

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.

ADVANCES IN HETEROCYCLIC CHEMISTRY, Vol. 1—A. R. Katritzky, Ed.—Academic Press, 476 p., diagrams, \$15. Authoritative review articles covering heterocyclic chemistry from both theoretical and practical points of view.

AEROSPACE, Vol. 1, No. 1, March 1963—Burton E. English, Ed.—Aerospace Industries Assn. of Am., 24 p., illus., paper, quarterly, free upon request direct to publisher, 1725 De Sales St., N.W., Washington 6, D. C. About projects, skills, personnel and developments in the space industry.

AFRICAN MYTHS AND LEGENDS—Kathleen Arnott—Walck, H. Z., 211 p., illus. by Joan Kiddell-Monroe, \$4. Retold in English from verbal recordings by natives.

AMERICAN DRUG INDEX 1963—Charles O. Wilson and Tony Everett Jones—Lippincott, 7th ed., 819 p., \$6.75. Alphabetical list of generic and brand names with pertinent data of chemical names, manufacturer, pharmaceutical forms, size, dosage and use.

THE ASIANS: Their Heritage and Their Destiny—Thomas Welty—Lippincott, 344 p., illus., maps, \$4.95. Concise introduction to contemporary Asia.

BIRTH DEFECTS—Morris Fishbein, Ed.—Lippincott, 335 p., illus., \$5. Written by specialists, treats frequency, causes and effects, general genetics, borderline cases, specific abnormalities, and mental retardation, in language the layman can understand.

COYOTE, COME HOME—B. F. Beebe—McKay, 142 p., illus. by Larry Toschik, \$3.75. Nature story.

EDUCATION DIRECTORY, 1962-1963, Part 3: Higher Education—OE (GPO), 221 p., paper, 75¢. State-by-state listing of universities and colleges, including junior colleges, with data and names of officers.

ELECTRON SCATTERING AND NUCLEAR AND NEUTRON STRUCTURE: A Collection of Reprints with an Introduction—Robert Hofstadter—Benjamin, 690 p., diagrams, \$10; paper, \$6.95. Articles selected by Nobelist for their historical interest, importance of subject matter, usefulness and clarity of exposition.

EXPLORING BIOLOGY—Tad Harvey—Doubleday, 121 p., illus. by Lee J. Ames, \$2.95. About the quest of biologists trying to find out about life and its development on earth.

EXPLORING THE ATMOSPHERE—G. M. B. Dobson—Clarendon Press (Oxford Univ. Press), 188 p., diagrams, \$3.40. Describes present knowledge and current research in the areas of temperature, humidity and density of the upper atmosphere, thunderstorms, ozone, solar activity, auroras and Van Allen belts, in nontechnical language.

FEDERAL AID TO SCIENCE EDUCATION: Two Programs—Paul E. Marsh and Ross A. Gortner—Syracuse Univ. Press, 97 p., paper, \$1.75. Describes and analyzes the programs of the Physical Science Study Committee and the National Defense Education Act as an essay into the politics of school curriculum in science.

FLEXIBILITY IN THE UNDERGRADUATE CURRICULUM—Charles C. Cole, Jr. with Lanora G. Lewis—OE (GPO), 57 p., paper, 25¢. Discusses typical practices in 13 institutions.

FROM THE TURTLE TO THE NAUTILUS: The Story of Submarines—Edwin P. Hoyt—Little, 134 p., illus. by Charles Geer, \$3.50. The development and hazards of the submarine, told dramatically for boys.

THE GARDEN IN THE PLAINS—Agnes W. Harler—Oxford Univ. Press, 4th ed., 480 p., illus., \$6. A practical, standard work on gardening in a tropical climate, India.

GENETIC SELECTION IN MAN: Third Macy Conference on Genetics—William J. Schull, Ed.—Univ. of Mich. Press, 355 p., diagrams, \$10. On the role of natural selection in population genetics, genetic systems involved in disease susceptibility, and agents of disease and genetically controlled variations in virulence.

INDEX NOMINUM LICHENUM: Inter annos 1932 et 1960 divulgatorum—I. Mackenzie Lamb—Ronald, 809 p., \$16. Continuation of Zahlbruckner's CATALOGUS LICHENUM UNIVERSALIS, attempts to list all lichen names from "Abrothallomyces" to "Zschackea nigrescens."

INVERTEBRATE ZOOLOGY—Robert D. Barnes—Saunders, 632 p., illus., \$10. Textbook for graduate course, presents invertebrate groups systematically, each chapter treats a phylum, a class or a group of related phyla or classes.

LITTLE SCIENCE, BIG SCIENCE—Derek J. de Solla Price—Columbia Univ. Press, 119 p., diagrams, \$4.50. In appraising the impact of the explosive growth of the scientific establishment, scientist deals statistically with the general problems and the ground rules governing its growth and behavior.

