
Seiverd's Chemistry for Medical Technologists. Second Edition. *Wilma L. White and Sam Frankel.* The C. V. Mosby Co., St. Louis, 1965. 430 p. \$10.75.

In their preface, the authors have stated that this book is one for the beginning and practicing technologist and from that standpoint it fulfills their objective. Though this limits the scope of the subject matter, and puts great demands on the method of presentation, the authors have succeeded admirably. As a training manual for a selected group, however, it would be better if the material were available in a paperback edition.

The four chapters of Part I contain a brief but essential review of analytical chemistry and instrumentation. Before the presentation of methods, there is an excellent, though short, chapter on Quality Control, which clearly states the reasons for the procedures to be followed. Methods selected for discussion are those commonly used and accepted in clinical chemistry at the preautomation stage.

Inclusion of sample calculations with the dilution factors explicitly demonstrated for each method removes the mystery so often inherent in the equations to the beginner. By presenting procedures for curve calibration for each method, the limitations of the procedure are well demonstrated. The discussion in the chapter on Electrolysis is outstanding in a book of this type. The emphasis here alerts technologists to probable sources of error, both beyond and within their control in this complex field. This book should help the beginner both avoid and solve problems of the clinical chemistry laboratory.

F. FERN OCH

Preludes in Theoretical Physics in Honor of V. F. Weisskopf. Edited by *A. De-Shalit, H. Feshbach, and L. Van Hove.* John Wiley & Sons, New York, 1966. 351 pp. \$12.75.

This handsome book contains forty-two articles in modern theoretical physics and is dedicated to Professor V. Weisskopf on the occasion of his returning to the Mass. Institute of Technology after having served as Director General of CERN, European Organization for Nuclear Research, for five years. Of the articles, all written by his friends who have visited and spent some time at CERN, half are on symmetry principles and the other half are about field theory and nuclear physics. Many important recent advances in our understanding of elementary particles have been made through the use of various symmetry principles in elementary particle physics and nuclear physics. Theorists at CERN have played an important role in this development and some of their excitement is captured in several articles. The articles are not easy to understand, but will provide a birds-eye view of the recent advances in modern physics.

KATSUMI TANAKA

BOOK REVIEWS

Health and Disease. *Rene Dubos, Maya Pines, and the Editors of Life.* Volume II in the Life Science Library. Time Inc., New York. 1965. 200 p. Illustrated (72 pp. in full color). \$3.95. Available on order from Time-Life Books, 540 N. Michigan Avenue, Chicago, Illinois 60611.

Health and Disease is actually two books in one: twelve chapters of text, and twelve picture-essays which illustrate and supplement the narrative material, but can be read independently.

R. Keith Cannon presents the general tone of the book in the introduction. He emphasizes the need for understanding the social forces that influence health and disease.

The authors define health as the ability to function effectively in a given environment and the following picture-essay illustrates the relationships between environmental factors and disease. Then follow chapters on the histories of the Great Plagues, microbiology and immunization, starvation and the science of nutrition, poisons and pollution, genetics and disease, stresses of life, and, lastly, a chapter called "The Key to Survival." This chapter describes some bodily adaptations to environmental challenges and concludes with a discussion of work on the health problems in underdeveloped countries.

The pictures in full color following the formal discussions are beautifully done; the more carefully they are studied the more they can be appreciated.

The book emphasizes the changes constantly occurring in our environment and the social and cultural conditions that account for the most serious illnesses of our times, and is hopeful that increasing knowledge will enable man to achieve maximum adaptability.

Dr. Rene Dubos, a member and professor of the Rockefeller Institute, is a microbiologist and experimental pathologist and an authority on the relationship between disease and environment. Maya Pines is a writer specializing in the social aspects of medicine and education.

As in his several other books, the writing of Dr. Rene Dubos has been characterized by clarity and authority. In this volume he and Maya Pines present, discuss, and interpret an amazing number of interesting facts in a very few words. It is a book that can be read with ease and profit by those not familiar with the technical problems involved in the sciences of biology, health, and disease, as well as by those who work in these fields, because the style is a model of verbal communication.

There is a complete index, a list of suggested further reading, and an extensive list of acknowledgements and of picture credits.

JORGEN M. BIRKELAND

Biographical Notes Upon Botanists. Compiled by *John Hendley Barnhart.* G. K. Hall & Co., Boston, 1965. 3 vols. \$250.

Both botanists and non-botanists with an interest in plant taxonomy and botanical history will welcome this valuable biographical reference work. The three-volume publication presents the biographical data collected by the late Dr. Barnhart, former bibliographer at the New York Botanical Garden. These data, which were accumulated by Dr. Barnhart in a file of 3 x 5 cards, now maintained at the Garden, provide the names of an estimated 46,000 botanists from all over the world, and from the earliest times to the late 1940's. The file is primarily limited to those botanists who prepared collections of plants or contributed to scientific knowledge in the areas of plant taxonomy or horticulture.

