

# 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.

**AFRICAN ENCOUNTER: A Doctor in Nigeria**—Robert Collis—*Scribner*, 211 p., photographs, \$4.50. Account of his work with the people of Nigeria, written with warmth and perception by the head of the Pediatric Department at the University College of Ibadan in Nigeria.

**AGING IN THE STATE OF WASHINGTON: A Report by the Governor's Council on Aging**—William S. Hopkins, Ed.—*Univ. of Wash. Press*, 391 p., \$6. Programs and services currently available to the elderly in the state of Washington, and recommendations for meeting unsolved problems.

**AMERICA: Too Young to Die**—Alexander P. De Seversky—*McGraw*, 237 p., \$4.95. Major De Seversky's impassioned plea for better weapons of interception.

**ANALYTICAL GEOMETRY WITH CALCULUS**—Robert C. Yates—*Prentice-Hall*, 247 p., \$7.95. Textbook emphasizing analytic facts and techniques, with calculus introduced and used in a supporting role.

**ANCIENT EDUCATION AND TODAY**—E. B. Castle—*Penguin*, 218 p., paper, 95¢. Reviews the ideas that contributed to the education of "good men" in ancient Greece, Rome and Palestine.

**APPLES OF IMMORTALITY FROM THE CUNA TREE OF LIFE: A Study of the Most Ancient Ceremonial and a Belief that Survived 10,000 Years**—Clyde E. Keeler—*Exposition*, 72 p., 32 p. illus., \$3.50. Concerns the Cuna Indian Tribe of San Blas, Panama.

**THE ASSINIBOINES: From the Accounts of the Old Ones Told to First Boy (James Larpenteur Long)**—Michael Stephen Kennedy, Ed.—*Univ. of Okla. Press*, 208 p., illus. by William Standing, \$5. Records recollections and traditions

of North American Indian tribe whose remnants are now living on two Montana reservations.

**BASIC CONCEPTS AND EXPERIMENTS IN MICROBIOLOGY**—Delbert E. Schoenhard—*Burgess*, 238 p., illus., paper, \$5.50. Laboratory manual giving equal emphasis to techniques and development of concepts of general bacteriology.

**BETTER COLOR SLIDES INDOORS**—Fred Bond—*Ziff-Davis*, 104 p., photographs, paper, \$1.95. Basic information for beginner and advanced amateur.

**CARE OF THE DOG**—Charles Leedham—*Scribner*, 243 p., illus., \$4.95. Primer for the dog owner, on feeding, puppy and adult dog care, first aid, mating and pregnancy, and old dog care.

**CAREER OPPORTUNITIES FOR VETERINARIANS IN THE AGRICULTURAL RESEARCH SERVICE—USDA (GPO)**, 16 p., illus., paper, 15¢.

**COLOR VISION: An Enduring Problem in Psychology. Selected Readings**—Richard C. Teevan and Robert C. Birney, Eds.—*Van Nostrand*, 214 p., paper, \$1.45. Original source material of experimentation and still ongoing research in the field.

**THE COMPLETE BOOK OF CATS**—Ann McGovern—*Arco*, 96 p., photographs by Walter Chandoa, \$2.50. Guide to the selection, training and care of six major breeds, charmingly illustrated.

**COOPERATION FOR PROGRESS IN LATIN AMERICA: A Statement on National Policy—Research and Policy Committee of the Committee for Economic Development—CED**, 56 p., paper, \$1. Examines social and economic bases for progress in the future development of Latin America.

**THE DOUBLEDAY PICTORIAL LIBRARY OF NATURE: Earth, Plants, Animals**—James Fisher and Sir Julian Huxley, Eds., with Sir Gerald Barry and J. Bronowski—*Doubleday*, 363 p., illus. by Hans Erni, \$9.95. Visually intriguing presentation of facts about living things, of interest to the whole family.

**EDUCATION FOR PUBLIC RESPONSIBILITY**—C. Scott Fletcher, Ed.—*Norton*, 192 p., \$4.50. Fourteen contributors, among them Margaret Mead and Adlai Stevenson, deal here with education for leadership.

**ELEMENTS OF NUCLEAR ENGINEERING**—Glenn Murphy—*Wiley*, 213 p., illus., GE chart of nuclides, \$7.50. Presents scope, potentialities and limitations of nuclear engineering at college senior level.

