

# 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.

**ALCHEMY TO ATOMS**—Ellsworth Newcomb and Hugh Kenny—*Putnam*, 128 p., illus. by Eva Cellini, \$2.95. The story of chemistry for young readers.

**THE ANATOMY OF THE RHESUS MONKEY**—T. H. Bast and others—*Hafner Pub. Co.*, 383 p., illus. by Benjamin Kopel, \$11.50. Reprint of 1933 edition with corrections.

**ANIMAL SIGNS AND SIGNALS**—Ted S. Pettit—*Doubleday*, 60 p., illus. by G. Don Ray, \$2.95. For children.

**THE BEGINNING GARDENER**—Katherine N. Cutler—*Barrows*, 173 p., illus., \$2.95. Full of basic information.

**BIRDS OF THE WEST INDIES**—James Bond—*Houghton*, 256 p., illus. in color by Don R. Eckelberry and drawings by Earl L. Poole, \$6. Complete guide to the birds known to occur regularly in the Caribbean islands, from the Bahamas to Barbados.

**CULTURE METHODS FOR INVERTEBRATE ANIMALS: A Compendium**—Paul S. Galtsoff and others, introd. by James G. Needham—*Dover*, 590 p., illus., paper, \$2.75. Prepared cooperatively by American zoologists under AAAS direction, as an aid to studies that require living animals in continuous supply.

**CYLINDRICAL SANDWICH CONSTRUCTION DESIGN**—Sidney Allinikov—*Wright Air Dev. Div. (OTS)*, 276 p., paper, \$4. Comprehensive treatment of the theories and parameters associated with design of cylindrical sandwich construction.

**THE DANCING BEES: An Account of the Life**

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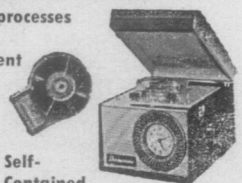
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and Senses of the Honey Bee—Karl von Frisch, transl. by Dora Ilse—*Harcourt*, 182 p., illus., paper, \$1.95. Reprint of classic, based on 45 years of field observations.

**DESIGN FUNDAMENTALS OF ANALOG COMPUTER COMPONENTS**—R. M. Howe—*Van Nostrand*, 268 p., illus., \$7.50. Describes in detail the design considerations that must be taken into account in the production of analog computer components.

**THE DYNAMICAL THEORY OF SOUND**—Horace Lamb—*Dover*, 2nd ed., 307 p., paper, \$1.50. Unabridged reprint of 1925 edition.

**ECONOMICS OF WATERSHED PLANNING**—G. S. Tolley and F. E. Riggs, Eds.—*Iowa State Univ. Press*, 339 p., \$3.95. Proceedings of 1959 Symposium which examined the problems of small watershed development.

**ELEMENTARY ALGEBRA FOR COLLEGE STUDENTS**—Irving Drooyan and William Wooton—*Wiley*, 272 p., \$4.95. Basic textbook.

**AN ENGINEERING APPROACH TO GYROSCOPIC INSTRUMENTS**—Elliott J. Siff and Claude L. Emmerich, foreword by C. S. Draper—*Speller*, 120 p., illus., \$7.50. Comprehensive review of principles and general features of existing instruments.

**ENGINEERS AND WHAT THEY DO**—Harold Coy—*Watts, F.*, 186 p., \$3.95. Describes for young people the training, opportunities and specialties in the engineering profession.

**EVALUATION OF DRUG THERAPY**—Francis M. Forster, Ed.—*Univ. of Wis. Press*, 167 p., \$4. Proceedings of the Symposium on Evaluation of Drug Therapy in Neurologic and Sensory Diseases held at the University of Wisconsin, May, 1960.

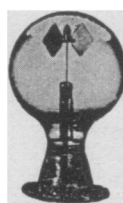
**FEDERAL FUNDS FOR SCIENCE, IX: The Federal Research and Development Budget, Fiscal Years 1959, 1960 and 1961**—National Science Foundation—*GPO*, 89 p., paper, 50¢. Trends and statistics, showing how the U. S. Government will spend an estimated \$9.1 billion in 1961 for scientific research.

**FIELD EMISSION AND FIELD IONIZATION**—Robert Gomer—*Harvard Univ. Press*, 195 p., illus., \$6.75. Presented at an elementary mathematical level, this monograph may serve as an introduction to field and ion microscopy.

