with some attention to lithology, paleontology and structure. The tectonic history is marked by the development in late Paleozoic and Mesozoic time of the Whitehorse trough. There was considerable prospecting during the early 20th century but little mining activity since 1920; the exposures of mineralized rock in most properties are poor. Deposits of base metals and gold are widely scattered; the Whitehorse copper belt has been recognized for many years. Field mapping on a scale of 1:253,440 was carried out between 1946 and 1955, and maps showing general geology and glacial features are included. (DGS.)

WHEELER, JOHN OLIVER, *see also*
Campbell, R.B., & J.O. Wheeler. Glenlyon . . . 1960. No. 70508

Gabrielse, H., & J.O. Wheeler. Tectonic framework S. Yukon . . . 1960. No. 71533

WHITE, DONALD EDWARD, 1914– , *see* Grantz, A., & *others*. Saline springs Copper R. lowland. 1962. No. 71822

76542. WHITE, L. G. Placer mining. (Western miner and oil review, Mar. 1961. v.34, no.3, p.28-36, illus.) 7 refs.

Discusses for student prospectors, this type of mining for gold in British Columbia, with some references to Yukon Territory. Origin and types of placer deposits, methods of prospecting, testing, recovery and mining are described, also the characteristics and types of placer gold. Placer production in the Yukon has yielded approx. $240,000,000 worth of gold, and continues at $2.5 million/yr. (DGS.)

WHITE, R. J., *see* Albin, M.S., & *others*. Hypothermia . . . spinal cord . . . 1961. No. 69667

76543. ***WHITE PASS CONTAINER ROUTE NEWS.*** Vancouver? v.1, no.1, 1957- *in progress*.

Published monthly in approx. 6 p. with illus., a house organ with news about people, events, and plans of the White Pass and Yukon Route. Stories of local interest and information about the Yukon generally are included. (CaONA.)

WHITEHEAD, HENRY COLLINS, 1935– , *see* Grantz, A., & *others*. Saline springs Copper R. lowland. 1962. No. 71822

76544. WHITFIELD, TERENCE JOHN. Anniapic and me. (North, Mar.-Apr. 1962. v.9, no.2, p.32-34, port.)

Discusses the "no fraternization" restriction imposed by some companies on their personnel working in area inhabited by northern natives. Author, an electrician at Great Whale River was dismissed from employment in Spring 1961 for breaking the rule. He suggests an amendment to the Federal Criminal Code to protect the natives from harm, rather than company regulations against social activities. (CaMAI.)

76545. WHITHAM, KENNETH, 1927– , *and* **E. R. NIBLETT.** The diurnal problem in aeromagnetic surveying in Canada. (Geophysics, Apr. 1961. v.26, no.2, p.211-28, tables, graphs, diagrs.) 9 refs.

Analyzes errors in aeromagnetic survey results caused by geomagnetic time variations. Statistical properties of average magnetic disturbance are calculated for five Canadian stations between 48° and 75° N.; the autocorrelation functions of vertical magnetic field fluctuations are used to estimate errors as a function of the lengths of the base loop and tr verse lines. The r.m.s. errors are proportional to the square root of elapsed time. Experimental results are presented of a comparison of total field intensity fluctuations measured with recording proton precision magnetometers at two pairs of stations (26 and 94 mi. apart) in western Canada. The r.m.s. differences in the time variations are determined quantitatively for each hour; statistically, the differences were proportional to the r.m.s. level of magnetic activity and to the separation of the stations. The two methods of correction appear to give about the same degree of accuracy. (DLC.)

76546. WHYARD, FLORENCE. The first hundred years. (North, Jan.-Feb. 1962. v.9, no.1, p.30-32, ports.)

Recounts Anglican missionary activities since 1861 in Yukon Territory: work among the Indians and during the gold rush, centennial services at Whitehorse and Fort Yukon. (CaMAI.)

76547. WIBORG, KRISTIAN FREDRIK, 1914–
Forekomst av egg og yngel av fisk i vest- og nordnorske kyst- og bankefarvann våren 1960. (Fiskets gang, Mar. 2, 1961. årg. 47, nr.9, p.190-95, tables, graphs, sketch maps.) 2 refs. Text in Norwegian. Summary in English. **Title tr.:** Occurrence of fish eggs and larvae in West and North Norway coastal waters and bank areas in the spring of 1960.

Reports on cod, haddock, saithe, Norwegian pout and herring eggs and larvae collected Mar. 21-Apr. 9 and May 23-June 12, 1960, from Bergen to Andenes, 61-70° N. In the Lofoten area, cod eggs and larvae were abundant at Skrova but scarce at Eggum west of the islands: in inner Vestfjord eggs and larvae were numerous Mar. 31-Apr. 1. The Nansen net and the Clarke-Bumpus plankton sampler proved equally effective for cod; herring larvae were caught more easily at night. Distribution and density of species are illus. Similar data (but including redfish) are reported for these coastal waters 64°- 69° 30° N., Apr. 25-June 20, 1961, in the same journal Mar. 15, 1962, p.161-64. (DA.)

76548. WICKMAN, BO. Some remarks on the problem of Fenno-Ugric vocalism. *(In:* Suomalais-ugrilainen seura. Toimituksia, 1962, v.125, Commentationes . . . , p.671-79.) Refs. in text.

Comparative phonetic analysis including Lappish, Ostyak and Vogul: vowels and semivowels, function of phones, harmony, vowel quantity and quality, evolution from proto-Finno-Ugric, etc. (DSI.)

76549. WICKS, EDWIN O. Alaska Department of Health news. (Alaska medicine, Dec. 1962. v.4, no.4, p.100-101.)

Discusses physical-mental appraisals of students, *E. coli* outbreak in Kotzebue area villages, radiation fallout in food (milk) and protection, vital statistics, small outbreak of hepatitis. (CaMAI.)

76550. WICKS, EDWIN O. Report from Division of Public Health, Alaska Department of Health and

Welfare. (Alaska medicine, Mar. 1961. v.3, no.1, p.16, table.)

Reports on budget, polio (in detail), accidents, trichinosis, tuberculosis and TB control. (DNLM.)

76551. WIDELL, TORSTEN A. Malmutlastningsanläggningen i Narvik. (Teknisk tidskrift, Aug. 26, 1960. årg. 90, nr.30, p.785-86, illus.) Text in Swedish. **Title tr.:** The ore-loading system in Narvik.

Notes ten years of trouble-free operation of this system built by Nordströms Linbanor AB, Stockholm. Its capacity is 6,000 t./hr., mooring facilities are available for 30,000 t. vessels. The push-button operation of the system is briefly described. (DLC.)

WIDEMANN, FERDINAND JOHANN, 1805-1887, *see* Kunze, E. Aus der Gründerzeit . . . 1962. No. 73212

WIDGREN, JACOB, *see* Brännström, O. 1860-talets nödår . . . 1962. No. 70362

WIEGMAN, ELDON J., *see* Serebreny, S.M., & *others* . . . jet stream complex . . . 1962. No. 75487

76552. WIK, HARALD. Norra Sveriges sågverksindustri i början av 1860-talet. (Geographica . . . 1944, nr.15, p.63-76, map, 3 tables.) Refs. Text in Swedish. **Title tr.:** The northern Swedish sawmill industry at the beginning of the 1860's.

Discusses the expansion of this industry in the mid-19th century, with economic incentives, steam power, and development of incorporated companies the main factors. It doubled in capacity; the size, nature, and location of the industrial sites are stated. Those in arctic areas (map) were all water-powered. (DLC.)

76553. WILBRAHAM, A. B. East coast industry problems outlined. (Canadian fisherman, June 1962. v.49, no.6, p.52-54.)

Discusses problems of Canada's Northwest Atlantic deep-sea fisheries, including increasing foreign competition, and development of markets. Use of large factory and freezer trawlers has increased foreign fishing capacity on the major banks, and adversely affected Canadian catches. International conservation and controls may help; but increased efficiency and modernization of the Canadian fleet are needed, also trained personnel. Similar views are expressed by: H.A. Russell, p.58-59, who states need for government assistance in competing against the government-owned or heavily subsidized foreign fleets; H.R.V. Earle in consideration of the Canadian salt codfish industry, p.57; and P.J. Antle who deals, p.59, with the future of the Newfoundland inshore fisheries. Antle suggests establishment of a twelve-mile territorial limit by Canada. (DI.)

76554. WILBUR, KARL M., *and* **E. A. McMAHAN.** Low temperature studies on the isolated heart of the beetle *Popilius disjuntus* Illiger. (Entomological Society of America. Annals, Jan. 1958. v.51, no.1, p.27-32, illus., tables.) 19 refs.

Chilled in insect Ringer to -6° to -8° C., one-third of the hearts resumed contraction after rewarming, but none after exposure to -20° C. Glycerol at specified concentrations produced a high percentage of survival at -18° to -20° C., and after long periods of storage. Recovery never occurred after even brief exposure to -70° to -76° C. (DLC.)

WILCE, ROBERT THAYER, *see* Ellis, D.V., & R.T. Wilce. Arctic & Subarctic . . . intertidal zonation. 1961. No. 71245

76555. WILCOX, WINTON W. A case of agranulocytosis. (Alaska medicine, June 1962. v.4, no.2, p.31-32, illus.)

Reports a case of a 43-year-old white female with agranulocytosis and lymphopenia. History, symptoms, therapy, and sequels are described. Cause equivocal. (DNLM.)

76556. WILDER, ROBERT J., *and others.* Survival and physiologic studies with profound hypothermia, 0° to 8° C., and a pump oxygenator in dogs. (Surgery, May 1961. v.49, no.5, p.629-35, tables.) 12 refs. *Other authors:* B.F. Rush, Y. Yaycioglu *and* M.M. Ravitch.

Reports observations on animals cooled with partial perfusion and a heat exchanger. Six of eight dogs cooled to 8-3° C. survived; those cooled below 3° C. did not survive beyond 36 hours. Studies of the blood of both groups revealed no major difference between those which survived and those which did not. (DLC.)

WILDER, ROBERT J., *see* Rush, B.F., & *others.* Effects of circulatory standstill . . . 1961. No. 75269

76557. WILIMOVSKY, NORMAN J. An application of radioactive isotopes in fish tagging. (*In:* Alaskan Science Conference 1960. Proceedings *pub.* 1961, p.93-99.)

Outlines the great need of data on Alaskan herring populations and the place of internal tagging in providing such data. A radioactive tag was found the only type feasible. A new design of tag, tag injector and retriever, are described. The equipment, both cheap and efficient, is undergoing field tests. Safety measures are discussed. (CaMAI.)

76558. WILKE, FORD. The northern fur seal. (Alaska sportsman, Dec. 1960. v.26, no.12, p.16-18, illus.) Alaska wildlife library no.8.

Describes the distribution, physical characteristics, food and breeding habits, and economic value of *Callorhinus ursinus.* The Pribilof herd has over a million and a half, and other North Pacific islands have about 200,000. An estimated 770,000 pups were born in the Pribilofs in 1957, but their mortality is high due to winter storms, inadequate food, hookworm, predators, etc.; up to 85% may be lost before the age of three years. Commercial killing of seals has been regulated since 1911 by international agreement. (DI.)

76559. WILLARD, PAUL W., *and* **S. M. HORVATH.** Blood distribution during cardiac arrest induced by hypothermia. (Journal of applied physiology, May 1961. v.16, no.3, p.538-40, tables.) 5 refs.

Study of blood volumes, and blood and erythrocyte distribution in hypothermia of 8-9°C., with and without splenectomy. Hypothermia produced blood redistribution toward the visceral areas. The two hypothermic groups showed only blood value differences in the lung, heart and kidney. (DLC.)

76560. WILLETT, FRANK. A set of gambling pegs from the North-West coast of America. (Man, Jan. 1961. v.61, no.3, p.8-10, illus.) Refs. in text.

Describes and illus. 28 carved cylinders

approx. 5 1/2 x 3/4 in., most decorated with shell inlays and showing traces of paint. Haida Indian workmanship of the late 19th century is suggested. (DSI.)

WILLIAMS, D. H., *see* Knight, W.E., *& others.* Response requirements . . . radiacs. 1961. No. 72869

WILLIAMS, G. D., *see* Hara, M., *& others.* Citric acid metab. . . . hypothermic dog. 1961. No. 72016

76561. WILLIAMS, GAYNOR PARRY. Evaporation from water, snow and ice. *(In:* Canada. Dept. of Northern Affairs and National Resources, Water Resources Branch, Proceedings of Hydrology Symposium no.2, evaporation. 1961, p.31-54, graphs.) 19 refs.

Outlines the basic theoretical differences between evaporation from these three types of surface. Some estimated energy budget analyses are made to show the order-of-magnitude of evaporation rates from these surfaces under Canadian conditions. Measurements from snow and water surfaces tend to confirm the theoretical considerations. Comparative values showing the seasonal variation of energy available from short-wave radiation are estimated for Ottawa and Aklavik. Observations of measured evaporation rate compared to vapor pressure difference are graphed for Norman Wells, Mackenzie District. (DLC.)

76562. WILLIAMS, GAYNOR PARRY. Thermal regime of lakes and rivers with reference to air bubbling systems. *(In:* National Research Council of Canada . . . Symposium on Air Bubbling, 1961. p.1-11, diagr., table.) 5 refs. *Its:* Technical memorandum no.70.

The thermal reserve at a potential installation site can be calculated accurately enough, if water temperature profiles are measured, depth determined. and if the area of influence of the air bubbling unit is known. Expected heat losses can probably be estimated if air temperature is predictable and the thickness of ice to be melted known. Heat-source and heat-loss calculations are summarized; their magnitude for various assumed conditions of operation is compared. If the thermal reserve is likely to be critical, the expected heat balance during operation of the air bubbling system should be calculated. Methods and results of a trial in Jan. 1961 are given: continuous operation of the air bubbler at an airflow rate of 1 cfm over a seven-day period removed ice 16-17.5 in. thick from a 1500 sq. ft. area. (DN-HO.)

76563. WILLIAMS, GAYNOR PARRY. Winter water temperatures and ice prevention by air bubbling. (Engineering journal, Mar. 1961. v.44, no.3, p. 79-84, table, graphs, diagrs.) 29 refs.

Summarizes avialable information on air bubbling systems for melting or preventing the formation of ice. Typical water temperature profiles under ice covers are given. Design considerations for bubbling systems are reviewed and design values used at specific locations are noted. Field and laboratory studies on techniques are surveyed. (DLC.)

WILLIAMS, GAYNOR PARRY, *see also* IUGG . . . Snow & Ice Comm. 1961. No. 72396

76564. WILLIAMS, JOHN ROPES, 1924– , *and others.* Geology of the Fairbanks (D-1) quadrangle, Alaska. Washington, D.C., 1959. Fold. map in color, with text, tables. (U.S. Geological Survey. Geologic quadrangle maps of the United States, no.GQ-124.) 19 refs. *Other authors:* T.L. Péwé *and* R.A. Paige.

Map of a 225-sq. mi. area 64°45′-65°N. 147°-147°30′W., adjoining Fairbanks on the east; at scale 1:53,360, contour interval 50 ft., it shows geologic features within two major physiographic units: the Tanana lowland in the southern part, and the Yukon-Tanana upland. The eight stratigraphic units are similar to those in Fairbanks D-2 quadrangle (No. 53976) to the west; soil analyses are tabulated; selected subsurface data are referred to map locations. Foundations should be planned for permafrost and earthquake conditions. (DGS.)

76565. WILLIAMS, JOHN ROPES, 1924– , *and* **O. J. FERRIANS,** *Jr.* Late Wisconsin and Recent history of the Matanuska Glacier, Alaska. (Arctic, June 1961. v.14, no.2, p.82-90, illus., maps.) 12 refs.

Reports studies of this glacier in the upper Matanuska valley in 1953, 1954, and 1957, as part of the U.S. Geological Survey terrain and permafrost investigations in Alaska. Advances and retreats of the glacier, indicated by moraines and marginal channels, were traced. The results are outlined amplifying the preliminary report, No. 56057. (DI.)

76566. WILLIAMS, LLEWELYN. Freeze-thaw phenomenon as a climatological parameter. Boston, Mass., 1960. Ph.D. dissertation in geography to Boston Univ. (Dissertation abstracts, University microfilms, Inc., Ann Arbor, Mich., Oct. 1960. v.21, no.4, p.846-47.)

Plots the frequency, duration, and severity of freeze-thaw cycles in Alaska, Canada, and other; discusses the resulting geographic patterns and compares them with distributions of generally accepted environmental features. Freeze-thaw is evident in most arctic and highland areas; the phenomenon is a climatic parameter but not a climatic element, because of the temperature of transformation involved, 32°F. which author extends to span 34-28°F. (DWB.)

WILLIAMS, M. E., *see* Corrigan, C., *& others.* Antibodies . . . 1962. No. 70829

76567. WILLIAMS, PETER J. Climatic factors controlling the distribution of certain frozen ground phenomena. (Geografiska annaler, 1961. v.43, no. 3-4, p.339-47, illus., map, graph, tables.) 23 refs.

Relates the development of patterned ground and solifluction features which require deep annual frost penetration, to a mean annual ground temperature close to 0°C., rather than to the intensity of winter cold. A mean annual air temperature of +3°C. is suggested as the rough upper limit of their development, +1°C. for large scale features. Examples are cited of Ottawa, Trollheimen at 62°45′N. in Norway, Godthåb in Greenland, and others. Effects of vegetation, snow cover, soil type, availability of water, etc. are noted. Variations in density of occurrence of specific fossil frozen ground phenomena result less from particular climatic conditions than from the duration of climatic conditions conducive to their formation. (DWB.)

WILLIAMS, R. J., *see*

Luyet, B.J., & R.J. Williams. Observations . . . formation of ice feet of mice. 1962. No. 73645

Luyet, B.J., & R. Williams. Pseudo freeze-drying muscle. 1962. No. 73646

76568. WILLIAMSON, R. G. H. Report from Wager Bay. (North, Sept.-Oct. 1961. v.8, no.5, p.15-17, illus.)

Describes living conditions at an Eskimo camp visited in Feb. 1961: two families living in traditional sod and snow dwellings in good health, well fed, well clothed. Seals, fish, caribou, whales, eider ducks, and foxes are found in this part of the Keewatin District and northwest Hudson Bay. (DLC.)

WILLIAMSON, R. G. H., *see also* Canada. Northern welfare '62. 1962. No. 70539

76569. WILLIS, JOHN S. Strange night ashore. (North, Jan.-Feb. 1962. v.9, no.1, p.18-24, illus.)

Describes brief stay of a doctor on a medical inspection tour, among non-English speaking Eskimos on the northwest coast of Ungava Bay. (CaMAI.)

WILLIS, JOHN S., 1917– , *see also*

Canada. Settlement handbook. 1962. No. 70545

Lotz, J.R. Dawson City Festival planning. 1962. No. 73596

76570. WILLMAN, VALLEE L., *and others.* Ventricular function after hypothermic caridac arrest. (Archives of surgery, Jan. 1961. v.82, no.1, p.120-27, illus., tables.) 22 refs. *Other authors:* H.S. Howard, T. Cooper *and* C.R. Hanlon.

General hypothermia to 15°C. produced unimpaired ventricular function in the dog, following cardiac arrest and 30 minutes of subsequent ischemia. By contrast, perfusion of the coronary arteries with cold solutions caused depressed ventricular functions even when supplemented by external cooling of the heart. (DLC.)

WILLSON, WILLIAM M., *see* Alaska. Statutes 1962 . . . 1962. No. 69625

76571. WILSE, EYVIND. Balsamgran og murrayanafuru har slått godt til pa høgfjellet. (Skogeieren, Nov. 1960. årg. 47, nr.11, p.413.) Text in Norwegian. **Title tr.:** Balsam and murrayana pine did well in mountain regions.

Reports on experimental shelter belts of native and foreign pine and spruce and of Siberian larch planted by the State Railroads 1953-1955 on high mountain passes. By 1960 the Norwegian pine (though 2-yr. plants used), the American *Abies lasiocarpa* and *Pinus contorta* had all developed well. Since 1955 shelter belt planting was suspended for lack of four-year plants; but is to be resumed, using, when ready, 27,000 pine seedlings planted in 1960 on a height about 62°N. 12°E. in East Norway; the seedlings are fenced against possible damage by Lapps and reindeer. (DA.)

76572. WILSE, EYVIND. Snøskjermplantingene på høgfjellet; litt om deres tilstand i dag. (Skogen *Oslo,* 1961. arg. 26, nr.7-8, p.101-102.) Text in Norwegian. **Title tr.:** Snow shelter plantings on high mountains; their condition today.

Reports on the Norwegian State Railroads experiment of 1953-1955 planting snow shelter belts on mountain passes to replace artificial shelters of high maintenance cost. Norwegian mountain pine was used, also pine and spruce of American and Scottish provenance, and Siberian larch. The Norwegian pine has done well; of the American species, *Abies lasiocarpa* and *Pinus contorta* have survived. No shelter belts have been planted since 1955 due to scarcity of four-year plants; 27,000 Norwegian mountain pine seedlings under cultivation since 1960, are to be used for shelter belts. (DA.)

