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A LITERATURE REVIEW OF ARCHAEOLOGICAL, HISTORICAL, AND
PALEONTOLOGICAL RESOURCES OF THE SHEYENNE RIVER BASIN IN
NORTH DAKOTA

by

Susan C. Vehik and Rain Vehik

A cultural resource reconnaissance conducted for
The St. Paul District, U.S. Army Corps of Engineers

in fulfillment of contract number
DACW37 77M-1015

1977

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ABSTRACT

This study is basically a literature survey of archaeological, historical, and paleontological data pertaining to the Sheyenne and Maple River basins in North Dakota. The majority of the text is descriptive and consists of a series of tables, figures, and appendices presenting the relevant data. In addition, an effort is made to construct a climatic sequence and a culture history for the research area and the eastern northern Plains in general. Correlations between the two sequences and internal differences within the culture history scheme are used to develop a series of questions or hypotheses, of broad anthropological relevance, which could be tested by future fieldwork in the Sheyenne and Maple River basins.

A LITERATURE REVIEW OF ARCHAEOLOGICAL, HISTORICAL, AND
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INTRODUCTION

A cultural resource reconnaissance of the Sheyenne and Maple River basins in North Dakota was undertaken during March and April 1977 for the St. Paul District, U.S. Army Corps of Engineers (Contract No. DACW37 77M-1015). The reconnaissance was conducted in the form of a literature search which included: published and unpublished written material, a search of site files at the University of North Dakota and the North Dakota State Historical Society, and consultations or preliminary contacts with professionals and a few amateurs knowledgeable in the archaeology, history, and paleontology of the area.

This report is designed as a partial fulfillment of the obligations of the St. Paul District regarding cultural resources as set forth in the Historic Preservation Act of 1966 (P.L. 89-665), the National Environmental Policy Act of 1969 (P.L. 91-190), Executive Order 11593 for the Protection and Enhancement of the Cultural Environment (May 13, 1971, 36FR8921), the Archaeological Conservation Act of 1974 (P.L. 93-291), the Advisory Council on Historic Preservation's

"Procedures for the Protection of Historic and Cultural Properties (36 C.F.R. Chapter VIII, Part 800), and EC 1105-2-37 for the Identification and Administration of Cultural Resources (August 8, 1975).

A general outline of the research area is provided in Figure 1. The upper portion of the Sheyenne Basin, where it trends east-west, received about one-quarter of the work effort. Special effort was devoted to the Maple River basin, specifically the area around Enderlin, North Dakota, but very little information existed.

Data sources, methods of collection, and analysis procedures varied depending upon the topic. A short summary will be provided here, but reference must be made to specific sections for additional information.

The majority of the paleontological data are contained in the section, The Environmental Setting Pre-Modern. Most published paleontological materials relate to Pleistocene and post-Pleistocene climatic patterns, and were derived from published reports. Only very general information was obtained by consultation, and discussion of that may be found under a section entitled Paleontological Data.

Archaeological data are discussed under a separate section. These data were gathered from previous survey reports (mostly unpublished or of limited distribution), from a few published reports, and from site files. The research area was divided into four regions and literature was reviewed for each region according to when it became available

(i.e., year of publication). Such a procedure was necessary because so few sites have any data pertaining to time of occupation, nature of occupation, and cultural affiliation.

Tables are included which list sites or site leads (possible, but not documented sites), their locations, site types, and, when available, cultural affiliation. These are discussed in greater detail later. Figures, which are generalized maps of site locations are also included. These figures do not include site leads.

Historical data are discussed in terms of three general time periods: Fur Trade, Military, and Settlement. Tables and Figures which contain much the same information as those presented for archaeological data are also included. Specific composition of these will be discussed later.

Another section organizes the archaeological and historical data in a very general chronological framework which is related to the sequence of climatic changes outlined in the Environmental Setting section. However, due to the limited nature of archaeological data no major conclusions will be presented about interrelationships between man and environment for this area.

Following this is a discussion of the previous archaeological and historical work in the research area, the possibility of predicting site locations, evaluations of the potential of some existing sites, and recommendations for future work. The final section is a summary of the work conducted and the major recommendations made.

THE ENVIRONMENTAL SETTING

Pre-Modern

Prior to the Pleistocene glaciations the upper part of the modern Sheyenne basin was characterized by a relatively smooth topography consisting of Tertiary and Cretaceous sandstone, shale, and siltstone (Bluemle 1972a: 2190). The area was drained by a north-flowing river whose valley was 200 to 300 feet deep and five to ten miles wide (Bluemle 1972a: 2190, Figure 1).

The southern or lower part of the modern Sheyenne basin was characterized by a gently rolling topography consisting of Cretaceous shale and sandstone, Jurassic red beds, Ordovician shell and carbonate, and Precambrian crystalline rocks (Bluemle 1972a: 2190). This area was drained by a system ancestral to that of the Red River, and its valleys were about 300 feet deep and 10 miles wide (Bluemle 1972a: 2190, Figure 1).

With the onset of Pleistocene glaciations, drainage patterns were drastically changed each time glaciers advanced and retreated (Bluemle 1972a: 2190). The modern drainage pattern, with the exception of the Red River, bears little resemblance to earlier drainage patterns in eastern North Dakota (Bluemle 1972a: 2192). This reflects the fact that the topography of the area is determined by deposits of late Wisconsinan drift or alluvium which have almost totally negated the influence of the earlier bedrock topography.

As the last or Wisconsin glaciation expanded into the southern Red River valley a proglacial lake was formed between it and high ground to the south (Brophy 1967a: 104). Deposits formed by this lake were eventually overridden by glaciers (Brophy 1967a: 104).

The Sheyenne River apparently originated, during the late Wisconsin glaciation, as an ice marginal stream (Baker 1966: 1379). Baker (1966: 1377) maintains that during one of its earliest stages the Sheyenne River drained south into the Lake Traverse area through a channel extending from its southernmost modern bend. Subsequent discussions of the geological history of the Sheyenne do not, however, mention this channel.

Prior to 14,000 B.P. and the formation of glacial Lake Agassiz proper, a series of lakes may have developed on top of stagnant ice deposits in the Red River valley (Bluemler 1974: 813). One of these lakes drained through a spillway in western Ransom County and into glacial Lake Dakota, which occupied the James River valley in southernmost North Dakota and northern South Dakota (Bluemler 1974: 813 and Figure 1). Apparently, that part of the Sheyenne River which flows south, was still functioning as an ice marginal stream which later switched its drainage toward the Lake Traverse area (Bluemler 1974: 813). The ancestral Maple River also served as an ice marginal stream ultimately draining into the Lake Traverse area (Bluemler 1974: 814).

Brophy (1967a: 97-105) discusses the Lake Agassiz deposits as they appear in the Fargo area and the Sheyenne River delta deposits. Delta deposits formed where the Sheyenne entered into Lake Agassiz and covered what is now southcentral Cass County, northeastern Ransom County, and much of central and western Richland County (Brophy 1967a: Figure 14).

When the Sheyenne River changed its course from the Lake Traverse area to the Richland, Ransom, and Cass County areas is unknown. However, the Sheyenne delta began to form around 12,000 B.P. and was completed by 10,500 B.P. (Brophy 1967a: 104).

After 10,500 B.P. the Sheyenne River trenched the delta until it graded to the new and lower lake level (Brophy 1967a: 104). Further trenching followed as the lake continued to recede (Brophy 1967a: 104). The lake level then rose and its water invaded the Sheyenne trench (Brophy 1967a: 104). This was then followed by the local accumulation of peat as the lake again retreated around 9100 B.P. (Brophy 1967a: 104). As the lake retreated the Sheyenne River began cutting downward in its trench (Brophy 1967a: 104).

After glacial Lake Agassiz abandoned the area there was at least one aggradational episode where the Sheyenne trench was filled with fluvial deposits up to the level of the present low terrace (Brophy 1967a: 104). These filling events began sometime before 2700 B.P. and, at least in the Rocky Mountain foothills, such episodes occur towards the

end of glacial stades (Brophy 1967b cited in Shay 1967: 247 and Scott 1963 cited in Wood 1972). At present the Sheyenne River appears to be slowly dissecting the low terrace (Brophy 1967a: 105).

For maps dealing with the glacial activity in the research area consult Bluemle (1974) and Colton, Lemke, and Lindvall (1963). Other general discussions of the geology and Pleistocene stratigraphy in the research area may be found in Hainer (1956) and Clayton (1966). In addition, specific discussions of Pleistocene and/or pre-Pleistocene geology for specific counties or areas are available (see Appendix A).

In addition to the work on the Pleistocene geology of North Dakota there have been a number of paleoecological studies relating to Pleistocene and post-Pleistocene climate and climatic change. Much of this research, however, has been conducted in areas to the west or east of the research area.

Within the research area much of the paleoecological work has been concentrated in the lower part of the basin where the Sheyenne River flows north and east. Several studies, such as those of Cvancara (1967) and Cvancara et. al. (1976), have dealt with fossil and modern mollusc remains.

Cvancara (1967: 187-195) sampled a series of locations within the Red River drainage system for fossil and modern mollusc shells. Nine of these sites were on the Sheyenne and Maple Rivers with fossil shells being found only on the lower

terrace of the Sheyenne River (definite locations for these finds were unavailable). There was, however, some indication from this material that the Sheyenne may have had a greater discharge at some earlier, unspecified time (Cvancara 1967: 195).

Cvancara et. al. (1975), using many of the same stations as the 1967 study, conducted a study of past and present Sheyenne River molluscs. They concluded that the "... fossil molluscan fauna generally resembled the living fauna (Cvancara et. al. 1976: 25)." Only one fossil site was actually dated (13,500 \pm 220 B.P.), the rest are believed to date between 2500-13,500 B.P., although they may be even younger (Cvancara et. al. 1976: 37). Thus it may be concluded that the molluscan fauna indicates little in way of climatic change. However, comparisons of the dated fossil station to its nearest modern stations showed little similarity in molluscan content (Cvancara et. al. 1976: Tables 2 and 4). Additional fossil collections and greater dating of such stations are needed before climatological implications of the Sheyenne-Maple River molluscan fauna can be adequately assessed.

McAndrews (1967: 253-270) discussed the content of two buried peat deposits. One, the Seminary site, was along the Red River and is not specifically in the research area. The other, the Mirror Pool site, was along the Sheyenne River in the Sheyenne delta region (NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 8, T135N, R52W).

The Mirror Pool site is early post-glacial, dating to around 9000 B.P. (McAndrews 1967: 267). In general, 20-40%

of the pollen spectra was pine and 50% herbs (McAndrews 1967: 267). The peat deposits have been divided into two sections with the lower and earlier one indicating the existence of a marsh community in the area dominated by cattail (McAndrews 1967: 268). The upper and later section indicates a shrub bog dominated by willow, alder, and dwarf birch (McAndrews 1967: 268). McAndrews (1967: 268) notes that these three genera still occur in the Sheyenne delta area.

Combining data from the Seminary and Mirror Pool sites with information from an earlier study (Rosendahl 1948) of the Moorehead Station No. 2 site, McAndrews (1967: 268) provides the following late glacial and early post-glacial vegetational history for the lower Sheyenne/Red River area. During the late glacial period upland areas were occupied by a boreal forest while the southern Lake Agassiz basin was not generally forested, but was instead occupied by marshes and meadows (McAndrews 1967: 268). During the earliest post-glacial (9900-9100 B.P.) some late glacial species may have persisted on protected sites within the basin while pine continued in the Sheyenne delta region, but the upland boreal forest disappeared (McAndrews 1967: 268). Vegetation similar to that of modern times probably appeared in the area around 9000-7000 B.P. (McAndrews 1967: 268).

Using information derived from paleoecology studies conducted outside the research area (Cvancara et. al. 1971, Watts and Bright 1968, and Shay 1967) a generalized sequence of late glacial and post-glacial climate and climatic change

was outlined for the research area. From about 12,000 until 10,000 B.P. the climate was cool and moist with increased warming toward the latter date. The major vegetation was that of a boreal forest dominated by spruce. Following Wendlund and Bryson (1974: Table 7) this is the late Glacial climatic episode. Beginning around 10,000 B.P. the vegetation was dominated by pine and/or deciduous forests which reflected increasing warmth. This period ended around 9000/8500 B.P., and within it Wendlund and Bryson (1974: Table 7) recognize two climatic episodes, the pre-Boreal and Boreal. From about 8500 B.P. the climate began to be even more warm and dry, reaching a maximum around 8000 to 7000 B.P. After that the climate ameliorated somewhat but remained relatively dry and warm until around 5000 B.P. In Wendlund and Bryson's terms this is the Atlantic climatic episode, and vegetation consisted primarily of oak and/or grasses and composites.

From 5000 B.P. until the present most of the available data indicates a climate which was more cool and moist, similar to today's, with herbs, pine, and deciduous trees being dominant. Wendlund and Bryson (1974: Table 7), however, recognize five climatic episodes during this period. The sub-Boreal (5000-2700 B.P.) was characterized by a major alpine glaciation (Temple Lake Stade) in the Rockies around 2950 B.P., and by a period of alluviation (Piney Creek) near its end (Wood 1972: 9). With the exception of alluviation at the end of the Wisconsin glaciation this may have been about the time when the Sheyenne trench was filled with fluvial

deposits. This assumes that the same set of factors were in operation in both the high plains and eastern North Dakota.

The sub-Atlantic (2700-1680 B.P. or A.D. 270) was characterized by one period of alpine glaciation (Arikaree Stade) with a major substade at about 1660 B.P. (Wood 1972: 9). The Scandic episode (1680-1260 B.P. or A.D. 690), with its terminal date derived from cultural and not botanical data, had a major substade at 1400 B.P. (Wendlund and Bryson 1974: 20 and Wood 1972: 9). The neo-Atlantic (1260-850 B.P. or A.D. 1100) was characterized by a major period of alluviation (Post-Piney Creek) between 1250 and 1050 B.P. in the foothills and grasslands east of the Front Range (Wood 1972: 9). The Pacific episode (850-400 B.P. or A.D. 1550) did not have a terminal date assigned by Wendlund and Bryson, but 400 B.P. is the generally accepted terminal date. The north-eastern Plains area may have experienced a dry spell during the Pacific episode.

The neo-Boreal (400-100 B.P. or A.D. 1850) was not discussed by Wendlund and Bryson. However, other researchers have noted a turn to a colder and wetter climate with one period of alpine glaciation, the Gannet Peak stade (Wood 1972: 10). Since A.D. 1850 alpine glaciation declined as the climate became warmer and somewhat less wet.

Since the exact climatic conditions represented in these episodes can vary from region to region no description derived from another area will be valid for this research area. Therefore, more research is necessary in the area to document

whether these changes occurred and to determine their nature and extent.

Modern Data

The modern Sheyenne River flows through two major topographic provinces: the Drift Prairie and Red River valley. Most of the river flows through the former province which consists primarily of morainic and glacial outwash deposits (Bluemle 1972b: Map). Here the valley of the Sheyenne is narrow and relatively steep sided, with its slopes somewhat dissected by short coulees (Cooper 1947: 2). There is almost no system of surface drainage for this area and, as a result, there are few tributaries to the Sheyenne. The upland topography is fairly level, but marked by the presence of many lakes (Cooper 1947: 2).

The Drift Prairie, in terms of vegetation and animal life, functions as a transitional zone between the eastern tall grass prairies and the xeric western short grass prairies. Upland vegetation is generally treeless, consisting of a variety of grasses, sage, and wolfberry among others (Johnson et. al. 1974: 20-28). Gallery forests were found along the floodplain and were dominated by oak, elm, and cottonwood (Johnson et. al. 1974: 29).

Prior to modern disruptions bison, antelope, elk, deer, wolves, bears, waterfowl, and a variety of smaller animals were common to the area, if only seasonally (Johnson et. al. 1974: 31-38 and Larson 1976: 8-9). Today only deer,

waterfowl, and some of the smaller animals are common.

The mean annual precipitation for the area is around 400 to 430 mm. with three-fourths of that occurring during the spring and summer (Schneider and Treat n.d.: 4). Snow depths of 2.5 centimeters or more exist, on the average, for 110 to 120 days (Schneider and Treat n.d.: 3).

The Sheyenne leaves the Drift Prairie and enters the Red River valley province near the town of Lisbon. The river flows through a variety of late and post-Pleistocene lake deposits before joining the Red River north of Fargo, North Dakota (Bluemle 1972b: Map). Here the terrain is relatively flat and surface drainage is poorly developed (Shay 1967: 232).

A general description of the Red River valley area was derived from Shay (1967: 231-237) and Scoby et. al. (1973). The Red River valley per se is flat except where it is interrupted by the Sheyenne delta escarpment and the glacial Lake Agassiz shorelines (Scoby et. al. 1973: 16). Surface drainage in the area is very poor with runoff tending to collect in low lying areas (Scoby et. al. 1973: 23). Prior to intensive drainage the area may have possessed many shallow lakes and marshes.

The natural vegetation of the area was somewhat varied with bluestem prairie existing in the Red River valley proper, an oak savanna in the Sheyenne delta area, and a gallery forest along the Sheyenne River and other wet areas (Scoby et. al. 1973: 32 and Burgess 1965). The gallery forest consisted primarily of cottonwood, willow, and elm and

represented a westward extension of the eastern upland forest (Scoby et. al. 1973: 32 and Shay 1967: 231-237).

Scoby et. al. (1973: 40-43) provide an inventory of modern mammals found in the area which include most importantly waterfowl, deer, rabbits, and squirrels. Other animals which may have been important prior to modern disruptions include buffalo, elk, moose, bears, wolves, foxes, raccoons, otter, beaver, cranes, swans, herons, and eagles (Wood 1971: 6).

Modern temperatures in the lower Sheyenne basin vary from a mean of 21° centigrade in August to -13° centigrade in January (Scoby et. al 1973: 9). Temperatures of 0 degrees centigrade, or less, occur on 184 to 189 days out of the year (Scoby et. al. 1973: Table 4).

The average annual precipitation for the area is 485 mm. with 75 per cent of it falling from April through September (Scoby et. al. 1973: 9). The average yearly snowfall is about 60.4 centimeters.

The modern Maple River begins at the edge of the Drift Prairie where it flows through morainic, collapsed lake, and till deposits (Bluemle 1972b: Map). At about Enderlin, North Dakota it enters the Red Rive valley province where it flows through Lake Agassiz shoreline deposits, along the northern edge of Sheyenne delta deposits, and then through lake plain deposits (Bluemle 1972b: Map).

For additional data see Appendix B for references to the botanical resources of specific sub-areas. Appendix C

supplies additional references of a more general nature.

PALEONTOLOGICAL DATA

The published discussions of paleontological data have mostly dealt with Pleistocene and post-Pleistocene material and refer to the lower Sheyenne basin. Outside of the Mirror Pool site, no exact locations for paleontological sites were obtainable. Holland (personal communication of March 25, 1977) indicated that there are around 40 such sites along the Sheyenne River.

ARCHAEOLOGICAL DATA

There have not been many published discussions of the prehistory of the Sheyenne and Maple River valleys. An outline of cultural historical development specific to these areas cannot be provided at the moment due to the lack of a detailed archaeological survey, let alone an adequately dated set of excavated sites. The procedure to be followed will be to provide a history of the research that has been conducted in the valleys.

For ease of discussion the research area has been arbitrarily divided into four sections: the lower Sheyenne basin from Range 141 North above Valley City, North Dakota to the confluence of the Sheyenne and Red Rivers, the middle Sheyenne basin from Range 141 North to the Nelson, Eddy, and Benson County line juncture, the upper Sheyenne basin from the Nelson, Eddy, and Benson juncture, including that portion

of the basin in Ramsey County, to the headwaters of the Sheyenne River in Sheridan County, and, fourth, the Maple River (Figure 1).

Explanations for headings in Tables 1 through 15 are as follows. Locations are, for sites, legal descriptions including at least the quarter section. For site leads, however, they range from complete legal descriptions to only approximate locations.

Site type refers to descriptive labelling terms, some of which are self-explanatory. For those which may not be self-explanatory the following descriptions are provided. Village refers to those sites which have visible lodge depressions or occupy extensive areas of land and show evidence of long term continuous occupation. Camp refers to those sites which lack lodge depressions and are of limited extent (spatially and temporally) thus indicating a short term occupation. Rock alignments are sites possessing arrangements of rocks such that a figure, either geometric or curvilinear and realistic or abstract, is outlined. Tipi rings which fit the above definition of rock alignment, are circular arrangements of rocks thought to have been used to hold down tipi covers. Rock cairns are piles of rocks with a pyramidal or hemispherical shape. Rock holes, a site type used only by Nelson (1973), refers to holes drilled, possibly by humans, through boulders. Trenchworks are sites consisting of a space, lacking lodge depressions, outlined by a trench. This is generally a term which refers to certain historic military

sites but is used here for two sites of unknown date.

Cultural affiliations are those generally recognized for the upper Plains and are primarily temporal subdivisions: Paleo-Indian, Archaic, Woodland, Plains Village (Missouri River in some early terminologies), and Late Nomadic. Late Nomadic refers to groups coeval, generally, with Plains Village but which possessed a hunting and gathering economy.

Lower Sheyenne Basin

Probably the earliest known reference to the archaeological resources of the lower Sheyenne basin is that of Hayden (1862, cited in Wood 1971: 70). This represents the earliest documentation of the Biesterfeldt or Sheyenne-Cheyenne earth lodge village site as having been inhabited by Cheyenne Indians (Wood 1971: 70). Additional references to this site were made in newspaper articles by members of General Sibley's expedition to the area during the early 1860's (Grinnell 1918: 364-365).

The earliest archaeological work undertaken in the area was probably that by T.H. Lewis, during the late 1800's, in conjunction with his survey of Red River antiquities. Published descriptions of this work are short, centering on mounds, petroglyphs, and cupstones with no detailed locational information (Lewis 1886, 1891, 1893). For instance, Lewis (1886: 371) notes only that many mounds can be found "... scattered through the valley of the Cheyenne (sic) river" below Devils and Stump Lakes. Lewis also conducted the first

survey of the Biesterfeldt site (Wood 1971: 57).

Work during the early 1900's consisted of surveys accompanied by occasional, inadequate excavations. An early review of archaeological literature relating to the Dakotas was undertaken by Smith (1906: 80-88) who listed, as some of the material catalogued by Thomas (1891: 159-161), a group of mounds about ten miles southeast of Fort Ransom on the south side of the Sheyenne River.

Libby (1910: 82-83) resurveyed the Biesterfeldt site with a copy of the map being published in Grinnell (1918). Later work by Libby (1915: 30) consisted of a survey of the Sheyenne basin (or some portion of it) in which some mounds, described as effigy mounds, were said to occur but no details were provided.

Other references to the lower Sheyenne center on discussions of the Biesterfeldt site, to what ethnological group produced it, and to what group was responsible for its destruction (Mooney 1905-1907, Will 1914, Grinnell 1918, 1923, Bushnell 1922, and Swanton 1930). The consensus was that the Cheyenne had lived in it with the Sioux, Assiniboine, and Chippewa as possible destroyers, with the latter considered to be the most likely candidate (Wood 1971: 57).

In 1928, W.D. Strong undertook the first systematic archaeological investigations in the lower Sheyenne basin. The majority of time was spent excavating the Biesterfeldt site, a brief description of which appeared in Strong (1940:

370-376). Strong (1940: 385) also mentions that he opened a mound near Lisbon, North Dakota "... which contained few artifacts but had several painted buffalo skulls." A subsequent reference to the Biesterfeldt site was also made by Strong (1941: 157-166).

Additional references to Biesterfeldt may be found in Wood (1955, 1971). The former is a description of pottery and the latter is an analysis of the material from Strong's 1938 excavations. Wood (1971: 70) suggests that the identification of the Biesterfeldt site as Cheyenne is economical but not definite. He also suggests that the site "... is part of the Post-Contact Coalescent of the Plains Village pattern" and that it shows striking contrasts with Woodland groups to the east from which the Cheyenne are supposed to have originated (Wood 1971: 70).

Hewes (1949: 328) and Howard (1953: 130) both make reference to an excavation of the Wray Mound near Lisbon, North Dakota by E.A. Milligan. Hewes (1949: 328) notes only that shell and horn ornaments resemble material found in the Devils Lake mounds. Howard (1953: 130) discusses the pottery noting that the vessels are "... identical in size, shape, and lip decoration with the spirally decorated vessels of the Southern Cult bearing culture, though the spiral groove decoration is replaced with a design reminiscent of the Southern Cult hand-and-eye motif."

Hewes (1949: 322) also makes mention of the excavation of 32BA8. However, the material retrieved was only very

generally described and was assessed as being of little archaeological use (Hewes 1949: 322). A collection from this site was noted as being in the possession of Vernon Gayle from Valley City, North Dakota (Hewes 1949: 322).

Some general data is available from Johnson (1962: 161-162) who notes the occurrence of Folsom projectile points in the upper Sheyenne delta area.

Wood (1963) provided descriptions of pottery from the Schultz site. This report described material from T.C. Hecker's excavations. Hecker's field notes referred to it as a village site and there was no record of any material being associated with the pottery (Wood 1963: 231). Wheeler (1963: 229) considered the Schultz site to be a member of the Stutsman focus to which he gave an early historic date.