**FINITE DIFFERENCE EQUATIONS**—H. Levy and F. Lessman—*Macmillan*, 278 p., \$5.50. Puts emphasis on methods of solution, rather than on the study of basic mathematical issues.

**THE FOREST AND THE SEA: A Look at the Economy of Nature and the Ecology of Man**—Marston Bates—*New Am. Lib.*, 216 p., paper, 50¢.

**FORGING A UNITED EUROPE: The Story of the European Community**—Robert L. Heilbroner—*Public Affairs Committee*, pamphlet No. 308, 28 p., illus., paper, 25¢ direct to publisher, 22



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**FROGS AND TOADS**—Charles A. Schoenkecht—*Follett*, 32 p., illus. by Robert Candy, \$1. Interesting facts for the beginning reader.

**FUEL CELLS: Power for the Future**—David R. Adams and others—*Grad. School of Bus. Admin., Harvard Univ. (Fuel Cell Res. Associates)*, 160 p., illus., \$18.75. Technical and economic analysis of developments and opportunities in electrochemical fuel cells.

**GOVERNMENT PUBLICATIONS AND THEIR USE**—Laurence F. Schmeckebier and Roy B. Easton—*Brookings*, rev. ed., 476 p., \$6. This up-to-date edition of the well-known reference work has new chapter on government periodicals and microfacsimile copies.

**THE GREAT EPIDEMIC**—A. A. Hoehling—*Little*, 217 p., illus., \$3.95. Documentary about the flu epidemic of 1918.

**GREAT IDEAS OF MODERN MATHEMATICS: Their Nature and Use**—Jagjit Singh—*Dover*, 312 p., paper, \$1.55. Explains for the non-mathematician such useful branches of modern mathematics as calculus, vectors, Zeno and infinity, the theory of sets and of groups, space and time, chance and probability.

**HEALTH AND HORMONES**—A. Stuart Mason—*Penguin*, 200 p., illus., paper, 95¢. On the importance of glands and their secretions.

**HYDROGRAPHIC MANUAL**—Karl B. Jeffers—*Coast & Geodetic Survey (GPO)*, Pub. 20-2, 283 p., paper, \$2. Serves as guide in the execution and processing of hydrographic surveys.

**INDIA AND THE WEST**—Barbara Ward—*Norton*, 256 p., \$4.50. Presents development of the modern economy in the West and examines its present stage in the Indian context in an attempt to find a pattern for a common policy.

**INDUSTRIAL RESEARCH LABORATORIES OF THE UNITED STATES**—John H. Gribbin and Sue Singer Krogfus, Eds.—*NAS-NRC*, 11th ed., 698 p., \$12. Information about 5,420 non-governmental laboratories devoted to fundamental and applied research. Contains also name index to research and administrative officials.

**INTRODUCTION TO PARASITOLOGY with Special Reference to the Parasites of Man**—Asa C. Chandler and Clark P. Read—*Wiley*, 10th ed., 822 p., illus., \$9.75. Extensively revised text.

**AN INTRODUCTION TO THE BIOLOGY OF MICRO-ORGANISMS**—Lilian E. Hawker and others—*St. Martins*, 452 p., illus., \$6.75. General introduction to the morphology, physiology and ecology of the major groups of micro-organisms.

**LABORATORY STUDIES IN GENERAL CHEMISTRY**—Frank Brescia and others—*Academic*, 210 p., illus., paper, \$3.25. Basic techniques of laboratory operations and 54 experiments requiring measurement, observation, calculation and interpretation of results.

**LIBERAL EDUCATION AND ENGINEERING**—Edwin J. Holstein and Earl J. McGrath—*Teachers College*, 132 p., paper, \$2.75. On the role of social science studies and humanities in the engineering school curriculum.

**LIQUID ROCKETS AND PROPELLANTS**—Loren F. Bollinger, Martin Goldsmith and Alexis W. Lemmon, Jr., Eds.—*Academic*, 682 p., illus., \$6.50. Papers on simulated high-altitude testing of rockets, instrumentation for combustion instability, reaction kinetics, propellant selection and rocket engine design.

**MAJOR ACTIVITIES IN THE ATOMIC ENERGY PROGRAMS**—U. S. Atomic Energy Commission—*GPO*, 554 p., illus., paper, \$1.75. Annual report covering January-December 1960.

