plants, it will serve to indicate problems and to provide a convenient approach to the widely scattered literature on the subject. Students of physiologically active compounds in plants will find in it much valuable information.

Hawaiian plants are included "as far as practical"—which does not appear to be very much. Otherwise, as far as determinable for the geographic area covered, all plants except bacteria known to have poisoned livestock or humans are treated. Some such plants, which occur on this continent but are not known to have caused poisoning here, are included on the basis of their known toxicity elsewhere. Many cases of plants reputed to be toxic but whose toxicity is undocumented by clear circumstantial or experimental evidence are not discussed.

Since this book is a survey drawn from the literature, doubtlessly many potentially harmful plants were omitted. A useful consequence of its publication may be to encourage the reporting of any well-documented cases unknown to the author or any that may come to light in future.

In the first chapter, which is provided with a separate bibliography, knowledge of poisonous plants in the United States and Canada is reviewed, and original sources of information are identified. Poisonous principles are discussed in the second chapter. The bulk of the book is devoted to individual or related groups of poisonous plants, the discussions of which generally are organized as follows: scientific name; common name(s), if any; description; distribution and habitat; poisonous principle(s); toxicity; symptoms and lesions; and conditions of poisoning. "Descriptions have been written with the intention of enabling a person to decide with certainty whether a suspected plant in hand is or is not the one described," a tall order and one that is not a little presumptious. In many instances illustrations help in this regard, but not nearly all plants are illustrated. Discussions relating to given plants are uneven in terms of content. The unevenness generally reflects the relative state of knowledge in the particular case, not simply a matter of the author's choice.

The text is generously supplied with significant references, which are listed in a bibliography of 1715 titles. Some of the latter are review papers, the bibliographies of which have not been repeated but which are thus made more accessible to the interested reader or potential researcher.

This publication should be of great value to those for whom it was primarily intended. Many others of us who are tagged as "botanist" not infrequently have calls, often made in great haste, for information on poisonous plants such as those dealt with here. We shall be very grateful to be able to have the volume close at hand.

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Biochemistry Textbook

Plant Biochemistry. D. D. Davies, J. Giovanelli, and Tom ap Rees. Davis, Philadelphia, 1964. xii + 454 pp. Illus. $10.

We live in an era of comparative biochemistry, in which the basic metabolic pathways common to all organisms are stressed. We remind our students that glycolysis is pretty much the same in muscle, yeast cell, and leaf, and that the modern orthodoxy regarding DNA, RNA, and proteins pertains to all of God's creatures.

Why, then, a special book on plant biochemistry? Obviously, one might suppose, because there *are*, after all, unique plant processes such as photosynthesis and symbiotic nitrogen fixation, unique plant components such as cellulose, rubber, and alkaloids, and unique problems in chemical physiology posed by such plant structures as stomata, phloem, and endodermis. The unwary reader approaching this book from that point of view is doomed to disappointment. What he will find is a conventional textbook of biochemistry, in which topics like proteins and enzymes, bioenergetics, oxidative phosphorylation, and the metabolism of carbohydrates, organic acids, amino acids, nucleic acids, and lipids are given routine coverage. Most of the information in these chapters is based on data derived from microorganisms and animals, and when plants are dragged into the act, it all seems a little contrived and after-the-fact. The only chapters with a plant flavor are those on photosynthesis, isopentanes, and alkaloids, and I did not find them particularly interesting. I also regret the fact that the authors omitted from consideration such interesting and current topics as ferredoxin, phytochrome, and kinetin, such interesting older stories as the metabolism of selenium and fluorine, and such fascinating problems in chemical physiology as the control of stomatal opening.

What the authors have chosen to do, they have done accurately and well. My major complaint is that they haven't improved significantly on such older books as Fruton and Simmonds for general biochemistry or James Bonner or Trevor Robinson for plant biochemistry.

As one who teaches advanced plant physiology to graduate students, I will certainly recommend that they become familiar with the contents of this book. As an adviser, however, I would recommend that they learn basic biochemistry from a general course. I would hope that the specialized study of plant biochemistry would build on such a general course, and that each plant topic could be explored in greater depth than permitted by this volume. In such a context, this book will find only limited use as a textbook.

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New Books

General

Anaxagoras and the Birth of Physics. Daniel E. Gershenson and Daniel A. Greenberg. Blaisdell (Ginn), New York, 1964. 556 pp. $10.

Anaxagoras and the Birth of Scientific Method. Daniel E. Gershenson and Daniel A. Greenberg. Blaisdell (Ginn), New York, 1964. 79 pp. Paper, $1.45.

Ancient Science and Modern Civilization. George Sarton. Univ. of Nebraska Press, Lincoln, 1964 (reprint of 1954 edition). 115 pp. Paper, $1.

The Atlantic Cable. Bern Dibner. Blaisdell (Ginn), New York, ed. 2, 1964. 190 pp. Illus. Paper, $1.95.

Australian Butterflies. I. F. B. Common. Jacaranda Press, Brisbane, Australia, 1964. 131 pp. Illus. 13s. 6d.

Big Men, Big Jobs. Clyde H. Duncan. College of Agriculture, Univ. of Missouri, Columbia, 1964. 150 pp. Paper, 50¢.

British Instruments Directory and Buyers' Guide, 1964–5. Scientific Manufacturers' Assoc. and United Science Press, London, ed. 4, 1964. 274 pp. Illus. £8 8s.

The Changing Science of Mineralogy. Cornelius S. Hurlbut, Jr., and Henry E. Wenden. Heath, Boston, 1964. 127 pp. Illus. Paper, $1.32.

A Checklist of Linneana, 1735–1835, in the University of Kansas Libraries. Compiled by Terrence Williams. Univ. of Kansas Press, Lawrence, 1964. 81 pp. Paper, $1.50.

(Continued on page 1490)