

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.

AEROSPACE FACTS AND FIGURES '61—Rudolf Modley and others; Ben S. Lee, Ed.—*Am. Aviation Publications*, 9th ed., 152 p., illus., paper, \$2. Official compilation of statistical data by Aerospace Industries Association of America.

A BOOK OF PLANETS FOR YOU—Franklyn M. Branley—*Crowell*, 59 p., illus. by Leonard Kessler, \$3.50. Designed to interest the young reader in the rotation of the planets.

CALIFORNIAN PLEISTOCENE PALEOTEMPERATURES—James W. Valentine and Robert F. Meade—*Univ. of Calif. Press*, 45 p., paper, \$1. Ancient climate estimates made from evidence of paleoecology and oxygen isotope ratios.

CHAVANTE: An Expedition to the Tribes of the Mato Grosso—Rolf Blomberg, transl. from Swedish by Reginald Spink—*Taplinger*, 119 p., 71 photographs, maps, \$7.50. The story of the first non-Brazilian expedition among the savage people of the Chavante territory, outstandingly illustrated, partly in color.

CLINICAL MEDICINE AND THE PSYCHOTIC PATIENT—Otto F. Ehrenthel and Walter E. Marchand, foreword by Joseph M. Hayman, Jr.—*Thomas, C. C.*, 383 p., illus., \$10.75. Reference book for physicians, result of many years of observations, pointing out some of the special problems of the practice of medicine among psychotics who often do not complain of physical pain even with acute appendicitis and severe heart attacks.

THE CLOUDS—Roger Clausse and Leopold Facy, transl. from French by Joan Ferrante—*Grove Press*, 192 p., illus., paper, \$1.35. Profusely illustrated and lively story of the why

and how of different cloud formations and the study of water in the atmosphere.

COLUMBUS—Marianne Mahn-Lot, transl. from French by Helen R. Lane—*Grove Press*, 192 p., illus., paper, \$1.35. The dramatic life of Columbus described against the background of his period, with quotes from Columbus' own logs and contemporary records.

CROSSED-FIELD MICROWAVE DEVICES, Vol. I: Principal Elements of Crossed-Field Devices. Vol. II: Principal Types of Crossed-Field Devices, Analysis of Oscillator System Performance, Regional Progress and Trends—E. Okress, Ed.-in-Chief—*Academic Press*, 648 p., 520 p., illus., \$22, \$18. Summarizes progress and state of the art in theory and practice.

DEEP SEA, HIGH MOUNTAIN—Elliott Roberts—*Little*, 275 p., illus. by Albert Orbaan, \$3.75. True stories for young people, based on the work and experience of the men who work in the U. S. Coast and Geodetic Survey, written by geophysicist.

ECONOMIC PLANNING FOR BETTER SCHOOLS—Benjamin Handler—*Univ. of Mich., College of Architecture*, 107 p., \$5. Based on pilot studies of school obsolescence, discusses school expansion needs by kind of city and region, economy through architectural means and capital budgeting.

EXPERIMENTAL NUCLEAR CHEMISTRY—Gregory R. Choppin—*Prentice-Hall*, 226 p., illus., \$9.25. Combines basic theory with the latest techniques in the expert use of radioisotopes in modern research, describes experiments using license-free quantities of radioisotopes of low activity, thus eliminating special safety requirements.

FRUITS IN THE HOME GARDEN: A Handbook—George M. Slate, Ed.—*Brooklyn Botanic Garden*, 96 p., 80 illus., paper, \$1. Leading authorities give advice to the amateur gardener on all phases of fruit culture.

FUNCTIONAL CIRCUITS AND OSCILLATORS—Herbert J. Reich—*Van Nostrand*, 466 p., illus., \$12.50. Deals mainly with the theory, characteristics and applications of negative-resistance circuits and sine-wave oscillators.

FUN-TIME RADIO BUILDING—Joseph A. Smith—*Childrens Press*, 63 p., illus. by Robert Borja, \$2.50. Gives step-by-step directions for boys to build their own radio equipment.

GLOSSARY OF ATOMIC TERMS—AEA (*Brit. Information Serv.*), 54 p., paper, 70¢. Glossary prepared by Technical Writers. Section of PR Branch of the U. K. Atomic Energy Authority.

I WANT TO BE A SCIENTIST—Carla Greene—*Childrens Press*, 32 p., illus. by Janet LaSalle, \$2. Experiments with a handful of beans, gaily illustrated for beginning reader.

I WANT TO BE A SPACE PILOT—Carla Greene—*Childrens Press*, 32 p., illus. by Donna Cieslak, \$2. Facts about space flight for beginning readers.

INTERSERVICE EDUCATION OF HIGH SCHOOL MATHEMATICS TEACHERS: Report of 1960 Conference—Kenneth E. Brown and Daniel W. Snader—*Off. of Educ. (GPO)*, 108 p., paper, 50¢. Highlights of conference, key addresses, group work sessions and panel discussions on ways to improve the teaching of mathematics.

