

• 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.

ADMIRAL ARLEIGH (31-Knot) BURKE: The Story of a Fighting Sailor—Ken Jones and Hubert Kelley, Jr.—Chilton Co., 203 p., photographs, \$7.50. Life story of the professional naval officer who through three unprecedented terms as Chief of Naval Operations was responsible for the Navy's technical development.

ADVANCES IN COMPUTERS, Vol. 3—Franz L. Alt and Morris Rubinoff, Eds.—Academic Press, 361 p., \$12. Treats computation of satellite orbits, multi-programming, alternating direction implicit methods, and information technology and the law.

AFGHANISTAN: Its People, Its Society, Its Culture—Donald N. Wilber with others—HRAF Press (Taplinger), 320 p., photographs, \$8.75. Collation and synthesis of the most authoritative materials available on the country, including tables and bibliography.

THE AMERICAN EPHEMERIS AND NAUTICAL ALMANAC for the Year 1964—Nautical Almanac Office—GPO, 520 p., \$3.75. Basic calculations and data on sun, moon, planets, stars, eclipses, and miscellaneous tables.

ANALYTICAL STANDARDS FOR TRACE ELEMENTS IN PETROLEUM PRODUCTS—H. S. Isbell and others—NBS (GPO), 23 p., paper, 25¢. Discusses the National Bureau of Standards' work and experimental procedures in selecting stable, oil-soluble, organic compounds for use in spectrographic analysis.

ASTRONOMY OF THE 20th CENTURY—Otto Struve and Yel'ta Zelbergs—Macmillan, 544 p., photographs, diagrams, \$12.50. Describes by means of specific examples some of the great advances made by astronomers, including chapters on photometry, radio astronomy, double stars, exploding stars and interstellar matter.

AUTOMATION AND THE CHALLENGE TO EDUCATION—Luther H. Evans and George E. Arnstein, Eds.—Nat. Educ. Assn., 190 p., illus., paper, \$4. Papers and discussions of a symposium on the educational implications of automation.

BEGINNER'S GUIDE TO THE SKIES—R. Newton Mayall and Margaret W. Mayall—Cornerstone, rev. ed., 183 p., star maps, paper, \$1. Tells beginners how to understand and enjoy what they can see in the night sky.

BIOPHYSICS: Concepts and Mechanisms—E. J. Casey—Reinhold, 335 p., illus., \$7.95. Intended as a substantial introduction into biophysics for the student of biological sciences.

CLASSICS IN LOGIC: Readings in Epistemology, Theory of Knowledge and Dialectics—Dagobert D.

Runes, Ed.—Philosophical Lib., \$18 p., \$10. A compilation of statements by logicians, from Peter Abailard to Jacob Zabarella, with short introductions.

CLEAR THINKING—Hy Ruchlis—Harper, 307 p., photographs, cartoons, \$3.95. A practical, simplified explanation of science versus superstition, of logical reasoning and the nature of opinions.

CONSERVATION FOR EVERY MAN—Grace E. Barstow Murphy, Ed.—Brooklyn Botanic Garden, 64 p., illus., paper, \$1. Handbook of ideas for preserving soil, water, trees, wetlands, wildlife and natural areas.

CONTINENTAL DRIFT—S. K. Runcorn, Ed.—Academic Press, 338 p., illus., \$12. Brings together in one volume a discussion by experts of the geophysical evidence relating to horizontal movements in the earth's crust, from palaeoclimatology to sea-floor spreading.

CONTRIBUTIONS TO ORDER STATISTICS—Ahmed R. Sarhan, Ed., and Bernard G. Greenberg—Wiley, 452 p., \$11.25. Presents mathematical and theoretical foundations and specific applications of order statistics.

CREEP IN STRUCTURE: Colloquium held at Stanford University, 1960—Nicholas J. Hoff, Ed.—Academic Press, 375 p., \$15. Contains papers and discussion of Colloquium organized by the International Union on Theoretical and Applied Mechanics.

CRYOGENIC GAS DATA CHARTS—Based on data from NBS—Air Products & Chemicals, wallet or regular size card charts, single copies free upon request direct to publisher, Allentown, Pa. Lists low temperature physical properties of gases, and weight and volume equivalents of oxygen, nitrogen, air, helium, argon and hydrogen.

DRUGS IN PSYCHOANALYSIS AND PSYCHOTHERAPY—Mortimer Ostow—Basic Bks., 348 p., \$8.50. The author demonstrates his use of drugs to facilitate therapy and points out criteria for selecting the proper drug.

