

## REVIEWS AND ABSTRACTS

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WORLD ERADICATION OF INFECTIOUS DISEASES. By E. Harold Hinman. A Monograph in AMERICAN LECTURES IN LIVING CHEMISTRY, edited by I. N. Kugelmass. Charles C Thomas, Publisher. Springfield, Illinois. 1966. Pp. xv+223. Price \$8.50.

According to the author's Introduction, this book "... is directed more to the Public Health Officials and Administrators who will be responsible to make top level decisions whether eradication is economically feasible rather than to the technical personnel who will be responsible for execution of such programs." Nevertheless technical personnel will find the volume both informative and stimulating.

A brief initial chapter introducing plagues affecting mankind is followed by a chapter on the eradication of animal diseases. Three chapters are then devoted to evolving patterns of control of infectious diseases of man (with especial reference to malaria), and to the evolution and philosophy of the eradication concept. Chapters 6, 7 and 8 specifically treat the eradication of malaria, major problems affecting its accomplishment, and the present (1964-1965) status of global malaria eradication. Efforts toward eradication of yellow fever are described in Chapter 9. In all, malaria eradication receives exclusive attention in 73 pages, and yellow fever in 18 pages. Additionally, both diseases are cited frequently in discussions of the philosophy and evolution of the eradication concept.

Smallpox, yaws, syphilis and tuberculosis are covered in Chapters 10-13, inclusive. Chapter 14 briefly discusses eradication possibilities of miscellaneous infections (poliomyelitis, measles, trachoma, pinta, epidemic and murine typhus, bubonic plague, hookworm disease, schistosomiasis and onchocerciasis).

The last two chapters present the author's criteria for selection of human diseases for eradication and his assessment of prospects for achievement of global eradication.

With many members technically involved or deeply interested in the execution of programs for eradication of malaria and the urban vector of yellow fever, the A.M.C.A. has historically, through its meetings and MOSQUITO NEWS, provided a forum for discussions of the eradication concept. Soper (Mosquito News 18(2):53-58, June, 1958) forcefully outlined the challenge, with "damm-the-mosquitoes-and-full-speed-ahead" enthusiasm. Gray (Mosquito News 20(1):14-23, March, 1960) expressed some "let's-take-another-look" reservations on methodology, evidently shared by many administrators and at least a few technicians. Dr. Hinman's views on malaria, *Aedes aegypti*, smallpox and yaws eradication programs are clearly stated in his Introduction: "The volume represents

the author's 'Pledge of Faith' in the philosophy of eradication as a one time major capital expenditure in lieu of the recurring annual effort from control programs." His speculations on selection of other problem diseases for global eradication are more cautious.

The public health specialists, the physician, and the professional biologist will welcome this book for the technical information which it summarizes in well-digested form. All responsible citizens in an ever-shrinking world will find it provocative and informative. It may give a timely nudge to those collectively determining the conscience of our society at national and global levels so that history may one day note, as reported by Soper for the eradication of *Anopheles gambiae* in Brazil (Mosquito News 26(4):470-476, December, 1966): "Not the certainty of winning but the cost of failure was the stimulus to action."—Donald J. Pletsch, National Communicable Disease Center, U.S.P.H.S.

ADVANCES IN PEST CONTROL RESEARCH, VOLUME 6, Edited by R. L. Metcalf, Interscience Publishers, a division of John Wiley & Sons, New York. London. Sydney, 1965, 289 pages, Cloth Hardback, 9" x 6", \$11.00.

Contents: Behavior and fate of chlorinated aliphatic acids in soils, by P. C. Kearney, C. I. Harris, D. D. Kaufman, and T. J. Sheets; Penetration and translocation of Rogor applied to plants, by P. de Pietri-Tonelli; Correlation between biological activity and molecular structure of the cyclodiene insecticides, by S. B. Soloway; Natural models for plant chemotherapy, by A. E. Dimond; Genetic studies on insecticide resistance, by G. P. Georghiou; and Nicotinoids as insecticides, by Izuru Yamamoto.

Several of the chapters in this volume are of interest to personnel engaged in mosquito control and other vectors of public health importance.

One of the techniques in mosquito control involves the application of herbicides to keep waters open for better utilization of insecticides. Although much has been published about the fate of insecticides in soils, relatively little information has been available to mosquito control workers on the fate of other pesticides, such as weed control agents.

