

Books of the Week

For the editorial information of our readers, books received for review since last week's issue 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. Request free publications direct from publisher, not from Science Service.

AIR CONDITIONING, REFRIGERATING, DATA BOOK: Applications Volume—Willis R. Woolrich, Ed. in Chief—*American Society of Refrigerating Engineers*, 6th ed., 1,100 p., illus., \$10.00, plus postage. Of particular interest to engineers, architects and students.

ALCHEMY—E. J. Holmyard—*Penguin*, 281 p., illus., paper, 85 cents. The forerunners of modern nuclear physicists were changing one substance into another in China four centuries before the birth of Christ.

AMERICAN FAMILIES—Paul C. Glick—*Wiley*, Social Science Research Council in cooperation with the Bureau of the Census, Census Monograph Series, 240 p., illus., \$6.00. A demographic analysis based on the 1950 census.

BLUEPRINT READING—Chief, Naval Air Technical Training and Bureau of Naval Personnel—*Arco*, 242 p., illus., \$3.00. A basic reference book for men whose duties require a knowledge of blueprint reading and layout work.

THE BOOK OF KNOWLEDGE ANNUAL 1957—Louise McDowell, Ed. in Chief—*Grolier Society*, 420 p., illus., \$7.50. A total of 95 specialists write on as many timely topics in this annual for young people of all ages.

CHEMISTRY: The Conquest of Materials—Kenneth Hutton—*Penguin*, 228 p., illus., paper, 85 cents. A small book for the layman on the materials used by chemists and what they can make out of them.

CONNECTIVE TISSUE IN HEALTH AND DISEASE—G. Asboe-Hansen, Ed.—*Philosophical Library*, 321 p., illus., \$15.00. The work of 23 prominent contributors from different parts of the world.

DAIRY MICROBIOLOGY—Edwin M. Foster, F. Eugene Nelson, Marvin L. Speck, Raymond N. Doetsch and Joseph C. Olson, Jr.—*Prentice-Hall*, 492 p., illus., \$5.65. Intended as a college text and for reference use by dairy plant operators, fieldmen, laboratory personnel and sanitarians.

ENCYCLOPEDIA OF ROSES AND ROSE CULTURE—H. Champneys, Ed., revised by Carl L. Withner—*Prentice-Hall*, 226 p., illus., \$7.50. All about the selection and care of roses for the gardening enthusiast.

EVALUATION OF MINE DRAINAGE WATER—S. A. Braley—*Mellon Institute*, 3 p., paper, free upon request direct to publisher, 4400 Fifth Avenue, Pittsburgh 13, Pa. Drainage from coal mines, the author points out, is probably the most serious water pollution problem today.

EXTRACLASST ACTIVITIES IN AVIATION, PHOTOGRAPHY, RADIO FOR SECONDARY SCHOOL PUPILS: Suggestions for School Administrators and Sponsors—Willis C. Brown—*Govt. Printing Office, Office of Education*, 48 p., illus., paper, 25 cents. Two of the fields of interest reported on here are on the Bureau of Labor Statistics' list of disciplines having critical personnel shortages.

FLOTATION—A. M. Gaudin—*McGraw-Hill*, 2d ed., 573 p., illus., \$12.50. Vast changes that have come to the art of flotation since publication of the first edition have necessitated complete rewriting. Flotation is now a widely used process for the separation or concentration of materials.

THE GALATHEA DEEP SEA EXPEDITION 1950-1952—Anton F. Bruun, Sv. Greve, Hakon Mielche and Ragnar Sparck, Eds., translated from the Danish by Reginald Spink—*Macmillan*,

296 p., illus., \$8.00. The story of a marine-biological world expedition told by the scientists themselves, describing the wonders they found on a trip around the world to all the Seven Seas.

GENERAL GEOGRAPHY FOR COLLEGES—O. D. Von Engel and Bruce Carlton Netschert—*Harper*, 681 p., illus., maps by Clare M. O'Gorman, cartographer—\$7.50. The hope of the authors is to promote geographic literacy. The book begins with a survey of the landmarks of the world, a birdseye view of the chief physical features.

INSECTS: A Guide to Familiar American Insects—Herbert S. Zim and Clarence Cottam—*Simon and Schuster*, rev. ed., *A Golden Nature Guide* sponsored by the Wildlife Management Institute, 160 p., illus. by James Gordon Irving, paper, \$1.00, cloth, \$1.95. To help the novice collector identify and understand his specimens to the problems."

INTRODUCTION TO OPERATIONS RESEARCH—C. West Churchman, Russell L. Ackoff and E. Leonard Arnoff and others—*Wiley*, 645 p., illus., \$12.00. An introductory textbook not requiring a high degree of mathematical maturity. Operations research is tentatively defined as "the application of scientific methods, techniques, and tools to problems involving the operations of a system so as to provide those in control of the system with optimum solutions to the problems."

