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necessary for overall continuity. The book also contains a bibliography of some 1,500 items, covering publications up to the mid-1930s.

The documentation and case histories of contraception are almost endless. The reader is overwhelmed by the mass of data suggesting that birth control represents an ageless struggle of mankind. One of the most fascinating portions of the book deals with contraceptive methods used by preliterate societies. The author documents methods of birth control used by tribes in Africa, North and South America, and Australasia. The last chapter is particularly interesting: here the author, writing in the mid-1930's, makes a number of predictions about future population growth in this country.

This book is a history, not a running commentary on contemporary affairs relating to birth control. It is therefore more applicable to sociology, anthropology, and science-history students. I would not recommend it for general use in the usual biology course, unless for reference. But it is a classic that should find renewed acceptance by readers interested in the early beginnings of population control.

Jon R. Fortman
Mississippi State College for Women
Columbus

HEALTH PRINCIPLES AND PRACTICE, by C. L. Anderson. 6th ed., 1970. C. V. Mosby Co., Saint Louis. 443 pp. \$8.50.

Any teacher of human physiology or health education will appreciate this book. Special attention has been given to cardiovascular disorders; human sexuality, reproduction, and inheritance; drug use and misuse; dental hygiene; and nutrition. Most of these topics are worrisome to high school and college students.

The information describing physiologic processes and the prevention and treatment of various disorders is very well written. Included are charts of current statistics and, at the end of each chapter, a comprehensive bibliography. However, throughout the book are many long lists, which distract the reader.

This book obviously was written for college use. Although it has the flavor of a typical health-education text, its special emphases make the book an excellent reference for the secondary school teacher.

Donald E. Mason
Gen. William Mitchell High School
Colorado Springs, Colo.

MARINE BIOLOGY

MARINE BIOLOGY: AN INTRODUCTION TO ITS PROBLEMS AND RESULTS, by Herman Friedrich. Translated from German by Gwynne Vevers. 1970. University of Washington Press, Seattle. 474 pp. \$9.50.

This book, in the original a popular German textbook, could become popular in this country also. It is surely one of the most comprehensive surveys recently published. It is suitable for advanced college undergraduates or graduate students who are interested in a short but thorough introduction to the most important aspects of marine ecology. High school teachers offering elective courses in the marine sciences to upper-level students would do well to examine this book.

A suitable introduction covers the history, apparatus, methods, and basic problems of marine biologic research. Biotic as well as abiotic factors are treated rather extensively, ahead of a brief treatment of phytoplankton and zooplankton; in this, Friedrich's book differs from the many others that over-treat taxonomic matters and then relegate important principles and considerations peculiar to marine environments to the remaining few chapters.

The author's style tends toward long, involved sentences, but the text is rich in descriptive and explanatory material, with few digressions. References are constantly cited within sentences—a matter of correct style at the expense of distracting the student and therefore discouraging him from reading scientific

literature of this kind voluntarily or for pleasure. Unfortunately, too, there are few photographs; and these, though clear, are washed out. By way of compensation there are dozens of charts and diagrams, most of which are taken from published works covering 60 years of marine research. The bibliography—22 pages of fine print—is longer than the index, which does not truly reflect the book's valuable contents.

Physiologic and morphologic descriptions systematically follow a sequence of typical pelagic and benthic organisms. Life on the margins of the sea is treated separately, as are those organisms of economic importance. Topics common to most marine texts are presented without undue emphasis on exclusively European organisms; this makes the book of potential interest to American biologists.

Whether or not a school offers a course in marine biology, this volume would be a valuable addition to the library.

John D. Woolever
Pine View School for
Gifted Students
Sarasota, Fla.

THE OCEANS: A SCIENTIFIC AMERICAN BOOK. 1969. W. H. Freeman & Co., San Francisco. 140 pp. \$6.50 hardback, \$3.25 softback.

The September issue of *Scientific American*, for a number of years, has dealt with a single major topic. These issues are traditionally very popular and newsstand copies often are sold out within hours. Fortunately for non-subscribers, *Scientific American* has re-issued a few in book form. This book contains the major articles appearing in the issue of September 1969. Topics include geology and origin of the ocean basins; characteristics of the shallow and the deep ocean floor; food webs; food and mineral resources from the ocean; marine technology; interaction of the atmosphere and the ocean; and political problems of the use of international waters.

This volume, although of only limited use as a reference in biology, should be popular as supplementary reading material for introductory oceanography courses at the college level. It should also aid the high school teacher who has a student professing interest in ocean science and needing more than the meager fare available in most high school textbooks.

S. Arthur Reed
University of Hawaii
Honolulu

MICROBIOLOGY

LABORATORY MANUAL AND WORKBOOK FOR GENERAL MICROBIOLOGY, by Frank Swatek, 1969. C. V. Mosby Co., St. Louis. 247 pp. \$4.95 (softback).