**MAN IN SPACE: The Next Decade**—Ralph E. Lapp—*Harper*, 183 p., illus., \$4.95. Accurate and readable account for the layman of the

U. S. program for space exploration, with evaluation of possible and probable developments.

**MEDICINE MAKERS OF KALAMAZOO**—Leonard Engel—*McGraw*, 261 p., illus., \$4.50. History of the Upjohn Company.

**MILESTONES IN MICROBIOLOGY**—Thomas D. Brock, Transl. and Ed.—*Prentice-Hall*, 275 p., paper, \$3.95. Collection of articles which were fundamental in the development of the science of microbiology.

**NEW APPROACHES IN CELL BIOLOGY**—P. M. B. Walker, Ed.—*Academic*, 208 p., illus., \$6. Survey of recent research.

**NEWMAN'S EUROPEAN TRAVEL GUIDE, 1961-62**—Harold Newman—*Harper*, 8th rev. ed., 502 p., maps, \$5.95. Up-to-date practical guide to travel in all western European countries, as well as Greece and Turkey.

**OLIGOCENE PLANTS FROM THE UPPER RUBY RIVER BASIN, SOUTHWESTERN MONTANA**—Herbert F. Becker—*Geological Soc. of Am.*, 127 p., illus., \$4.25. Describes flora from Tertiary fossiliferous shales.

**OUTWARD BOUND FOR SPACE**—David O. Woodbury—*Little*, 178 p., illus. by Henry Bugbee Kane, \$4.50. Tells the story of rocket development and space probes.

**PERSUASION AND HEALING: A Comparative Study in Psychotherapy**—Jerome D. Frank—*Johns Hopkins Press*, 282 p., \$5.50. Psychiatrist compares common features of attempts to heal through persuasion, from psychotherapy to religious revivalism and even Communist thought "reform."

**PIONEER MICROBIOLOGISTS OF AMERICA**—Paul F. Clark—*Univ. of Wis. Press*, 369 p., \$6. The story of men and achievements in the biological war against disease, by a specialist in the field.

**PLANETS, STARS AND GALAXIES: An Introduction to Astronomy**—Stuart J. Inglis—*Wiley*, 474 p., illus., \$6.75. Textbook for liberal arts students without special prerequisites in mathematics.

**THE PRACTICAL APPLICATION OF MEDICAL AND DENTAL HYPNOSIS**—Milton H. Erickson, Seymour Hershman and Irving I. Senter—*Julian Press*, 470 p., \$12.50. Official textbook of the Seminars on Hypnosis Foundation which conducts sessions on a post-doctoral level for physicians, dentists and psychologists.

**PRINCIPLES OF ANIMAL TAXONOMY**—George Gaylord Simpson—*Columbia Univ. Press*, 247 p., illus., \$6. Introduction to fundamental modern principles and rules underlying classification in zoology.

**PRINCIPLES OF ASTRONAUTICS**—M. Vertregt—*Elsevier (Van Nostrand)*, 221 p., \$3.50. Explains the principles underlying the different fields of astronautics for the mathematically inclined general reader.

**PROGRAMS FOR THE GIFTED: A Case Book in Secondary Education**—Samuel Everett, Ed.—*Harper*, 299 p., \$5.50. This Fifteenth Yearbook of the John Dewey Society surveys and suggests programs for early recognition and development of the gifted student's special aptitudes.

**A PROGRESS REPORT ON THE PHOTOCHEMISTRY OF POLLUTED ATMOSPHERES**—E. A. Schuck, George J. Doyle and Noboru Endow—*Air Pollution Foundation*, Report No. 31, 112 p., paper, single copies free upon request direct to publisher, 2556 Mission St., San Marino, Calif. Fourth report of work done in smog chamber by Stanford Research Institute.

**THE PROMISE OF WORLD TENSIONS**—Harlan Cleveland, Ed.—*Macmillan*, 157 p., \$3.50. On promoting world law, economic growth and free communications.

**THE QUEST OF MICHAEL FARADAY**—Tad Harvey—*Garden City Bks.*, 56 p., illus. by

Lee J. Ames, \$2.50. Handsome and informative book for young reader.

