

REVIEWS AND ABSTRACTS

OBSERVATIONS ON THE OXYGEN CONSUMPTION OF SOME ADULT MOSQUITOES. By T. I. Mercado, H. L. Trembley,¹ and T. Von Brand. *Physiol. Compar. Etocologia* 4(2):201-208. 1956. 9 refs. The rate of oxygen consumption of six species² of adult mosquitoes was studied. No definite signs were found that sex influences the rate of tissue respiration materially. Feeding with sucrose water or blood increased the rate of respiration rather considerably, but this increase was in most cases maintained for only a few days upon starvation. Sucrose-water fed specimens withstood starvation better than blood-fed ones.—Authors' summary.

THE DISTRIBUTION OF *Culex p. pipiens* AND *C. q. quinquefasciatus* IN NORTH AMERICA. By A. R. Barr. *Amer. J. trop. Med. and Hyg.* 6(1):153-165. 1957. 10 refs. The only reliable character for separating individual *pipiens* and *quinquefasciatus* was described by Sundararaman (1949). This is a ratio of two measurements of various parts of the male genitalia. . . . DV is the extension of the ventral arm laterally of the intersection with the dorsal arm. In specimens with a negative ratio the same measurement was used. Since there was no intersection of the arms, the point where they would have intersected had the ventral arm been longer was used. Both DV measurements were recorded and an average taken. D is the distance between the two intersections of the dorsal and ventral arms.—Excerpts from text.

The DV/D ratio was measured in about 3/2 thousand males of *pipiens* and *quinquefasciatus*, mostly from North America. It was found that the average ratio in a collection of *pipiens* is 0.1 or less and in *quinquefasciatus* 0.6 or more. In individual specimens the ratio is usually less than 0.2 in the former and more than 0.4 in the latter. In North America north of 39° N. only *pipiens* is usually found; south of 36° N. only *quinquefasciatus* is generally present. Collections from between these latitudes may contain one or the other form, intermediates, or various mixtures of the three. There seems little doubt but that the forms do hybridize in nature. In some localities (Sacramento, Calif.) intermingling seems to be much freer than others (E. St. Louis, Ill.). At the present time it seems wisest to retain subspecific names for the two forms.—Author's summary.

THE MICROSCOPIC DIAGNOSIS OF HUMAN MALARIA. II. A MORPHOLOGICAL STUDY OF THE ERYTHROCYTIC PARASITES. By J. W. Field and

P. G. Shute. Studies from Inst. for Med. Res., Fed. of Malaya. No. 24, 243 pp. 59 plates. This well-illustrated book on thin-film diagnosis is a companion volume to Study No. 23 which is an account of the morphology of the Malayan parasites as observed in thick blood films.

The present study describes and illustrates the appearance in thin blood films of plasmodia found in man *P. falciparum vivax, malariae*, and *ovale*, with particular emphasis on the forms prevalent in Malaya. The drawings of the Malayan parasites are original. Unlike Study No. 23, the present volume contains information on *P. ovale*, a species not known to occur in Malaya. There are also chapters on the history of microscopic diagnosis in human malaria, the parasite and the host red cell, methods of examination, and technical miscellanea.

In the Appendix is given something on the morphology of malaria parasites as damaged by quinine, mepacrine, chloroquine, amodiaquine, proguanil, pyrimethamine, and pamaquine. Malariaologists around the world will find much in the book to stimulate their continued interest in this complicated and intriguing field of research.—Harry H. Stage.

FOREST MOSQUITOES ASSOCIATED WITH SYLVAN YELLOW FEVER IN NICARAGUA. By P. Galindo and H. Trapido. *Amer. Jour. trop. Med. Hyg.* 6(1):145-152. 1957. 11 refs. The results are given of forest canopy mosquito surveys at three places in Nicaragua where there was evidence of sylvan yellow fever activity during 1952 and 1953. At these localities five species of *Haemagogus* were taken: *spgazzinii falco*, *iridicolor*, *m. mesodentatus*, *equinus*, and *anastasionis*, the last named only on the Pacific slope, and the first three only on the Caribbean slope. *H. iridicolor* is also present on the Pacific slope in small numbers, but was not in the collections made at the two fixed stations operated there. Also present and of interest as possible vectors were *Aedes leucocelaenus clarki* and *Trichoprosopon magnus* on the Caribbean side only, and *Sabethes chloropterus* on both the Caribbean and Pacific versants. On epidemiological grounds *H. equinus* appears to have been the vector on the Pacific side and *H. iridicolor* the principal vector on the Caribbean slope. The possible role of *S. chloropterus*, considered an important species in carrying virus over the dry season in Panama, could not be assessed as the Nicaraguan collections were made only in the rainy season. Also in doubt is the possible part played by *Trichoprosopon magnus*, the commonest arboreal mosquito at the Caribbean side stations, since its ability to transmit has not yet been determined. It is thought that the numbers of three species known to be vectors elsewhere, *H. spgazzinii falco*, *H. m.*

¹ Now H. L. Durkee.

² *Aedes aegypti*, *A. atropalpus*, *Culex pipiens*, *Anopheles albimanus*, *A. quadrimaculatus*, *A. freeborni*.

mesodentatus, and *A. leucocelaenus clarki* were too small for them to have been significantly involved in transmission.—Authors' summary.

MOSQUITOES ASSOCIATED WITH SYLVAN YELLOW FEVER NEAR ALMIRANTE, PANAMA. By H. Trapido and P. Galindo. Amer. Jour. trop. Med. Hyg. 6(1):114-144. 1957. 21 refs. An analysis has been made of the composition of the sylvan mosquito fauna of a well developed virgin tropical rain-forest in which yellow fever appeared in 1951. The results are based on two years of collecting mosquitoes attacking human baits on

the ground and in the forest canopy, during the daylight and evening hours. The circumstances under which yellow fever occurred are given, and the climate and microclimate of the rain-forest summarized. It is shown that in true rain-forest the vertical stratification of the sylvan mosquito fauna is much more pronounced than in open deciduous forest. The daily activity cycles of 19 species are illustrated, and an analysis made of the regularity of attack in the case of five species known or suspected as sylvan yellow fever vectors. In addition the annual abundance cycles of 19 species are given.—Authors' summary.

NOTICE OF FILM RELEASE

AN INTRODUCTION TO ARTHROPOD-BORNE ENCEPHALITIS M-237

16mm motion picture—color, sound.

17½ minutes, 629 feet, 1957.

Audience: Epidemiologists, sanitary engineers, insect and rodent control personnel and medical students.

Summary: Establishes the nature, significance, distribution extent, and known control measures for arthropod-borne encephalitis by: (1) an introduction to the disease—its definition and importance; (2) showing example cases in humans and horses; (3) the distribution of 3 types of arthropod-borne encephalitis and (4) both temporary and permanent control measures.

Available

On *Short-term loan* from: Chief, Communicable Disease Center, Public Health Service, Department of Health, Education, and Welfare, P. O. Box 185, Chamblee, Georgia.

For *Purchase*, from: United World Films, Inc., 1445 Park Avenue, New York 29, New York.