

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.

ABORTION IN THE UNITED STATES—Mary Steichen Calderone, Ed., introduction by M. F. Ashley Montagu—*Hoebner-Harper*, 224 p., \$5.50. Report of a conference sponsored by the Planned Parenthood Federation of America, Inc. at Arden House and The New York Academy of Sciences.

ADVANCES IN PETROLEUM CHEMISTRY AND REFINING, Vol. I—Kenneth A. Kobe and John J. McKetta, Jr., Eds.—*Interscience*, 641 p., illus., \$13.50. A series of critical evaluations of new developments in petroleum refining and in petrochemicals.

ANALYTIC GEOMETRY PROBLEMS—C. O. Oakley—*Barnes & Noble*, 253 p., paper, \$1.95. Review of basic principles, keyed to standard textbooks.

COLORING BOOK OF THE SMITHSONIAN INSTITUTION: An Educational Book to Read and Color—*Smithsonian*, 32 p., illus., paper, 50¢. To arouse in children an interest in the wonders of nature and man's ingenuity.

COMMISSION V ON RADIOASTRONOMY: Proceedings of the XIIth General Assembly, Boulder, Colo. 1957, Vol. XI, Part 5—*International Scientific Radio Union*, 148 p., paper, \$4. Membership list and some of the reports and papers submitted to the Commission.

CONTAINMENT STUDY OF THE ENRICO FERMI FAST BREEDER REACTOR PLANT—E. M. Fisher and W. R. Wise, Jr.—*Office of Technical Services*, 31 p., illus., paper, \$1. Investigates the capability of the Enrico Fermi nuclear power plant to contain an accidental explosion.

THE EDGE OF TOMORROW—Thomas A. Dooley—*Farrar, Straus*, 208 p., illus., \$3.75. The true story of six Americans who in the spirit of Albert Schweitzer went to Laos to set up a jungle hospital.

ELECTRONIC MEASURING INSTRUMENTS—E. H. W. Banner—*Macmillan*, 2nd rev. ed., 496 p., illus., \$7.95. Written for the instrument engineer, instrument user, and the advanced student.

THE EVOLUTION OF GENETIC SYSTEMS—C. D. Darlington—*Basic Bks.*, rev. ed., 265 p., illus., \$5.50. Attempts to join together the relatively fixed world of physics and the moving world of biology. The author is led by a belief in the connectedness of the processes of life.

EXISTENCE: A New Dimension in Psychiatry and Psychology—Rollo May, Ernest Angel and Henri F. Ellenberger, Eds.—*Basic Bks.*, 445 p., \$7.50. Existential psychology tells us that Western man, in freeing himself from the drive-pressures of hunger, disease and fatigue, has run headlong into a vacuum where boredom and meaninglessness usurp his being.

THE FASCINATING WORLD OF BUTTERFLIES—Adapted from Charles Ferdinand's "Les plus beaux Papillons" by L. Hugh Newman—*Hanover House*, 93 p., color photographs, \$4.95. Species from all regions and climates in all their exotic colors and shapes.

FRONTIERS IN SCIENCE: A Survey—Edward Hutchings, Jr., Ed., commentaries by L. A. DuBridge, George W. Beadle, Harrison Brown, and Hunter Mead—*Basic Bks.*, 362 p., illus., \$6. A guided tour of their laboratories, observatories, and field stations, by leaders of scientific research.

THE HANDBOOK OF PRIVATE SCHOOLS: An Annual Descriptive Survey of Independent Education, 1958—*Porter Sargent*, 39th ed., 1132 p., illus., \$10. New feature is inclusion of foreign private school facilities.

A HISTORY OF TECHNOLOGY, Vol. IV: The Industrial Revolution 1917 to 1850—Charles Singer and others, Eds.—*Oxford Univ. Press*, 728 p., 48 plates, \$26.90. Fourth of five volumes which will cover the subject from the Old Stone Age to the later nineteenth century. For the general reader, written with few specialist terms.

MAN, METALS AND MODERN MAGIC—J. Gordon Parr—*Am. Soc. for Metals*, 238 p., illus., \$2.95. The story of what metals did to man, from 6,000 B.C. to the present day.

MENTAL HEALTH: A Ford Foundation Report—*Ford Foundation*, 40 p., illus., free upon request direct to publisher, Office of Reports, 477 Madison Ave., New York 22, N. Y. A non-technical account of mental health activities supported by the Ford Foundation.

THE METAL MOLYBDENUM: Proceedings of a Symposium sponsored by Office of Naval Research—Julius J. Harwood, Ed.—*Am. Soc. for Metals*, 696 p., illus., \$12.50. Up-to-date picture of the status of molybdenum as a structural material which can withstand temperatures above 1800° F, but still lacks resistance to oxidation at such temperatures.

THE MOTILITY OF MUSCLE AND CELLS—Hans H. Weber—*Harvard Univ. Press*, 69 p., illus., \$3.50. Experimental data showing clearly the conditions in the interior of muscles and cells necessary for contraction and relaxation.

