

Books of the Week

For the editorial information of our readers, books received for review are listed. For convenient purchase of any U. S. book in print, send a remittance to cover retail price (postage will be paid) to Book Department, Science Service, 1719 N Street, N.W., Washington 6, D. C.

ALGAE IN WATER SUPPLIES: An Illustrated Manual on the Identification, Significance and Control of Algae in Water Supplies—C. Mervin Palmer, introd. by Clarence M. Tarzwell—*U.S. Public Health Service (GPO)*, 88 p., illus. by Harold J. Walter, paper, \$1. Suitable for biology courses in high schools and colleges.

THE ARCHAEOLOGY OF PALESTINE—William Foxwell Albright—*Penguin*, rev. ed., 271 p., illus., paper, 95¢. Up-to-date survey of the most important and interesting phases of Palestinian archaeology.

ARCHEOLOGICAL INVESTIGATIONS IN BRITISH GUIANA—Clifford Evans and Betty J. Meggers—*Smithsonian Inst. (GPO)*, Bureau of Ethnol. Bull. 177, 418 p., illus., 68 plates, \$4. Report on findings during field trips into the lowlands of British Guiana during 1952-53.

THE ART OF MARRIAGE COUNSELING: A Modern Approach—W. L. Herbert and F. V. Jarvis—*Emerson*, 125 p., \$2.75. Principles of modern sociological teaching are applied to marriage counseling, covering also practical aspects of the work.

AUTOMATIC LANGUAGE TRANSLATION—Anthony G. Oettinger, foreword by Joshua Whatmough—*Harvard Univ. Press*, 380 p., illus., \$10. Primarily concerned with certain fundamental lexical and technical problems of translation by machine, with particular reference to Russian.

BLIND CHILDREN IN FAMILY AND COMMUNITY—Marietta B. Spencer—*Univ. of Minnesota Press*, 142 p., photographs by Frank Agar, Jr., and Carol Safer, \$4.25. Through the use of excellent photographs and brief, clear explanations, the author shows how parents and others can start blind children on their way to becoming useful, independent adults.

THE CHILD'S WORLD—Phyllis Hostler—*Penguin*, 203 p., paper, 85¢. Shows why children behave as they do and how we can make our behavior intelligible to them.

COLD INJURY: Transactions of the Sixth Conference, 1958—Steven M. Horvath, Ed.—*Macy*,

375 p., illus., \$6.50. Among other subjects, field studies on cold adaptation and hibernation of mammals are discussed.

A COLLECTION OF ARTICLES ON DYNAMIC METEOROLOGY—I. A. Kibel', Ed.—*Am. Geophysical Union (Consultants Bureau)*, 181 p., \$8. Volume 1 of "Soviet Research in Geophysics" in English translation. Describes theory for soil temperature and calculation, clouds and the atmospheric heat balance, and cooling of radiational heat exchange.

DIVING FOR PLEASURE AND TREASURE—Clay Blair, Jr.—*World Pub.*, 350 p., photographs by Walter Bennett, \$4.95. Tells the story of the exploration and finding of the sunken Spanish galleon El Matanzero off the coast of Yucatan.

ELEMENTARY THEORETICAL FLUID MECHANICS—Karl Brenkert, Jr.—*Wiley*, 340 p., illus., \$7.50. Stresses the rigorous derivation and application of the fundamental equations of fluid mechanics. Offers 374 problems, covering a wide variety of topics.

EXTRACTIVE AND PHYSICAL METALLURGY OF PLUTONIUM AND ITS ALLOYS—W. D. Wilkinson, Ed.—*Interscience*, 314 p., illus., \$8.50. Brings up-to-date the many scientific achievements in this field, and includes a special introduction and annotated bibliography by the editor.

FIRST MEN TO THE MOON—Wernher von Braun—*Holt, Rinehart and Winston*, 96 p., illus. by Fred Freeman, \$3.95. A dramatization of space travel with scientific descriptions of facts and problems of space.

FOOD BECOMES YOU—Ruth M. Leverton—*Iowa State Univ. Press*, 198 p., illus., \$3.50. Informative and up-to-date guide to nutrition and diets for young persons and families.

FUN WITH MATHEMATICS—William H. Glenn and Donovan A. Johnson—*Webster Pub. Co.*, 43 p., illus., paper, 75¢. Mathematical recreations for students who want to go beyond the textbook.

THE GIANT GOLDEN BOOK OF DINOSAURS AND OTHER PREHISTORIC REPTILES—Jane Werner Watson—*Golden Press*, 60 p., illus. by Rudolph F. Zallinger, \$2.95. Dramatic pictures and text introduce young people to many of the creatures of prehistoric times.

GLOSSARY OF TERMS FREQUENTLY USED IN PLASMA PHYSICS—Introduction by Elmer Hutchisson—*American Institute of Physics*, 30 p., single copies free upon request to publisher: 335 E. 45th St., New York 17, N. Y. Intended for the lay reader, gives definitions in simple scientific terms.

