24669

REVIEWS AND ABSTRACTS

LOS ANOFELINOS DE LA ISLA DE GRAN CANARIA. By J. M. Romeo Viamonte, 1946. Rev. de Sanid. e Hig. Pub. [Madrid] 20(5):449–455. (Abstract of author's summary.)

During a brief stay in the Gran Canaria [one of the Canary Islands] the author collected 96 adults of *Myzomyia hispaniola* and 23 of *M. sergenti*. Characteristics differentiating the two species are given. Although both are considered malaria carriers of little significance on the island, the author saw endemic malaria of some importance due to these species. The habits and life cycle of the two appear similar since larvae and adults of both are found in the same situations.—HELEN SOLLERS, U. S. Bureau of Entomology and Plant Quarantine. Translated by Clark Collins, Columbia University.

NOTA PREVIA SOBRE UN NUEVO MÉTODO DE LUCHA ANTILAVARIA CON EL HEXACLORURO DE BENCENO (666). By Alvaro Lozano Morales. 1946. Rev. de Sanid. e Hig. Pub. [Madrid] 20(5):456–459.

In the laboratory, benzene hexachloride was found to be toxic to larvae of *Culex pipiens, C. hortensis, Theobaldia annulata, T. longeareolata, T. fumipennis, Aedes rusticus, Anopheles maculipennis atroparvus,* and *A. claviger*. Benzene hexachloride dust, although lethal to both *Culex* and *Anopheles,* killed the latter more quickly. However, an emulsion containing 10 per cent 666 was equally effective against both.

The author feels that the two genera apparently ingest microscopic particles of this insecticide. The optimum dose per cubic meter of water was found to be 10 cc. of the emulsion for anophelines and 15 cc. for culicines. In the laboratory larvae died within a few hours, usually within one hour.

Even though the emulsion had been mixed for more than 15 days, it still retained its power to kill larvae in experimental jars. In the field, immediate effect of this emulsion was noted on the larvae, particularly those of *Culex* and *Theobaldia* of which even the pupae were killed.

In the near future, the author proposes to give more complete details concerning these experiments.—HELEN SOLLERS, U. S. Bureau of Entomology and Plant Quarantine.

INSECT MICROBIOLOGY. By E. A. Steinhaus. Comstock Publishing Co., Inc. 763 + x pp. 1946. This unique book, though its implications are wide, is of interest to all workers in the field of insect biology and control. It is an extensive account of the microbes associated with insects and acari (ticks and mites) with special reference to the biologic relationships involved. The author points out that while it is not a book on insect pathology or on medical entomology, an attempt has been made to include biologic relationships existing between pathogenic agents and their arthropod hosts and vectors as well as all those between non-pathogenic agents and insects, ticks, and mites in general.

There are 13 chapters, each dealing separately with the following subjects, extracellular bacteria and insects, specific bacteria associated with insects, intracellular bacteriumlike and rickettsialike symbiotes, rickettsiae, yeasts and insects, viruses and insects, fungi and insects, spirochetes associated with insects and ticks, protozoa and insects, protozoa and termites, immunity in insects, methods and procedures. There are 88 pages of references and an author index comprising 12 pages. The subject index deserves high praise; it consists of over 57 pages. There are nearly 270 separate references to mosquitoes in the index, e.g., *Culex tarsalis* Coq., associated with bacterium, *Pasteurella tularensis*, p. 166 and p. 168; associated with viruses, encephalitis p. 438, St. Louis encephalitis p. 438 and p. 439, western equine encephalitis p. 438 and p. 439.

Dr. Steinhaus, the author, is widely known for his excellent contributions in the field of biologic relationships existing between agents pathogenic for man, animals, and plants, as well as those between non-pathogenic microbes and their hosts. The author is to be highly commended for bringing together in systematic form this mass of hitherto practically unavailable information. Dr. Steinhaus was formerly a member of the United States Public Health Service, and is now a member of the Department of Agriculture, University of California, Division of Biological Control, Berkeley, California.—W. B. HERMS.

THE INSECTICIDE SITUATION. By F. C. Bishopp. J. Ec. Ent. 39(4):449–459, 28 refs. 1946. Due to conditions brought about by the war, it became impossible to obtain adequate supplies of copper, pyrethrum, and rotenone for the manufacture of essential insecticides. This resulted in strict allocations of these materials to meet the more pressing needs, and intensive research to find new insecticides. In this article the author directs attention to the unprecedented pace with which research in the insecticide field is pressing forward and briefly reviews the following: seed treatments, fumigants, insecticidal materials of plant origin, and synthetic organic compounds. Several insecticides, including *sabadilla, Ryania, hydroxypentamethylflavan, benzene hexachloride, DDT, TDE, methoxy analog of DDT, bromine and fluorine analogs of DDT, benzyl benzoate, sulfones,* and *synergists* are discussed in some detail.

The effects of benzene hexachloride (1, 2, 3, 4, 5, 6-hexachlorocyclohexane) upon different insects as reported by various research workers is reviewed. Attention is directed to the need of