REVIEWS AND ABSTRACTS

THE EFFECTS OF KNOWN REPEATED ORAL DOSES OF CHLOROPHENOTHANE (DDT) IN MAN. W. J. Hayes, W. F. Durham, and C. Cueto, Jr. J. Amer. Med. Assoc. Vol. 162. Oct. 27, 1956. This report emanating from the Communicable Disease Center of the U. S. Public Health Service in Savannah, Georgia, concerns an experimental study of the storage and excretion of DDT in man, and the possible clinical effects of DDT given in many small daily doses. Based on the premise that DDT occurs regularly in prepared meals, and that it is stored in the fat of most persons in the general population, this research becomes of special interest to all mosquito control workers. After all, DDT continues as the predominant residual insecticide for public health use around the world. Publication of the report has been authorized by the Council on Pharmacy and Chemistry of the American Medical Association. It has therefore been reviewed critically by competent scientists and may be considered as having unusual merit.

Briefly, fifty-one volunteers were given daily oral doses of DDT at varying intervals, one-third receiving as much as 35 mg. DDT per man, per day, which, incidentally, is considered about 200 times the daily amount which an average man receives from his diet. During the study, no volunteer complained of any symptom or showed, by the tests used, any sign of illness that did not have an easily recognized cause clearly unrelated to exposure to DDT. A method for determining the concentration of DDA (bis (p-chlorophenyl) acetic acid) was also perfected. In general, the research indicates that a large safety factor is associated with DDT, as it now occurs in the general diet. Undoubtedly many readers of MOSQUITO NEWS will wish to study the data in greater detail. The reference can be obtained at almost any library, or, perhaps, a reprint can be had by writing the authors.—H. H. Stage.

AN ANATOMICAL AND HISTOLOGICAL STUDY OF THE FEMALE REPRODUCTIVE SYSTEM AND FOLLICULAR DEVELOPMENT IN *Aedes aegypti* (L.). James J. Parks, M.Sc. Thesis, Dept. of Entomol. and Econ. Zool., Univ. of Minnesota, 1955, pp. iii plus 72. This is a study of the female reproductive system and the development of the egg up to (but not including) fertilization. The results are based on dissections and sectional material. An introductory section reviews previous investigations relevant to the study and the section which follows explains in detail the methods used.

The anatomy and histology of the female reproductive system are discussed at length and illustrated by a photograph of a longitudinal section of the abdomen. The point is made that there is a flap blocking the passageway between the vagina and spermathecal duct which might interfere with artificial insemination of the female.

The histology of the ovary is described and illustrated from third and fourth instar larvae, pupae, and adults. In the adult the oocyte is within a follicle which develops for about 24 hours following emergence (27°C.) and then enters a "resting stage"; development will continue only after the mosquito has taken blood. Counts of oocyte nuclei of 6 ovaries from 3 newly emerged (teneral) females showed that there were 70 primary follicles and thus 70 ovarioles in each. This suggests a limit of 140 eggs for a single clutch of *aegypti* but as a rule less than a hundred eggs are laid.

After the mosquito has taken blood, about 60 hours are required for the development of the eggs till they are ready for laying. During this time the nucleus undergoes a fantastic development and as a result assumes the shape of a thin sheet which extends throughout the egg. The nucleus thus presents a maximum surface area to the yolk.

After the first clutch of eggs has been laid the ovary appears different which suggests that it might be possible to differentiate nulliparous and parous females by the appearance of the ovaries. —A Ralph Barr, Univ. of Kansas, Lawrence, Kansas.