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Conference, 1958—Bertram Schaffner, Ed.—*Macy*, 196 p., illus., \$4.50. Includes discussion by Margaret Mead and Theodore Schwartz about the meaning of cult among the Manus people of New Guinea.

HANDBOOK OF PROGRAMS OF THE U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, 1960—Office of Program Analysis, Dept. of HEW—*GPO*, unpagged, paper, \$1.50. Provides general information about each program and five-year summary of fiscal, personnel and other statistics.

AN INEXPENSIVE SCIENCE LIBRARY: A Selected List of Paperbound Science Books—Hilary J. Deason and Robert W. Lynn—*Am. Assn. for the Advancement of Science*, 4th ed., 70 p., paper, 25¢. Lists more than 500 books, grouped by sciences, with brief descriptive notes and classification as to degree of difficulty.

INGENIOUS MATHEMATICAL PROBLEMS AND METHODS—L. A. Graham—*Dover*, 237 p., illus., paper, \$1.45. Selection of 100 puzzles from Graham DIAL, calling for some knowledge of all branches of mathematics.

ISOSTASY AND ISOSTATIC HYPOTHESES—E. N. Lyustikh, transl. from Russian—*Am. Geophysical Union (Consultants Bureau)*, 119 p., illus., \$6.50. Discusses principles of theory, isostatic status of the earth and causes of zonal anomalies.

JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, Vol. I, No. 1—Richard Bellman, Ed.—*Academic*, 132 p., paper, quarterly, \$16 per year. Publishes selected mathematical papers, particularly those in which analytical aspects and the novelty of problem and solution are emphasized.

LAND, WOOD AND WATER—Sen. Robert S. Kerr, ed. by Malvina Stephenson and Tris Coffin, introd. by Sen. Lyndon B. Johnson—*Fleet Pub.*, 380 p., photographs, \$4.95. A study of conservation and the policies and programs affecting this vital problem.

MECHANICS—Keith R. Symon—*Addison-Wesley*, 2d ed., 557 p., illus., \$10.50. Textbook for advanced undergraduate course in mechanics to provide a foundation for advanced courses in physics.

MEDICAL WORLD NEWS, Vol. I, No. 1—Morris Fishbein, Ed.—*Medical World Pub. Co.*, 48 p., illus., paper, 60¢; bi-weekly, \$12.50 per year. A newsmagazine of medicine, with selected articles on new medical techniques, medical economics and legislation.

THE MICROSTRUCTURE AND MACROSTRUCTURE OF ELASTIC WAVES IN ONE-DIMENSIONAL CONTINUOUS NONHOMOGENEOUS MEDIA—B. N. Ivakin, transl. from Russian—*Am. Geophysical Union (Consultants Bureau)*, 113 p., \$6. Originally published by the Geophysics Institute of the Academy of Sciences of the USSR in Moscow in 1958.

NATURE AND MAN—John Hillaby—*Phoenix House (Roy Pub.)*, 64 p., illus. by Jane Burton, \$2.95. Gives young persons a picture of the battle for survival and man's changing attitude toward conservation.

THE NATURE OF THE UNIVERSE—Fred Hoyle—*Harper*, rev. ed., 141 p., illus., \$3. Original text rearranged according to recent astronomical discoveries; the chapter dealing with the origin of the planets was completely rewritten.

PAPERBOUND BOOKS IN PRINT: Summer 1960—Olga Svatik Weber, Ed.—*Bowker*, 329 p., illus., paper, \$2; quarterly, \$5 per year. Author and title index of inexpensive reprints and originals, with selective subject guide.

PERSONALITY "PLUS" THROUGH DIET: Foodlore for Teen-Agers—Charles Glen King and Gwen Lam—*Public Affairs Committee*, Pamphlet No. 299, 20 p., illus., paper, 25¢ direct to publisher, 22 E. 38th St., New York 16, N. Y. Prepared in cooperation with the Nutrition Foundation, Inc.

THE PYTHAGOREAN THEOREM—William H.

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Glenn and Donovan A. Johnson—*Webster Pub. Co.*, 49 p., illus., paper, 75¢. To introduce the student to the pleasure of reading mathematics as an adventure.

SCIENCE CIRCUS—Bob Brown—*Fleet Pub.*, 253 p., illus., photographs, \$4.50. Shows how to perform 153 experiments and stunts by using household equipment; gives reason for each experiment and thus teaches the youngsters while they are having fun.

SETS, SENTENCES AND OPERATIONS—Donovan A. Johnson and William H. Glenn—*Webster Pub. Co.*, 63 p., illus., paper, 85¢. To encourage the student to explore mathematics on his own.

SIR MORTIMER WHEELER—Ronald W. Clark—*Roy Pub.*, 112 p., illus., \$2.50. Archaeologist's biography for young persons.

THE SPACE ENCYCLOPAEDIA: A Guide to Astronomy and Space Research—M. T. Bizony, Ed.—*Dutton*, 2nd rev. ed., 288 p., 320 illus., \$6.95. More than 700 entries dealing with the known facts about satellites, missiles, upper atmosphere research and all branches of astronomy, written by experts in these fields.