FIFTH TISSUE HOMOTRANSPLANTATION CONFERENCE—John Marquis Converse and Blair Oakley Rogers, Eds.—N.Y. Acad. of Sciences, Annals, Vol. 99, Art. 3, 607 p., illus., paper, \$5. Papers on the role of the lymphoid system in reaction of graft, cellular and serum antibodies in tissue transplantation, and experiments with organ transplantation.

FRONTIERS IN BRAIN RESEARCH—John D. French, Ed.—Columbia Univ. Press, 285 p., illus., \$9. On the development of brain research institutes, on current research in neuropathology and neuroendocrinology, and new aspects of brain functions.

HERMANN OBERTH: Father of Space Travel—Helen B. Walters, introd. by Hermann Oberth—Macmillan, 169 p., illus., \$4. Sympathetic study of the rocket scientist, for young people.

THE HIDDEN HEART OF BAJA—Erie Stanley Gardner—Morrow, 256 p., photographs, \$7.50. A dramatic account of exploring Indian caves with pictographs in a remote region of Southern California.

IN NAVAJO LAND—Laura Adams Armer—McKay, 107 p., photographs by the author and Sidney and Austin Armer, \$3.95. A personal record of life among the Navajo Indians.

INSECTS AND THEIR WORLD—Harold Oldroyd—Univ. of Chicago Press, 139 p., illus., paper, \$1.95. Entomologist's account of the orders and their classification, of how insects live and how they fit into the animal kingdom, in nontechnical language.

LECTURES ON THE MANY-BODY PROBLEM—E. R. Caianiello, Ed.—Academic Press, 344 p., \$10.50. Advanced research on specific problems, such as ground state theory of imperfect Fermi gases and theory of normal Fermion systems.

LIFE: Origin and Development—Gosta Ehrensvar—Univ. of Chicago Press, 164 p., diagrams, \$4.50.

Brief exposition of the chemical activity in cells and organisms underlying different manifestations of life, based on present knowledge of biochemistry, geochemistry, paleontology, zoology and chemistry.

MAN AND SOCIETY IN DISASTER—George W. Baker and Dwight W. Chapman, foreword by Carlyle F. Jacobsen—Basic Bks., 442 p., \$10. Scholarly review of scientific studies exploring human behavior under stress in natural and man-made disasters.

MATHEMATICAL METHODS IN SMALL GROUP PROCESSES—Joan H. Criswell, Herbert Solomon and Patrick Suppes, Eds.—Stanford Univ. Press, 361 p., \$9.75. Papers represent varied sampling of mathematical methods applied to problems of interpersonal behavior in small groups.

MATTER AND ANTIMATTER—Maurice Duquesne—Collier, 127 p., diagrams, paper, 95¢. Reprint (1960).

MEN OF SPACE: Profiles of the Leaders in Space Research, Development and Exploration, Vol. 5—Shirley Thomas—Chilton Co., 300 p., photographs, \$4.95. Includes profiles of John H. Glenn, Jr., Homer E. Newell, Charles H. Townes and others.

MEXICO—Michael D. Coe—Praeger, 245 p., photographs, illus., maps, \$6.95. About the ancient people and places, from this, birds, mollusks, crustaceans and other creatures of the sea, commonly available to the nature photographer.

MODERN COMMUNICATION COURSE, Vol. 2: AM Modulation Systems—Edward M. Noll—Sams, 256 p., illus., paper, \$4.95. A practical course designed to serve as a self-study guide.

MULTIPLE SCLEROSIS: New Hope in an Old Mystery—Jules Saltman—Public Affairs Committee, Pamphlet No. 335, 28 p., illus., by Dick Shelton, paper, 25¢ direct to publisher, 22 E. 38th St., New York 16, N.Y. Summarizes the state of research on MS.

THE NARCOTIC ADDICTION PROBLEM—Charles Winick—Am. Social Health Assn., 22 p., illus., paper, 15¢ direct to publisher, 1790 Broadway, New York 19, N.Y. On the extent of the problem, its prevention and treatment.

NATURE STUDY AT THE SEASHORE: Exploring with Your Camera—Percy A. Morris—Ronald, 204 p., photographs, \$6. Describes the location and habits of seaweeds, birds, mollusks, crustaceans and other creatures of the sea, commonly available to the nature photographer.