**EMOTIONAL PROBLEMS OF THE STUDENT**—Graham B. Blaine, Jr., Charles C. McArthur

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and others, introd. by Erik H. Erikson—*Appleton*, 254 p., \$4.95. Articles describing psychiatric student problems, by members of the Harvard University Health Service.

**ENGINEERING DRAWING AND GEOMETRY**—Randolph P. Hoelscher and Clifford H. Springer—*Wiley*, 2nd ed., paged by sections, illus., \$8.95. Textbook not confined to machine drawing but includes graphical mathematics, map drawing and architectural drawing.

**ESSENTIALS OF MATHEMATICS**—Russell V. Person—*Wiley*, 646 p., \$7. Introductory textbook stressing practical utility of arithmetic, geometry, algebra, logarithms and trigonometry.

**EXPLORATIONS INTO THE NATURE OF THE LIVING CELL**—Robert Chambers and Edward L. Chambers—*Harvard Univ. Press*, 252 p., illus., \$8. Discusses in relation to recent advances in cell biology the findings of a lifetime's research focusing attention on the intact living cell.

**THE EXPLORATION OF THE COLORADO RIVER AND ITS CANYONS**—J. W. Powell—*Dover*, 400 p., illus., paper, \$2. Reprint first published in 1895 under title "Canyons of the Colorado."

**FIRST COURSE IN ALGEBRA**—Arthur W. Weeks and Jackson B. Adkins—*Ginn*, 534 p., illus., \$4.40. Text for ninth grade, emphasizing structure and deductive nature of algebra.

**FISHERIES RESEARCH BOARD OF CANADA: Annual Report, 1959-1960**—*Queen's Printer*, 196 p., map, paper, 50¢. Reports on biological and oceanographic Canadian research during fiscal year ended March 31, 1960.

**FIVE INDIAN TRIBES OF THE UPPER MISSOURI: Sioux, Arickaras, Assiniboines, Crees and Crows**—John C. Ewers, Ed.—*Univ. of Okla. Press*, 217 p., illus., \$4. Based on records of the early fur traders, particularly the manuscript of Edwin Thompson Denig.

**FOOD FOR PEOPLE**—Sarah R. Riedman, introd. by John Boyd Orr—*Abelard-Schuman*, rev. ed., illus. by Helen Ludwig, \$3. Story of how people learned the facts about nutrition.

**FOREIGN AID: Our Tragic Experiment**—Thomas S. Loeber—*Norton*, 139 p., \$3.50. Reflections on administration of foreign aid based on the experience of an I.C.A. malaria specialist.

**THE FOURTH DIMENSION SIMPLY EXPLAINED: A Collection of Essays Selected from Those Submitted in the Scientific American's Prize Competition**—Henry P. Manning, Ed.—*Dover*, 251 p., illus., paper, \$1.35. Unabridged reprint of work first published in 1910.

**THE GRASS COVER OF AFRICA**—J. M. Rattray—*FAO (Internat'l Documents Service)*, 168 p., paper, map, \$2.50. First of FAO projects of mapping the grazing resources of underdeveloped countries.

**HANDBOOK ON ROCK GARDENS**—Victor H. Ries, Ed.—*Brooklyn Botanic Garden*, 95 p., illus., paper, \$1. Expert articles on rock garden design, rocks, soil and plants for various regions, on propagation and pest control. Generously illustrated.

**HI-FI STEREO KITS**—Norman Eisenberg—*Arco*, 126 p., illus., \$2.50. For the do-it-yourself hi-fi builder.

**A HOLE IN THE BOTTOM OF THE SEA: The Story of the Mohole Project**—Willard Bascom—*Doubleday*, 352 p., illus. by author and Russell F. Peterson, \$4.95. Comprehensive account of the events leading up to and the preparations for the scientific drilling project aimed at probing the composition of the earth's mantle.

**HOSPITAL WITH A HEART**—Joseph D. Wassersug, M.D.—*Abelard-Schuman*, 160 p., \$3. Discusses various hospital departments for young people interested in career in nursing, medicine, science or social science.

**IRE DICTIONARY OF ELECTRONIC TERMS AND SYMBOLS**—Compiled from IRE Standards—*Inst. of Radio Engineers*, 225 p., \$10.40. Brings

together definitions in force in December, 1959, from *absolute delay* to *zoning (stepping)*, as well as letter symbols and graphical symbols.