STATIONARY PROCESSES AND PREDICTION THEORY—Harry Furstenberg—*Princeton Univ. Press*, 283 p., paper, \$5. Shows how stochastic processes and sequences may be used to analyze systematically various stationary processes and their sample sequences.

STATISTICAL PROCESSES AND RELIABILITY ENGINEERING—Dimitris N. Chorafas—*Van Nostrand*, 438 p., illus., \$12.75. Designed particularly for reliability engineers, it presents an integrated approach to stochastic processes and to their use as a means for prediction and control.

THINGS TO DO IN SCIENCE AND CONSERVATION—Byron L. Ashbaugh and Muriel Beuschlein—*Interstate*, 163 p., illus., \$2.50. Demonstrations and projects illustrating scientific concepts related to conservation of natural resources, both on elementary and advanced level.

UNDERSTANDING WEATHER—O. G. Sutton—*Penguin*, 212 p., illus., paper, 95¢. Outlines in simple terms the main features of climate and weather, explaining the methods needed to analyze the complex data of meteorology.

VIDEO TAPE RECORDING—Julian L. Bernstein—*Rider, J. F.*, 268 p., illus., \$8.95. Presents a basic treatment of the techniques, mechanics and circuitry used in the rapidly expanding field of video tape recording.

WINDOWS IN THE WOODS—Heinz Sielmann, transl. from German by Sidney Lightman, introd. by E. Thomas Gilliard, foreword by James Fisher—*Harper*, 139 p., photographs, \$4.95. Takes the reader with the naturalist-photographer into the woods to observe woodpeckers at close range, their nesting, breeding and feeding.

• Science News Letter, 78:156 September 3, 1960

Do You Know

The United States produces about 90% of the timber we use.

Dairying is the greatest single source of farm income in America today.

A synthetic soil for house plants, chemically treated to eliminate souring and odors, is now on the market.

The fact that an unusual blood substance in patients with *rheumatoid arthritis* is also found in the blood of their relatives raises the possibility that it may be inheritable.

BOTANY

Unnamed Peruvian Plant Has Record Chromosomes

➤ FIVE HUNDRED AND TWENTY chromosomes have been found in an unnamed plant discovered growing on Inca ruins in Peru.

Prof. Charles H. Uhl of the New York State College of Agriculture at Cornell University was sent the plant from Peru. He counted the chromosomes, which help determine heredity, and announced the plant had more than any other flowering species known.

The blue-green plant, a member of the genus *Echeveria*, will probably be around for a long time. Cornell scientists said that the plant's large numbers of chromosomes might give it a better chance of surviving an atomic war than most other living things.

• Science News Letter, 78:157 September 3, 1960

CONSERVATION

Rules Eased on Hunting Birds Over Seeded Land

➤ MIGRATORY BIRDS will be fair game during this fall's hunting season over planted or harvested agricultural lands.

Effective Sept. 1, the U. S. Department of the Interior has relaxed its restrictions on hunting methods because of late fall plantings. Under the previous rules, hunters could engage in shoots only over agricultural land on which seed might have been scattered as a result of harvesting. Unaware of fall plantings, many hunters unwittingly were violating the limited regulation.

• Science News Letter, 78:157 September 3, 1960

PUBLIC HEALTH

Red Cross to Aid School-age Chileans

➤ A LONG-RANGE PROGRAM to aid Chilean children who suffered from the earthquake disaster that rocked the nation last May and June has been announced by the American Red Cross.

As a part of the continuing Red Cross assistance to the stricken nation, a \$500,000 relief program has been undertaken to assist school-age Chileans. One of the main under-

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takings is a \$30,000 project to provide \$15 a month for a period of five months to 400 of the neediest students at the University of Concepcion and the University of Austral in Valdivia.

Another project will give Chilean schools in the devastated area 150 school assistance units, chests containing educational supplies, health and sanitary items, tools and recreational equipment. These units are designed so that the export packing cases can be converted into bookcases or storage cabinets.

These and several other projects are in addition to the aid—\$2,000,000 in cash and \$700,000 worth of supplies—already extended by the Red Cross to Chile.

• Science News Letter, 78:157 September 3, 1960

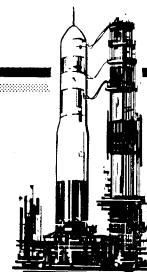
Questions

ASTRONOMY—What is the "suburban" population of stars in a galaxy? p. 147.

PSYCHIATRY—What are some of the elements of the psychic constitution of the swindler? p. 153.

TECHNOLOGY—Why would salt water be used to collect solar power? p. 149.

Photographs: Cover, Boing Airplane Company; p. 147, U. S. Air Force; p. 149, General Dynamics Corporation; p. 151, Minnesota Mining and Manufacturing Co.; p. 154, Courtesy of David J. Wilson, Jr.; p. 160, Solar Products.



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