Milligan (1968) provides a discussion of rock art but it is of very limited value. He presents some general discussion of this material from the Sheyenne valley providing some approximate locations on a very generalized map. For the lower Sheyenne he notes "effigy" axes, a sandstone pebble with a design painted on it in green paint that was found in northwest Richland County, and inscribed boulders in the vicinity of Fort Ransom.

Sherrod (1970) noted five sites which had been excavated or examined by Milligan. One, the Groff site, was said to be a large village similar to Biesterfeldt. Another, the Joe Wall site, was said to be small with scattered lodge sites. The Schultz site and two other sites of small or indeterminate

size were also noted. See Table 1 for a list of sites discussed so far, their legal locations, site type and, cultural affiliation, and refer to Figure 2 for their geographic distribution. Sherrod (1970, 1971) also provides site lead information for the Sheyenne National Grassland and Kindred areas (Table 2). References to collectors in the Kindred area can also be found in Sherrod (1971).

The petroglyphs near Fort Ransom are discussed in some detail by Nelson (1973: 8-23) and include some tracings. Several mounds were noted as occurring both to the west and east of the petroglyphs (Nelson 1973: 9).

Nelson (1973: 51-58, 63) discusses several rock alignment sites as well as a possible cupstone site. Rock holes, which may be prehistoric, historic, or natural were found near the Fort Ransom petroglyphs and the town of Sheldon, North Dakota (Nelson 1973: 59-62). Nothing was found in association so cultural affiliation could not be determined and site function was a matter of speculation.

Nelson (1973: 63-76) also examined museums in the Ransom County area. In the Ransom County Historical Museum there were several of what were apparently grooved axes which were said to have come from the center of Springer Township (Nelson 1973: 63). Also, J.D. Quam is said to have surveyed the Fort Ransom and Lisbon areas in 1937 and his collection along with a map of site locations is supposed to be on display at the museum. These latter sites were listed as site leads in the University of North Dakota site files (Table 4).

TABLE 1
LOWER SHEYENNE BASIN ARCHAEOLOGICAL SITES LIST-A

SITE	LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
Biesterfeldt-32RM1	NW $\frac{1}{4}$, Sec. 28, T134N, R54W	Village	Cheyenne
32BA8	SE $\frac{1}{4}$, Sec. 29, T140N, R58W	Camp	
Schultz	N $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 10, T135N, R53W	?	
Groff	NE $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 17, T135N, R53W	Village	
Joe Wall	N $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 16, T135N, R53W	Village	
Sim Wall	W $\frac{1}{4}$, NE $\frac{1}{4}$ & NE $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 16, T135N, R53W	?	
Bagouin	SW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 10, T135N, R53W	?	

Sources: Hewes (1949), Sherrod (1970, 1971), and Wood (1971)

TABLE 2

LOWER SHEYENNE BASIN ARCHAEOLOGICAL SITE LEADS LIST-A

LEGAL LOCATION
NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 9, T135N, R53W
NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 15, T135N, R53W
S $\frac{1}{2}$, NE $\frac{1}{4}$, Sec. 18, T135N, R53W
Sec. 7, T135N, R53W
SW $\frac{1}{4}$, Sec. 21, T137N, R50W
Secs. 25, 35, 36, T136N, R53W
SE $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 25, T136N, R53W
NW $\frac{1}{4}$, Sec. 14, T135N, R54W
Sec. 17, T135N, R54W
E $\frac{1}{2}$, Sec. 18, T135N, R54W
SW $\frac{1}{4}$, Sec. 24, T135N, R53W
S $\frac{1}{2}$, Sec. 19, T135N, R53W
SW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 15, T135N, R53W

Source: Sherrod (1970, 1971)-no information as to site type and cultural affiliation

Chomko and Wood (1973: 12) discuss some linear mounds, 32RM101, in Ransom County. The mounds are on bluffs overlooking the south bank of the Sheyenne River "... near the point where the river leaves the Drift Prairie and enters the Red River Valley." A plot of the site is provided (Chomko and Wood 1973: Fig. 3). Although some pot hunting has taken place no material has been reported in association (Chomko and Wood 1973: 12).

Some additional unpublished information was obtained from the University of North Dakota site files. 32RM106 is a Plains Woodland burial mound, 32RM107 is a Late Nomadic camp, and 32RM201 is a Middle Missouri-like (A.D. 850) period female burial (University of North Dakota site files). The latter was found in association with a kit of tools similar to those known ethnographically to have been used by women.

See Table 3 for the remaining lower Sheyenne basin sites. Nelson (1973) provided neither trinomial site designations nor legal locations of the sites he discussed, and Chomko and Wood (1973) did not include legal locations. This missing information was obtained from the University of North Dakota site files. Figure 2 provides graphic illustration of site locations. Table 4 provides site lead information obtained from the University of North Dakota site files.

TABLE 3
LOWER SHEYENNE BASIN ARCHAEOLOGICAL SITES LIST-B

SITE	LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
32RM101	SW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 31, T134N, R54W	Mounds	
32RM102	NE $\frac{1}{4}$, Sec. 31, T134N, R58W	Rock Alignment	
32RM103	SW $\frac{1}{4}$, Sec. 9, T135N, R57W	Rock Holes	
32RM104-Fort Ransom Writing Rock	SW $\frac{1}{4}$, Sec. 11, T135N, R58W	Pictograph	
32RM105	NW $\frac{1}{4}$, Sec. 17, T135N, R57W	Rock Alignment	
32RM106	SE $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 12, T135N, R58W	Mounds	Plains Woodland
32RM107	NE $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 1, T136N, R56W	Camp	Late Nomadic
32RM201	SW $\frac{1}{4}$, NE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 33, T134N, R55W	Burial	Middle Missouri
32RM401	NW $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 3, T136N, R58W	Trenchwork	
32RM402	NW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 2, T136N, R58W	Trenchwork	
32BA401	NW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 15, T139N, R58W	Camp	

Source: University of North Dakota site files

TABLE 4

LOWER SNEYDEE RIVER ARCHAEOLOGICAL SITE LEASE LIST-B

LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
<u>RICHLAND COUNTY</u>		
Sec. 18, T136N, R50W	Camp	
Iron Springs Bowl, NW corner of County on Sneyde	?	
<u>RANSOM COUNTY</u>		
Sec. 1, T133N, R55W	Camp	Woodland
Sec. 2, T133N, R55W	Mound	
NE¼, Sec. 13 & SE¼, Sec. 12, T133N, R56W	Camp	
SW¼, Sec. 12, T134N, R53W	Camp	
Center Sec. 11, T134N, R53W	Camp	
SE¼, Sec. 7, T134N, R54W	Camp	
SE¼, Sec. 7 & SW¼, Sec. 8, T134N, R54W	Camp	
W¼, SW¼, Sec. 12, T134N, R54W	Camp	
Sec. 3, T134N, R56W	Camp	
Sec. 1, T134N, R56W	Mounds	
Sec. 25, T134N, R56W	Camp	
SE¼, Sec. 31, T134N, R56W	Mounds	
NW¼, NW¼, Sec. 35, T134N, R56W	Burial	
NE¼, NW¼, Sec. 21, T135N, R53W	Camp	
Sec. 14, T135N, R53W	Camp	
NE¼, Sec. 16, T135N, R53W	Camp	
On boundary of NW¼, Sec. 19, T135N, R53W & NE¼, Sec. 24, T135N, R54W	Camp	
N¼, NW¼, Sec. 5, T135N, R54W	Mounds	
NW¼, NW¼, Sec. 5, T135N, R54W	Earthwork	
NW¼, NW¼, Sec. 6, T135N, R54W	Mounds	
Sec. 11, T135N, R54W	Camp	
N¼, NE¼, Sec. 6, T135N, R54W	Mound	
SE¼, Sec. 13, T135N, R54W	Camp	
S¼, SE¼, Sec. 13, T135N, R54W	Camp	
NW¼, Sec. 19 & NE¼, Sec. 24, T135N, R54W	Camp	
Sec. 26, T135N, R54W	Camp	
S¼, SE¼, Sec. 24 & N¼, NE¼, Sec. 25, T135N, R54W	Camp	
S¼, Sec. 32, T135N, R54W	Camp	
T135N, R54W	Mound	
NW¼, NW¼, Sec. 1, T135N, R55W	Mounds	
E¼, NW¼, Sec. 2, T135N, R55W	Mounds	
NE¼, Sec. 1, T135N, R55W	Mounds	
NE¼, NE¼, Sec. 2, T135N, R55W	Mounds	
NE¼, NW¼, Sec. 3, T135N, R55W	Mounds	
SE¼, SE¼, Sec. 3, T135N, R55W	Mounds	

TABLE 4 continued

LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
SE $\frac{1}{4}$, Sec. 12 & NE $\frac{1}{4}$, Sec. 13, T135N, R56W	Camp	
Sec. 13, T135N, R55W	Camp	
SW $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 19, T135N, R56W	Mounds	
SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 32, T135N, R56W	Mound	
Sec. 10, T135N, R58W	Mounds	
Secs. 10, 11, 12, & 13, T135N, R58W	Mounds	
NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 2, T135N, R58W & SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 35, T136N, R58W	Mounds	
E $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 10, T135N, R58W	Mounds	
NW $\frac{1}{4}$, Sec. 11, T135N, R58W	Mounds	
SE $\frac{1}{4}$, Sec. 11, T135N, R58W	Mounds	
NW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 35, T136N, R53W	Camp	
NW $\frac{1}{4}$, Sec. 14, T135N, R58W	Mound	
NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 6, T136N, R57W	Effigy Mound	
Sec. 2, T136N, R58W	Fortified Village?	
SW $\frac{1}{4}$, NW $\frac{1}{4}$, T136N, R58W	Mounds	
NE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 2, T136N, R58W	Mounds	
NE $\frac{1}{4}$, Sec. 12, T136N, R58W & NW $\frac{1}{4}$, Sec. 7, T136N, R57W	Mounds	
Sec. 10, T136N, R55W	Mounds	
NW $\frac{1}{4}$, Sec. 11, T136N, R58W	Mounds	
SE $\frac{1}{4}$, Sec. 12, T136N, R58W	Camp	
NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 11, T136N, R58W	Mounds	
E $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 35, T136N, R58W	Mounds	
<u>BARNES COUNTY</u>		
SW $\frac{1}{4}$, Sec. 20, T137N, R57W	Mound	
E $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 3, T137N, R58W	Camp	
SE $\frac{1}{4}$, Sec. 2, T137N, R58W	Camp	
E $\frac{1}{4}$, Sec. 10, T137N, R58W	Mound	
NW $\frac{1}{4}$, Sec. 11, T137N, R58W	Camp	
SE $\frac{1}{4}$, Sec. 24, T137N, R58W	Camp	
NE $\frac{1}{4}$, Sec. 25, T137N, R58W	Camp	
NW $\frac{1}{4}$, Sec. 25, T137N, R58W	Camp	
SW $\frac{1}{4}$, Sec. 1, T138N, R58W	Mound	
NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 15, T138N, R58W	Camp	
W $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 15, T138N, R58W	Camp	
NE $\frac{1}{4}$, Sec. 22, T138N, R58W	Burials	
SE $\frac{1}{4}$, Sec. 15, T138N, R58W	Camp	
E $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 3, T139N, R58W	Camp	
SE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 4, T139N, R58W	Camp	
SE $\frac{1}{4}$, Sec. 27, T139N, R57W	Mound	
NE $\frac{1}{4}$, Sec. 28, T139N, R57W	Camp	
SE $\frac{1}{4}$, Sec. 2, T139N, R60W	Multi-component	

TABLE 4 continued

LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
SE $\frac{1}{4}$, Sec. 5, T140N, R58W	Camp	
N $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 6, T140N, R58W	Stone Circles	
SW $\frac{1}{4}$, Sec. 6, T140N, R58W	Village	
NW $\frac{1}{4}$, Sec. 6, T140N, R58W	Mound	
SW $\frac{1}{4}$, Sec. 15, T140N, R58W	Camp	
NN $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 17, T140N, R58W	Mound	
NE $\frac{1}{4}$, Sec. 28, T140N, R58W	Mound	
NE $\frac{1}{4}$, Sec. 32, T140N, R58W	Mound	
NE $\frac{1}{4}$, Sec. 35, T140N, R58W	Mound	
NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 12, T140N, R59W	Stone Circles	

Sources: University of North Dakota site leads and Callan (n.d.)

Middle Sheyenne Basin

References to early work in the middle Sheyenne basin are not numerous. Smith (1906: 87, citing Thomas 1891) notes that there were some mounds to be found along the Sheyenne River in Griggs County. Smith (1906: 80-88) also reprinted a discussion by Todd (1886) of a rock alignment site northwest of Valley City, North Dakota. This site was ultimately designated 32BA11 by Wheeler in 1952 and discussed by Nelson (1973: 58) and Johnson et. al. (1974: 49-51). Additional references to the middle Sheyenne basin appear in conjunction with the construction of Baldhill dam in the late 1940's.

Kivett (1948) surveyed the Baldhill reservoir area for a week in 1947 locating ten archaeological sites consisting of six occupational or camp sites, three mound sites, and one site of an undetermined nature. Most of the occupational areas were on low terraces along abandoned stream channels while the mounds were on uplands overlooking the river valley (Kivett 1948: 7-8).

Test excavations were conducted at 32BA5, 32BA6, and 32GG2 and Kivett (1948: 8) speculated that these may have been permanent villages. On the other hand, 32BA2 and 32BA3 were postulated to be temporary camps (Kivett 1948: 8). Very brief descriptive reports of the pottery from these sites was provided but they were not site specific and are, therefore, of limited value here.

A test excavation was also made into a mound, 32GG1 (Kivett 1948: 8-9). The disarticulated remains of eight individuals with no associated artifacts were recovered (Kivett 1948: 8-9). The distribution of the remains within the mound suggested that mound construction may have been an accumulative process over a considerable period of time.

Additional reports of the survey results, more generalized in form, may be found in Wedel (1948: 24-27) and Kivett (1949: 25).

Hewes (1949) excavated two mounds at 32BA1 in 1948. Both mounds had central burial chambers with oak logs in which there were several disarticulated burials, in addition some intrusive extended burial occurred in one of the mounds (Hewes 1949: 324-327). The artifact material found in association with the skeletal material was also described (Hewes 1949: 324-327). Additional brief reports of this material may be found in Hewes (1950: 9), Roberts (1951: 373-374), and Wedel (1953: 47-48, 53).

Subsequent references to 32BA1 may be found in several papers. Neuman (1967) reported a date of 90 ± 150 A.D. for one of the mounds. Ossenberg (1974) utilized the cranial data from the site, lumped with that from the Devils Lake area, to study the origins and relationships of Woodland peoples. Basically, according to her results, this skeletal group has its closest affinities with material from the Arvilla culture along the Red River, northern Blackduck culture (northern Minnesota-southern Manitoba), the Manitoba

phase, and modern Cheyenne and Assiniboine (Ossenberg 1974: 35). However, there are problems with her interpretations as she ignores Neuman's (1967) date and assigns the group a date of A.D. 1200 to 1700. Neuman (1975) includes the material from 32BA1 in his Sonota complex which he dates from 0 to A.D. 600. He also suggests that these mounds were built by hunters and gatherers whose cultural development took place on the northern Great Plains (with close relationships to Besant occupations in Montana, Saskatchewan, and Alberta) and that this group received some stimulus from Hopewellian groups (Neuman 1975: 93). Vehik and Vehik (1976) included the material from 32BA1 in an analysis of northern Plains Woodland social variation.

Johnson et. al. (1974) provide a review of archaeological sites in the vicinity of Baldhill dam and Lake Ashtabula. Eleven of the thirteen sites discussed were reported on by Kivett (1948) and Hewes (1949) and the 1974 work simply reassessed their status. One of the other two sites was the rock alignment site (32BA11) northwest of Valley City. The thirteenth, 32BA401, was a mound located during a brief resurvey of the area (Johnson et. al. 1974: 40-51). Nothing of diagnostic importance was recovered during resurvey, however.

In 1975 the University of North Dakota conducted a cultural resource inventory of the central portion of the Garrison Diversion project in the vicinity of Devils and Stump Lakes (Schneider, Good, and Schweigert n.d.). Much

of their research area was outside the Sheyenne basin and most of that which was within the basin was within its upper part as defined here. Four mound sites, two of which possessed more than one mound, were located along the Sheyenne River in Nelson County. Apparently, however, nothing was recovered from them during survey (Schneider, Good, and Schweigert n.d.: 9-10).

A search of the University of North Dakota site files added one additional site, 32NE101, of an unknown type. See Table 5 for a list of middle Sheyenne basin archaeological sites, Table 6 for site leads, and Figure 3 for graphic locations of the sites listed in Table 5.

Upper Sheyenne Basin

With the exception of references to material from the vicinity of Devils Lake (Montgomery 1906, Smith 1906: 87 citing Lewis 1886a and Thomas 1891) there are even less early references for the upper Sheyenne basin than for the other two areas. Since the Devils Lake material is not within the research area, discussion of the upper basin's archaeological resources really begins with dam construction projects in the late 1940's.

Cooper (1947) and Bauxar (n.d.) conducted a four day survey of the Sheyenne reservoir, which was to occupy the Sheyenne River in Benson, Eddy, and Wells counties. They located 11 archaeological sites, seven of which were occupational areas and four of which were mound sites, but did not

TABLE 5
MIDDLE MISSISSIPPI BASIN ARCHAEOLOGICAL SITES

SITE	LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
32BA1	NW $\frac{1}{4}$, Sec. 10 & SE $\frac{1}{4}$, Sec. 9, T142N, R58W	Mound	
32BA2	NE $\frac{1}{4}$, Sec. 9, T142N, R58W	Camp	
32BA3	SW $\frac{1}{4}$, Sec. 18, T141N, R58W	Camp	
32BA4	SE $\frac{1}{4}$, Sec. 5, T141N, R58W	Mound	
32BA5	SW $\frac{1}{4}$, Sec. 22, T142N, R58W	Village	
32BA6	SE $\frac{1}{4}$, Sec. 16, T142N, R58W	Village	
32BA7	SW $\frac{1}{4}$, Sec. 16, T143N, R58W	?	
32BA11	NW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 35, T143N, R58W	Rock Alignment	
32BA402	NW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 5, T143N, R57W	Mound	
32GG1	NW $\frac{1}{4}$, Sec. 26, T144N, R58W	Mound	
32GG2	SW $\frac{1}{4}$, Sec. 35, T144N, R58W	Village	
32GG3	SW $\frac{1}{4}$, Sec. 23, T144N, R58W	Camp	
32NE101	SE $\frac{1}{4}$, Sec. 35, T150N, R50W	?	
32NE410	NW $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 2, T149N, R60W & SE $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 35, T150N, R60W	Mounds	Woodland
32NE411	SW $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 35, T150N, R60W	Mounds	Woodland
32NE412	NE $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 30, T150N, R60W	Mounds	
32NE413	SE $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 31, T150N, R60W	Mounds	

Sources: Kivett (1948), Hewes (1949), Johnson et. al. (1974), Schneider, Good, and Schwoigert (n.d.), and University of North Dakota site files

TABLE 6
MIDDLE SHEYENNE BASIN ARCHAEOLOGICAL SITE LEADS

LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
<u>DANVERS COUNTY</u>		
SE $\frac{1}{4}$, Sec. 7, T141N, R57W	Camp, Burial, Rock Cairn	
NW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 2, T141N, R57W	Effigy Mound	
NE $\frac{1}{4}$, Sec. 33, T142N, R58W	Mound	
SW $\frac{1}{4}$, Sec. 20, T141N, R57W	Camp	
NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 3, T141N, R58W	Mound	
Sec. 9, T141N? R58W?	Mound	
NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 3, T142N, R58W	Mounds	
NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 3, T142N, R58W	Burial	
<u>GRIGGS COUNTY</u>		
Red Willow Lake Area, T148N, R60W	Mounds, Stone Circles	
SE of Cooperstown, NE of Hannaford	Mounds	
Sec. 16, T145N, R58W	Mounds	
<u>NELSON COUNTY</u>		
Sec. 32, T150N, R60W	Mounds	
Sec. 35, T150N, R60W	Mounds	
Sec. 3, T149N, R60W	Trenchwork	
NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 5, T150N, R60W	Mound	
NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 39, T150N, R60W	Mound	
SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 19, T150N, R60W	Mounds	
<u>STEELE COUNTY</u>		
Sec. 21, T146N, R57W	Incised Stone Artifact	

conduct test excavations (Cooper 1947: 4-7 and Table 7 and Figure 4, this paper). With the exception of 32BE3, which was on the uplands, all of the occupation sites were on terraces in the river valley (Cooper 1947: 7). The mounds, on the other hand, were all on the uplands (Cooper 1947: 5-6).

The collected archaeological material "... were too few to permit a statement as to cultural affiliation other than that there is apparently some relationship to cultures in the Plains to the west (Cooper 1947: 7)." A fortalice, 125 feet in diameter, surrounded by a ditch was noted, apparently, as part of 32BE3 with its pottery showing relationships to that of the Missouri River (Cooper 1947: 4). Supposed effigy mounds were noted as being possibly present at 32ED3 and 32ED4 and some of the ceramics from the former mound were said to be similar to those of the Mandan (Cooper 1947: 6).

Howard (1953: 130-133) described the cultural material retrieved from the Heimdal mound which had been excavated in 1930 (see Table 7 and Figure 4 for locational data). Howard (1953: 137) stresses the similarity of this material to that recovered from other northern Plains sites and notes that it shows some similarities to Southern Cult material from the southeastern United States.

In 1965 Mallory (1966) following up on the surveys of Cooper (1947), Bauxar (n.d.), F. Fenenga and W.R. Wood in 1951, and O.E. Johnson in 1963, surveyed the upper Sheyenne basin. Of those sites discussed by Mallory 44 of them appear to be within the research area and 33 of them were

TABLE 7
UPPER SNEYENNE BASIN ARCHAEOLOGICAL SITES LIST-A

SITE	LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
32BE3	NE $\frac{1}{4}$, Sec. 28, T151N, R65W	Village	Missouri River
32BE4	SE $\frac{1}{4}$, Sec. 28, T151N, R65W	Mound	
32BE5	SE $\frac{1}{4}$, Sec. 28 & SE $\frac{1}{4}$, Sec. 27, T151N, R65W	Mound	
32BE6	Sec. 29, T151N, R65W	Camp	
32BE7	SE $\frac{1}{4}$, Sec. 35, T151N, R67W	Camp	
32ED1	NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 3, T149N, R67W	Camp	
32ED2	NE $\frac{1}{4}$, Sec. 3, T149N, R67W	Camp	
32ED3	SW $\frac{1}{4}$, Sec. 12, & E $\frac{1}{4}$, Sec. 11, T150N, R65W	Mound	Missouri River
32ED4	Center Sec. 24, T150N, R65W	Mounds	
32ED5	N $\frac{1}{4}$, Sec. 18, T150N, R64W	Camp	
32ED6	NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 4, T149N, R64W	Camp	
32WE401 (Reimel)	NE $\frac{1}{4}$, Sec. 23, T150N, R64W	Mound	

Sources: Cooper (1947), Howard (1953), and University of North Dakota site files

new sites, including four sites with mounds, five open camps, 18 sites with tipi rings, eight sites with rock cairns, three sites with rock alignments, and two bison kill sites (Table 8, Figs. 4, 5, and 6).

A tipi ring and a rock cairn from 32SH2 were excavated. The tipi ring yielded a projectile point and some scrapers while the rock cairn produced nothing (Mallory 1966: 39-42).

32SH8 was suggested to have been a Plains Woodland campsite (Mallory 1966: 44). 32SH203, which contained tipi rings and rock cairns, was also suggested to be of Plains Woodland origin (Mallory 1966: 45).

The material that resulted from these surveys was insufficient for any of the authors to formulate a culture history for the area. Instead, for example, Mallory (1966: 58-62) supplied a general summary based on information from outside the area.

Other references from about this same time period include Johnson (1962) and Chomko and Wood (1973). Johnson (1962: 61) noted that Folsom points had been found on the upper Sheyenne. Chomko and Wood (1973) classified 32BE5 as a linear mound but provided no further discussion.

In the early 1970's the University of North Dakota undertook a series of surveys and excavations on the upper Sheyenne in the vicinity of the proposed Lonetree Reservoir. During 1973, 23 new sites were located and five sites were excavated.

