

BOOK REVIEWS

MOSQUITOES, MALARIA AND MAN: A HISTORY OF THE HOSTILITIES SINCE 1880. BY Gordon Harrison. 1978. E.P. Dutton, New York. 314 pp. \$15.00.

Detective stories are not the usual fare for medical entomologists, but Harrison has provided such in his fascinating book: *Malaria, Mosquitoes and Man*. A good detective book has short, fast-moving chapters, each leaving one in suspense and with the feeling that some solutions will be forthcoming in the next chapter, yet knowing that the final unraveling will not occur until the end. The best part of Harrison's book is that the intrigue, the challenges, the disappointments of wrong solutions, and the successes are all real. Harrison has gleaned through much published literature and especially personal notes and letters in order to provide his historical documentation. At the same time he has given his personal interpretations to many of the events which he describes.

Medical entomologists know that Ronald Ross was given credit for having proved that a mosquito is the vector of the malaria parasite—he received a Nobel prize for his efforts. Yet it may not be generally realized that Ross never did make this determination for human malaria. He tried, but had to be satisfied with bird malaria and *Culex* mosquitoes. Ross did make the correct interpretation for *Anopheles* as the vector for human malaria. Also, Ross, though a medical doctor and not an entomologist, was one of the first persons to attempt malaria control by means of mosquito control, with emphasis on *Anopheles*.

Hindsight is fine—Harrison describes many efforts in different parts of the world to control or to eradicate malaria, and he interprets philosophically what may have gone wrong when programs did not succeed, or what went right when success was achieved. His analysis is especially cogent relative to eradication efforts towards an insect imported into a foreign area, as for example *Anopheles gambiae* into South America.

Harrison's interpretations of the world malaria eradication program first by a Commission of the League of Nations and later by WHO, AID and others, provide some of the most lucid opinions of what should or should not have been done in this program, and

should therefore be a *must* reading for anyone seriously concerned with mosquito and malaria control. The failure of politicians and the general public to continue to support vector control programs once the problems have been appreciably diminished is clearly presented, especially in the chapter entitled "Relapse." The tremendous resurgence of malaria in recent years has been caused to a much greater extent by public apathy and misunderstanding than by mosquito resistance to insecticides, although that has been important. This same problem has occurred recently in California's mosquito control programs. When the public voted for Proposition 13 to cut taxes, it resulted in a great reduction or even virtual destruction of effective programs.

It obviously was not possible for Harrison to review or present all the literature on malaria. Several minor omissions included the work of W. B. Herms in California which represented some of the first efforts in malaria control in the United States. Also, the U.S. Armed Forces malaria control units in the South Pacific in at least certain cases achieved complete protection for troops and close to eradication from native populations within a period of 2 or 3 years of effort, this in some of the most highly malarious areas of the world. Had these programs been continued, it is probable that permanent eradication of the parasite would have been obtained on some of the islands. As Harrison states, however, re-introductions from uncontrolled areas could nullify the gains within a very short time.

Harrison has provided an interesting history of malaria and efforts to control and eradicate it, and at the same time has presented philosophies which should be reviewed by everyone engaged in mosquito and malaria control programs.—W. Donald Murray, Delta Vector Control District, 1737 West Houston Avenue, Visalia, CA 93291.

MICROBIAL CONTROL OF PESTS AND PLANT DISEASES 1970–1980, edited by H. D. Burges. 1981. Academic Press Inc., London and New York. 949 pp. \$99.50.

The publication of "Microbial Control of Pests and Plant Diseases 1970–1980" within a