

# 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.

**ADVANCES IN THE ASTRONAUTICAL SCIENCES**, Vol. 7—American Astronautical Society—*Plenum Press*, 454 p., illus., \$17.50. Technical papers on terrestrial, space transit, planetary and return operations of space vehicles.

**AMERICA'S MIGHTIEST MISSILE: Space Science**—Lloyd Mallan—*Arco*, 144 p., illus., \$2.50. Popular pictorial review of space program, from Titan to Samos satellite.

**BRITISH FLIES; Vol. VI: Empididae**—J. E. Collin—*Cambridge*, 782 p., illus., \$17.50. Third volume published of this standard work, contains full descriptions of all the 354 recorded British species.

**THE ECOLOGY OF MALNUTRITION IN THE FAR AND NEAR EAST: Food Resources, Habits and Deficiencies**—Jaques M. May with Irma S. Jarcho—*Hafner*, 688 p., maps, \$13.50. Study in the medical geography of Asia.

**EDUCATION AND PROFESSIONAL EMPLOYMENT IN THE U.S.S.R.**—Nicholas DeWitt—*NSF (GPO)*, 900 p., \$5.50. Extensive factual report with scholarly assessment of Soviet professional manpower potential. See story, SNL Jan. 27, 1962, p. 50.

**ELEMENTARY KINEMATICS OF MECHANISMS**—John R. Zimmermann—*Wiley*, 290 p., illus., \$6.

Textbook for student of limited mathematical background.

**ELEMENTARY QUANTUM MECHANICS**—Peter Fong—*Addison-Wesley*, 368 p., \$9.75. One-semester introductory course emphasizing understanding of physical principles of the quantum theory.

**FLOWERING TREES OF THE WORLD: For Tropics and Warm Climates**—Edwin A. Menninger, foreword by B. Y. Morrison—*Hearthsides Press*, 336 p., 425 full-color plates, \$18.95. Comprehensive guide to 1,000 species.

**FRANCIS BACON: Philosopher of Industrial Science**—Benjamin Farrington—*Collier Bks.*, 157 p., paper, 95¢. Reprint.

**FUNDAMENTAL CONCEPTS OF ELEMENTARY MATHEMATICS**—Charles F. Brumfield, Robert E. Eicholz and Merrill E. Shanks—*Addison Wesley*, 340 p., illus., \$5.75. Presents structure of arithmetic as related to algebra and geometry.

**FUNDAMENTALS OF APPLIED ENTOMOLOGY**—Robert E. Pfadt, Ed.—*Macmillan*, 668 p., illus., \$9.50. College text stressing principles of agricultural entomology.

**GROWTH IN LIVING SYSTEMS**—M. X. Zaitov, Ed.—*Basic Bks*, 759 p., illus., \$15. Proceedings of 1960 symposium on current researches into the basic processes of molecular biology.

**HARVEY CUSHING: Surgeon, Author, Artist**—Elizabeth H. Thomson, foreword by John F. Fulton—*Collier Bks*, 318 p., paper, 95¢. Reprint.

**THE HARVEY LECTURES, 1960-1961**—Seymour Benzer and others—*Academic Press*, 264 p., illus., \$8. Covers subjects such as genetic fine structure, and the temporal organization of living systems.

**HOW TO HELP YOUR CHILD IN GRADE SCHOOL SCIENCE**—Frieda E. Van Atta—*Random House*, 372 p., illus. by author, \$5.95. Grade-by-grade guide for parents prepared by teacher.

**THE INSPIRATION OF SCIENCE**—Sir George Thomson—*Oxford Univ. Press*, 150 p., illus., \$4. Taking examples from physics, Nobelist shows how a scientist thinks and works, how the apparently trivial may give clues to an understanding of great principles of nature.

**INTRODUCTION TO PROTOZOLOGY**—Reginald D. Manwell—*St. Martins*, 642 p., illus., \$12. Text

stresses principles and evolution of the Protozoa, and aspects of parasitism.

**JAMES WATT AND THE HISTORY OF STEAM POWER**—Ivor B. Hart—*Collier Bks*, 159 p., illus., paper, 95¢. Reprint.

**THE JUNIOR CHEMIST: A Formula Book for High School Students**—Henry Goldschmidt and Halina de Roche—*Denison*, 197 p., \$3.50. History of cosmetics and small-scale formulas for making your own cosmetics.

**THE LAWS OF NATURE**—R. E. Peierls—*Scribner*, 284 p., diagrams, paper, \$1.45. Reprint, introduction to classical and modern physics for the non-specialist.

