

There is such a flood of new information into the field at this time that what is true one year may not necessarily be true the next. But mysteries there always have been; so the author warns us our goal should be "to unravel their mysterious mechanisms" and thus be "filled with awe at their exquisite simplicity."

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VERTEBRATE EMBRYOLOGY: A LABORATORY MANUAL

by Richard M. Eakin. 3rd ed., 1978.
University of California Press (2223
Fulton Street, Berkeley 94720) 281 p.
\$5.65.

Few laboratory manuals are so well-written or so full of information as this book—it should have been entitled, a manual and sourcebook of embryology. It hardly resembles a traditional laboratory manual in size (8" x 5 1/4") or general format. It deals primarily with vertebrate structural embryology but it includes sections on the starfish, the tube worm and the mussel. The five main chapters are entitled: "Gametogenesis and the Estrous Cycle," "Early Development," "Development in the 10mm Frog Larva," "Development of the Chick Embryo," and "Development in the Pig Embryo and Fetus." There is a sixth section called "General Review Questions." The book is so much more interesting and fact-filled than the table of contents suggests. In fact, a truly exceptional facet of the book would be hidden from those who read tables of contents and stop with the word "index" for the page following it in this book contains the List of Summaries and Discussions of General Topics. These summaries and discussions lift the book out of the laboratory manual category and elevate it to an outstanding reference sourcebook about general embryology. This is not a suggestion that the book covers all topics. rather, it is a suggestion that it covers 36 essential and basic topics so well. Among these are meiosis, menstrual cycle, parturition, echinoderm theory of chordate origin, sperm entrance, sex differentiation, placental types, and length of gestation.

It is not an impressive-looking book. Actually it is a no-nonsense book—the cover is a "Ho-Hum" "scientific" cover, the paper is unbleached rough stock, and, there is not a single color plate. It simply does not fit the expectations of our packaging-conscious culture; but, what a pleasant surprise one finds in the content. Yet, it is not a flawless book. It has its share of cookbook directions—"Carefully disclose by means of probe the great veins in the vicinity of the heart,

using figure 72 as a guide." (p. 223); pseudo-personal comments to the student—"By now you must be weary of microscopical study." (p. 222); and, ambiguous directions—"List the structures appropriate to the spaces in the chart below." (p. 242). But the good immeasurably overshadows the not so good.

The book may well be used as a mini-textbook and syllabus for a course in general embryology or introductory developmental anatomy, for supplementary reading or as a sourcebook for general biology and general zoology classes and laboratory, and it should be invaluable for reviewing and fact-finding. It is highly recommended for use by both students and teachers of biology from high school through some levels of graduate work. It would be, also, especially valuable for graduate students preparing for comprehensive and preliminary examinations in zoology.

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FUNDAMENTALS OF ENTOMOLOGY

by Richard J. Elzinga. 1977. Prentice-Hall, Inc. (Englewood Cliffs, New Jersey 07632). 325 p. \$17.95.

Textbook writers attempting to cover the field of entomology find that they have either a massive volume (or volumes) full of details—or a thin, bare-bones book with general coverage and few details. This is a very good example of the latter.

The basics of entomology are covered in excellent fashion in this little book. The material is well organized and presented in pleasing fashion; it will be a superior source of supplemental information for biology, invertebrate, and general ecology courses. It should be quite acceptable as a text for very general entomology courses.

This is a generously illustrated book, with pleasing use of SEM photographs. It is unfortunate, however, that a number of the older, probably borrowed, black-and-white pictures turned out so poorly. The general organization, headings, pagination, and type face make for a superior book, easy to read, and full of information for the beginning entomologist or browsing biologist.

Sequence of topics in a book is always a problem. In this case, classification is covered at the end; it will be inevitable, therefore, that use of insect examples while discussing earlier topics will cause numerous interruptions, to wit: "What is a . . . tiger beetle?" or "what is an . . . orth-

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opteran?" The only alternative, of course, is to change the order of coverage, which would not detract from the value of this neat little book.

Fred A. Lawson
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Laramie

Audiovisuals . . . from p. 577

glucose level is presented as solely dependent on a glucose to glycogen shift, instead of on the complex process involving the pancreas, adrenals, hypothalamus, and pituitary—in addition to skeletal muscles and kidneys. Also, temperature regulation is considered in cold-blooded and warm-blooded animals but is ignored in the large group of vertebrates—the heterotherms—whose temperature regulation falls somewhere between these two groups.

The section on population control is well done. It presents an overall view of adjustment to change and of the effects on a total population of a change in one component of the population. It contains ten examples of dynamics in plant, invertebrate, and vertebrate populations.

Both audio and visual portions are presented in a clear, concise manner. Two experts in the field serve as narrators. This approach adds to the attractiveness of the material, but tends to give a deceptive aura of completeness and depth of coverage. The program can best be used as an introduction to some of the aspects of homeostasis, rather than a complete unit. The Teacher's Guide suggests means of providing students with a more in-depth examination of homeostasis. The guide includes a list of relatively good proposed investigations and activities and a workable bibliography.

