

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

former with remarks concerning the parts that are poisonous, nature of the poisonous effect, and the like. The latter, being strictly a check-list would be of less use to non-residents of the area indicated.

THE HARVARD APPARATUS COMPANY, THE AMERICAN JOURNAL OF PHYSIOLOGY AND DR. W.

T. PORTER

The undersigned, having on the request of W. T. Porter assumed the guidance of the Harvard Apparatus Company, wish to place on record Dr. Porter's unique services to Science. Some forty-five years ago, when there was scant if any laboratory teaching of physiology in our colleges and universities outside the medical schools, and laboratory teaching of physiology in medical schools was just emerging, he saw the probable importance of rendering available to our colleges, universities and medical schools good apparatus at the lowest possible cost for the laboratory teaching of physiology. He started the Harvard Apparatus Company as a private corporation, partly on borrowed funds. This business has been conducted by Dr. Porter in the public interest, and without commercial profit. When there was a modest annual surplus, this was used: (a) to improve production equipment, (b) to provide a pension fund for the Company's employees, (c) and to finance the *W. T. Porter Research Fellowship in Physiology*, administered by the Council of the AMERICAN PHYSIOLOGICAL SOCIETY.

In 1934 the Harvard Apparatus Company was reorganized as a non-profit corporation under the laws of the State of Massachusetts "for the promotion of teaching and research in physiology and its allied sciences." Dr. Porter gave to this corporation all property owned by the private Harvard Apparatus Company corporation. He has received no salary for his services to the corporation. We intend to follow Dr. Porter's example, with (we hope) some of his efficiency and vision. In recent years the services to the sciences of functional biology rendered by Dr. Porter within our own borders have been extended to many other countries. The services of the Company can be further extended to the liberal arts colleges, junior colleges, and high schools where experimental physiology has not yet been introduced as an element of a liberal education, a forward step in the education of tomorrow, probably in the cards.

Forty-six years ago Dr. Porter founded *The American Journal of Physiology* (for the publication of research), and for 16 years he

carried the entire financial responsibility and editorial burden for the first 33 volumes, that is, until 1914, when Dr. Porter presented this Journal (including back volumes in stock) as a gift to the AMERICAN PHYSIOLOGICAL SOCIETY.

These are significant services to science and to our fellow men. They call for more than a passing note, as they echo and amplify the voice of the English chemist, James Smithson of a hundred years ago, whose vision of science, whose faith in man, and whose material wealth established the Smithsonian Institution of Washington, "*for the increase and diffusion of knowledge among men.*"

A. J. CARLSON,
University of Chicago
PHILIP BARD,
Johns Hopkins University
WALTER E. GARREY,
Vanderbilt University
F. W. WEYMOUTH,
Stanford University
MAURICE B. VISSCHER,
University of Minnesota

THE FUTURE OF PHARMACY

The war has caused a shortage of pharmacists in every American community, according to a recent survey, and unless more young people are attracted to the profession of pharmacy in the next few years, the services of the neighborhood drug store, for so many years an integral part of American life, will be impaired and, what is more important, public health will suffer. Hospitals, too, are feeling the pinch, along with drug and pharmaceutical manufacture and research.

The primary interest, however, to educators is the situation facing colleges of pharmacy as a result of the shortage. A great many may have to close their doors unless additional students are enrolled. Careful surveys indicate that the shortage of practicing pharmacists can be conservatively estimated at 6,500 by January, 1946, and this estimate is made assuming the return to pharmacy of 10,000 of the 14,000 pharmacists now in the armed services. At present, it cannot be forecast accurately how much greater this shortage will be because of the number that may be required for an expanded Army, a world-wide U. S. Navy or for important work in rehabilitation centers for the wounded. However, the most startling factor of all is the downward trend of replacements. Pharmacy student enrollments have dropped from a normal of 8,800 to 2,700 in the spring of 1944. Only 800 will gradu-