WILSON, A. G., *see* Kent, A.D., & A.G. Wilson. . . . heating & ventilation trials. 1961. No. 72731

76573. WILSON, ANN MACLEAN. W. I.'s on the move. (North, Sept.-Oct. 1961. v.8, no.5, p.37-39.)

Reports extension of the Women's Institute, a world-wide rural educational organization, to Mackenzie District. Branches organized since 1960 at four settlements include Indian and Eskimo members. (DLC.)

76574. WILSON, B. G., *and others.* Small cosmic-ray increases measured at ground level, September 3, 1960, July 18 and July 20, 1961. (Canadian journal of physics, May 1962. v.40, no.5, p.540-49, tables, graphs.) 9 refs. *Other authors:* D.C. Rose *and* M.D. Wilson.

Examines three small increases observed at five Canadian stations including Resolute and Churchill. Pronounced impact zone effects appeared during the July 18 event (the largest); the Sept. 3 event showed no such effects. The July 20 increase does not seem to conform with the usual pattern. (DLC.)

76575. WILSON, C. V., *and* **W. L. GODSON.** The stratospheric temperature field at high latitudes, 100-mb data, 1949-1959 winters. Montreal, Feb. 1962. vi, 191 p., maps, graphs, tables. (McGill University, Arctic Meteorology Research Group, Publications in meteorology no.46. *Also issued as:* U.S. Air Force. Cambridge Research Laboratories, contract no. AF 19 (604)-8431, scientific report no.2.) 170 refs.

Summarizes the large-scale events of each winter in turn, and all generally based on a compiled series of circumpolar 100-mb temperature maps using ten-day mean data. Two major patterns are suggested, both highly persistent: an asymmetric pattern with a warm ridge over Eastern Siberia-Alaska, and an eliptical cold-core vortex over Eurasia; an eccentric bipolar distribution, thr trough line extending from central Canada to central Siberia. The striking asymmetry of both patterns in the stable stratosphere appears to require an external forcing agent, possibly related to the zonal-meridional fluctuations of the troposphere. (DLC.)

WILSON, C. V., *see also* Boville, B.W., & *others.* Baroclinic waves . . . 1961. No. 70344

WILSON, CHARLES R., *see* Alaskan Science Conference 1961. 1962. No. 69644

76576. WILSON, COLIN BLAIR, 1928–1959. The Upper Middle Hecla Hoek rocks of Ny Friesland, Spitsbergen. (Geological magazine, Mar.-Apr. 1961. v.98, no.2, p.90-116, plates, diagrs., table.) 11 refs.

Continues upward the detailed description (begun in No. 56071) of the lithology and thicknesses of these Vestspitsbergen rock formations,

investigated during Cambridge University expeditions in the 1950's. The succession described is the late Precambrian part of the Hecla Hoek geosyncline. It lies below the tillite horizons and is characterized essentially by limestones and dolomites of the Grusdievbreen and Akademikerbreen series. A posthumous publication. (DGS.)

WILSON, DEREK WILLIAM RAYMOND, *see* Raasch, G.O., & *others*. Silurian *Aulacopleura* . . . Yukon. 1961. No. 75008

76577. WILSON, H. P. A comparison of theoretical actual surface wind data. Toronto, Aug. 1, 1961. 16 p. tables. (Canada. Meteorological Branch, Circular CIR-3518, TEC-364.) 4 refs.

Compares results of previous investigations of theoretical vs. actual surface. Date from nine northern rawinsonde stations: Churchill, Fort Smith, Ship Papa, Point Barrow, Mould Bay, Shemya, Baker Lake, Isachsen, and Resolute are considered in relation to theoretical studies of wind behavior; agreement is generally good. (DWB.)

76578. WILSON, H. P. The major factors of arctic climate. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.915-30, maps, graph, tables.) 2 refs.

Explains the general influence of the chief physical, geographical, and meteorological factors in the climate of the Arctic Basin, including various forms of radiation and of precipitation; the lag of temperature cycles; distribution of land, sea and ice; mountain ranges, prevailing winds, and storm tracks. Maps, etc. summarize the discussion. (DLC.)

76579. WILSON, HARRY DAVID BRUCE, *and* **W. C. BRISBIN.** Regional structure of the Thompson-Moak Lake nickel belt. (Canadian mining and metallurgical bulletin, Nov. 1961. v.54, no.595, p.815-22, illus., maps, graphs.) 19 refs.

Describes geologic setting of this Northern Manitoba nickel belt, on the boundary between the the Superior and Churchill blocks of the Canadian Shield, and lying along the root of a Precambrian mountain range of the island-arc or alpine type. Similar structures and highly nickeliferous peridotites occur in present-day island arcs. Length of the favorable structure (210 mi.) and the size of the known deposits (60-mi.-long) indicate a major source of nickel. Regional gravity anomalies are explained by crustal warping of agranitic and a basaltic layer. The sulfide mineralogy is similar to that of the Sudbury ores, but the structure of the ore in gneiss is different, and the Manitoba ores are almost entirely nickel. Possible igneous and metamorphic origins are considered as an aid to further research on the problem of genesis. Two types of deposits occur: extensive low grade, finely disseminated pentlandite and pyrrhotite in serpentinized peridotite: Mystery Lake - Moak Lake; and sulfide bands and stringers in gneiss near peridotite intrusions: Thompson, Hambone Lake. (DGS.)

76580. WILSON, HARRY DAVID BRUCE, *and* **W. C. BRISBIN.** Tectonics of the Canadian Shield in Northern Manitoba. (*In:* Royal Society of Canada. The tectonics . . . 1962, p.60-75, maps, diagrs., tables.) 8 refs.

Compares the nature and structure of the rocks in the Superior and Churchill blocks or provinces of the Shield, and combines geological and geophysical data on the boundary between these two blocks, the major tectonic feature in Northern Manitoba. This boundary consists of a northeast-to-southwest gneissic zone, within which most structural trends are east-west, like those of the Superior block, though these trends are cut off abruptly on the northwest by a fault zone coinciding with the gravity low. The Nelson River gravity high coincides generally with the gneissic zone. Average crustal thickness was determined to be 34 km. in the Superior block, 36 km. in the Churchill. Potassium-argon methods indicate some dates in the gneissic zone are of Churchill (Hudsonian) age. Folding in the Churchill block suggests a structural pattern like that in the Appalachian and Cordilleran regions, with overturning and thrusting towards the stable continent. (DGS.)

76581. WILSON, JOHN TUZO, 1908– . The effect of new orogenetic theories upon ideas of the tectonics of the Canadian Shield. (*In:* Royal Society of Canada. The tectonics . . . 1962, p.174-80.) 20 refs.

Considers the new observations of the physical properties of rocks, of crustal depths, and submarine geology. Development of the continents and the role of the unstable zones in that process can probably be explained by the better time scale recently set up for the Canadian Shield. Other principal problems to which the Shield may offer partial solutions include: the apparent conversion of sedimentary into metamorphic rocks; the subdivision of shields into distinct areas; the apparent removal of old sediments from the ocean floor; deficiencies in the contraction theory toward explaining the original shape and properties of island arcs, e.g., no former island arcs have been satisfactorily identified in the Canadian Shield; the large horizontal movements known or suspected on several dozen faults, e.g., the Great Slave; new arguments in support of continental drift and convection currents. The possible former union of Canada with Greenland and Europe merits further study. (DGS.)

WILSON, JOHN TUZO, 1908– , *see also* International Symposium on Arctic Geology, 1960 . . . 1961. No. 72392

WILSON, MARGARET D., *see* Wilson, B.G., & *others*. Small cosmic-ray increases . . . 1962. No. 76574

76582. WILSON, MILDRED STRATTON, 1909– . North American harpacticold copepods, 6; new records and species of *Bryocamptus,* subgenus *Arcticocamptus,* from Alaska. (American Microscopical Society. Transactions, July 1958. v.77, no.3, p.320-28, illus. tables.) 13 refs.

Describes: Bryocamptus(A.) arcticus (Lilljeborg) and *B. (A.) tikchikensis* n. sp., the first one new to North America. Occurrence, sexual differences, differential diagnosis, and related forms are also considered. (DLC.)

WILSON, WILLIAM H., *see* Merbs, C.F., & W.H. Wilson. . . . vertebral column, Sadlermiut . . . 1962. No. 73939

WILSON, WILLIAM SOLOMON, 1908– , *see* Alaskan Science Conference 1960. 1961. No. 69643

76583. **WILSSON, LARS.** Bävern. (Sveriges natur, årsbok 1961: årg. 52, nr.5 A, p.110-21, illus.) Text in Swedish. **Title tr.:** The beaver.

Notes a large beaver population formerly widely distributed in Swedish forests but completely wiped out by the late 19th century. In 1922 a pair of Norwegian beaver was planted in a Jämtland lake, subsequently others in various localities as far north as Norrbotten, and this fur bearer is now in the process of re-occupying its former habitats in Norrland. Transplanting the beaver cubs which survived the regulation of Fax River is described. (DA.)

76584. **WILT, J. C.,** *and others.* Sendai virus antibodies in the Arctic. (Canadian Medical Association. Journal, Feb. 11, 1961. v.84, no.6, p.319-21, illus., tables.) 19 refs. *Other authors:* J.A. Hildes, W.L. Parker *and* A. Delaat.

Reports a study of healthy inhabitants of five Eskomo and one Indian community. Antibodies to Sendai virus were found in each settlement. No relationship was found between the presence of these antibodies and mumps antibodies. The significance of the Sendai antibodies in terms of disease among the studied populations is not known. (DNLM.)

76585. **WINSNES, THORE S.** Activities of Norsk Polar institutt (Norwegian Polar Institute) in Svalbard. (*In:* International Symposium on Arctic Geology. Proceedings 1961. v.2, p.1167-84, illus., maps.) 231 refs.

Surveys the work of the Norsk Polarinstitutt and its predecessors which have carried out hydrographic, topographic, and geologic mapping and research in Svalbard since 1906. Establishment of Norwegian sovereignty over Svalbard in 1925 was followed in 1928 by the founding of Norges Svalbard- og Ishavs-undersøkelser (Norwegian exploration in Svalbard and the Polar Seas) with a staff of 12, under A. Hoel. After World War II, the work was revived under A.K. Orvin; H.U. Sverdrup was director 1948-1957; A.K. Orvin 1957-1960, then T. Gjelsvik. Facilities and staff have expanded despite restriction to certain fields. Expeditionary organization and procedure are outlined; results of mapping, and of geologic and glaciological studies are noted, with index maps of sheets completed, and a list of maps, charts, and papers published through 1959. (DGS.)

WINSOR, TRAVIS, *see* Hyman, C., *& others.* Distensibility of digital blood vessels . . . 1961. No. 72286

WINSPEAR, FRANCIS G., *see* National Northern Development Conference. 1961. No, 74224

76586. **WINTER, LAWRENCE H.** Increase in tuberculosis is noted. (Alaska's health and welfare, Oct. 1961. v.18, p.1-2, illus.)

Reports conditions in the Kotzebue area, especially in the village of Noorwick, with 50% of all X-rays indicating the presence of TB, and most of the younger children representing new infections. Over-work, and overcrowded homes, preceding mumps and flu epidemics, as well as undernourishment are considered responsible for this increase. (DLC.)

76587. **WITNEY. C. H** Major increase assured in Manitoba. (Western miner and oil review, Apr. 1961. v.34, no.4, p.62-64, map.)

Reviews the province's mineral industry during 1960. Start of smelting operations at the International Nickel Thompson development, areas undergoing exploration and geological mapping, geophysical surveys carried out in the Thompson nickel belt and the Lynn Lake area, etc. are noted. Author is Provincial Minister of Mines and Natural Resources. (DI.)

76588. **WITTMANN, WALTER ITTNER.** Ice conditions in Baffin Bay and the Labrador Sea relevant to proposed cable tracks and cable operation. Washington, D.C., June 23, 1961. 11 l. 7 maps, graph. (U.S. Hydrographic Office, Informal oceanographic manuscripts no.16-61.) Refs.

Describes ice conditions relevant to the laying, maintenance, and repair of the proposed Newfoundland-Greenland cable from Deer Lake to Dye I - Itivdleq near Søndre Strømfjord, and to Thule. Ice conditions in waters along the track which may break or crush cables are also dealt with. Sea-ice coverage in the area is the main factor in planning ship operations for the proposed cable; unescorted vessels can operate safely and efficiently in pack ice of less than one-tenth coverage. With icebreaker support, maintenance and repair operations may be conducted with concentrations of ice up to five-tenths. Glacial ice, as bergs, bergy bits and growlers, is also a hazard to shipping. Sea ice is not a serious problem in causing cable breaks on this track; bergs and bergy bits are most numerous near Disko Bugt and Umanak Fjord; minimum frequency of icebergs appears to be in the area between Ivigtut and 68°30'N. Height and draft measurements of bergs made by the USS *Seadragon* in 1960 are summarized; height-drift relationships are graphed from reconnaissance flight data. Icebergs tend to rock, calve fragments, or capsize; thus their height-draft ratios may change frequently. Bathymetric data should be used in coordination with ice information. (DN-HO.)

76589. **WITTMANN. WALTER ITTNER,** *and others.* Proposed arctic drift ship station study. Washington, D.C., Sept. 14, 1961. iv, 22 l. maps incl col. fold. (U.S. Hydrographic Office, Informal oceanographic manuscripts no.19-61.) Refs. *Other authors:* C.W. Senior *and* L.F. Stiles.

Discusses the U.S. Navy Plan to embed a ship in the Chukchi Sea ice pack, and recommends approx. 77°N. 170°W. as the preferred area; empirical evidence as well as theoretical considerations are advanced in support. September is normally the best month for reaching the preferred area. A long-range aerial ice reconnaissance and forecasting program initiated five months prior to the operation is also recommended. (DN-HO.)

76590. **WITTMANN, WALTER ITTNER.** The sea forecasting program. (Navigation, winter 1961-1962. v.8, no.4, p.267-72, table, diagr., fold. map inside front cover.) 3 refs. in text.

Reviews the history of the U.S. Hydrographic Office forecasting program. Services rendered during major arctic operations of 1946-1960 are shown in tabular form. The differing forecast requirements for surface and submarine navigation are outlined. The status of sea ice research is briefly

discussed and needs in future data gathering and reduction are summarized. Nuclear submarines, drifting ice stations (or vessels), drifting automatic weather stations, aircraft, and earth satellites are expected to contribute most to the data-gathering program; better instrumentation is required. Earth satellite photography of ice conditions is illus: (cf. folded map) by such in the St. Lawrence River made from TIROS II at 450 mi. altitude and reduced to World Aeronautical Chart scale. The NIMBUS series to be launched into polar orbits is expected to yield data on both arctic and antarctic ice. (DLC.)

WITTUR, G. E., *see*

Elver, R.B., & G.E. Wittur. Canadian iron ore industry . . . 1962. No. 71258

Janes, T.H., & G.E. Wittur. Primary iron & steel industry Canada. 1962. No. 72519

WLODEK, G. D., *see* Lawson, R.N., & *others.* Thermographic assessment of burns and frostbite. 1961. No. 73358

76591. WOLAK, FRANCIS A. Army field nuclear power plant. (Military engineer, Nov.-Dec. 1961. v.53, no.356, p.434-35, illus.) Ref.

Describes construction of the SM 1-A plant at Fort Greely, Alaska, which started operating in spring 1961. Except for the nuclear reactor, the 4,000 kw. plant is similar to a conventional steam plant in cycle. An inner shell of concrete and an outer shell of steel and concrete called a vapor container enclose the reacter as a safety measure. (DLC.)

WOLAK, FRANCIS A.. *see also* Alaskan Science Conference 1960. 1961. No. 69643

WOLD, RICHARD J., *see* Ostenso, N.A., & *others.* Reconn. magnetic maps Arctic basin. 1961. No. 74564

WOLFE, JACK A., *see*

Grantz, A., & J.A. Wolfe. Age of Arkose Ridge formation . . . 1961. No. 71819

MacNeil, F.S. & *others.* Correlation Tertiary . . . 1961. No. 73722

WOLFE, JOHN L., *see* Reed, R.J., & *others.* Spectral analysis . . . sudden warmings. 1962. No. 75090

WOLFF, ERNEST N., *see* Thomas, B.I., & *others.* Placer mining Alaska, methods costs. 1959. No. 76114

WOLFF, H. S., *see* Fox, R.H., & *others.* . . . radio pill to measure deep body temp. 1962. No. 71473

WOLFSON, S. K., *Jr.*, *see* Speicher, C.E., & *others.* Cold injury . . . cardiac. 1962. No. 75863

76592. WONDERS, WILLIAM C., 1924– . Economic change in the Mackenzie valley area. (Canadian geographical journal, Oct. 1961. v.63, no.4, p.138-47, illus., maps.)

Discusses post-World War II changes in this area including the Mackenzie District and northern Yukon Territory. The fur trade declined from $2,000,000 annual value in 1950-1951 to $757,000 in 1954; mining became the main industry. Gold mining expanded in the Yellowknife area; large scale explorations were made for metallic minerals, oil and gas. Lumbering expanded; large scale commercial fishing developed, especially on Great Slave Lake; and a tourist industry began. Air and water transportation improved, and a road (Mackenzie Highway) was built to Hay River on Great Slave Lake. (DGS.)

76593. WOOD, HERBERT FAIRLIE. They broke the arctic silence. (Canadian geographical journal, Jan. 1962. v.64, no.1, p.20-27, illus., map.)

Reviews the establishment and operation, since 1923, of radio communications in the Northwest and Yukon Territories by the Royal Canadian Corps of Signals. The communications system, developed to 24 stations and carried some three million messages annually; it was transferred in 1957-1960 from the Army to the Dept. of Transport, its chief user. Difficulties in establishing remote stations, expansion of the system due to increasing mining and flying activities, effects of World War II and the post-war developments are recounted. (DGS.)

WOOD, J. W., *see* Murdaugh, H.V. Function of the inferior vena cava valve . . . 1962. No. 74167

WOOD, R. H., *see* Gold, L.W., & *others.* Bearing capacity . . . 1961. No. 71729

WOODBURY, RICHARD B., 1917– , *see*

Abstracts of New World archaeology. 1960-61, *in progress.* No. 69475

Biennial rev. anthrop. 1961. 1962. No. 70207

76594. WOODWARD, JACK R., 1913– . The Churchill-Pacific Railway. (North, Nov.-Dec. 1962. v.9, no.6, p.25-27, map.)

Suggests a future east-west railroad near 60°N., from Churchill on Hudson Bay to Whitehorse in Yukon Territory, connecting with the White Pass and Yukon Railway to Skagway, Alaska. It would link several south-north lines (noted) and provide the transportation base for mining and other development areas to the north. The 1600-mi. railway would cost approx. $750 million. (CaMAI.)

WOOLLARD, GEORGE PRIOR, 1908– , *see* Ostenso, N.A., & *others.* Reconn. magnetic maps Arctic basin. 1961. No. 74564

76595. WOOLSON, JOHN R., *and others.* Seismic and gravity surveys of Naval Petroleum Reserve No.4 and adjoining areas, Alaska. Washington, D.C., U.S. Govt. Print. Office, 1962. p.1-25, illus., maps and sections incl. 19 fold., tables. (U.S. Geological Survey. Professional paper 304-A. Exploration of Naval Petroleum Reserve No.4 and adjacent areas, Northern Alaska, 1944-53. Part 4, Geophysics.) 5 refs.

Outlines the operations, problems encountered such as permafrost, experimental work, techniques and results of these two types of survey, carried out 1945-1953 by United Geophysical Co. Inc. for the U.S. Navy. An aeromagnetic survey was made 1945-1946 by the U.S. Geological Survey and the Navy, and further geophysical work was done by the Company. A reconnaissance gravity survey of the area north of 68°30′N., in the foothills of the Brooks Range, was complete in 1950. Seismic surveys, generally restricted to the arctic coastal plain, were made each year to map areas of gravity or magnetic anomalies, of known oil seeps, etc. The seismic work indicated several reflecting horizons by which structures in Cretaceous and older rocks could be contoured. An east-west belt

of folded rocks 250 by 30-50 mi. was outlined in the central part of the Reserve; the belt extends into the foothills of the Brooks Range. Within this belt, a series of anticlinal folds in Cretaceous rocks was discovered and studied to establish more than 20 drilling locations. Correlation between gravity and magnetic anomalies was found only near Barrow and in the western part of the Reserve. Results are shown on maps of 1 in.:16 mi. and other scales. (DGS.)

WORLD HEALTH ORGANIZATION, *see also Canadian Med. Services Journal.* Health, cold climates. 1962. No. 70596

76596. *WORLD OIL.* Canada's northernmost wildcat is projected to 14,000 feet. (World oil, Jan. 1962. v.154, no.1, p.100, +, map.)

