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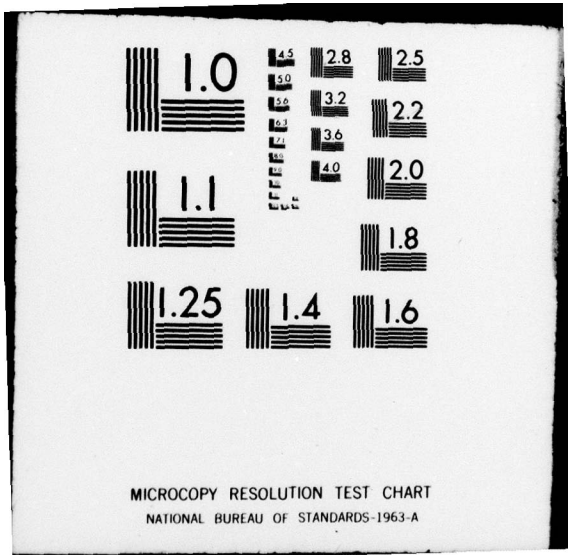
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STUDIES OF PHLEBOTOMINE SAND FLIES

ANNUAL REPORT

By

D. G. YOUNG

31 May 1977

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Supported by

U. S. ARMY MEDICAL RESEARCH & DEVELOPMENT COMMAND
WASHINGTON, D. C. 20314

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UNIVERSITY OF FLORIDA
Gainesville, Florida 32611

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A biosystematic review of the bloodsucking psychodid flies of Colombia was completed. Of the 105 taxa studied, 14 represent previously undescribed forms. Each species is keyed, figured and discussed. An extensive bibliography is provided. The review, to be published in a technical bulletin of the University of Florida, should be useful not only in Colombia but also in other neotropical countries owing to the broad distribution of most species.

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PROGRESS REPORT
DADA 17-72-C-2139

Introduction

Previous annual reports under this contract included identification keys, distributional data and other information on New World Phlebotominae. The present report is similar in content but is more detailed, covering over one-third of the described American species.

Objectives

1. To prepare keys, illustrations, and other aids to identification both by geographic areas and by taxonomic groups.
2. To arrive at a more satisfactory classification of the subfamily Phlebotominae.
3. To build an American reference collection.
4. To maintain a sand fly colony for experimental purposes.

Results

A study of the phlebotomine sand flies of Colombia was completed (see Appendix)*. Ten species or subspecies are described as new. Nineteen phlebotomine species are reported in Colombia for the first time. Other new distributional records include those from Ecuador (22 spp.), Panama (3 spp.), Honduras (2 spp.), Costa Rica, Cuba, Guatemala, and Paraguay (1 sp. each). Actual and/or probable misidentifications in

*Owing to its length (over 450 pp.), this publication was not included as an appendix to this report. Reprints will be distributed when available.

the literature are discussed. Recent speciation in the neotropical Phlebotominae was due probably to climate changes in the Pleistocene.

The paper is being reviewed for publication in a technical bulletin of the University of Florida. It should appear in print before August, 1978.

A paper on the classification of the subfamily was completed and was accepted for publication in the journal, "Systematic Entomology."

Three other papers mentioned in the 1976 Annual Report as being "in press" are expected to be published in 1977.

Work continued on the sand fly fauna of Trinidad. Additional material collected by Dr. E.S. Tikasingh was identified and will be included in the paper.

In order to complete some of the taxonomic papers, we decided to abandon the sand fly colony owing to the considerable amount of time involved with maintenance.

Although no field trips were made during this time period, the collection continued to grow due to gifts from colleagues working in Brazil, Colombia, and Trinidad.

LIST OF PUBLICATIONS RESULTING FROM THIS RESEARCH

1. Young, D.G. and C.H. Porter. 1972. *Lutzomyia yuilli*, a new man-biting phlebotomine sand fly from Colombia (Diptera:Psychodidae). J. Med. Ent. 9(6):524-526.
2. Young, D.G. 1973. Two new phlebotomine sand flies from Colombia (Diptera:Psychodidae). Fla. Ent. 56(2):106-112.
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4. Young, D.G. and D.J. Lewis. 1975. Pathogens of phlebotomine sand flies. Bull. W.H.O. (in press).
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6. Lainson, R., R.D. Ward, D.G. Young, J.J. Shaw, and H. Fraiha. 1977. Preliminary entomological and parasitological studies in Humboldt, Aripuana, Mato Grosso State, Brazil. Bol. INPA (in press).
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8. Aitken, T.H.G., A.J. Main, and D.G. Young. 1977. *Lutzomyia vexator* (Coquillett) in Connecticut (Diptera:Psychodidae). Proc. Ent. Soc. Wash. (in press).

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