THE LIVING SEA—Jacques-Yves Cousteau with

James Dugan—Harper, 325 p., photographs, \$6.50. Story of deep-sea exploration, using the oceanographic ship Calypso and new techniques in underwater investigations of ancient wrecks.

MAN AND ENERGY—A. R. Ubbelohde—Penguin Bks., 124 p., illus., paper, \$1.25. Surveys the growth of human power over energy from prehistoric domestication of slaves and animals to the modern control of the atomic bomb.

THE MANAGEMENT OF THE ANXIOUS PATIENT—Ainslie Meares—Saunders, 493 p., \$9. A practical account, intended for the general practitioner and others who have professional dealings with the anxious patient.

MANUAL OF VASCULAR PLANTS OF NORTH-EASTERN UNITED STATES AND ADJACENT CANADA—Henry A. Gleason and Arthur Cronquist—Van Nostrand, 810 p., \$11.75. Text-reference manual for the identification of standard flora including ferns, grasses, trees, weeds and wild flowers.

MATHEMATICAL DIVERSIONS—J. A. H. Hunter and Joseph S. Madachy—Van Nostrand, 178 p., diagrams, \$4.95. Recreational mathematics for those who enjoy the relationships and patterns of numbers and geometrical figures.

MEDICAL GENETICS—Widukind Lenz, transl. from German by Elisabeth F. Lanzl—Univ. of Chicago Press, 218 p., illus., \$6.50. Introduction to human genetics for physicians and medical students, relating the study of human genetics to other sciences, such as biochemistry and cytology.

METHODS OF EXPERIMENTAL PHYSICS, Vol. 5: Nuclear Physics, Part B—Luke C. L. Yuan and Chien-Shiung Wu, Eds.—Academic Press, 886 p., diagrams, \$22.50. On methods for the determination of fundamental physical quantities, sources of nuclear particles and radiation, beam transport systems, and statistical fluctuations of nuclear processes.

THE MISEDUCATION OF AMERICAN TEACHERS—James D. Koerner, introd. by Sterling M. McMurrin—Houghton, 360 p., \$4.95. Based on a two-year study, the author assesses and criticizes the quality of teacher preparation in schools of education and teachers' colleges.

MOSAICS: Design Construction and Assembly—Robert Williamson—Lockwood (Hearthside Press), 103 p., photographs, \$6.95. Instruction in method and design.

NATURE ADIRUF: The Story of Marine Plankton—James Fraser—Dufour Editions, 178 p., photographs, illus., \$8.95. Introduces the reader to underwater exploration of the world of phytoplankton and zooplankton, planktonic larvae, their geographic and seasonal distribution and the food chain.

NERVE CELLS AND INSECT BEHAVIOR—Kenneth D. Roeder—Harvard Univ. Press, 188 p., illus., \$4.75. Neurophysiological studies of insects, describing the author's experiments with moth, cockroach and praying mantis.

NINE CHAINS TO THE MOON—R. Buckminster Fuller—Southern Ill. Univ. Press, 375 p., diagrams, \$7; paper, \$2.45. Reprint (1938), of thoughts and speculations by the inventor of the Geodesic dome.

NOISE AND FLUCTUATIONS: An Introduction—D. K. C. MacDonal—Wiley, 118 p., \$6.50. Discusses broad principles of fluctuation phenomena and Brownian movement, correlation, frequency spectrum and distribution function, and noise in electric currents.

THE ORGANIC CONSTITUENTS OF HIGHER PLANTS: Their Chemistry and Interrelationships—Trevor Robinson—Burgess, 306 p., \$6.75. Directed primarily towards botanists and pharmaceutical chemists, book presents the chemistry rather than the biochemistry of compounds.

OUTLINES OF BIOCHEMISTRY—Eric E. Conn and P. K. Stumpf—Wiley, 391 p., diagrams, \$8.75. One-semester course in general biochemistry for advanced undergraduates and first-year graduate students.

THE PHOTOSYNTHESIS OF CARBON COMPOUNDS—Melvin Calvin and J. A. Bassham—Benjamin, 127 p., illus., \$6. Reviews the evidence leading to the formulation of the carbon reduction cycle, discusses its quantitative importance and describes the biosynthetic pathways believed to exist in the chloroplast.

PLAY MATHEMATICS—Harry Langman—Hafner Pub. Co., 216 p., illus., \$4.95. Offers many exercises, problems and puzzles in algebra, geometry, letter and skeleton divisions, line problems, visualization and numerical methods of analysis.

POPULAR SCIENCE ENCYCLOPEDIA OF THE SCIENCES—William B. Sill and Norman Hoss, Eds.—Popular Science (Doubleday), 762 p., illus., \$9.95; thumb-indexed \$10.95. Single reference volume of more than 4,000 entries for the general reader

and student, with fact-finder index and special study guide, includes 350 biographies of scientists.