Reports the Dome companies' Winter Harbour no.1 well on southern Melville Island, drilling below 9,600 ft. It is to be deepened to 14,000 ft., because the Devonian section is much thicker than was anticipated, and drilling operations are ahead of schedule due to good weather. The 14 participating companies are listed; drilling in the Arctic Islands awaits outcome of Winter Harbour no.1. (DGS.)

76597. *WORLD PETROLEUM.* Tracked vehicles move men, materials over all types of rugged terrain. (World petroleum, May 1962. v.33, no.5, p.68, illus.)

Describes two of the eight models of Nodwell-designed, off-highway vehicles, the RN 110, first Nodwell carrier to work in the North, and the newer RN 200, with independent front and rear track power. Nodwell vehicles have been in use in Alaska, the Antarctic and desert areas by U.S. and Canadian military groups. The Robin-Nodwell Mfg. Ltd. plant is in Calgary, Alberta. (DGS.)

76598. *WORLD PETROLEUM REPORT.* Alaska. (World petroleum report, Feb. 15, 1960. v.6, p.169.)

Surveys developments in the Alaskan oil industry during 1959: eight drilling rigs at work during the year, seven wells abandoned, six wells completed as producers. Field development continued in the Swanson River, Soldotna Creek, Katella, and other areas; the Richfield-Socal discovery at Swanson River produced about 650 b/d. Most of Alaska is subject to federal oil regulation; a land act passed by the state legislature in 1959 included more detailed oil- and gas-leasing regulations on state lands, than hitherto in force. A useful summary of the previous year's developments in Alaska appears regularly in the Feb. issue of this journal. (DGS.)

76599. WORMINGTON, H. M. A survey of early American prehistory. (American scientist, Mar. 1962. v.50, no.1, p.230-42, illus.) 45 refs.

Discusses the Asiatic origin, the time (fifteen - twenty thousand yrs. ago) and route (Bering Strait) of the migrations, the material culture, etc. of the ancestral American Indians. Percussion and pressure flaking techniques, shapes and types of artifacts, and indigenous developments of early Siberian and American (including arctic) sites are analyzed and compared. Environmental factors are responsible for the development of typologically different New World traditions. (DGS.)

WOWERN, ERIC, *see* King-Farlow, R., & E. Wowern. Grønlands poststempler . . . 1959. No. 72793

WRIGHT, D. T., *see* Gold, L.W., & *others.* Bearing capacity . . . 1961. No. 71729

WRIGHT, GRANT MacLACHLAN, 1917– , *see* Lowdon, J.A., & *others.* Age determinations . . . 1: isotopic ages. 1960. No. 73610

76600. WRIGHT, J. B. Solid-solution relationships in some titaniferous iron oxide ores of basic igneous rocks. (Mineralogical magazine, June 1961. v.32, no.253, p.778-89, diagrs., tables.) 11 refs.

Presents calculations, based on modal and chemical analyses of ores from the Skaergaard intrusion of East Greenland and Saguenay County, Quebec. The calculations show that Fe:Ti ratios are constant for granular aggregates of ilmenite and titaniferous magnetite formed at any one stage in the cooling history of the containing rock body. From this and other evidence, it is concluded that the aggregates are the result of exsolution from original high-temperature cubic solid solutions. For the Skaergaard rocks, the problem of separately crystallized ilmenite, distinct from the granular aggregates, is also discussed.–From author's abstract. (DGS.)

WRIGHT, J. W., *see* Olesen, J.K., & J.W. Wright. . . . Low-height ionosonde echoes . . . 1961. No. 74514

WRIGHT, THOMAS, *see*

Goodhart, J., & *others.* Goose-ringing in Vestspitsbergen. 1954. No. 71755

Goodhart, J., & T. Wright. NE. Greenland exped. 1957. No. 71756

WU, H. M., *see* Race, G.J., & H.M. Wu. Adrenal cortex zonation whale. 1961. No. 75014

WUNDERLICH, R. EUGENE, *see* Rieger, S., & R.E. Wunderlich. Soil survey . . . 1960. No. 75130

WYNESS, ROBERT, *see* Apollonio, S., & *others.* Devon I. Exped. 1961. No. 69832

WYSS, O., *see* Meyer, G.H., & *others.* Viable microorganisms in 50 yr. old yeast. 1962. No. 73960

76601. YAGODA, HERMAN. Radiation studies from nuclear emulsions and metallic components recovered from polar satellite orbits. Bedford, Mass., Mar. 1961. vii, 25 p., illus., map, diagr., graphs, tables. (U.S. Air Force. Cambridge Research Laboratories. GRD Research notes no.54.) 15 refs. AFCRL 285.

Two blocks of Ilford G5 emulsion 10 x 15 cm. in size and 772 ± 2 gm. in weight have been recovered from polar satellite orbits. The emulsions launched on Discoverer XVII, exposed to the intense solar radiation associated with the 3 + flare of 12 Nov. 1960, appeared to have lost their electron sensitivity; by severe underdevelopment, it was possible to discern the tracks of multiple-charged particles stopped by ionization in the emulsion. Data from the Discoverer XVIII emulsions, exposed during a period of relatively normal solar activity, indicate that the flux of the heaviest galactic primary particles remained essentially unaltered, even during the giant solar flare. Comparison of Discoverer XVIII and balloon data indicates that the flux of slow heavy primary particles does not increase while the satellite is orbiting

over the polar regions during quiescent solar conditions. Preliminary reports indicate greatly increased yields of radionucleides in the metallic components of the satellite capsule exposed to the flare as compared with iron and stone meteorites. The yield of tritium is particularly high, and the ratio of H^3/Ar^{37} observed suggests that primary tritium nuclei may be accelerated during the 3+ solar flare. (DWB.)

YALAV, E. H., *see* Speicher, C.E., & *others*. Cold injury . . . cardiac. 1962. No. 75863

YAMAMOTO, M., *see*

Maeda, H., & *others*. Solar-terrestrial relationships . . . 1962. No. 73736

Maeda, H., & *others*. Solar-terrestrial relationships IGY, IGC. 1962. No. 73737

76602. YAND, T. L., *and* **K. LISSÁK.** Influence of the environmental temperature on physical performance, O_2-consumption, blood lactic acid level and rectal temperature. (Acta physiologica, 1960. t.17, fasc. 1, p.63-68, illus., tables.) 6 refs.

Study of swimming rats in water of various temperatures. Swimming capacity sharply decreased at 22-20° C., also at 39-41°. Core temperatures varied practically with those of the bath; O_2-consumption increased 24% at 18° and was accompanied by a rise in blood lactic acid. (DNLM.)

76603. YANG, YONG T., *and* **C. A. EVANS.** Hypothermia in mice due to influenza virus infection (Society for Experimental Biology and Medicine. Proceedings, Dec. 1961. v.108, no.3, p.776-80, illus.) 11 refs.

Mice inoculated with a strain of influenza A virus responded with hypothermia rather than with fever. Large inoculations with two sublines of the virus produced marked hypothermia and fatal termination. Hypothermia was found to be related to the degree of pulmonary lesions rather than to the extent of virus increase. (DLC.)

76604. YATSUSHIRO, TOSHIO. The changing Eskimo, a study of wage employment and its consequences among the Eskimos of Frobisher Bay, Baffin Island. (Beaver, summer 1962. outfit 293, p.19-26, illus.)

Discusses results of surveys among Eskimo workers in 1958 and 1959. Living standards have improved, but some psychological strain and sociocultural disorganization have resulted from the requirements and restrictions imposed by western civilization upon these former nomadic hunters. Adjustment to western time schedules, and lack of opportunity to hunt native foods are among the greatest difficulties. Measures of alleviation especially establishment of a self-governing body for the Eskimo community, are suggested. (DI.)

YAYCIOGLU, Y., *see* Wilder, R.J., & *others*. Survival . . . 1961. No. 76556

76605. YEARSLEY, GORDON. The artists of Povungnituk. (North, Jan.-Feb. 1962. v.9, no.1, p.28-29, illus.)

Describes a print-making project, since May 1961, by the Sculptors' Co-operative at this settlement on the Ungava Peninsula. Words in Eskimo syllabics are incorporated into the Povungnituk graphics which depict episodes from the folk lore, as part of a policy to communicate within, as well as beyond the Eskimo community. (CaMAI.)

YEH, T. Y., *see* Ellison, R.G., & *others*. Metabolic alterations . . . 1961. No. 71248

YEHLE, LYNN ALOIS, 1929– , *see* Nichols, D.R., & L.A. Yehle. Mud volcanoes . . . Alaska. 1961. No. 74316

76606. YEN, YIN-CHAO, *and* **J. A. BENDER.** Cooling of an undersnow camp. Hanover, N.H., Feb. 1962. iv, 17 p. tables, graphs, diagrs. (U.S. Army. Corps of Engineers. Cold Regions Research and Engineering Laboratory. Research report 95.) Briefly reported also in *Military engineer* May-June 1962, p.179-80.

Describes tests at Camp Century, Greenland, on the use of air wells for cooling an undersnow structure in summer. By means of a fan, the warm air is drawn from the trench through the trench walls and floor and through the (cold) snow to the walls of the air well, hence back into the trench. The air well consists of a hole drilled into the trench foundation and fitted partway with a straight-pipe casing. The arrangement was found practical and effective; recommendations are given on construction to insure maximum efficiency. (DLC.)

76607. YEN, YIN-CHAO. Effective thermal conductivity of ventilated snow. (Journal of geophysical research, Mar. 1962. v.67, no.3, p.1091-98, tables, graphs, diagrs.) 7 refs.

Reports measurements of thermal conductivities of unconsolidated snow parallel but opposite to the energy flow. The results are interpreted as being the effective thermal conductivity of snow. For snow densities of 0.376-0.472 gm./cu. cm. and corresponding snow particle sizes of 0.07-0.22 cm. nominal diameter, the results can be represented well by a least-squares equation in which the effective thermal conductivity of snow in cal./cm. sec. ° C. is equal to 0.0014 plus 0.58 times G, the mass flow rate of dry air. G ranges approx. from 10×10^{-4} to 40×10^{-4} gm./cm. sec. based on the total cross-sectional area of the flask containing the snow sample. When there is no flow the conductivity is reduced to a constant value of 0.0014 cal./cm. sec.° C. which is equivalent to the thermal conductivity of snow with stagnant air included in the void space. The value of 0.0014 is in good agreement with the data reported by Kondrat'eva in 1945 (No. 135).—From CRREL. (DLC.)

YODER, HATTEN SCHUYLER, *Jr.*, *see* Wager, L.R. Note . . . Skaergaard intrusion. 1961. No. 76461

76608. YONCE, LLOYD R. Effect of temperature on reactive hyperemia in skeletal muscle. (American journal of physiology, June 1962. v.202, no.6, p.1055-58, illus., table.) 5 refs.

Reports study of circulatory reactivity to vascular occlusion in isolated dog muscle under normo- and hypothermic conditions. Reactive hyperemia always decreased with hypothermia and was statistically independent from effects of control blood flow as temperature dropped. Recovery required about the same time for the three periods of occlusion at each temperature level. (DLC.)

76609. YONCE, LLOYD R., *and others*. Vascular resistance and venous blood K^+ during hypothermia in skeletal muscle. (American journal of physiology, Feb. 1962. v.202, no.2, p.277-80, illus., tables.) 8 refs. *Other authors:* J.R. Dykers, Jr., *and* J.W. McGee.

Study of the isolated gracilis muscle of the dog at a temperature range of 37.5° to 25° C. showed first a decreased, then an increased vascular resistance when cooling was rapid, but only increased resistance when cooling was slow. No change in potassium concentration of venous blood was noted but it decreased continuously in the plasma. (DLC.)

76610. YONG, RAYMOND. Operation Hazen: a preliminary study of Lake Hazen soils, Ellesmere Island. Ottawa, Jan. 1961. 10 p. illus., map, graphs, tables. Mimeographed. (Canada. Defence Research Board. Operation Hazen no. 16.)

Presents results of the April-Oct. 1960 phase of a study on strength of frozen soils: ten samples from the Lake Hazen area were subjected to standard laboratory tests and compared with soil behavior at normal temperatures, say, 65° F. Critical evaluation awaits completion of tests on other samples. (DLC.)

76611. YOSHIDA, AKIRA, *and* **K. ASHIDA.** Effect of moderate low temperature on the accumulation of liver fat of rats fed an amino-acid unbalanced diet. (Nature, May 5, 1962. v.194, no.4827, p.484-85, table.) 10 refs.

Environmental temperature of 9° prevented development of fatty liver as was the case in controls kept at room temperature. This was highly effective on a threonine-deficient diet, less so with a diet deficient in choline. (DLC.)

YOUMANS, W. B., *see* Afonso, S., *& others.* Temperature variations . . . 1962. No. 69500

76612. YOUNG, DENIS A. Another stage reached in vast Lapland ore scheme. (Canadian mining journal, Mar. 1961. v.82, no.3, p.88.)

Notes expansion since 1951 of iron ore mining operations in northern Sweden by the government-owned company, LKAB: change of from open-pit to underground; extension of storage, rail, and shipping facilities; construction of dressing plant and administration building; automatic traffic-direction system for ore trains installed at the 1,000 ft. depth. Annual output, 13 million tons in 1959, is to reach 20 million tons by completion of the project in 1965. (DGS.)

YOUNG, W. GLENN, *Jr., see* Lesage, A.M., *& others.* Study . . . hypothermic dog. 1960. *E.* No. 73436

76613. YOUNGNER, VICTOR B. Low temperature induced male sterility in male-fertile *Pennisetum clandestinum.* (Science, Feb. 24, 1961. v.133, no.3452, p.577-78, table.) 7 refs.

At 10° C. controlled temperature, stamens of a male-fertile strain of this grass were not exerted though the stigmas emerged. Pollen abortion was high at 10° C. and increased with lengthening photoperiod. These responses to cold explain sterility during cold seasons. (DLC.)

76614. YUEN, HEENY S. H. Bow wave riding of dolphins. (Science, Oct. 6, 1961. v.134, no.3484, p.1011-12. illus.) 9 refs.

Reports observations through underwater ports: the postures (illus.) assumed indicate that dolphins expose their bodies rather than the ventral side of their flukes to the propellant force of the bow wave. (DLC.)

YUKON TERRITORY. COUNCIL, *see* Canada. Govt. activities N. 1961. 1962. No. 70516

76615. ZABELINA, Ė. K. Migratsiia prorvy r. Okhoty i vliianie ee na dinamiku berega. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy 1961. t.12, p.67-72, illus.) 2 refs. Text in Russian. **Title tr.:** Migration of the Okhota River mouth and its effect on coastal dynamics.

Discusses the effects of sand bars on river mouths of the Okhotsk district, in particular upon the mouth of the Okhota and its displacements; effects of storms; changes since 1951 and their causes. (DLC.)

76616. ZABOLOTSKIĬ, A. A. Bentos r. Podcherem i ego rol' v pitanii molodi semgi. (Leningrad. Vsesoiuznyĭ nauchno-issledovatel'skiĭ institut ozernogo i rechnogo rybnogo khoziaĭstva. Izvestiia 1959. t.48, p.44-64, tables.) 9 refs. Text in Russian. **Title tr.:** Benthos of the Podcher'ye River and its role in the food of young salmon.

Describes the geographical and physical aspects of this tributary of the middle Pechora, its aquatic plants, plankton and bottom fauna. The latter is treated according to species, their frequency and substrates, and in the framework of biocenoses. The place of these forms in the diet of young salmon and of other species in this area is then analyzed and discussed. (DLC.)

76617. ZABOROVSKIĬ, E. P. Kogda nachinat' sbor shishek sosny i eli v taezhnoĭ zone? (Lesnoe khoziaĭstvo, Sept. 1961. god 14, no.9, p.49-53, tables.) Text in Russian. **Title tr.:** When should the harvesting of pine and spruce cones begin in the taiga zone?

Reports results of Leningrad Forestry Research Institute (LenNIILKh) investigations in 1956-1960. Seed quality (% germination) is compared in cones collected at various dates from Aug. 15 to April 15. October is found to be the best time to begin collecting in Karelia, Komi ASSR and southern Arkhangel'sk Province, in its northern part: November. (DLC.)

76618. ZADKOVA, I. I., *and others.* Osadochnye formatsii verkhnego mela i paleogena v basseĭne r. Vakh. (Geologiia i geofizika, 1961, no.5, p.39-51, plate, tables, graphs, map.) 4 refs. Text in Russian. Summary in English. *Other authors:* A.V. Ivanovskaia *and* E.S. Rabikhanukaeva. **Title tr.:** Upper Cretaceous and Paleogene sedimentary formations in the Vakh River basin.

Presents lithologic and mineralogic analyses of samples from core drills in the upper Vakh basin, between Lar'yak and Asses-Yegan. Six sedimentary formations of different lithologic properties are distinguished and each is described noting mineralogic composition, age, thickness and other features. (DLC.)

76619. ZAGORSKAIA, N. G. Nekotorye osobennosti zyrianskogo oledeneniia na severe Sibiri. *(In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.1, p.218-23.) Text in Russian. **Title tr.:** Some features of the Zyryanka glaciation in the Siberian North.

Describes the procedure of the Zyryanka glaciation in Severnaya Zemlya, Yamal Peninsula, the Taymyr, the Anabar shield, and other areas. The distribution of land and sea, thickness of

ice (insignificant), role of glacial meltwater in relief formation, development of aqueo-glacial deposits and other special features are described. (DLC.)

76620. ZAGORSKAIÂ, N. G. Osobennosti pleĭstotsenovykh oledeneniĭ severa Zapadnoĭ Sibiri v svete novykh dannykh. (*In:* Leningrad. Vsesoîuznyĭ n.-i. geologicheskiĭ institut. Trudy 1961. t.64, Problemy chetvertichnogo . . . , p.37-44.) Text in Russian. **Title tr.:** The features of Pleistocene glaciations in the north of West Siberia in the light of new data.

Reviews Pleistocene glaciations in the region roughly between the Timan Ridge and the Yenisey. Interpretation of the paleogeography and glaciation conditions in northern Siberia differs among various investigators. One group of opinion approves for Siberia the European stratigraphic and paleogeographic schemes of the Quaternary period. Another rejects the role of glaciation in the Siberian Pleistocene. The author, representing a third group, attempts to reconcile these opposing opinions and offers an intermediate explanation. Middle and Upper Pleistocene glaciations are recognized and their traces summarized. (DLC.)

76621. ZAGREBINA, N. L. Deshifrirovanie na aèrosnimkakh rastitel'nosti v almazonosnykh raĭonakh severo-zapadnoĭ IÂkutii. (*In:* Akademiîa nauk SSSR. Laboratoriîa aèrometodov. Primenenie aèrometodov pri poiskakh . . . almazov, 1960, p.47-51, plates.) Text in Russian. **Title tr.:** Interpretation of vegetation on aerial photographs in the diamond-bearing regions of northwestern Yakutia.

States briefly the botanical-geographic characteristics of the area from interpretation of air photos mostly at 1:15,000 scale, and from panchromatic and chromatic-spectro-zonal film. Vegetation associations and grouping are to a great extent related to relief forms. Vegetation of watersheds, slopes of interfluves, and river valleys (Daldyn, Muna and others) is described. Aerial photography is considered an important tool for geobotanical mapping. (DLC.)

76622. ZAGREBINA, N. L. Landshaftnyĭ metod vyîavleniîa kimberlitovykh tel; na primere landshafta severnoĭ taĭgi Zapadnoĭ IÂkutii. (Akademiîa nauk SSSR. Laboratoriîa aèrometodov. Ispol'zovanie aèrometodov pri issledovanii prirodnykh resursov, 1961, p.46-53, illus.) 3 refs. Text in Russian. **Title tr.:** The landscape method for disclosing kimberlite bodies, as exemplified by the northern taiga landscape of western Yakutia.

Reports a landscape and vegetation study in the Daldyn and Muna basins (66°05′-67°20′N. 111°46′-114°30′E.), based on interpretation of air photography. Landscape units of levelled watersheds, slopes and gently undulating surface are distinguished and characterized. The vegetation cover of these units is described. Features of outcrops of kimberlite pipes are examined, and related to certain features of landscape and vegetation spots, which are recognizable on air photos, and disclose thus the presence of the kimberlite pipes. (DLC.)

76623. ZÁHLAVA, J., *and others*. L' élimination du néopallium pendant la période postnatale; son influence sur quelques mécanismes de thermorégulation. (Journal de physiologie, 1961. t.53, no.2, p.497-98.) 4 refs. Text in French. *Other authors:* P. Sobotka, S. Reiniš *and* J. Mysliveček. **Title tr.:** Elimination of the neopallium during the postnatal period; its influence on some mechanisms of thermoregulation.

Reports on rats kept at 40°, 26° (controls) and 0°C. In the last, O_2-consumption in animals operated at the age of two years was larger than in controls; rats with the neopallium removed at six months, showed no difference from controls. (DNLM.)

