

BOOK REVIEWS

Mosquitos. J. D. Gillett. 1971. xii, 274 pp. illus. L5.90. The World Naturalist. Ed. Richard Carrington. Weidenfeld & Nicholson, London.

The author spent a number of years working with mosquitoes in East Africa and the best parts of the book deal with his studies there. His laboratory investigations on the feeding and oviposition cycles of mosquitoes are particularly interesting, especially his elucidation of the reasons why mosquitoes, in the laboratory, lay their eggs just before the lights go out.

The East African work on vertical distribution and biting cycles of rain forest mosquitoes is well known. Dr. Gillett's description of the difficulties in climbing rickety ladders to reach capture stations in the forest gallery illustrates some of the practical difficulties encountered in entomological research. These studies were part of Dr. Gillett's important research that helped to unravel the epidemiological riddles associated with the forest-rural cycle of yellow fever in East Africa where *Aedes africanus* plays a role, similar to that of *Haemagogus spegazzinii* in Central and South America, as the forest tree-top vector maintaining the disease in the monkey populations. *Aedes simpsoni* was found to be the monkey-to-man vector in rural situations.

There is also a good discussion of the epidemiological aspects of the African mosquito-borne dengue-like viruses Chikungunya and O'nyong-nyong (both African names meaning "bone breaker" because of the severe pain in the joints characteristic of infection with these viruses).

The chapter on mosquitoes and history is interestingly told, from a rather British point of view, e.g., The Earl of Arundel's fleet forced to abandon its campaign at Sluys because of malaria in 1387, Drake and Frobisher's crews contracting malaria on the Cape Verde Islands, the defeat of the British at Walcheren in 1809, Captain Lawrence Wright setting sail in 1689 with 11 ships for the West Indies carrying the Duke of Bolton's Regiment that was to be defeated by yellow fever, Sir Francis Wheeler losing his fighting force to yellow fever in the Barbados, Admiral Vernon from Southampton, etc. etc.

The book seems to reflect Dr. Gillett's interests and biases, perhaps too much so. He covers only briefly many important aspects of mosquito life. Malaria, the most important of these, is dealt with in six pages. Insecticides, chemosterilants, chromosome studies, and mosquito control are hardly mentioned. The extensive work of the past five or six years on mermithids and microsporidia of mosquitoes is largely omitted.

The figures and illustrations are excellent, the color plates of adult female *Sabethes belisarioi* and *Toxorhynchites brevipalpis* by Dr. Judith Smith

are outstanding. The book is remarkably free of typographical errors, I noted only one, on page 104. Like the rest of "The World Naturalist" series "Mosquitos" is a thoroughly enjoyable, erudite and expertly prepared book.

HUGO JAMNBACK, N. Y. State
Museum & Science Service

40 Years of Tropical Medicine Research—A History of the Gorgas Memorial Institute of Tropical and Preventive Medicine, Inc., and the Gorgas Memorial Laboratory, by Willard H. Wright, D.V.M., M.S., Ph.D., 426 pp and 18 illustrations. Privately printed by the Gorgas Memorial Institute in 1970, Washington, D.C. \$9.50.

The Gorgas Memorial Institute was incorporated in Delaware in 1921. Later that year it was given legal status in the Republic of Panama. The Gorgas Memorial Laboratory, situated in Panama City, and jointly supported by the governments of Panama and the United States, was dedicated in 1929. Herbert C. Clark was its first director.

The program of the laboratory has been diverse, with perhaps greatest overall attention to parasitology, but encompassing many different types of biomedical research, including much entomology. Of the 630 entries in the bibliography of papers from the laboratory 1930-1969, 106 deal directly with mosquitoes, of eight genera.

Achievements have been outstanding in the epidemiology of mosquito-borne diseases—malaria, yellow fever, equine encephalitis and other arbovirus infections—and of other arthropod-borne diseases, such as Chagas' disease (American trypanosomiasis) and leishmaniasis.

The laboratory is ideally situated as a base for many types of biomedical research in the wet tropics. A goodly number of visiting scientists have augmented the scope of the activities of the laboratory staff.

The early studies of Pedro Galindo on the taxonomy of *Culex (Melanoconion)* spp. provided the perfect foundation for his later studies of the epidemiology of Venezuelan equine encephalitis and other arboviruses. These culminated in the demonstration that, quite independently of equines and man, an enzootic cycle of VEE transmission exists, involving *Melanoconion* spp. and cotton rats. This brilliant work was done after 1969, and thus can only be mentioned in this review.

The book is attractively printed and bound, and it is well indexed. It can be obtained from the Gorgas Memorial Institute, 2007 Eye Street, Washington, D. C. 20006.

J. AUSTIN KERR