Of these sites surveyed nine contained tipi rings, 12

TABLE 8
UPPER SHEYENNE BASIN ARCHAEOLOGICAL SITES LIST-B

SITE	LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
32ED201	NE¼, Sec. 18, T150N, R64W	Mound	
32ED202	NW¼,SE¼, Sec. 19, T150N, R64W	Camp	
32ED203	NE¼,NW¼, Sec. 12, T150N, R65W	Camp	
32NE203	SE¼,NE¼, Sec. 29 & SW¼,NW¼ Sec. 28, T151N, R69W	Mound, Rock Alignment	
32BE204	NW¼,NE¼, Sec. 24, T151N, R70W	Tipi Rings	
32BE205	Center Sec. 18, T151N, R69W	Tipi Rings	
32BE206	NE¼,SW¼, Sec. 23, T151N, R71W	Tipi Rings	
32BE207	E¼,E¼, Sec. 22, T151N, R71W	Rock Cairns	
32WE2	NW¼,N¼, Sec. 32, T150N, R72W	Mound	
32WE3	NW¼, Sec. 10, T150N, R72W	Cairns	
32WE201	NE¼,SW¼, Sec. 13, T150N, R71W	Tipi Rings	
32WE202	SW¼, Sec. 17, T150N, R71W	Tipi Rings	
32WE203	NE¼,SE¼, Sec. 18, T150N, R71W	Tipi Rings	
32WE204	S¼,NW¼, Sec. 14, T150N, R71W	Rock Cairn & Alignment	
32WE205	NW¼,NW¼, Sec. 19, T150N, R71W	Tipi Ring	
32WE206	E¼,SW¼, Sec. 18, T150N, R71W	Cairn	
32WE207	NW¼,NE¼, Sec. 12, T149N, R73W	Tipi Ring	
32WE208	SE¼,NW¼, Sec. 13, T149N, R73W	Tipi Ring	
32WE209	NE¼,SW¼, Sec. 12, T149N, R73W	Tipi Ring	
32WE211	NW¼,SW¼, Sec. 13, T149N, R73W	Tipi Rings	
32SH1	NE¼,SE¼, Sec. 12, T148N, R75W	Tipi Rings	
32SH2	E¼, Sec. 26, T149N, R75W	Tipi Rings, Rock Cairns & Alignment	
32SH3	SE¼, Sec. 32, T149N, R74W	Camp	
32SH4	SW¼,SW¼, Sec. 23, T149N, R75W	Camp	
32SH5	Center Sec. 18, T149N, R75W	Tipi Rings	
32SH6	NE¼, Sec. 22 & SW¼,SE¼, Sec. 15, T148N, R74W	Bison Kill	
32SH7	SW¼,SW¼, Sec. 14 & NW¼, Sec. 23, T148N, R74W	Bison Kill	
32SH8	E¼, Sec. 16, T150N, R74W	Camp	Woodland
32SH201	NE¼,SW¼, Sec. 24, T148N, R74W	Cairns, Tipi Rings	
32SH202	NW¼,SE¼, Sec. 13, T148N, R74W	Tipi Rings	
32SH203	NW¼,NW¼, Sec. 5, T148N, R74W	Cairns, Tipi Rings	Woodland
32SH204	Center Sec. 6, T148N, R75W	Cairns, Tipi Rings	
32SH205	NW¼,SW¼, Sec. 19, T149N, R76W	Tipi Rings	

Source: Mallory (1966)

contained rock cairns, five were open camps, one contained a rock alignment, and one was a depression (Schneider n.d. a and Table 9 and Figures 5 and 6, this paper). Although some material was recovered it had little diagnostic value.

The excavation of two rock cairns from 32SH2 yielded little material and the same was true of a tipi ring from 32SH116 (Schneider n.d. a: 4-9). 32SH7 was a bison kill site with some cord-marked pottery and corner-notched projectile points or hafted knives (Schneider n.d. a: 12-20).

32SH205 was a tipi ring site with 81 rings and a rock lined depression. Four of the rings and the depression were excavated with the recovered pottery showing relationships to Plains Woodland material (Schneider and Treat n.d.: 11). Schneider and Treat (n.d.: 34-36) suggest that the site was a hunting camp occupied, at least twice, by groups similar to those which occupied Besant culture sites further to the west and north. Additional survey and excavation occurred in 1974. Sixty new sites were located (Schneider 1976: 6 and Table 10 and Figures 5 and 6, this paper). Thirty six sites contained tipi rings, 31 had rock cairns, three were open camps, and one was an eagle trap (Schneider 1976: 6). Almost nothing was recovered from the surface of these sites, however (Schneider 1976: 13).

Excavations were conducted at 25 of these sites.

32SH121, a rock cairn, yielded nothing (Schneider 1976: 17-20). 32SH203 was a supposed mound site which also yielded nothing and may have been a natural feature (Schneider 1976: 24).

TABLE 9
UPPER SNEYDEE BASIN ARCHAEOLOGICAL SITE LIST-C

SITE	LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
32SH101	SE $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 25, T149N, R76W	Tipi Ring	
32SH102	NE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 25, T149N, R76W	Rock Cairns	
32SH103	W $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 25, T149N, R76W	Camp	
32SH104	SE $\frac{1}{4}$, NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 17, T149N, R75W	Rock Cairn	
32SH105	SE $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 17, T149N, R75W	Tipi Rings	
32SH107	SE $\frac{1}{4}$, NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 16, T149N, R76W	Rock Cairn	
32SH108	SE $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 24, T149N, R76W	Tipi Rings	
32SH109	S $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 23, T149N, R76W	Rock Cairns	
32SH110	NW $\frac{1}{4}$, NE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 1, T148N, R75W	Depression	
32SH111	SE $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 12, T148N, R75W	Rock Cairn	
32SH112	SW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 16, T148N, R74W	Tipi Rings & Rock Cairns	
32SH113	SE $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 12, T148N, R74W	Rock Cairn	
32SH114	NW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 25, T149N, R76W	Camp	
32SH115	NW $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 26, T149N, R76W	Camp	
32SH116	NW $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 34, T149N, R75W	Tipi Rings	
32SH117	N $\frac{1}{4}$, S $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 12, T148N, R75W	Tipi Rings & Rock Cairns	
32SH118	N $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 11, T148N, R74W	Camp	
32SH121	SW $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 7, T149N, R75W	Rock Cairns	
32SH122	SW $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 7, T149N, R75W	Rock Cairns	
32SH124	SW $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 12, T148N, R74W	Rock Cairn	
32WE101	N $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 34, T149N, R73W	Tipi Rings	
32WE102	Center W $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 5, T148N, R73W	Tipi Rings	
32WE103	W $\frac{1}{4}$, NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 16, T148N, R73W	Tipi Rings, Rock Cairns & Alignment	

Source: Schneider (n.d. a)

TABLE 10
UPPER CHEYENNE BASIN ARCHAEOLOGICAL SITES LIST-D

SITE	LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
32SH126	NW1/4, Sec. 36, T150N, R76W	Tipi Rings	
32SH127	Center NW1/4, NW1/4, Sec. 26, T149N, R76W	Tipi Rings & Rock Cairns	
32SH128	SW1/4, NE1/4, NW1/4, Sec. 23, T148N, R74W	Rock Cairns	
32SH129	NW1/4, NE1/4, NW1/4, Sec. 9, T149N, R75W	Tipi Rings	
32SH130	SW1/4, NW1/4, NW1/4, Sec. 9, T149N, R75W	Eagle Trap	
32SH133	SW1/4, SE1/4, NW1/4, Sec. 20, T149N, R75W	Tipi Rings	
32SH134	NE1/4, SE1/4, NE1/4, Sec. 17, T149N, R75W	Tipi Rings & Rock Cairns	
32SH135	NW1/4, NW1/4, SW1/4, Sec. 25, T149N, R76W	Tipi Rings & Rock Cairns	
32SH136	SE1/4, SW1/4, SE1/4, Sec. 8, T149N, R75W	Tipi Rings	
32SH137	SW1/4, SW1/4, SW1/4, Sec. 9, T149N, R75W	Rock Cairns	
32SH138	SW1/4, NW1/4, NW1/4, Sec. 8, T149N, R75W	Rock Cairns	
32SH140	SW1/4, SE1/4, SE1/4, Sec. 23, T149N, R76W	Tipi Rings	
32SH141	SW1/4, SE1/4, SW1/4, Sec. 36, T149N, R76W	Tipi Rings	
32SH142	N1/4, SE1/4, NE1/4, Sec. 3, T148N, R75W	Camp	
32SH144	SW1/4, NE1/4, NW1/4, Sec. 18, T148N, R74W	Rock Cairns	
32SH145	W1/4, SE1/4, NE1/4, Sec. 35, T149N, R75W	Tipi Rings & Rock Cairns	
32SH146	NW1/4, SW1/4, SW1/4, Sec. 21, T146N, R74W	Tipi Rings & Rock Cairns	
32SH147	NW1/4, NW1/4, NE1/4, Sec. 21, T148N, R74W	Tipi Rings & Rock Cairns	
32SH148	NW1/4, NE1/4, NW1/4, Sec. 21, T148N, R74W	Tipi Rings	
32SH149	NE1/4, SE1/4, NW1/4 & W1/4, SW1/4, NE1/4, Sec. 24, T148N, R74W	Tipi Rings	
32SH151	E1/4, NE1/4, NW1/4, Sec. 21, T148N, R74W	Tipi Rings & Rock Cairns	
32SH152	SW1/4, NW1/4, NW1/4, Sec. 24, T148N, R74W	Tipi Rings	
32SH153	SE1/4, NE1/4, NE1/4, Sec. 23, T148N, R74W	Tipi Rings & Rock Cairns	
32SH154	NE1/4, NE1/4, NE1/4, Sec. 23, T148N, R74W	Tipi Rings	
32SH155	N1/4, NW1/4, NW1/4, Sec. 24, T148N, R74W	Tipi Rings	
32SH156	SW1/4, NW1/4, NW1/4, Sec. 21, T148N, R74W	Tipi Rings	
32SH157	NE1/4, SE1/4, NW1/4, Sec. 23, T148N, R74W	Tipi Rings	
32SH158	NE1/4, NW1/4, SE1/4, Sec. 24, T146N, R74W	Tipi Rings	
32SH159	NW1/4, SE1/4, Sec. 24, T148N, R74W	Tipi Rings & Rock Cairns	
32SH160	NE1/4, SE1/4, NW1/4, Sec. 23, T148N, R74W	Tipi Rings	
32SH161	SE1/4, NE1/4, SE1/4, Sec. 23, T149N, R76W	Tipi Rings	
32SH162	SW1/4, SW1/4, NW1/4, Sec. 20, T149N, R75W	Tipi Rings	
32SH163	Center SW1/4, NW1/4, Sec. 24, T148N, R74W	Tipi Rings	
32SH164	SE1/4, SW1/4, NW1/4, Sec. 24, T148N, R74W	Tipi Rings & Rock Cairns	
32SH166	NW1/4, NW1/4, NW1/4, Sec. 23, T148N, R74W	Tipi Rings	
32SH167	SE1/4, NW1/4, NW1/4, Sec. 2, T149N, R76W	Rock Cairns	
32SH168	NW1/4, NW1/4, NW1/4, Sec. 9, T149N, R75W	Rock Cairns	

TABLE 10 continued

SITE	LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
32SH169	NE $\frac{1}{4}$,SE $\frac{1}{4}$,NE $\frac{1}{4}$, Sec. 7, T149N, R74W	Rock Cairns	
32SH170	NE $\frac{1}{4}$,SE $\frac{1}{4}$,SW $\frac{1}{4}$, Sec. 9, T149N, R75W	Rock Cairns	
32SH171	NE $\frac{1}{4}$,NE $\frac{1}{4}$,NE $\frac{1}{4}$, Sec. 29, T149N, R75W	Rock Cairns	
32SH172	NW $\frac{1}{4}$,SW $\frac{1}{4}$,NE $\frac{1}{4}$, Sec. 3, T148N, R75W	Rock Cairns	
32SH173	NW $\frac{1}{4}$,NW $\frac{1}{4}$,SW $\frac{1}{4}$, Sec. 11, T148N, R75W	Rock Cairns	
32SH174	NE $\frac{1}{4}$,NW $\frac{1}{4}$,SW $\frac{1}{4}$, Sec. 11, T148N, R75W	Rock Cairns	
32SH175	SW $\frac{1}{4}$,SW $\frac{1}{4}$,NE $\frac{1}{4}$, Sec. 16, T148N, R74W	Rock Cairns	
32SH176	NE $\frac{1}{4}$,NW $\frac{1}{4}$,NW $\frac{1}{4}$, Sec. 18, T148N, R74W	Rock Cairns	
32SH177	E $\frac{1}{2}$,SW $\frac{1}{4}$,NE $\frac{1}{4}$, Sec. 17, T149N, R75W	Rock Cairns	
32WE107	E $\frac{1}{2}$,NW $\frac{1}{4}$, Sec. 17, T148N, R73W	Tipi Rings	
32WE108	SW $\frac{1}{4}$,SW $\frac{1}{4}$,SE $\frac{1}{4}$, Sec. 36, T149N, R73W	Tipi Rings & Rock Cairns	
32WE109	Boundary of Secs. 25,26,35,36, T149N, R73W	Camp	
32WE110	NE $\frac{1}{4}$,NE $\frac{1}{4}$,NE $\frac{1}{4}$, Sec. 30, T148N, R73W	Tipi Rings	
32WE111	NE $\frac{1}{4}$,SE $\frac{1}{4}$,SW $\frac{1}{4}$, Sec. 19, T148N, R74W	Tipi Rings	
32WE113	SW $\frac{1}{4}$,NE $\frac{1}{4}$,SE $\frac{1}{4}$, Sec. 19, T148N, R73W	Tipi Rings	
32WE114	Boundary NE $\frac{1}{4}$ & SE $\frac{1}{4}$, Sec. 8, T148N, R73W	Tipi Rings	
32WE115	NW $\frac{1}{4}$,SE $\frac{1}{4}$,SW $\frac{1}{4}$, Sec. 19, T148N, R73W	Rock Cairns	
32WE116	SW $\frac{1}{4}$,SW $\frac{1}{4}$,SW $\frac{1}{4}$, Sec. 17, T148N, R73W	Rock Cairns	
32WE117	NE $\frac{1}{4}$,SW $\frac{1}{4}$,NE $\frac{1}{4}$, Sec. 5, T148N, R73W	Rock Cairns	
32WE118	SE $\frac{1}{4}$,SW $\frac{1}{4}$,SE $\frac{1}{4}$, Sec. 34, T149N, R73W	Rock Cairns	
32WE119	NE $\frac{1}{4}$,SE $\frac{1}{4}$,NE $\frac{1}{4}$, Sec. 34, T149N, R73W	Rock Cairns	
32WE120	SE $\frac{1}{4}$,SW $\frac{1}{4}$,SW $\frac{1}{4}$, Sec. 36, T149N, R73W	Camp	

Source: Schneider (1976)

Twenty two of the sites tested contained tipi rings (Table 11). There was little discussion of the archaeological material recovered from the rings, and apparently none of it was diagnostic enough to support discussions of cultural affiliation. However, distribution analysis indicated that sites on the uplands were characterized by either greater technological activity and/or longer occupation than was true for those in the bottomlands (Schneider 1976: 40).

The other site excavated was 32SH7, a bison kill. This site has been described in detail by Larson (1976) and appears to date to the Post-Contact Coalescent, although no specific cultural assignment could be made.

Also surveyed in 1974 was the area to be occupied by the New Rockford canal (Schneider n.d.b). Three new sites were located within the research area (Table 12, Figure 5). Two of these were tipi ring sites and the other was a rock cairn.

Schneider, Good, and Schweigert (n.d.) located three additional sites in the Sheyenne basin area of Eddy and Benson counties during their 1975 survey of the central North Dakota section of the Garrison Diversion project (Table 12, Figure 4). Two were mound sites and the other was a combination of tipi rings and mounds (Schneider, Good, and Schweigert (n.d.: 11). According to site file information one of the mound sites, 32BE408, dated to the Woodland period.

A review of the University of North Dakota site files resulted in one additional rock cairn site, 32WE124 (Table

TABLE 11

UPPER SHEYENNE BASIN TIPI RING SITES TESTED IN 1974

32SH5

32SH105

32SH112

32SH116

32SH126

32SH133

32SH145

32SH146

32SH147

32SH149

32SH151 .

32SH153

32SH154

32SH156

32SH157

32SH161

32SH162

32SH164

32SH166

32WE102

32WE111

32WE114

Source: Schneider (1976)

TABLE 12

UPPER SHEYENNE BASIN ARCHAEOLOGICAL SITES LIST-E

SITE	LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
32BE408	SE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 28, T151N, R65W	Mound	Woodland
32ED403	NW $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 13, T150N, R65W	Tipi Ring & Mounds	
32ED404	NE $\frac{1}{4}$, SW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 17, T150N, R62W	Mound	
32WE121	NW $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 25, T149N, R73W	Rock Cairns	
32WE122	SE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 26, T149N, R73W	Tipi Ring	
32WE123	SE $\frac{1}{4}$, NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 35, T149N, R73W	Tipi Rings	
32WE124	NW $\frac{1}{4}$, Sec. 35, T149N, R73W	Rock Cairn	

Sources: Schneider (n.d. b), Schneider, Good, and Schweigert (n.d.), and University of North Dakota site files

12, Figure 5). Seven possible site locations were obtained from the site leads (Table 13).

The Maple River Area

Very little information is available regarding the Maple River per se, let alone the specific area around the town of Enderlin, North Dakota. For the latter only one site lead was noted (Enderlin Diamond Jubilee Committee n.d.).

On the upper Maple River near Page, North Dakota several possible archaeological sites were noted (Page Community 1958: 14-18). Two miles east of Page a mound was excavated which contained, in its center underneath a rock, several sitting burials with "... the remains of a dog and a horse and a stone covered with carved figures (Page Community 1958: 15)." One of the burials was said to have a pipestem in its mouth (Page Community 1958: 14). Another, apparently unexcavated, mound known as Thompson's mound was also mentioned (Page Community 1958: 15).

Other sites mentioned included another burial which seems not to have been in a mound, an isolated find of a metal spear stamped "I & H Sorby," and a campsite of undetermined nature (Page Community 1958: 17-18). In addition there was a list of locations for other various isolated finds which were not included in the list of site leads (Table 15).

Nelson (1973: 64-65) noted that the Fort Ransom Military Museum possessed a small tripodial stone vessel supposedly found about 1938 on the Maple River east of Enderlin.

TABLE 13

UPPER CHEYENNE BASIN ARCHAEOLOGICAL SITE LEADS

LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
<u>EDDY COUNTY</u>		
Sec. 3, T150N, R65W	?	
NW $\frac{1}{4}$, Sec. 12, T150N, R65W	Effigy Mounds	
<u>PIERCE COUNTY</u>		
Sec. 19, T152N, R73W	Mound & Camp	
<u>SHERIDAN COUNTY</u>		
NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 33, T149N, R74W	Mound & Camp	
NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 2, T148N, R74W	Mounds	
NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 21, T148N, R74W	Mounds	
SW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 17, T148N, R74W	Mounds	

Source: University of North Dakota site files

TABLE 14

MAPLE RIVER BASIN ARCHAEOLOGICAL SITES

SITE	LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
32CS101	SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 11, T137N, R54W	Village	

Source: University of North Dakota site files

TABLE 15
 MAPLE RIVER BASIN ARCHAEOLOGICAL SITE LEADS

LEGAL LOCATION	TYPE	CULTURAL AFFILIATION
<u>CASS COUNTY</u>		
Sec. 33, T137N, R53W	Camp	
Sec. 34, T139N, R53W	Camp	
SE 1/4, Sec. 11, T137N, R54W	?	
2 miles east of Page, N.D.	Mound	
NE 1/4, Sec. 10, Rich Township	Mound	
NE corner, NW 1/4, Sec. 12, Lake Township	Burial	
1 mile south of center Sec. 13, Lake Township	Iron Spear	
SW 1/4, Sec. 7, Page Township	?	

Source: University of North Dakota site files and Enderlin Diamond Jubilee Committee (n.d.)

He also noted that there may be a site on the east bank of the Maple River north of state highway 16 between the towns of Enderlin and Leonard, North Dakota (Nelson 1973: 76).

The University of North Dakota site files recorded only one site, 32CS101, for the area. 32CS101 is a village site with some possible house depressions (Table 14, Figure 2). The site leads files produced two possible sites, both occupation or camp sites (Table 15).

HISTORIC PERIOD

The historic period was divided into three units: Fur Trade (1738-1860), Military (1860-1870), and Settlement (1870-1900). Table 16 provides a list of those historic sites with legal locations. Table 17 lists those sites for which locations are only approximate and as such can only be considered site leads. These tables, when taken in conjunction with the text are self-explanatory. Figures 8 and 9 map those sites in Table 16, excluding trail markers and burials.

Fur Trade Period

Although the Fur Trade Period begins with La Verendrye's expedition to visit the Mandan in 1738 extensive activity probably did not begin until the early 1800's. La Verendrye's influence in the research area was minimal; his route to the Mandan villages crossed the upper Sheyenne near its headwaters (Robinson 1966: 89).

The Biesterfeldt site, discussed earlier, dates from

TABLE 16
KNOWN HISTORIC SITES

TYPE	LEGAL LOCATION
<u>FUR TRADE PERIOD</u>	
Nolan's Crossing	SW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 29, T136N, R51W
Maple Creek Crossing	NW $\frac{1}{4}$, Sec. 16, T138N, R53W
<u>NICOLLET-FREMONT EXPEDITION</u>	
Birch Creek Camp	SW $\frac{1}{4}$, Sec. 18, T137N, R58W
<u>MILITARY SITES DATING AFTER 1861</u>	
Watson's Crossing	SE $\frac{1}{4}$, Sec. 26, T139N, R53W
Sibley Trail	S $\frac{1}{4}$, Sec. 22, T140N, R55W
Camp Johnson	SW $\frac{1}{4}$, Sec. 18, T137N, R58W
Camp Wharton	E $\frac{1}{4}$, Secs. 18 & 19, corner of Sec. 20, T135N, R56W
Camp Weiser	SW $\frac{1}{4}$, Sec. 33, T137N, R57W
Camp Sheardown	NW $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 2, T139N, R58W
Camp Corning	SW $\frac{1}{4}$, Sec. 8, T143N, R58W
Camp Arnold	NE $\frac{1}{4}$, Sec. 32, T141N, R56W
Camp Atchison	NW $\frac{1}{4}$, Sec. 28, T147N, R60W
32BE3-Trenchwork	SW $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 28, T151N, R65W
Grave-S. Wannamaker	NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 20, T147N, R60W
Graves-J. Ponsford & A. Moore	NE $\frac{1}{4}$, Sec. 32, T141N, R56W
Fort Ransom	S $\frac{1}{4}$, Sec. 11, T135N, R58W
Fort-Ransom-Fort Totten Trail	SW $\frac{1}{4}$, Sec. 18, T137N, R58W
Brenner Crossing	SE $\frac{1}{4}$, Sec. 1, T149N, R64W
Shoyenne Crossing Mail Station, Ft. Totten Trail (32NE414)	NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 23, T150N, R61W
Pidgeon Point Trail Station, Ft. Abercrombie-Ft. Ransom Trail	E $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$ & W $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 19, T135N, R53W
Nolan's Crossing Road Station	SW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 29, T136N, R51W
Palmer's Spring-Ambush	S $\frac{1}{4}$, Sec. 14, T151N, R71W
<u>ABANDONED TOWN SITES</u>	
Owago Colony	SE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 16, T135N, R53W
<u>BONANZA FARMS</u>	
Power's Holendale Farm	NW $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 13, T136N, R52W
<u>ABANDONED FARM STEADS</u>	
32SH119-Dugout	SW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 12, T148N, R74W
32SH106-Dugout/Root Cellar	SW $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 17, T149N, R75W
32SH120-Dugout	SE $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 29, T149N, R74W
32SH123-Dugout	NW $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 21, T149N, R75W
32SH125-Foundation	SW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 35, T150N, R76W
32SH131-Foundation, Other Structures	SE $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 17, T149N, R75W
32SH132-Foundation, Other Structures	NW $\frac{1}{4}$, NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 20, T149N, R75W
32SH139-Foundation	NE $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 18, T149N, R75W
32SH143-Foundation	SW $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 18, T148N, R74W

TABLE 16 continued

TYPE	LEGAL LOCATION
32SH150-Foundation	NW $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 12, T148N, R74W
32SH165-Dugout	SE $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 13, T146N, R74W
32NE104-Dugout, Other Structures	NE $\frac{1}{4}$, NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 18, T148N, R73W
32NE112-Foundation, Other Structures	NW $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 3, T148N, R73W
32RN105-Dugout, Other Structures	NW $\frac{1}{4}$, Sec. 17, T145N, R75W
32WE210-Foundation	NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 24, T149N, R73W
Wadeson Log Cabin	S $\frac{1}{4}$, Sec. 24, T137N, R58W
32ED402-Unknown	NE $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 18, T149N, R66W
32ED405-Log/Frame Structures	SE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 18, T150N, R64W
<u>CHURCHES AND/OR CEMETERIES</u>	
Owego Lutheran Church/Cemetery	SE $\frac{1}{4}$, Sec. 9, T135N, R53W
Zion Lutheran Church/Cemetery	NW $\frac{1}{4}$, Sec. 3, T135N, R52W
Barrie Lutheran Church/Cemetery	NW $\frac{1}{4}$, Sec. 29, T136N, R51W
Brenner Crossing Pioneer Cemetery	SE $\frac{1}{4}$, Sec. 1, T149N, R64W

Sources: Schweigert (n.d.), Sherrod (1970), Schneider (1976), University of North Dakota site leads, North Dakota State Historical Society (1965), Mallory (1966), Nelson (1973), and Schneider (n.d. a)