NOBEL: The Man and His Prizes—H. Schueck and others; Nobel Foundation, Ed.—Elsevier Pub. Co. (N.Y.), 2nd rev. ed., 690 p., illus., \$10.95. Authoritative account of the life and ideals of Alfred Nobel and the intent and awards made in the fields of literature, physiology or medicine, chemistry, physics and peace, up to 1961.

NONCONVENTIONAL TECHNICAL INFORMATION SYSTEMS IN CURRENT USE, No. 3—National Science Foundation, Ed.—Office of Science Information Service, Washington 25, D.C. Describes operational technical information systems which embody new principles or employ automatic equipment.

NUCLEAR INFORMATION, Vol. V, No. 1—Virginia Brodine, Ed.—Greater St. Louis Citizens' Committee for Nuclear Information, 14 p., illus., paper, 50¢; ten issues per year, \$5 annually; students \$2.50. Information on fallout and radiation hazards as they affect the general public.

ORGANIC SEMICONDUCTORS: Proceedings of an Inter-Industry Conference—James J. Brophy and John W. Buttrely, Eds.—Macmillan, 243 p., illus., \$9. Concise summary of experimental findings in this new field which involves both semiconductor physics and organic chemistry.

OUTLOOK 1963: Agricultural Chartbook—U.S. Dept. of Agric.—GPO, 96 p., 161 tables, paper, 60¢. Graphical presentation of U.S. agricultural production, foreign trade and commodity trends.

OXYGENASES—Osamu Hayaishi, Ed.—Academic Press, 588 p., illus., \$17.50. Summarizes present knowledge of enzymes that catalyze reactions involving the direct addition of oxygen to substrates.

PEACE CORPS VOLUNTEER, Vol. I, No. 1—Peace Corps, 24 p., illus., paper, single copies free upon request direct to Peace Corps, Washington 25, D.C. Newsletter for volunteer workers with information about Peace Corps programs around the world.

THE PENGUIN BOOK OF DOGS—Margaret Flannery, Ed.—Penguin Bks., 116 p., illus., paper, \$1.45. Handbook, informs on breeds choosing and caring for a dog, breeding and first aid.

PLAY, DREAMS AND IMITATION IN CHILDHOOD—Jean Piaget, transl. by C. Gattegno and F. M. Hodgson—Norton, 296 p., paper, \$1.85. Reprint (1951).

THE PROFESSIONAL SCIENTIST: A Study of American Chemists—Anselm L. Strauss and Lee Rainwater with others—Aldine, 282 p., \$6. Results of the first large-scale sociological study, reflecting the different occupations of the 90,000 members of the American Chemical Society.

PROGRAMED INSTRUCTION FOR SCHOOLS AND INDUSTRY—J. L. Hughes—Science Res. Assoc., 239 p., illus., \$6. Written in nontechnical language, book is intended as a guide explaining es-



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RADIOACTIVE FALLOUT: A Bibliography of the World's Literature—William E. Bost—AEC (OTS), 221 p., paper, \$3. Lists 1,523 references to recent reports, articles and other literature on radioactive materials produced by nuclear explosions.

RADIOISOTOPES IN WORLD INDUSTRY: Abstracts of Selected Foreign Literature—AEC, Div. of Tech. Information—GPO, 131 p., paper, \$2.50. Contains 569 abstracts of articles which, in general, were printed in languages other than English.

RELATIVITY FOR THE MILLION—Martin Gardner—Macmillan, 182 p., illus. by Anthony Ravielli, \$6.95. Explores the world of Einstein's special and general theory with a minimum of mathematics, explaining such terms as the twin paradox, Mach's principle, and gravity and space time.

RENDEZVOUS IN SPACE: The Story of Projects Mercury, Gemini, Dyna-Soar and Apollo—Martin Caidin—Dutton, 320 p., illus. by Fred L. Wolff, photographs, \$4.95. Reviews the U.S. manned space program for the general reader.

RESIDUE REVIEWS: Residues of Pesticides and Other Foreign Chemicals in Foods and Feeds, Vol. 1—Francis A. Gunther, Ed.—Academic Press, 162 p., illus., \$6.50. International in scope, book provides concise, critical reviews of advanced research on plant-protecting and animal pest-control chemicals, as well as food additives.