INTRODUCTION TO MATHEMATICS—Charles F. Brumfiel, Robert E. Eicholz and Merrill E. Shanks—*Addison-Wesley*, 323 p., illus., \$4. Junior high school text emphasizing mathematical ideas rather than manipulative skills.

INTRODUCTORY TOPOLOGY—Stewart Scott Cairns—*Ronald*, 244 p., illus., \$8.75. Text for a first course in topology on the advanced undergraduate and beginning graduate level.

KEY AUDIOVISUAL PERSONNEL: In Public School and Library Systems in States and Large Cities and in Large Colleges and Universities, 1960-61—Searley Reid—*Off. of Educ. (GPO)*, 101 p., paper, 35¢.

LIBERAL EDUCATION AND PHARMACY—James Newcomer, Kevin P. Bunnell and Earl J. McGrath—*Teachers College*, 125 p., paper, \$2.75. Analysis of courses of study for pharmacy students during their undergraduate years.

MAN AND DOLPHIN—John C. Lilly, M.D.—*Doubleday*, 312 p., photographs, \$4.95. Summary of experiments investigating the possibilities of interspecies communication, describing work conducted with dolphins, carefully documented and written in layman's language.

MAN'S CONQUEST OF THE STARS—Pierre Rousseau, transl. from French by Michael Bullock—*Norton*, 356 p., illus., \$5. Epic of the discovery of the universe from primitive times to the present.

1961 MISSILE HANDBOOK—*Aircraft & Missiles (AMRI)*, 3rd ed., 96 p., 40-page spring '61 updating, illus., paper, \$2; incl. midyear and year-end updating, \$4. Directory of missile and space projects, active R&D projects and contractors' directory.

THE OPTIMAL DESIGN OF CHEMICAL REACTORS: A Study in Dynamic Programming—Rutherford Aris—*Academic Press*, 191 p., \$7. Supplementary text for graduate or undergraduate courses in chemical reactor design, also of interest to those engaged in the rapidly developing field of mathematical programming.

THE OSAGES: Children of the Middle Waters—John Joseph Mathews—*Univ. of Okla. Press*, 826 p., illus., \$7.95. An Osage himself, the author presents in epic form the history of the Osage Indians, based on oral and recorded sources. Detailed index and bibliography included.

PIONEERS OF SCIENCE AND THE DEVELOPMENT OF THEIR SCIENTIFIC THEORIES—Sir Oliver Lodge—*Dover*, 404 p., illus., paper, \$1.50. Reprint of authoritative, yet readable history of astronomy, from Copernicus to the tidal theories of Helmholtz and Lord Kelvin.

PSYCHOSOMATIC ASPECTS OF PAEDIATRICS—Ronald Mac Keith and Joseph Sandler, Eds.—*Pergamon*, 155 p., \$8.50. Papers and discussions of Study Group of the Society for Psychosomatic Research, held at the Royal College of Physicians, May 1959.

RADIO MOSCOW AND THE WESTERN HEMISPHERE—Comments by Norman Brokenshire—*Cook*, 12" LP record, \$4.95. Concise recording in English, of radio propaganda the Soviets beam to America and the world, including the Russian claim for supremacy in space and science—a sobering record of the contemporary war of words.

THE RANDOM HOUSE AMERICAN EVERYDAY DICTIONARY—Jesse Stein, Ed.—*Random House*, 570 p., illus., \$1.95. Reprint, dictionary for quick reference, gives pronunciation, spelling, division and meaning of more than 60,000 entries.

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REPORT ON COOPERATIVE EDUCATION—Ralph W. Tyler and Annice L. Mills—*Edison Foundation*, 32 p., illus., paper, single copies free upon request direct to publisher, 8 W. 40th St., New York 18, N. Y. Summary of the two-year national Study of Cooperative Education.

REPORT ON THE NATIONAL DEFENSE EDUCATION ACT: Fiscal Year Ending June 30, 1960—*Off. of Educ. (GPO)*, 93 p., paper, 55¢. Summary of program administered by the Federal Government, including student loans, fellowships, and financial assistance for strengthening science.

RESEARCH ON THE ACADEMICALLY TALENTED STUDENT—Kenneth E. Anderson, Ed.—*NEA*, 92 p., paper, \$1. Brings together information on past studies dealing with the academically gifted student and discusses research needs.

SANDPIPERS—Edith Thacher Hurd—*Crowell*, 35 p., illus. by Lucienne Bloch, \$2.35. Appealing life-cycle story for the youngest readers.

SCIENTIFIC RESOURCES IN THE WASHINGTON D. C. AREA: 1961-1962 Directory—Gordon Kennedy, Jr., Ed.—*Metropolitan Washington Science Bureau*, 62 p., paper, \$2. First complete guide to the area's scientific organizations, documentation centers, research and development facilities, both private and government.

A SELF-CONSISTENT FIELD THEORY OF QUANTUM ELECTRODYNAMICS—Mendel Sachs and Solomon L. Schwebel—*Lockheed (OTS)*, 51 p., paper, \$1.50. Theory rejects photon as an elementary particle, replacing it by a state of the particle-antiparticle pair.