William J. Brett
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BOOKS RECEIVED

- STATISTICS FOR EXPERIMENTS, by George E. P. Box, William G. Hunter, and J. Stuart Hunter. 1978. John Wiley and Sons, New York. 652 p. \$23.95.
- INSECTS AND OTHER ARTHROPODS OF MEDICAL IMPORTANCE, by Kenneth G. V. Smith, ed. 1973. John Wiley and Sons, Somerset, New Jersey. 561 p. \$36.
- ANCIENT NATIVE AMERICANS, by Jesse D. Jennings, ed. 1978. W. H. Freeman and Company, San Francisco, California. 660 p. \$24.50 hardback; \$19.95 softback.

INDEX

The Index, which normally appears in the December issue of *ABT*, will appear in the center pages of the January issue. The index will be arranged so that it may be removed and filed or bound with volume 40 without disturbing the articles in the January issue. Subscribers who require a separate copy of the index may request it from the editorial office.

The address is:
American Biology Teacher
N.V.C.C.
3001 Beauregard Street
Alexandria, Virginia 22311

- THE GULF OF MAINE, by Patrick W. Grace. 1977. The Stephen Greene Press, Brattleboro, Vermont. 150 p. Price not given.
- CELLULAR DEGRADATIVE PROCESSES, by R. J. Dean. 1978. John Wiley and Sons, New York. 80 p. \$3.95.
- THE PENETRATING BEAM, by Edith M. Levin. 1978. Richard Rosen Press, Inc., New York. 116 p. \$7.97.
- INTRODUCTION TO WORLD VEGETATION, by A. S. Collinson. 1977. Allen and Unwin, London. 200 p. Price not given.
- HOW TO DISSECT, by William Berman. 1978. Arco Publishing Company, Inc., New York. 128 p. \$3.25 softback; \$6.95 hardback.
- INTEGRATION AND COORDINATION OF METABOLIC PROCESSES, by J. H. U. Brown. Van Nostrand Reinhold, New York. 236 p. \$15.95.
- EXPLORING THE PLANETS, by Jonathan Rutland. 1978. Franklin-Watts, Inc., New York. 24 p. \$2.95.
- EXPLORING ANIMAL JOURNEYS, by Theodore Rowland-Entwistle. 1978. Franklin-Watts, Inc., New York. 24 p. \$2.95.

FUNDAMENTALS OF ENTEMOLOGY AND PLANT PATHOLOGY, by Louis Pyenson. 1978. AVI Publishing Company, Westport, Connecticut. 326 p. \$19.

A TUTORIAL GUIDE TO INSECT ORDERS (ADULTS) by H. S. Dashesky and J. G. Stoffolono. 1977. Burgess Publishing Company, Minneapolis, Minnesota. 57 p. Price not given.

A CLOSER LOOK AT WHALES AND DOLPHINS, by Bernard Stonehouse. 1978. Franklin-Watts, Inc., New York. 32 p. \$5.90.

A CLOSER LOOK AT JUNGLES, by Joyce Pope. 1978. Franklin-Watts, Inc., New York. 32 p. \$5.90.

A CLOSER LOOK AT PLANT LIFE, by Bernard Stonehouse. 1978. Franklin-Watts, Inc., New York. 32 p. \$5.90.

KEEPING INSECTS AS PETS, by Ross and Pat Olney. 1978. Franklin-Watts, Inc., New York. 72 p. \$4.90.

EXPLORING THE AGE OF DINOSAURS, by David Lambert. 1978. Franklin-Watts, Inc., New York. 24 p. \$2.95.

EXPLORING ANIMAL HOMES, Theodore Rowland-Entwistle. 1978. Franklin-Watts, Inc., New York. 24 p. \$2.95.

MOUNTAIN ADVENTURES, by Karl Lukan. 1978. Franklin-Watts, Inc., New York. 128 p. \$4.95.

WONDERS OF THE EARTH, by Ernst Bauer. 1978. Franklin-Watts, Inc., New York. 128 p. \$4.95.

COUNTRIES OF THE WORLD, by Keith Lyle. 1978. Franklin-Watts, Inc. 96 p. \$4.95.

INTRODUCTION TO HUMAN EVOLUTION, VOLUMES 1 AND 2, by John Wood. 1977. R. H. Lowie Museum of Anthropology, University of California, Berkeley. 16 p. and 14 p. Price not given.

VETERINARY CLINICAL PARASITOLOGY, by Margaret W. Sloss and Russell L. Kemp. 1978. Iowa State University Press, Ames, Iowa. 263 p. \$12.95.

BIOLOGY IN THE NINETEENTH CENTURY, by William Coleman. 1978. Cambridge University Press, New York. 187 p. \$13.95 hardback, \$5.95 softback.

PRINCIPLES AND TECHNIQUES OF ELECTRON MICROSCOPY, by M. A. Hayat, ed. 1978. Van Nostrand Reinhold, New York. 318 p. \$27.50.

INTRODUCTION TO COLLOID SCIENCE, by W. J. Popiel. 1978. Exposition Press, Inc., Hicksville, New York. 217 p. \$12.50.