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they worth such attention? Well, arachnids have successfully endured for millions of years—while we latecomers are still trying to find our niche in the scheme.

Mary B. Gadd
Colorado College
Colorado Springs

LABORATORY ANATOMY OF THE RABBIT, by Charles A. McLaughlin. 1970. Wm. C. Brown Co., Dubuque, Iowa. 111 pp. \$2.50.

This manual is a welcome addition to the "Booth Laboratory Anatomy" series. Because of new regulations concerning the procurement of animals for research, the rabbit may be brought back as a primary subject for the study of mammalian and comparative vertebrate anatomy.

The book is well written and the clear drawings are of good quality. It systematically presents the skeletal, muscular, digestive, respiratory, and circulatory systems, the urinary and reproductive organs, the nervous system, and the special sense organs. The beginning student will greatly benefit from this guide. The only chapter that might be improved is the one on the muscular system: it lacks a guideline for the dissection of the various muscles. There is no educational value in forcing the student to dissect and understand the morphology of a muscle by providing him with a drawing. The

derivation of muscle function from origin-insertion data is oversimplified and often erroneous. I hope that no teacher will force the student to memorize origin-insertion-function of all the muscles listed. It is a waste of time, and current research in muscle function has proved that the origin-insertion approach to determine function incorporates numerous pitfalls. An accurate description of the shape of the muscles, the fiber arrangement, the tendons, the physiologic cross-section, and the leverage systems would be a far better approach.

This laboratory manual is highly recommended for beginning students. Researchers working with the rabbit as an experimental animal may also benefit from this book, although it contains no regional anatomy.

Karel F. Liem
University of Illinois Medical Center
and
Field Museum of Natural History
Chicago

THE NATURE OF ANIMALS, by Lorus and Margery Milne. 1969. J. B. Lippincott Co., Philadelphia. 255 pp. \$5.95.

This book is about animals—hundreds of kinds of animals: how they developed, how they live, and how they relate to other organisms. The Milnes combine a tremendous fund of knowledge about the biologic world with great skill in organizing this knowledge to illustrate general themes; and they

present the whole in a highly readable fashion. Although the contents are very different, this book gave me much of the kind of pleasure I found in the books of Marston Bates and of Archie Carr.

Organizing themes include sizes and shapes, how animals live, how animals reproduce, how they inherit, the balance of nature, and the spread of animal life. Ecology, genetics, biochemistry, paleontology—all these and more are included. But instead of the largely encyclopedic compendium of facts that appears so often in zoology books, in this volume the facts are used to illustrate broad ideas in such a way that both the facts and the ideas make sense. The culminating chapter, "Animals and Mankind," is particularly timely in a society that is just discovering what ecology is all about.

The volume can be highly recommended for a wide audience. For the biology student, the book should dispel any notion of a close association between biology and the stultifying odor of formaldehyde. For the general reader, the world will become more interesting and many familiar organisms will be seen in new perspectives. And for the teacher of biology, the volume may provide a better insight into some of the concepts he is teaching and will certainly enlarge the fund of illustrations he draws on to make these concepts more meaningful to students.

Hulda Grobman
New York University
New York City

AN ILLUSTRATED LABORATORY TEXT IN ZOOLOGY, by Richard A. Boolootian and Donald Heyneman. 2nd ed, 1969. Holt, Rinehart, and Winston, Inc., New York. 262 pp. \$5.95 (softback).

The authors present the reader with 20 chapters: 13 on the usual animal phyla (3 on Chordata) and a chapter each on microscopy, classification, cytology and histology, cell division, embryology, genetics, animal behavior, and ecology. The major feature distinguishing the second edition from the first and from other lab manuals is the extensive use of photographs along with line drawings to illustrate microscope slides and dissections. In most cases the photographs are superior to the line drawings, and should be a valuable aid to the student.

The major criticism of the manual has to do with the actual instructions for laboratory work. Too much detail is left for the instructor to present. This endangers the success of each exercise by requiring the instructor to use considerable lab time in a preliminary "how-to" lecture and by requiring the student to consult the instructor about something he missed in the lecture. Details of instruction should be presented in print so that the student may refer back to them.