

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 ELECTRONICS AND ELECTRON PHYSICS, Vol. XIV—L. and Claire Marton, Eds.—*Academic Press*, 341 p., illus., \$14.20. Treats problems of photo-conductivity, hydrogen thyrons, Cerenkov radiation, and high-power axial-beam tubes.

ALIVE IN SPACE: The Science of Bio-astronautics—Robert Wells—*Little*, 180 p., illus. by Robert Curran, \$3.75. Discusses for young people space instruments, weightlessness, living in space and training for space.

ATLAS OF HUMAN ANATOMY—Franz Frohse, Max Brodel and Leon Schlossberg—*Barnes & Noble*, rev. 6th ed., 180 p., illus., paper, \$2.95. Describes the human body through charts, standard guidebook for nurses, doctors, students and general reader.

ATOMS AND MEN—Louis Leprince-Ringuet, transl. from French by Elaine P. Halperin—*Univ. of Chicago Press*, 118 p., \$3. French atomic energy commissioner writes about science, its process, and the intellectual material conditions it needs to thrive.

AUTHIGENIC MINERALS IN SEDIMENTARY ROCKS—G. I. Teodorovich, transl. from Russian—*Consultants Bur.*, 120 p., illus., \$22.50. Treats in detail characteristics, conditions of formation and classification of authigenic, principally syngenetic, minerals.

BEHAVIOR MECHANISMS IN MONKEYS—Heinrich Kluever, introd. by K. S. Lashley—*Univ. of Chicago Press*, 387 p., illus., paper, \$1.95. First published in 1933, is a classic on the neurophysiology of behavior.

BIBLIOGRAPHY OF FOSSIL VERTEBRATES, 1949-1953—C. L. Camp and H. J. Allison—*Geological Soc. of Am.*, 532 p., \$8.25. Complete index of publications in vertebrate paleontology and paleoanthropology, author catalogue, subject index and systematic index.

CELL HEREDITY—Ruth Sager and Francis J. Ryan—*Wiley*, 411 p., illus., \$7.50. Discusses

genetics at the cellular level, for college students, general reader and scholars in disciplines other than genetics.

CHANGING VIEWS OF THE UNIVERSE—Colin A. Ronan—*Macmillan*, 206 p., illus., \$3.95. Historical sketch of the attitudes with which men have looked at the cosmos, from early civilizations to the 20th century.

CHEMISTRY FOR CHILDREN—Virginia L. Mullin—*Sterling*, 117 p., illus. by Bernard Case, \$2.95. Introduces boys and girls to the language of chemistry and laboratory techniques, and gives instructions for many experiments.

THE CHOSEN FEW: An Examination of Some Aspects of University Selection in Britain—W. D. Furneaux—*Oxford Univ. Press*, 245 p., \$4. Results of a ten-year study analyzing university student selection techniques and their functioning.

A CONCISE DICTIONARY OF ABBREVIATIONS—George Mayberry—*Tudor*, 159 p., \$3.75. List of key abbreviations in general use and in special fields.

DARWINISM AND THE STUDY OF SOCIETY: A Centenary Symposium—Michael Banton, Ed.; introd. by J. Bronowski—*Quadrangle Bks.*, 191 p., \$5. Essays based on papers read at conference held at the University of Edinburgh, 1959.

THE DEATH OF ADAM: Evolution and Its Impact on Western Thought—John C. Greene—*New Am. Lib.*, 382 p., illus., paper, 75¢. Traces the rise of the idea of evolution and the decline of the idea of creation in the century and a half from Newton to Darwin. First published in 1959.

THE DREAMS OF REASON: Science and Utopias—Rene Dubos—*Columbia Univ. Press*, 167 p., illus., \$5. Examines the influence of Bacon on the modern structure and development of science, the limits to which scientific inquiry is subject and the dilemmas of medical research.

ELEMENTARY PARTICLES—Enrico Fermi—*Yale Univ. Press*, 110 p., paper, \$1.25. Reprint, attempts to present some of the significant results of the field theories of elementary particles that can be understood without excessive mathematics.

FISHES AND HOW THEY LIVE—George S. Fichter—*Golden Press*, 54 p., illus. by Rene Martin and James Gordon Irving, 69¢. For young readers.