The chapter on the "Behavior and fate of chlorinated aliphatic acids in soils," presents a rather comprehensive look at this group of pesticides. Information on persistence, degradation, effect on soil microorganisms and other pertinent data are presented for monuron, diuron, CIPC, dalapon, and TCA.

An excellent scholarly presentation on molecular structure of the cyclodiene insecticides is given in the chapter by S. B. Soloway. Although re-

sistance and residue problems have precluded use of this class of compounds in some areas engaged in mosquito control, interest in this group continues with other mosquito control workers.

The chapter, "Genetic studies on insecticide resistance," is liberally sprinkled with illustrations of resistance problems in mosquitoes. An understanding of the manner in which resistance problems may arise can be gained from reading this.

The "Nicotinoids as insecticides," is of interest as a group of potentially useful compounds especially, since there are prospects of increasing insecticide resistance to presently used materials in mosquito control.

This Volume VI would be a useful addition to the reference shelves of mosquito control and other vector control agencies.—L. L. Lewallen, California State Department of Public Health, Bureau of Vector Control, Fresno 93727.

**PLAGUE AND PLAGUE CONTROL IN THE SOVIET UNION.** By Robert Pollitzer. Fordham University, Institute of Contemporary Russian Studies, Bronx, N.Y. 1966. 478 pp. Price \$5.

An account of plague and plague control in the Soviet Union is of special interest to plague workers in the United States since many of the ecologic and epidemiologic situations are similar. Certain developing countries in Africa, South America, etc., also can derive much benefit by a close study of plague control methods in the Soviet Union. Dr. Pollitzer has given English-speaking plague workers the opportunity to understand Soviet anti-plague work originally in his *Selected Abstracts from Soviet Biomedical Journals*, and now in a synthesis of papers on plague.

Chapter I reviews the geographical distribution and recent incidence of plague. The infection apparently continues to exist in the Trans-Ural and Central Asian desert foci, in Armenia, and two other areas. It has been eliminated in the Stalingrad and Rostov areas and in Stavropol. Chapter II discusses treatment. In treatment and prophylaxis, both chemotherapeutics and immunization are used. Although, as practiced abroad, antibiotics such as streptomycin are the drugs of choice, the older sulfonamides are still used. Chapter III on immunization indicates that the killed vaccine was abandoned and that a search for avirulent strains is being made to replace the live EV vaccine. Chapter IV on plague control mentions the spectacular large-scale campaigns

made to eradicate wild rodent hosts of the infection over periods of up to 10 years. In more recent years some emphasis has been placed upon the eradication of so-called "elementary" foci of the infection. Combined flea and rodent control is now favored. The volume ends with a useful bibliography of 714 citations. There are numerous typographical errors, but the type is easy to read and, generally, this is a distinct contribution to the international exchange of scientific information the value of which outweighs any shortcomings.—Leo Kartman, C.D.C., U.S.P.H.S., San Francisco, Calif. 94118

**ADVANCES IN PEST CONTROL RESEARCH, VOLUME 7, INSECT CHEMOSTERILANTS.** Edited by R. L. Metcalf; compiled and written by A. B. Borkovec, Interscience Publishers, a division of John Wiley & Sons, New York. London. Sydney, 1966, 143 pages, Cloth Hardback, 9" x 6", \$6.95.

Interest in the prospects of applying the chemosterilant technique to insect pests has received increased impetus with the growing list of species that are becoming resistant to conventional insecticides. Although this concept has enjoyed some successful applications, it has limitations that become apparent upon examination of research findings of various workers. Evaluation of safety problems involved in application of these materials still remains one of the big questions.

The theory of the insect-sterility control method is very well presented and illustrated with models. The chemistry of insect sterilants is discussed in detail. Liberal use of structural formulae helps to gain a picture of the diversity of this group.

The chapter on physiological effects is rather scanty, but this is primarily due to the fact that little work has been done in this area.

The section on testing and practical application brings out dosage-response relationships, specificity, competitiveness between sterilized and normal populations, and resistance implications.

A handy appendix listing materials tested and organisms tested, and a very comprehensive reference list completes this work.

Recent information on the status of the application of this technique can be gained from this compendium. Workers in mosquito and other vector control activities should find it of interest in relation to chemical control problems.—L. L. Lewallen, California State Department of Public Health, Bureau of Vector Control, Fresno 93727.