TABLE 17
HISTORIC SITE LEADS

TYPE	LOCATION
<u>FUR TRADE PERIOD</u>	
Hudson's Bay Trail	Griggs County, Sec. 24, Pilot Mound Township
Hudson's Bay Post	Griggs County, Sec. 24, Pilot Mound Township
Columbia Fur Company Post	Confluence of Red and Sheyenne Rivers
American Fur Company Post	Griggs County
Sheyenne Delta Crossing	Foot of Sheyenne Delta near Kindred
<u>NICOLLET-FREMONT EXPEDITION</u>	
Nelson County Camp	Across river from 32NE414
Unnamed Sheyenne Crossing-1	Few miles below Valley City
Unnamed Sheyenne Crossing-2	Between Fort Ransom and Lisbon
Maple River Camp	Upper branch of Maple River
Trail	Addie Township, Griggs County
<u>MILITARY EXPEDITIONS 1840-1861</u>	
Stevens Trail	Addie Township, Griggs County
Sibley's Crossing	T143N R58 or R59W
Unnamed Sheyenne Crossing-3	In area of southernmost bend of Sheyenne River
Unnamed Sheyenne Crossing-4	East of unnamed crossing-3
<u>MILITARY SITES DATING AFTER 1861</u>	
Unnamed Sheyenne Crossing-5	Across from 32NE414
Scoville's Ford	Scoville Township, Ransom County
Sibley Trail	Pilot Mound Township, Griggs County
Carnahan (Sully) Trail	Addie Township, Griggs County
Camp Jenison	T147N, R60W
Camp Austin	T145N, R60W
Camp Cox	T143N, R60W
Camp Barton	T139N, R59W
Camp Libby	T142N, R58W
Camp Stephens	T139N, R55W
Camp Ambler	T138N, R53W
Camp Egerton	T130N, R50W
Camp Hayes	Sec. 36, T134N, R55W
Unnamed Camp (Fisk 1862-63)	Socs. 22-23, Addie Township, Griggs County
Unnamed Camp (Sibley)	Near Lisbon
Unnamed Camp	On Sheyenne River south of Ft. Totten
Camp Pope	Sec. 4, T141N, R60W (Hald Hill Township, Griggs County)
Camp Burr	Sec. 36, T144N, R60W (Hald Hill Township, Griggs County)
Nelson County Trenchwork	Sec. 1, T149N, R60W
Earthen Embankment and Rifle Pits	SW1/4, Sec. 7, T136N, R57W
1862 Stone Battle	Near Valley City
Ransom County Battle	Sec. 19, T135N, R66W
Round Top Hill Battle, Barnes County	SW1/4, Sec. 1, T139N, R60W

TABLE 17 continued

TYPE	LOCATION
Barnes County Battle	NE $\frac{1}{4}$, Sec. 28, T140N, R58W
Grave-G.E. Brent	Sec. 29, Addie Township, Griggs County
Grave-C. Johnson	Sec. 23, Bald Hill Township, Griggs County
Grave-C. Petterson	Sec. 35, Bald Hill Township, Griggs County
Shenford (Shinford) Ford	On Fort Abercrombie-Fort Ransom Trail
Fort Ransom-Fort Totten Trail	Addie and Willow Townships, Griggs County
Log Shelter and Mail Drop-Ft. Totten Trail	Sec. 14, Addie Township, Griggs County
Burials of Travelers on Military Trails	Near Maddock, North Dakota
Ambush Site	Lyle Hill, north of Harvey, North Dakota
Unknown Historic Site-Clausen Springs	T137N, R58W
Unknown Historic Site-Sugarloaf Hill?	NW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 22, T140N, R58W
<u>ABANDONED TOWN SITES</u>	
Mardell	Griggs County
Plymouth	Sec. 11, T135N, R57W
Bonnerville	Ft. Abercrombie-Ft. Ransom Trail?
Venlo	Ft. Abercrombie-Ft. Ransom Trail
<u>STAGE AND MAIL STATIONS</u>	
Alfson Post Office and Store	Sec. 30, Pilot Mound Township, Griggs County
Willow Post Office	Sec. 16, Willow Township, Griggs County
Ed Lohnes Stage and Mail Station	Sec. 7, Willow Township, Griggs County
<u>ABANDONED FARM STEALS</u>	
Adobe Building	SE $\frac{1}{4}$, Sec. 10, T148N, R74W
Unspecified	Secs. 20, 21, Scoville Township, Ransom County
<u>MILL SITES</u>	
Lisbon	
Wissner	
Old Lee	Sec. 1, Pilot Mound Township, Griggs County

Sources: Griggs County (1976), Arnold (1918), University of North Dakota site leads, Enderlin Diamond Jubilee Committee (n.d.), Robinson (1966), Stiles (1951), Page Community (1978), Gilman (1975), Wright (1936)

this same general time period. White influence can be noted in the presence of horse bones, glass beads, and various objects of brass, steel, and iron (Wood 1971: 39-42). Although metal tools, such as axes, hatchets, knives and projectile points were present many tools of stone (projectile points, end scrapers, hammers) and bone (hoes, fleshers, etc.) as well as pottery vessels were still being manufactured (Wood 1971: 33-42, 49). This suggests that white influence was still not of major importance.

For a general idea of the distribution of certain North Dakota Indian groups circa 1750 see Figure 7. The Sheyenne River valley would have been occupied primarily by the Cheyenne and Yanktonai. By 1800 most of the area from Wahpeton to the Turtle River was a no-man's land disputed over by the Chippewa and Dakota (Robinson 1966: 56). Both groups, however hunted the area with at least the Chippewa occasionally building fortified hunting camps (Hickerson 1962: 25-27).

Although the dispute between the Chippewa and Dakota may have promoted white inactivity in the area it was not the sole cause. Most of eastern North Dakota produced poorer quality furs than did areas to the west and north, and thus there was less incentive for fur companies to build posts (Robinson 1966: 58). Trade increased in the area as a result of the need to more intensively exploit bison both for furs and for food to feed the trappers to the north and west (Robinson 1966: 58).

Around 1805 the Michilimackinac Company gained control of trade on the Red River south of the Sheyenne River with the Northwest Company apparently retaining control of that area to the north (Robinson 1966: 57). As such, however, the Red River valley and its tributaries, did not become avenues of trade until after the Americans had gained control of the upper Mississippi River around 1820 (Robinson 1966: 72-73).

Only three posts are known for the Sheyenne River and none for the Maple. Supposedly Hudson's Bay had a post in operation in Griggs County from 1820 to 1870 (Griggs County 1976: 4-5). Joesph Renville and the Columbia Fur Company established a post in 1826 at the confluence of the Sheyenne and Red Rivers (Robinson 1966: 73). After 1826 the American Fur Company, under Sibley and Kittson, controlled much of the trade in the area (Robinson 1966: 73). They established a post in 1834 in what appears to be the same general area of the Hudson Bay post (Gilman 1970: 125, 128-129).

The trails used by the fur traders are less well known. A portion of the one used by Hudson's Bay is located in Griggs County (Griggs County 1976: 4-5). Trails used by the Red River carts around 1840 to carry material between Pembina, North Dakota and St. Paul, Minnesota had crossings of the Sheyenne at the foot of the Sheyenne delta near Kindred, North Dakota and at Nolan's Crossing (Sherrod 1970: 38). The trail also crossed the Maple River at the Maple Creek Crossing (North Dakota State Historical Society 1965).

The Fur Trade Period began its ending in 1837 with the small pox epidemics and decline in the numbers of fur-bearing animals (Robinson 1966: 106). The final end was brought about by the Indian wars of the 1860's and the resulting reservation policies (Robinson 1966: 106).

Military Period

Around 1820 the U.S. government began to build or to support the building of military and/or trade posts. With an increase in Indian hostility the government began sending military expeditions to North Dakota.

In 1839 the Nicollet-Fremont mapping expedition explored portions of the research area. Camps made by this expedition include: Birch Creek, where a council was held with an Indian leader by the name of Wahnetah, the upper branch of the Maple River, and the south side of the Sheyenne River in Nelson County (North Dakota State Historical Society 1965, Page Community 1958: 19, and Schweigert n.d.: 52). Crossings of the Sheyenne River by this expedition were noted as being a few miles below Valley City, North Dakota and between Fort Ransom and Lisbon, North Dakota (Arnold 1918: 27 and Page Community 1958: 19).

The opening of the Oregon Territory and discovery of gold in Montana increased white activity in the area. Sumner's expedition to Devils Lake in 1845 crossed the Sheyenne River in the area of its southernmost bend as did one of the routes to the Oregon Territory (Arnold 1918: 31-32). The Pope and/or

Woods expedition of 1849 crossed the Sheyenne somewhere further to the east (Page Community 1958: 19). The Stevens 1861 survey party crossed the Sheyenne River in northern Barnes County at what would later be known as Sibley's Crossing (Page Community 1958: 21).

In 1862 the Sioux killed several hundred whites in Minnesota and the U.S. Army began to conduct military reprisals under the direction of Sibley and later Sully (Robinson 1966: 100). These reprisals, which lasted into the late 1860's eventually extended into North Dakota with action in eastern North Dakota directed towards the Devils Lake area. This is apparently the best known episode of North Dakota military history with trails, camps, burials, crossings, and other sites fairly well known.

Nolan's, Sibley's, and the Sheyenne delta crossing were still in use (Sherrod 1970: 39, Wright 1936). Additional crossings included the Sheyenne Crossing and Scoville's Ford (Schweigert n.d.: 52, Arnold 1918: 34). Watson's Maple River Crossing may also date to this period (Enderlin Diamond Jubilee Committee n.d.).

A large number of campsites can be assigned to these expeditions. Most were occupied only for a day or two. Camp Hayes was occupied for about a week and Camp Atchison, which served as Sibley's base camp, was occupied for about one month (Arnold 1918: 34, North Dakota State Historical Society 1965). Most of the camps were in the vicinity of the Sheyenne River, with the exception of camps Arnold, Stephens, and

Ambler which were in the Maple River area.

In addition to camps there are several other military sites in the research area. Schweigert (n.d.: 45-46) has concluded that 32BE3, which had been considered a prehistoric site by all other authors, may be a trenchwork associated with an 1865 camp of the Third Illinois Calvary. The University of North Dakota site lead files noted another trenchwork in Nelson County and an earthen embankment with rifle pits in Ransom County. Both of these sites are of unknown date and affiliation.

There are four possible battle sites noted for the research area. One is an 1862 battle with the Sioux near Valley City, North Dakota (Andreas 1884). The second, in Ransom County, has no other information except that soldier burials occurred on the east side of the Sheyenne River (Andreas 1884). The University of North Dakota site leads file listed two battles in Barnes County, but no other information was available.

Other sites dating to this period include portions of trails and soldier burials. Both are listed in Tables 16 and 17.

In 1864 the military began establishing a series of forts to control Indian behavior. Fort Ransom was established on the Sheyenne River in 1867 to guard a trail from Fort Abercrombie to the Missouri River (Robinson 1966: 102). The fort occupied an area of about 300 x 200 feet with log buildings, earthworks, and two block houses but no palisades

(Arnold 1918: 36). In 1872 Fort Ransom was replaced by Fort Seward at Jamestown, North Dakota (Robinson 1966: 102).

Within the research area there were two major military trails. One leads from Fort Abercrombie directly to Fort Totten with one crossing of the Sheyenne River at Nolan's Crossing, a second in the vicinity of Sibley's Crossing, and a third near that listed in Table 17 as Sheyenne Crossing-5 (Sherrod 1970: 39, Robinson 1966: 89). Also involved were two crossings of the Maple River (Robinson 1966: 89). In addition one ford, Shinford or Shenford, has been noted for this trail (Enderlin Diamond Jubilee Committee n.d.).

The second trail ran from Fort Abercrombie to Fort Ransom and from Fort Ransom to just above Baldhill Creek where it joined the Fort Abercrombie-Fort Totten trail. The Fort Abercrombie-Fort Ransom Trail had two routes, one apparently proceeded from the area of Nolan's Crossing and cut across the Sheyenne River just below and above the southernmost bend while the other followed directly along the south side of the Sheyenne River (Robinson 1966: 89). The route from Fort Ransom to its juncture with the Fort Abercrombie-Fort Totten Trail involved on crossing of lower Baldhill Creek (Robinson 1966: 89). Portions of these trails are still observable.

After the replacement of Fort Ransom by Fort Seward the Brenner Crossing of the Sheyenne River became important (North Dakota State Historical Society 1965).

There were also a series of trails and/or mail stations maintained on these routes. These generally had at least an attendant and sometimes a guard in addition to mail carriers (Sherrod 1970: 41-42, Scheigert n.d.: 51-52). People who died while traveling were generally buried nearby. Stiles (1951: 4) notes a series of such burials near Maddock, North Dakota. Ambushes also occurred on these trails with one noted for Lyle Hill, north of Harvey and a second at Palmer's Spring on the Fort Totten-Fort Stevenson Trail (Stiles 1951: 4, North Dakota State Historical Society 1965).

The University of North Dakota site leads file listed two other historic sites of unknown date and significance. They are listed in Table 17.

Settlement Period

White settlement of the research area gradually increased after the Civil War. Settlement became more pronounced, however, in 1871 as a response to the railroads reaching the Red River, an increase in steamboat service on the Red River, an extension of stage services, the opening of a land office at Pembina, North Dakota, and the surveying of section lines near Fargo and Wahpeton, North Dakota (Robinson 1966: 129).

Much of the lower Sheyenne was settled by Norwegian farmers during the early 1870's (Robinson 1966: 130). Probably some of the abandoned homesteads listed in Tables 16 and 17 belonged to these farmers.

In addition the extension of the railroads into North Dakota brought about the creation of many towns (Sherrod 1970: 43-44). However, many of the towns were built in anticipation of the railroad and when it took another route they disappeared. One such town was Mardell in Griggs County (Robinson 1966: 154).

Owego Colony was a similar settlement established in anticipation of the Northern Pacific railroad (Sherrod 1970: 43-44). However, a Sioux scare resulted in its abandonment and destruction (Sherrod 1970: 43-44).

A series of stage and mail stations were also established during this period (Griggs County 1976: Frontispiece). The Sheyenne Crossing Mail Station (32BE414) continued to be used into the 1880's (Schweigert n.d.: 51-52).

Bonanza farming appeared in the 1870's as a response to the bankruptcy of the railroads (Robinson 1966: 137). This method put large tracts of land into production by the intensive use of a large number of laborers. Power's Helendale farm was one such farm (Sherrod 1970: 45). Other farms were located near Casselton, North Dakota, in the Maple River drainage, and in Wells, Foster, Richland, and Barnes counties (Robinson 1966: 137-138). By the turn of the century, however, most of these farms had been or shortly would be split into smaller holdings (Robinson 1966: 139).

North Dakota experienced a great boom in population during the 1880's, possibly as a response to the rapid industrialization of the American economy (Robinson 1966: 130).

It was during this time that many homesteads began to appear in the state (Robinson 1966: 148-151). Schweigert (n.d.: 69) has noted that within the area he was researching the U.S. General Land Office Survey Maps from 1875 to 1903 indicated the existence of 230 homesteads or dwelling sites. At least on the upper Sheyenne these sites tend to be on the first river terrace (Schneider 1976: 7).

Many of the old mills in the area were built at about this time also (Andreas 1884, Griggs County 1976: Frontispiece). The Old Lee Mill in Griggs County, for example, was in use from 1877 to 1902 (Griggs County 1976: Frontispiece).

Several churches also date to this period and many have associated cemeteries (Sherrod 1970: 46). The Fargo Genealogical Society has compiled a list of old cemeteries in several counties (see Appendix D).

After 1915, however, North Dakota began to steadily lose population. This was marked, at least in Benson County, by the abandonment of several schools during the period from 1910 to at least 1929 (Anonymous 1929). Also some of the church cemeteries were abandoned at this time (Sherrod 1970: 46).

Appendix D lists other potential historical sources in addition to those published by the Fargo Genealogical Society. Many of them contain discussions relation to the settlement period as defined here. Others are potential resources whose content was not evaluated due to a lack of time.

A SUMMARY OF THE ARCHAEOLOGICAL AND HISTORICAL DATA AND ITS
RELATIONSHIP TO THE CLIMATIC DATA

Summarizing this data and organizing it into a systematic interpretive framework is difficult due to the lack not only of adequately excavated material but also to the indistinctive nature of much of the available material. A short general summary will be provided below with much of the information derived from outside the immediate research area. The relationship of this sequence to the various climatic data will also be discussed. Reference should also be made to Table 18 at this point as it provides a schematic view of the discussion which follows.

The earliest cultural group represented in the research area is the later Paleo-Indian Folsom culture. The Folsom culture, hunters primarily of extinct bison, was coeval with the Pre-Boreal and Boreal climatic episodes. Apparently, those sites in the research area are isolated finds of projectile points. No sites belonging to this group have been excavated in the research area or its immediate vicinity. As a result nothing is known regarding the nature of this culture's exploitation of the eastern Northern Plains.

The Plano culture followed and was partially contemporaneous with the Folsom culture. Plano culture groups were primarily hunters first of extinct bison and then later on of modern bison. During the early Plano the climate

was more cool and moist (Pre-Boreal and Boreal episodes) but it became increasingly warm with the period of maximum warmth appearing to end at about the same time as the Plano culture.

No sites or isolated finds have been noted for the Plano culture in the Sheyenne-Maple River basins. Plano culture sites and/or isolated finds are not frequent in areas adjacent to the research area either. An isolated find of a Yuma-like point in Stutsman County is apparently the only known or at least published example of the Plano culture (Kammerer 1942: 123).

Plains Archaic sites are also absent in both the research area and much of the rest of the northern Plains. In other areas, both to the east and west, the early Plains Archaic was partially coeval with the Plano groups. Like the Plano they subsisted on bison but there appears also to have been a somewhat greater emphasis on the collection of smaller animals and plants. The Plains Archaic spans three climatic episodes, it began at about the same time as the Atlantic, continued through the sub-Boreal, and ended at about the same time as did the sub-Atlantic.

A few Archaic sites have been found in areas adjacent to the Sheyenne-Maple River basins. One, 32SH9, in Sheridan County had artifacts distributed over an area of high ground (University of North Dakota Site Files). Another apparently, aceramic and possibly Archaic site is 32LM201 in LaMoure County (Mallory 1966: 29-30) and Vehik n.d.: 73). This site

consists of three stratigraphic layers, the lowest of which is seven feet below the present ground surface (Mallory 1966: 30). Isolated finds of material possibly belonging to the Old Copper Culture have been noted near the towns of Lakota and McHenry, North Dakota (Spiss 1968: 125).

Possible reasons for the lack of archaeological sites dating before 5000 B.P. in the northern Plains have been discussed in some detail by Reeves (1973) and, indirectly, by Shay (1971). One of the primary reasons is that not very many northern Plains sites have been investigated (Reeves 1973: 1243). Second, there has been a tendency for researchers not to define or sample earlier terrace systems and sediments (Reeves 1973: 1243). Third, several studies have indicated that, at least on the western Plains, there was a complex paleoclimatological and paleohydrological sequence which either destroyed or deeply buried those emergent floodplain surfaces existing between 7500 and 5000 B.P. (Reeves 1973: 1243). Finally, both Reeves (1973: 1246) and Shay (1971) note that side-notched projectile points characteristic of this period are very similar to those from much younger sites, sometimes as recent as the early historic.

By the beginning of the Christain era and possibly somewhat earlier there appears in the areas being considered here a series of groups belonging to the Woodland cultural tradition. As such, however, the nature of much of the Woodland occupation of the northern Plains is still poorly defined.

The major subsistence mode continued to be that of hunting and gathering with the possible addition of some horticultural produce late in time. The major distinction, then, from the earlier Archaic cultures was the manufacture and use of pottery.

Early Woodland sites, such as those found to the southeast in Illinois, have not been found in the areas considered here. One possible exception is Morrison Mound 13 in western Minnesota with a radiocarbon date of 2640 B.P. (Wilford et. al. 1969: 24-25, 50).

It is with the Middle Woodland that evidence for human activity in the northern Plains becomes more frequent. The groups which occupied central and eastern North Dakota and its adjacent areas were of two general types, Sonota and Laurel.

The Sonota complex, as defined by Neuman (1975: 96), is one component of a cultural tradition occupying most of the northern Plains. The Sonota Complex itself consists of a series of campsites and mounds found in the Dakotas from the Missouri River trench eastward to western Minnesota (Neuman 1975: 96).

The major difference between the Sonota Complex and groups to the west, such as the Besant Culture, is the former's mound building activities (Neuman 1975: 96). Otherwise sites belonging to this tradition share in an emphasis on communal bison hunting and they also show a number of

similarities in their chipped and ground stone artifacts (Neuman 1975: 81). Their similarities in pottery, however, are less pronounced (Neuman 1975: 81). Much of the mortuary complex and some of the ceramic attributes are thought to reflect Hopewellian influences (Neuman 1975: 83-84, 96).

Traits similar to those of the Sonota Complex have also been recognized in some of the mounds assigned to the Malmo Focus of southern Minnesota (Neuman 1975: 87). These include log-covered secondary burials (but not central burial chambers), certain pottery attributes, and the inclusion of bison skeletons and/or skulls as burial accompaniments (Neuman 1975: 87).

Sites within the research area which may belong to the Sonota Complex are few. 32BA1, the Baldhill Mounds, has already been included in the complex by Neuman (1975: 79). The Sprenger Tipi Ring site may also belong here as it is noted as showing similarities to Besant Culture sites (Schneider and Treat n.d.: 35-36). Strong's (1940: 385) Lisbon mound may belong to the Sonota Complex or one of the southern Minnesota groups.

The Laurel Culture extends from the eastern margin of the northern Plains around the north shore of Lake Superior and into the Upper Peninsula of Michigan (Stoltman 1973: 3). It too was characterized by a hunting and gathering way of life, possibly organized into a seasonal pattern, centering on the exploitation of fish, moose, and beaver (Stoltman 1973: 3).

The strongest relationships of the Laurel Culture appear to be to the east with other Great Lakes cultures such as Point Peninsula (Stoltman 1973: 3). Evidence of Hopewellian influence includes the occasional appearance of obsidian, certain ceramic attributes, and the practice of mound burial (Stoltman 1973: 3). Unlike the Sonota Complex mounds, Laurel mounds lack a central burial chamber and were accretional. Certain burial practices, such as the breaking of long bone ends on secondary human interments, were found at the Grover Hand site of the Sonota Complex and Smith Mound 4 of the Laurel Culture (Neuman 1975: 48, 87 and Stoltman 1973: 9-11).

There is no evidence for Laurel Culture remains in any area south of northern Minnesota according to Stoltman (1973: 3). Within the Red River valley drainage Laurel material occurs at least as far south as the Snake River (Johnson 1973: 30). Nelson (1973: 76, in referring to some archaeological work conducted by the University of Minnesota in southeastern Sargent County, North Dakota, mentioned the occurrence of Laurel pottery. Perhaps the secondary burials from the accretional mound at 32GG1 belonged to a Laurel-like Culture.

The Laurel and Sonota groups spanned the sub-Atlantic and Scandic climatic episodes. Both began their existence toward the end of the sub-Atlantic when the climate was becoming cooler and both terminated their existence toward the end of the Scandic as the climate became warmer.

Hopewellian influences on these groups apparently ended with the onset of the Scandic (Baerreis et. al. 1976: 39-57).

Beginning around 1400 B.P. the Late Woodland Arvilla Complex appeared in the northeastern Plains and its periphery. It has been suggested that Arvilla was basically a mortuary complex associated with a series of foci or phases (Johnson 1973: 65). The lack of habitation sites associated with this Complex has resulted in an absence of knowledge regarding settlement and subsistence patterns. Basically, all that can be said is that burials tended to be placed under both round and linear mounds with a burial assemblage reflecting northern origins with the addition of some marine shell trade goods from the south (Johnson 1973:66).

The Arvilla complex per se does not seem to appear in North Dakota west of the Red River valley, with the exception of the Fordville area (Johnson 1973: 65). The only possible exception might be the mound noted as being east of Page, North Dakota, assuming that at least the horse burial was intrusive or misidentified. The Arvilla Complex does, however, share some traits with the Sonota Complex including the possession of Prairie side-notched projectile points (Johnson 1973: 65).

The Arvilla Complex spanned the late Scandic and neo-Atlantic climatic episodes. In the southern Red River valley it disappeared toward the end of the neo-Atlantic, but it seems to have persisted in the northern Red River basin for several more centuries (Johnson 1973: 66).

By 1000 B.P. in the Missouri trench cultures of the Plains Village (Mississippian) tradition had appeared. Groups belonging to this tradition may have also appeared in the research area at about this time or slightly earlier (considering the 1100 B.P. date of 32RM201). However, most of the sites belonging to this tradition from the research area probably are somewhat later in date and will thus be discussed in greater detail below.

Within the Red River valley and northern Minnesota the Blackduck Culture may have developed from an Arvilla Complex base (Johnson 1973: 66). In central Minnesota, however, the Kathio Focus, which developed from the Malmo Focus, replaced Arvilla (Johnson 1973: 66).

The presence of the Blackduck Culture in the southern Red River valley is not adequately documented. Nelson (1973: 76) noted that such material was recovered from southeastern Sargent County by the University of Minnesota expedition but little other data is available. However in southern Canada the Blackduck Culture may have continued to historic times. It has been suggested that Blackduck was prehistoric Assiniboine (Hlady 1970: 108-110).

The Kathio Focus dates from at least A.D. 900 to 1000 (Wilford 1970: vii-viii and Wilford et. al. 1969: 51). The Kathio Focus people practiced secondary burial in mounds which were sometimes accretional and they added very few, if any, grave goods (Johnson 1973: 66 and Wilford et. al.

1969: 15). These people, as well as those of the Blackduck Culture, were primarily hunters and gatherers. Although no sites belonging to the Kathio Focus have been noted in the research area it is possible that 32GG1 could belong here rather than to the Laurel Culture.