ZAĬONCHKOVSKIĬ, M. A., *see* Aver'îanov, A.G., *& others*. Deep seismic sounding . . . 1961. No. 69921

76624. ZAĬTSEV, G. N., *and others*. Components of the water; thermal and chemical budget of the Greenland and Norwegian Seas. (International Council for Exploration of the Sea. Rapports et procès-verbaux des réunions, 1961. v.149, Contributions to Special IGY Meeting 1959, p.46-52, tables, maps.) 8 refs. *Other authors:* M.V. Fedosov, N.L. Il'ina, *and* I.A. Ermachenko.

Reviews the components making up the thermal budget of the Greenland - Norwegian basin (including methods used in study), and the balance of nutritive elements of this basin. It is concluded that the Atlantic water flowing into the basin through the Iceland - Scandinavian straits carries with it the bulk of phosphorus, nitrogen and silicon. Most of these elements are carried further into the Arctic Basin and into the Barents Sea. (DI.)

76625. ZAĬTSEV, G. N. O vodoobmene Arkticheskogo basseĭna s Tikhim i Atlanticheskim okeanami. (Okeanologiîa, 1961. t.1, vyp.4, p.743-44.) 2 refs. Text in Russian. **Title tr.:** On exchange of water between the Arctic Basin and the Pacific and Atlantic Oceans.

Questions the calculations made by V.T. Timofeev (No. 48411), concerning exchange between these water bodies through various straits; and offers new calculations showing, for example, that the exchange through Denmark Strait is up to 10-12 times less and through Davis Strait eight times greater than that calculated by Timofeev. (DLC.)

76626. ZAĬTSEV, G. N. Thermic balance of the active layer of the Norwegian Sea. (International Union of Geodesy and Geophysics, International Association of Physical Oceanography, Monograph no.10, Symposium on radiant energy in the sea, Helsinki, Aug. 4-5, 1960. *pub.* June 1961. p.114-15.) Abstract of paper presented.

Results of data collected in 1954 and 1958 indicate that the temperature of the 400-m. active layer of this sea rises 1.27°C. during the Apr.-Oct. warming period; in addition the upper 100m. layer warms an additional 0.78°C. as a result of radiation factors. The total average temperature increment for the whole 400-meter layer is thus 1.45°C. (DGS.)

ZAĬTSEV, G. N., *see also*

Alekseev, A.P., *& others*. Results . . . Norwegian Sea in 1958. 1961. No. 69693

Rossov, V.V. O vodnom i teplovom balanse . . . 1961. No. 75215

Timofeev, V.T. K voprosu o vodoobmene . . . 1962. No. 76151

ZAĬTSEV, SERGEĬ IVANOVICH, *see* Khokhlov, I.V., & *others*. Razrabotka ugol'nykh mestorozhdeniĭ . . . 1960. No. 72770

76627. ZAĬTSEV, VIKENTIĬ PETROVICH. Sorok let sovetskikh morskikh rybokhoziaĭstvennykh issledovaniĭ. (Rybnoe khoziaĭstvo, 1961. god 37, no.3, p.3-8.) Text in Russian. **Title tr.:** Forty years of Soviet marine fisheries research.

Reviews activities in this field since Lenin's decree on the exploitation of the arctic seas and estuaries in 1921. Institutions and general areas and aspects of work are considered; as are fishing implements, location instruments, canning, etc. (DLC.)

76628. ZAĬTSEVA, E. D. K voprosu o emkosti obmena i sostave obmennykh kationov osadkov severo-zapadnoĭ chasti Tikhogo okeana i dal'nevostochnykh moreĭ. (Akademiia nauk SSSR. Okeanograficheskaia komissiia. Trudy 1960. t.10, vyp.2, Khimiia moria, p.48-55, tables, diagr.) 26 refs. Text in Russian. **Title tr.:** On problem of the base-exchange capacity and the composition of exchangeable cations of sediments of the northwest Pacific and the Far Eastern Seas.

Reports on the clay minerals of 50 bottom samples from the Pacific, Bering, Okhotsk and Japan Seas. The base-exchange capacity determined in milliequivalents/100 g. varies in general from 12.8 to 29.6, and mud fractions (less than 0.001 mm.) from 42.1 to 59.4 milliequivalents/100 g. Sodium prevails in the Pacific and Okhotsk deposits, the magnesium, potassium and calcium content is less. (DLC.)

ZAĬTSEVA, E. D., *see also* Pacific Science Congress. 1961. No. 74619

76629. ZAĬTSEVA, M. G., *and* **V. A. POZDNIAKOVA.** Nekotorye osobennosti pochvennogo pitaniia rastenii na Kraĭnem Severe. (Akademiia nauk SSSR. Doklady 1961. t.138, no.5, p.1223-26, illus., tables.) 28 refs. Text in Russian. **Title tr.:** Some features of soil nutrition of plants in the far North.

Reports experiments with wheat grown on iron-containing podsol in Murmansk Province, and controls on soil from the Moscow area. The former, supplied with the customary fertilizers showed phosphorus deficiency. Application of N-fertilizer without appropriate increase in P gave negative results. (DLC.)

ZAJAC, I. STEPHAN, *see* Stubbins, J.B., & *others*. Origin . . . iron ores Knob L. 1961. No. 75969

76630. ZAKHARINA, D. M. Krasnoiarskiĭ ėkonomicheskiĭ administrativnyĭ raĭon. (Geografiia v shkole, Jan.-Feb. 1961. god 24, no.1, p.19-23, map.) Text in Russian. **Title tr.:** The Krasnoyarsk economic administrative region.

Krasnoyarsk Province covers over 2.4 million km², 11% of the territory of the Soviet Union; it has second highest industrial production in Siberia. With 3,000 billion tons of coal reserves, water-power capacity up to 50 million kw., 14 billion m³ of timber, vast mineral and ore resources, this province has the conditions for rapid economic development. Importance of Noril'sk and Igarka in the far North is stressed; plan for Yenisey and Angara power development noted. Distribution of the industrial centers is shown (map). (DLC.)

ZAKHAROV, IU. F., *see* Chochia, N.G., & *others*. Muzhinskiĭ Ural . . . 1961. No. 70733

76631. ZAKHAROV, V. A. Novye Monotidae nizhnego leĭasa s poberezh'ia Okhotskogo moria i ikh stratigraficheskoe znachenie. (Geologiia i geofizika, 1962, no.3, p.23-31, illus., plate.) 9 refs. Text in Russian. Summary in English. **Title tr.:** New Monotidae of the Lower Lias from the Okhotsk Sea coast and their stratigraphic importance.

Presents a taxonomic account of two new species of Lower Jurassic (Lower Lias) pelecypods, found in the Viliga basin in Magadan Province. *Otaprira limaeformis* and *Monotis pseudooriginalis* are described in detail noting collected material, diagnosis, distribution, age, and other features. Special attention is given to the variability of the specimens. Their stratigraphic importance for the Lias deposits of northeastern USSR is stressed. (DLC.)

76632. ZAKHAROV, V. F. Opredelenie granits rasprostraneniia rechnykh vod v more Laptevykh. (Okeanologiia, 1962. t.2, vyp.2, p.233-37, charts.) 2 refs. Text in Russian. **Title tr.:** Determination of the limits of river-water distribution in the Laptev Sea.

Reports a Aug. 26-Sept. 12, 1955 study in the southern and central part of this sea to determine the amount of fresh water received as runoff from the land and the extent of its distribution. The salinity of the Laptev Sea is established as 32‰ without mixture of river water. An equation is developed for calculating the thickness of the fresh-water layer in the active upper layer and in the bottom layer of the sea; the data obtained are presented in a chart showing regional distribution of fresh water in the various sections of the sea. Possibilities are discussed for determining the fresh water limit and some calculations are offered for Sept. 1955. (DLC.)

ZAKLINSKIĬ, A. B., *see* Grigorash, Z.K., & A.B. Zaklinskiĭ. Modelirovanie tsunami . . . 1962. No. 71854

76633. ZAKMAN, L. M. Vliianie udobreniĭ na fotosintez kartofelia v usloviiakh Kraĭnego Severa. (Botanicheskiĭ zhurnal, Apr. 1961. t.46, no.4, p.576-79, illus., tables.) 22 refs. Text in Russian. **Title tr.:** Effect of fertilizers upon photosynthesis of potatoes in the far North.

Reports on the effect of various doses of fertilizers (K, N, P). One combination of P produced doubling of the crop. The experiments were conducted at Salekhard (66°30′N. 66°40′E.) (DLC.)

76634. ZAKRUTKIN, V. V. Granity iugo-vostochnoĭ chasti Anabarskogo shchita. (Izvestiia vysshikh uchebnykh zavedeniĭ. Geologiia i razvedka, Apr. 1962. god 5, no.4, p.38-48, tables.) 25 refs. Text in Russian. **Title tr.:** Granites in the southeastern part of the Anabar shield.

Distinguishes two series of Archean granites. Three groups are recognized according to age and genetic and petrographic features: hypersthene granites, biotite granites, and alaskites. Each is described. Mineral composition and typomorphic features of minerals are characterized. Development conditions are discussed. (DLC.)

76635. ZAKRUTKIN, V. V. Ob anabarskikh psevdotakhilitakh i ikh vozraste. (Akademiia nauk SSSR.

Doklady, Jan. 11, 1961. t.136, no.2, p.419-20.) 5 refs. Text in Russian. **Title tr.**: On Anabar pseudotachylytes and their age.

Describes the mode of occurrence, microscopic study, and mineralogic properties of pseudotachylytes in various types of Archean rocks in Anabar basin. A trap fragment found in one of the veins suggests that pseudotachylyte should have been a form of trap. It considered Mesozoic, and, more precisely, after early Triassic. (DLC.)

76636. ZAKRUTKIN, V. V. Sravnitel'naia kharakteristika amfibolov iz porod amfibolitovoĭ i granulitovoĭ fatsii Anabarskogo shchita. (Geologiia i geofizika, 1961, no.9, p.72-80, tables, diagr.) 26 refs. Text in Russian. Summary in English. **Title tr.**: Comparative characteristics of amphiboles from rocks of amphibolite and granulite facies of the Anabar shield.

Reports amphiboles of the granulite facies represented by hastingsites, and those of the amphibolite facies by the usual hornblendes. Optical properties and chemical composition of amphiboles from both facies are described and compared. (DLC.)

76637. ZAKS, M. G., *and* **M. M. SOKOLOVA.** Immuno-serologicheskie razlichiia mezhdu otdel'nymi stadami nerki. (Voprosy ikhtiologii, 1961. t.1, vyp.4 (21), p.707-715, illus., tables.) 11 refs. Text in Russian. **Title tr.**: Immuno-serological differences between separate tribes of sockeye salmon.

Reports study of four tribes of this fish in Kamchatka, conducted with the precipitin reaction. At sufficiently low serum titres, tribe-specific antigens were detectable. The potential practical value of the method, especially if simplified, is discussed. (DLC.)

76638. ZAKS, M. G., *and* **M. M. SOKOLOVA.** O mekhanizmakh adaptatsii k izmeneniiam solenosti vody u nerki i *Oncorhynchus nerka* Walb. (Voprosy ikhtiologii, 1961. t.1, vyp.2 (19), p.333-45, illus., tables.) 25 refs, Text in Russian. Translation available. **Title tr.**: On the mechanism of adaptation to changes of salinity in the sockeye salmon *Oncorhynchus nerka* Walb.

Account of experiments conducted during June - July 1960 in the laboratory of TINRO on Lake Dal'neye, Kamchatka. Young and descending fish and mature ascending specimens were studied. It was found that adaptation to salinity changes is effected in the gill apparatus and not in the kidneys. The role of hormones in this function is discussed. (DLC.)

76639. ZALESSKIĬ, N. A. Flotiliia Severnogo Ledovitogo okeana v grazhdanskuiu voinu. (Istoricheskie zapiski, 1962. v.71, p.251-58.) 4 refs. Text in Russian. **Title tr.**: The Arctic Ocean flotilla during the civil war.

Describes naval operations, numerical strength, types of vessels, etc. Organized in 1916, the fleet consisted in 1917 of 89 war ships and support craft, including four hydrographic vessels, the icebreakers *Sviatogor* and *Mikula Selianinovich*, and the submarine *Sv. Georgii*, later renamed *Kommunar*. Fate of the vessels during and after the Revolution is indicated: some were sunk, others turned over to the Allies by the Russian Whites; many disabled were scrapped, and the surviving craft, mostly hydrographic vessels and icebreakers, were put to expeditionary and merchant marine use. (DLC.)

76640. ZAL'F, N. G. Iodnye vody Arkhangel'skoĭ oblasti. (Moskovskoe obshchestvo ispytateleĭ prirody. Biulleten' 1961, n. ser. t.66, otdel geologicheskiĭ, t.36, vyp.6, p.110.) Text in Russian. **Title tr.**: Iodine waters of Arkhangel'sk Province.

Reports an increased content of iodine disclosed by deep drillings in Lower Carboniferous deposits of the coastal areas. The iodine content varies from 4.0 to 18 mg./l., and bromine from 5.0 to 13.0 mg./l. Yield and mineralization of these water are briefly noted; origin is not clear. (DLC.)

76641. ZAMARAEV, S. M. Osnovnye èlementy struktury iugo-vostochnoĭ chasti Sibirskoĭ platformy v dokembrii i v nizhnem paleozoe. (Geologiia i geofizika, 1961, no.11, p.30-39, maps, diagrs.) 11 refs. Text in Russian. Summary in English. **Title tr.**: Main elements of the Precambrian and lower Paleozoic structure of the southeastern part of the Siberian platform.

Evaluates recent geologic and magnetic data on the problem and offers comparisons with the Anabar and Aldan massifs and with some other arctic regions. Three stages in development of this part of Siberian platform are characterized. (DLC.)

ZAMOLOTCHIKOVA, S. A., *see* Garagulia, L.S., & S.A. Zamolotchikova. Sezonnoe promerzanie gruntov . . . 1961. No. 71584

76642. ZANINA, ANASTASIIA ANDREEVNA. Dal'nevostochnye raiony, Kamchatka i Sakhalin. Leningrad, Gidrometeorologicheskoe izd-vo, 1958. 168 p. tables, charts, diagrs. (Leningrad. Glavnaia geofizicheskaia observatoriia. Klimat SSSR, vyp.6.) 47 refs. Text in Russian. **Title tr.**: Far-Eastern regions, Kamchatka and Sakhalin.

Monographic account of the climate of the area including Magadan Province, the Bering and Okhotsk Seas, Kamchatka, Commander Islands, etc. Climate-forming factors such as radiation, circulation process, influence of relief and seas, are described. Climatic characteristic is given according to seasons. Thermal, wind and humidity regimes are outlined. The Chukotka-Anadyr, Okhotsk, Kamchatka - Commander Islands, etc. regions are characterized. (DLC.)

76643. ZAPOROZHTSEVA, A. S., *and others.* O posledovatel'nom zameshchenii kal'tsievykh tseolitov v vertikal'nykh razrezakh osadochnykh tolshch. (Akademiia nauk SSSR. Doklady, Nov. 11, 1961. t.141, no.2, p.448-51, diagr.) 8 refs. Text in Russian. *Other authors:* T.N. Vishnevskaia *and* G.P. Dubar'. **Title tr.**: On the sequential replacement of calcium zeolites in vertical sections of sedimentary strata.

Reports on the composition, types, optical orientation and occurrence of calcium zeolites, as studied in three vertical sections: the Nizhnyaya Baykha (tributary to the Turukhan), the Lepiske (tributary of the Lena), and the Aldan River basins. Vertical variation of the zeolites is downward: desmine - heulandite - epidesmine - laumontite - scolecite. The occurrence conditions for zeolites and their replacement are discussed. Their dia-

genetic origin and upward transition are stressed. (DLC.)

76644. ZAPOROZHTSEVA, I. V., *and* L. A. TOKAREVA. Rezul'taty sverki moshchnosti merzlykh porod opredelennoĭ pri interpretatsii krivykh VÉZ, s moshchnost'iu poluchennoĭ po raschetnomu metodu D.V. Redozubova. (*In:* Akademiia nauk SSSR. Institut merzlotovedeniia. Severnoe otdelenie. Trudy vyp.2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.88-94, tables, graphs.) 5 refs. Text in Russian. **Title tr.:** Results of verifying frozen rock thickness determined by interpreting VÉZ curves, with the thickness obtained by D.V. Redozubov's calculation method.

Reports average permafrost thickness in the Vorga-Shor coal deposits to be 70 m. as determined by the vertical electric sounding (VÉZ) method in 1960. To test the obtained values, the thickness was also established by calculations based on temperature measurements in shallow drillings. Comparison of the two reveals that the Redozubov (calculation) method can be used to verify data only in Quaternary deposits and where the temperature regime is not interrupted by a water-bearing horizon. (DLC.)

76645. ZARRINA, E. P., *and* I. I. KRASNOV. Proiskhozhdenie i stratigraficheskoe polozhenie sanchugovsko-tazovskikh "morenopodobnykh" otlozheniĭ na severe Zapadno-Sibirskoĭ nizmennosti. (*In:* Leningrad. Vsesoiuznyĭ n.-i. geologicheskiĭ institut. Trudy 1961, t.64, Problemy chetvertichnogo . . . p.45-60, table.) Text in Russian. **Title tr.:** Origin and stratigraphic position of the Sanchugovka-Taz "moraine-like" deposits in the north of the West Siberian plain.

Reports own and others' study of Quaternary deposits in the lower Yenisey, Ob, Taz and other valleys in 1959-1960. Cross-sections are described with special attention to the Sanchugovka-Taz moraine-like stratum, and its marine fauna and especially molluscs are reported. Typical continental glacial forms of relief are recognized and described. The stratigraphic position of the Sanchugovka and Taz glaciation is analyzed. It is concluded that Sanchugovka and Taz fragmental loams with boulders represent the normal moraine of continental origin and are not of marine-glacial origin as identified by others. (DLC.)

76646. ZARUBIN, N. E. O tselesoobraznosti nekotorykh protivonaledthings meropriiatiĭ i ustroĭstv. (Transportnoe stroitel'stvo, Feb. 1960. god 10, no.2, p.45.) Text in Russian. **Title tr.:** The effectiveness of several measures and devices against naleds.

Reviews six measures against naled formation along railroads, recommended in draft instructions for railroad construction in permafrost areas, 1958: drain the area by deepening and rectifying natural water channels, digging open ditches, and constructing closed drains; hinder water movement by means of frozen layers within the ground; lay water repelling screens; construct earth walls, sink warming pans into ground; make or enlarge depressions where naleds form without hazard to the railroad. These measures are evaluated from construction experience on the Tayshet-Lena railroad, Amur-Yakutsk highway, etc. All of them may control naled formation in winter, but most fail to protect the roadbeds from saturation by naled melt water in spring. The most effective countermeasure where both problems are involved is the closed drain, the least effective is the frozen layers within the ground.–From CRREL. (DLC.)

76647. ZAVATTI, SILVIO, 1917– . Atlante polare. Bergamo, Bolis, 1958. 7 p. text + 15 col. maps. 19 refs. Text in Italian. **Title tr.:** Polar atlas. (SPRI.)

76648. ZAV'IALOV, G. G. Nekotorye dannye o nerestovom stade Piasinskogo chira kak ob"ekta akklimatizatsii. (Voprosy ikhtiologii, 1960. vyp.16, p.121-30, tables.) 7 refs. Text in Russian. **Title tr.:** Some data on the spawning stock of the Pyasina broad whitefish as an object of acclimatization.

Study of the spawning stock of *Coregonus nasus* Pall. in the Pyasina River system of Taymyr Peninsula, the location of spawning grounds and conditions of spawning. Sex and age composition, length and weight, fatness, and fertility are considered. The fish is recommended for introduction into more southerly zones of Siberia. (DLC.)

76649. ZAVODOVSKIĬ, V. M., *and* D. L. STEPANOV. O novom iaruse permskoĭ sistemy na Severo-Vostoke. (Sovetskaia geologiia, June 1961, no.6, p.71-78.) 21 refs. Text in Russian. Summary in English. **Title tr.:** On a new stage of the Permian system in northeastern USSR.

Describes Upper Permian deposits in the Kolyma basin and the Okhotsk coastal areas. Most complete sequences are found in the basin of the Khivach tributary to the Gizhiga, where the top of the Permian section is represented by marine deposits containing a fauna of foraminifers, brachiopods and other forms, which are reported. The underlying beds contain Kazanian brachiopods. The Khivach formation, synchronous with the non-marine Tartarian stage, is proposed as a new stage of the marine Permian. (DLC.)

ZDRODOVSKAIA, E. P., *see* Neĭfakh, S.A., & E.P. Zdrodovskaia. O vyrabotke teploty . . . 1961. No. 74253

76650. ZEĬLIK, B. S. Proiavlenie neotektoniki v riade raĭonov Tsentral'noĭ Kamchatki. (Sovetskaia geologiia, Nov. 1961, no.11, p.148-50.) 6 refs. Text in Russian. **Title tr.:** Manifestation of recent tectonics in a series of regions of central Kamchatka.