THE ROCKEFELLER FOUNDATION: Program in the Agricultural Sciences, Annual Report 1961-1962—Rockefeller Foundation, 335 p., illus., paper, single copies free upon request direct to publisher, 111 W. 50th St., New York 20, N.Y. Reports in detail on agricultural programs supported by the Foundation in Mexico, Colombia, Chile, India and on the Inter-American food crop improvement program.

THE SEED, GERMINATION AND SEEDLING OF YUCCA—Howard J. Arnot—Univ. of Calif. Press, 163 p., illus., 33 plates, paper, \$3.50. Detailed study based on materials collected by the author in their native habitats.

SHORE AND SEA BOUNDARIES: With Special Reference to the Interpretation and Use of Coast and Geodetic Survey Data, Vol. 1—Aaron L. Shalowitz—Coast & Geodetic Survey (GPO), 420 p., illus., \$3.50. Treats boundary problems associated with the submerged lands cases.

A SHORT HISTORY OF SOCIOLOGY—Heinz Maus—Philosophical Lib., 226 p., \$6. An account of the growth of sociology from early beginnings in Europe to world-wide sociology today.

SMITHSONIAN INSTITUTION: Annual Report of the Board of Regents—Leonard Carmichael, Sec.—GPO, 579 p., illus., \$4.25. Secretary's report on branch operations and research papers on life in the universe, satellite tracking program, drilling beneath the sea, evasion of bats by moths, and skull of Shanidar II.

SPACE RESEARCH AND TECHNOLOGY: Proceedings of Symposia Sponsored by the British Interplanetary Society—G. P. Thomson, Ed.—Gordon & Breach (N.Y.), 216 p., illus., \$5.95. Covers space medicine, rocket and satellite instrumentation, pressure suits, space navigation and liquid hydrogen symposia.

STARS AND GALAXIES: Birth, Ageing and Death in the Universe—Thornton Page, Ed.—Prentice-Hall, 163 p., illus., \$4.50; paper, \$1.95. Experts present in simple terms areas of present astronomical research.

STATISTICAL MANAGEMENT OF INVENTORY SYSTEMS—Harvey M. Wagner—Wiley, 235 p., \$8.95. A mathematical approach to problems of management control of complex systems.

STORIES FROM SCIENCE, Book 1: Chemistry; Book 2: Physics—A. Sutcliffe and A. P. D. Sutcliffe—Cambridge Univ. Press, 141 p., 167 p., illus. by Robert Hunt, \$2.75 each. Short stories, each dealing with an event in the history of science, for young people.

STORY SEQUENCE ANALYSIS: A New Method of Measuring Motivation and Predicting Achievement—Magda B. Arnold—Columbia Univ. Press, 287 p., \$7.50. Presents a method of analyzing stories for the purpose of psychological diagnosis, a useful aid for discovering positive and negative motivation in normal people.

STRENGTHENING MECHANISMS IN SOLIDS—W. R. Hibbard, Jr. and others—Am. Soc. for Metals, 416 p., 236 photographs, diagrams, \$15. Discusses major advances in understanding the hardening and strengthening of metals.

THE THOUGHTS OF THOREAU—Selected with biographical foreword by Edwin Way Teale—Dodd, 311 p., \$3.75. Thoughts on nature, on day and night, on science, on sounds and silence, and other observations.

TOTEM AND TABOO: Some Points of Agreement between the Mental Lives of Savages and Neurotics—Sigmund Freud, transl. by James Strachey—Norton, 172 p., paper, \$1.25. Reprint (1960).

U.S. BOMBERS: B-1-B70—Lloyd S. Jones—Aero Pubs., 237 p., illus., \$7.75. Intended to show the development of the American bomber from the XB-1 biplane in 1928, to the B-70 Valkyrie tri-sonic provisional model.

THE UNIVERSE WE LIVE IN—John Robinson, introd. by Sir Harold Spencer Jones—Collier, 253 p., illus., paper, \$1.50. Reprint (1951).

THE WORLD THROUGH YOUR SENSES—Sarah R. Riedman, preface by John F. Fulton—Abelard-Schuman, rev. ed., 189 p., \$3.50. Explains in short, interesting chapters how sense organs work.

YOUR SCIENCE FAIR: An Opportunity for Youth, A Guidebook to Successful Science Exhibits—Arden F. Welte, James Dimond and Alfred Fried—Burgess, 161 p., illus., paper, \$2.95. Discusses the objectives and organization of science fairs and describes sample projects.

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• Science News Letter, 82:388 December 15, 1962

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