PRINCIPLES OF MAGNETIC RESONANCE with Examples from Solid-State Physics—Charles P. Slichter—Harper, 246 p., diagrams, \$8.25. Introductory text in nuclear and electron magnetic resonance intended for research workers employing resonance.

PROCEDURES FOR ROUTINE LABORATORY DIAGNOSIS OF VIRUS AND RICKETTSIAL DISEASES—S. S. Kalter—Burgess, 106 p., illus., \$5. Laboratory manual describes methods and procedures that have been found satisfactory in the performance of routine laboratory diagnosis.

PROCEEDINGS OF THE FOURTH ALL-UNION CONFERENCE ON SEMICONDUCTOR MATERIALS—N. Kh. Abriskosov, Ed., transl. from Russian—Consultants, 139 p., paper, illus., \$17.50. Russian text was published by USSR Academy of Sciences in Moscow, 1961.

PROFILE OF KENYA—Leonard S. Kenworthy—Doubleday, 128 p., photographs, \$2.95. Provides a vivid and short description of this East African country today.

PROFITABLE TELEVISION TROUBLESHOOTING: A step-by-step guide to efficient, professional servicing of black-and-white and color television receivers—McGraw, 2nd ed., 418 p., illus., \$7.25. Brought up-to-date, with new chapter on remote control.

SELF-ORGANIZING SYSTEMS, 1962—Marshall C. Yovits, George T. Jacobi and Gordon D. Goldstein—Spartan Bks., 563 p., \$12. Proceedings of conference held in 1962, concerned primarily with the evolution of artificial self-organizing information systems.

A SHORT HISTORY OF SCIENCE AND SCIENTIFIC THOUGHT with Readings from the Great Scientists from the Babylonians to Einstein—F. Sherwood Taylor—Norton Lib., 368 p., illus., paper, \$1.85. Reprint (1949), tells the story of man's conquest of matter from the application of the lever to the splitting of the atom.

THE SOLAR CORONA—John W. Evans, Ed.—Academic Press, 344 p., illus., \$14. Proceedings of International Astronomical Union Symposium, 1961, presenting papers on local physics of corona, coronal phenomena and larger aspects of the corona.

TALENT AND TOMORROW'S TEACHERS: The Honors Approach—Lanora G. Lewis with J. Ned Bryan and Robert Poppendieck—OE (GPO), 83 p., paper, 35¢. Explores the potentialities of the honors approach in relation to high ability students who are preparing to teach.

TASTY ADVENTURES IN SCIENCE—Sally Fox—Lantern Press (N.Y.), 64 p., illus. by Kim Chesley, \$2.95. Entertaining, simple experiments for young children, all involving something to eat or drink and demonstrating some scientific principle.

THEORETICAL ELECTROMAGNETISM—R. H. Atkin—Wiley, 260 p., \$9. For students of theoretical physics, treats in a concise manner electrostatics, magnetostatics and the electromagnetic field.

THE THIRD WORLD: The Unaligned Countries and the World Revolution—Mario Rossi—Funk, 209 p., \$4. Informed and readable background material on the attitudes of the neutralist nations.

THE TIME HAS COME: A Catholic Doctor's Proposals to End the Battle over Birth Control—John Rock, foreword by Christian A. Herter—Knopf, 216 p., \$3.95. Leading gynecologist presents the birth control controversy in detailed perspective, historically, medically and theologically, and presents the promises of research.

A TREATISE ON RADIATIVE TRANSFER—V. V. Sobolev, transl. from Russian by S. I. Gaposchkin—Van Nostrand, 319 p., \$9.75. Proposes several new methods in the theory of radiative transfer and indicates their application to the solution of astrophysical problems.

UNITED STATES NAVY AND MARINE CORPS FIGHTERS, 1918-1962—Paul R. Matt; Bruce Robertson, Ed.—Aero Publishers, 248 p., 300 photographs, illus., \$9.75. Historical story and authoritative data on naval aviation, from the first Curtiss HA of 1917 to the phantom F.H-1 jet of today.

USING PLANTS FOR HEALING: An American Herbal—Nelson Coon—Hearthside Press, 272 p., illus. by author, \$4.95. Describes 250 medicinal herbs, from "Acer" to "Vitis," short history of herbal medicines, glossary, index of scientific and common names.

VANISHING ANIMALS: Preserving Nature's Rarities—Philip Street—Dutton, 232 p., photographs, \$4.50. About the problem of fauna preservation, describing a wide variety of rare animals from the great auk to the Komodo dragon.

THE WISDOM OF THE BODY—Walter B. Cannon—Norton, 333 p., diagrams, paper, \$1.95. Reprint (1939), deals with investigations of self-regulating physiological processes.

YOUR CAREER IN ELECTRONICS—Harry Edward Neal—Messner, 191 p., photographs, \$3.95. About the opportunities and requirements for a career as an electronics engineer and specialist.

• Science News Letter, 83:268 April 27, 1963