**AN INTRODUCTION TO THE EXPERIMENTAL METHOD:** For Students of Biology and the Health Sciences—J. Maxwell Little—*Burgess*, 84 p., paper, \$3. Elementary introduction to the principles of the experimental method with emphasis on the simpler and most frequently used statistical concepts.

**THE LAST FRONTIER:** A Short History of Alaska—Ben Adams—*Hill & Wang*, 181 p., illus. by George Ahgupuk, \$3.50. Highlights of the history of the forty-ninth state.

**MECHANICAL MEASUREMENTS**—T. G. Beckwith and N. Lewis Buck—*Addison-Wesley*, 559 p., illus., \$8.75. Introductory textbook on modern measurements problems in developmental engineering and in the field of automatic control.

**THE MIGHTY THOR:** Missile in Readiness—Julian Hartt—*Duell*, 271 p., photographs, \$4.50. The story of the first operational ballistic missile, the first one to boost a payload into polar orbit.

**MODERN FUNDAMENTALS OF ALGEBRA AND TRIGONOMETRY**—Henry Sharp, Jr.—*Prentice-Hall*, 340 p., \$8.65. Modern and rigorous treatment of elementary algebra and trigonometry.

**MODERN JUNIOR HIGH SCHOOL SCIENCE:** A Recommended Sequence of Courses—Abraham S. Fischler—*Teachers College*, 127 p., paper, \$2. Deals with science programs for grades seven, eight and nine, outlining courses in general science as four units of work per year.

**ON BEING A PARENT OF A HANDICAPPED CHILD**—Benjamin Spock—*Nat. Soc. for Crippled Children and Adults*, 18 p., illus., paper, 25¢ direct to publisher, 2033 W. Ogden Ave., Chicago 12, Ill. Pediatrician's advice to parents.

**PORPOISE AND SONAR**—Winthrop N. Kellogg—*Univ. of Chicago Press*, 177 p., illus., \$4.50. Describes extensive research program examining the way in which porpoises navigate in the ocean without the use of vision, smell, taste or touch, presenting evidence on the working of echo-ranging or sonar system.

**RARE METALS HANDBOOK**—Clifford A. Hampel, Ed.—*Reinhold*, 2nd ed., 715 p., illus., \$20. Fully revised, now includes cesium, chromium, plutonium, rubidium, scandium and yttrium. Arranged for speedy reference.

**THE REAL BOOK ABOUT ROBOTS AND THINKING MACHINES**—Julian May—*Garden City Bks.*, 216 p., illus. by Ray Gooris, \$1.95. Tells boys and girls about history and progress in automation.

**ROAD ATLAS:** United States, Canada, Mexico—*Rand McNally*, 112 p., 11 x 15 inches, illus., paper, \$1.95. New up-to-date color maps covering 50 states alphabetically, index gives final 1960 census figures.

**SILICONES**—S. Fordham, Ed.—*Philosophical Lib.*, 252 p., illus., \$10. On the chemistry of organosilicon compounds with systematic treatment of manufacturing processes and the applications of silicones.

**SPITFIRE:** The Story of a Famous Fighter—Bruce Robertson—*Harleyford Pubs. (Aero Publishers)*, 211 p., illus., photographs, \$8.50. Complete history of the many achievements of this British-designed aircraft, famous during World War II.

**STATISTICAL SOURCES REVIEW**, Vol I, No. 1—*Gale*, 45 p., paper, monthly; \$20 per year. Monthly survey of newly published sources of current U. S. non-governmental statistical information, including some foreign sources.

**A STUDY OF HISTORY**, Vol. XII: Reconsiderations—Arnold J. Toynbee—*Oxford Univ. Press*, 740 p., \$10. Historian's "second thoughts" on his earlier ten-volume work, in the light of new research, after visiting a number of Asian and

Latin American countries, and in answer to his critics.

**SUNSET FOOD FREEZING CHARTS**—Vera Greaves Mrak—*Lane Bk. Co.*, unpagged, paper, 60¢. Charts tell how to prepare and freeze fruits, vegetables, fish, poultry and cooked foods.

