

# Book Reviews

All unsigned reviews were made by the Editor.

## Zoology

THE GOLDEN BOOKSHELF OF NATURAL HISTORY, MAMMALS, Donald F. Hoffmeister, 104 pp., \$3.95, Golden Press, New York, 1963.

This is the most recent entry into an excellent series of natural history reference books. Other titles include Birds, Fishes, Flower, Insects, Life of the Past, Natural History of Man, Reptiles and Amphibians, Rocks and Minerals, Stars and Plants, etc.

A first impression is that the book will be particularly useful as a valuable reference text for students at the upper elementary and secondary school level. Careful analysis of this excellent book revealed the following: A review of the major common characteristics of mammals (hair and fur, special glands, skeleton, teeth, reproduction, brain, hibernation, etc.); geographic location and distribution of mammals throughout the world; major groups of mammals with a family tree, on an evolutionary based chart, that clearly presents representative members of all large groupings, i.e., monotremes, marsupials, and placentals.

A particularly impressive grouping lists the principal orders of placental mammals, giving their distinctive features and common examples. In this chart, page 22, those mammals at the top of the list are the least specialized in anatomy, whereas those at the bottom are the most advanced. It is noteworthy to mention that the primates, most specialized in the development of the hands and the brain, are closer to the top of the chart.

The most extensive treatment of the book is an alphabetical arrangement of mammals; each section includes common and interesting types for the reader's consideration. Included also by the author and illustrators are scientific and common names, and basic scientific data of interest to students desiring to increase their knowledge about mammals.

Illustrations are pleasantly spaced, accurate, and colorful in scientific detail. The use of extensive color and appropriate illustrations pertaining to the sections presented make this unusual book on mammals a must for school and library reference sections.

In summary: an excellent book for the student at any level—especially appropriate for the junior high and high school learner who wishes to broaden his understanding about the more than 15,000 kinds of mammals living everywhere

in the world from open seas to deserts.

Stanley B. Brown  
School of Education  
Indiana University

BATS, Glover Morrill Allen, 368 pp., \$2.00, Dover Publications, Inc., New York, 1962.

With an increased interest in and study of bats in North America, it seems highly appropriate that this book should be reproduced. The publishers should be congratulated on republishing this important book.

It is important that this book be reprinted because it still is the only real source of general information under one cover on bats. Much of the data in the 21 chapters is still current. A considerable amount of research has been done in the 25 years since the book was first published, yet the chapters on migration, hibernation, enemies, parasites, and geographic distribution of bats are remarkably accurate.

If the chapter on disease were to be brought up-to-date the chapter would be considerably enlarged as much has been learned recently on this topic. Many investigations are being pursued in the whole area of bat diseases.

The chapter, "Wings in the Dark," is quite out of date. In fact, this chapter questions the work of Spallanzani who first worked with bats (1794) to try to determine how they found their way in the dark. He concluded, after careful experiments that they found their way by hearing the echo vibrating from a group of silk threads stretched across a room. Rollinat, Trouessart, Hahn and others, as reported in Allen's book, after experimenting, could not accept Spallanzani's experiments and abandoned his ideas. Recent experiments by D. R. Griffin have shown Spallanzani's original thesis to be correct and this is the accepted theory today.

Although nonglossy paper was used in the Dover publication, the 57 illustrations reproduced remarkably well and add much to the text.

In spite of these minor criticisms, the book has a real place on the bookshelf of the professional, the high school teacher, and the lay person. It is well written, with a minimum of scientific jargon.

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INTRODUCTION TO HERPETOLOGY, Coleman J. and Olive B. Goin, 341 pp., \$8.00, W. H. Freeman and Company, San Francisco 4, California, 1962.

The doctors Goin are to be complimented on

this very well-written and informative book. The text is arranged so that the material may be presented formally as the basis of a course in herpetology, but a thorough index and good sectional arrangement also allows its use for reference. Many of the sections also make excellent reading on their own, and the emphasis on biological phenomena throughout is noteworthy.

Frank N. Young  
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THE LIFE STORY OF FISH, HIS MANNERS AND MORALS, Brian Curtis, 284 pp., \$1.50, Dover Publications, Inc., New York 14, 1961.

This edition represents a complete revision of the original book. In covering the life history of the fish, numerous factors are presented that are not readily available from a single reference. Of special interest are sections on the senses, with extensive discussions on sight, sound, and smell. Also included among the many interesting chapters are discussions on the air bladder, trout and salmon, fish and fisherman, to mention a few. Numerous line sketches are included as helpful illustrations. This book is highly recommended for the high school biology classroom and library, as well as valuable reading for the college biologist.

William M. Smith  
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REARING INSECTS IN SCHOOLS, R. E. Siverly, 113 pp., \$2.75, Wm. C. Brown Company Publishers, Dubuque, Iowa, 1962.

The scarcity of books in science for elementary teachers is rather well known. However, in this book the author attempts to give a book of substance for elementary science teachers in a subject which they can easily grasp and carry out in school demonstrations and project work. Because the book has substance, it is also quite a pertinent book for secondary school biology teachers. The author, as the title indicates, takes up chapter by chapter the directions and materials needed for rearing certain very common insects in an indoors environment. The directions are clearly stated, and the equipment needed is very modest. The insects include mosquitoes, crickets, grasshoppers, ants, cockroaches, houseflies, meal worms, and milkweed bugs. A final chapter takes up the instructions for rearing other miscellaneous insects which can easily be obtained by the elementary or secondary school science teacher.

Critically, one must note the poor quality of illustrations. While there are many of them, the contrast and detail is lacking in quite a few

of the photographs. Further, the diagrams do not give as much detail as needed. However, this book is a most useful one and highly recommended for purchase for elementary and secondary school teaching.

LABORATORY DIRECTIONS FOR INVERTEBRATE ZOOLOGY, Tyler A. Woolley, 140 pp., \$4.00, Burgess Publishing Company, Minneapolis, 15, Minnesota, 1963.

A very good laboratory guide with rather extensive coverage of invertebrate zoology. Many questions and demonstrations will be rewarding for the curious student. Most of the demonstrations are designed to instigate provocative thinking on taxonomy, anatomy, physiology, phylogeny, and development. The exercises are constructed so that the student has a wide latitude of activity. The demonstrations are designed to be stimulating to the student and are followed with thought provoking questions.

Highly recommended for college level work and would be a very good teacher reference for an advanced biology or zoology class on the secondary level.

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ICHTHYOLOGY, THE STUDY OF FISHES, F. F. Lagler, John E. Bardach, R. R. Miller, 545 pp., \$12.50, John Wiley and Sons, Inc., New York 16, 1962.

This is the kind of reference which all biology teachers will wish to have. It is complete, up-to-date, authoritative, well illustrated, and well written—the first of its kind in many years. The scope of the treatment is broad, with classification, anatomy, metabolism, reproduction, integration, genetics and evolution, and ecology. There are many references to recent monographs in this field, pointing out many interesting new theories and ideas. To the amateur ichthyologist it may come as a surprise to learn of the many metabolic studies which have been made of fish. In other words, there is more to this subject than fishing, identification, and natural history.

A superlative reference book for all general biologists.

MEDICAL ENTOMOLOGY LABORATORY GUIDE, Donald M. Allred, 71 pp., \$3.50, Burgess Publishing Company, Minneapolis 15, Minnesota, 1963.

This is a concise, but not comprehensive, manual which should be useful in an introductory course in medical entomology. The illustrated keys will be helpful in orienting the