SENSORY COMMUNICATION: Contributions to the Symposium on Principles of Sensory Communication, 1959, M.I.T.—Walter A. Rosenblith, Ed.—*Wiley*, 844 p., illus., \$16. Presents experimental results and theoretical considerations from a variety of disciplines.

SOVIET POLICY TOWARDS INTERNATIONAL CONTROL OF ATOMIC ENERGY—Joseph L. Noguee—*University of Notre Dame Press*, 306 p., \$6.50. Presents fully documented account of Soviet Union's atomic energy policy as reflected in the negotiations, 1945-1960, and discusses the apparent objectives of Soviet negotiating tactics.

SPACE TRAVEL GUIDEBOOK: An Intimate Glimpse into Man's Conquest of Flight—Robley D. Stevens—*Wilde*, 148 p., illus., \$4.50. For the general reader.

TRIG, LOG, ANTILOG AND LOG OF TRIG FUNCTIONS SIX PLACE TABLES—C. Attwood—*Otteneheimer Publishers*, 192 p., indexed, \$1. Vest-pocket guide to six-figure trigonometrical, logarithmic, antilogarithmic and logarithmic trigonometrical tables and formulas.

THE TRUE BOOK OF HORSES—Elsa Posell—*Childrens Press*, 48 p., illus. by Betsy Warren, \$2. Informative book for the very young reader.

VOLUNTARY HEALTH AND WELFARE AGENCIES IN THE UNITED STATES: An Exploratory Study by an Ad Hoc Citizens Committee—Robert H. Hamlin, Dir.—*Schoolmasters' Press*, 88 p., paper, \$1. Findings and recommendations of study supported by the Rockefeller Foundation.

WEED CONTROL: As a Science—Glenn C. Klingman with Lyman J. Noordhoff—*Wiley*, 421 p., illus., \$8.50. Up-to-date textbook, written in readable form, presents a thorough review of the chemistry of various herbicides, their physiological effects, and applied phases of weed control.

WHO'S WHO OF AMERICAN WOMEN: A Biographical Dictionary of Notable Living American Women, Vol. II—*Marquis*, 2nd ed., 1,114 p., \$25. Some 20,000 condensed biographical sketches of American "women outstanding as women": educators, civic workers, club women, as well as professional women, artists and authors.

• Science News Letter, 80:124 August 19, 1961

GENERAL SCIENCE

News From Science Clubs

► A STEADY FLOW of reports on interesting, worthwhile club projects is being received by Science Clubs of America. SCA's headquarters office at 1719 N Street, N.W., Washington 6, D. C., welcomes news of what YOUR club is doing.

THE SHELDON, IOWA, Community High School Science Club tried a successful "first" this year by sponsoring an Open House for public inspection of the school's science departments. Visitors totaled 300.

THE MIDLAND, LA., High School Science Club conducted a school-wide campaign to determine each student's blood type and record the data gathered.

THE BIOLOGY Science Club of Holy Family High School, Birmingham, Ala., took a trip to the Tuskegee Institute, Tuskegee, Ala. They visited the George Washington Carver Museum, the laboratories in the Carver Foundation building and the Institute's general science building.

SCIENCE EXHIBITS have been placed on display at the public library and at P.T.A. meetings by members of the Disque Junior High School Science Club in Gadsden, Ala.

A PROGRAM to promote college preparatory studies at Creswell, Ore., High School was undertaken by that school's Science Club.

IN FULTON, MISS., members of the

Fulton Junior High School Science Club have been compiling various collections for the school museum.

"SCIARAMA," a science exposition, is cited as one of the well-received activities of the Crusader Science Club at Central Catholic High School, Canton, Ohio.

THE MOTTO of the Coronado Junior High School Science Club in Plainview, Texas, is "Inquiring Minds Conquer the Future."

THE BIOLOGY CLUB at San Fernando, Calif., High School labeled the trees and shrubs on the school campus.

A MAJORITY of the 62-member Beverly Hills, Calif., High School Medical Club expect to study medicine at college. Practicing physicians in the Beverly Hills area frequently meet with the group and serve as guest speakers. Films on surgical procedures are another popular meeting feature.

SCIENCE TEACHERS, youth leaders and others interested in starting and sponsoring clubs can get complete details from Science Clubs of America, 1719 N Street, N.W., Washington 6, D. C.

There is no charge for these materials, or for affiliating a club with SCA.

• Science News Letter, 80:125 August 19, 1961

Questions

CHEMISTRY—At what temperature does the new tantalum carbide filament burn? p. 115.

MEDICINE—How many percent of all deaths in 1959 were caused by diseases of the heart and circulatory system? p. 116.

PUBLIC HEALTH—What is the "cure" for earache from chewing gum with only one side of the mouth? p. 117.

Photographs: Cover, Canadian National Railways; p. 115, Hooker Chemical Corporation; p. 117, F. C. Livingstone; p. 118, U. S. Forest Service; p. 119, United Technology Corporation; p. 128, Goode Products Co.

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