

equally condensed: in 81 pages Snow summarizes what we know about the disease organisms carried by noxious diptera, fleas, lice, and bugs. Two appendices complete the book. The first lists the main orders of insects, with a minimum of description of subclasses and infraclasses. The second similarly treats of parasitic organisms among protozoans and worms of all sorts.

Entomologists may be disturbed by the organization of part 1, which is nontaxonomic. Instead, the insects treated are grouped by their mode of feeding or their relationship to the host. On the whole, however, the book can be recommended highly for the reference shelf of secondary-school biology teachers and the laboratory library of general-biology courses in colleges. It is aimed especially at giving the premedical student an adequate view of the importance of insects as disease agents. The book supplies sufficient clues so that the student should be able to recognize these insects in the larval, pupal, and adult stages. Snow's line drawings are simple and well done; they successfully supplement the text.

F. Martin Brown
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American Museum of Natural History

THE PENGUIN: ITS LIFE CYCLE, by David H. Thompson. 1974. Sterling Publishing Co., New York. 64 p. \$5.95.

This small but informative and colorful nature-series book is mainly about the Adélie penguin, of the Antarctic. Because the Adélie is virtually unafraid of man, it is an easy subject for study. The author, who has spent three summers studying this species, illustrates every fact elicited not only in the course of his field work but also from experiments performed on Adélie penguins and chicks reared in a laboratory.

The book would be suitable for an introduction to marine birds in a high-school marine-biology class. It is skillfully written and easy to understand. Many good illustrations are used to tell the story of the Adélie. However, more could have been written about the penguin in comparison with other species of marine birds.

Adrian C. Davis
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Senior High School

MARINE AQUARIUM KEEPING: THE SCIENCE, ANIMALS, AND ART, by Stephen Spotte. 1973. John Wiley & Sons, New York. 171 p. \$9.95.

For the teacher who has set up a saltwater aquarium and then to his dismay has watched his animals die within the first week, this book offers

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both practical and technical information. The author describes how to set up an aquarium and explains how each piece of equipment helps maintain a balanced environment. Chemical testing kits are recommended for checking acceptable ranges of ammonia, nitrites, nitrates, and oxygen. Causes of large deviations from normal values are suggested.

The second section of the book deals with choosing compatible animals and feeding them. The behavior of a variety of animal groups is discussed. Packaged foods are described, and home recipes are given. The author tells how to raise brine shrimp and earthworms for food. A chapter in this section reviews symptoms of the diseases of marine animals and their treatment.

The art of decorating an aquarium, either to simulate a natural habitat or to enhance its esthetic appeal, is covered in the last section. The topics include the preparation of corals and the construction of a diorama to give an illusion of greater tank depth.

The extensive use of charts, diagrams, and photographs to illustrate ideas is an asset to this book. Every technique is clearly presented in steps. Spotte does assume that the reader is willing to invest considerable time, effort, and money in this project; however, his enthusiastic encouragement of the hobbyist is evident throughout the book.

Jane Mazur
Pikesville Senior High School
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THE THIRD EYE, by Richard M. Eakin. 1973. University of California Press, Berkeley. 168 p. \$7.50 (hardback).

This is a thorough, well-written summary of our present knowledge of parietal eyes, based on more than 15 years of research by the author. The reader feels a part of the research, thanks to the author's style. I found Eakin's sense of humor very refreshing; in particular, I enjoyed the photograph of him impersonating Charles Darwin, with a circle above his forehead indicating the presumed position of a third eye if *Homo sapiens* had one. Readers will appreciate not only the lucid, succinct writing but also the thoroughness with which research methods and results are presented.

The first chapter introduces three species with third eyes: the western fence lizard (*Sceloporus occidentalis*), the Pacific treefrog (*Hyla regilla*), and the Pacific lamprey (*Entosphenus tridentatus*). These species are the main subjects of Eakin's research. The chapter closes with an excellent discussion of "the universal cilium," so named because motile cilia possess a ring of nine pairs of microtubules enclosing two central microtubules in all major phyla. Chapter 2—perhaps the most interesting

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Additional statements are given by Vincent Dethier, Martin Schein, Haven Kolb, David Denker, Lawrence Mann and others. This book is available now from the National Association of Biology Teachers for only \$1.95.

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to the nonbiologist—deals with the evolution of the third eye. A storehouse of information is packed into chapter 3, entitled "Structure," which gives a detailed description of photomicrographs and electron micrographs of third-eye components. Chapter 4 is an excellent description of the development of the third eye. I found this chapter particularly interesting because of its reinforcement of the previous chapter on structure. The final chapter outlines seven hypotheses of third-eye function and includes a discussion of experiments and conclusions supporting the author's own hypothesis. I think biologists and students will find this chapter to be the most important, because it not only proposes a role for the parietal eye but is also an excellent example of the scientific method in biology.

This book should inspire many working biologists and students to find research subjects of interest to them and then to explore every possible facet in carrying out the research. Some instructors may find the book helpful in supplementing their courses; however, I believe its main appeal will be to the reader who enjoys a well-written account of biologic research on an interesting subject.

