

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.

THE ASTRONOMER'S UNIVERSE—Bart J. Bok—*Cambridge Univ. Press*, 107 p., illus., \$3.75. Summarizes recent developments in the field of astronomy for the benefit of the intelligent and inquiring layman.

THE AUTOBIOGRAPHY OF CHARLES DARWIN 1809-1882—Nora Barlow, Ed.—*Harcourt*, 253 p., illus., \$4.50. First unexpurgated edition with original omissions restored, edited with Appendix and Notes by his grand-daughter.

THE BIRTH OF NORMAL BABIES—Lyon P. Streaun—*Twayne*, 194 p., \$3.95. Case histories in support of the author's research findings that most congenital abnormalities are not hereditary but due to stress.

ELECTRICITY IN AIRCRAFT—F. G. Spreadbury—*Macmillan*, 342 p., illus., \$8. Deals mainly with aircraft electrical equipment after 1945; for electrical engineers and technicians.

EMBRYONIC NUTRITION—Dorothea Rudnick, Ed.—*Univ. of Calif. Press*, 113 p., illus., \$3.25. Symposium of one of the Developmental Biology Conference Series which took place in 1956, under the auspices of the National Academy of Sciences-National Research Council.

ENCOURAGING FUTURE SCIENTISTS: Student Projects—John H. Woodburn—*National Science Teachers Assn.*, rev. ed., 23 p., illus., paper, 50¢. Helpful to science students who want to do a science project.

THE GENETICAL THEORY OF NATURAL SELECTION—R. A. Fisher—*Dover*, rev. ed., 291 p., illus., paper, \$1.85. An examination of Darwinism and natural selection in the light of modern genetics. First published in 1929.

GUIDE TO THE LITERATURE OF MATHEMATICS AND PHYSICS: Including Related Works on Engineering Science—Nathan Grier Parke III—*Dover*, 2nd rev. ed., 436 p., paper, \$2.49. Of greatest use to those who use mathematics.

MATHEMATICS FOR INDUSTRY—S. E. Rusinoff—*Am. Technical Soc.*, rev. ed., 565 p., illus.,

\$6.25. Presents in simplified form the mathematics most often needed in the field of practical engineering.

MENTAL SUBNORMALITY: Biological, Psychological and Cultural Factors—Richard L. Masland, Seymour B. Sarason and Thomas Gladwin—*Basic Bks*, 442 p., \$6.75. A survey of research sponsored by the National Association for Retarded Children.

THE NATIVE BROTHERHOODS: Modern Intertribal Organizations on the Northwest Coast—Philip Drucker—*Smithsonian Inst.* (Govt. Printing Office), 194 p., paper, \$1. A study in acculturation of the Alaskan and British Columbian Indians.

A NATURAL HISTORY OF INHACA ISLAND, MO-CAMBIQUE—William Macnae and Margaret Kalk, Eds.—*Daub*, 163 p., illus., \$7.50. Handbook dealing with the animals and plants of the tropical east African shore.

NOTHING LIKE SCIENCE—Magnus Pyke—*St. Martins*, 172 p., illus. by Michael Ffolkes, \$4. A British scientist looks at our science of today and demonstrates that some of the things attributed to it are often "nothing like science."

ORQUIDEAS DE MEXICO—N. Pelham Wright—*Editorial Fournier, S. A.* (*Science Service*), 23 p., text, 40 colored plates, \$10. In Spanish and English. Of interest to horticulturists and all orchid enthusiasts.

PAPERS ON THE SOLAR CONSTANT—Theodore E. Sterne and others—*Smithsonian Inst.* (Govt. Printing Office). Smithsonian Contributions to Astrophysics, Vol. 3, No. 3, 24 p., paper, 20¢.

THE PRACTICAL DICTIONARY OF ELECTRICITY AND ELECTRONICS—R. L. Oldfield—*Am. Technical Soc.*, 216 p., illus., \$5.95. Includes handbook of formulas, tables, diagrams and graphical symbols.

PROCEEDINGS OF LUNAR AND PLANETARY EXPLORATION COLLOQUIUM—B. B. Chew and others—*North Am. Aviation, Missile Division*, 23 p., illus., free upon request direct to publisher, 5601 Imperial Highway, Los Angeles, Calif.

PROJECT VANGUARD REPORT No. 31: The Vanguard Sequence Diagram, a Graphical Method of Presenting Complex System Opera-

tion—W. J. D. Escher and R. W. Foster—*Naval Res. Lab. (Office of Technical Services)*, 15 p., illus., 75¢. Includes master sequence diagram.

THE PROPERTIES AND STRUCTURE OF MATTER: Part I—Lewis Pokras—*Macmillan*, 580 p., illus., paper, \$5. Experimental college textbook of fundamental chemistry with stress on more independent study by the student.