**SYMPOSIUM ON TECHNICAL DEVELOPMENTS IN THE HANDLING AND UTILIZATION OF WATER AND INDUSTRIAL WASTE WATER**—William L. Lamar, Chmn.—*Am. Soc. for Testing Materials*, 92 p., illus., \$3. Among others, papers and discussions on radioactive waste water and on disposal of oil-field brines.

**TECHNIQUES IN FLAME PHOTOMETRIC ANALYSIS**—N. S. Poluektov, transl. from Russian by C. N. and T. I. Turton—*Consultants*, 219 p., illus., \$9.50. Discussion of basic methods, apparatus, photometric measurement procedure and techniques for determining elements in various materials.

**THIS IS THE AIR FORCE ACADEMY**—Marian Talmadge and Iris Gilmore, foreword by William S. Stone, Major General, USAF—*Dodd*, 95 p., photographs, \$2.75. Presents life of Academy cadets.

**THUNDERBIRDS!**—Martin Caidin—*Dutton*, 256 p., illus. by Fred L. Wolff, \$4. The story of the USAF jet precision team famous for their split second sky maneuvers at supersonic speeds.

**TONY'S BIRDS**—Millicent E. Selsam—*Harper*, 64 p., illus. by Kurt Werth, \$1.95. A first grader's book of discovery.

**TOURIST MANUAL FOR RUSSIA: A Pocket Guide Book**—John E. Felber—*Hammond*, 4th. rev ed., 192 p., illus., \$1.95. Handy passport-size, full of useful up-to-date information for the traveler.

**TREASURES BY THE MILLIONS:** The Story of the Smithsonian Institution—Harry Edward Neal—*Messner*, 192 p., photographs, \$3.50. The story behind the collections of a great scientific institution, including the work of many scientists and specialists, told for young people.

**TYPE SPECIMENS OF BIRDS IN THE UNITED STATES NATIONAL MUSEUM**—Herbert G. Deignan—*U.S. National Mus. (GPO)*, 718 p., paper, \$2.75. The result of 15 years of study of the types of birds preserved in the national collection.

**THE UNITY OF THE UNIVERSE**—D. W. Sciama—*Doubleday*, 213 p., illus., diagrams by Joan Wedge, paper, 95¢. Cosmology for the layman.

**WONDERS OF THE WORLD BETWEEN THE TIDES**—Norman Hammond Wakeman—*Dodd*, 63 p., photographs by author, \$2.95. Seashore biology for young and old.

**YOUR GARDEN IN THE SOUTH**—Hamilton Mason—*Van Nostrand*, 358 p., photographs, \$7.75. Comprehensive garden guide to what you can and cannot grow in different sections of Florida, Alabama, Georgia, Louisiana, Mississippi and eastern Texas.

• Science News Letter, 79:284 May 6, 1961

## Questions

**MEDICINE**—How does a new gun device detect cancer? p. 281.

**OCEANOGRAPHY**—How is electricity generated in an organic fuel cell? p. 275.

**Photographs:** Cover, Convair Division of General Dynamics Corporation; p. 275 and 278, U. S. Geological Survey; p. 277, Firewel Company, Inc.; p. 279, U. S. Navy; p. 282, Science Service; p. 288, Eastman Chemical Products, Inc.

## ENGINEERING

### National Academy of Engineering Discussed

► A NATIONAL ACADEMY of Engineering is being planned by the leading professional engineering organizations of the nation acting through the Engineers Joint Council in New York.

This new top-level organization with limited membership would either have a separate existence paralleling the National Academy of Sciences, now almost a century old as the most elite such body in the nation, or it would be established as a part of the existing academy with a name change to the National Academy of Sciences and Engineering.

The proposed organization is being discussed by a committee of the Engineers Joint Council an organization of national and regional engineer societies that includes 250,000 engineers in the nation.

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## ROCKETS AND MISSILES

### Weightless Tests Of Rocket Fuels

See Front Cover

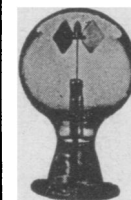
► TWO ENGINEERS test a capsule of liquid hydrogen under weightless conditions in an Air Force zero-gravity flight.

The test is part of a study to learn how liquid rocket fuels would behave in outer space, being made for the National Aeronautics and Space Administration by Convair Division of General Dynamics Corporation, San Diego, Calif.

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