Swatek has produced a laboratory manual that, according to the preface,

"is intended as a laboratory companion to *Textbook of Microbiology*; however, it is readily adapted to other current texts in the field." The manual contains some 57 exercises over a wide variety of routine subjects ordinarily covered in general bacteriology; however, as in most materials now being labeled general microbiology, the attention paid to microorganisms other than bacteria is very slight indeed. (There does seem to this reviewer to be a tendency for bacteriologists to consider the terms "bacteria" and "microorganisms" synonymous. This should be discontinued; but, at this point in time, it is doubtful if it ever will be.)

The format of Swatek's manual is a familiar one. Each exercise is preceded by a short explanation. The exercises themselves should be easy for the student to perform. Most are divided into sections on procedure, results, and questions. Appropriate tables are provided for recording results. If anything, most of the exercises may be just a bit too thorough to allow for much independent work by the student. However, many of the questions at the conclusion of these exercises do require thought. And the final unit of the manual, titled "Studies of Known and Unknown Organisms," contains some good ideas for directing the student toward real work as a bacteriologist. (This reviewer would prefer having the latter materials introduced slowly and much earlier in the course—thus forming a constant theme throughout.)

The manual will serve its stated purpose quite well. It has many of the strengths and weaknesses of other works of its kind, and perhaps this is our problem in microbiology. Microbiology does need new ideas and innovative approaches to the teaching and learning of a very interesting group of organisms. In the meantime, this manual will serve as well as some, and better than most, books of its class.

Glen E. Peterson
University of Nevada
Reno

YOUNG ADULTS

YOUR CAREER IN PARKS AND RECREATION, by Virginia and Joseph R. McCall. 1970. Julian Messner Publishing Co., New York. 190 pp. \$3.95.

This is an easily read book intended primarily for the college or graduate student interested in working for the National Park Service. It contains, however, useful information for the biology teacher seeking summer employment or wishing to assist his students in identifying job opportunities in science-related fields.

Major emphasis is placed on careers in the national parks, but mention is made of jobs in national monuments and forests and in state parks and recreation areas. The book describes jobs for both men and women and appraises the possibilities for advancement. The authors are careful to mention the wide variety of careers available—many of them unknown to the casual summer tourist. Tables and lists specify the formal education required, current salaries, summer job opportunities, and how to apply. An appendix lists state agencies in charge of parks, colleges offering degrees in park management and recreation, and the locations of the regional offices of the National Park Service.

The authors interject first-hand experiences and historical background of many of our national parks; this keeps the book from being a mere statistical and descriptive presentation.

Elizabeth J. Davison
Swarthmore (Pa.) High School

A WORLD EXPLORER—FRIDTJOF NANSEN, by Erick Berry. 1969. Garrard Publishing Co., Scarsdale, N.Y. 96 pp. \$2.59.

Living on a farm near Oslo, Norway, young Fridtjof Nansen spent much time skiing, skating, and hiking in the woods near his home. This interest in nature led to a career as a zoologist. A desire to study ocean currents eventually led Nansen to make several expeditions to the North. These trips included exciting and dangerous ones into the north-polar region. As a statesman during World War II Nansen did much for his own and other countries; for this he was awarded the Nobel peace prize.

This history in fictional form, intended for grades 4 to 6, is good reading and excellently suited for arousing interest in the lives of scientists.

Betty Wislinsky
Lone Mountain College
San Francisco

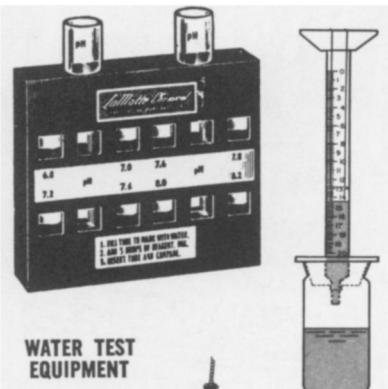
YOU AND TODAY'S TROUBLED WORLD: A PSYCHOLOGIST TALKS TO URBAN YOUTH, by Sarah Splaver. 1970. Julian Messner, New York. 190 pp. \$3.95.

Sarah Splaver addresses the urban high school student through the dialogue of four girls and four boys, who represent to the author (and she should know) a group of typical white and Negro youths with typical aunts, uncles, sisters, brother, parents—all with today's typical problems. Throughout the discussions, Splaver responds to each dialogue with definitions and clarifications; with admonishments that may become cloying to the adult reader but probably not to the questioning and troubled youth; and, most often, with a recommendation that the young student take his problems to the school psychologist. We are obliged to hope that school counselors and psychologists

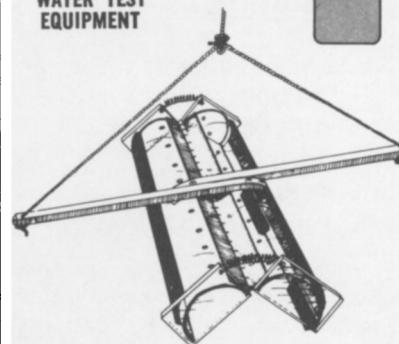
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