ing of DDT as an anopheline larvicide are briefly described.—Author's summary.

THE EXPERIMENTAL USE OF DDT IN THE CONTROL OF THE YELLOW FEVER MOSQUITO *Aedes aegypti* (L). By W. M. Upholt, T. B. Gaines, S. W. Simmons, and E. H. Arnold (Malaria Control in War Areas, U. S. Public Health Service). Public Health Rpts. Suppl. 186:90–96. 1945.

Field and laboratory tests showed that DDT was a very satisfactory larvicide for the control of *A. aegypti*. When applied in a variety of typical *A. aegypti* breeding places, it remained effective over a period of five to six months or more. Even water removed from containers that had been treated 5 months previously and left in the open was highly toxic to insectary-reared larvae. The results were the same in metal, glass, wood, or rubber containers even in the presence of rust. (Of course no large amount of mud was present.) In the laboratory, larvae were affected much more rapidly than larvae of *Anopheles quadrimaculatus* but required a longer time to succumb. DDT at 1 ppm did not appear to prevent oviposition nor did it appear to kill eggs, but all larvae hatching from eggs deposited on treated surfaces, succumbed soon after hatching (the eggs were not removed from the treated surface). Dosages of DDT below 4 ppm did not kill pupae.—W. M. UPHOLT.

THE DEVELOPMENT AND LONGEVITY OF *Haemagogus* MOSQUITOES UNDER LABORATORY CONDITIONS. By M. Bates. Ann. Ent. Soc. Am. 40(1): 1–12. 1947.

The author has given detailed experiments which were carried on to test the effect of food and larval temperature on mosquitoes, especially *Haemagogus spegazzinii*. Studies of culture media involved different types of infusions. Results with Brewer's yeast were consistent and this was adopted as standard medium, both for raising larvae and for stimulus of eggs.

The larval development required 26 days at 20° C., 18 days at 25° C., 15 days at room temperature, and 12.5 days at 30° C. Adults from larvae kept at lower temperatures were larger and hardier than those kept at higher temperatures. Twenty degrees Centigrade was adopted as a routine temperature for raising adults. The males developed faster than the females, the increase in development speed being demonstrable from the second larval stage on.

Longevity of the *Haemagogus* mosquitoes is discussed in detail. Individual mosquitoes were kept in glass vials with a layer of moist cotton covered with filter paper on the bottom and the vial plugged with a cup of aluminum (or monel) wire screening. The best results were obtained in a relatively dry atmosphere (70 per cent relative humidity) with a constant air movement provided by an electric fan. Studies were made on the effect of temperature on *Haemagogus* adults along with the temperature effect on yellow fever virus development.

Throughout the paper, the author compares the diurnal forest mosquitoes *(Haemagogus)* with other species. The relation between the laboratory results and the habits of the mosquito in nature is discussed, together with some comment on the significance of the concept of "optimum temperature."—ABBY H. CASANGES, Beltsville, Md.

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BIOLOGICAL CHARACTERISTICS OF LABORATORY-REARED *Aedes atropalpus*. By H. L. Trembley. Jour. Ec. Ent. 40(2):244–250. 1947.

Aedes atropalpus, a species of rock-hole mosquito, has been added to that small group of mosquitoes which are autogenous. The females do not require blood meals, or, in fact, any food at all, in order to deposit viable eggs. A colony in which the females were fed only a sugar solution was reared in the laboratory for more than a year, and in its 26th generation continued with no apparent loss of vigor. A colony in which the females received only distilled water for several generations was thriving at the time the article went to press. A comparison of the life-cycles of individuals from the colony routinely offered blood and those denied blood showed no marked differences. The females of this species may be induced to bite when blood meals are offered, but subsequent oviposition results in comparatively few viable eggs. *Aedes atropalpus* may mate in small spaces, has no seasonal period of comparative inactivity, and does not exhibit a decrease in the number of females with the increase in successive generations.—Author's abstract.