# **books** of the week

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MAMMALS OF THE WORLD, Vols. I & II—Ernest P. Walker with Florence Warnick and others; rev. by John L. Paradiso—Johns Hopkins Press, 2nd ed., 1968, 1,500 p., 1,850 photographs, two vols. slip-cased, \$30. Extensively revised and augmented sourcebook in vertebrate zoology, describes 1,049 genera of recent mammals, includes 25 pages of world distribution of mammals charts.

MODERN MATHEMATICAL TOPICS—D. H. V. Case—Philosophical Lib., 1968, 158 p., diagrams, \$4.75. Introduces sets, probability, logic, number, matrices, linear programming and statistics at the secondary school level.

MUSIC OF THE SPHERES, Vol. I. The Macrocosm: Planets, Stars, Galaxies, Cosmology, Vol. II. The Microcosm: Matter, Atoms, Waves, Radiation, Relativity—Guy Murchie—Dover, rev. ed., 1967, 644 p., illus., paper, 2 vols., \$4. Extensively revised (1961), with new foreword by author, explains the material universe, from atom to quasar.

A NEW CHEMICAL STRUCTURE CODE FOR DATA STORAGE AND RETRIEVAL IN MOLECULAR SPECTROSCOPY—L. C. Thomas—Heyden & Son Ltd. (Sadtler Research Labs., Philadelphia), 1968, 60 p., illus., paper, \$4. Describes the adaptation of the Kodak MIRA-CODE system to spectroscopic data capable of retrieving spectra of molecules with the correct functional groups arranged in different ways.

1968 BOOK OF ASTM STANDARDS, Part 26: Plastics, Specifications; Methods of Testing Pipe, Film, Reinforced and Cellular Plastics—Am. Soc. for Testing and Materials, 1968, 920 p., illus., \$18. More than one third of the 153 standards included are new or revised. They range from specifications of polybutylene plastics to those for cross-linkable ethylene plastics.

1968 BOOK OF ASTM STANDARDS, Part 27: Plastics, General Methods of Testing, Nomenclature—Am. Soc. for Testing & Materials, 1968, 885 p., illus., \$16. Among the new standards in this book are a recommended practice for resistance of plastics to bacteria, and a method of test for resistance to puncture propagation of tear in thin plastic sheeting.

POINT DEFECTS AND DIFFUSION IN STRAINED METALS—L. A. Girifalco and D. O. Welch—Gordon & Breach, 1967, 169 p., diagrams, \$6.50; paper, \$3.25. Deals with the interaction of point defects with stress fields, defect concentration and migration in stress fields, and effect of strain gradients on the macroscopic diffusion equations.

PRIMITIVE NERVOUS SYSTEMS—Thomas L. Lentz—Yale Univ. Press, 1968, 148 p., illus., \$7.50. Reviews the present state of knowledge of the nervous systems of sponges, hydra and planaria, and advances a hypothesis to explain the origin and probable characteristics of the earliest nervous systems to appear.

PRINCIPLES OF HYDROLOGY—R. C. Ward—McGraw-Hill, 1968, 403 p., illus., \$11. Presents a non-mathematical treatment of "pure" as opposed to "applied" hydrology, giving a systematic analysis of the distribution and movement of water in the physical environment, addressing the earth scientist rather than the engineer.

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PSYCHOSOMATIC DISORDERS AND MENTAL RETARDATION IN CHILDREN—S. A. Szurek, M.D. and I. N. Berlin, M.D., Eds.—Science and Behavior Bks., 1968, 306 p., \$6.95. The clinical work presented includes not only medical evaluation of the child but also psychotherapeutic work with the child and his family.

PUBLIC KNOWLEDGE: An Essay Concerning the Social Dimension of Science—J. M. Ziman—Cambridge Univ. Press, 154 p., \$3.95; paper, \$1.95. Explores the psychological and sociological consequences of the basic assumption that the true goal of all scientific research is to contribute to the consensus of universally accepted knowledge.

QUICK-KEY GUIDE TO ROCKS AND MIN-ERALS—Carl J. Bowser, Robert M. Gates and David Archbold—Doubleday, 1968, 80 p., 75 punched cards, illus. by John Thresher and Judy Meyer, \$4.95. A pocket-sized computer-type identification guide to 34 rocks and 121 minerals most commonly found.

SCIENTIFIC CONTRIBUTIONS OF SELMAN A. WAKSMAN—H. Boyd Woodruff, Ed.—Rutgers Univ. Press, 1968, 391 p., illus., \$15. Selected articles published in honor of the microbiologist's 80th birthday, July 22, 1968.

SCIENTIFIC SELECTION OF CATALYSTS—A. A. Balandin and others, Eds.; transl. from Russian by A. Aledjem—IPST (Daniel Davey, Hartford), 1968, 274 p., diagrams, \$11.50. Deals with the general problems of catalyst selection, kinetic factors, rules governing the selection of oxidation catalysts and of metallic catalysts, and search for new catalysts.