ON TWO PARAMETERS USED IN THE PHYSICAL THEORY OF METEORS—Luigi G. Jacchia—*Govt. Printing Office*, Smithsonian Contributions to Astrophysics, Vol. 2, No. 9, 7 p., paper, 15¢.

PERFORMANCE OF METAL-CUTTING TOOLS—R. Tourret—*Butterworth & Co. (Canada)*, 184 p., illus., \$10. Man's ability to shape metal according to his needs is one of the cornerstones of our civilization. The broad principles of metal-cutting and the present stage of knowledge are here reviewed.

PESTICIDE HANDBOOK 1958—Donald E. H. Frear, Ed.—*Pa. State College*, 10th anniv. ed., 220 p., cloth, \$3., paper, \$1.50. Gives trade names, ingredients, uses, and manufacturers of 6,128 products.

PRINCIPLES OF GEOCHEMISTRY—Brian Mason—*Wiley*, 2nd ed., 310 p., diagrams, \$8.50. Concerns the chemistry of the earth and provides a coherent account of the physical and chemical evolution of our planet. A one semester course.

THE PSYCHOLOGY OF INTERPERSONAL RELATIONS—Fritz Heider—*Wiley*, 322 p., \$6.25. Analyzes complex interpersonal relations in terms of a few basic elements and factors, such as perception, common sense ideas, the effects of action, ability, exertion, and others.

RADAR-SYNOPTIC ANALYSIS OF AN INTENSE WINTER STORM—Edwin Kessler, III—*Office of Technical Services*, 218 p., illus., paper, \$3.50. Demonstrates that radar measurements have

great semiquantitative value for determinations of vertical velocity distributions in most rain or snow precipitations.

SELECTED WRITINGS OF JOHN HUGHLINGS JACKSON, Vol. I: On Epilepsy and Epileptiform Convulsions; Vol. II: Evolution and Dissolution of the Nervous System, Speech, Various Papers, Addresses and Lectures—James Taylor, Ed. assisted by Gordon Holmes and F. M. R. Walshe—*Basic Bks.*, 1010 p., illus., \$15 the set. After being long out of print, here are the principal writings of one who thoroughly revolutionized the foundations and practice of modern neuropsychiatry.

STANDARD AIRCRAFT HANDBOOK—Stuart Leavell and Stanley Bungay, Eds.—*Aero Publishers*, 2nd ed., 160 p., spiral bound, \$2.75.

THE STATUS OF SECONDARY SCIENCE EDUCATION IN THE STATE OF OHIO—Charles L. Koelsche—*Toledo Univ. Research Foundation*, 29 p., paper, single copies free upon request direct to publisher, Toledo 6, Ohio. Based on a survey of 159 high schools.

THE STORY OF TRANSPORTATION—E. John Long—*Smithsonian*, 36 p., illus., paper, 50¢. As told by historic originals and scale models in the Smithsonian Institution. Includes color stamp sheets.

THEORY OF PSYCHOANALYTIC TECHNIQUE—Karl Menninger—*Basic Bks.*, 206 p., illus., bibliography, \$4.75. The product of both subjective and objective experience with patients and students, this book is a written version of the author's seminar presentations.

THINKING: An Experimental and Social Study—Sir Frederic Bartlett—*Basic Bks.*, 203 p., diagrams, \$4. Tries to put thinking into its place as a natural development from earlier established forms of bodily skilled behavior. Discusses experiments made and suggests others.

UPPER CRETACEOUS OF THE PACIFIC COAST—F. M. Anderson—*Geol. Soc. of Am.*, Memoir 71, 378 p., illus., \$6.75. Result of the late author's study of the fossils of the Upper Cretaceous of California and Oregon.

YOUR PET COCKATIEL—Alice L. Sadler—*All-Pet Bks.*, rev. ed., 40 p., illus., paper, 50¢. All about a winning little household pet.

Science News Letter, July 5, 1958

ENGINEERING

Radioactivity Measures Jet Nozzle Wear

► MICROSCOPIC wear of fuel nozzles in jet aircraft can be measured with precision accuracy by radioactivity methods.

Explaining how even minute amounts of wear in a nozzle spewing jet fuel under high pressure can seriously affect efficiency, H. R. Hazard, P. Gluck, and R. W. Tate of the Battelle Memorial Institute, Columbus, Ohio, described a method for measuring wear quickly, at a reasonable cost, to the American Society of Mechanical Engineers meeting in Detroit.

The engineers said their system was to make the nozzle parts radioactive, and then to circulate through them a stream of hot fuel.

Later measurements of the fuel for radioactive residue reveal that it permits investigators to measure wear of parts as little as 1/1,000,000 of a gram per hour. Visual inspection requires 100 hours or more before visible erosion occurs.

Science News Letter, July 5, 1958

IS YOUR CHILD GIFTED?

THEN YOU WILL WANT TO READ "THE GIFTED CHILD." For parents and teachers of gifted children, this bi-monthly magazine reviews research, new teaching methods, equipment, books, scholarship programs and outside of school activities in use throughout the country.

Included are a complete reporting service on published research papers, an annual review of books, kits and games, articles for parents on selecting and getting into schools and colleges.

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