

Books of the Week

For the editorial information of our readers, books received for review since last week's issue 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. Request free publications direct from publisher, not from Science Service.

ADVANCES IN APPLIED MICROBIOLOGY, Vol. 2—Wayne W. Umbreit, Ed.—*Academic*, 384 p., illus., \$12. Covers newer aspects of waste treatment, aerosol samplers, microbiological assaying, microbial control in brewery, vinegar manufacture and advances in fermentation.

AEROSPACE FACTS AND FIGURES 1960—Rudolf Modley and others, Ben S. Lee, Ed.—*Am. Aviation Pubs.*, 149 p., illus., paper, \$2. Compilation of data on aircraft and missile production.

AMINO ACIDS, PROTEINS AND CANCER BIOCHEMISTRY—John T. Edsal, Ed., preface by Sidney W. Fox and Julius Schultz—*Academic*, 244 p., illus., \$7. Papers presented at the Jesse P. Greenstein Memorial Symposium, with biographical article and bibliography.

ANATOMY: A Regional Study of Human Structure—Ernest Gardner, Donald J. Gray and Ronan O'Rahilly—*Saunders*, 999 p., illus. by Caspar Henselmann, \$15. Textbook for undergraduate medical and dental student, stressing importance of relationship between structure and function, and including relevant references for the advanced student.

APPLIED BOOLEAN ALGEBRA: An Elementary Introduction—Franz E. Hohn—*Macmillan*, 139 p., paper, \$2.50. Simple introduction to basic Boolean algebra, and some of its applications.

BASICS OF GYROSCOPES, Vols. 1 & 2—Cari Machover—*Rider*, 112 p., 120 p., illus., \$7.75 per set; paper, \$3.30 each. Vol. 1 tells what gyro is, how it works, and treats vertical gyro and components. Vol. 2 discusses rate and integrating gyros, stable platforms and inertial navigation.

BERTRAND RUSSELL SPEAKS HIS MIND—*World Pub. Co.*, 173 p., \$3.50. Transcript of television dialogues presenting Nobel Prize winner's controversial thinking about vital problems of modern man.

BORATE GLASSES—L. Ya. Mazelev, transl. from Russian—*Consultants Bureau*, 159 p., illus., \$10. Based on the results of investigating

silicate and borate glasses, discusses thermochemical processes in glass formation, crystalline and physicochemical properties.

CAREERS IN ASTRONAUTICS AND SPACE EXPLORATION—Juvenal L. Angel—*World Trade*, 50 p., illus., paper, \$1.50. Describes the field, specializations required, nature of work, lists educational institutions and bibliography.

CARTESIAN GEOMETRY OF THE PLANE—E. M. Hartley—*Cambridge Univ. Press*, 324 p., \$3.75. Intended as a first course in coordinate geometry, uses pure and analytical methods throughout.

CONDITIONED REFLEXES: An Investigation of the Physiological Activity of the Cerebral Cortex—I. P. Pavlov, transl. from Russian and ed. by G. V. Anrep—*Dover*, 430 p., illus., paper, \$2.25. Unabridged reprint of first English translation published in 1927.

DISEASE AND THE ADVANCEMENT OF BASIC SCIENCE—Henry K. Beecher, Ed.—*Harvard Univ. Press*, 416 p., illus., \$12.50. Lowell Lectures, examining a newly emerging role of the university hospital, that of advancing pure science through the study of disease in the hospital ward.

ELEMENTS OF GENERAL CHEMISTRY—Jay A. Young—*Prentice-Hall*, 466 p., illus., \$6.95. One-semester elementary and practical introduction to chemistry, serving both as foundation or terminal course.

EXPLORING THE AIR OCEAN—Frank H. Forrester—*Putnam*, 70 p., illus. by Robert Eggers, \$2.75. About the science of meteorology, written for those aged 8-12.

FLAT ROLLED PRODUCTS, II: Semi-Finished and Finished—E. W. Earhart and R. D. Hindson, Eds.—*Interscience*, 150 p., illus., \$4. Proceedings of the Second Technical Conference sponsored by the Metallurgical Society of AIME, Chicago, January, 1960.

FRONTIERS OF THE SEA: The Story of Oceanographic Exploration—Robert C. Cowen, introd. by Roger R. Revelle—*Doubleday*, 307 p., illus. by Mary S. Cowen, photographs, \$4.95. About past, present and future of oceans and oceanographic research.

GERMAN-ENGLISH SCIENCE DICTIONARY for Students in Chemistry, Physics, Biology, Agriculture and Related Sciences—Louis De Vries—*McGraw*, 3rd ed. (1959), 592 p., \$7. Includes over 3,000 new terms that have become important since the end of World War II.

HANDBOOK OF GEOPHYSICS—U.S. Air Force—*Macmillan*, rev. ed., 680 p., illus., \$15. Comprehensive reference work of recent data gathered from satellite and rocket observations, solar observatory, Arctic expeditions, aircraft and balloon flights, and laboratory experiments.

HORNS, STRINGS, AND HARMONY—Arthur H. Benade—*Doubleday*, 271 p., illus., paper, 95¢. This book on musical physics tells how music is formed by pianos, violins, bugles, saxophones and many other instruments.

HOW TO CHOOSE YOUR TECHNICAL INSTITUTE: A Career as an Engineering Technician—Walter M. Hartung and George W. Brush, Jr.—*Bellman*, 30 p., illus., paper, \$1. A guide for students and parents.

HOW TO KNOW THE WATER BIRDS—H. E. Jaques and Roy Ollivier—*Brown, W. C.*, 159 p., illus., \$3; paper, \$2.50. More than 225 species of U.S. and Canadian water birds are keyed, pictured and described.