SPECIAL EDUCATION: Children with Learning Problems—Roger Reger, Wendy Schroeder and Kathie Uschold—Oxford Univ. Press, 1968, 251 p., diagrams, \$6. Intended to assist those interested in the formal education of children who deviate significantly in a negative direction from the average in their learning patterns and their general behavior, with emphasis on consequences rather than antecedents.

TAXONOMY OF AMERICAN SPECIES OF LINDEN (TILIA)—George Neville Jones—Univ. of III. Press, 1968, 156 p., 30 plates, paper, \$5.95. Monograph is based upon the study of the structure of preserved specimens, and on observation and collection of specimens from living trees in the field the field.

TECHNICAL MANUAL WRITING AND AD-MINISTRATION—Thomas F, Walton; Clare Bull and Walter S. Baker, Eds.—McGraw-Hill 1968, 383 p., illus., \$15. Describes the processes and proven techniques for developing manuals used in training programs in industry, military, NASA and other government agencies.

TECHNICAL PAPERS PRESENTED AT THE ENGINEERING CONFERENCE April 1-3, 1968, Engineering Dept. National Assn. of Broadcasters—Malcolm M. Burleson and others—TAB Bks., 1968, 254 p., illus., paper, \$10. Papers and panel discussions deal with current advances in radio-TV broadcast engineering, from dual reliable AM transmitter system to TV automation workshop.

TREES OF NORTH AMERICA: A Guide to Field Identification—C. Frank Brockman—Golden Press, 1968, 280 p., 1,000 full color illus. by Rebecca Merrilees, \$5.95; paper, \$2.95. Comprehensive field guide describes 730 species in 76 families for easy identification of the major native and introduced species north of Mexico.

UNITED STATES GOVERNMENT ORGANIZATION MANUAL 1968-69—Office of the Federal Register, GSA—GPO, 1968, 842 p., paper, \$2. Contains the text of the Constitution, detailed organization of the legislative, judicial and executive branches of government, quasi-official and multilateral international organizations.

WILD FOX—Roger Burrows—Taplinger, 1968, 202 p., 16 plates, diagrams, \$6.50. A detailed study of the red fox, his feeding and breeding habits as a free-living animal in a mixed farmland area in West Gloucestershire, England.

WIRE ANGLE TABLES—Adapted by John E. Rothbrock—Cornell Maritime Press, 1968, 91 p., paper, \$5. Tables adapted for research vessels' wire angles and assorted problems, useful to fishermen, oceanographers, marine biologists, marine surveyors and weather balloon observations.

#### FREE BOOK!

"How do you play chess?" 48-page book with 86 questions on rules, strategy, history, etc., answered by Fred Reinfeld. Excellent for beginners. Entirely free; no strings attached; no obligation. Supply limited, write now. Dept. SNL, Dover, 180 Varick St., N.Y., N.Y. 10014

YOUR COLLEGE EDUCATION: How to Pay for It—Sarah Splaver—Messner, 1968, rev. ed., 279 p., \$4.95. Directed to student and counselor, the author tells what it costs to attend the various kinds of colleges and academies, and the financial aid available through scholarships, loans, part-time employment, military services, contests, major subject and other sources.

#### TEXTBOOKS

CHEMISTRY EXPERIMENTS AND PRINCIPLES—Paul R. O'Connor, Joseph E. Davis Jr. and others—Raytheon Educ. Co., 1968, 447 p., and 56.08. Text modified by the experience gained in nearly 500 high schools where the CHEM Study trial versions were used, completely rewritten to bring fundamental understanding of bonding earlier into the course.

INTRODUCTION TO NUCLEIC ACIDS: Chemistry, Biochemistry and Functions—Eberhard Harbers with Gotz F. Domagk and Werner Muller, transl. from German by Scripta Technica—Reinhold, 1968, 403 p., illus., \$18. Updated and partly rewritten version of the German text published in 1964.

MATHEMATICAL METHODS FOR PHYSICISTS AND ENGINEERS—Royal Eugene Collins—Reinhold, 1968, 385 p., diagrams, \$12.50. Text for the advanced undergraduate or beginning graduate student, emphasizes mathematical tools rather than mathematics, such as the escentials of vector calculus, calculus of variations, numerical approximation methods and similar tools for analysis. tools for analysis.

PATTERNS AND PROCESSES OF SCIENCE: Laboratory Text No. 3—Fred T. Weisbruch, James J. Donovan and others—Heath, 1968, 293 p., illus., \$6.60. A laboratory high school text-book in physical science, with emphasis on dis-covery and understanding through experimenta-tion

VERTEBRATES OF THE UNITED STATES—W. Frank Blair and others—McGraw-Hill, 2nd ed., 1968, 616 p., illus., \$20. Updated revision of college textbook, provides keys and descriptive material for the identification of the conterminous U.S., organized in phylogenetic sequence.

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