RIVERS IN THE DESERT: A History of the Negev—Nelson Glueck—*Farar, Straus*, 302 p., illus., \$6.50. Archaeological exploration of the southern half of Israel, the site of trade routes and civilizations since the 4th millennium B.C.

SCALE-UP IN PRACTICE—Richard Fleming, Ed.—*Reinhold*, 134 p., \$4.50. Based on an "Experience in Industry" symposium jointly sponsored by Philadelphia-Wilmington Section of the American Institute of Chemical Engineers and the University of Pennsylvania.

THE SOCIAL IMPACT OF BOMB DESTRUCTION—Fred Charles Iklé—*Univ. of Okla. Press*, 250 pp., illus., \$3.95. Findings of the effects of bombing on the functioning of society, based on extensive analysis of World War II data from Germany, Japan, Poland, and other countries.

STELLAR POPULATIONS—D. J. K. O'Connell, Ed.—*Interscience*, 544 p., illus., \$10. Proceedings of the Conference sponsored by the Pontifical Academy of Science and the Vatican Observatory, 1957.

THE STORY OF THE DINOSAURS: A Guidebook for Young Scientists—Stanley B. Brown and Barbara M. Brown, reviewed for scientific accuracy by Mary B. Paturis—*Harvey House*, 125 p., illus. by Don Bolognese, \$2.95. Accurate information in simple language abundantly illustrated.

STUDIES ON THE STRUCTURE AND DEVELOPMENT OF VERTEBRATES, Vols. I and II—Edwin S. Goodrich—*Dover*, 837 p., illus., 2 vols., paper \$5. Unabridged reprint of original one-volume edition published in 1930.

A SYMPOSIUM ON THE CHEMICAL BASIS OF DEVELOPMENT—William D. McElroy and Bentley Glass, Eds.—*John Hopkins Press*, 934 p., illus., \$15. Papers on developmental cytology, cellular and tissue interactions in development, problems of specificity in growth and development and on control mechanism in development.

SYNTHETIC METHODS OF ORGANIC CHEMISTRY: Yearbook Vol. XII—W. Theilheimer—*Interscience*, 546 p., \$22.50. Reports on new trends in the synthesis of organic compounds and improvements of known methods published between 1955 and 1957. Includes German Register-Schlüssel of volumes I-XII.

A TEXT-BOOK OF ORGANIC CHEMISTRY: Historical, Structural & Economic—John Read and F. D. Gunstone—*Bell, G.*, 4th rev. ed., 610 p., illus., \$5.25. Includes discussions of modern theories of organic chemical structure, reactivity and reaction mechanism.

THE THEORY OF THE POTENTIAL—William Duncan MacMillan—*Dover*, 469 p., paper, \$2.25. Unabridged reprint of first edition in 1930.

THREE MILES DEEP: The Story of the Transatlantic Cables—John Merrett—*Hamilton, H.*, 191 p., illus., \$1.90. A cable-man's story of how the 2,400-mile-long submarine telegraph cables were laid which established rapid communication between Europe and America a hundred years ago.

3 REPORTS OF SUMMER CONFERENCES FOR SCIENCE TEACHERS: Teacher Demonstrations in Chemistry, The Science Teacher as a Career Counselor, and Teaching for Critical Thinking in Chemistry—*National Science Teachers Assn.*, 32 p., illus., paper, \$1.

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TREES FOR TOMORROW—Solveig Paulson Russell—*Melmont Pubs.* (Leibel), 32 p., illus. by Florence and Andrew Kerechuk, \$2. Tells children how forests are planted.

VACUUM TUBE CHARACTERISTICS — Alexander Schure, Ed.—*Rider*, 89 p., illus., paper, \$1.80. Written at the intermediate level.

WATER: Riches or Ruin—Helen Bauer—*Doubleday*, 121 p., illus., \$3. Written for young people impressing them with the need for conservation of the most important natural resource—water.

Science News Letter, January 24, 1959

Questions

ASTRONOMY—What is the scientific name for Mecha? p. 56.

GENERAL SCIENCE—How many students qualified to be judged in this year's science talent search? p. 55.

GEOPHYSICS—What type of curve is formed by plotting the observed auroral occurrence on geomagnetic coordinates? p. 55.

Photographs: Cover, Yankee Atomic Electrical Engineering Company; p. 51, Bell Telephone Laboratories; p. 53, Gardner-Denver Company; p. 55, Boeing Airplane Company; p. 64, Corning Glass Company.

Do You Know

It takes 25,000 pounds of water to grow a pound of *cotton*.

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An ultrasonic wave machine is being used by an English firm to measure the thickness of *fat* on the back of live pigs.

The fish themselves are not what interest Laboratory scientists, however. The fish are hosts to certain parasites, especially those found on fishes' gills, that do interest scientists.

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