

REVIEWS AND ABSTRACTS

HELEN LOUISE DURKEE

ENTOMOLOGIA MÉDICA. Volume I. Parte General, Diptera, Anophelini. By O. P. Forattini. Departamento de Parasitologia, Faculdade de Higiene e Saúde Pública. Caixa Postal 8099, São Paulo, Brasil. (In Portuguese.) 1962. 662 pp. 263 figs. Dr. Oswaldo Paulo Forattini, Adjunct Professor, Department of Parasitology, University of São Paulo, is AMCA Regional Director for Mexico, Central America, and South America. He has dedicated his book to Professor J. Lane.

Volume I contains eight chapters and an appendix, each with its own bibliography, and a subject index. The 263 text figures include line drawings, photographs, and graphs; the several tables are not numbered.

Chapter 1 deals with "General Entomology," under the headings of taxonomy, nomenclature, ecology, and distribution and zoogeography. There are 32 pages and 9 references.

Chapter 2, on "Phylum Arthropoda," includes sections on morphology, reproduction, and on the medical and veterinary importance of arthropods, and on classification within the Phylum.

Chapter 3, "Class Insecta," with 34 pages and 6 references, considers morphology, physiology, and classification. Chapter 4, "Order Diptera," includes sections on morphology, biology, classification, and keys to the families. There are 34 pages and 10 references.

Chapter 5, "Family Culicidae," 59 pages, including morphology, classification, and keys to subfamilies and tribes, lists 15 references. Chapter 6, "Family Culicidae," covering biology in some detail, is 116 pages long and has 235 references.

Chapter 7, "Tribe Anophelini," 200 pages, includes general characters, sections on the genera *Chagasia* and *Anopheles*, keys to species, and 115 references.

Chapter 8, "Malaria," 87 pages, summarizes pathology and symptomatology, phases of the infection, life cycle of the plasmodia and transmission, epidemiology, control, and eradication, and lists 69 references.

The Appendix, 49 pages, on the "Principal Techniques Employed in *Anopheles* Investigations," sets forth procedures followed in the field and in the laboratory. There is a section devoted to the determination of the resistance and susceptibility of larvae and adults. There are 113 references.

A 20-page subject index concludes the volume.

This 6 x 9-inch book is 1 3/4 inches thick, with a heavy paper binding; however, this cover and the binding are not adequate. The text and illustrations are clearly printed on good quality paper and combine to make an attractive, easy-to-read book.—H. L. T. D.

THE MOSQUITOES OF ALASKA. By C. M. Gjullin, R. J. Sailer, Alan Stone, and B. V. Travis. Agriculture Handbook No. 182, U.S.D.A. Jan. 1961. 98 pp., 12 maps, 116 refs. Supt. of Documents, U. S. Govt. Printing Office, Wash. 25, D. C. 4 cents. This 6 x 9 inches well-illustrated booklet gives information on the biology, ecology, distribution, control, and taxonomic characters of the 27 mosquito species (20 *Aedes*, 5 *Culiseta*, *Culex*, 1 *Anopheles*) known to occur in Alaska. The information was obtained by the authors over a number of years and includes, as well, data recorded by others.

On the inside cover we read, "the military services will have considerable use for this publication at their various installations in Alaska." I think it well to have added the fact that a great part of all the material obtained was made possible by military funds, personnel, and equipment. The Arctic Institute of North America also gave aid to the very valuable "prediction of mosquito abundance" so ably worked out by Sailer.

Mosquito counts as related to precipitation are based on data obtained in 1951 and 1953. Tanana, Nenana, Port Yukon, Kotzebue, and Tooler are graphically illustrated. The authors state "The actual value of this effort to correlate mosquito abundance with precipitation will depend on how accurately the correlation can be used to predict populations of slight, localized, and serious regional economic importance." It is regrettable that this research was not carried on for a longer period of time since I believe it is a logical approach to human activity and mosquito annoyance.

The authors have included a considerable amount of data on the ecology and control of these arctic and semi-arctic mosquitos which is new, interesting, and important. Emphasis is placed on methods of control, and recommendations are made for controlling both larvae and adults in that region. Information is included on protection with the latest and most efficient insect repellent, diethyltoluamide, against the adults.

Somewhat over half of the booklet is devoted to keys and taxonomic characters of the species. The male genitalia and the larval segments of all species are exceedingly well illustrated by line drawings (who drew them?) which makes this section particularly valuable. I go without saying that I have great confidence in keys and drawings prepared by Gjullin and viewed by Alan Stone.

I was flattered to be the party-of-the-first-pick in Figure 1. Although my back only is shown the picture does not give one an idea of the ab-

ance of these insects in Alaska. I can assure you the picture was a common one over much of the State. To work or play under such conditions is an impossibility. I have noted an unimportant error. On page 2, it is stated that I obtained certain data on species and abundance in Alaska in 1943. It should be 1944. On the same page there exists a confusion, where it is stated that Ehrlich collected mosquitoes in northeastern Alaska in 1956; his reference, however, reads, "Mosquito Records from the Chukchi Sea Coast of Northwestern Alaska." I did note on Map 8 that *Aedes fitchii* and *A. impiger* were recorded from in the vicinity of the Barter Islands. Ap-

parently, considerable information emanated from W. C. Frohne, of the U. S. Public Health Service, since there are 14 references (the greatest number of any one author) to his titles in Literature Cited. The 12 maps of Alaska giving the distribution of species could be improved. For example, Map 9 gives data on 3 climate zones together with the distribution of 5 species, and is confusing. On the other hand, 4 maps give the distribution of but one species, with no data on climate.

This handbook is an excellent contribution to our knowledge of mosquitoes, and is the best dealing with the species indigenous to the arctic. —Harry Stage.

John Lane

JOHN LANE, who was born in São Paulo on March 12, 1905, the son of one of the American families that emigrated to Brazil from the southern United States after the Civil War, died suddenly in São Paulo on January 4, 1963 of a heart attack. Well known throughout the Americas, Mr. Lane was Associate Professor in the Department of Parasitology and Rural Health in the Faculty of Hygiene and Public Health, University of São Paulo.

His secondary education was at Macenzie College in São Paulo, and he received his earliest scientific training in São Paulo under Herman Luederwaldt and Frei Thomaz Bergmeier. Later, in Rio de Janeiro he worked with Dr. G. F. de Oliveira Castro at the Oswaldo Cruz Institute, and then with Raymond Shannon and Nelson C. Davis of the Rockefeller Foundation staff. In 1941-42 he studied at Cornell under Matheson, on Rockefeller Foundation fellowship.

In 1953 two volumes of his *Neotropical Culicidae* were published by the University of São Paulo. Volume III of this work, dealing with the biology of mos-

quitoes, has been in preparation since 1959, and on December 7, 1962 Mr. Lane wrote to the Pan American Health Organization, which was sponsoring the work, to say that the text of this volume had been finished, and that the typescript ran to 548 pages.

Lane's magnum opus is the culmination of some 23 years of work with the Neotropical Culicidae, in the course of which he collaborated with many well-known specialists in the group. His studies were much helped by a Guggenheim travel grant in 1950 to visit museums in Europe and the United States to examine type and other specimens of special interest.

His studies and publications involve species in at least seven families of Diptera in addition to Culicidae. The current list of title of his scientific papers contains 152 entries, on a great variety of forms. Among these entries is the chapter in Boyd's *Malariaology* "Anophelines of the Neotropical Region." He also assisted in the translation into Portuguese of *Practical Malariaology* by Russell, West and Manwell.