Reports 1956 studies in the Sredinnyy Range and other areas. Attention was given to relic cirques and their stepped, ladder-like, hypsometric position. Seven surfaces in which cirques are distributed are recognized, of which the fourth (absolute height 1300 - 1350 m.) fifth (1400 - 1430 m.), sixth (1500 - 1530 m.) and seventh (1600 - 1630 m.) are well developed. Many cirques are filled by lakes of which distribution is also calculated. The formation of these stepped-surfaces is considered caused by recent tectonic movements. (DLC.)

ZELENOV, KONSTANTIN KONSTANTINOVICH, *see* Gorshkov, G.S., & K.K. Zelenov. Dolina geĭzerov. 1962. No. 71782

76651. ZEMSKAIA, ARIADNA ALEKSEEVNA, 1922– , *and* É. I. KORENBERG. Paraziticheskie gamazovye kleshchi gryzunov Tsentral'noĭ Iakutskoĭ nizmennosti. (Zoologicheskiĭ zhurnal, June 1962. t.41, vyp. 6, p.939-43, illus., tables.)

8 refs. Text in Russian. Summary in English. **Title tr.**: Parasitic gamasid mites from rodents of the central Yakutian plains.

Presents records of 37 species of these mites found on nine rodents, the most common of them being *Laelaps clethrionomydis*. Hosts, frequency of parasites on them, ecology of hosts, etc. are noted. (DLC.)

76652. ZEMSKIĬ, V. A., *and* **A. A. BERZIN.** O redkom iavlenii atavizma u kashalota, *Physeter catodon* L. (Nauchnye doklady vysshei shkoly, biologicheskie nauki, 1961. no.2, p.56-60, illus.) 5 refs. Text in Russian. **Title tr.**: A rare case of atavism in the sperm whale, *Physeter catodon* L.

Discusses phylogenetic and ontogenetic disappearance of pelvis and hind limbs, and records of atavisms of limbs in various whales. An additional case of rudimentary hind limbs is described, both in its external appearance and on X-ray pictures. (DLC.)

76653. ZEMSKIĬ, V. A. Rost novorozhdennykh finvalov v period molochnogo pitaniia. (Moskva. Vsesoiuznyi nauchno-issledovatel'skii institut morskogo rybnogo khoziaistva i okeanografii. Trudy 1957, t.33, p.173-78, tables.) 12 refs. Text in Russian. **Title tr.**: Growth of newborn finwhales during the suckling period.

Describes mammary glands in the active and dormant state; chemical compositon of the milk and percentage of lactating females the year round. Lactation is estimated to last 6-7 months and growth of the young not as quick as generally assumed. Estimates are largely based on literature and on catches in the South Georgia area. (DLC.)

76654. ZEMSKOV, V. I. Proektirovanie malykh mostov i trub v raionakh vechnomerzlykh gruntov. (Avtomobil'nye dorogi, Jan. 1962. god 25, no.1, p.24-25, diagrs.) Text in Russian. **Title tr.**: The planning of small bridges and culverts in areas of permafrost.

Describes methods of sealing the joints of prefabricated reinforced concrete sections of conduits, bridge supports, etc. against damage by ground water, ground ice, and frost heaving. Transportation, assembly, and installation problems are discussed on the basis of methods developed and tested for permafrost-ground areas. (DLC.)

76655. ZEMTSOV, A. A., *and* **S. B. SHATSKIĬ.** K geologii i stratigrafii chetvertichnykh otlozheniĭ severo-vostochnoi chasti Zapadno-Sibirskoi nizmennosti. *(In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.32-38, fold. map.) 9 refs. Text in Russian. **Title tr.**: On the geology and stratigraphy of Quaternary deposits in the northeastern part of the West Siberian plain.

Outlines relief development and stratigraphy of Quaternary deposits of the area 56°-68° N. 72°-90° E., based on studies during 1948-1956. Three geomorphic zones are distinguished; those of the maximal - Samarovo, the Taz, and the Zyryanka glaciations. Sections of Quaternary deposits of each zone are described. Glaciations, relief forms, river valleys, and marine transgressions are briefly characterized. (DLC.)

ZEMTSOV, A. A., *see also* Bone, R.M. Note on permafrost . . . 1962. No. 70320

76656. ZENKEVICH, LEV ALEKSANDROVICH, 1889– . Dekret ot 10 marta 1921 g. ob issledovaniiakh severnykh morei. (Okeanologiia, 1961. t.1, vyp. 2, p.193-96.) Text in Russian. **Title tr.**: Decree of March 10, 1921 on investigation of the northern seas.

Commemorates the 40th anniversary of Lenin's decree, which resulted in founding of the first marine scientific institute in the Soviet Union, and in oceanographic studies in the White, Barents, Kara and other northern seas. Expeditions of the icebreaker *Malygin* and research vessel *Persei* are briefly reviewed. The present status of Russian oceanographic studies is summarized: more than a thousand persons are engaged in them, as well as some fifty ship units representing about 50,000 tons. (DLC.)

76657. ZENKEVICH, N. L. Novye dannye o rel'efe dna severo-vostochnoi chasti Tikhogo okeana. (Akademiia nauk SSSR. Institut okeanologii. Trudy 1961. t.45, p.5-21, illus., fold. maps.) 14 refs. Text in Russian. Summary in English. **Title tr.**: New data on the bottom relief of the Northeastern Pacific.

Account of investigations in the IGY program carried out during the 29th, Oct. 1958-Mar. 1959, cruise of the *Vitiaz'*, which included the Gulf of Alaska and touched into the Aleutian waters. The variety of the bottom relief is confirmed and several geomorphic features are distinguished and described. Large-scale charts of 17 small areas were prepared and several hitherto unknown seamounts are recognized. A new bathymetric chart of the area is presented as well as a schematic cross-section of the bottom. (DLC.)

76658. ZENKIN, V. Iskusstvo narodov Amura. (Dekorativnoe iskusstvo, Apr. 1960, no.4(29), p.31-32, illus.) Text in Russian. **Title tr.**: Art of the peoples of the Amur region.

Describes modern ornamental patterns for embroidery and woodcraft among the Gilyaks and Golds, also ancient magic, religious, and shamanistic wood carvings exhibited at the Leningrad Branch of the Painters' Union in January 1960. All objects were collected during 1934-1938 by the painter E. Evenbakh as folk art materials to be used in illustrating primers and readers for northern minorities' schools. (DLC.)

76659. ZEVAKINA, R. A. Geographical distribution of inospheric disturbances in high latitudes. *(In:* International Conference on Cosmic Rays and the Earth Storm 1961. Proceedings *pub.* 1962, v.1, p.139-42, charts.)

Reports on the analysis of synoptic charts of $\Delta f\ min$, fE_S, and $\Delta foF2$ drawn in polar geomagnetic coordinates according to data of 38 stations in the Northern Hemisphere. From this analysis, the simultaneous magnetic disturbances in the lower and the upper ionosphere, and the distribution of abnormal variations and intensity in the ionosphere were investigated during Sept. and Dec. 1957. The results presented in 15 synoptic charts of $\Delta f\ min$, $\Delta foF2$, and fE_S are discussed. (DLC.)

76660. ZEVINA, G. B. Obrastanie sudov, dokuiushchikhsia v Kol'skom zalive; Barentsevo more. (Okeanologiia, 1962. t.2, vyp. 1, p.128-33, tables.) 18 refs. Text in Russian. **Title tr.**: The fouling of ships docked in Kola Bay, Barents Sea.

Reports results of the seasonal inspection of

some forty vessels with quantitative measurements of the biomass of fouling organisms, species cited, and special attention to *Balanus crenatus, B. balanoides,* etc. Ships stationed at Murmansk, those plying Barents Sea only, Barents and White Seas, the North Atlantic and south of Barents Sea, are treated in turn. Extent of fouling, biomass, composition and variation of organisms are reported. Treatment of bottoms by protective coloring or covering is considered important. Bottom fouling in Kola Bay is compared with that in ports of other seas. (DLC.)

76661. ZHARKOV, I. Puti ispol'zovaniia zapasov bobra. (Okhota i okhotnich'e khoziaĭstvo, Mar. 1962. god 8, no.3, p.12-14, illus., table.) Text in Russian. **Title tr.:** Utilization of beaver resources.

Discusses the means of management and use of beaver resources in European RSFSR. The 1959 distribution data are tabulated by provinces as collected by the Main Administration of Hunting Industry and Preserves of RSFSR; they include Arkhangel'sk Province, with 1020 beaver, Komi ASSR: 700, and Murmansk Province: 150. (DLC.)

76662. ZHAROV, V. K. Novyĭ otriad sibirskikh okhotovedov. (Sel'skoe khoziaĭstvo Sibiri, Oct. 1961. god 6, no.10, p.77.) Text in Russian. **Title tr.:** A new phalanx of hunting experts for Siberia.

Notes the seventh class of hunting experts to graduate at the Irkutsk Agricultural Institute: 57 regular students and 15 by correspondence. Some of the theses submitted for the hunting-expert degree are cited, one on Kamchatka fur farms, another on muskrat in the Eastern Siberian hunting industry. (DLC.)

76663. ZHAROV, V. K. Vnimanie kadram! (Sibirskie ogni, Nov. 1962. god 41, no.11, p.155-56.) Text in Russian. **Title tr.:** More attention to cadres!

Criticizes poor training of hunting personnel and the indifference in central organizations to the taiga and tundra fur-hunters' needs, the antiquated or defective trapping gear, poor supply of saddle-reindeer (used by Evenki-Tungus) and of draft-dogs, etc. Relocation of taiga settlers to consolidated kolkhoz centers restricts hunting areas and lowers fur output. Low remuneration of hunters is considered a vital factor in the high drop-out rate in hunting cadres. (DLC.)

ZHDANKO, T. A., *see* Gardanov, V.K., *& others.* Osnovnye napravleniia ėtnicheskikh protsessov . . . 1961. No. 71588

76664. ZHDANOV, V. V. Organizatsiia stroitel'stva linii Taĭshet-Lena ne mozhet sluzhit' primerom dlia novostroek Vostochnoĭ Sibiri. (Transportnoe stroitel'stvo, May 1960. god 10, no.5, p.47-48.) Ref. Text in Russian. **Title tr.:** The organization of Tayshet-Lena railroad construction should not present a pattern for new construction in Eastern Siberia.

Notes that construction of the Tayshet-Lena railroad was started in 1938, interrupted in 1941, and resumed in 1946. The line was put to provisional use from 1950, and permanent service began in December 1958. Railroad was built in a hurry, used when only half-ready, hampering completion, and supplementary work has involved enormous costs. Such a method has no economic justification and must be avoided in planning other railroads in northern taiga areas. (DLC.)

76665. ZHEGALOV, IU. V. Stratigrafiia tretichnykh otlozheniĭ Komandorskikh ostrovov. (*In:* Soveshchanie . . . stratigraficheskikh skhem . . . 1961, p.198-204.) Text in Russian. **Title tr.:** Stratigraphy of Tertiary deposits of the Commander Islands.

Describes a stratigraphic column of deposits 6000 m. thick, consisting of sedimentary, tuffaceous and effusive rocks. The Commander series is distinguished and divided into four subseries, each of which is characterized. (DLC.)

76666. ZHEGALOV, IU. V. Vulkanizm i tektonika Komandorskikh ostrovov. (Vsesoiuznoe vulkanologicheskoe soveshchanie 1959. Voprosy vulkanizma, 1962, p.366.) Text in Russian. **Title tr.:** Volcanism and tectonics of the Commander Islands.

Describes cross-section of Tertiary deposits and divides them into four series. Among the effusive rocks, andesites, andesite-basalts and basalts are noted those of Beringa and Mednyy. Tectonic structure of the Commanders is briefly characterized noting similarities with the Aleutian Islands arc. (DLC.)

76667. ZHELUBOVSKAIA, K. V., *and* **T. E. LADYSHKINA.** Rezul'taty palinologicheskogo i diatomovogo analizov chetvertichnykh otlozheniĭ severnoĭ chasti Arkhangel'skoĭ oblasti. (Sovetskaia geologiia, June 1962, no.6, p.126-29, diagrs.) 4 refs. Text in Russian. **Title tr.:** Results of palynoligic and diatom analyses of Quaternary deposits in the northern part of Arkhangel'sk Province.

Reports pollen and diatom algae spores identified from interglacial, postglacial marine, present marine deposits and peat bogs, in the coastal areas between Mezen' River mouth and the lower Pechora. Changes in vegetation and climatic conditions for each sequence of these deposits are characterized. (DLC.)

76668. ZHERNAKOV, N. Na beregakh Severnoĭ Dviny. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Oct. 1961. god 4, no.10, p.66-68, port.) Text in Russian. **Title tr.:** On the banks of the Severnaya Dvina.

Describes a steamer trip on the river and the Novaya Zhizn' collective across from Kopachevo (63° 57′N. 41° 42′E.); it is the leading farm in Arkhangel'sk Province. (DLC.)

76669. ZHEZLOVA, V. Interesnyĭ metod mecheniia guseĭ. (Okhota i okhotnich'e khoziaĭstvo, Jan. 1962. god 8, no.1, p.58.) Text in Russian. **Title tr.:** The interesting way in marking geese.

Reports on migrating snow geese *(Chen hyperborea)* of an unusual violet-purple color, as observed on the northeastern Asiatic coastal areas; the result of the California Board of Fish and Game Commissioners experiment of marking the birds with paint instead of banding them in 1955 and 1956. (DLC.)

76670. ZHIGALOV, L. N., *and* **N. N. ZHIGALOVA.** Magnitnye vozmushcheniia v raĭone mysa Shmidta i Uélena. (Leningrad. Arkticheskiĭ i antarkticheskiĭ nauchno-issledovatel'skiĭ institut. Trudy 1962. t.241, Geofizicheskie issledovaniia . . . vyp. 4, p.81-89, graphs, tables.) 9 refs. Text in Russian. **Title tr.:** Magnetic disturbances in the region of Cape Shmidta and Uelen.

Discusses magnetic disturbances in the eastern sector of the Arctic as recorded at Cape Shmidta 1952-1956 and at Uelen 1935-1947 and 1951-1958.

The index $r\gamma_H$ (the hourly amplitude of the horizontal component) was used for measuring the magnetic activity, and data on the frequency of appearance of magnetic disturbances of different intensity were analyzed. The regularities in the regime of magnetic disturbances in the sector are interpreted. (DLC.)

76671. ZHIGALOV, L. N., *and* **N. N. ZHIGALOVA.** O raspredelenii magnitnoĭ aktivnosti v uzkom sektore dolgot Vostochnoĭ Arktiki. (Geomagnetizm i aėronomiĭa, 1961. t.1, no.1, p.67-72, graphs, tables.) 13 refs. Text in Russian. **Title tr.:** Distribution of magnetic activity in a narrow sector of Eastern Arctic longitudes.

Analyzes characteristics of magnetic disturbances in the sector $\lambda \approx 170°$-$230°$ E., when the process of a disturbance is influenced by latitude effects. Data recorded by the drifting stations North Pole-6 and -7 during the IGY; and those of North Pole-4 and -3, also the Uelen and Cape Shmidta observatories in 1954-1956 were used, with added information from the Vrangel Island station, North Pole-2, and ice bases No. 2 and 5. It was established that the sum total of the intensity of magnetic disturbances in the sector $\Phi = 62°$-$82°$ N. $\Lambda = 190°$-$240°$ E. decreases with increased distance from the zone of auroras and magnetic disturbances. Magnetic activity in the central Arctic was found to increase during the summer season, and distribution of maximum disturbances form a clockwise spiral for the morning maxima, night maxima, in agreement with observations made previously by A.P. Nikol'skiĭ, and by O.A. Burdo (No. 63685), although the form and orientation of the spirals on the map are slightly different. (DLC.)

ZHIGALOVA, N. N., *see*
Zhigalov, L.N., & N.N. Zhigalova. Magnitnye vozmushcheniĭa . . . 1962. No. 76670

Zhigalov, L.N., & N.N. Zhigalova. O raspredelenii magnitnoĭ aktivnosti . . . 1961. No. 76671

ZHILINA, T. I., *see* Akademiĭa nauk SSSR. Sravnitel'nyĭ slovar' . . . 1961. No. 69583

76672. ZHIROV, K. K., *and others.* K geokhimii redkozemel'nykh ėlementov v pegmatitakh Severnoĭ Karelii. (Geokhimiĭa, 1961, no.11, p.995-1004, tables, graphs.) 32 refs. Text in Russian. Summary in English. *Other authors:* G.A. Bandurkin *and* IU. G. Lavrent'ev. **Title tr.:** On the geochemistry of the rare-earth elements in pegmatites of northern Karelia.

Reports on the rare-earth element composition in various minerals collected 1955-1958, as determined by universal X-ray spectometer. In monazites and xenotimes, it is characterized by continuity, independent of paragenesis and sections of the stratum. In the orthites and uranitites, it depends upon mineral paragenesis. Alteration of minerals plays an important role in composition of rare-earth elements. (DLC.)

76673. ZHIROVA, V. V., *and others.* O vozraste tsirkonov drevneĭshikh formatsiĭ Kol'skogo poluostrova. (Geokhimiĭa, 1961, no.12, p.1043-1052, tables, graph.) 14 refs. Text in Russian. Summary in English. *Other authors:* S.I. Zykov *and* A.I. Tugarinov. **Title tr.:** On the age of zircons of the oldest formations of the Kola Peninsula.

Reports methodological investigation of zircon, the most abundant accessory mineral of Kola Peninsula, and its use for absolute age determination of Kola geologic formations. In the Peninsula two groups of rocks, different in age, are distinguished: an intrusive group having 1900-2000 million years, and a metamorphic group 2600-2800 million years. Data of the argon-potassium method and that of U-Th-Pb are compared. Approximate age of metamorphism is also calculated. (DLC.)

76674. ZHMUR, V. A., *and others.* Ėlektroėntsefalograficheskie nabliūdeniĭa pri iskusstvennoĭ gibernatsii. (Ėksperimental'naĭa khirurgiĭa, 1961. god 6, no.3, p.30-32, illus.) 7 refs. Text in Russian. Summary in English. *Other authors:* S.V. Ryneĭskiĭ *and* S.N. Efuni. **Title tr.:** Electroencephalographic observations during artificial hibernation.

Describes three types of EEG curves recorded in nine patients operated under hypothermia. The first two, in light and medium cooling, correspond to the first two stages of Guedel, that in deep hypothermia resembles graphs of deep anesthesia. (DNLM.)

76675. ZHUKOV, ANATOLIĬ BORISOVICH, 1901– . Perspektivy raboty uchenykh Sibiri. (Lesnoe khoziĭaĭstvo, Jan. 1961. god 14, no.1, p.7-8.) Text in Russian. **Title tr.:** Prospects in the work of scientists in Siberia.

Outlines tasks and plans of the Academy of Sciences' Forestry and Wood Institute, Krasnoyarsk: forest study and development methods, fire prevention and control. (DLC.)

76676. ZHUKOV, DMITRIĬ. Sto millionov deĭstviĭ v sekundu. (Ogonek, Dec. 1961. god 39, no.49, p.12-13, illus.) Text in Russian. **Title tr.:** Hundred million operations per second.

Sketches work of the research institutes in the Academic Town of the Siberian Division of the Academy: on a computer, on mosquito control, etc. (DLC.)

76677. ZHUKOV, V. V. O ritmichnosti karbonatnykh otlozheniĭ srednego i verkhnego kembriĭa na severo-vostochnom kryle Sukhanskogo progiba. *(In:* Leningrad. Nauchno-issled. institut geologii Arktiki. Trudy t.117, Geologiĭa . . . 1961, p.81-83, diagr.) 3 refs. Text in Russian. **Title tr.:** On the rhythmicity of carbonate deposits of the Middle and Upper Cambrian in the northeastern limb of the Sukhana downwarp.

Describes the rhythmic bedding of carbonates of the Sukhana (68° 45′ N. 118° E.) downwarp in the Olenek basin, as observed in the course of geologic mapping. A stratigraphic section is studied and in three horizons rhythmic bedding is identified and briefly characterized. It is considered a result of vertical oscillating movements. (DLC.)

ZHUKOV, V. V., *see also* Ėrlikh, Ė.N., & V.V. Zhukov. Tektonicheskoe stroenie . . . 1961. No. 71289

76678. ZHUKOV, VLADIMIR FEDOROVICH. Nekotorye voprosy uprochneniĭa protaivaĭushchikh gruntov Igarki i Noril'ska. *(In:* Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Igarskaĭa merzlotnaĭa stantsiĭa. Trudy 1961. vyp. 2, p.70-72.) 2 refs. Text in Russian. **Title tr.:** Some problems in strengthening of thawing ground in Igarka and Noril'sk.