Jon R. Fortman

Mississippi University for Women
Columbus

Books Received

THE KIDNEYS AND THE INTERNAL ENVIRONMENT, by R. J. Harvey. 1974. Halsted Press, New York. 175 p. \$8.95 (hardback).

CONCEPTS IN BIOENERGETICS, by Leonardo Peusner. 1974. Prentice-Hall, Englewood Cliffs, N.J. 318 p. \$12.50 hardback, \$6.50 softback.

THE WALRUS, by Kay McDearmon. 1974. Dodd, Mead & Co., New York. 45 p. \$4.25.

HUSBANDRY, MEDICINE AND SURGERY IN CAPTIVE REPTILES, by Frederic L. Frye. 1973. VM Publishing, Inc., Bonner Springs, Kan. 140 p. Price not given.

PLANT PHYSIOLOGY, by Meirion Thomas, S. L. Ranson, and J. A. Richardson. 5th ed., 1973. Longman, Inc., New York. 1077 p. \$23.50 (hardback).

PROCEEDINGS OF THE FOURTH PENNSYLVANIA ENVIRONMENTAL CONFERENCE. 1974. Pennsylvania Environmental Council, Philadelphia. 62 p. \$5.00 (softback).

DEVELOPMENT OF BIOCHEMICAL CONCEPTS FROM ANCIENT TO MODERN TIMES, by Henry M. Leicester. 1974. Harvard University Press, Cambridge, Mass. 286 p. \$15.00 (hardback).

MORAL ISSUES IN THE CONTROL OF BIRTH, by Duane K. Friesen. 1974. Faith and Life Press, Newton, Kan. 69 p. \$1.95 (softback).

GENETICS LECTURES, vol. 3, ed. by Ralph Bogart. 1973. Oregon State University Press, Corvallis. 192 p. \$5.00 (softback).

CHROMOSOMES TODAY, vol. 4, ed. by J. Wahrman and K. R. Lewis. 1973. Halsted Press, New York. 454 p. Price not given.

PRACTICAL GENETICS, ed. by P. M. Shepard. 1973. Halsted Press, New York. 349 p. \$27.50 (hardback).

WILD FLOWERS, by Michael Stringer. 1973. Arco Publishing Co., New York. 61 p. \$4.95 (hardback).

DOORYARD GARDENING, by Ada and Frank Graham. 1974. Four Winds Press, New York. 91 p. \$5.95 (hardback).

THE DOUBLEDAY NATURE ENCYCLOPEDIA, by Angela Sheehan. 1974. Doubleday & Co., Garden City, N.Y. 179 p. \$6.95 (hardback).

BIBLIOGRAPHY ON THE GENETICS OF *Drosophila*, Part 6, by Irwin H. Herskowitz. 1974. Macmillan Publishing Co., New York. 526 p. Price not given.

COURS ET DOCUMENTS DE BIOLOGIE, vol. 5, by Louis E. Gallien. 1973. Gordon and Breach, New York. 404 p. \$35.50 (hardback).

BLACK'S MEDICAL DICTIONARY, ed. by William A. R. Thomson. 30th ed., 1974. Barnes & Noble Books, New York. 934 p. \$13.50 (hardback).

ELECTRON MICROSCOPY OF ENZYMES, vol. 2, ed. by M. A. Hayat. 1974. Van Nostrand Reinhold Co., New York. 173 p. \$16.50 (hardback).

THE ABC OF ACID-BASE CHEMISTRY, by Horace W. Davenport. 6th ed., 1974. University of Chicago Press, Chicago. 124 p. \$8.00 hardback, \$3.45 softback.

MOSES: UTAH AND THE WEST, by Seville Flowers. 1973. Brigham Young University Press, Provo, Utah. 580 p. \$19.50 (hardback).

SIERRA WILDFLOWERS, by Theodore F. Niehaus. 1974. University of California Press, Berkeley. 223 p. \$3.95 (softback).

NATIVE SHRUBS OF THE SIERRA NEVADA, by John Hunter Thomas and Dennis R. Parnell. 1974. University of California Press, Berkeley. 127 p. \$3.95 (softback).

INTRODUCTION TO CALIFORNIA PLANT LIFE, by Robert Ornduff. 1974. University of California Press, Berkeley. 156 p. \$3.95 (softback).

GRASSES IN CALIFORNIA, by Beecher Crampton. 1974. University of California Press, Berkeley. 178 p. \$3.95 (softback).

PLANET STEWARD: JOURNAL OF A WILDLIFE SANCTUARY, by Stephen Levine. 1969. Unity Press, Santa Cruz, Calif. 229 p. \$9.95 hardback, \$4.95 softback.

AN INTRODUCTION TO THE STUDY OF MAN, by J. Z. Young. 1971. Oxford University Press, New York. 719 p. \$6.95 (softback).

ANIMALS AND PLANTS THAT TRAP, by Philip Goldstein. 1974. Holiday House, New York. 125 p. \$4.95 (hardback).