

Books of the Week

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ADVANCED RESEARCH: Key to the Future—Victor Seigel—NASA, 40 p., photographs, paper, single copies free upon request direct to Office of Educ. Programs, NASA, Washington, D. C. 20546. Research on low speed, supersonic aircraft, space flight simulation, materials and magnetoplasma dynamics.

ADVANCES IN ENZYMOLOGY and Related Subjects of Biochemistry, Vol. XXVI—F. F. Nord, Ed.—Interscience, 453 p., illus., \$12.50. Deals with phytochrome and plant growth, pyridinucleotide, vitamin B12, and metabolism of propionic acid.

AEROSPACE FACTS AND FIGURES 1964—Gerald J. McAllister, Ed.—Aerospace Industries Assn. (Aero Publishers), 132 p., illus., paper, \$3. Information about the \$20-billion-a-year aerospace industry.

AMERICAN GEM TRAILS—Richard M. Pearl—McGraw, 173 p., illus., maps, \$5.50. A handbook for the gem hobbyist, covers the best areas for discovery in the U.S.

THE ARMED FORCES INSTITUTE OF PATHOLOGY: Its First Century, 1862-1962—Robert S. Henry—Office of the Surgeon General (GPO), 422 p., photographs, \$4.25. A brief historical review of the program of research, education and consultation developed by the Institute in its service to the nation.

ASTRONOMY AND SPACE RESEARCH—G. A. Chisnall and Gilbert Fielder—Norton, 230 p., photographs, diagrams, \$5.95. An introduction for the advanced amateur to the principles of gravitation, rocketry and radiation with special reference to space research.

BETTER HEALTH FOR WOMEN—Charles Richard Alsop Gilbert, M.D.—Doubleday, 365 p., illus. by Phyllis Anderson, \$4.95. The author, a gynecologist and obstetrician, discusses and answers questions on the special health problems of women.

CALCULATION OF THERMAL STRESSES IN NUCLEAR REACTORS—Iosif Izrailevich Gol'denblat and Nikolai Aleksandrovich Nikolaenko, transl. from Russian—Consultants, 78 p., paper, \$15. Deals with thermal stresses in the basic structural elements of reactors and with thermal stresses in plates and shells (nonlinear theory).

THE DISPERSION OF NUCLEAR WEAPONS: Strategy and Politics—R. N. Rosecrance, Ed.—Columbia Univ. Press, 343 p., \$7.50. A study of the impact of nuclear sharing and dispersion in the past, with assessment of the impact of future technology on nuclear diffusion and international stability.

EARTH IN ORBIT—Patrick Thornhill—Fearon Pubs., 48 p., illus., paper, \$1.25. A programmed student aid for junior high school students who are beginning work in geography.

ELEMENTS OF CYTOLOGY—Norman S. Cohn—Harcourt, 368 p., illus., \$8.95. Text covers the cytoplasm, the nucleus and nucleocytoplasmic relations, with chapters dealing with specific cellular components of cellular behavior.

THE ETRUSCANS: Their Art and Civilization—Emeline Richardson—Univ. of Chicago Press, 285 p., 48 plates, maps, \$7.95. A study of Etruscan history based on the evidence of their art found in the 19th and 20th century excavations of Etruscan tombs.

EXTRACHROMOSOMAL INHERITANCE—John L. Jinks—Prentice-Hall, 177 p., illus., \$4.95; paper, \$2.95. Deals with criteria and evidence of extrachromosomal inheritance, and the nature and role of extrachromosomal systems in development, variation and evolution.

FAMILIAR REPTILES AND AMPHIBIANS OF AMERICA—Will Barker—Harper, 220 p., illus. by John Cameron Yrizarry, \$5.95. Gives the general reader an understanding of what reptiles and amphibians are, how they evolved, and their present distribution.

THE 480—Eugene Burdick—McGraw, 313 p., \$5. Novel about a fictitious presidential election in which the American electorate for purposes of classification is divided into 480 groups, with data stored in computers, available for possible manipulation.

GENERAL ZOOLOGY—Clarence J. Goodnight, Marie L. Goodnight and Peter Gray—Reinhold, 564 p., illus., \$8.95. Presents a balanced treatment of structure, diversity of form and functional anatomy, as well as a discussion of the interaction of molecules with each other, of cells and tissues, and animals in conventional taxonomic sequence.

