

## NEW BOOKS

### General Biochemistry

WILLIAM H. PETERSON, and F. M. STRONG. v + 469 pages. Prentice Hall, Inc., New York, N. Y. 1953. \$8.65. Reviewed by CARL VESTLING, Department of Biochemistry, University of Illinois, Urbana, Ill.

*General Biochemistry* is a new textbook of elementary biochemistry, based on the extensive teaching experience of the authors at the University of Wisconsin. Three chapters have been contributed by two colleagues as follows: *Plant Metabolism*, R. H. Burris; *Enzymes and Digestion*, G. W. E. Plaut.

The authors indicate that it is their intention that this text be useful both in biochemistry courses where the chemical background of the students is adequate and in courses where the previous chemical experience of the students is limited and which may include students "with only a general chemistry background, though" the material may be "best appreciated and understood by the reader with a knowledge of organic chemistry." It is the opinion of the reviewer that it will be difficult indeed for a student without formal training in organic chemistry to gain an appreciation of even the elements of biochemistry, but that this text will be understandable and stimulating when studied by those students with a reasonable background. The authors hope that their text may be helpful to groups of students whose range of training is quite wide is likely to be realized.

"General Biochemistry" is a more or less "orthodox" introductory textbook, which has, however, several unique features, as follows: Three rather concise chapters deal with the Metabolism of Animals, the Metabolism of Microorganisms and the Metabolism of Plants. These valuable chapters are not so long and detailed as to be beyond the scope of usefulness in a beginning text, and—in fact—these chapters are quite typical of a rather commendable brevity in this book aided by skillful organization of material. The size of the book has been kept within quite reasonable bounds, which is no small feat in itself. The value of presenting summaries of the metabolic features of animals, microorganisms, and plants in three successive chapters is not inconsiderable, and students in various related fields will find this means of presentation to be very useful.

The first eleven chapters (of sixteen) are concerned primarily with the *materials* of living cells and the final chapters with the *functions* of cells. In these latter

chapters there is considerable emphasis on so-called dynamic aspects and attempts at integration of diverse cellular activities.

A final chapter on Biological Energetics will be of interest, as will excellent brief chapters on Enzymes; Nucleoproteins, Nucleic Acids and Related Substances; Biochemically Important Mineral Elements; and Vitamins.

At the end of the book is an Appendix which consists mainly of four extensive tables of 1. Proximate Composition of Foods, 2. Major Mineral Elements in the Edible Portion of Foods, 3. Trace Elements in Foods, and 4. Vitamin Content of Common Foods.

Peterson and Strong's text should be well received. It is well organized and well illustrated throughout, and the publishers have done an excellent job. As usual, there are a few matters which do not suit the exact taste of the reviewer. For example: Tables, such as that in the carbohydrate chapter, entitled, "Economic Importance of Some Industries Based on Carbohydrates" and that in the protein chapter with a similar title, seem of questionable value in a textbook of biochemistry.

The authors cannot hope to be quite consistent in so exhaustively discussing many of the organic chemical reactions of biochemical importance, even though they state—as already mentioned—that their text does not absolutely require formal training in organic chemistry. The discussion of carbohydrates does not present the Haworth *perspective* formulas with utmost clarity. In the vitamin chapter, the formula of choline shows an apparently pentavalent nitrogen. This is quite obviously an oversight. There are very few errors to be found.

### Nutrition and Diet in Health and Disease

JAMES S. McLESTER, and W. J. DARBY. xii + 710 pages. W. B. Saunders Co., Philadelphia, Pa. 1952. \$10.00. Reviewed by JAMES B. ALLISON, Bureau of Biological Research, Rutgers University, New Brunswick, N. J.

The book "Nutrition and Diet in Health and Disease," is a valuable contribution to the libraries of the student, teacher, dietitian, and physician. The two authors, with the able help of others, have told the modern story of nutrition in health and disease in an interesting and authoritative manner. The presentation is designed to meet the demands of the physician who "in order to nourish his patient properly, no longer tells him

what he should not eat; he tells him what he should eat."

Part I emphasizing "Nutrition in Health," discusses normal conditions and fundamental principles in nutrition that must be understood thoroughly to appreciate Part II which is devoted to "Nutrition in Disease." Part I brings to the reader information and comments on subjects such as digestion, energy requirements, the protein problem, the vitamins, inorganic nutrients—and even covers satiety values, cost of food and other nutritional factors of lesser importance. Various foods such as milk and milk products, meat, fish, eggs and food adjuncts are discussed. A resumé of the normal diets is a fitting summary to this first part of the book. A special chapter on "Feeding of Infants" by Dr. P. C. Jeans adds to this summation. Part I ends with a chapter on "Nutrition in Pregnancy and Lactation."

Part II opens with a discussion of nutritional deficiency diseases followed by chapters on diabetes mellitus, gout, obesity and leanness, food poisoning and allergy, diseases of the kidney and urinary tract, of the digestive organs, febrile diseases, those of the heart and arteries, of the blood, of the joints, of the nervous system, endocrine disorders, and diseases of the skin. An interesting and important chapter on "Nutrition in Surgery" is presented at the end of this part by Dr. Charles C. Lund and similarly another on "Nutrition in Industry" by Dr. R. S. Goodhart.

The book ends with a valuable appendix devoted to methods of feeding, cooking, and storing of foods together with supplementary tables needed by the experimentalist, the dietitian, or the physician. Each chapter is documented by a selective bibliography containing classical references and reliable reviews. It is a pleasure to recommend this book.

### Western Fertilizer Handbook

Soil Improvement Committee. 160 pages. California Fertilizer Association, 475 Huntington Drive, San Marino 9, California. 1953. \$1.00.

This handbook has been compiled over a period of 3 years by a subcommittee of the California Fertilizer Association. It is the first comprehensive study of the soil fertility, plant nutrition, soil types, water use and fertilizers for the western region of the United States.

The book is very well illustrated, including a number of 4 color plates, and should be of value to anyone interested in the fertilizer industry or soil conservation.