**THE ROTATION OF THE EARTH: A Geophysical Discussion**—W. H. Munk and G. J. F. Macdonald—*Cambridge*, 323 p., illus., \$13.50. Gives an account of observed irregularities in the rate of rotation of the earth and in the position of its axis, not ordinarily included in the gravitational theory.

**RUBBER AND TIRE FRICTION**—H. W. Kummer and W. E. Meyer—*Pa. State Univ., College of Engineering*, 96 p., paper, \$3. Reports results of research on the frictional behavior of pneumatic tires on wet road surfaces.

**SAHARA: Desert of Destiny**—Georg Gerster, transl. by Stewart Thomson—*Coward-McCann*, 302 p., illus., \$5. Detailed panorama of past and present developments, thoroughly indexed.

**SCHOOL FIRES: An Approach to Life Safety**—Building Research Advisory Board—*NAS-NRC*, 58 p., illus., paper, \$2.50. Report to serve as guidance for corrections and improvements in school fire safety.

**SIR JULIAN HUXLEY**—Ronald W. Clark—*Roy Pubs.*, 109 p., 11 photographs, \$2.50. Biography for young people about the famous biologist part of whose life's work has been disseminating his knowledge in books and popular articles for the layman.

**SPACE AND TIME**—Emile Borel, new foreword by Banesh Hoffmann—*Dover*, 234 p., paper, \$1.45. Reprint of book first published in 1922.

**TIDE TABLES, HIGH AND LOW WATER PREDICTIONS 1961: East Coast of North and South America including Greenland—Coast and Geodetic Survey—GPO, 279 p., paper, \$1. Same price for **TIDE TABLES of West Coast, North and South America; Europe and West Coast of Africa; Central and Western Pacific Ocean and Indian Ocean.****

**TEXTBOOK OF INORGANIC CHEMISTRY**—S. Young Tyree, Jr. and Kerro Knox—*Macmillan*, 434 p., illus., \$7. Treats the chemistry of all the elements at the same level, thus giving an over-all view of the variety of chemical behavior.

**THEORY OF MAXIMA AND MINIMA**—Harris Hancock—*Dover*, 193 p., paper, \$1.50. Reprint of 1917 edition.

**THE THEORY OF TRANSITION-METAL IONS**—J. S. Griffith—*Cambridge Univ. Press*, 455 p., \$17.50. A unified and deductive introduction to the so-called ligand-field theory of the physical properties of ions of metals, concentrating on non-cooperative phenomena, such as paramagnetism and single optical spectra.

**A TREATISE ON THE CALCULUS OF FINITE DIFFERENCES**—George Boole; J. F. Moulton, Ed.—*Dover*, 2nd ed., 336 p., paper, \$1.85. Reprint of last revised edition of work first published 100 years ago.

**THE WAR CALLED PEACE: Khrushchev's Communism**—Harry and Bonaro Overstreet—*Norton*, 368 p., \$4.50. Searching analysis of the pattern of "Communist man" as he confronts "the free man."

**WEBSTER'S NEW SCHOOL AND OFFICE DICTIONARY**—Noah Webster—*Fawcett*, rev. ed., 896 p., paper, 75¢. With pronunciation guide, synonyms and antonyms and other reference material.

**WORDS FROM THE MYTHS**—Isaac Asimov—*Houghton*, 225 p., illus., by William Bars, \$3. Explores the Greek myths to discover the roots of hundreds of words used in our daily language, contains index of mythological terms and index of modern words derived from them.

**THE WORLD OF LEARNING, 1960-61**—*Europa Publications Ltd.*, 11th ed., 1,282 p., \$23.50. Up-to-date directory of the world's universities,

colleges, learned societies, libraries, museums and research institutes, listed by country, includes names of administrators and faculty members.

**X-RAY MICROSCOPY**—V. E. Cosslett and W. C. Nixon—*Cambridge Univ. Press*, 406 p., illus., \$15. Deals with the principles of the main methods of X-ray microscopy, with their use for qualitative microradiography and quantitative microanalysis, with examples of applications in biology, medicine, metallurgy and technology.

• Science News Letter, 79:156 March 11, 1961

## Questions

**AGRICULTURE**—Where are the only three institutes of agricultural medicine located? p. 148.

**ANTHROPOLOGY**—How long ago did Chellean man live? p. 147.

**MEDICINE**—By what percentage did meningitis rise between 1957 and 1958? p. 146.

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