THE GIFTED STUDENT—William K. Durr—Oxford Univ. Press, 296 p., photographs, \$5.50. Book emphasizes specific suggestions for educational techniques and school programs that will make use of the gifted students' abilities, with many examples for the classroom teacher at both the elementary and secondary levels.

GONADOTROPINS: Their Chemical and Biological Properties and Secretary Control—H. H. Cole, Ed.—Freeman, 252 p., illus., paper, \$7.50. Papers of the Sixth Annual Reproduction Symposium, held at Oregon State University, Corvallis, in 1963.

A HANDBOOK OF PRACTICAL AMATEUR ASTRONOMY—Patrick Moore, Ed.—Norton, 254 p., photographs, diagrams, \$5.95. To provide an observational guide to the serious amateur astronomer who wants to carry out useful work, leading specialists here outline techniques and recommend procedures and equipment.

A HISTORY OF WESTERN MUSIC: Shorter Edition—Donald Jay Grout—Norton, 515 p., illus., \$7.65. A shorter course in music history based on the author's full-length study of the development of Western music since the close of the ancient world. Glossary, bibliography and chronology included.

INTRODUCTION TO ATOMIC AND NUCLEAR PHYSICS—Harvey E. White—Van Nostrand, 560 p., illus., \$9.75. Treats the subject of modern atomic and nuclear physics at a somewhat lower level than nearly all other intermediate texts, making it suitable for liberal arts college students. Features numerous two-color illustrations throughout.

LASER ABSTRACTS, Vol. 1—A. K. Kamal—Plenum Press, 177 p., \$12.50. More than 750 informative abstracts of the published laser literature from the earliest researches to mid-1963. Entries are indexed by categories as well as by authors.

LIFE HISTORIES OF NORTH AMERICAN FLYCATCHERS, LARKS, SWALLOWS AND THEIR ALLIES—Arthur Cleveland Bent—Dover, 555 p., 70 plates, paper, \$2.75. Unabridged reprint (1942), collection of detailed, specific observations of becard, kingbird, flycatcher, phoebe, pewee, lark, swallow and martin.

MAN BEFORE ADAM: The Story of Man in Search of His Origins—Robert Silverberg—Macrae Smith Co., 253 p., illus. by Judith Ann Lawrence, \$4.50. A readable review of the history of the scientific exploration of man's beginnings.

METABOLIC CONTROL MECHANISMS IN ANIMAL CELLS—William J. Rutter, Ed.—Nat. Cancer Institute (GPO), 275 p., 22 plates, \$3.50. Symposium sponsored by the Tissue Culture Association, concerned with the problem of defining at the molecular level mechanisms of control of cell proliferation and metabolic function.

METEOROLOGICAL SATELLITES—K. Ya. Kondrat'yev, transl. from Russian—NASA (OTS), 288 p., illus., paper, \$4. Monograph intended for specialists interested in the meteorology of the upper atmosphere and in the uses of satellites in the study of weather.

THE MICROSCOPIC PROPERTIES OF METEORITES—Gustav Tschermak, transl. from German by John A. and E. Mathilde Wood—Smithsonian Contributions to Astrophysics, Vol. 4, No. 6. (GPO) 91 p., illus., paper, \$1.25. Though first published 78 years ago, this study offers still the most comprehensive collection of photographs of microstructures of stony meteorites in the literature.

sive collection of photographs of microstructures of stony meteorites in the literature.

MINERALOGY FOR AMATEURS—John Sinkankas—Van Nostrand, 585 p., photographs and diagrams by author, \$12.50. For the advanced amateur, discusses atoms and minerals, classification, growth and geometry of crystals, physical and optical properties, identification tests, and includes description of 250 minerals.

MODERN ELECTROPLATING—Frederick A. Lowenheim, Ed.—Wiley, 2nd ed., 769 p., illus., \$16. Sponsored by the Electrochemical Society, this completely revised standard survey of the chemistry of plating gives detailed directions for solutions for the plating of all important metals and alloys.

MOLECULAR BIOLOGY: Genes and the Chemical Control of Living Cells—J. M. Barry—Prentice-Hall, 139 p., illus., paper, \$3.35. Describes the discoveries in chemistry, biology and biochemistry that together form the basis of molecular biology.

THE MYSTERY OF THE EXPANDING UNIVERSE—William Bonnor—Macmillan, 212 p., photographs, diagrams, \$7.50. Nontechnical investigation outlining the scale of the universe, the evidence of observations, a detailed comparison between relativistic and steady-state theories, and a summary of the most recent observations.