THE JOURNAL OF SOLAR ENERGY SCIENCE AND ENGINEERING: Volume 1, Number 1, January 1957—Jean Jensen, Ed.—*Association for Applied Solar Energy*, 64 p., illus., paper, \$10.00 per year. Carrying original papers on all aspects of solar energy, as well as brief abstracts of significant papers which have appeared elsewhere and resumes of solar activities throughout the world.

LEAPER: The Story of an Atlantic Salmon—Robert M. McClung—*Morrow*, 64 p., illus. by the author, \$2.25. Telling for children the story of the life cycle of a salmon from his hatching from a pale pink egg to his return to his birthplace to fertilize another generation of salmon eggs.

MODERN MATHEMATICS FOR THE ENGINEER—Edwin F. Beckenbach, Ed.—*McGraw-Hill*, 514 p., \$7.50. Based on a lecture series at the University of California and including such topics as the theory of games, operations research, Monte Carlo methods and relaxation methods.

NEW AND NONOFFICIAL REMEDIES: Containing Descriptions of Drugs Evaluated by the Council on Pharmacy and Chemistry of the American Medical Association, 1957—Harold D. Kautz, Secretary of the Council—*Lippincott*, 582 p., \$3.35. Descriptions are presented under non-proprietary names with cross references under trade names.

ORGANIC SYNTHESIS: Volume 1, Open-Chain Saturated Compounds and Volume 2, Open-Chain Unsaturated Compounds, Alicyclic Compounds and Aromatic Compounds—Vartkes Migrdichian—*Reinhold*, 1822 p., \$35.00. For the serious organic chemical research worker and others engaged in organic synthesis.

PACKED THERMAL DIFFUSION COLUMNS: Effect of Changes in Annular Spacing and Packing Density—Lloyd J. Sullivan, Thomas C. Ruppel and Charles B. Willingham—*Mellon Institute*, 4 p., illus., paper, free upon request direct to

publisher, 4400 Fifth Avenue, Pittsburgh 13, Pa.

PHYSICS: A Textbook for Colleges—Oscar M. Stewart, revised by Newell S. Gingrich—*Ginn*, 6th ed., 756 p., illus., \$6.50. Introducing basic principles to beginning college students with no special mathematical training as a part of a general course in arts and sciences.

PLANT PATHOLOGY—John Charles Walker—*McGraw-Hill*, 2d ed., 707 p., illus., \$10.00. A general text describing symptoms, causes, disease cycles and control of nearly 100 representative diseases of plants.

THE PRESENT STATUS OF THE VOLCANOES OF CENTRAL AMERICA—Sharat Kumar Roy—*Chicago Natural History Museum, Fieldiana: Geology*, Volume 10, No. 28, 5 p., illus., paper, 15 cents. Discussing the circumstances under which the occasionally erupting volcanoes of Central America should be called active, when dormant, and when extinct.

PROCEEDINGS OF THE THIRD NATIONAL CANCER CONFERENCE, DETROIT, MICHIGAN, June 4-6, 1956—Lester Breslow and others—*Lippincott*, 961 p., illus., \$9.00. Report of a meeting at which some 1,698 persons gathered to exchange views and experiences.

PROFESSIONAL AMATEUR: The Biography of Charles Franklin Kettering—T. A. Boyd, foreword by Alfred P. Sloan, Jr.—*Dutton*, 242 p., illus., \$4.50. The colorful story of the life of "Boss Ket," whose inventiveness will probably be best remembered for his automobile self-starter.

REPORT ON THE ATOM: What You Should Know About the Atomic Energy Program of the United States—Gordon Dean—*Knopf*, 2d ed., 366 p., illus., \$5.00. The author, former chairman of the AEC, adds a new chapter covering significant developments since the first edition appeared.

SEMICONDUCTOR SURFACE PHYSICS—R. H. Kingston and others, Eds.—*University of Pennsylvania Press*, 413 p., illus., \$8.00. A collection of invited papers on the new semiconductors that are replacing vacuum tubes for many uses.

SNAKES AND SNAKE HUNTING—Carl Kauffeld—*Hanover House*, 266 p., illus., \$3.95. The author recounts his own experiences in the chase after such unusual game and, he assures us, has added no embellishment or fiction to his tales.

TOWARD OUTER SPACE—Franklyn M. Branley—*Alumni Publications (Home Education Council)*, 14 p., illus., paper, 25 cents. Brief description of the proposed earth satellites and rocket space travel.

WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY ANNUAL REPORT 1956—Hudson Hoagland, Gregory Pincus and Ralph I. Dorfman, Co-Directors—*Worcester Foundation*, 51 p., illus., paper, free upon request direct to publisher, 222 Maple Avenue, Shrewsbury, Mass. Summarizing, for non-scientists, the interesting activities of the Foundation during the year.

Science News Letter, March 23, 1957

Younger hens in the prime of health lay eggs with thicker whites and firmer shells than when they become older.

A pneumatic crash pillow is a rubberized nylon bag weighing less than two pounds to be stowed, deflated, in the back of airplane seats.

Witchweed attacks the roots of corn plants, causing yellowing of the foliage and severe stunting.