FLOW OF FLUIDS THROUGH POROUS MATERIALS—Royal Eugene Collins—*Reinhold*, 270 p., illus., \$12.50. Unified treatment of all aspects of all types of flow, primarily directed to petroleum engineers and to research workers.

FLUOROSIS: The Health Aspects of Fluorine Compounds—Edward J. Largent—*Ohio State Univ. Press*, 140 p., illus., \$3.50. Comprehensive, up-to-date review of research on all aspects of fluoride metabolism and its toxicology with particular reference to occupational exposure to fluorides.

FROM GALILEO TO THE NUCLEAR AGE: An

Introduction to Physics—Harvey Brace Lemon—*Univ. of Chicago Press*, 468 p., illus., paper, \$2.95. Reprint of second edition, interpreting physics non-technically, including nuclear structure, radioactivity and isotopes.

FUEL ELEMENT FABRICATION: With Special Emphasis on Cladding Materials, Vol. 2—International Atomic Energy Agency—*Academic Press*, 384 p., illus., \$10. Proceedings of a Symposium held in Vienna, May 10-13, 1960.

GUIDES TO NEWER EDUCATIONAL MEDIA: Films, Filmstrips, Phonorecords, Radio, Slides and Television—Margaret I. Rufsvold and Carolyn Guss—*Am. Lib. Assn.*, 74 p., paper., \$1.50. Guide to catalogues and lists, services of professional organizations and journals, providing information on educational audio-visual materials.

A HANDBOOK OF BIOLOGICAL ILLUSTRATION—Frances W. Zweifel—*Univ. of Chicago Press*, 131 p., illus., paper, \$1.95. To help the biologist who is not an artist and the artist who is not a biologist. Treats materials, drawing techniques, measurements, graphs and printing processes.

HIGHLIGHTS OF RESEARCH PROGRESS: Allergy and Infectious Diseases, 1960—National Institute of Allergy and Infectious Diseases—*GPO*, 71 p., paper, 30¢. Covers virus diseases, allergy-immunology, parasitic, bacterial, fungus and rickettsial diseases.

HOW TO FIX TRANSISTOR RADIOS & PRINTED CIRCUITS, Vols. 1 and 2—Leonard Lane—*Gernsback*, rev. ed., 160 p., 160 p., illus., \$9.90 per set; paper \$3.20 each, \$5.90 per set. Non-mathematical course of semiconductor fundamentals and their practical application.

HYPNOSIS IN OBSTETRICS: Obstetric Hypno-anesthesia—Ralph V. August, M.D.—*McGraw*, 160 p., 33 1/3 rpm long-playing record, \$10. Presents obstetrician's practical experiences with the use of hypnosis in obstetric care, for physician-readers.

INVESTING IN SCIENTIFIC PROGRESS, 1961-1970: Concepts, Goals and Projections—Richard H. Bolt, Ed.—*National Science Foundation*, 30 p., paper, free upon request direct to publisher, Washington 25, D. C. Describes the desirable growth of basic research and its needs during the next decade.

JOSIAH MACY, JR. FOUNDATION: A Review of Activities, 1956-1960—Willard C. Rappleye, M.D., Pres.—*Macy*, 66 p., paper, single copies free upon request direct to Foundation, 16 W. 46th St., New York 36, N. Y. Five-year review and projections of research activities.

LIFE OF THE PAST: An Introduction to Paleontology—George Gaylord Simpson—*Yale Univ. Press*, 198 p., illus., paper, \$1.45. Reprint, discusses in nontechnical terms the scope and significance of paleontology as a science concerned not only with the identification of fossils, but with the principles and interpretation of the history of life.

LIGHT WAVES AND THEIR USES—A. A. Michelson—*Univ. of Chicago Press*, 166 p., illus., paper, \$1.50. Reprint of work by first American Nobelist.

MAMMALS OF THE SOUTHWEST MOUNTAINS AND MESAS—George Olin—*Southwestern Monuments*, 126 p., illus. by Edward Bierly, \$3.25; paper, \$2. Maps, habitats and descriptions on each species of the southwest uplands.