NATIONAL PARKS: A guide to the National Parks and Monuments of the United States—Paul Jensen—Golden Press, 165 p., color photographs, maps, \$4.95. Compact and up-to-date information, ranging from Acadia to Zion National Park, from Hawaii Volcanoes to Virgin Islands.

PACIFIC BASIN BIOGEOGRAPHY: A Symposium—J. Linsley Gressitt, Ed.—Bishop Mus. Press, Honolulu, 561 p., illus., \$12. Papers and discussions of the Tenth Pacific Science Congress concerned with Bering Arc relationships, tropical and Antarctic distribution patterns, and the modification of biotic balance of island faunas and floras.

PENGUIN SCIENCE SURVEY, 1964, A—Arthur Garratt, Ed.—Penguin, 230 p., 16 plates, diagrams, paper, \$1.65. On advances in pure research and technology in the fields of automation, chemistry, education, mathematics, physics and space research.

PENGUIN SCIENCE SURVEY 1964, B—S. A. Barnett and Anne McLaren, Eds.—Penguin, 252 p., 8 plates, diagrams, paper, \$1.65. On recent research in the fields of biology, genetics, agriculture, medicine, zoology and botany.

THE PICTURE BOOK OF PERENNIALS—Arno and Irene Nehrling—Hearstside Press, 236 p., photographs, color plates, drawings by Charlotte E. Bowden, \$5.95. Offers alphabetical description of perennials, garden procedures and design, and list of perennials for every purpose.

RADIO ASTRONOMY TODAY—H. P. Palmer, R. D. Davies and M. I. Large, Eds., foreword by Sir Bernard Lovell—Harvard Univ. Press, 242 p., illus., \$6. Papers given at the Jodrell Bank Summer School, 1962, dealing with observational techniques, solar system studies, the galaxy and extra-galactic sources, and cosmology.

RELIGION PONDERS SCIENCE—Edwin P. Booth, Ed.—Appleton-Century, 302 p., \$5.95. A companion volume to "Science Ponders Religion." Harlow Shapley, Ed. (1960), this collection explores the position of religion in an age of science.

SELECTED PAPERS ON VIROLOGY—Nicholas Hahn, Ed.—Prentice-Hall, 363 p., illus., \$10. Collection of papers including the period from the inception of experimental virology to recent research on viral tumors, arranged chronologically.

SOCIAL STRATIFICATION: Class in America—Harold M. Hodges—Schenkman Pub. Co., 307 p., \$4.95. Focus is upon American society, showing what has happened and is happening to the social class structure in the United States and, by derivation, to the whole Western world to the extent that it is being cast in the American image.

THE SYSTEM OF LUNAR CRATERS, QUADRANT II—D. W. G. Arthur and others—Communications of the Lunar and Planetary Laboratory, Vol. 3, No. 40 (Univ. of Ariz. Press), 70 p., illus., paper, \$4.50. Lists designation, diameter, position and other information for each discernible crater, illustrated by map in 11 sections.

THEORY OF ANISOTROPIC SHELLS—S. A. Ambartsumyan, transl. from Russian—NASA (OTS), 396 p., illus., paper, \$6. Presents fundamental equations of theories, discusses general and membrane theory of anisotropic shells, symmetrically loaded shells of revolution, cylindrical and shallow shells, and new theories of shells and plates.

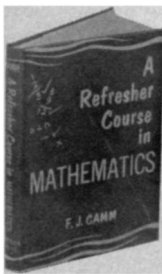
UNITIZED EXPERIMENTS IN ORGANIC CHEMISTRY—Ray Q. Brewster, Calvin A. Vanderwerf and William E. McEwen—Van Nostrand, 2nd ed., 271 p., illus., paper, \$5.75. Versatile and flexible manual featuring a wide variety of tested experiments with added problems and questions at the end of each experiment to encourage students to think.

WHITTAKER'S DYEING WITH COAL-TAR DYE STUFFS—C. C. Wilcock and J. L. Ashworth—Van Nostrand, 6th ed., 427 p., illus., \$10.50. Up-to-date and comprehensive survey of modern dyeng practice, written primarily as a textbook for students.

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A REFRESHER COURSE IN MATHEMATICS

By F. J. Camm

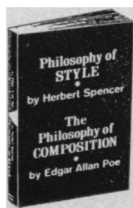


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