

# Books of the Week

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**THE ARMS DEBATE**—Robert A. Levine—Harvard Univ. Press, 347 p., \$6.50. A very careful attempt to deal objectively with the entire range of views on American military policy, with a lucid analysis of the structure and dynamics of intelligent opinion on the subject.

**THE ART AND SCIENCE OF GROWING CRYSTALS**—J. J. Gilman, Ed.—Wiley, 493 p., illus., \$20. Presents expert discussion of the principles and experimental results in the systematic production of artificial crystals through vapor growth, precipitation from liquid, solidification and recrystallization.

**ATOMIC SUBMARINES**—Norman Polmar—Van Nostrand, 285 p., illus., maps, \$6.95. Short historical background and description of the building, testing and exploratory voyages of nuclear submarines.

**BANGKOK**—Martin Hurlimann—Viking, 121 p., 86 illus., 12 color plates, \$8.50. A picturesque guide to the shrines and sights of the capital of Thailand.

**BURNING LANDS AND SNOW-CAPPED MOUNTAINS: The Story of the Tropics**—R. Frank, Jr.—Crowell, 216 p., illus., \$4.25. With many illustrations book describes the tropics in terms of climate and geography, for young people.

**CANADIAN CANCER CONFERENCE**, Vol. 5—R. W. Begg and others, Eds.—Academic Press, 479 p., illus., \$14. Proceedings of the fifth (1962) conference, discussing recent research on cellular organization, cell interaction, immunology and chemotherapy.

**CAREERS IN THE BIOLOGICAL SCIENCES**—William W. Fox—Walck, H. Z., 114 p., photographs, \$3.50. Discusses potential employers, educational requirements and professional opportunities.

**THE CIRCULATION OF THE BLOOD** and Other Writings—William Harvey, transl. and introd. by Ken-

eth J. Franklin—Everyman's Lib. (Dutton), 236 p., \$1.95. Reissue in new translation.

**THE CONSUMERS UNION REPORT ON SMOKING AND THE PUBLIC INTEREST**—Ruth and Edward Brecher and others—Consumers Union (Simon & Schuster), 222 p., illus., \$3.50. Examines one of the controversial issues of today and presents the record in four parts: the medical evidence, the industry, advertising, and suggestions for a program in the public interest.

**DIGITAL PROCESSING: A System Orientation**—Louise Schultz—Prentice-Hall, 403 p., illus., \$11.90. Text for a general introductory course on digital computers and their operation.

**ECOLOGY**—Eugene P. Odum—Holt, 152 p., illus., \$1.75. Organized around a series of pictorial or graphic models, this volume in the Modern Biology Series discusses the principles of ecology that are fundamental to the understanding of the subject by student and layman alike.

**EDUCATION AND THE CREATIVE POTENTIAL**—E. Paul Torrance—Univ. of Minn. Press, 167 p., \$4.50. Discusses break-throughs in the measurement of creative thinking abilities and the role of such abilities in educational achievement, vocational success, mental health, and the general social welfare.

**EDUCATORS GUIDE TO FREE TAPES, SCRIPTS AND TRANSCRIPTIONS**—Walter A. Wittich and Gertie Hanson Halsted, Eds.—Educ. Progress Service, 10th ed., 140 p., indexes, paper, \$5.75. Annotated listing of 416 titles.

**ENERGY-LINKED FUNCTION OF MITOCHONDRIA**—Britton Chance, Ed.—Academic Press, 282 p., diagrams, \$4.50. Discussion by colloquium of experts interested in energy-linked processes in mitochondria in general and reversal of electron transport in particular.

**ERROR PROPAGATION FOR DIFFERENCE METHODS**—Peter Henrici—Wiley, 72 p., \$4.50. Deals with propagation of error in the numerical integration of differential equations and presents analogous results for the integration of systems by multi-step methods.

**ESSENTIALS OF BIOLOGICAL CHEMISTRY**—James L. Fairley and Gordon L. Kilgour—Reinhold, 287 p., \$7.50. This introductory text gives a coherent picture of the major metabolic activities of living cells with special attention to the relationship of chemical structure to biological function.