MATHEMATICAL MACHINES. Vol. I: Digital Computers. Vol. II: Analog Computers—Francis J. Murray—*Columbia Univ. Press*, 300 p., 365 p., illus., \$12.50, \$17.50. Discusses basic principles, stressing fundamental ideas rather than engineering detail.

THE MERCK MANUAL OF DIAGNOSIS AND THERAPY—Charles E. Lyght, M.D., Ed.—*Merck Sharp & Dohme Research Labs.*, 10th ed., 1907 p., (Continued on p. 79)

RAPID CALCULATIONS

by A. H. Russell

CAN YOU —

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 - Give the cube root of 42508549 . . .
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Books of the Week

(Continued from p. 76)

illus., \$7.50. Updated and thumb-indexed handbook for physicians and their associates.

MODERN ELEMENTARY SCHOOL SCIENCE: A Recommended Sequence—Willard J. Jacobson and Harold E. Tannenbaum—*Teachers College*, 194 p., paper, \$2.25. Discusses effective elementary school science program and includes recommendations for junior high school science, and for biology, chemistry and physics in the senior high school.

NATURAL POLYMER MAN-MADE FIBRES—C. Z. Carroll-Porczyński—*Academic Press*, 303 p., illus., \$11.20. Presents results of recent scientific investigations for readers engaged in manufacture or in research and development work of organic man-made fibres.

THE NEW INTERNATIONAL YEAR BOOK: A Compendium of the World's Progress for the Year 1960—Drenka Willen, Ed.—*Funk*, 557 p., illus., \$11. Survey volume of scientific, social and political events in 1960. Section on physics contributed by Science Service.

NEW LIVES FOR OLD: Cultural Transformation—Manus, 1928-1953—Margaret Mead—*New Am. Lib.*, 460 p., photographs, paper, 75¢. Anthropologist shows what happens when a Stone Age culture comes in contact with and tries to adopt 20th century way of life. Reprint.

THE NEW SCIENCE OF GIAMBATTISTA VICO—Transl. from 3rd ed. (1744) by Thomas Goddard Bergin and Max Harold Fisch—*Double-day*, rev. ed., 384 p., paper, \$1.45. Abridged revision of 18th century Italian work on social theory.

NEW THINKING IN SCHOOL MATHEMATICS—Howard F. Fehr, Ed.—*OEEC Mission*, 246 p., paper, \$2.50. Report of the deliberations and conclusions of a seminar initiated by Organization for European Economic Co-operation for the purpose of improving mathematical education.

NUMBERS, PLEASE—F. Emerson Andrews—*Little*, 101 p., illus. by Aldren A. Watson, \$3. About thinking with numbers and fun with practicing elementary skills.

OCEANOGRAPHY—Maurice Ewing and others; Mary Sears, Ed.—*AAAS*, 654 p., illus., \$14.75. Invited lectures presented at the International Oceanographic Congress held in New York, Aug. 31-Sept. 12, 1959, covering history of oceans, marine life, boundaries of the sea, and cycles of organic and inorganic substances in the ocean.

THE PHYSICAL BASIS OF POLARIZED EMISSION—P. P. Feoflov, transl. from Russian—*Consultants Bur.*, 274 p., \$12.50. Systematic presentation of problems associated with polarization of radiation, includes relatively elementary material useful in understanding polarized emission.

PROGRESS IN VERY HIGH PRESSURE RESEARCH—F. P. Bundy, W. R. Hibbard, Jr. and H. M. Strong, Eds.—*Wiley*, 314 p., illus., \$12. Papers and discussions presented at International Conference held at Bolton Landing, Lake George, N. Y., June 13-14, 1960.

THE QUANTUM MECHANICS OF MANY-BODY SYSTEMS—D. J. Thouless—*Academic*, 175 p., \$5.50. Unified introduction to many-body theory, concerned with problems common to nuclear and atomic physics, the electron theory of metals, and low temperature physics.

QUANTUM THEORY, Vol. I: Elements—D. R. Bates, Ed.—*Academic Press*, 447 p., \$10. Advanced text and reference work on the fundamentals of quantum theory.

