

# Reviews

## BOOKS

BISHOP, SHERMAN C. *Handbook of Salamanders*. Comstock Publishing Company, Ithaca, New York. xiv + 555 pp. illus. 1943. \$5.00.

A frequent job of the biology teacher is to identify specimens brought in by curious students who expect the teacher to have at least a speaking acquaintance with everything alive. Handbooks useful to the general biologist, however, have yet to cover some of the important animal groups.

With publication of Bishop's *Handbook of Salamanders*, another gap is filled. Following a summary of the biology and habits of salamanders, the book consists of identification keys and descriptive notes on all known salamanders of the United States, Canada, and Lower California. The extensive bibliography is conveniently arranged by states.

The treatment of each species follows a uniform pattern: *Type Locality, Range, Habitat, Size, Description, Color, Breeding, and Larvae*. Photographs, line drawings, and maps add to the value of the book.

To learn how this first complete guide to the salamanders is being received by specialists on the cold-blooded vertebrates, I questioned Dr. Reeve M. Bailey of Iowa State College. Besides giving it his highest praise, he reminded me that there is still much to learn about the habits and distribution of even the common species of salamanders. Teachers might add much worthwhile data by encouraging students to collect local specimens and send them, properly labeled, to some authority in the state concerned.

GUSTAFSON, A. F., GUISE, C. H., HAMILTON, W. J., JR., RIES, H. *Conservation in the United States*. 2nd ed. Comstock Publishing Company, Inc., Ithaca, New York. 477 pp. illus. 1944.

When a critic quibbles over small details, he is reviewing a good book. So to get this part of it over—the bibliography might have included some of the better educational films on conservation; and the magazine *Bird Lore*, which has changed names since the first edition of this book, might have been called *Audubon Magazine*.

The authorship—including a soil technician, forester, zoologist, and geologist—illustrates the wide scope of the conservation problem today. Further, it breaks the book into topical sections which for actual class work should be related to one another by

supplementary reading and discussion. For in functional conservation soil science, forestry, wildlife management, and wise use of minerals are intimately bound together.

An effective student project in the use of this fine source book would be to show how the wise use of soils is related to sustained yield of forests, how trees effect wildlife, how animals in turn affect the environment which sustains them, and finally how the management of renewable biologic resources is related to conservation of those which are not renewable such as coal and iron. It's an angle that should challenge postwar planners, young and old.

LT. (JG) RICHARD F. TRUMP,  
On leave from *Ames Senior High School*,  
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HOERR, NORMAND L., ET AL. *Frontiers in Cytochemistry*. Biological Symposia, Vol. X. Jaques Cattell Press, Lancaster, Pa. vii + 334 pp. illus. 1943. \$3.50.

This volume of *Biological Symposia* is a summation of what is known about several phases of the chemical and physical organization of cytoplasm. It is the fruition of many years of work by investigators who were taught and inspired by Professor R. R. Bensley, and who conducted the symposium in his honor. As a source of information it is invaluable to all who desire the latest first-hand information about protoplasm. But more than that, it is inspirational in that it shows the tremendous influence of the able teacher and the marked appreciation of those who were fortunate enough to have been under his tutelage or who were inspired to develop their ideas along the lines he so ably pointed out. The book is profitable reading for any serious biologist.

BROTHER H. CHARLES, F. S. C.  
*St. Marys College*,  
*Winona, Minnesota*

JEAN, FRANK C., HARRAH, E. C., AND POWERS, S. R. *Man and his Biological World*. Ginn and Co., New York. viii + 630 pp. illus. 1944. \$3.50.

The 23 chapters of this book are arranged in nine units, which have titles of about a dozen words each, but are essentially as follows: 1. Nutrition, 2. Reproduction, 3. Adaptation, 4. Disease Control, 5. Metabolic Cycles, 6. Balance of Nature, 7. Evolution, 8. Heredity, 9. Cultural Development. The unit organization seems rather artificial, and nothing seems to be gained by the excessively long titles; however, these are minor peevish

that really do not matter in a book that is in general an excellent one. The illustrations, both photos and drawings, are unusually good. There are from 10 to 20 questions for study at the end of each chapter, and about the same number of references, with specific page citations, consisting of both books and periodicals. The glossary is fairly complete, and the index is well organized. This is a college text, but it can easily be read by the intelligent high school student, and should find wide distribution in high school libraries and reference shelves.

