

tion, however, whether this great skill has commensurate clinical applications. Even the authors of this authoritative and comprehensive volume observe that "in the last analysis, treatment of arrhythmias with present available methods is either symptomatic or at best represents the first attempts to modify in an experimental way an unknown deviation of an unknown biological process."

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An Illustrated Catalogue of the Rothschild Collection of Fleas (Siphonaptera) in the British Museum (Natural History). With keys and short descriptions for the identification of families, genera, species, and subspecies of the order. Vol. II, *Coptosyllidae*, *Vermipsyllidae*, *Stephanocircidae*, *Macropsyllidae*, *Ischnopsyllidae*, *Hypsophthalmidae* and *Xiphopsyllidae*. G. H. E. Hopkins and Miriam Rothschild. British Museum (Natural History), London, 1956. xi + 445 pp. Illus. £6, 6s.

In 1953 medical entomologists in general and flea workers in particular were delighted with the appearance of the first volume of *An Illustrated Catalogue of the Rothschild Collection of Fleas* by G. H. E. Hopkins and Miriam Rothschild. This auspicious beginning was in effect a monograph of the superfamily Pulicoidea and also outlined a general classification of the Siphonaptera as understood by Karl Jordan of the British Museum (Natural History) at Tring. In the present work Hopkins and Rothschild have not only met their own high standards but have improved upon them.

A readable and at times amusing introduction outlines the plan of the volume and the terminology of types, geographic localities and host names. It also informs the reader that there are now nearly 1500 described species and subspecies of fleas, an increase of about 150 in less than 3 years. Ten new names appear in the list of genera and subgenera of the world, and in an appendix a new genus is described.

An increased and exhaustively illustrated glossary of terms is a boon to specialist and nonspecialist alike. I remember only too well how difficult it was in the past for a beginner to absorb and reconcile the numerous and various morphological terms applied to fleas. The key to superfamilies and families of fleas is a definite improvement over that found in the first volume, with illustrations of each point that might be misinterpreted. Even beginning students should have a minimum of trouble with it.

Volume II gives monographic treatment of some of the most interesting

families of Siphonaptera, including the bat fleas and the helmeted fleas of Australia and South America. Descriptions of genera and higher groups, workable keys to all categories, and descriptions of all the species described in the families treated are to be found. Records of specimens in the Rothschild collection are included in each species discussion. Key characters of all species are illustrated.

Most of the illustrations are very good, and all are adequate, although they are not uniform, since many were taken from different sources in the literature. The authors were forced to depend on reproduction of rather sketchy figures in a few instances. The beautiful drawings executed by F. G. A. M. Smit and Arthur Smith for this book deserve particular mention. As in volume I, photographs of fleas by A. E. L. Barron are included and again demonstrate that, properly used, good photographs sometimes illustrate more adequately than line drawings.

Volume II appears to contain a minimum of typographic and other errors, but the poltergeist who plagues editors and proofreaders caused "Macropsyllidae" to be omitted from the list of families printed on the title page.

This volume and volume I are indispensable for serious work on fleas and, because of the complete and clear treatment of their respective subjects, should be placed in the library of every institution in which medical entomology is studied or taught. Research workers, teachers, and students may all rest assured that the information contained in the "catalogue" is accurate and the classification used is not likely to undergo major change for some time to come.

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Elements d'Immunologie Générale. P. Gastinel, R. Fasquelle, P. Barbier. Masson, Paris, 1955. 335 pp. Illus. F. 2000.

This book is a readable account of the general principles of immunology and resistance to infectious disease. Presumably the book is intended primarily for medical students. The 12 chapters include consideration of the properties of plasma proteins, of antigens and antibodies, and of the antigen-antibody reaction. The latter half of the book deals with the more biological aspects of inflammation, hypersensitivity, and immunity to disease.

Certain "chapters," particularly those dealing with the chemical properties of antigens and antibodies, contain a good many factual errors. Thus, the treatment of pneumococcus polysaccharides is poor.

Although references to English and American papers are reasonably complete, very little effort was made to spell the authors' names correctly. Finally, certain important new developments in immunology are barely touched upon. Thus, the use of isotope- or fluorescein-labeled antigens and antibodies is barely mentioned. Almost nothing is said about antigen-antibody reactions in gels, despite the fact that this work was initiated in France. The cell types and sites involved in antibody formation and the effects of irradiation are incompletely covered.

The scope and general treatment of the subject are not very different from other recent books on immunology. The chief value for American readers will be the fairly complete references to the work of French immunologists.

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Books Reviewed in

The Scientific Monthly, September

A Short History of Medicine, E. H. Ackerknecht (Ronald). Reviewed by J. T. Velardo.

Sir William Petty, E. Strauss (Free Press). Reviewed by M. C. Moos.

Hastening Childbirth without Pain, P. A. Beloshapko and A. M. Foi (State Publishing House of Medical Literature, Moscow, U.S.S.R.). Reviewed by S. A. Corson.

Man and Energy, A. R. Ubbelohde (George Braziller). Reviewed by J. L. Magee.

The Hopi Indians, H. C. James (Caxton). Reviewed by R. Anderson.

New Books

Man and the Waters of the Upper Ohio Basin. A symposium held at Linesville, Pa., under the joint auspices of the Pymatuning Laboratory of Field Biology, Department of Biological Sciences, the College, and the Department of Public Health Practice, the Graduate School of Public Health, University of Pittsburgh. Special Publ. No. 1, Pymatuning Laboratory of Field Biology, Pittsburgh, Pa., 1956. 100 pp.

Engineering Mechanics. S. Timoshenko and D. H. Young. McGraw-Hill, New York, ed. 4, 1956. 546 pp. \$7.50.

Musical Acoustics. Charles A. Culver. McGraw-Hill, New York, ed. 4, 1956. 305 pp. \$6.

Gaseous Nebulae. vol. 3 of *The International Astrophysics Series*. L. H. Aller. Wiley, New York, 1956. 322 pp. \$11.

Principles and Methods of Sterilization. John J. Perkins. Thomas, Springfield, Ill., 1956. 340 pp. \$8.

Anxiety and Magic Thinking. Charles Odier. Translated by Marie-Louise Scholli and Mary Jane Sherfey. International Universities Press, New York, 1956. 302 pp. \$5.