RADIOISOTOPE APPLICATIONS ENGINEERING—Jerome Kohl, Rene D. Zentner and Herbert R. Lukens—*Van Nostrand*, 562 p., illus., \$16.50. Sourcebook and graduate course for engineers,

chemists, biologists, physicians and other users of radioisotopes.

REACTORS OF THE WORLD: Second Series—Nuclear Engineering, E. N. Shaw, Ed.—*Simmons-Boardman*, 13 folded drawings, \$4.50; paper, \$3.50. Cutaway drawings and descriptions of nuclear reactors in Europe, including U. S. OMRE (1958) and N. S. SAVANNAH (1961), as well as Canada's NRU (1957).

THE RELIGIOUS FACTOR: A Sociological Study of Religion's Impact on Politics, Economics and Family Life—Gerhard Lenski—*Doubleday*, 381 p., \$5.95. Sociologist looks at the consequences of religious belief and practice in the everyday life of families, based on a Detroit Area Study.

ROCKS AND HOW THEY WERE FORMED—Herbert S. Zim—*Golden Press*, 54 p., illus. by Harry McNaught and others, 69¢. Factual book for young readers.

THE SCIENCE OF ADHESIVE JOINTS—J. J. Bikerman—*Academic Press*, 258 p., illus., \$8. Monograph covers solid surfaces, formation of adhesive joints, tack, setting, final strength, stresses and experimental strength of adhesive joints.

SCIENCES IN COMMUNIST CHINA—Sidney H. Gould, Ed.—*AAAS*, 872 p., illus., \$14. Papers on the results of scientific research conducted in China, presented at the New York meeting of the American Association for the Advancement of Science, December 26-27, 1960.

SCIENTISTS' APPROACHES TO INFORMATION—Melvin J. Voigt—*Am. Lib. Assn.*, 81 p., paper, \$2.50. Study of scientist's habits and methods of obtaining information with emphasis on printed sources. Based on data from Scandinavian scientists and research librarians with findings of importance to all concerned with storage and retrieval of scientific information.

SECURITY AND PUBLICITY: Dilemmas of Democracy—Francis E. Rourke—*Johns Hopkins Press*, 236 p., \$5. Political scientist's study of the power of government officials to control the flow of information to the public.

SHIP RECOGNITION: Merchant Ships—Laurence Dunn—*Coles (DeGraf)*, 3rd rev. ed., 132 p., illus., \$3.50. Shows how to analyze ships in order to make correct identification according to structure.

THE SYNONYM FINDER—J. I. Rodale and Edward J. Fluck, Eds.—*Rodale Bks.*, 1388 p., thumb-indexed, \$10.95; deluxe, \$16. Alphabetically arranged thesaurus listing synonyms and near-synonyms under each key-word, making cross-referencing unnecessary.

TALKING YOUR WAY AROUND THE WORLD—Mario Pei—*Harper*, 216 p., \$3.75. Profiles of the world's great languages, showing the psychological differences between nations as reflected in British English, German, French, Spanish, Portuguese, Italian, Russian, Latin, Swahili, Chinese and Japanese.

TEACHER SUPPLY AND DEMAND IN UNIVERSITIES, COLLEGES AND JUNIOR COLLEGES, 1959-60 and 1960-61—Ray C. Maul, Dir.—*Research Div., NEA*, 88 p., paper, single copies free upon request direct to publisher, 1201-16th St., NW, Washington 6, D. C. Explores the problem of providing competent teachers for all institutions of higher education.

TECHNICAL REPORT WRITING—Fred H. Rhodes—*McGraw*, 2nd ed., 168 p., \$5.50. Contains expanded chapters dealing with application of statistics, to help those engaged in interpreting experimental work.

TOWARD A SCIENCE OF MANKIND—Laura Thompson—*McGraw*, 276 p., \$5.95. Anthropologist's working hypothesis, to unite anthropology with biology, ecology, the social sciences, the psychological disciplines and the humanities in a multi-discipline science of mankind.

• Science News Letter, 80:76 July 29, 1961

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NATIONAL GEOGRAPHIC MAGAZINES, 1888-1960, any issue. Periodical Service, Box 465-SN., Wilmington, Delaware.

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