INSTABILITY CONSTANTS OF COMPLEX COMPOUNDS—K. B. Yatsimirskii and V. P. Vasil'ev, transl. from Russian—*Consultants Bureau*, 214 p., \$6.75. Introductory section of a general theoretical nature, followed by instability constants of 1381 complex compounds.

MEDICAL PHYSICS, Vol. III—Otto Glasser, Ed.—*Year Bk. Pubs.*, 754 p., 595 illus., \$25. Up-to-date presentation by experts of advances in the application of medico-physical and biophysical principles, in the interpretation of living processes by physical laws, and in the development of physical methods and instruments. Alphabetical arrangement by title.

MITS, WITS AND LOGIC—Lillian R. Lieber—*Norton*, 3rd ed., 240 p., illus. by Hugh Gray Lieber, \$3.95. Combining mathematics and art, the book presents unconventional introduction to logic and its place in life.

MODERN MATHEMATICS: An Introduction—Samuel I. Altwerger—*Macmillan*, 462 p., \$6.75. Aimed at those college students whose appreciation and understanding of modern mathematics will be enhanced by a comprehensive presentation.

OF MICE, MEN AND MOLECULES—John H. Heller, introd. by Vannevar Bush—*Scribner*, 176 p., photographs, \$3.95. Research scientist opens before the layman some exciting vistas of basic biological research.

ORGANIZING THE TECHNICAL CONFERENCE—Herbert S. Kindler—*Reinhold*, 139 p., illus. by Joseph H. Callay, \$6. Describes tried conference techniques for organizing smaller meetings.

PRINCIPLES OF OPTICAL CRYSTALLOGRAPHY—A. V. Shubnikov, transl. from Russian—*Consultants Bureau*, 186 p., illus., \$9.50. Parallels the course on optical crystallography given at Moscow State University.

PROPERTIES OF ELEMENTAL AND COMPOUND SEMICONDUCTORS—Harry C. Gatos, Ed.—*Interscience*, 340 p., illus., \$8.50. Papers and discussions of the Metallurgical Society Conference, 1959.

THE PSYCHOLOGY OF DEAFNESS: Techniques of Appraisal for Rehabilitation—Edna Simon Levine—*Columbia Univ. Press*, 383 p., illus., \$7.50. Pioneering treatise on the complex psychology of serious hearing impairment, on psychological practice in rehabilitation setting and on psychological examination and evaluation of data.

PUBLICATION INDEX: 1956-1959—*Highway Res. Bd.*, 129 p., paper, \$2.60. Contains references to papers and reports presented at the 35th through 38th annual meetings.

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RADIOACTIVITY FOR PHARMACEUTICAL AND ALLIED RESEARCH LABORATORIES—Abraham Edelmann, Ed.—*Academic*, 171 p., illus., \$6. Symposium sponsored by Nuclear Science and Engineering Corporation, held in Uniontown, Pa.

THE RESTLESS ATOM—Alfred Romer—*Doubleday*, 198 p., illus., paper, 95¢. Follows the awakening of nuclear physics by describing famous experiments out of which the new physics developed.

SCIENCE IN CRIME DETECTION—Nigel Morland—*Emerson Bks.*, 192 p., illus., \$4.95. Survey of current scientific-criminological working techniques, methods of identification and material evidence, with case studies of experts at work.

SOURCE BOOK OF MEDICAL HISTORY—Compiled with Notes by Logan Clendening—*Dover*, 685 p., paper, \$2.75. Reprint, contains 124 papers covering great discoveries in anatomy, diseases, anesthesia, bacteriology, modern therapy and preventive medicine.

STARBOUND: The Story of Rocketry—Eileen and Raymond Schussler—*Putnam*, 160 p., illus. by Denny McMains, \$2.95. Juvenile introduction to astronautics.

THE STORY OF ENGINEERING—James Kip Finch—*Doubleday*, 528 p., illus., paper, \$1.45. Follows in outline the great periods in the rise of Western technology.

THE TOMB OF ST. PETER: The New Discoveries in the Sacred Grottoes of the Vatican—Margherita Guarducci, transl. from Italian by Joseph McLellan, introd. by H. V. Morton—*Hawthorn Bks.*, 198 p., illus., \$4.95. Archaeologist's scholarly account acquaints the general reader with findings made during the excavations beneath St. Peter's in Rome.

TRANSPORT AND ACCUMULATION IN BIOLOGICAL SYSTEMS—E. J. Harris—*Academic*, 2nd rev. ed., 279 p., illus., \$9. Up-to-date information on progress made in cellular inorganic chemistry and in the kinetics of movement of inorganic and simple organic substances between cells and their surroundings.

WHAT'S NEW IN SCIENCE—Fred Reinfeld—*Sterling*, 204 p., illus., \$3.95. For the general reader, the author tells in short chapters of advances in electronics, surface travel, medicine and mental health, space, atomics, meteorology and oceanography.

Science News Letter, July 9, 1960

Questions

ASTRONAUTICS—How fast does a "Ballute" inflate? p. 21.

ASTRONOMY—How often does the Finlay comet reappear? p. 22.

BIOLOGY—What is the first step in photosynthesis thought to be? p. 19.

MEDICINE—Why does the Humane Society oppose the Cooper Bill? p. 26.

Photographs: Cover, Lincoln Electric Company; p. 19, U. S. Dept. of Agriculture; p. 21, Good-year Aircraft Corporation; p. 23, United States Rubber; p. 26, National Institute of Health; p. 32, Air Reduction Co.

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