Blackduck, that is its southern manifestations, and the Kathio Focus both appear to have begun and ended at about the same time as the Neo-Atlantic. It is possible that at least the Blackduck culture retreated northwards with the onset of the dryer Pacific climatic episode.

Remaining to be discussed are those Woodland sites which could not be assigned to a more specific group. These sites are: 32RM106, 32BE408, 32SH8, and 32SH203 which constitutes half of the Woodland sample. These sites, just as some excavated sites in other areas, cannot be assigned to specific cultural groups due to the lack of diagnostic material (Good et. al. 1976: 208-209).

At any rate this marks the end of Woodland Tradition domination in the northeastern Plains. It does not mean, however, that Woodland based cultures did not continue to co-exist, at least early on, with groups belonging to the Mississippian Plains Village Tradition.

With the increase of Mississippian influences in the northeastern Plains a number of "Southern Cult" materials begin to appear in the area (Johnson 1973: 66). To this belong the spirally decorated pottery and other materials

found in the Heimdal (32WE401) and Wray mounds. Similar materials have been noted in other areas of the northern Plains (Howard 1953: 130). Dates for this material are lacking, however.

Documented evidence for Mississippian groups along the eastern periphery of the northern Plains include sites of the Cambria Culture dating from about 950 to 650 B.P. and the Oneota Culture circa 650 to 350 B.P. (Wilford 1970: viii). These groups were primarily settled village agriculturalists. There is some evidence for the presence of Oneota groups in southeastern North Dakota (Nelson 1973: 76). However, no such materials have been found in the research area.

Of the Middle Missouri Plains Village groups, the Mandan had a traditional belief that they had moved from the Devils Lake area to the Middle Missouri. Whether or not this is actual fact the pottery from an effigy mound 32ED3, in the research area, has been considered very similar to Mandan (Cooper 1947: 5-6). Another potential village site, 32BE3, had pottery which generally resembled material from the Middle Missouri (Cooper 1947: 4).

Remaining material from the research area with Middle Missouri Plains Village relationships dates to the Post-Contact Coalescent. Biesterfeldt was a possible Cheyenne village, and 32SH7 was a bison kill site whose ethnographic affiliation is unknown.

The remaining sites (32CS101, Schultz, Goff, and Joe Wall) are village sites of unknown cultural affiliation.

Most likely they date to the same time as the Plains Village Tradition, however. The exact nature of these occupations and determinations of their cultural affiliation will have to await further excavations.

The Late Nomadic period is an infrequently used term referring primarily to that period of time during which certain groups gained the majority of their subsistence by hunting bison from horseback. 32RM107 has been considered to be one of these sites (University of North Dakota site files). Larson (1976: 72) has noted that 32SH7 might, alternatively, also have been such a site.

The Plains Village/Mississippian covered three climatic episodes and, at least in the Middle Missouri area, continued into a fourth. Within the research area, however, it began during the neo-Atlantic and continued through the Pacific and the neo-Boreal, ending at about the same time as the latter. The Late Nomadic, on the other hand, was almost a strictly neo-Boreal phenomenon.

The Fur Trade, Military, and Settlement periods have been previously discussed (pp. 32-41) within a regional setting and it will not be repeated here. Climatically, the major portion of fur trading activity occurred within the neo-Boreal episode while the Military period spanned the end of the neo-Boreal and the beginning of the Recent episode, and the major settlement activity took place towards the beginning of the Recent episode.

In summary certain cultural groups and/or events seem to be somewhat related to climatic events. The Folsom culture may be a pre-Boreal and Boreal phenomenon but its presence in the research area is poorly documented.

The Plano and Plains Archaic are to some extent less correlatable with specific climatic events. Like Folsom, they are poorly represented in the research area. At least for the Plains Archaic the absence of sites had, until recently, been considered a reflection of the human abandonment of the Plains due to hot, dry weather especially between 8000-7000 B.P. Now the lack of such sites dating before 5000 B.P. may reflect the fact that these sites were eroded, or deeply buried by alluvium, and/or situated on higher river terraces.

None of the preceeding explain the lack of sites from the sub-Atlantic episode. Perhaps it is here that the great similarity in the projectile points from the Archaic and Woodland (or later) becomes important. Possibly the northern Plains Middle Woodland groups, at least, reflect a continuation of an Archaic base with an overlay of Hopewellian influences.

The Archaic ends prior to the end of the sub-Atlantic and the Woodland begins at about the same time. The Middle Woodland cultures end at about the time as does the Scandic episode. Hopewellian influence had apparently declined shortly after these Middle Woodland cultures came into being (Baerreis et. al. 1976: 50).

The Arvilla Complex developed during the Scandic and ended during the neo-Atlantic. The Blackduck Culture may have in turn developed out of some group characterized by the Arvilla Complex burial pattern. If in fact Blackduck is prehistoric/protohistoric Assiniboine the Arvilla Complex-Blackduck may represent one or more hunting and gathering groups which expanded southwards after the beginning of the Scandic only to retreat northwards as it became warmer during the neo-Atlantic and Pacific.

Since neither Arvilla nor Blackduck have been documented in the research area the question remains as to what followed the Middle Woodland. Perhaps it was groups similar to those represented by the Kathio Focus or the Blasky Mound group, or other Late Plains Woodland groups (Wilford 1970: viii). Whom ever they were the evidence suggests that the Drift Plains between the Missouri and Red Rivers were still occupied by people primarily engaged in hunting (Good et. al. 1976). Whether they may have retreated northwards or northwestwards with the onset of the neo-Atlantic is open to question.

At any rate with the onset of the neo-Atlantic and warmer, wetter weather Mississippian and Plains Village groups began to expand northward (Baerreis et. al. 1976: 51). It is possible that at least some of the village sites and the "Southern Cult-like" material in the research area date to this episode.

By 850/800 B.P. there began, at least to the immediate south of the research area in Iowa and South Dakota, a trend

toward dryer conditions such that eventually maize agriculture became quite difficult (Baerreis et. al. 1976: 51). Whether these changes influenced the research area or not is unknown.

The Plains Village/Mississippian Tradition ended, with the exception of the Middle Missouri area, sometime after the beginning of the neo-Boreal. Some researchers have suggested that, at least in the northeastern United States, the climatic deterioration during the neo-Boreal could have been of as much or more importance in its impact on Indian cultures than did the intrusions of the white man (Bryson and Wendlund 1967: 296). It may be then that the onset of the neo-Boreal coupled with white influences may have caused, at least within the research area, Plains Village Cultures to retreat westwards.

The Late Nomadic and Fur Trade periods were primarily neo-Boreal phenomenon. Again it is almost impossible to separate climatic and cultural influences but it is possible that a return to colder/wetter climate favored a hunting adaptive pattern more so than a horticultural one.

Whether a return to a warmer pattern around 100 B.P. could have resulted in a change of white perceptions about the agricultural potential of the area is unknown. Such a change, in conjunction with other cultural attitudes, could have resulted in a desire, by whites, to utilize the area. Considering, however, that much of it was already occupied there would have developed a need for military enforcement

of the idea before settlement could occur.

At any rate, there seem to be some possible and tenuous correlations between climatic events and cultural activities. The degree of correlation will have to await more extensive research.

SUMMARY AND CONCLUSIONS

Most of the previous archaeological work has been concentrated on the upper Sheyenne basin as defined here. In addition, some very limited work was conducted in the middle Sheyenne basin in conjunction with the construction of the Baldhill dam and reservoir. With the exception of a cursory survey of the Kindred area no work has really been conducted on the lower Sheyenne basin. Also there has been no previous work on the Maple River Basin, let alone the area around Enderlin, North Dakota. This is reflected in the lack of information on Cass county as well.

Historical work has been even more limited. The only professional historical survey with a regional scope has been in the Devils Lake area and the adjoining Sheyenne basin area. Unfortunately, we have not been able to obtain any information on historic building surveys, with the exception of the Devils Lake area. In addition, although, the cemeteries in many of the counties have had their graves listed the value of such information to the present genealogical craze has prevented us from obtaining these data for further analysis. Certainly

such surveys of historical buildings and cemeteries must be conducted prior to any activities which might adversely affect them.

The existing archaeological data are not really of sufficient detail to have much predictive value. From what has been mentioned in previous sections it appears that sites belonging to Paleo-Indian and Archaic groups have been eroded away and/or are lying deeply buried, probably on higher river terraces. In addition, they may also be found on other areas of high ground which are either not generally subject to survey or else are covered with vegetation.

The extent and nature of Woodland occupations in the research area are unknown. Mounds are almost invariably located on the uplands overlooking river valleys. Open sites tend to be on the river bottomlands, sometimes along abandoned stream channels. Tipi rings may be found in both situations. Bison kills have not been very frequently noticed by researchers, but may be found in certain coulee/gully areas (Larson 1976: 10-13).

Most of the Middle Woodland sites known from the research area so far are from the Drift Prairie area and appear to be associated with the Sonota Complex. Nothing is really known about Middle Woodland occupations of the Red River valley. It may be that the Red River valley was occupied by groups more similar to the Laurel Culture.

Outside of the Red River valley nothing is known about

Late Woodland cultures in the research area. It is unlikely that the Drift Prairie was abandoned, however. Evidence from the James River area seem to indicate that the Drift Prairie was still inhabited by bison hunting groups occupying sites beside what are now abandoned river channels and building mounds on the uplands.

With the exception of upland mounds, a possible village site, and a bison kill site in the Drift Prairie, most of the Plains Village/Mississippian material comes from the Red River valley. Villages in the Red River valley tend to be located beside modern stream channels, but the available sample of sites is inadequate for predicting such locations for sites.

Excluding the Settlement Period nothing can really be said about the locations of fur trade and military occupations. A more intensive review of various fur trade and military documents such the minutes of the Northwest Company, the Hudson Bay archives, and diaries kept by members of the Sibley and Pope expeditions (some of the latter are in the Minnesota State Historical Society) would probably alleviate at least part of this problem. Many of the habitation sites from the Settlement Period can be predicted to occur on the first river terrace, but more specific predictability is impossible.

It is difficult to evaluate the sites now known to exist in the reseach area. The sample is extremely small and there is really nothing to which it could be compared. The cursory

regional survey undertaken earlier tends to indicate that the Drift Prairie, which constitutes much of the research areas, may have been characterized by a slightly different culture history than the Red River valley. The James River valley, which is within the Drift Prairie, is still too inadequately known. The Missouri River valley appears to have been characterized by a similar culture history up through the Middle Woodland, but it becomes quite different from that point on (at least as things seem now). Unfortunately, the Woodland period is not well known for the Missouri River valley because most of the work has been concentrated on Plains Village materials.

The University of North Dakota site files for the upper Sheyenne River did not indicate that any of the archaeological sites were nominated or nominateable to the National Register of Historic Places. Schweigert (n.d.: 46) suggested that 32BE3 and 32NE414 should be given such consideration. The Biesterfeldt site, 32RM1, should certainly be nominated. The remaining known sites, especially those in the Maple and lower to middle Sheyenne River basins, must be considered important until more is known about them and the area.

Future work should first concentrate on the Maple and lower to middle Sheyenne River basins. A more extensive knowledge of basin geomorphology will be necessary in order to define possible Paleo-Indian and Archaic site locations. In addition a more extensive archaeological effort must be

made to locate such sites.

The transition from the Archaic to the Middle, if not Early, Woodland should also receive some effort. Not only will this require the location, excavation, and dating of such sites but it will also necessitate an intensive analysis designed to differentiate the similar tool inventories of cultures belonging to these traditions.

It may be that the Drift Prairie-Red River valley differences in culture history may have become important during the Late Archaic. If not, however, attention should be devoted to exploring this possibility with Middle Woodland sites. It will, of course, require if possible, some attention to the mounds found in the two areas.

The nature of any Late Woodland occupations, especially in the Drift Prairie, are unknown and these sites need to be located and excavated. Also there remains the potential differences between the Drift Prairie and Red River valley areas. Along these lines Vehik and Vehik (1976) have noted, using mortuary data, that there may have been substantial differences in social organization between the Arvilla Complex and other Late Woodland mound groups.

Another area toward which some effort needs to be directed is the transition from Woodland to Mississippian/Plains Village. To begin with not much is known about the latter period in either the Drift Prairie or Red River valley areas. It is also possible that most of the village sites

date later in time. Also perhaps the evidence for the "Southern Cult-like" material reflects Mississippian influence on mortuary patterns while the lifestyle remained basically Woodland. Finally, there is the question of whether or not Mississippian/Plains Village groups utilized the Drift Prairie area primarily for hunting with few or no permanent settlements being built.

In addition to the archaeological and geomorphological investigations several other research projects should be undertaken in order to more fully understand man's adaptation to this portion of the northern Plains. It will be necessary to conduct a historical evaluation, including detailed archival and literary resource reviews accompanied by on-ground reconnaissance, to determine the location of additional sites belonging to the three periods outlined earlier as well as to evaluate subsequent historical developments and the architectural potential of existing buildings. The potential correlations noted earlier between climatic and cultural data need to be more fully explored, including at least palynological and malacological investigations.

In conclusion, the work undertaken has been primarily a literature survey organized into several parts. Principally, it was a survey of known sites and possible sites (Tables 1-17 and Figures 1-6, 8-9). Additional information, organized into appendices, included geological data (Appendix A), modern botanical data relevant to specific regions within the

research area (Appendix B), general ecological data (Appendix C), potential sources of historical data, in particular pertaining to Settlement and later times (Appendix D), and a list of potential resource individuals such as collectors and professionals in other fields (Appendix E).

An attempt was made to construct a general cultural history for the research area (and its adjacent regions) and to relate it to a general sequence of climatic change. Although some correlations were noted much more research needs to be directed towards the question.

In addition, a series of suggestions were made regarding future work in the area. These include efforts toward the location of Archaic sites, the definition and comparison of Drift Prairie and Red River valley adaptive patterns through time, and the study of paleoenvironment. It is recognized that not all of the recommendations for future field work can be carried out. However, it is hoped that at least some of the recommendations can be investigated as the questions pertain, in many cases, to archaeological problems which are much broader in scope.

LITERATURE CITED

- Andreas, A.T.
1884 Andreas Historical Atlas of North Dakota. R.R. Donnelly and Sons, Chicago.
- Anonymous
1929 Standard Atlas of Benson County, N.D.
- Arnold, H.V.
1918 The Early History of Ransom County, Including to Sargent County. Privately printed, Larimore.
- Baerreis, D.A., R.A. Bryson and J.E. Kutzbach
1976 Climate and Culture in the Western Great Lakes Region. Midcontinental Journal of Archaeology, 1: 39-57.
- Baker, C.H., Jr.
1966 The Milnor Channel, An Ice-Marginal Course of the Sheyenne River, North Dakota. U.S. Geological Survey Professional Paper 550-B, pp. B77-79.
- Bauxar, J. Joseph
N.D. Notes on the Archaeology of the Upper James and Sheyenne River Valleys and the Devils Lake Area. Manuscript on file with the Smithsonian Institution River Basin Surveys, Lincoln, Nebraska.
- Blueemle, J.P.
1972a Pleistocene Drainage Development in North Dakota. Geological Society of America, Bulletin 83: 2189-2194.

1972b Guide to the Geology of Southeastern North Dakota. Education Series 3, North Dakota Geological Survey.

1974 Early History of Lake Agassiz in Southeast North Dakota. Geological Society of America, Bulletin 85: 811-814.
- Brophy, J.A.
1967a Some Aspects of the Geological Deposits of the South End of the Lake Agassiz Basin. In: W.J. Mayer-Oakes (ed.), Life, Land and Water, pp. 97-105.

1967b Some Aspects of the Geological Deposits of the Lake Agassiz Basin. In: L. Clayton and T.F. Freers (eds.), Glacial Geology of the Missouri Coteau," pp. 159-165. North Dakota Geologic Survey Miscellaneous Series No. 30.

- Burgess, R.L.
1965 Ninety Years of Vegetational Change in a Township in Southeastern North Dakota. North Dakota Academy of Sciences Proceedings 28: 84-94.
- Bushnell, D.I., Jr.
1922 Villages of the Algonquian, Siouan, and Caddoan Tribes West of the Mississippi. Bureau of American Ethnology Bulletin 77.
- Callan, F.G.
N.D. A History of Richland Co. and the City of Wahpeton, N.D.
- Chomko, S.A. and W.R. Wood
1973 Linear Mounds in the Northeastern Plains. Archaeology in Montana 14: 1-19.
- Clayton, L.
1966 Notes on Plesitocene Stratigraphy of North Dakota. North Dakota Geological Survey Report of Investigations 44.
- Colton, R.B., R.W. Lemke, and R.M. Lindvall
1963 Preliminary Glacial Map of North Dakota. U.S. Geological Survey Miscellaneous Geological Inventory Map I-331.
- Cooper, P.L.
1947 Preliminary Appraisal of the Archaeological and Paleontological Resources of Sheyenne Reservoir, North Dakota. Smithsonian Institution, River Basin Surveys, Missouri Basin Project, Appraisals. On file, Smithsonian Institution, River Basin Surveys, Lincoln, Nebraska.
- Cvancara, A.M.
1967 Mussels of the Red River Valley in North Dakota and Minnesota and Their Use in Deciphering Drainage History. In: W.J. Mayer-Oakes (ed.), Life, Land and Water, pp. 187-195.
- Cvancara, A.M., L. Clayton, W.B. Buckley, Jr., A.F. Jacob, L. Denis Delorme, and G.E. Lammers
1971 Paleolimnology of Late Quaternary Deposits: Siebold Site, North Dakota. Science 171: 172-174.
- Cvancara, A.M., R.D. Norby, and G.B. VanAlstine
1976 Mollusks of the Sheyenne River, North Dakota U.S.A.: Present and Past. Malacological Review 9: 25-38.

Enderline Diamond Jubilee Committee
N.D. Enderlin Diamond Jubilee.

Gilman, R.R.

1970 Last Days of the Upper Mississippi Fur Trade.
Minnesota History 42: 122-140.

Good, K.N., J.C. Dahlberg, W.L. Tibesar, and S. Vehik

1976 Archaeology Investigations in the LaMoure-Oakes
Project Area, Garrison Diversion, North Dakota.
Report to the U.S. Department of Interior,
Bureau of Reclamation.

Griggs County

1976 Griggs County Heritage. Taylor Publishing Company.
Dallas.

Grinnell, G.B.

1918 Early Cheyenne Villages. American Anthropologist
20: 359-380.

1923 The Cheyenne Indians, Vol. 1, pp. 17-22. Yale
University Press, New Haven.

Hainer, J.L.

1956 The Geology of North Dakota. N.D. Geological Survey
Bulletin 31.

Hayden, F.W.

1862 On the Ethnography and Philology of the Indian Tribes
of the Missouri Valley. Transactions of the
American Philosophical Society N.S. 12: 231-461.

Hewes, G.W.

1949 Burial Mounds in the Baldhill Area, North Dakota.
American Antiquity 14: 322-328.

1950 Sheyenne River. In Proceedings of the 6th. Plains
Anthropological Conference. University of Utah
Anthropological Papers, No. 11, p. 9. Salt Lake City.

Hickerson, H,

1962 The Southwestern Chippewa: An Ethnohistorical
Study. American Anthropological Association,
Memoir 92.

Hlady, W.M.

1970 Manitoba-The Northern Woodlands. In: W.M. Hlady
(ed.) Ten Thousand Years in Manitoba, pp. 93-121.

Howard, J.H.

- 1953 The Southern Cult in the Northern Plains. American Antiquity 19: 130-138.

Johnson, E.

- 1962 The Prehistory of the Red River Valley. Minnesota History 38: 157-165.

- 1973 The Arvilla Complex. Publications of the Minnesota Historical Society, Minnesota Prehistoric Archaeological Series No. 9.

Johnson, G.E., A. Carmichael, J.C. Pigage, C.E. Farmer, T.J. O'Leary, W.F. Shirk, R.H. Bares, and C. Godfreed

- 1974 Environmental Impact Assessment of Baldhill Dam and Lake Ashtabula. North Dakota Institute for Ecological Studies, Research Report No. 8.

Kammerer, J.J.

- 1942 A Yuma-type Point from North Dakota. The Minnesota Archaeologist 8: 123.

Kivett, M.F.

- 1948 Preliminary Appraisal of the Archeological and Paleontological Resources of the Baldhill Reservoir, North Dakota. Smithsonian Institution, River Basin Surveys, Missouri Basin Project, Appraisals. On file with the Smithsonian Institution River Basin Surveys, Lincoln, Nebraska.

- 1949 An Archeological Survey of the Garrison and Baldhill Reservoirs. Proceedings of the 5th. Plains Conference. University of Nebraska Laboratory of Anthropology Notebook No. 1, pp. 24-25. Lincoln.

Larson, T.K.

- 1976 The Archaeology of 32SH7: A Bison Kill Site in Central North Dakota. Unpublished Master's Thesis. University of Wyoming, Laramie. Also as Part II in Archaeological Investigations in the Proposed Lonetree Reservoir (Schneider n.d. a).

Lewis, T.H.

- 1886a Ancient Rock Inscriptions in Eastern North Dakota. The American Naturalist 20: 423-425.

- 1886b Mounds on the Red River of the North. American Antiquarian 8: 369-371.

- 1891 Cup-Stones Near Old Fort Ransom, North Dakota. The American Naturalist 25: 455-461.

Lewis, T.H.

- 1893 Mounds on the Red River of the North. Minnesota Archaeologist 3: 17-19. Reprint of 1886 American Antiquarian article.

Libby, O.G.

- 1910 Fieldwork. Collections of the State Historical Society of North Dakota, 3: 82-83
- 1913 Report of Fieldwork. North Dakota State Historical Society Collections, 4: 30.

McAndrews, J.H.

- 1967 Paleoeecology of the Seminary and Mirror Pool Peat Deposits. In: W.J. Mayer-Oakes (ed.) Life, Land and Water, pp. 253-270.

Mallory, O.L.

- 1966 An Appraisal of the Archaeological Resources of the Garrison Diversion Project, North Dakota. Smithsonian Institution, River Basin Surveys, Lincoln.

Milligan, E.A.

- 1968 Petroglyphs, Pictographs, and Prehistoric Art in the Upper Missouri and the Red River of the North Valley Areas. Bottineau Courant Print. Bottineau, N.D.

Montgomery, H.

- 1906 Remains of Prehistoric Man in the Dakotas. American Anthropologist 8: 640-651.

Mooney, J.

- 1905- The Cheyenne Indians. American Anthropological Association Memoirs, No. 1.

Nelson, L.S.

- 1973 Archaeological Survey in Portions of Southeastern North Dakota, Northeastern South Dakota and West-Central Minnesota, Vol. 1. On file in the Department of Archaeology and Anthropology, University of North Dakota, Grand Forks.

Neuman, R.W.

- 1967 Radiocarbon Dated Archeological Remains on the Northern and Central Plains. American Antiquity, 32: 471-486.
- 1975 The Sonota Complex and Associated Sites on the Northern Plains. Publications in Anthropology, No. 6. Nebraska State Historical Society, Lincoln.

North Dakota State Historical Society

- 1965 List of Historic Sites. Bismarck, N.D.

Ossenberg, N.S.

- 1974 Origins and Relationships of Woodland Peoples: The Evidence of Cranial Morphology. In: E. Johnson (ed.) Aspects of Upper Great Lakes Anthropology--Papers in Honor of C.A. Wilford, pp. 15-39.

Page Community

- 1958 Our Page. North Dakota Institute for Regional Studies. Fargo.

Roberts, Frank H.H., Jr.

- 1951 River Basin Surveys: The First Five Years of the Inter-Agency Archeological and Paleontological Salvage Program. Smithsonian Report for 1951, pp. 373-374.

Reeves, B.O.K.

- 1973 The Concept of an Altithermal Cultural Hiatus in Northern Plains Prehistory. American Anthropologist 75: 1221-1253.

Robinson, E.B.

- 1966 History of North Dakota. University of Nebraska Press, Lincoln.

Rosendahl, C.O.

- 1948 A Contribution to the Knowledge of the Pleistocene Flora of Minnesota. Ecology 29: 284-315.

Schneider, F.E.

- N.D. a Archaeological Investigations in the Proposed Lonetree Reservoir, Garrison Diversion Unit, North Dakota: 1973 Season. Report to U.S. National Park Service, Midwest Archaeological Center, Lincoln.
- N.D. b Section I. Archaeological Survey of the Proposed Route of the New Rockford Canal. In: F.E. Schneider and R. Vehik: Archaeological Surveys in the Garrison Diversion Unit, North Dakota. A Report to the United States National Park Service.
- 1976 Survey, Test Excavations and Recommendations Part I. Archaeological Investigations in the Proposed Lonetree Reservoir, Garrison Diversion Project, North Dakota. 1974 Investigations. A Report to the United States National Park Service.

Schneider, F.E. and P.A. Treat

- N.D. Archaeological Excavations at the Sprenger Tipi Ring Site, 32SH205, Sheridan County, North Dakota: An Archaeological Salvage Project in the Garrison Diversion Unit. Report to the U.S. National Park Service, Midwest Archaeological Center. Lincoln.

Schneider, F., K. Good, and K. Schweigert

- N.D. Preliminary Report of Cultural Resource Inventory of Portions of the Central North Dakota Section, Garrison Diversion Unit, North Dakota. Report to the U.S. Department of Interior, Bureau of Reclamation.

Schweigert, K.