JOHN BREUKELMAN

### FILMS

A SERIES OF NINE FILMS, devoted to the study of zoology, embryology and botany, and of special interest to teachers and students of these subjects, is available through the *British Information Services*, Film Division, 30 Rockefeller Plaza, New York 20, N. Y. The films are as follows:

**THE AMOEBA.** It shows the structure and function of a single-celled animal of a very primitive type and illustrates the study of protoplasm and cells, including energy relations, response to stimuli, and reproduction. 9 minutes. Rental 50¢.

**THE BLOWFLY.** The life cycle of the housefly, with a visual explanation of wing expansion and final coloring and hardening of skin. 18 minutes. Rental 75¢.

**THE FROG.** Study of its composition by dissection, spermatozoa, coition, fertilization, development of eggs and the process of segmentation. The embryo stage, and complete development from tadpole to its final form. 17 minutes. Rental 75¢.

**THE EARTH WORM.** Digestive, circulatory, excretory and reproductive systems are stressed, and there are moving diagrams of the processes of coition, subsequent egg-laying and cocoon formation, ending with the birth of young worms. 18 minutes. Rental 75¢.

**THE DEVELOPMENT OF THE TROUT.** The eggs, with a close view of unfertilized egg-cell showing composition, their fertilization and development. The embryo stage progressively shown, and the varied stages of development from hatching to final adult form. 16 minutes. Rental 75¢.

**THE SEA URCHIN.** The development of the pluteus larva shown in actual photographs assisted by explanatory animated diagrams. The feeding and growth of the four, six and eight-armed stages. 25 minutes. Rental 75¢.

**THE DEVELOPMENT OF THE CHICK.** The structure of the egg described by diagram, the blastoderm and embryo stages illustrated

by close-view and speeded-up photography, and development after hatching up to 7-8 months. 23 minutes. Rental 75¢.

**LIFE CYCLE OF A PLANT.** The growth is shown by means of speeded-up photography, and structure of flower is described by enlarged model and explained in detail. Also illustrated by moving diagrams or dissected studies are the mechanics of flower, cross pollination, germination, fertilization and development of seed pod. 11 minutes. Rental 50¢.

**HEREDITY IN MAN.** Combining the use of charts and actuality, the law of differential fertility is described. Illustrations are given of the inheritance of beneficial characteristics in families, and the case history of a family of 17 children with a normal mother and an apparently normal father with defective relatives is used as an example of inheritance of defect. 14 minutes. Rental 50¢.

Besides the central depository named above, there are regional depositories at Washington, D. C., Chicago, Hollywood and New Orleans. The films may also be obtained from a number of cities where there are consular offices. Complete information may be obtained from the New York office.

### RECENT PUBLICATIONS

KEELER, CLYDE E., *Organic Evolution, A Genetic Phenomenon*. Edgewood School Press, Greenwich, Conn., 1944, 25 pp. 60¢.

A popular account of the mechanics of evolution, as presented in the biology classes in the Edgewood School. Analysis of the factors in evolution, with special reference to the heredity and embryological development of the individual. Illustrated with drawings, both technical and of the "cartoon" type.

HEIDGERKEN, LORETTA, *Selected Films for Biological and Physical Sciences in Schools of Nursing*, Educational Film Library Association, 45 Rockefeller Plaza, New York 20, N. Y., 1944, 50¢.

A 37-page pamphlet, summarizing 28 important films (Alimentary Tract, Bacteria, Body Defenses, Catalysis, Colloids, etc.) of importance in the training of nurses. Each film is appraised from the standpoint of this particular use. There is a bibliography and a directory of educational film libraries.

DARBAKER, L. K., *Poisonous Plants of Western Pennsylvania, and Some Medicinal Plants of Western Pennsylvania*. School of Pharmacy, University of Pittsburgh. Mimeographed outlines, 5¢ each.

Alphabetical check-lists of plants, including both scientific and common names, the