BOOK REVIEWS

INTEGRATED MOSQUITO CONTROL METHODOLOGIES Volume 1, edited by M. Laird and J. W. Miles. Academic Press (London). 1983. 388 pp. US$56.00, 34 British pounds.

As stated in the Preface, this book is the first of two volumes and is subtitled "Volume 1. Experience and components from conventional chemical control." The promised second volume will deal with "innovative" approaches to mosquito control. The editors state (p. x) that they "consider *integrated mosquito control methodologies* as comprising chemical, biological and environmental procedures used conjointly or sequentially against the background of an exhaustive ecological understanding of the selected target pest or vector so as to maximize efficacy, and be fully acceptable from health and environmental standpoints." Therefore, it is strange that the two volumes divide the subject into chemical and so-called "innovative" approaches.

Volume 1 is comprised of 15 chapters each by different authors with the usual unevenness that is common in edited works. There is an appendix presenting the WHO program for evaluating and testing new insecticides. A 2-page glossary of abbreviations includes a miscellaneous list, the rationale for which is hard to discern. One interesting one is IPM = *Insect* Pest Management which even one of the editors (Laird) uses properly in the Introduction (p. 2) as *Integrated* Pest Management. Laird, however, uses the term in stating that he thinks IPM is "inapplicable" to medical and veterinary entomology primarily because an extremely high level (99%) control is claimed to be needed. There have been contrary views and examples of the management approach in medical and veterinary entomology, however, but those are not presented. Some of the chapters by contributors to this book discuss programs comprising management methods and include the hope that the mosquito control programs put in place will continue to *maintain* a respectable, although less than desired, level of mosquito control (for example 80% in Rangoon—Chapter 11).

The brief history of mosquito control in the Introduction (Laird) is pleasant reading. Chapter 1 (Akesson) on principles of insecticide dispersal is quite detailed but surprisingly has only 7 references among which is *not* the recent bulletin issued by the AMCA (and authored by Akesson!). Chapter 2 (Pant) on space sprays is a concise summary with a "modest" list of references. Chapter 3 (Fontaine) on residual insecticides is quite detailed and with an extensive list of references. It is surprising, in view of the book title, that there is no chapter on using insecticides as larvicides.

Chapter 4 (Luh and Zhu) presents a very informative discussion on mosquito control in the People's Republic of China. Chapter 5 (Kurihara) reviews mosquito control in Japan (except Hokkaido which is discussed in Chapter 6 (Hatori). A review of chemical control in the southwest Pacific region is given in Chapter 7 (Sweeney).

Chapter 8 is the most comprehensive one being a review of mosquito resistance to insecticides by A. W. A. Brown. It is thorough, well written, and documented with 11 pages of references! It easily can be considered the most valuable chapter in the book. It is, therefore, a shock to next encounter Chapter 9 (Jukes) on "DDT-retrospective comments." A balanced scientific review of DDT would have been useful but Chapter 9 is not that. The views of "anti-DDT" extremists of yesterday are presented and refuted in an extreme manner even to the extent of implying that there is no such thing as biological magnification of pesticides in a food chain.

The next part of the book is subtitled "Problem Solving Under WHO Leadership" and contains Chapter 10 (Mathis) on larval *Aedes aegypti* control in Bangkok, Chapter 11 (Mathis) on *Culex quinquefasciatus* control in Burma, Chapter 12 (Shaw) on *Anopheles aconitus* control in Indonesia and Chapter 13 (Rishikesh) on field trials of residual insecticides in Nigeria. These chapters bring together facets of the WHO programs in a useful way which helps to show the complexities and problems in organizing and managing mosquito control activities. From these chapters one learns about the scientific approaches while getting a feel for the socio-political and management problems (often by implication and not precisely stated).

The final two chapters deal with problems in commercial development of insecticides for mosquito control using the examples of fenitrothion (Chapter 14, Hattori) and bendiocarb (Chapter 15, Goose). The shortage of new insecticides and the increasing costs of development for the narrow market of mosquito control is a growing concern and threatens the future of integrated mosquito control.

Although the chapters in this book vary greatly in quality and scope, there is a wealth of useful information. It is, however, information on specific aspects of chemical control and not a balanced presentation on the use of chemicals in an integrated approach to mosquito control as one might assume from the title. Libraries should have a copy of this book and the companion volume. As is so often the case these days with edited books, the price of $56.00 (for volume 1) in relation to the content makes it difficult to recommend for the individual to purchase. The book is hardbound with high quality paper and printing. Why can't books of this type be issued in a lower priced edition on less expensive paper and with soft binding for the individual to purchase?—R. C. Axtell, Department of Entomology, North Carolina State University, Raleigh, NC 27650.

ANNUAL REVIEW OF ENTOMOLOGY. Volume 29, 1984. Thomas E. Mittler, Editor. Annual Reviews, Inc. Palo Alto, CA 94306. 521 pp. $27.00 USA, $30.00 elsewhere.

In Volume 29 of the Annual Review there are 20 articles dealing with a variety of subjects with some emphasis on ecology and IPM. Of especial interest to readers of *Mosquito News* is a paper by R. A. Wirtz, "Allergic and Toxic Reactions to Non-stinging Ar-