- N.D. Historic Site Survey in the Central North Dakota Section, Garrison Diversion Project, North Dakota. In: Schneider, Good, and Schweigert N.D.: 38-70.

Scoby, D., S. Bexell, R. Bjorklund, B. Blackmer, B. Larsen, M. Miller, M. Peck, and K. Thompson

- 1973 Sheyenne Basin Study: An Ecological Approach to Land Use Planning. North Dakota State University, Fargo.

Scott, G.C.

- 1963 Quaternary Geology and Geomorphic History of the Kassler Quadrangle, Colorado. U.S. Geological Survey, Professional Paper 700-B.

Shay, C.T.

- 1967 Vegetation History of the Southern Lake Agassiz Basin During the Past 12,000 Years. In: W.J. Mayer-Oakes (ed.), Life, Land and Water, pp. 231-252.

- 1971 The Itasca Bison Kill Site: An Ecological Analysis. Publications of the Minnesota Historical Society, Minnesota Prehistoric Archaeology Series, No. 6.

Sherrod, J.C.

- 1970 Kindred Dam Impact--Early Rough Draft. U.S. Forest Service.

- 1971 Kindred Survey Field Notes. North Dakota State Historical Society, Bismarck.

Smith, H.I.

- 1906 The Data of the Archaeology of the Dakotas. Collections of the North Dakota State Historical Society 1: 74-88.

- Spiss, P.B.
1968 Old Copper Artifacts from North Dakota. The Wisconsin Archeologist, 49: 125-126.
- Stiles, W.E. and S.O. Stiles
1951 A History of the Community of Maddock, North Dakota 1901-1951. Standard Publishing Company, Maddock.
- Stoltman, J.B.
1973 The Laurel Culture in Minnesota. Publications of the Minnesota Historical Society, Minnesota Pre-historic Archaeology Series, No. 8.
- Strong, W.D.
1940 From History to Prehistory in the Northern Great Plains. Essays in Historical Anthropology of North America. Smithsonian Miscellaneous Collections, 100: 353-391.
- 1941 Arikara and Cheyenne Earth Lodge Sites in North and South Dakota. North Dakota Historical Quarterly, 8: 157-166.
- Swanton, J.R.
1930 Some Neglected Data Bearing on Cheyenne, Chippewa, and Dakota History. American Anthropologist, 32: 156-160.
- Thomas, Cyrus
1891 Catalogue of Prehistoric Works East of the Rocky Mountains. Bureau of American Ethnology, Bulletin 8: 159-161.
- Todd, J.E.
1886 Boulder Mosaics in Dakota. The American Naturalist, 20: 1-4.
- Vehik, S. and R. Vehik
1976 Social Implications of Northern Plains Woodland Burial Mound Variation. Paper presented to 52nd. Annual Meeting of the Central States Anthropological Society.
- Vehik, R.
N.D. Archaeological Survey of Bank Stabilization Areas Along the James River and of the Proposed Oakes Canal and Irrigation Areas. In: Schneider and Vehik: Archaeological Surveys in the Garrison Diversion Unit, North Dakota. A Report to the U.S. National Park Service, Lincoln.

- Watts, W.A. and R.C. Bright
 1968 Pollen, Seed, and Mollusk Analysis of Sediment Core from Pickerel Lake, Northeastern South Dakota. Geological Society of America Bulletin 79: 855-876.
- Wedel, W.R.
 1948 Prehistory and the Missouri Valley Development Program. Smithsonian Miscellaneous Collections, 111: 24-27, 37-38, 50.
 1953 Prehistory and the Missouri Development Program: Summary Report on the Missouri Basin Archeological Survey in 1948. Bureau of American Ethnology Bulletin 154, No. 1: 47-48, 53.
- Wendlund, W.M. and R.A. Bryson
 1974 Dating Climatic Episodes of the Holocene. Quaternary Research 4: 9-24.
- Wheeler, R.P.
 1963 The Stutsman Focus: An Aboriginal Complex in the Jamestown Reservoir Area, North Dakota. Bureau of American Ethnology Bulletin 185, No. 30. Smithsonian Institution. Washington D.C.
- Wilford, L.A.
 1970 Burial Mounds of the Red River Headwaters. Publications of the Minnesota Historical Society, Minnesota Prehistoric Archaeology Series No. 5.
- Wilford, L.A., E. Johnson and J. Vicinus
 1969 Burial Mounds of Central Minnesota. Publications of the Minnesota Historical Society, Minnesota Prehistoric Archaeology Series, No. 1.
- Will, G.F.
 1914 The Cheyenne Indians in North Dakota. Proceedings of the Mississippi Valley Historical Association for the Year 1913-1914, 7: 67-78.
- Wood, W.R.
 1955 Pottery Types from the Biesterfeldt Site, North Dakota. Plains Anthropologist, No. 3: 3-12.
 1963 Lisbon Flared Rim and Owego Flared Rim Wares. Appendix to R.P. Wheeler The Stutsman Focus: An Aboriginal Complex in the Jamestown Reservoir Area, North Dakota. Bureau of American Ethnology Bulletin 185, No. 30. Smithsonian Institution. Washington D.C.

Wood, W.R.

1971 Biesterfeldt: A Post-Contact Coalescent Site on the Northeastern Plains. Smithsonian Contributions to Anthropology No. 15. Smithsonian Institution Press, Washington D.C.

1972 Archeological Interpretive Report: Pueblo Reservoir, Eastern Colorado. National Park Service, Midwest Region, Lincoln.

Wright, E.J.

1936 General Sibley's Expedition, July and August 1863 (Map). North Dakota State Historical Society, Bismarck.

APPENDIX A

GEOLOGICAL DATA

- Arndt, B.M.
1975 Stratigraphy of Offshore Sediment of Lake Agassiz, North Dakota. Unpublished Ph.D. dissertation, University of North Dakota, Grand Forks.
- Baker, C.H., Jr.
1967 Geology and Ground Water Resources of Richland County. N.D. Geological Survey Bulletin 46.
- Block, D.A.
1965 Glacial Geology of the North Half of Benson County, N.D. Unpublished Ph.D. dissertation, University of North Dakota, Grand Forks.
- Bluemle, J.P.
1965 Geology and Ground Water Resources of Eddy and Foster Counties, North Dakota. N.D. Geological Survey Bulletin 44.
- 1975 Geology of Griggs and Steele Counties. N.D. Geological Survey Bulletin 64.
- Bluemle, J.P., G.A. Faigle, R.J. Kresl, and J.R. Reid
1967 Geology and Ground Water Resources of Wells Co. N.D. Geological Survey Bulletin 51.
- Callender, E.
1968 The Post Glacial Sedimentology of Devils Lake, N.D. Unpublished Ph.D. dissertation, University of North Dakota, Grand Forks.
- Carlson, C.G. and T.F. Freers
1975 Geology of Benson and Pierce Counties, North Dakota. N.D. Geological Survey Bulletin 59.
- Clayton, L. and T.F. Freers (ed.)
1967 Glacial Geology of the Missouri Coteau and Adjacent Areas. North Dakota Geological Survey Miscellaneous Series 30.
- Gustavson, T.C.
1964 The Glacial Geology of Eastern Sheridan County, N.D. Unpublished Masters thesis, University of North Dakota, Grand Forks.

- Kelley, T.E.
1967 Geology and Ground Water Resources Barnes County, N.D. N.D. Geological Survey Bulletin 43.
- Klausing, R.L.
1968 Geology and Ground Water Resources of Cass County, N.D. N.D. Geological Survey Bulletin 47.
- Merritt, J.C.
1966 Surficial Geology of the Southern Half of Griggs County, N.D. Unpublished Masters thesis, University of North Dakota, Grand Forks.
- Paulson, Q.F.
1964 Geologic Factors Affecting Discharge of the Sheyenne River in Southeastern North Dakota. U.S. Geological Survey, Grand Forks.
- Reede, R.J.
1972 Geology of Southern Nelson County, N.D. Unpublished Ph.D. dissertation, University of North Dakota, Grand Forks.
- Rude, L.C.
1966 Surficial Geology of Northern Griggs County, North Dakota. Unpublished Masters thesis, University of North Dakota, Grand Forks.
- Tuthill, S.J.
1964 Unusually Well-Preserved Lampselis luteolus and Molluscan Fauna in Post-Hypsithermal Sediments. Compass, 41: 149-155.

APPENDIX B

BOTANICAL DATA FOR SPECIFIC REGIONS WITHIN THE SHEYENNE AND MAPLE RIVER DRAINAGES

Challey, J.R.

- 1955 Range Ecology of the White Tailed Deer (*Odocoileus virginianus boddaert*) in the Sand Hills of South-east North Dakota. Unpublished Masters thesis, North Dakota State University, Fargo.

Dix, T.L. and F.E. Smeins

- 1967 The Prairie, Meadow, and Marsh Vegetation of Nelson County, North Dakota. The Canadian Journal of Botany, 45: 21-58.

Hanson, J.D.

- 1976 A Phytosociological Study of Oak Savanna in South-east North Dakota. Unpublished Masters thesis, North Dakota State University, Fargo.

Kramer, J.L.

- 1973 Vegetation and Soil Responses to Burning, Mowing, and Fertilization in the Sheyenne National Grassland of North Dakota. Unpublished Masters thesis, North Dakota State University, Fargo.

Seilen, G.

- 1973 Vascular Flora of Richland, Ransom, and Sargent Counties, North Dakota. Unpublished Masters thesis, North Dakota State University, Fargo.

Shunk, R.A.

- 1917 Plant Associations of Shenford and Owego Townships, Ransom County, North Dakota. Unpublished Masters thesis, University of North Dakota, Grand Forks.

Wanek, W.J.

- 1965 The Grassland Vegetation of the Sandhills of South-east North Dakota. Unpublished Masters thesis, North Dakota State University, Fargo.

Wanek, W.J. and R.L. Burgess

- 1965 Floristic Composition of the Sand Prairies of South-eastern North Dakota. Proceedings of the North Dakota Academy of Science, 19: 26-40.

APPENDIX C

GENERAL ECOLOGICAL DATA

Aase, J.K. and J.R. Wright

- 1972 Energy Balance Investigations on Native Range Vegetation in the Northern Great Plains. Ecology, 53: 1200-1203.

Anderson, P.W.

- 1966 A Study of the Productivity and Plankton of Devils Lake, North Dakota. Unpublished Masters thesis, University of North Dakota, Grand Forks.

Brenckle, B.

- 1932 A Study of the Microflora of Fargo Clay Soil. Unpublished Masters thesis, North Dakota State University, Fargo.

Cvancara, A.M.

- 1970 Mussels (Unionidae) of the Red River Valley in North Dakota and Minnesota, U.S.A. Malacologia 10: 57-92.

Field, M.

- 1899 The Medicinal Plants of North Dakota. Unpublished Masters thesis, North Dakota State University, Fargo.

Heil, D.M.

- 1970 An Analysis of Some Relationships between the Hammerly and Buse Soil Series in Eastern North Dakota. Unpublished Masters thesis, North Dakota State University, Fargo.

Jansen, R.E.

- 1972 Climate of North Dakota. National Weather Service, North Dakota State University. Fargo.

Johnson, G.A.

- 1975 Cytogenetic and Ecological Analysis of Agropyron and Agrohordeum Species of the Red River Valley. Unpublished Ph.D. dissertation, University of North Dakota, Grand Forks.

Kunkel, S.L.

- 1974 Bacteriological Study of the Lower Sheyenne River. Unpublished Masters thesis, North Dakota State University, Fargo.

Lores, R.R.

- 1965 A Superdetailed Description, Classification, and Map of Chernozem and Associated Soils on Medium Textured Calcareous, Mixed Glacial Till in Selected Areas in Southeastern North Dakota. Unpublished Masters thesis, North Dakota State University, Fargo.

McClelland, J.E., C.A. Morgan, W.M. Johnson, F.W. Schroer, and J.S. Allen

- 1959 Chernozems and Associated Soils of Eastern North Dakota. Some Properties and Topographic Relations. Soil Science Society of America Proceedings 23: 51-56.

Martin, L.K.

- 1973 Seasonal Movements of White Tailed Deer in North Dakota. Unpublished Masters thesis, North Dakota State University, Fargo.

Miller, T.G.

- 1965 North Dakota Climatology: A Method of Statistical Approach and Analysis to Determine Climatic Boundaries Within the State. Unpublished Masters thesis, University of North Dakota, Grand Forks.

Miller, W.

- 1955 Wildlife in North Dakota. Bismarck Tribune Co. Bismarck.

Omodt, H.W.

- 1961 Some Relationships of Chestnut and Chernozem Soils in Their Boundary Area. Unpublished Masters thesis, North Dakota State University, Fargo.

Omodt, H.W., D.D. Patterson, and O.P. Olson

- 1961 General Soil Map of North Dakota. North Dakota Agricultural Experimental Station, Fargo.

Omodt, H.W., F.W. Schroer, and C.R. Redmond

- 1966 Soil Survey of the Tri-County Area, N.D. U.S. Department of Agriculture, Soil Conservation Service in Cooperation with N.D. Agricultural Experiment Station.

Omodt, H.W., G.A. Johnsgard, D.D. Patterson, and O.P. Olson

- 1968 The Major Soils of North Dakota. North Dakota Agricultural Experimental Station Research Bulletin 472.

Price, J. and F. Taylor

- 1972 North Dakota Crop and Livestock Statistics. Agricultural Statistics No. 26. North Dakota Crop and Livestock Reporting Service, Fargo.

Redmond, C.E.

- 1956 Some Physical and Chemical Properties of Calcium Carbonate Solonchalk and Associated Soils of the Chernozem Soil Region. Unpublished Masters thesis, North Dakota State University, Fargo.

Rudd, V.E.

- 1951 Geographical Affinities of the Flora of North Dakota. American Midland Naturalist 45: 722-739.

Spalding, Albert G.

- 1973 A Study of the Biogeocoenosis of Two Merging Rivers, the Sheyenne River and the Red River of the North. Reference unknown.

Seago, J.B., M.R. Wright, C.H. Wiesner, and R.E. Smith

- 1970 Soil Survey of Wells County, N.D. U.S. Department of Agriculture Soil Conservation Service in Cooperation with North Dakota Agricultural Experiment Station.

Stevens, O.A.

- 1950 Handbook of North Dakota Plants: Fargo. Knight Printing Co. Fargo.

- 1963 Handbook of North Dakota Plants. North Dakota Institute for Regional Studies, Fargo.

Thompson, D.G. and L.L. Joos

- 1975 Soil Survey of Richland County and Sheyenne National Grassland Area of Ransom County, N.D. U.S. Dept. Agriculture Soil Conservation Service and Forest Service in Cooperation with N.D. Agricultural Experiment Station.

Tuthill, S.J. and W.M. Laird

- 1963 Molluscan Fauna of Some Alkaline Lakes and Sloughs in Southern Central North Dakota. The Nautilus 77: 47-55 and 81-90.

Wanek, W.J.

- 1967 The Gallery Forest Vegetation of the Red River of the North. Unpublished Ph.D. dissertation, North Dakota State University, Fargo.

Wikum, D.A.

- 1972 Vegetation of the Forest River Biology Area in Relation to Environmental Gradients and Some Patterns and Processes of Nutrient Cycling. Unpublished Ph.D. dissertation, University of North Dakota, Grand Forks.

Willman, C.A.

1968 Airborne Pollen of Native Prairie. Unpublished
Masters thesis, University of North Dakota, Grand
Forks.

Whitmann, N.H., et. al.

1941 Grass. North Dakota Agricultural College Experiment
Station Bulletin 300.

Winslow, M.L.

1921 Mollusca of North Dakota. Michigan University
Museum of Zoology Ocassional Paper No. 98: 1-18.
Ann Arbor.

APPENDIX D

ADDITIONAL HISTORICAL SOURCES

Aneta Diamond Jubilee Committee

1971 Action in Aneta 1896-1971.

Anonymous

1893 Plot Book of Cass County, N.D. D.W. Ensign and Co.

1901 Lakota, North Dakota. Wall & Haines, Minneapolis.

1906 Atlas of Cass County, N.D. R.L. Polk & Co., St. Paul.

1908 The Expedition of Jas. L. Fisk to the Gold Fields of Montana and Idaho in 1862 and 1863. North Dakota State Historical Society Collections 2: 34-85.

1910a Standard Atlas of Barnes County. Alden Publishing Company.

1910b Standard Atlas of Benson County, N.D. G.A. Ogle & Co., Chicago.

1910c Standard Atlas of Griggs County, N.D. Alden Publishing Co.

1910d Standard Atlas of Pierce County, N.D. G.A. Ogle & Co., Chicago.

1910e Standard Atlas of Ransom County, N.D. G.A. Ogle & Co., Chicago.

1910f Standard Atlas of Richland County, N.D. Alden Publishing Co.

1911a Standard Atlas of Steele County, N.D. G.A. Ogle & Co., Chicago.

1911b Standard Atlas of Wells County, N.D. G.A. Ogle & Co., Chicago.

1914 Standard Atlas of Sheridan County, N.D. G.A. Ogle & Co., Chicago.

1928a Standard Atlas of Barnes County. Brock and Co. Chicago.

Anonymous

- 1928b Standard Atlas of Nelson County, N.D. Brock and Co., Chicago.
- 1928c Standard Atlas of Steele County, N.D. Brock and Co., Chicago.
- 1929a Standard Atlas of Eddy County, N.D. Brock and Co., Chicago.
- 1929b Standard Atlas of Foster County, N.D. Brock and Co., Chicago.
- 1929c Standard Atlas of Wells County, North Dakota. Brock and Co., Chicago.
- 1974 Illustration of Storelee Barn. North Dakota History, Vol. 41, No. 4: 3.
- N.D. Pioneer Stories Written by the People of Nelson Co., N.D.

Arnold, H.V.

- 1902 Some Early Visits of White Men to Ransom County. Sheldon Progress Newspaper.

Babcock, W.M.

- 1927 Minnesota as Seen by Travelers: A Dragoon on the March to Pembina in 1849. Minnesota History 8: 61-74.

Barnes County Historical Society

- 1976 Barnes County History, Barnes Co., North Dakota. Taylor Publishing, Dallas, Texas.

Barrett, G.L.

- 1931 The End of the Track. American Print. Lakota, N.D.

Blinsky, K.

- 1968 Wimbeldon History 1893-1968. Wimbeldon, N.D.

Bray, E.C. and M.C. Bray

- 1976 Joseph N. Nicollet on the Plains and Prairies. The Expeditions of 1838-1839 with Journals, Letters, and Notes on the Dakota Indians. Minnesota Historical Society. St. Paul.

Briggs, H.E.

- 1930 The Great Dakota Boom 1879-1886. North Dakota Historical Quarterly 5: 80-95.

Brocket Jubilee Committee

- 1975 Brocket Diamond Jubilee. Brocket, N.D.

Cooperstown Diamond Jubilee Committee

1957 Cooperstown Diamond Jubilee. Cooperstown, N.D.

Crandall, H.B.

1886 A History of Richland County. Privately published.

Davenport, John B.

1975 Guide to Orin G. Libby Manuscript Collection and Related Research at the University of North Dakota. Grand Forks.

Devils Lake Bicentennial Committee

1976 A Bicentennial History of Devils Lake, North Dakota. Ness Printing Co., Devils Lake.

Devils Lake Diamond Jubilee Association, Inc.

1957 Devils Lake's Seventy-five Years.

Elzinc, W.H.

1913 Bohemians in Richland County. North Dakota Historical Society Collections 6: 63-65.

Fargo Diamond Jubilee Committee

1950 The Fargo Diamond Jubilee. Fargo.

Fargo Genealogical Society

1972a Cemeteries of Cass County, N.D., Vol. 1. Fargo.

1972b Cemeteries of Griggs County and Steele County in North Dakota. Fargo.

1973 Cemeteries of Barnes County. Fargo.

1974a Cemeteries of Benson County in North Dakota. Fargo.

1974b Cemeteries of Eddy County, N.D. Fargo.

1975 Cemeteries of Cass County, N.D., Vol. 2. Fargo.

Federal Writers' Project

1950 North Dakota: A Guide to the Northern Prairie State (Second edition). Oxford University Press, New York.

Hale, H.

1942 Pioneer's Association Devils Lake Region. Privately printed.

Hall, L.J.

1923 History of the Formation of Counties in North Dakota. North Dakota State Historical Society Collections, Vol. 5.

Herigstad, O.B.

- 1906 First Norwegian Settlement in Griggs Co., N.D. North Dakota State Historical Society Collections 1: 131-153.

Hope Jubilee Committee

- 1957 Hope of the Prairie. Hope, N.D.

Horace Centennial

- 1973 They Planted Their Roots Deep.

House, W.M.

- 1897 North Dakota and Richland County Chart. Rand, McNally and Co.

Kohlepp, H.W.

- 1937 A Missionary Trip to the Land of the Arikara. The Minnesota Archeologist 3: 90-93.

Lakota Diamond Jubilee Committee

- 1958 Lakota's 75 Years. Lakota, N.D.

Lamphere, G.N.

- 1905 History of Wheat Raising in the Red River Valley. Minnesota Historical Society Collections 10: 1-33.

McCrae, A.R.

- 1967 Between the Horizons.

McPhillips, H.T.

- 1901 Minnewaukan Illustrated. Pioneer Print. Larimore, N.D.

Michael, R.L.

- 1965 Fur Trade of the Red River Valley of the North: 1763-1812. Unpublished Masters Thesis, University of North Dakota, Grand Forks.

Milligan, E.A.

- 1969 Known Migrations of Historic Indian Tribes in the Upper Mississippi-Missouri Area with Notes on the Prehistoric and Protohistoric Movements. Bottineau Courant Print. Bottineau, N.D.

Nute, G.L.

- 1925 The Red River Trails. Minnesota History 6: 279-282.
- 1930 Posts in the Minnesota Fur-Trading Area, 1660-1855. Minnesota History 11: 353-385.

Pekin Jubilee Committee

- 1956 Pekin Golden Jubilee. Pekin, N.D.

- Petersburg Diamond Jubilee Committee
1957 Petersburg Diamond Jubilee. Petersburg, N.D.
- Polk, R.L.
1937 Polk's Valley City Directory. R.L. Polk & Co., St. Paul.
- Pope, J.
N.D. Report of an Exploration of the Territory of Minnesota, by Brevet Captain Pope. U.S. Senate Executive Documents No. 42, Serial 558.
- Pritchett, J.P.
1924 Some Red River Fur Trade Activities. Minnesota History Bulletin, No. 5.

1926 Sidelights on the Sibley Expedition from the Diary of a Private. Minnesota History 7: 326-335.

1942 The Red River Valley 1811-1849: A Regional Study. Yale University Press, New Haven.
- Sandhei, C.A.
1953 Historical Sketch of Ft. Ransom Community.
- Schulenberg, R.F.
1956 Indians of North Dakota. North Dakota History 23: 119-230.
- Schweigert, K.
1977 Historic Sites Cultural Resource Inventory in the Devils Lake Region. Final Report, U.S. Department of Interior, Bureau of Reclamation.
- Scott, R.N. et. al. (eds.)
1880- War of the Rebellion: A Compilation of the Official
1891 Records of the Union and Confederate Armies. Series I, Vol. 22, Parts 1 and 2 and Vol. 41, Part 1.
- Spokesfield, W.E.
1929 History of Wells County, North Dakota. Privately published.
- Taylor, J.H.
1930 The Fort Totten Trail. North Dakota Historical Quarterly 4(4): 239-246.
- Tofsrud, O.T.
1936 A History of Pierce County. Privately printed.
- Westerguard, W.C.
1906 History of the Danish Settlement in Hill Township, Cass County, N.D.

Will, G.F.

- 1914 The Cheyenne Indians in North Dakota. Mississippi Valley Historical Association 7: 67-78.

Woods, S.

- N.D. Report of Major Wood(s), Relative to his Expedition to Pembina Settlement and the Condition of Affairs on the Northwestern Frontier of the Territory of Minnesota. U.S. House Executive Documents No. 51, Serial 577.

Wright, D.M.

- 1927a The Sibley Trail in North Dakota, Chapter I. North Dakota Historical Quarterly 1(3): 30-45.
- 1927b The Sibley Trail in North Dakota, Chapter II. North Dakota Historical Quarterly 1(4): 5-13.
- 1928 The Sibley Trail-Chapter III-In Barnes County. North Dakota Historical Quarterly 3(2): 120-128.
- 1946a Military Trails in Dakota, The Fort Totten-Abercrombie Trail. North Dakota History 13(1 & 2): 80-95.
- 1946b Military Trails in Dakota, the Fort Totten-Abercrombie Trail. North Dakota History 13(3): 103-111.
- 1949 Military Trails in North Dakota, Fort Ransom to Fort Totten. North Dakota History 8(4): 203-210.
- 1950 Military Trails in North Dakota, Fort Abercrombie to Fort Ransom with Notes on the History of Fort Ransom. North Dakota History 17(4): 241-252.
- 1951 Military Trails in North Dakota, Fort Abercrombie to Fort Wadsworth. North Dakota History 18(2 & 3): 157-170.
- 1953 The Fort Totten-Fort Stevenson Trail 1867-1872. North Dakota History 20(2): 67-86.
- 1962 The Sibley Trail of 1863. North Dakota History 29: 283-296.

York, M.C.

- 1965 The Place Names of Barnes County, North Dakota. Unpublished Masters Thesis, University of North Dakota, Grand Forks.

