

EDITORIAL SECTION

THE POST-WAR OUTLOOK FOR MOSQUITO CONTROL AND RELATED WORK

The "shooting war" has stopped. Millions of our fighting men will soon be home again. But many thousands of these ex-servicemen will, in the course of fighting our war for us, have become walking "culture tubes" or reservoirs of various germs; of microorganisms; viruses, and the like, which are the causative agents of malaria and of other hitherto locally unknown or long absent insect borne diseases, some of which may be transmitted from man to man by insects native to our own home-land.

Most of these diseases can not normally be passed directly from man to man. Such diseases are not "catching" in the usual sense. Association with their ex-serviceman carriers, therefore, is quite free from any danger of such contagion.

The potential insect transmitters, also, are innocuous in the absence of infected human carriers; hence the former absence of such diseases, even where appropriate insect transmitters are locally abundant.

Only when an appropriate insect transmitter has taken an infected blood-meal from a carrier, and then only after an incubation interval characteristic of the causative agent, can the disease normally be inoculated into the body of a healthy man through the "bite" of the infected insect.

Even though our returned ex-service carriers are themselves incapable of passing on to other directly, their particular insect borne infections, wherever they may go, any considerable abundance of the appropriate insect transmitters may constitute a serious local health hazard.

The magnitude of this health hazard in any locality will be determined by the numerical ratio of potential insect transmitters to returned human carriers, and of both to the local population as a whole; for it is on this basis that a normal operation of the law of probability will de-

termine how many of the potential insect transmitters will be likely to take an infected blood-meal, and how many of the resulting infected insects will be likely then to "bite" and thus introduce the causative agent of the disease into the body of a healthy member of the community.

Returned ex-service carriers will settle in almost every community throughout North America and Europe, as well as many parts of South America and other regions of the world. In this way, malaria and other insect borne diseases will be brought into localities where they have been hitherto unknown or long absent; and even in regions where the same or similar insect borne diseases are endemic, new and possibly more dangerous strains of these diseases may be introduced.

As a result, sporadic new cases arising from this source will inevitably appear in many places. Whether these sporadic new cases will develop into local epidemics with attendant cost in loss of manpower, in human suffering, and in human life, and whether any of the so introduced diseases may be able anywhere to maintain itself and thus become locally endemic, will usually depend upon the relative abundance of the appropriate insect transmitters.

To meet this situation adequately will require a tremendous, and even world-wide expansion of mosquito control and similar pest abatement work.

The saving feature in the present situation lies: (1) In the almost universal public and official knowledge of the critical importance of insect borne diseases and their control in war areas; (2) In the fact that most returning service men also, have had knowledge of the benefits from insect control practice; and (3) In the fact that many hundreds of service men have had practical training and experience in

the suppression of mosquito carriers of malaria, and of other insect carriers of disease.

While malaria control has monopolized a great part of public and official attention since World War II began, and while introduced malaria will constitute a large part of the immediate nation-wide, and even world-wide post-war hazard, still other insect borne diseases will complicate the problem of meeting this general post-war menace.

Mosquito abatement commissions will shortly be charged with responsibility not only for control of malaria or of pest mosquitoes as the case may be, but, according to local need, also for control of mosquito-borne encephalitis, of flea-borne plague, of tick-borne spotted fever, and the like. Other pest control problems that require community action may also be added from time to time; a further respon-

sibility which should be welcomed by such public agencies.

With a generally recognized health hazard; with a favorably conditioned public opinion; with a leaven of returned service men who will not have to be "sold" the idea of insect borne disease control; and with a reservoir of experienced men trained to do efficient control work; only energetic leadership should be required to bring about an expansion of mosquito control and related work, the like of which has never before been known.

Where such leadership is met by a tardy official response, as it well may be sometimes, the American Mosquito Control Association and MOSQUITO NEWS may be able to lend helpful support through information relating to existing legislation, and to the steps which should be taken first initiating a sound community program for control of mosquitoes and related pests.

REVIEWS AND ABSTRACTS

A MANUAL OF TROPICAL MEDICINE. By Mackie, Thomas T., Hunter, George W. III. and Worth, C. Brooke; XIX + 727 pp., 287 illustrations, 6 in color. \$6.00. Published by W. B. Saunders Company, Philadelphia and London, 1944.

This volume is one of a series developed under the auspices of the Division of Medical Sciences of the National Research Council. In the Preface there are these two significant statements: "The importance of insects and other arthropods as reservoir hosts, intermediate hosts and vectors of many important tropical diseases has led us to devote considerable space to Medical Entomology. This has been done advisedly since few physicians have been trained in this field.

Section X, Medically Important Arthropods, comprises 142 pages, nearly one-fifth of the volume. In addition each chapter dealing with an arthropod borne disease contains further entomological information, frequently a repetition in different form of the material in Section X, however, fully justifiable for epidemiological and prophylactic reasons. In this Manual, as in others in the same field, there is the obvious segregation of entomology as something separate and apart in spite of the statements quoted above. There is not yet the wholehearted cooperation in matters

pertaining to epidemiology, experimentation, and prophylaxis. Insect surveys and the use of insecticides typify the province of the entomologist. The entomologist perhaps has not yet earned the full confidence of his medical associates—certainly very few deserve being classed as medical entomologists. Surely those who contributed the section on "Medically Important Arthropods" made an excellent contribution adding much to the value of the Manual. According to the acknowledgments much of the section on Medical Entomology was contributed by Major Gordon E. Davis, Sn. C., and Captain Luther S. West, Sn. C., both capable scientists.

Section X begins with an excellent exposition of the role of arthropods as vectors of disease and a valuable table (Table 49) of human diseases so transmitted. This table is divided into the following parts: (1) Helminthic Diseases, (2) Protozoal Diseases, (3) Spirochaetal Diseases, (4) Bacterial Diseases, (5) Rickettsial Diseases, (6) Virus Diseases, (7) Miscellaneous, such as enteric diseases transmitted by houseflies; also human bots. Then follow two other tables: Table 50, Envenomization (including Allergies) and Table 51, Dermatoses of Arthropod Origin. These tables are excellently set up and very useable. For each disease the