The frozen ground of Igarka and Noril'sk are

basically clayey loams containing ice lenses and other ice forms. Thawing of these soils tends to make them more compact, but also results in the settling of foundations to as much as 20% of the depth of the thawing layer. Bearing capacity of these soils is also reduced by high moisture content. Methods for strengthening these soils by drains, such as vertical "sand pilings" and by artificial compaction are discussed. Experimental construction work for the purpose of testing measures for strengthening thawed soils and reducing foundation damage is mentioned.—From CRREL. (DLC.)

76679. ZHUKOV, VLADIMIR FEDOROVICH. 25 let nauchnoĭ raboty v Vorkute Instituta merzlotovedeniĭa im. V.A. Obrucheva Akademii nauk SSSR. *(In:* Akademiĭa nauk SSSR. Institut merzlotovedeniĭa. Severnoe otdelenie. Trudy vyp. 2, 1962. Voprosy obshcheĭ i inzhenernoĭ geokriologii . . . p.5-12.) 25 refs. Text in Russian. **Title tr.:** Twenty-five years' scientific activities of the Obruchev Permafrost Institute, Academy of Sciences of USSR in Vorkuta.

Reviews the work of the station from 1936: the research programs, personnel, achievements in developing construction techniques. Current research is along three main lines: investigation of the mechanical properties of frozen, thawed, and freezing ground pertinent to foundation construction, with determination and forecasting of the rates of settling; investigation of the sinking of pilings into frozen, unfrozen, or specially thawed ground, and determination of the thermal properties of undisturbed and disturbed ground; and investigation of the physiochemical properties of ground, the thixotropic properties of fine soils, and the stabilization of soils by salting, electrochemical and other methods.—From CRREL. (DLC.)

76680. ZHUKOVA, A. N. Imĭa kachestvennogo sostoĭaniĭa v koriākskom ĭazyke. (Leningrad. Gos. pedagogicheskiĭ institut. Uchenye zapiski, 1955. t.111, Materialy Gertsenovskikh chteniĭ, p.165-66.) Text in Russian. **Title tr.:** Qualitative words in Koryak.

Words formed by the affixes ė/a – kė/ka are morphologically and syntactically closer to adjectives than to adverbs and should be considered a specific category of adjectives. (DLC.)

76681. ZHUKOVA, O. G. Kariologiĭa nekotorykh vidov Ranunculaceae v Poliārno-Al'piĭskom botanicheskom sadu. (Botanicheskiĭ zhurnal, Mar. 1961. t.46, no. 3, p.421-28, tables.) Approx. 25 refs. Text in Russian. **Title tr.:** The karyology of some *Ranunculus* species in the Polar Alpine Botanical Garden.

Reports some 70 species studied. Of these the general *Aquilegia* and *Anemone* showed polyploid cells in their tissues. This is assumed to be due to changed physiological and chemical conditions in their new environment in the Botanical Garden in Khibiny Tundra. (DLC.)

76682. ZHURAVLEV, E. V. Kolkhoz "Ena" idet v goru. (Sel'skoe khoziāĭstvo Severo-Zapadnoĭ zony, May 1961. god 4, no.5, p.90.) Text in Russian. **Title tr.:** The Yena collective farm is moving up-hill.

Outlines the achievements in stock breeding by this collective in Murmansk Province: average annual yield of 3,520 kg. milk/cow, a threefold increase in 1959 as compared with 1953; hay production has doubled; kale *(Brassica subspontanea planifolia)* is grown for silage, etc. Competition between Yena and the Zapolyarnyy Trud collective is noted. (DLC.)

76683. ZHURAVLEV, E. V. V zverosovkhoze "Murmansk". (Sel'skoe khoziāĭstvo Severo-Zapadnoĭ zony, May 1962, no.5, p.89.) Text in Russian. **Title tr.:** On the Murmansk state fur farm.

Notes increase in stock (cattle, milk), equipment (trucks, etc.), and output (four thousand blue fox skins); production rose from 312,000 rubles in 1960 to 512,000 in 1961. Some failures, such as poor fodder production, are noted. (DLC.)

ZHURAVLEV, L. G., *see* Borisenko, L.F., & *others.* O korreliātivnoĭ sviāzi srednego soderzhaniĭa skandiĭa . . . 1961. No. 70329

ZHURAVLEV, V. K., *see* Plekhanov, G.F., & *others.* O vliiānii vzryva . . . 1961. No. 74820

ZHURAVLEV, VSEVOLOD SERGEEVICH, *see* Raaben, M.E., & V.S. Zhuravlev. Sopostavlenie razrezov rifeĭa . . . 1962. No. 75007

76684. ZHURAVLEVA, Z. A., *and* **V. A. KOMAR.** K stratigrafii rifeĭa (siniĭa) Anabarskogo massiva. (Akademiĭa nauk SSSR. Doklady, May 1, 1962. t.144, no.1, p.197-200.) 11 refs. Text in Russian. **Title tr.:** On stratigraphy of Riphean (Sinian) deposits of the Anabar massif.

Reports on 1958 and 1960 studies in the eastern, southeastern, southern and western slopes of the massif. Stromatolites, oncolites, also microscopic and problematic organic remains are given according to layers, with special attention to the Billyakh series. Some stratigraphic adjustments were made. (DLC.)

76685. ZHURAVLEVA, Z. A., *and others.* Stroenie i vozrast otlozheniĭ, otnosimykh k tolbinskoĭ svite; iūgo-vostochnaĭa ĪAkutiĭa. (Akademiĭa nauk SSSR. Doklady, Sept. 21, 1961. t.140, no.3, p.658-61, diagrs.) 12 refs. Text in Russian. *Other authors:* V.A. Komar *and* N.M. Chumakov. **Title tr.:** Structure and age of deposits referred to the Tolba series; southeastern Yakutia.

Analyzes the stratigraphy of the Tolba series in the northern and western slopes of the Aldan shield. It consists of two parts different in age, the lower Precambrian, upper Cambrian. Correlation of stratigraphic columns is presented and evaluated. Spore-pollen analyses are reported. (DLC.)

76686. ZHUZE, ANASTASIĪA PANTELEĬMONOVNA, 1906– . Stratigraficheskie i paleogeograficheskie issledovaniĭa v severo-zapadnoĭ chasti Tikhogo okeana. Moskva, Izd-vo Akademii nauk SSSR, 1962. 260 p. illus., incl. plates, tables, charts, diagrs. (Akademiĭa nauk SSSR. Institut okeanologii.) Approx. 200 refs. Text in Russian. Summary in English. **Title tr.:** Stratigraphic and paleogeographic investigations in the northwestern part of the Pacific Ocean.

Presents a study of the stratigraphy and geographic sedimentation conditions based on diatom analysis. The bottom sediments were collected by the R/V *Vitiāz'*, during 1949-1955 in the Okhotsk, Bering and Japan Seas and the Commander-Kamchatka regions of the Pacific. Earlier reported

data are included as well as a great deal new. The method of investigating diatoms in bottom sediments, especially suitable for revealing paleoclimatic and paleoecologic sedimentation conditions, is described. In the Bering and Okhotsk Seas, the diatom content reaches 30-50%, in the northwestern Pacific 25%. On the Okhotsk and Bering bottom areas, three zones are distinguished: oceanic, neritic and neritic-oceanic; for each, the diatom species are analyzed. Five stratigraphic horizons are identified in the sediments. The changes of climate, occurrence of transgressions and regressions, and other features of the geologic history of these seas are characterized. (DLC.)

ZHUZE, ANASTASIĬA PANTELEĬMONOVNA, 1906– , *see also* Pacific Science Congress. 1961. No. 74619

ZHUZGOV, L. N., *see* Dolginov, Sh. Sh., & *others*. Nekotorye . . . postoĭannogo magnitnogo poliā . . . 1962. No. 71066

ZHVANIĬA, T. O., *see* Éristavi, K.D., & *others*. O deĭstvii gibernatsii . . . 1961. No. 71286

76687. ZIĀT'KOVA, L. K., *and* **E. N. PETROV.** Analiz prodol'nykh profileĭ rek v tseliākh poiskov struktur v Zapadno-Sibirskoĭ nizmennosti. (Akademiiā nauk SSSR. Izvestiiā, ser. geograficheskaiā, May-June 1961. no.3, p.89-90, map.) 4 refs. Text in Russian. **Title tr.:** Analysis of the longitudinal profiles of rivers in the search for structures on the West Siberian lowland.

Reports use of a geologic-geomorphic method for the detection of recent tectonic movements and structures in Vakh - Tym - Taz interfluve in east-central Tyumenskaya Oblast'. Longitudinal profiles were analyzed and a map developed, with aid of topographic maps and air photos, showing falls on the streams. This map is presented and the method is considered suitable for detecting second- and third-order structures. (DLC.)

76688. ZIAUDDIN, SYED. Polar-cap absorption following the solar flare of July 16, 1959. (Canadian journal of physics, Dec. 1961. v.39, no.12, p.1882-87, table, diagrs.) 6 refs.

Discusses short-term recoveries of the cosmic noise level, associated with auroral disturbances, as observed in Canada during the PCA event. It is suggested that the recoveries were due to a magnetic screening mechanism resulting from the interaction of the aurora producing plasma with the geomagnetic field. (DLC.)

ZIBAREV, V. A., *see* Nauchnaiā konferentsiiā po istorii . . . Dal'nego Vostoka. 1960. No. 74233

76689. ZIBROV, V. Mastera pestsovogo promysla. (Okhota i okhotnich'e khoziāĭstvo, Oct. 1961. god 7, no.10, p.11-12.) Text in Russian. **Title tr.:** Masters of arctic-fox hunting.

Describes activities of the Dikson promkhoz (commercial hunting establishment) as reorganized in 1959: 1,200,000 rubles worth of skins were delivered, 300 tons of marine mammals and 17 tons of fish caught. In five months of 1960, the 52 hunters of the promkhoz delivered skins worth 130,000 rubles (new currency); some take up to 300 arctic foxes a season. The promkhoz hunting grounds are characterized, hunting and trapping methods noted, and the most successful hunters cited. (DLC.)

76690. ZIBROV, V. Na pestsa s borzoĭ. (Okhota i okhotnich'e khoziāĭstvo, Jan. 1961. god 7, no.1, p.13.) Text in Russian. **Title tr.:** Hunting arctic fox with a borzoi.

Notes an experiment in the tundra at Omulevaya Bay near Dikson: the Russian wolf hound caught 15 foxes without damage to the skin during one winter. (DLC.)

76691. ZIEGELMEIER, E. Investigations on the bottom fauna in the shelf region off SW Iceland and SE Greenland during the research cruise with "Anton Dohrn" in the IGY. (International Council for the Exploration of the Sea. Rapports et procès-verbaux des réunions 1961. v.149. Contributions to Special IGY Meeting 1959, p.209.) Ref.

Notes the most important groups in the macrobenthos, areas of differing abundance, their characteristics, depth range, leading forms. (DI.)

76692. ZIEGLER, PETER A. Frühpaläozoische Tillite im östlichen Yukon-Territorium, Kanada. (Ecologae geologicae Helvetiae, 1959, special issue, Festschrift Professor Dr. Rudolf Staub, *pub.* Jan. 20, 1960. v.52, nr.2, p.735-41, illus., graph, map, profile.) 7 refs. Text in German. Summary in English. **Title tr.:** Early Paleozoic tillites in eastern Yukon Territory, Canada.

Describes a tillite in the Bonnet Plume River area at 65° 18′ N. 134° 35′ W. and another covering over 100 sq. mi. in the Mackenzie Mts. The former, 2600 ft. thick, is Precambrian to Eo-Cambrian; the latter, up to 3000 ft. thick, is of Cambro-Ordovician age. Both are considered to have been deposited under marine glacial conditions. (DGS.)

ZIEGLER, WILLIAM S., *see* National Northern Development Conference. 1961. No. 74224

76693. ZIEMLAŃSKI, ŚWIATOSŁAW, *and* **W. BEREZOWSKI.** Zmiany temperatury błony śluzowej żołądka pod wpływem działanie niektórych neurohormonow, 1; działanie acetylcholiny, adrenaliny i noradrenaliny. (Acta physiologica polonica, 1961. v.12, fasc. 2, p.231-44, illus.) 29 refs. Text in Polish. Summary in English. **Title tr.:** Temperature changes in the gastric mucosa under the influence of certain neurohormones, 1; effect of acetylcholine, adrenaline and noradrenaline.

Acetylcholine, in specified doses, caused a slight rise of mucosal temperature in dogs then a fall and a return to normal. Electric stimulation of the vagus nerve produces similar changes. Atropine inhibits both reactions. Adrenaline caused a brief fall, followed by a rise, and return to normal. Noradrenaline produced a sharp, brief rise in temperature. (DLC.)

ZIEMLAŃSKI, ŚWIATOSŁAW, *see also* Berezowski, W., & Ś. Ziemlański. Zmiany temperatury . . . 1961. No. 70148

ZIKEEV, NIKOLAY T., *see* Sergeev, A.I. Razrabotka . . . 1956. No. 75493

76694. ZIMAKOV, B. M. Vliiānie geologicheskikh uslovii na gazonosnost' ugol'nykh mestorozhdeniĭ Pechorskogo basseĭna. (Izvestiiā vysshikh uchebnykh zavedeniĭ. Geologiiā i razvedka, July 1961, no.7, p.78-92, tables, map, diagrs.) 13 refs. Text

in Russian. **Title tr.:** The influence of geologic conditions on gas-bearing properties of coal deposits in the Pechora basin.

Describes methane, carbon dioxide, nitrogen, hydrogen, and other gases in the Pechora coal mines, involved in safety measure requirements. Factors affecting distribution of gases are considered: physical - chemical properties of the coal, its porosity, permeability, etc. Tectonics, permafrost and other features also are evaluated in respect to gas occurrence, and three types of factors are distinguished. (DLC.)

76695. ZIMM, ALFRED. Die Kohlenwirtschaft der Sowjetunion. (Zeitschrift für den Erdkundeunterricht, *Berlin,* Jan. 1962. Jahrg. 14, Heft 1, p.1-22, map, tables.) 13 refs. Text in German. **Title tr.:** The coal economy of the Soviet Union.

Includes brief description: of the Pechora basin in the Komi ASSR, the Tunguska, east Yenisey, Taymyr, Lena, Indigirka-Kolyma, and south Yakutia basins in Siberia; and in the Far East the Omsukchan (62°32′N. 155°48′E.), Omolon (64°07′N. 161°E.), Anadyr, Avekova (61°55′N. 160°23′E.), and Okhotsk (approx. 59°N. 163°E.) basins, and Kamchatka Peninsula. Types of coal and estimated reserves are indicated. (DLC.)

ZINCHENKO, A. P., *see* Antsypalovskiĭ, IÙ. F., & A.P. Zinchenko. O povyshennoĭ chuvstvitel'nosti k kholodu. 1961. No. 69827

ZINDER, LEV RAFAILOVICH, *see* Bondarko, L.V., & L.R. Zinder. Foneticheskaîa kharakteristika . . . 1962. No. 70319

76696. ZINGER, EVGENIĬ MAKSIMOVICH. Est' li na Urale ledniki? (Ogonëk, Mar. 1961. god 39, no.11, p.16.) Text in Russian. **Title tr.:** Do glaciers occur in the Ural?

Notes the work of the Institute of Geography (Academy of Sciences) glaciological station in the Polar Ural at Bol'shaya Khadata Lake, 80 km. east of Vorkuta. It was set up as an IGY station, and in two years discovered nearly 80 small glaciers in the Polar and Northern Urals hitherto unknown; 120 are now known in the area. (DLC.)

76697. ZINGER, EVGENIĬ MAKSIMOVICH. Ledîanoe metro. (Ogonëk, Jan. 1961. god 39, no.5, p.7, illus.) Text in Russian. **Title tr.:** Ice subway.

Describes a 200 m. natural tunnel in a glacier on northwestern Novaya Zemlya; it was formed by a stream beneath the ice. (DLC.)

76698. ZINGER, EVGENIĬ MAKSIMOVICH. Mirazh v ledîanoĭ pustyne. (Ogonëk, Aug. 1961. god 39, no.34, p.10.) Text in Russian. **Title tr.:** Mirage in the ice desert.

Reports an optical phenomenon observed while setting up the Ledorazdel'naya glaciological station on Novaya Zemlya 800 m. above sea level: author and companions "saw" the Kara Sea to the east and Barents Sea to the west though neither is actually visible from that spot. The phenomenon is explained as a mirage caused by a warm layer of air spreading over the lower colder layer. (DLC.)

76699. ZINGER, EVGENIĬ MAKSIMOVICH, *and* **V. V. ÈNGEL'GARDT.** Snegonakoplenie i stai-vanie na lednike Shokal'skogo i prilegaîushcheĭ k nemu chasti novozemel'skogo lednikovogo shchita. (*In:* Akademiîa nauk SSSR. Institut geografii . . . Materialy glîatsiologicheskikh . . . 1961. vyp.3, p.19-26, illus., table, graphs, diagrs.) Text in Russian. **Title tr.:** Snow accumulation and degradation on Shokal'skogo Glacier and the adjacent part of the Novaya Zemlya glacial shield.

Reports on the snow cover study done in 1957-1959 at the Bar'yer-Somneniy and Ledorazdel'naya stations. Snow accumulation and ablation measurements are tabulated. Pertinent meteorological factors: winds, humidity, solar radiation, etc. are analyzed. Snow balance, glacier movement and other features are briefly reviewed. (DLC.)

ZINGER, EVGENIĬ MAKSIMOVICH, *see also* Akademiîa nauk SSSR. Institut geografii. . . . Novaîa Zemlîa, snezhnyĭ pokrov. 1962. No. 69551

76700. ZINGG, W., *and* **S. KANTOR.** Observations on the temperatures in the brain during extracorporeal differential hypothermia. (Surgical forum, 1960. v.11, p.192-93.) Refs.

Temperature gradients of up to 7°C. between various parts of the brain were noted during cooling, indicating a poor heat conductivity of this organ. During cooling (and rewarming), the brain showed a lag in temperature, when compared with the esophagus, or jugular vein. (DNLM.)

ZINKOV, A. P., *see* Gnevushev, M.A., & *others.* Dannye o zakonomernostîakh raspredeleniîa almazov . . . 1961. No. 71712

ZINOV'EV, E. SH., *see* Bondarev, G.I., & *others.* Ènergeticheskie zatraty . . . 1962. No. 70318

ZLOBIN, V. S., *see* Fedorov, A.F., *and* V.S. Zlobin. Gamma-fon . . . 1962. No. 71352

76701. ZOL'NIKOV, G. V. Granatsoderzhashchie porody Anabarskogo shchita i ikh sravnenie s vklîucheniîami v kimberlitakh. (*In:* Akademiîa nauk SSSR. Sibirskoe otdelenie. IÂkutskiĭ filial. Petrografiîa i mineralogiîa . . . almazov 1962. Trudy, sbornik no.8, p.110-20, illus., tables, diagr., map.) 6 refs. Text in Russian. **Title tr.:** Garnet-containing rocks of the Anabar shield and their comparison with inclusions in kimberlites.

Presents a petrographic account of garnet-biotite gneisses, cordierite-hypersthene-biotite garnet gneisses, amphibole-diopside-garnet rocks and hypersthene-garnet gneisses. Mineral and chemical composition of these rocks is described. Eclogite-like rocks are not present in the Anabar shield. Garnet-containing rocks are compared with similar rocks included in kimberlite pipes, and certain similarities, also differences are noted. (DLC.)

76702. ZOL'NIKOV, V. G. O nakhodke *Mammonteus primigenius* Bl. v Megino-Kangalasskom raĭone IÂkutskoĭ ASSR. (Akademiîa nauk SSSR. Komissiîa po izucheniîu chetvertichnogo perioda. Biîulleten' 1960. no.24, p.104-109, illus., table.) 3 refs. Text in Russian. **Title tr.:** The find of *Mammonteus primigenius* Bl. in the Megino-Kangalasskiy District of Yakut ASSR.

Describes the mammoth remains, site and life conditions found in the alluvium of the right bank

of the Suola River (62°04′N. 130°E.), tributary to the Lena. An almost complete skeleton has been obtained as well as additional fragments and some other mammal bones. This mammoth is established as *Mammonteus primigenius* Blumenbach. Results of spore-pollen analyses of seven rock samples from the site are tabulated. The mammoth is presumed to have lived in warmer climate than the present. (DLC.)

76703. ZOL'NIKOV, V. G. O nakhodke ostatkov zhivotnykh mamontovogo kompleksa na r. Suole v Megino-Kangalasskom raĭone IAASSR. (Akademiia nauk SSSR. Izvestiia, ser. geograficheskaia, May-June 1961. no.3, p.81-85, table.) 4 refs. Text in Russian. **Title tr.:** The find of animal remains of the mammoth complex on the Suola River in the Megino-Kangalasskiy District, Yakut ASSR.

Reports a find in 1955 of a *Mammonteus primigenius,* Blumenbach skeleton also bison, reindeer and other remains in the 13-15 m. terrace of the Suola River (62°04′N. 130°E.). The site and its alluvial deposits are described. The mammoth evidently perished in the permafrost conditions in the Pleistocene. Results of spore-pollen analyses are reported, the fossil vegetation identified and evaluated. (DLC.)