**LIVINGSTONE'S MISSIONARY CORRESPONDENCE, 1841-1856**—I. Schapera, Ed.—*Univ. of Calif. Press*, 342 p., illus., \$7. With explanatory footnotes by anthropologist, these lengthy letters from the interior of South-Central Africa contain detailed accounts of famous geographical discoveries.

**MASTERS OF THE SCALPEL: The Story of Surgery**—Sarah R. Riedman—*Rand McNally*, 320 p., illus., \$4.25. For young adults.

**THE MIDDLE EAST: A Physical, Social and Regional Geography**—W. B. Fisher—*Dutton*, rev. 4th ed., 557 p., maps, \$9.75. An extensive account of the peoples of the Middle East and their environmental background.

**THE MODERN ASPECTS OF MATHEMATICS**—Lucienne Felix, transl. from French by Julius H. and Fancille H. Hlavaty—*Science Editions*, 194 p., paper, \$1.65. Understandable account of the new approach to mathematics developed in France under the name of Nicolas Bourbaki.

**THE MUSHROOM: Edible and Otherwise, Its Habitat and Its Time of Growth**—M. E. Hard—*Hafner Pub. Co.*, 609 p., illus., \$16. Reprint, originally published in 1908.

**THE NATURE OF NATURAL HISTORY**—Marston Bates—*Scribner*, rev. ed., 309 p., paper, \$1.45. A survey of the concepts of natural history, from classification to observation of behavior.

**NEW AND NONOFFICIAL DRUGS, 1962**—Evaluated by A.M.A. Council on Drugs—*Lippincott*, 900 p., \$4. Annual compilation on drugs, including their therapeutic, prophylactic and diagnostic status.

**ORGANIC CHEMISTRY, Vols. I and II**—Frank C. Whitmore—*Dover*, 2nd ed., 1005 p., paper, set of 2 vols. \$4. Unabridged and corrected republication.

**PARACELSUS: Magic Into Science**—Henry M. Pachter—*Collier Bks*, 286 p., paper, 95¢. Reprint of annotated biography.

**PHOTONEUTRON METHOD OF DETERMINING BERYLLIUM**—Kh. B. Mezhiborskaya, transl. from Russian—*Consultants*, 30 p., illus., paper, \$12.50. Includes instructions on safety precautions approved by USSR State Health Inspection.

**PLANT ECOLOGY WORKBOOK: Laboratory Field and Reference Manual**—J. T. Curtis and Grant Cottom—*Burgess*, rev. ed., 193 p., illus., paper, \$5. New exercises added.

**PRINCIPIA MATHEMATICA To \*56**—Alfred North Whitehead and Bertrand Russell—*Cambridge*, 410 p., paper, \$1.95. This abridged text of Volume I contains material most relevant to an introductory study of logic and the philosophy of mathematics.

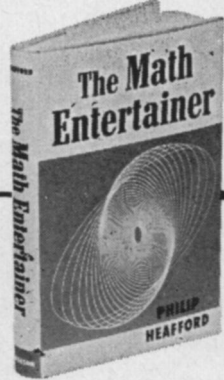
**THE PROFESSOR AND THE PRIME MINISTER: The Official Life of Professor F. A. Lindemann**

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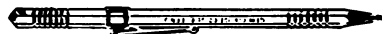
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Viscount Cherwell—The Earl of Birkenhead—*Houghton*, 400 p., photographs, \$5.95. Biography of the scientist who was Winston Churchill's personal advisor during World War II.

RADIATION BOTANY, Vol. I, No. 1—A. H. Sparrow, Ed.—*Pergamon*, 100 p., illus., annual subscription, libraries \$20; individuals \$10. Original articles and notes on research concerned with the effects of ionizing radiation on plants, and related fields.

ROCKETS AND SPACE FLIGHT—Hans K. Kaiser, transl. from German by Alex Helm—*Pitman*, rev. ed., 154 p., illus., \$4.75. Summarizes developments in rocketry for general reader.

S-MATRIX THEORY OF STRONG INTERACTIONS—Geoffrey F. Chew—*Benjamin, W. A.*, 182 p., paper, \$3.95. Frontiers in Physics Lecture Note and Reprint Volume, for physicists.

SELECTED PAPERS ON NEW TECHNIQUES FOR ENERGY CONVERSION—Sumner N. Levine, Ed.—*Dover*, 444 p., illus., paper, \$2.85. Collection of 37 recent articles on thermoelectric methods, thermionic, photovoltaic and electromechanical effects, and on fusion.