APPENDIX E

SOME POTENTIAL RESOURCE INDIVIDUALS FOR FUTURE WORK

Amateur Archaeologists or Others Knowing Potential Archaeo- logical Sites:

Buckley (?)	Fargo, North Dakota (South High School Bio- logy Teacher)
D. Shanholtzer	District Ranger, U.S. Forest Service, Lisbon
A. Gemolus	Fargo, N.D.
W. Essig	Bismarck (for upper Sheyenne)
D. Rustad	Kindred, N.D.

Botanical Data:

W. Barker	North Dakota State University, Fargo, N.D.
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Historical Data:

J. Twiten	University of North Dakota, Grand Forks, N.D.
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Paleontology/Paleoecology Data

J.C. Brophy	North Dakota State University, Fargo, N.D.
F.D. Holland	University of North Dakota, Grand Forks, N.D.
A.M. Cvancara	University of North Dakota, Grand Forks, N.D.

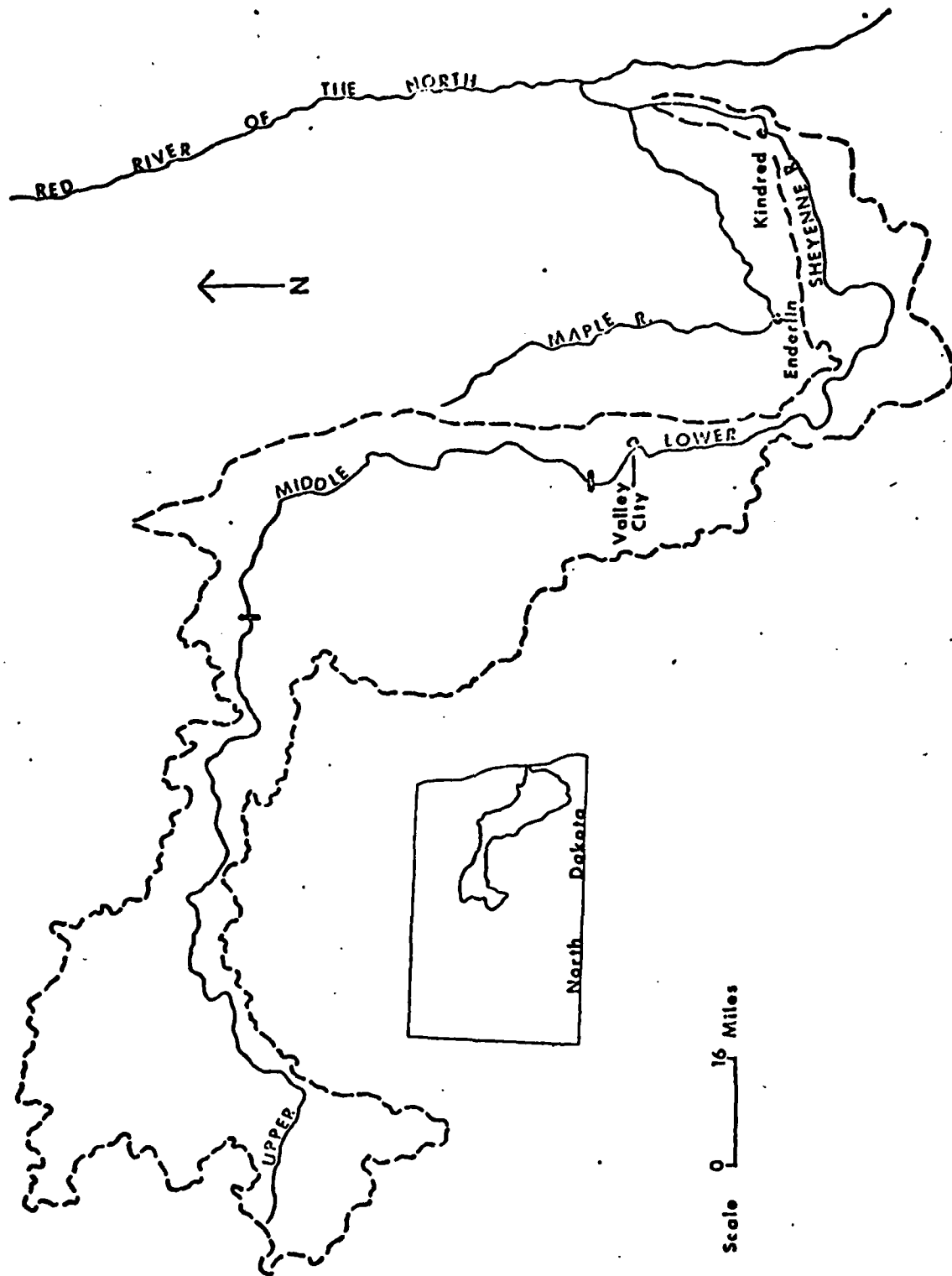


Figure 1 Location of the Research Area. (Map modified from U.S. Army Corps of Engineer's Project Map for the Sheyenne River and Kindred Lake Areas).

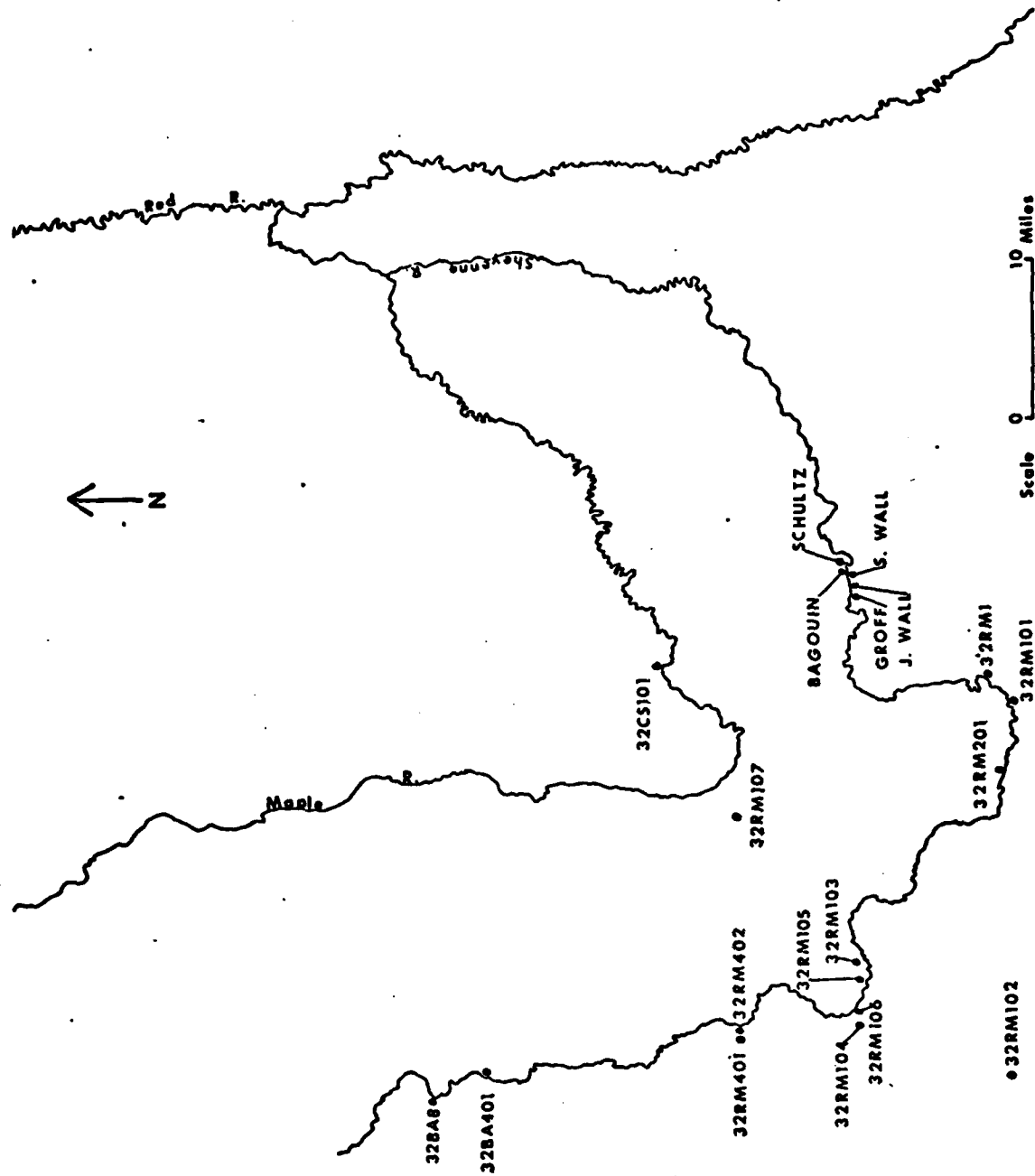


Figure 2 Lower Sheyenne and Maple River Basin Archaeological Sites
(U.S.G.S. North Dakota Base Map 1963).

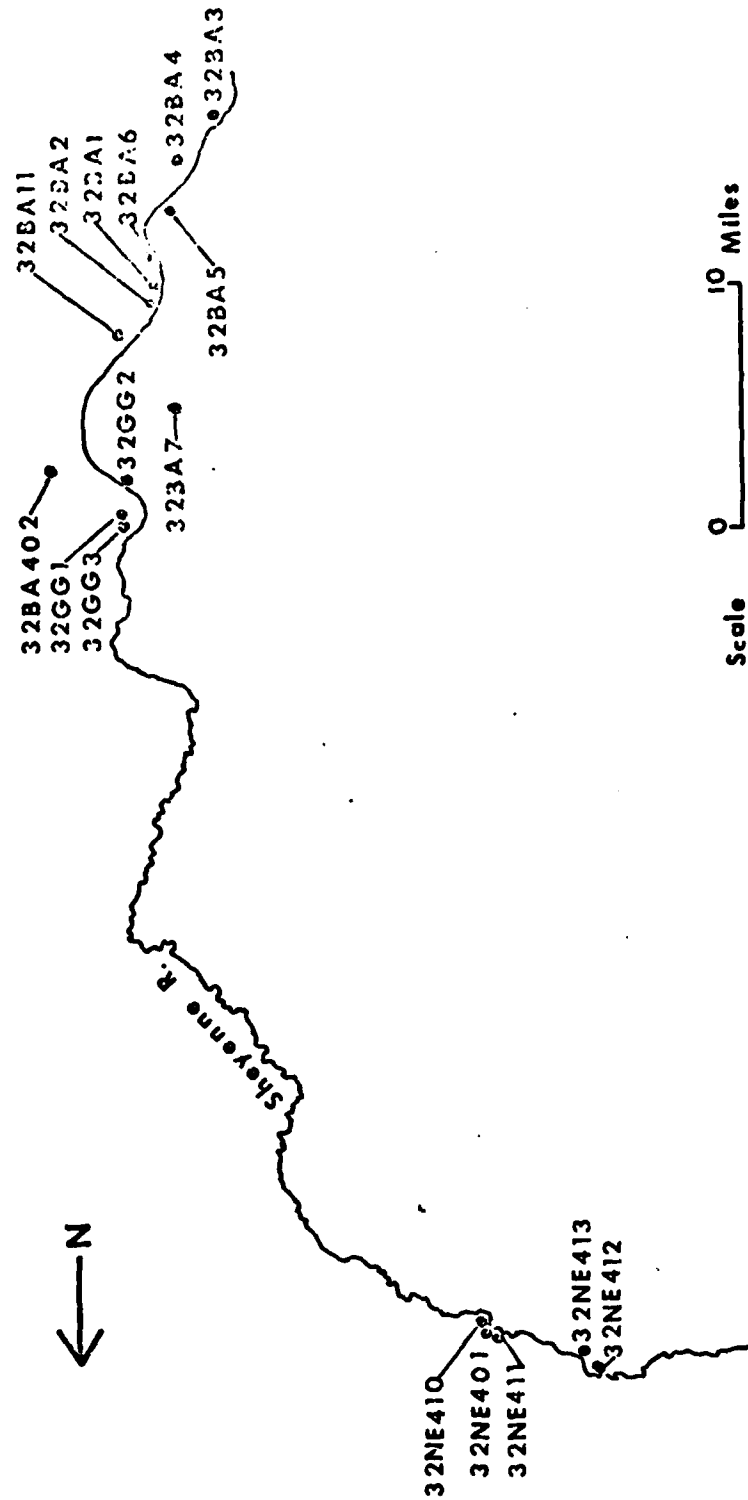


Figure 3 Middle Sheyenne River Basin Archaeological Sites
(U.S.G.S. North Dakota Base Map 1963)

Key for Figure 4. Upper Sheyenne Basin Archaeological Sites
From the Nelson, Eddy, and Benson County Lines to the
Lonetree Reservoir Area.

- | | |
|-------------|-------------|
| 1. 32WE211 | 24. 32ED3 |
| 2. 32WE208 | 25. 32ED203 |
| 3. 32WE209 | 26. 32ED403 |
| 4. 32WE207 | 27. 32ED201 |
| 5. 32WE2 | 28. 32ED5 |
| 6. 32WE3 | 29. 32ED202 |
| 7. 32WE206 | 30. 32ED6 |
| 8. 32WE205 | 31. 32ED1 |
| 9. 32WE203 | 32. 32ED2 |
| 10. 32WE202 | 33. 32ED404 |
| 11. 32WE204 | |
| 12. 32WE201 | |
| 13. 32BE206 | |
| 14. 32BE207 | |
| 15. 32BE104 | |
| 16. 32BE205 | |
| 17. 32BE7 | |
| 18. 32BE6 | |
| 19. 32BE202 | |
| 20. 32BE408 | |
| 21. 32BE3 | |
| 22. 32BE4 | |
| 23. 32BE5 | |

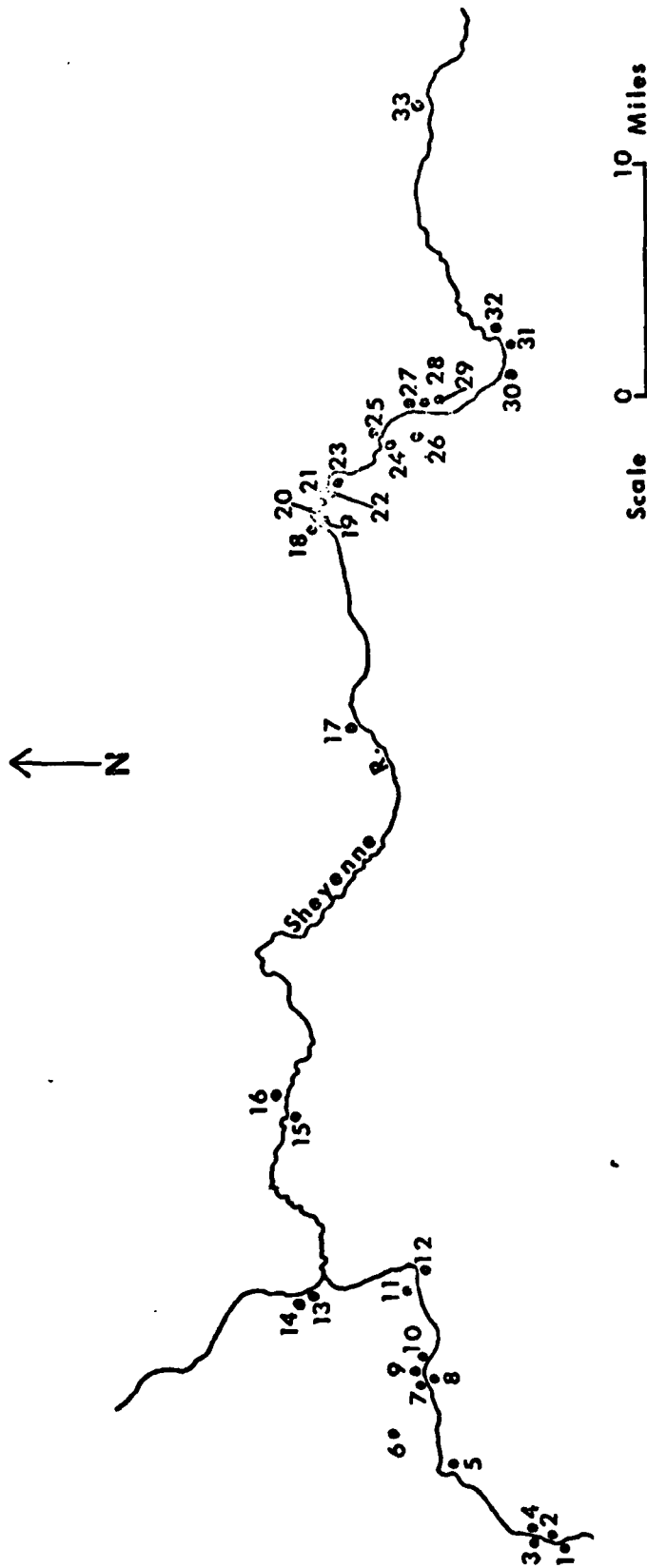


Figure 4 Upper Sheyenne Basin Archaeological Sites from the Nelson, Eddy, and Benson County Lines to the Lonetree Reservoir Area. (U.S.G.S. North Dakota Base Map 1963).

Key for Figure 5. Archaeological Sites in the Eastern
Lonetree Reservoir Area (Upper Sheyenne River Basin).

1. 32SH1	70. 32SH155	108. 32WE119
3. 32SH3	71. 32SH156	110. 32WE120
6. 32SH6	72. 32SH157	111. 32WE121
7. 32SH7	73. 32SH158	112. 32WE122
17. 32SH120	75. 32SH160	113. 32WE123
18. 32SH111	78. 32SH163	114. 32WE124
19. 32SH112	79. 32SH164	115. 32SH8 (relative location)
20. 32SH113	84. 32WE102	
24. 32SH117	85. 32WE107	
25. 32SH118	86. 32WE108	
31. 32SH124	87. 32WE110	
32. 32SH201	88. 32WE111	
33. 32SH202	90. 32WE113	
39. 32WE101	91. 32WE114	
40. 32WE103	98. 32SH173	
59. 32SH144	99. 32SH174	
61. 32SH146	100. 32WE109	
62. 32SH147	101. 32SH175	
63. 32SH148	102. 32SH176	
64. 32SH149	103. 32SH128	
66. 32SH151	104. 32WE115	
67. 32SH152	105. 32WE116	
68. 32SH153	106. 32WE117	
69. 32SH154	107. 32WE118	

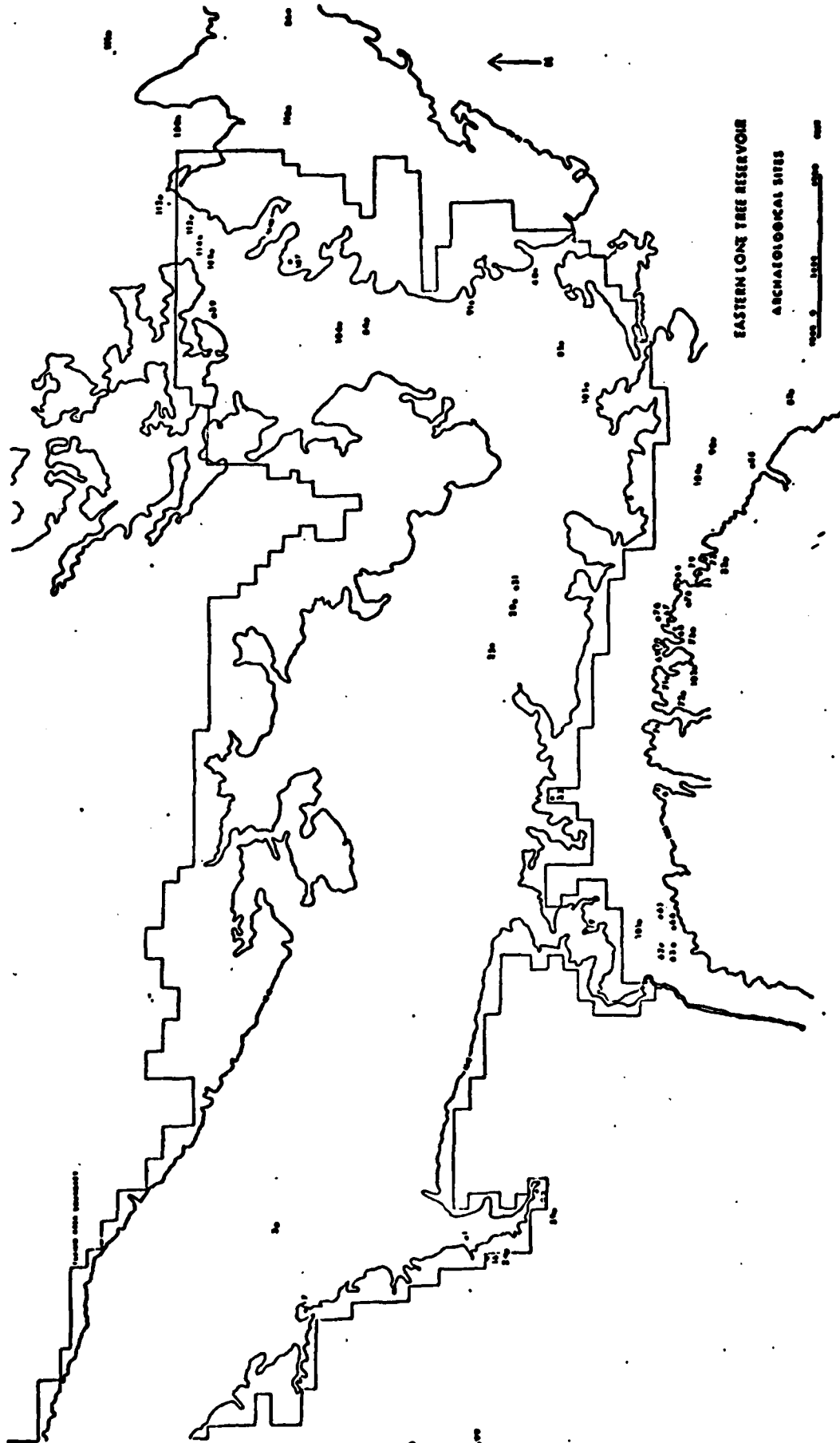


Figure 5 Archaeological Sites in the Eastern Longtree Reservoir Area (Upper Sheyenne River River Basin). Map modified from Schneider 1976: 8 and 9.

Key for Figure 6. Archaeological Sites in the Western
Lonetree Reservoir Area (Upper Sheyenne River Basin).

2. 32SH2	49. 32SH134
4. 32SH4	50. 32SH135
5. 32SH5	51. 32SH136
8. 32SH101	52. 32SH137
9. 32SH102	53. 32SH138
10. 32SH103	55. 32SH140
11. 32SH104	56. 32SH141
12. 32SH105	57. 32SH142
14. 32SH107	60. 32SH145
15. 32SH108	74. 32SH159
16. 32SH109	76. 32SH161
21. 32SH114	77. 32SH162
22. 32SH115	92. 32SH167
23. 32SH116	93. 32SH168
28. 32SH121	94. 32SH169
29. 32SH122	95. 32SH170
34. 32SH203	96. 32SH171
35. 32SH204	97. 32SH172
36. 32SH205	109. 32SH177
42. 32SH126	
43. 32SH127	
44. 32SH129	
45. 32SH130	
48. 32SH133	

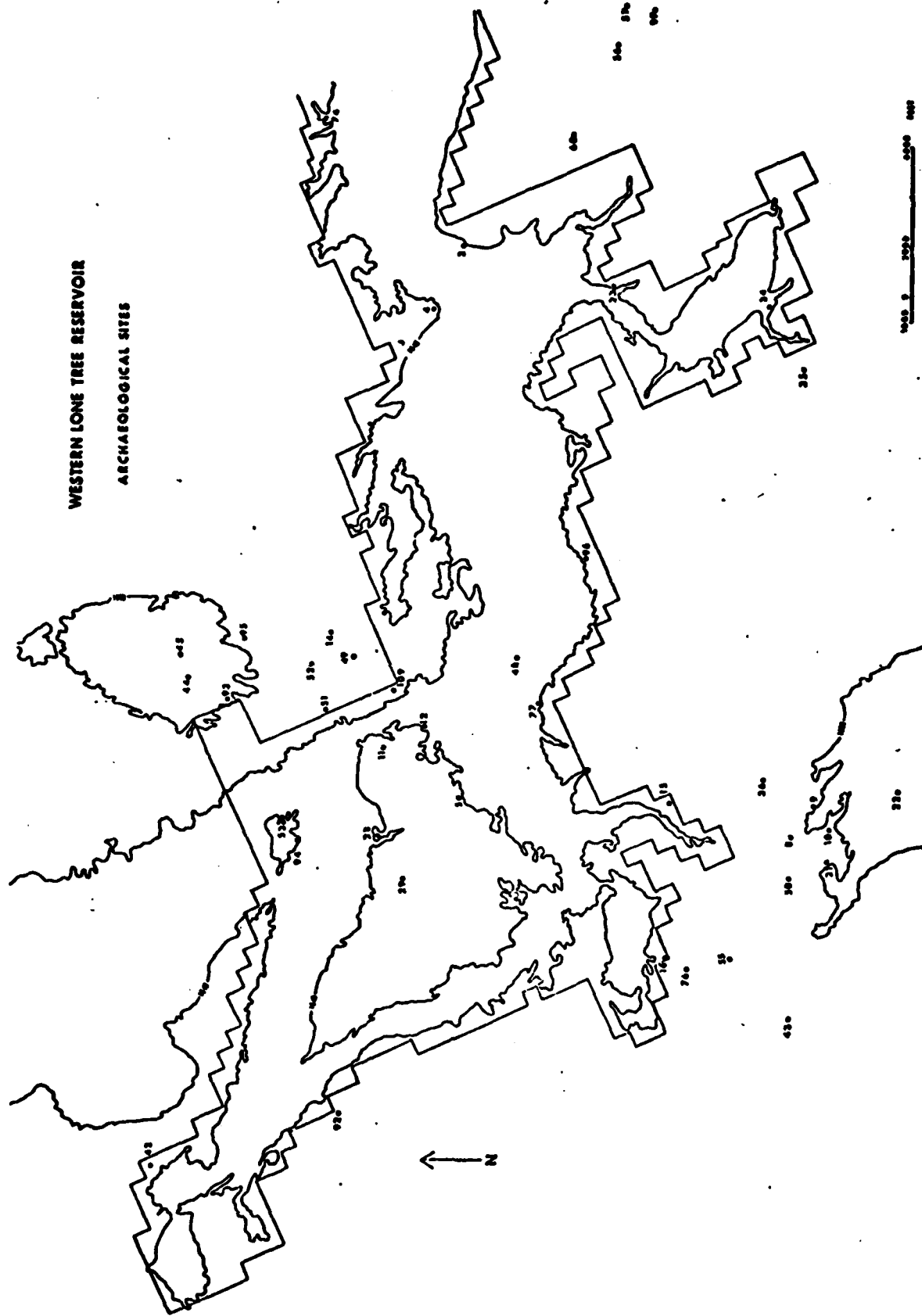


Figure 6 Archaeological Sites in the Western Lone Tree Reservoir Area (Upper Sheyenne River Basin). Map modified from Schneider 1976: 8 and 9.