ZOLOTAREV, M. A., *see* Leningrad. Arkticheskiĭ . . . institut. Uchashchennye aėrologicheskie nabliudeniia . . . 1959. No. 73410

76704. ZOLOTAREVA, I. M. Antropologicheskoe issledovanie nganasan; predvaritel'noe soobshchenie. (Sovetskaia ėtnografiia, Nov.-Dec. 1962, no.6, p.131-36, diagr., tables.) 6 refs. Text in Russian. **Title tr.:** Anthropological survey of the Nganasans, a preliminary report.

Craniological study from measurements made in 1961 on 122 male and 91 female Nganasan Samoyeds of the Avam and Vadeyevskiy districts, Taymyr National District. Physical characteristics of the Nganasans, as representative of Sayan-Altay Mongoloids, are compared with those of the Sel'kup Samoyeds and Ket Yeniseians with their Europoid admixture. The Nganasans cannot be attributed without reservation to any known anthropological type of Siberia, and they may represent remnants of an aboriginal stratum of central Siberia preserved by ethnic isolation in the Taymyr Peninsula. Comparative craniological data are tabulated for Nganasans, Nenets Samoyeds of the Taz River, Ket Yeniseians of the Yeloguy, Evenki Tungus of the Podkamennaya Tunguska, Taz, Lake Baunt, and for Buryats. (DLC.)

ZOLOTAREVA, I. M., *see also* Alekseeva, T.I. Otchetnaia arkheologo-ėtnograficheskaia sessiia 1962. No. 69705

76705. ZOR'KIN, L. M. Novye dannye po gazonasyshchennosti podzemnykh vod produktivnykh gorizontov Berezovskogo gazonosnogo raĭona. (Geologiia nefti i gaza, May 1962. god 6, no.5, p.44-49, charts, graph.) 7 refs. Text in Russian. **Title tr.:** New data on gas saturation of subsurface waters of producing horizons in the Berezovo gas-bearing region.

Reports hydrogeologic study on the Hauterivian-Barremian H horizon and the Callovian basal horizon. Chemical composition of the soluble gases, saturation of stratal waters, and pressure of gases are reported. Appraisal of the gas-bearing properties of the region is made according to the composition and buoyancy of gases dissolved in subsurface waters. (DLC.)

ZOR'KIN, L. M., *see also* Rudkevich, M. IA., & L.M. Zor'kin. Perspektivy neftegazonosnosti . . . 1961. No. 75256

76706. ZOTKIN, I. T. Ob anomal'nykh opticheskikh iavleniiakh v atmosfere sviazannykh s padeniem Tungusskogo meteorita. (Meteoritika, 1961, vyp. 20, p.40-53, tables, map.) 47 refs. Text in Russian. **Title tr.:** On abnormal optical phenomena in the atmosphere connected with the fall of the Tunguska meteorite.

Reviews optical phenomena during, after, and before June 30, 1908, as observed in various cities and countries of Europe, and as published in various papers. The 114 observation points are listed with some basic notes, and an evaluation of of these reports is made. The intensity, duration, and height of the optical phenomena are summarized: the Tunguska meteorite was a small comet. (DLC.)

ZOTKIN, I. T., *see also* Florenskiĭ, K.P., & I.T. Zotkin. Novye poiski . . . 1962. No. 71446

76707. ZUBAKOV, V. A. Paleogeograficheskie usloviia oledeneniia Prieniseĭskoĭ chasti Sibiri v pleĭstotsene. *(In:* Leningrad. Vsesoiuznyĭ n. -i. geologicheskiĭ institut. Trudy 1961, t.64, Problemy chetvertichnogo . . . , p.71-86, table, map, diagrs.) Text in Russian. **Title tr.:** Paleogeographic conditions of Pleistocene glaciation west of the Yenisey in Siberia.

Reports a study of Quaternary deposits filling the recent tectonic depression, north of 62° N. 86-88° E. They are 100-120 m. thick, and to 250-300 m. in a buried canyon. A stratigraphic division of the Pleistocene deposits in this depression between 61° and 64° 30′N., and 64° 30′ - 74° N. is summarized in a table noting briefly their lithology, facies and paleontologic characteristics. Nine climatic phases are distinguished, and for each the horizons and paleogeographic conditions are characterized. (DLC.)

76708. ZUBAKOV, V. A. Sovremennoe sostoianie problemy pleĭstotsenovogo oledeneniia Sibiri. *(In:* Leningrad. Vsesoiuznyĭ n.-i. geologicheskiĭ institut. Trudy 1961, t.64, Problemy chetvertichnogo . . ., p.5-26, tables, maps.) Text in Russian. **Title tr.:** The present status of problems of the Pleistocene glaciation of Siberia.

Reviews the studies and groups them into five periods. The extent of continental glaciation is noted as a still disputed problem. The inadequacies of glacial terminology are discussed. The amplitude of climatic fluctuations during the Pleistocene and the number of glaciations are evaluated noting the prevailing disagreement on these problems also. Paleogeographic hypotheses are outlined such as the metachronism and synchronism of European and Siberian glaciations, development of Siberia's glaciation simultaneously with transgression of the northern seas, etc. Problems in the stratigraphic correlation of Quaternary deposits are also reviewed and some

suggestions given for their handling. Seven paleogeographic regions in USSR during the Pleistocene are noted. (DLC.)

76709. ZUBAKOV, V. A. Stratigrafiia i paleogeografiia chetvertichnykh otlozhenii Prieniseiskoĭ Sibiri. *(In:* Vsesoiuznoe soveshchanie po izucheniiu chetvertichnogo perioda. Materialy . . . 1961, t.3, p.157-66, table.) Text in Russian. **Title tr.:** Stratigraphy and paleogeography of the Quaternary deposits of the Yenisey region of Siberia.

Presents a stratigraphic division of Quaternary deposits, for the glaciated and non-glaciated areas of the middle Yenisey. This division is based on study of river terraces and their sections, with spore-pollen analysis and data of fauna and flora as paleontologic substantiation. Tectonic movements are analyzed and five phases noted. Their effects on the paleogeography of the region are summarized. (DLC.)

76710. ZUBOV, A. Ondatra na ozere Irkana. (Sel'skoe khoziaĭstvo Sibiri, Apr. 1961. god 6, no.4, p.76.) Text in Russian. **Title tr.:** Muskrat on Irkana Lake.

Reports on 183 muskrats released in 1932 at Irkana Lake (55°50′N. 111°14′E.) in the Angara basin. They spread fast, and when trapping was allowed 18,130 were taken in 1938, 55,314 in 1947; then the take began to decline and reached less than 10,000. The causes are discussed: depletion of the water resources, predators (dogs), overtrapping i.e. beyond legal limit, etc. (DLC.)

76711. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885–1960. Semen Ivanovich Chelīuskin, XVIII v. *(In:* Kuznetsov, I.V., *ed.* Liūdi . . . 1962, p.356-65, map.) 13 refs. Text in Russian.

Describes Chelīuskin's explorations during 1733-1743 in connection with the Great Northern Expedition. The route of the *Ĭakutsk* down the Lena, the Lena delta, along the coast of the Laptev Sea, and Khatanga Bay is described in detail. The *Ĭakutsk* beset in ice, was abandoned and further explorations were carried on with dogs for transport. The discovery of Cape Chelyuskin and the other discoveries of S.I. Chelīuskin and others are reported. His fate after return to St. Petersburg is briefly sketched. (DLC.)

76712. ZUBOV, NIKOLAĬ NIKOLAEVICH, 1885–1960. Vladimir Aleksandrovich Rusanov, 1875-1913. *(In:* Kuznetsov, I.V., *ed.* Liūdi . . . 1962, p.548-58, port.) 8 refs. Text in Russian.

Describes his life and investigations of Novaya Zemlya and partly Spitsbergen, 1907-1912. As a revolutionary, Rusanov was arrested several times and unable to finish his studies at Kiev University. In 1903 he emigrated to France and completed his geologic studies in Paris in 1907. His first voyage to Novaya Zemlya was made in 1907 on *Koroleva Ol'ga.* In 1908 he took part in the French expedition to Novaya Zemlya and in 1909, 1910, and 1911 in the Russian expeditions thither. In 1912 on the *Gerkules,* he led an expedition to Spitsbergen, and on the return from Spitsbergen he attempted to find a new route to the east and was lost. Only in 1934 and later were the remains of this expedition found on Kara Sea Islands and Severnaya Zemlya. (DLC.)

ZUBRILOV, L. E., *see* Alekseevskiĭ, I.G., & L.E. Zubrilov. Sokratit' . . . 1961. No. 69706

76713. ZUEV, A. Brigada i brigadir. (Master lesa, Jan. 1961, no.1, p.20.) Text in Russian. **Title tr.:** The team and team leader.

Discusses team organization and role of the team leader in the lumbering industry of Arkhangel'sk Province; of 3000 logging teams, 2250 are two-man. (DLC.)

76714. ZUEV, A. G. Produktivnost' i rasprostranenie kholmogorskogo skota. (Sel'skoe khoziaĭstvo Severo-Zapadnoĭ zony, Aug. 1961. god 4, no.8, p.51-54, diagrs.) Text in Russian. **Title tr.:** Productivity and distribution of Kholmogory cattle.

Outlines this cattle-raising industry, a purebred 150,000 head herd, centered in the Kholmogorskiy and Primorskiy Districts of Arkhangel'sk Province, with 23 collective farms and four state farms engaged. The annual milk yield averages 3,200 kg./cow, giving 499 cwt. of milk per 100 hectares of land and meadows. The Novaya Zhizn' collective farm gets 4,922 kg. milk/cow and 938 cwt./100 hectares. Kholmogory cattle are sent to all parts of the Soviet Union, including Karelia, Komi, Yakutia and Kamchatka, and the income from this trade amounts to over a million rubles/yr. in some collectives. (DLC.)

76715. ZUKERMAN, HAROLD, *and* **N. ZUKERMAN.** A community council. *(In:* Canada. Dept. of Northern Affairs and National Resources. Northern welfare . . . 1962, p.21-28.)

The regional superintendent of welfare at Frobisher Bay and his wife, the area social worker describe the local Eskimos' efforts toward establishment of the community council at Frobisher Bay: their initial meetings with social workers, electing their own representatives (including women) from Apex Hill, Ikaliut and the Base, their selection of white representatives, agenda of first three council sessions. (CaMAI.)

ZUKERMAN, NORMA, *see* Zukerman, H., & N. Zukerman. Community council. 1962. No. 76715

76716. ZVEDER, L. N. K voprosu o geologii Daldynskogo kimberlitovogo polia na severe Sibirskoĭ platformy. *(In:* Akademiia nauk SSSR. Ĭakutskiĭ filial. Almazy Ĭakutii . . . 1961, p.18-23, map.) 3 refs. Text in Russian. **Title tr.:** On the geology of the Daldyn kimberlite field in the northern Siberian platform.

Analyzes the tectonic structure of the Daldyn region, distinguishing flexures, small domes, depressions and other features. Orientation of fractures is diagrammed from some six hundred measurements. Kimberlite pipes are mostly tied to flexures or tectonic fractures. Three groups of kimberlite pipes and trap dikes are differentiated according to position and orientation. Kimberlite bodies are found in lower Paleozoic rocks with trap sills, an important criterion in search. (DLC.)

76717. ZVEDER, L. N. O priurochennosti daek i sillov diabazov k nekotorym sistemam treshchin. (Geologiia i geofizika, 1962, no.4, p.127-28, illus.) 9 refs. Text in Russian. **Title tr.:** On the confinement of diabase dikes and sills to certain systems of fractures.

Describes distribution of diabase dikes and sills in the Daldyn-Alakit diamond-bearing region

of Yakutia. The dikes are confined to the tectonic fractures. A diagram of the orientation of tectonic features, based on 480 measurements, is presented and the prevailing patterns are summarized. This type of study may be utilized for the detection of kimberlite pipes. (DLC.)

ZVEDER, L. N., *see also* Mikheenko, V.I. O vozrastnom vzaimootnoshenii . . . 1961. No. 73993

76718. ZVEREV, ANATOLIĬ ARSEN'EVICH. Morskie gidrologicheskie prognozy. Leningrad, Izd-vo "Morskoĭ transport", 1961. 292 p. charts, tables & graphs incl. fold. 78 refs. Text in Russian. **Title tr.**: Marine hydrological forecasts.

Textbook for higher schools of marine engineering, in three parts. The first deals with general problems of hydrological forecasting. The second describes methods and calculations for forecasting wave, current and sea-level fluctuations. Finally sea-water temperature and ice conditions are dealt with: short- and long-range forecasts of freeze-up, thickness of ice cover, drifting of ice, distribution of ice and icebergs, etc. Long-range forecasting of ice distribution in the arctic seas is treated specifically, p.263-68. (DLC.)

766719. ZVEREV, S. M. O stroenii osadochnoĭ tolshchi nekotorykh uchastkov Tikhogo okeana po dannym seĭmicheskikh otrazhennykh voln. (Akademiîa nauk SSSR. Izvestiîa, ser. geologicheskaîa, Feb. 1961, no.2, p.80-86, graphs, profiles.) 3 refs. Text in Russian. **Title tr.**: On the structure of the sedimentary stratum in certain sections of the Pacific according to seismic reflected wave data.

Reports deep seismic soundings carried out in 1957-1958 near Kamchatka, the Commander Islands and the Aleutian Trench. Depths of the sedimentary stratum and features of the relief are reported. Deep tundras are characterized by a stratum horizontally bedded and subject to little change, whereas the sedimentary stratum of shelves has a complicated relief. This stratum in the Aleutian Trench is 2-2.5 km. thick two-three-fold that in the Kuril - Kamchatka Trench. (DLC.)

ZVEREV, S. M., *see also* Aver'îanov, A.G., & *others*. Deep seismic sounding . . . 1961. No. 69921

ZVEREV, V. L., *see* Knorre, K.G., & *others*. Vozrast gornykh porod . . . 1962. No. 72873

76720. ZVÎAGINA, O. A. Materialy po razmnozheniîu i razvitiîu ryb morîa Laptevykh; 1, vostochnosibirskaîa treska. *Arctogadus borisovi* Gadidae. (Akademiîa nauk SSSR. Institut okeanologii. Trudy 1961. t.43, p.320-27, illus., tables.) 14 refs. Text in Russian. **Title tr.**: Materials on the reproduction and development of Laptev Sea fish; 1, the East-Siberian cod *Arctogadus borisovi* Gadidae.

Presents the first description of larvae and fry of this arctic form, with morphological and morphometric records. Comparative data for the Atlantic and Pacific cod are also given. (DLC.)

ZVÎAGINTSEV, OREST EVGEN'EVICH, 1894–, *see* Genkin, A.D., & O.E. Zvîagintsev. Vysotskit . . . 1962. No. 71628

76721. ZVONAREV, I. N. Tret'e soveshchanie Sibirskoĭ tematicheskoĭ komissii. (Geologiîa i geofizika, 1961, no.11, p.125-27.) Text in Russian. **Title tr.**: The third conference of the Siberian thematic commission.

Reports a conference in Apr. 1961 at Novokuznetsk; distribution and properties of Siberian coal were discussed, that of the Tungusskiy, Lena and Pechora basins among others; papers delivered are listed. (DLC.)

76722. ZVONKOV, VASILIĬ VASIL'EVICH. Razvitie vodnogo khozîaĭstva SSSR. (Akademiîa nauk SSSR. Vestnik, Oct. 1962. god 32, no.10, p.55-59.) Text in Russian. **Title tr.**: Water resources development in the USSR.

Reviews the status, prospects and planning: 180 new hydroelectric plants are to be built, to increase twelve-fold by 1980 the electric energy available. These plans include the diversion of 40 km³ water from the Pechora and Vychegda toward the Volga basin and of 300 km³ from Siberian rivers toward the Aral depression in the south. A scientific institute for water conservation and development should be set up. (DLC.)

76723. ZYKOV, M. Na bor'bu s pozharami. (Master lesa, Apr. 1961, no.4, p.18-19, illus.) Text in Russian. **Title tr.**: To combat fires.

Discusses damage caused by forest fires and need for greater prevention and control measures. Organization is weak and equipment lacking in several areas, including Arkhangel'sk Province and Komi ASSR, and that is why they suffered more from forest fires in 1960 than in 1959. (DLC.)

ZYKOV, S. I., *see* Zhirova, V.V., & *others*. O vozraste tsirkonov . . . 1961. No. 76673

76724. ZYRÎANOV, G. A. Natsional'nye i provintsial'nye parki Kanady. (Akademiîa nauk SSSR. Izvestiîa, ser. geograficheskaîa, July-Aug. 1961, no.4, p.137-39.) Ref. Text in Russian. **Title tr.**: National and provincial parks of Canada.

Reviews the size, distribution, character, attractions, administration, management, etc. of these parks, representing an area of 23 million hectares. Of the 37 national parks noted, Wood Buffalo and some others, are adjacent to, or within the Northwest Territories, which has 12% of the total. (DLC.)

76725. ZYRÎANOV, G. A. Sud'ba karibu. (Priroda, May 1961. god 50, no.5, p.110-111, illus.) Ref. Text in Russian. **Title tr.**: Fate of the caribou.

Discusses the taxonomic position and races of *Rangifer tarandus*. Its economic value to natives, migrations and migration paths, past distribution and abundance in Canada and Alaska are sketched; its exploitation, present numbers, wolf predation, conservation, etc. are also touched upon. (DLC.)

LANGUAGE SYMBOLS ATTACHED TO TITLES IN INDEX

Titles of all publications indexed in this volume are represented by key words *in English,* regardless of the language of their text. The latter is indicated by a single letter following the publication date.

B–Bulgarian
Ch–Chukchi
Cz–Czech
D–Danish
Du–Dutch
E–English
Es–Eskimo
Est–Estonian
F–French
Fi–Finnish
G–German
Go–Gold
Gr–Greek
H–Hungarian
He–Hebrew
I–Italian
Ic–Icelandic
J–Japanese
L–Latin
La–Latvian
Li–Lithuanian
Lp–Lappish
N–Norwegian
P–Polish
Port–Portuguese
R–Russian
Ro–Romanian
S–Swedish
Sa–Samoyed
S-C–Serbo-Croatian
Sp–Spanish
T–Tungus
U–Ukrainian
Y–Yiddish
Ya–Yakut
Z–Zyryan

*–Basic work

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Aberdeen Lake (Keewatin District; 64°27′N. 99° W.) & *region.*
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Acasta Lake (Mackenzie District; 65°22′N. 115° 33′W.).
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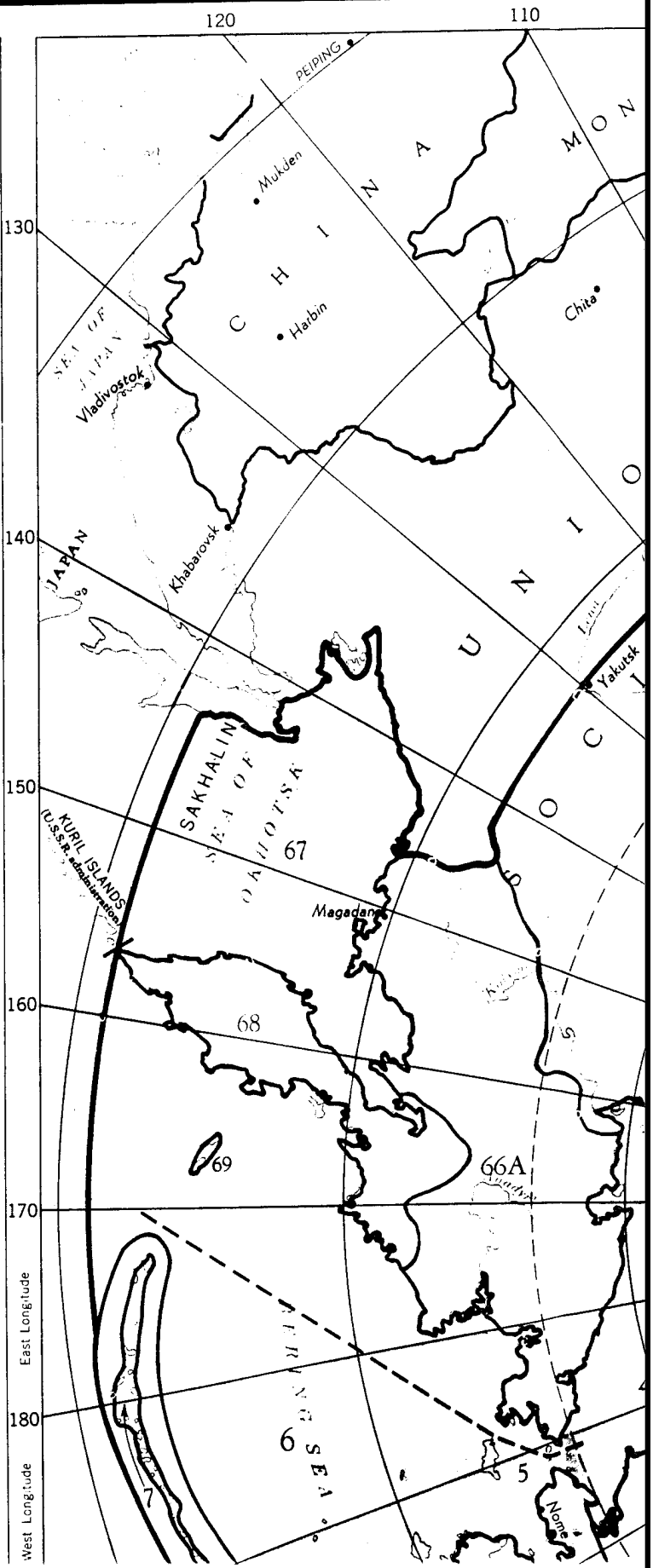