Barnhart recorded: the date and place of birth and death for each botanist when known, information on educational background and professional activities for many, notes on travels and botanical collections or data from correspondence and personal interviews for some, and usually listed references to obituary notices and biographical sketches. Although there is wide variation in the nature, amount, and completeness of the data, the serious student should find some pertinent information for any botanist included.

Perhaps the most useful items are the literature references. These are given in the manner in which Barnhart abbreviated and cited them, so the reader will find that some references are not accompanied by any volume number, page number, or year of publication; others do include the volume and/or page number, but rarely is the year of publication given. To clarify the meanings of Barnhart's abbreviations, a partial list of 225 titles, giving full citation, Barnhart's equivalent abbreviations, and year(s) of publication, is included. Although incomplete, the list will be an indispensable guide and time-saver for those unfamiliar with taxonomic and other scientific literature.

The publisher states that the data were copied unedited from the original cards, printed by offset on permalife paper with approximately 30 cards per 10 x 14 inch page, and bound in Class A library binding. This work is not likely to be purchased by an individual at this expensive price; however, any library serving plant taxonomists and historians of botany should have it available.

RONALD L. STUCKEY

Modern Science and Technology. Edited by *Robert Colborn* and others. Van Nostrand, Princeton, New Jersey, 1965. xiv+746 p. 538 photographs and diagrams. \$22.50.

Robert Colborn, the editor of this book, is also editor of the monthly magazine, *International Science and Technology*. In that role he claims a peculiar advantage over most editors; he knows exactly who his readers are. This is because the magazine, a Conover-Mast publication, is circulated only to professional scientists and engineers, and the articles are written and edited with these readers' needs in mind. The standards of the articles are unusually high, and often I have felt that many of them deserve a more permanent format than the transience of a monthly issue.

Consequently, I welcome the appearance of *Modern Science and Technology*, which contains eighty-one of the best of these articles, brought up to date, where necessary, especially for this book.

The subjects range from the scientifically esoteric, "The dynamics of space-time," to the severely practical, "Corrosion;" from discussions of old problems, "The origin of oil" and "Tomorrow's weather," to state-of-the-science articles on new subjects: "High energy lasers," "Optical information processing," and "Communication by satellite." The book considers the immediate future in: "Ion rockets," "Neutrino astronomy," and "Resources from the sea."

The articles are grouped into six sections: Physics and Electronics; Chemistry; Technology; Rocketry, Space, and Astronomy; Earth Science and Oceanography; and Mathematics, Computers, and Control. Most of the articles were written by senior scientists actively engaged in the research that they are describing, with the close cooperation of one of the editors. In other cases, "Traffic" and "The earth's crust," for example, one of the editors is solely responsible. All have been prepared with great care.

The large number of diagrams and photographs, the surprising clarity and utility of the explanatory sketches in the margins, and the "further-reading" section at the end of each article all add to the value of the volume.

I have a few criticisms, but most of them are either minor (for example, the photographs could have been placed closer to the articles to which they are related), or refer to omissions (I would have liked the scope of the work extended to include advances in the life and behavioral sciences). The book can be read for present enjoyment and enlightenment, and retained as a valuable reference work for years to come; I am only sorry that it costs so much.

COLIN BULL

Man, Nature and Disease. *Richard Fiennes.* Signet Science Library, New American Library, New York. Paperback original, 1965. xiv+268 p. \$.75.

Perhaps the greatest accomplishment of man has been his capacity to control diseases which, in the past, have threatened his very survival and which still, in some parts of the world, are the chief causes of death. The control of these plagues and pestilences has been possible because of an understanding of the factors that determine the occurrence of disease in time and place. This book deals with the relationships of disease in man to nature and wild life.

Richard Fiennes was educated at Cambridge, then qualified in veterinary medicine in Edinburgh, and subsequently spent twenty years in Africa studying diseases in wild and domestic animals, as well as problems of human and animal ecology. He writes with clarity and authority as he examines, from the standpoint of comparative medicine, the various factors that influence disease in man and animals.

This book is divided into three parts. The first part deals with a variety of diseases, such as leprosy, poliomyelitis, rabies, plague, yellow fever, and malaria. The second part discusses the evolution of parasitism and describes some of the pathogenic bacteria, viruses, protozoa, and larger parasites. The third part deals with various components of disease, such as stress, heredity, nutrition, and age. Then follows a discussion of the future of disease and a summary. There are twenty-seven illustrations. Each chapter has an excellent bibliography and there is a good glossary and an index.

JORGEN M. BIRKELAND

Life of Mendel. *Hugo Iltis.* Translated by Eden and Cedar Paul. Hafner Publishing Co., New York. (facsimile of 1932 edition). 1966. 336 p. \$5.75.

Long out-of-print and difficult to obtain, this 1932 English translation of the 1924 German definitive biography of Gregor Mendel by Hugo Iltis is again available in a Hafner facsimile edition. For many years, Professor Iltis gathered the available information about the life and work of Mendel from original documents and from interviews with individuals who had known him. This well printed and nicely bound volume should be of interest to all who wish to know about the life and labors of a giant of nineteenth-century biology.

E. D. RUDOLPH