SIR ISAAC NEWTON—H. D. Anthony—*Collier Bks*, 188 p., paper, 95¢. Reprint.

SIR THOMAS BROWNE: A Doctor's Life of Science & Faith—Jeremiah S. Finch—*Collier Bks*, 251 p., paper, \$1.50. Reprint.

THE STRUCTURE AND BIOSYNTHESIS OF MACROMOLECULES: Biochemical Society Symposium No. 21—D. J. Bell and J. K. Grant, Eds.—*Cambridge*, 132 p., illus., \$5.50. Survey of the structure and formation of giant molecules of living matter.

A SYNTHESIS OF EVOLUTIONARY THEORY—Herbert H. Ross—*Prentice-Hall*, 387 p., illus., \$10. A scholarly attempt at a unified theory of evolution, from cosmic dust to the most complex biological communities, the biomes.

THE THEORY OF FUNDAMENTAL PROCESSES: Lecture Note Volume—R. P. Feynman, ed. by H. T. Yura—*Benjamin, W. A.*, 172 p., paper, \$3.95. For physicists.

VOLCANOES: In History, In Theory, In Eruption—Fred M. Bullard—*Univ. of Texas Press*, 441 p., illus., maps, \$7.50. Geologist summarizes for the general reader what is known about volcanoes.

THE WORLDS AROUND US—Patrick Moore—*Collier Bks*, 128 p., illus., paper, 95¢. About possible life on planets. Reprint.

YEARBOOK OF ASTRONOMY, 1962—J. G. Porter and Patrick Moore, Eds.—*Norton*, 216 p., illus., paper, \$2.95. A new reference book geared to the needs of the active amateur astronomer.

• Science News Letter, 81:124 February 24, 1962

## Cradle of the Space Age

(Continued from Page 117)

provide added support and protection.

The skin is so thin that it will not support itself without internal pressures. These pressures are supplied by bottled nitrogen "bled" into the rocket by a truck at the launch pad and by bottled helium in the vehicle during flight.

Next up the beach from the Atlases are the Titans, then the giant Saturn pad.

Some pads are being used constantly at Cape Canaveral, others are now inactive because the missiles have passed the testing stage and are operational. All air-breathing missiles, such as the Matador, Bomarc, Mace and Snark, are gone from the Cape. The Bomarc is still being tested elsewhere, however.

More than 100 Polaris, 50 Thors, 40 Titans and 80 Atlas rockets have soared into the skies from the Cape.

During the last four years, 66 launches sent U.S. satellites successfully into space, most of them from Cape Canaveral. Sixty-three hurled payloads into earth orbit while three sent satellites spinning around the sun. Some payloads had more than one satellite aboard, bringing the total number of earth-orbiting satellite packages to 67, the National Aeronautics and Space Administration reported.

The U.S. score in space is impressive in number, and in scientific achievement has added greatly to man's understanding of the world he lives in and the space around the earth. It compares more than favorably with the 16 USSR launches, which include two manned orbital shots and other spectaculars, among them two solar probes and one lunar impact vehicle.

Canaveral is today a magic word that stands for the last frontier, catching the imagination of thousands who watch from

the white sand beach and the gaily colored motels when a launching is scheduled.

A Cocoa Beach drug store clerk, when asked if she went out to watch the launches, said, "We always do. No one ever comes into the store during the shot anyway. They are all out watching."

A taxi driver had this comment, "People get used to it after a while, but if there is a man in that thing up there, you can bet they are out to watch it go."

An Air Force colonel reminisced about some of the unusual shots from the Cape.

There was the Polaris that broke into two pieces, one of which fell close to the pad, the other landing in the Banana River. This IRBM (Intermediate Range Ballistic Missile) was forever after known as the IBRM—the Into the Banana River Missile.

Another Polaris veered off unexpectedly after launch, went over a hangar where many persons were standing and landed in the brush where it burned up. The security police had to rush out to shoot about 45 rattlesnakes slithering out on the road from the burning brush.

The colonel also told of the Jupiter that started off, then turned directly at the photographers' stand where busy cameras were trying to follow it. In a picture taken by one photographer the rocket showed up from the front tip as a perfect circle coming straight toward the camera. The camera man was not hit.

As another sidelight he related that the old cemeteries on the Cape, from times when civilians lived in the area, are given perpetual care. Relatives are allowed to visit the graves by checking at the security gate. Thus the past is not forgotten by the men who are shaping the space age of the future.

• Science News Letter, 81:117 February 24, 1962

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