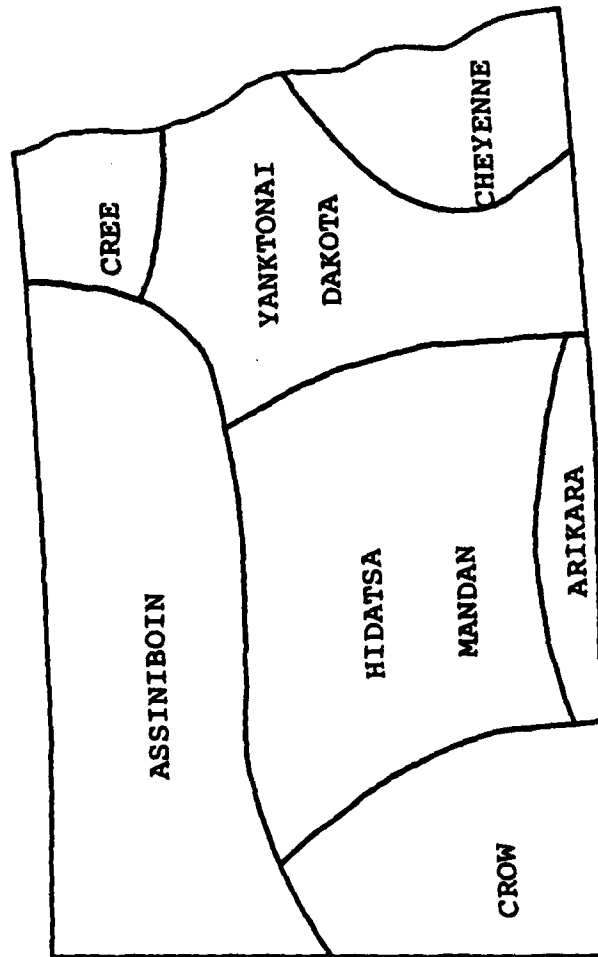


Figure 7 Distribution of North Dakota American Indian Groups Around 1750. Map from Robinson 1966: 24.

Key for Figure 8. Distribution of Historic Sites in the
Lower and Middle Sheyenne and Maple River Basins excluding
Graves and Trail Markers

1. Nolan's Crossing
2. Maple Creek Crossing
3. Birch Creek Camp
4. Watson's Crossing
5. Camp Johnson
6. Camp Wharton
7. Camp Weiser
8. Camp Sheardown
9. Camp Corning
10. Camp Arnold
11. Camp Atchison
12. Fort Ransom
13. Sheyenne Crossing Mail Station (32NE414)
14. Pidgeon Point Trail Station
15. Nolan's Crossing Road Station
16. Owego Colony
17. Power's Helendale Farm
18. 32RM105
19. Wadeson Log Cabin
20. Owego Lutheran Church/Cemetery
21. Zion Lutheran Church/Cemetery
22. Barrie Lutheran Church/Cemetery

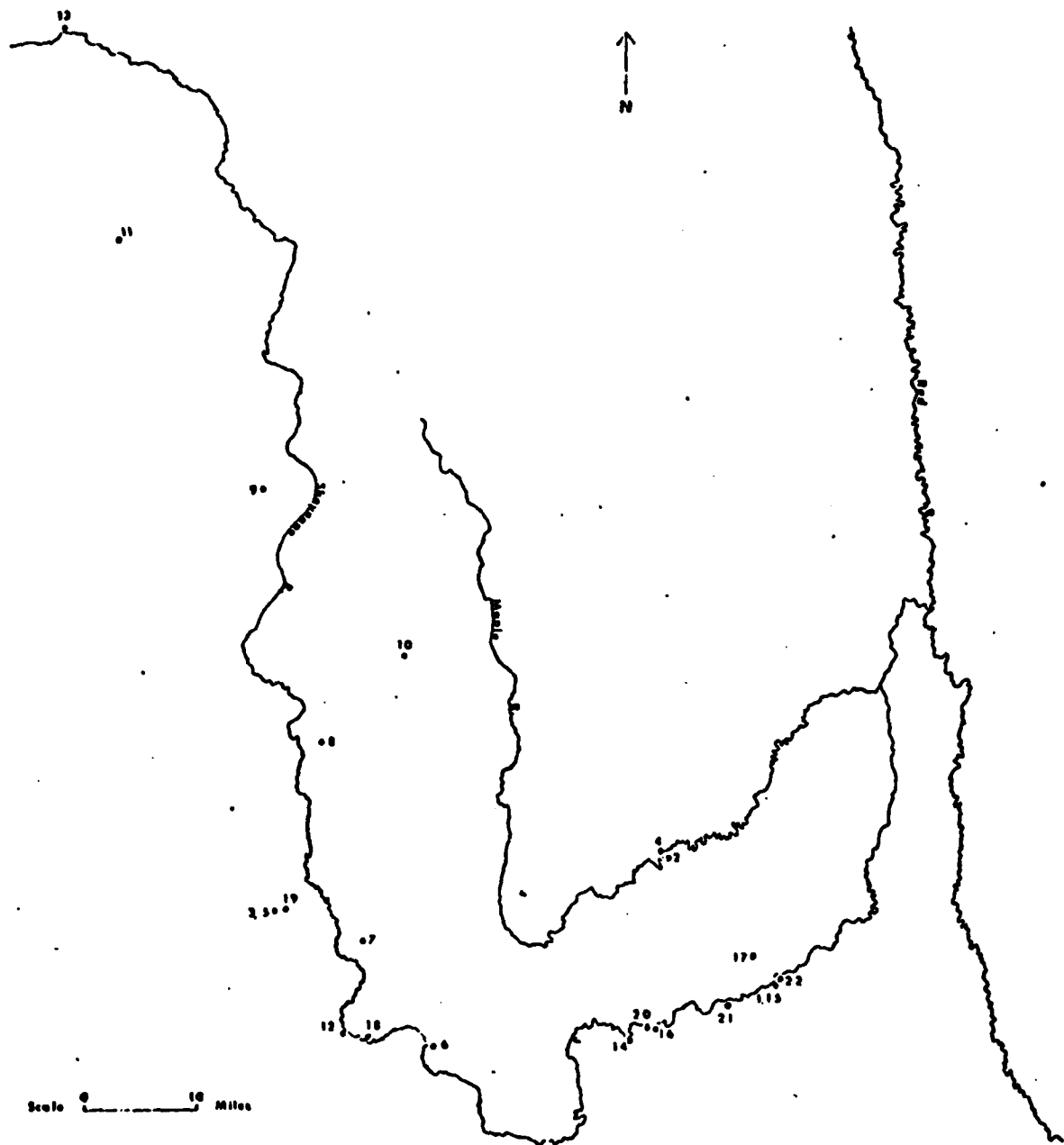


Figure 8 Distribution of Historic Sites in the Lower and Middle Sheyenne and Maple River Basins, excluding Graves and Trail Markers. (U.S.G.S. North Dakota Base Map 1963).

Key for Figure 9. Distribution of Historic Sites in the
Upper Sheyenne River Basin

1. 32BE3
2. Brenner's Crossing
3. Palmer's Crossing
4. 32SH119
5. 32SH106
6. 32SH120
7. 32SH123
8. 32SH125
9. 32SH131
10. 32SH132
11. 32SH139
12. 32SH143
13. 32SH150
14. 32SH165
15. 32WE104
16. 32WE112
17. 32WE210
18. 32ED402
19. 32ED405
20. Brenner Crossing Pioneer Cemetery

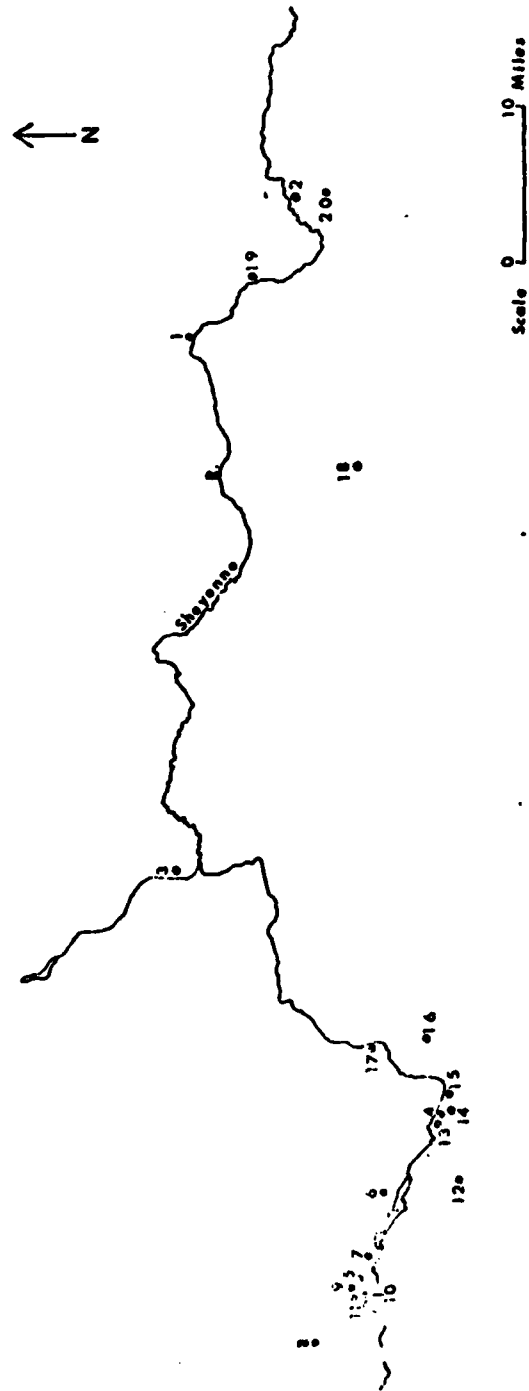


Figure 9 Distribution of Historic Sites in the Upper Shesenne River Basin.
(U.S.G.S. North Dakota Base Map 1963).

CURRICULUM VITAE

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DEGREES: B.A. Wichita State University, 1969, Cum Laude,
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M.A. University of Missouri-Columbia, 1971 (Anthropology)

Ph.D. University of Missouri-Columbia, 1975 (Anthropology)

AREAS OF SPECIALIZATION: North American Archaeology, Archaeological
Method and Theory, European Prehistory,
and Paleoecology.

FELLOWSHIPS AND GRANTS: NDEA Title IV Fellowship, 1971-1974.

HONORS: Lambda Alpha (Anthropological Honors Society), NSF Graduate
Fellowship (Honorable Mention 1971).

POSITIONS: Assistant Professor, University of Oklahoma 1977.

Adjunct Assistant Professor, University of Wisconsin-
LaCrosse 1975-1977.

Research Assistant, University of North Dakota, Summer
and Fall 1975.

Teaching Assistant, University of Missouri-Columbia,
1970-1972.

Field Assistant, University of Missouri-Columbia,
Summer 1969, 1970, 1971.

RESEARCH INTERESTS: North American Archaeology, Old World Prehistory,
Archaeological Method and Theory, Paleoecology,
Cultural Change, South American Archaeology.

PROFESSIONAL ORGANIZATIONS: American Anthropological Association
Society for American Archaeology
Central States Anthropological Society
Plains Conference
Oklahoma Anthropological Association

FIELD WORK: Peru, South America, Fall 1976
Wisconsin, Various times 1975-1977
North Dakota, Summer 1975
Missouri, Summers 1969, 1970, 1971
Kansas, Summer 1968

PUBLICATIONS:

- 1977a Bone Fragments and Bone Grease Manufacturing: A Review of Their Archaeological Use and Potential. Plains Anthropologist, Vol. 22, pp. 169-182.
- 1977b A Literature Review of Archaeological, Historical and Paleontological Resources of the Sheyenne River Basin in North Dakota. U.S. Army Corps of Engineers, pp. 1.123. Co-authored with Rain Vehik.
- 1976a The Quast Site. In: Archaeological Investigations in the LaMoure-Oakes Project Area, Garrison Diversion, North Dakota. U.S. Bureau of Reclamation, pp. 22-51.
- 1976b The Great Bend Aspect: A Multivariate Investigation of its Origins and Southern Plains Relationships. Plains Anthropologist, Vol. 21, pp. 199-206.
- 1976c Comment on: A Test of a Migration Hypothesis: Slavic Movements into the Karst Region of Yugoslavia. Current Anthropology, Vol. 17, pp. 424-425. Co-authored with Robert A. Benfer.
- 1976d Results of a Palynological Investigation of Neolithic Sediments from the Titleberg. In: E.S.J. Rowlett, H.L. Thomas, and R.M. Rowlett (eds) Neolithic Levels on the Titleberg, Luxembourg. University of Missouri, Museum of Anthropology, Brief 18.
- 1975 Sociocultural Implications of Central European Early Bronze Age Mortuary Practices. Unpublished Ph.D. Dissertation, University of Missouri-Columbia.
- 1971a A Multivariate Investigation into the Formation of British Bell Beaker Cultural Groups. Unpublished M.A. Research Paper, University of Missouri-Columbia.
- 1971b An Analysis of Pollen Samples from the Kelley Site, Doniphan County, Kansas. Plains Anthropologist, Vol. 16, pp. 134-137.

IN PRESS:

Climate, Population, Subsistence and the Central Peruvian Lomas between 8000 and 2500 B.P. To appear in: R.A. Benfer (ed) The People of Paloma: A Prefarming Village from Coastal Peru. University of Missouri, Museum of Anthropology, Briefs. Also to be included in a Final Report to the National Science Foundation.

RESEARCH REPORTS:

- 1977 Cultural Resource Reconnaissance of Selected Portions of Corps of Engineers Property Located Near LaCrosse, Wisconsin. Contract survey for the U.S. Army Corps of Engineers. Co-authored with Rain Vehik.

RESEARCH REPORTS CONTINUED:

- 1975a Pollen Analysis of a Bronze Age Burial Mound, Ebly, Belgium. Report submitted to R.M. Rowlett, University of Missouri, for inclusion in: Final Report on the Excavations of a Bronze Age Burial Mound, Ebly, Belgium.
- 1975b Archaeological Survey of Ebner and State Road Coulees. Contract survey for the U.S. Army Corps of Engineers.
- 1975c Archaeological Survey of a Mississippi River Bottom Rail Loop. Contract survey for Dairyland Power Cooperative, LaCrosse, Wisconsin. Co-authored with Rain Vehik.
- 1975d Archaeological Survey of the Black River Falls, Wisconsin Industrial Park. Contract survey for the U.S. Economic Development Agency. Co-authored with Rain Vehik.
- 1973 Central European Bronze Age Artifact Type Distributions. Report submitted to R.M. Rowlett, University of Missouri, for inclusion in: The European Bronze Age Interaction Sphere.
- 1970 Pollen Analysis of the Davis Site, South Dakota. Report submitted to the National Park Service, Midwest Research Center, Lincoln, Nebraska.

PAPERS PRESENTED:

- 1976a Death, Grief, and Bereavement: An Interdisciplinary Review and Integration of Approaches and Research. In the symposium: Death and Aging in Cross-Cultural Perspective. American Anthropological Association meetings.
- 1976b The Quast Site (32LM234) and its Implications for the Prehistory of the James River Valley, North Dakota. Contributed paper, Society for American Archaeology meetings.
- 1976c A Preliminary Analysis of Burial Customs in the Northern Plains. Contributed paper, Central States Anthropological Society meetings. Co-authored with Rain Vehik.
- 1975a Sociocultural Change in Central Europe for the Late Neolithic/Chalcolithic through the Early Bronze Age. In a symposium I organized entitled: Recent Developments in Old World Prehistory. American Anthropological Association meetings.
- 1975b Preliminary Analysis of the Quast Site (32LM234), North Dakota. Field Report, Plains Conference. Co-authored with Rain Vehik.
- 1975c An Assessment of the Ancestral Relations of the Great Bend Aspect (South-Central Kansas). Contributed paper, Society for American Archaeology meetings.

PAPERS PRESENTED CONTINUED:

- 1975d Multivariate Statistical Analysis of an Early British Bell Beaker Cultural Group. Contributed paper, Central States Anthropological Society meetings.
- 1974a Preliminary Suggestions on the Origin of the Great Bend Aspect (South-Central Kansas). Contributed paper, Plains Conference.
- 1974b A Multivariate Analysis of Temporal Variations within a Central European Early Bronze Age Cemetery. In the symposium: Introduction to Mapping Multivariate Dimensions and Clusters: Snapshots of Anthropological Data. Central States Anthropological Society meetings.
- 1973a Methodology, Mortuary Practices, and the Study of Prehistoric Social Organization. Contributed paper, American Anthropological Association.
- 1973b A History of the Use and Abuse of Ethnographic Analogy. Contributed paper, Plains Conference.
- 1973c Methodology and the Study of Prehistoric Social Organization. In the symposium: Data Applications and Theoretical Implications of Quantitative and Qualitative Methods in Social Anthropology. Central States Anthropological Society.
- 1972 A Preliminary Investigation of the Social Structure of an Early Bronze Age Community. Contributed paper, Southern Anthropological Society meetings.
- 1968 Application of Pollen Analysis to North American Archaeology. Contributed paper, Conference on Anthropology in Kansas.

REFERENCES:

Dr. Ralph M. Rowlett, Department of Anthropology, University of Missouri, Columbia, Missouri.

Dr. Robert A. Benfer, Department of Anthropology, University of Missouri, Columbia, Missouri.

Dr. Frederick Schneider, Department of Anthropology, University of North Dakota, Grand Forks, North Dakota.

Dr. Joan Freeman, Wisconsin State Historical Society, Madison, Wisconsin. (most archaeological contract work reports were submitted to her).

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University of Utah, 1967-1968
Ph.D. Candidate in Anthropology, University of Missouri-Columbia. Course work and comprehensive exams completed, 1968-Present

AREAS OF SPECIALIZATION: North American Archaeology, Lithic Analysis, North American Indians, Culture Change, Archaeological Methods.

POSITIONS: Assistant Professor, University of Wisconsin-La Crosse 1974-Present.
Research Associate, University of North Dakota, Summer 1974, 1975.
Teaching Assistant, University of Missouri-Columbia, 1970-1974.
Research Assistant, University of Missouri-Columbia, Summer 1969, 1970.
Archaeological Survey Assistant, University of Missouri-Columbia, 1968-1969.
Instructor, Wichita State University, Summer 1968.
Teaching Assistant, University of Utah, 1967-1968.
Field Assistant, University of Utah, Spring 1967.
Teaching Assistant, Wichita State University, 1966-1967.
Field Assistant, Wichita State University, Summer 1966.

FIELD WORK: Wisconsin 1974-present.
North Dakota, Summer 1974, 1975.
Missouri, Summer 1969, 1970.
Missouri, Spring 1969
Kansas, Summer 1966, 1967, 1968.
Utah, Spring 1968.
Arkansas, Summer 1964, 1965.

FELLOWSHIPS AND GRANTS: NDEA Title IV Fellowship.

LANGUAGE COMPETENCY: Good in reading, speaking, and writing Estonian, Fair in reading German.

COURSES TAUGHT: Archaeological Field School, Archaeology (emphasis on World Archaeology), Physical Anthropology, Introduction to Physical Anthropology and Archaeology, Archaeology (emphasis on methods), New World Prehistory, Introduction to Anthropology, Peoples of the World, North American Indians.

RESEARCH INTERESTS: Plains Prehistory (specifically Southern and Central Plains), Lithic Analysis, Early Man in the New World, Cultural Ecology, Archeological Methods, Cultural Change, Northern Plains Woodland.

PROFESSIONAL ORGANIZATIONS: American Anthropological Association, Society for American Archaeology, American Association of Physical Anthropologists, Plains Conference, Wisconsin Archaeological Society, Minnesota Archaeological Society, Oklahoma Anthropological Society, Kansas Anthropological Society, Iowa Archaeological Society, Pennsylvania Anthropological Society, Smithsonian Associate, American Museum of Natural History Associate, Wisconsin Archaeological Survey.

PUBLICATIONS:

- 1977 A Multivariate Analysis of the Fristoe Burial Complex in Southwestern Missouri. Plains Anthropologist. In Press.
- 1976 Archaeological Survey of the James River Valley, South-Central North Dakota: 1974. Occasional Publications in Anthropology, No. 1, University of North Dakota. Also: Contract report submitted to the U.S. Bureau of Reclamation.
- 1974 Archaeological Investigations in the Harry S. Truman Reservoir Area: 1970. Report submitted to Regional Director, National Park Service, Midwest Archaeological Research Center, Lincoln, Nebraska.
- 1971 An Archaeological Survey of the Proposed Pattonsburg Reservoir, Missouri: 1969. Report submitted to Regional Director, National Park Service, Midwest Archaeological Center, Lincoln, Nebraska.
- 1970 The Walters Site: A Fluted Point Manifestation in North-Central Missouri. Memoir No. 8. Missouri Archaeological Society, Columbia.
- 1967 An Archaeological Evaluation of South-Central Kansas. Unpublished M.A. Thesis, Wichita State University.

RESEARCH REPORTS:

- 1976a An Archaeological Inventory and Evaluation of the Proposed Sewage Treatment Plant, Viroqua, Wisconsin: Final Report.
- 1976b An Archaeological Inventory and Evaluation of the Proposed Wastewater Treatment Site, Medary, Wisconsin: Final Report.

- 1975a Archaeological Survey of a Mississippi River Bottom Rail Loop. Contract survey for Dairyland Power Cooperative, LaCrosse, Wisconsin. (co-author S. Vehik).
- 1975b Archaeological Survey of the Black River Falls, Wisconsin Industrial Park. Contract survey for the U.S. Economic Development Agency. (Co-author S. Vehik).

PAPERS PRESENTED:

1. Archaeological Investigations in the James River Valley, North Dakota. Research Report, Society for American Archaeology, 1976.
2. A Preliminary Analysis of Burial Customs in the Northern Plains. Central States Anthropological Meetings, 1976. Contributed paper. With S. Vehik.
3. Preliminary Analysis of the Quast Site, North Dakota. Field Report, Plains Conference, 1975. With S. Vehik.
4. Test Excavations Along the James River, South-Central North Dakota: 1975. Field Report, Plains Conference, 1975.
5. Archaeological Investigations in the James River Valley, North Dakota. Research Report, Society for American Archaeology, 1975.
6. Archaeological Survey Along the James River Valley in South-central North Dakota. Field Report, Plains Conference, 1974.
7. A Re-Evaluation of the Taxonomic Position of the Great Bend Aspect. Symposium: Introduction to Mapping Multivariate Dimensions and Clusters: Snapshots of the Anthropological Data. Central States Anthropological Society, 1974.
8. A Quantitative Analysis of the Great Bend Aspect. Contributed Paper, Plains Conference, 1973.
9. A Multivariate Analysis of the Fristoe Burial Complex. Contributed Paper, Plains Conference, 1972.
10. Archaeological Investigations in the Truman Reservoir, Missouri: 1970. Field Report, Plains Conference, 1970.
11. Archaeological Investigations in the Smithville Reservoir, Missouri: 1969. Field Report, Plains Conference, 1969.
12. An Analysis of Artifacts from the Augusta Site. Tri-Institutional Conference for Anthropology, 1966.

PAPERS IN PREPARATION:

An Analysis of Cultural Variability during the Late Woodland Period in the Ozark Highlands. Ph.D. Dissertation.

The Augusta Site: A Great Bend Aspect Site in South-Central Kansas. To be submitted to Plains Anthropologist.

A Quantitative Analysis of the Great Bend Aspect, South-Central Kansas. To be submitted to American Antiquity.

Spatial Analysis of a Late Woodland Rockshelter in Southwest Missouri.