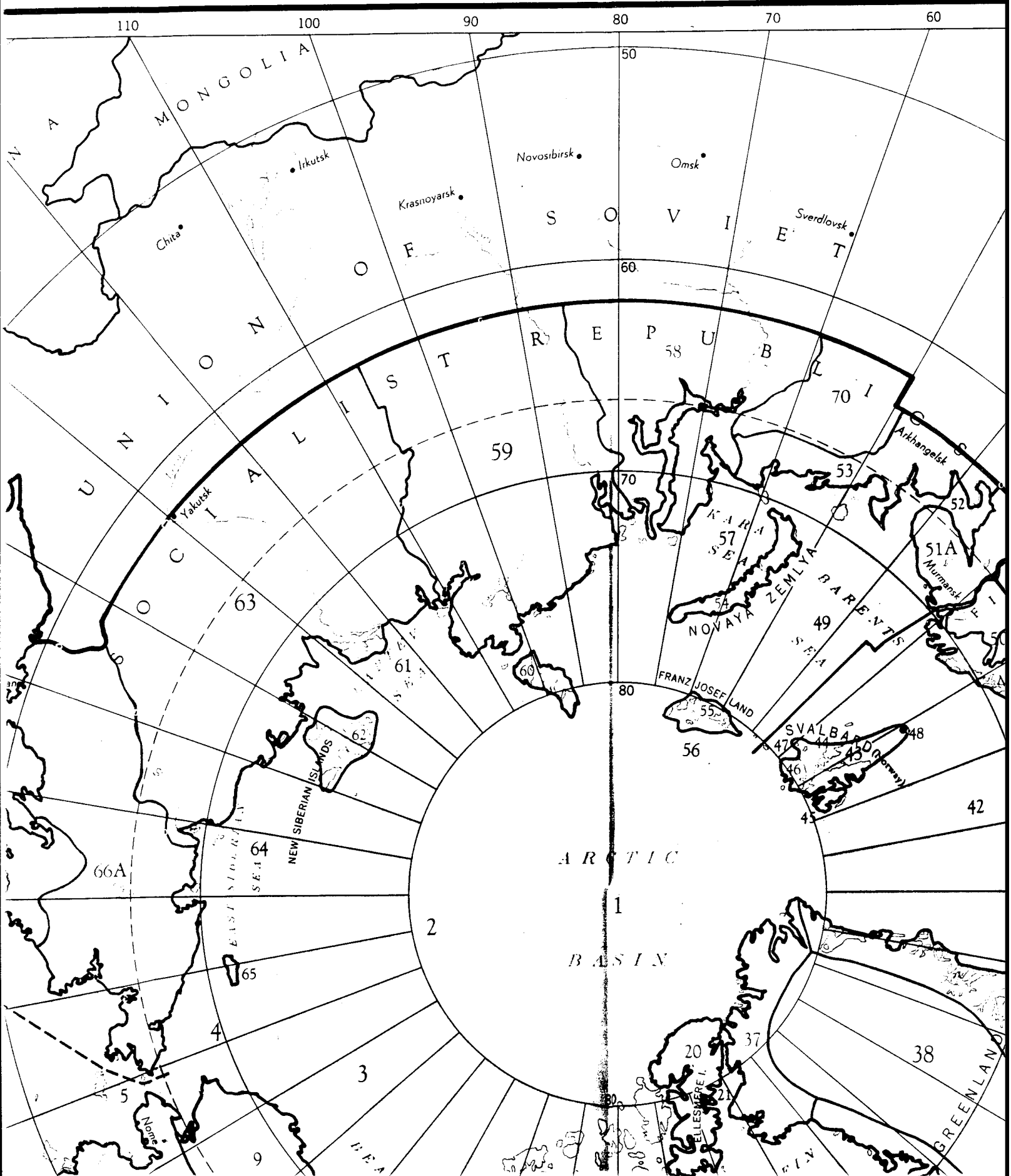
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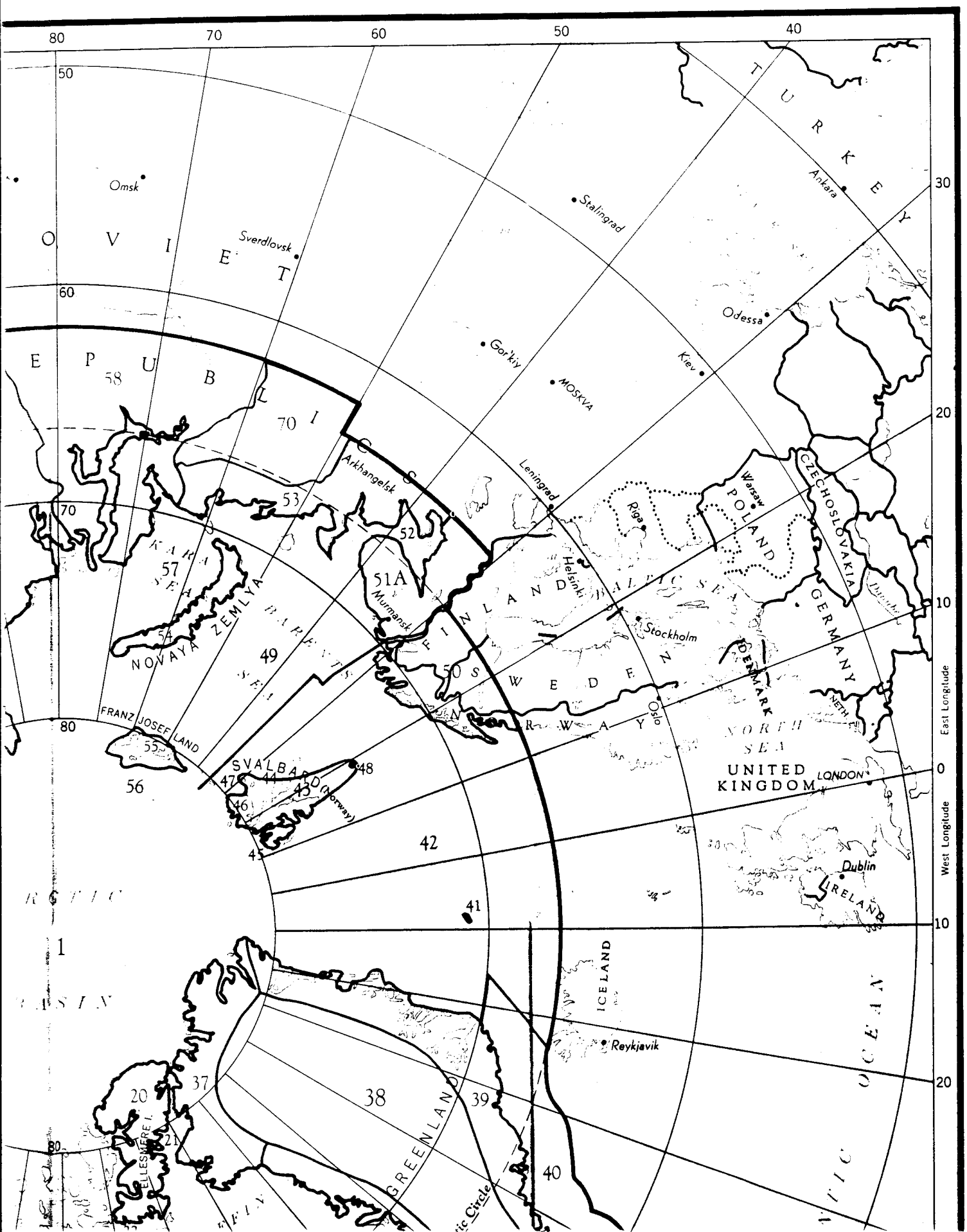
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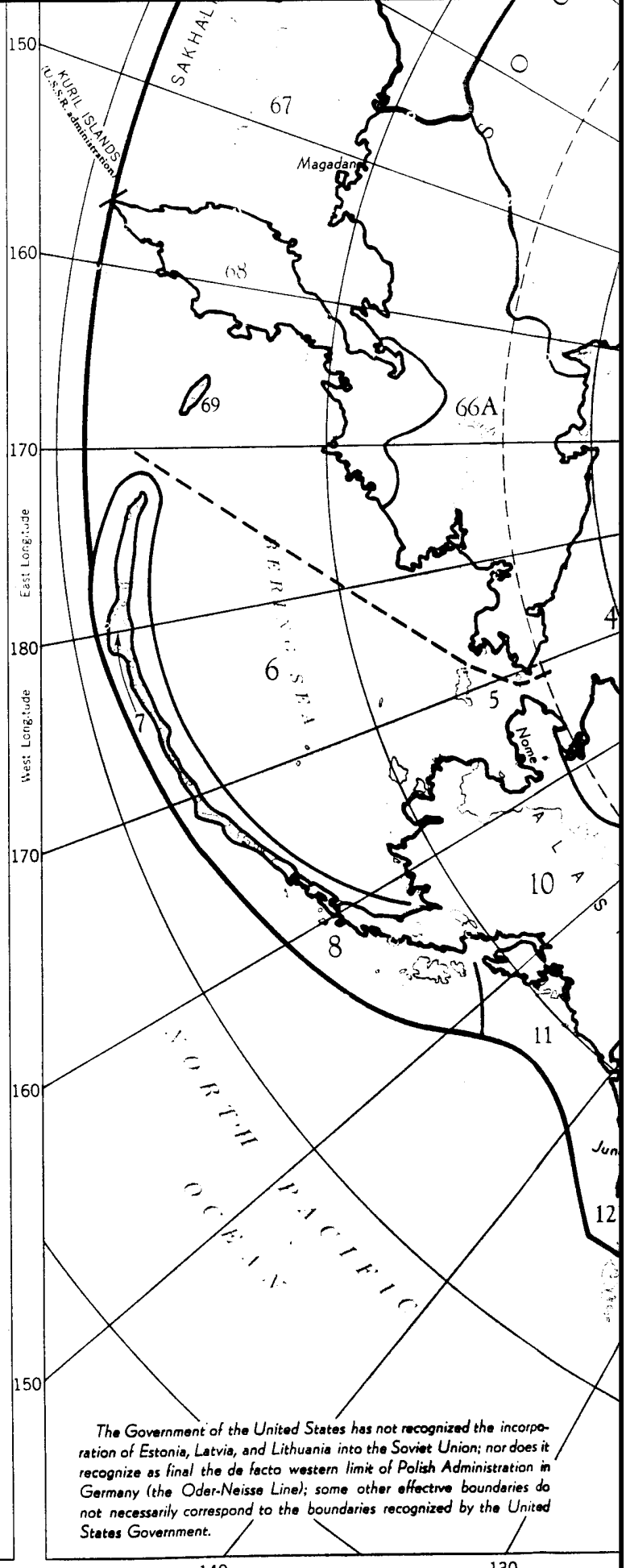
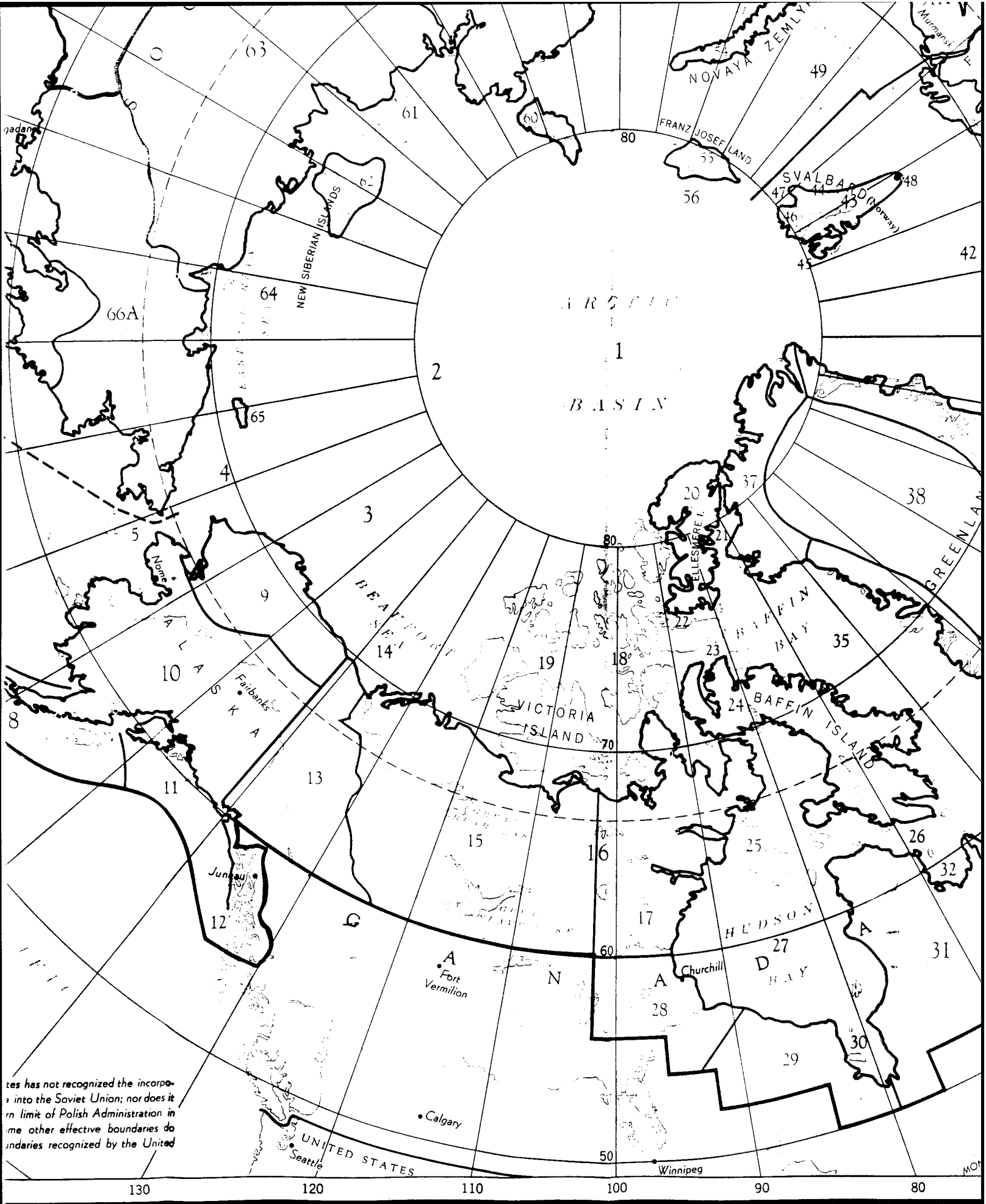
47. Kong Karls Land
48. Bjornoya
49. Barents Sea
50. Scandinavia and Finland
51A. Kol'skiy Poluostrov-Severnaya Kareliya
52. Beloye More
53. Arkhangel'skaya Oblast'
54. Novaya Zemlya
55. Zemlya Frantsa-Iosifa
56. Zemlya Frantsa-Iosifa waters
57. Karskoye More
58. Tyumenskaya Oblast' (formerly Omskaya Oblast')
59. Krasnoyarskiy Kray
60. Severnaya Zemlya
61. Laptevykh, More
62. Novosibirskiye Ostrova
63. Yakut A.S.S.R.
64. Vostochno-Sibirskoye More
65. Vrangelya, Ostrov
66A. Magadanskaya Oblast'
67. Okhotsk, Sea of
68. Kamchatka, Poluostrov
69. Komandorskiye Ostrova
70. Komi A.S.S.R.



The Government of the United States has not recognized the incorporation of Estonia, Latvia, and Lithuania into the Soviet Union; nor does it recognize as final the de facto western limit of Polish Administration in Germany (the Oder-Neisse Line); some other effective boundaries do not necessarily correspond to the boundaries recognized by the United States Government.



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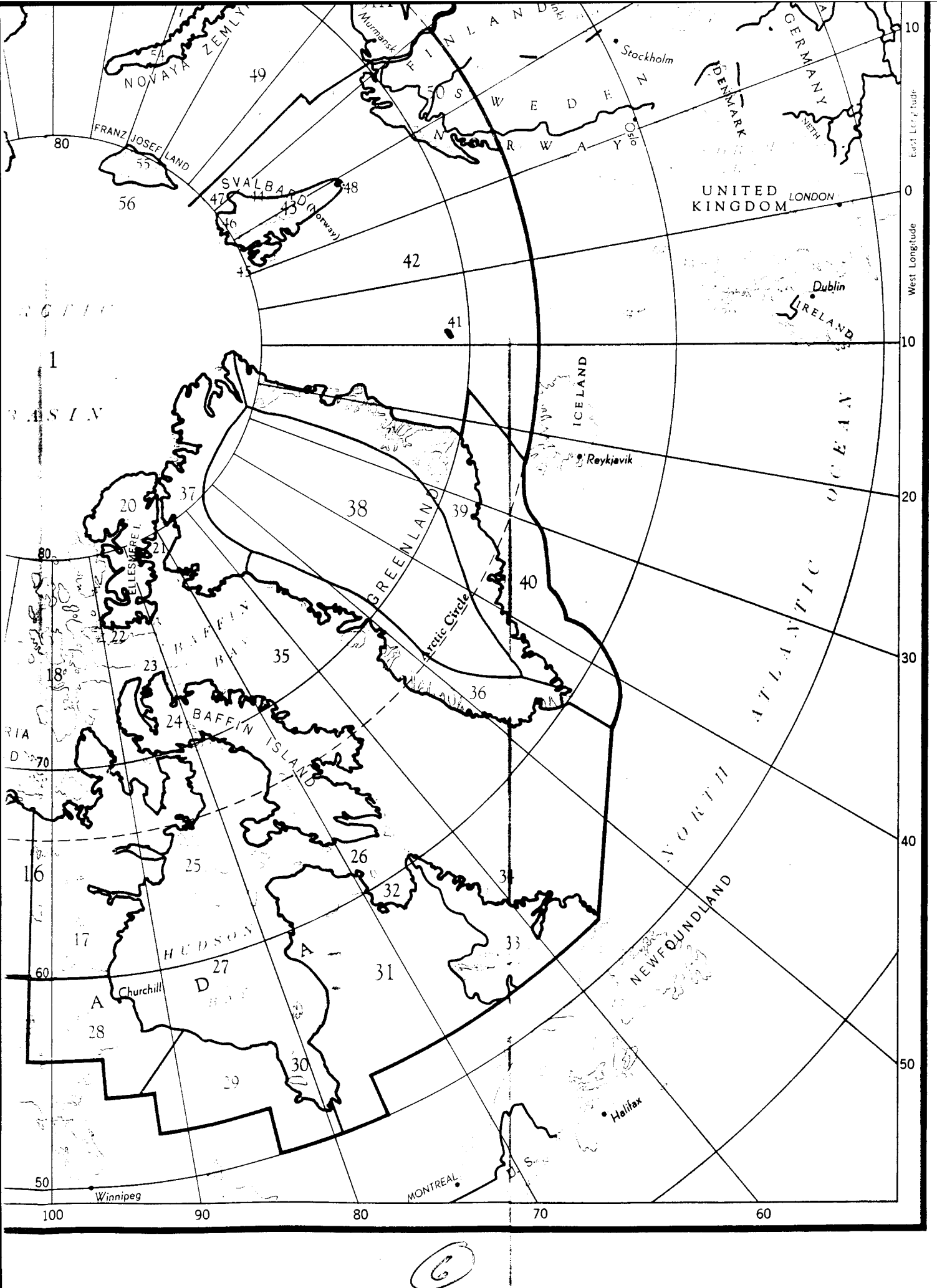
NOVAYA ZEMLYA
FRANZ JOSEF LAND
SVALBARD (Norway)
Murmansk
FINLAND
Stockholm
SWEDEN
NORWAY
Oslo
DENMARK
GERMANY
NETH
UNITED KINGDOM
LONDON
Dublin
IRELAND
ICELAND
Reykjavik
GREENLAND
ELLESMERE I.
BAFFIN BAY
BAFFIN ISLAND
Arctic Circle
ATLANTIC OCEAN
NORTH
NEWFOUNDLAND
HUDSON
Churchill
Winnipeg
MONTREAL
Halifax
West Longitude
East Longitude
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