**EXPLORING THE SECRETS OF SPACE:** Astronautics for the Layman—I. M. Levitt and Dandridge M. Cole—Prentice-Hall, 306 p., illus., \$5.95. Written for the student or layman with high school mathematics, author emphasizes fundamental scientific concepts in the areas of astronomy, propulsion, fundamental mechanics, booster conceptual design, and space flight missions.

**FATTY ACID METABOLISM IN MICROORGANISMS**—Klaus Hofmann—Wiley, 78 p., \$3.25. Deals with the discovery and chemistry of lactobacillic acid, the biosynthesis of cyclopropane fatty acids, and the biosynthesis of monounsaturated fatty acids by microorganisms.

**FEDERAL AVIATION REGULATIONS AND FLIGHT STANDARDS FOR PILOTS, 1963**—Walter P. Winner, Ed.—Aero Pubs., 25th ed., 177 p., illus., paper, \$3. Contains all the revised and renumbered regulations now applicable to pilots, also includes details on how to obtain a pilot's license.

**THE FIRST BOOK OF INTERNATIONAL MAIL: The Story of the Universal Postal Union**—Henry Hoke—Watts, F., 40 p., illus. by Walter Buehr, \$2.50. For boys and girls.

**FLOWERING TREES: A Handbook**—Harold O. Perkins, Ed.—Brooklyn Botanic Garden, 81 p., 95 illus., 11 color plates, paper, \$1 direct to publisher, Brooklyn 25, N. Y. An aid in the selection of suitable trees for planting in the home garden, with charts and tables showing how color may be obtained from March to November.

**GEODETTIC OPERATIONS IN THE UNITED STATES AND IN OTHER AREAS THROUGH INTERNATIONAL COOPERATION**, January 1, 1960 to December 31, 1962—F. R. Gossett—U.S. Dept. of Commerce (GPO), 32 p., maps, paper, 30¢. One of a series of triennial reports to the International Association of Geodesy on the geodetic activities of various agencies in the U.S.

**MEDICAL ENTOMOLOGY LABORATORY GUIDE**—Donald M. Allred—Burgess, revised 2d ed., 71 p., illus., spiral bound, \$3.50. Manual of an introductory course intended to be helpful to the instructor.

**UNDERSTANDING CULTURE**—John J. Honigmann—Harper, 468 p., photographs, maps, drawings, \$6.75. This introduction to anthropology explores the complete range of human culture from witchcraft to community development and is designed to develop the reader's understanding of his own and other cultures.

**THE WORLD OF FLYING SAUCERS: A Scientific Examination of a Major Myth of the Space Age**—Donald H. Menzel and Lyle G. Boyd—Doubleday, 302 p., illus., \$4.50. This collaborative work of astronomer and science writer provides scientific explanations for each category of sightings of unidentified flying objects.

• Science News Letter, 84:114 Aug. 24, 1963

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**SPACE COVERS COMMEMORATING U.S. SPACE Achievements.** Write for brochure, Space Craft Covers, Box 2296, Huntington, West Virginia.

## SPACE

### New Lightweight Silicone Ablative Developed

#### See Front Cover

➤ A HEAT BARRIER material that swells as it chars has been developed for use on missiles, supersonic aircraft and space vehicles.

The material, made by Dow Corning, is a low density silicone rubber that cures at room temperature to form a flexible blanket that bonds firmly to a wide variety of metals, plastics and ceramics.

An important characteristic of the new material is that it swells when exposed to intense heat, thus increasing the effective thickness of the shield. How effectively the lightweight silicone ablative shields from the heat is shown in the photograph on this week's front cover.

This ablative, designated Dow Corning 325, will be used by McDonnell Aircraft Corporation in the construction of the heat shield for the Gemini spacecraft of the National Aeronautics and Space Administration.

Selection came only after severe testing with high-temperature plasma jets and such conditions as exposure to fuels, oils and oxidizers.

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