

changes the potentialities of the cells; that the fate of kinetosomes depends on their metabolism, their positions in the organism, and on several factors of the environment. He discusses some of the problems which arise from these facts, and suggests possible uses of these facts to explain cell differentiation and protoplasmic inheritance. The terminology is somewhat difficult.

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CRAFTS, A. S., H. B. CURRIER, and C. R. STOCKING. *Water in the Physiology of Plants*. Chronica Botanica Co., Waltham, Mass., and Stechert-Hafner, Inc., New York. xx+240 pp. illus. 1949. \$6.00.

Water in the Physiology of Plants is a monograph on the relations of water to plant cells. The authors have combined the results of their extensive researches with relevant facts wisely selected from the numerous papers on the absorption, movement and utilization water by plants. As a result the book is a synthesis of present day concepts relative to water utilization by plants. It offers students an attractive means of becoming better acquainted with contemporary literature dealing with the mechanism of osmosis, the uptake, movement, retention and loss of water. Those who, because of lack of time, are unable to give the entire book a thorough reading can bring themselves up-to-date on plant-water relations by reading the excellent summaries which end each chapter. An extensive bibliography of nearly 800 titles is included.

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BULLOUGH, W. S. *Practical Invertebrate Anatomy*. Macmillan & Co., London. xi + 463 pp. 1950. \$4.50.

The beginning of each chapter on invertebrate phyla, from Protozoa up to and including Chordata, describes the general characteristics of the phylum, class, and order of the invertebrates commonly used for study in college zoology. For each representative listed under the genus name, the general account, anatomy, conclusions and references are presented. The general account is

a description of the life history of the individual. Under anatomy, the general structure is described, with important words in bold-face type to facilitate the laboratory work on the study of the specimens. As conclusions the author suggests particular characteristics to be noticed and the characteristics of the phylum, class, and order to be compared with that of the specimen being studied. Many of the references listed are of little value to the average small college student as some are written in foreign languages and others cannot be obtained in an average small college library.

In the reviewer's opinion, the section on the anatomy of the specimens might well be separated into a laboratory manual as the text is cumbersome to handle during the lab work. The rest of the information given in the book is excellent reference material. The paper of the text seems poor, however, and might not stand hard wear in the laboratory. The text is easily read and a person can quickly find the description of the specimens he wishes to look up. The table of contents is comprehensive; listing the phylum, class, order, genus, and the common names of all the representatives given in the book. There are 168 excellent figures and the text is concluded with general references, general appendix, index of authors and general index.

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FILMSTRIPS

Three new agricultural filmstrip series in full natural color, *Selection of Breeding Stock—Beef*; *Selection of Breeding Stock—Sheep*; and *Selection of Breeding Stock—Hogs*, have just been released by the Audio-Visual Division, Popular Science Publishing Company, 353 Fourth Avenue, New York 10, N. Y. Each of the three series consists of two full-length filmstrips, one devoted to the male and the other to the female of the species, with emphasis on points that teach students to recognize and evaluate best breeding characteristics of the animals. Each series comes with a helpful Teaching Guide that provides ample background, development and review material to teachers and group leaders.