

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.

ACIDS, BASES, AND THE CHEMISTRY OF THE COVALENT BOND—Calvin A. Vanderwerf—*Reinhold*, 118 p., illus., paper, \$1.95. Curriculum enrichment text in modern chemistry, showing the relationship between structure and chemical properties.

AN APPROACH TO CYBERNETICS—Gordon Pask, preface by Warren S. McCulloch—*Harper*, 128 p., illus., \$2.50. Gives insight into cybernetic processes and principles of control systems, biological controllers, teaching machines and reproducing machines.

ASK A QUESTION ABOUT METEORITES—H. H. Nininger—*Am. Meteorite Laboratory*, 87 p., photographs, paper, \$1.25. Meteorite museum director answers questions about nature and classification of meteorites, meteoritic dust, craters and tektites.

THE BIRTH OF THE BOMB—Ronald W. Clark, preface by Sir George Thomson—*Horizon Press*, 209 p., photographs, \$3.95. The dramatic story of the development of the atomic bomb in which scientists of six nationalities participated, as seen from Great Britain.

CHARLES BABBAE AND HIS CALCULATING ENGINES: Selected Writings by Charles Babbage and others—Philip and Emily Morrison, Eds.—*Dover*, 400 p., illus., paper, \$2. Babbage, an "eccentric genius," lived from 1792 to 1871, and spent most of his life inventing and trying to build an "analytical machine," early forerunner of today's computer.

CHEMISTRY IN NON-AQUEOUS SOLVENTS—Harry

H. Sisler—*Reinhold*, 119 p., paper, \$1.95. To provide chemistry teachers with supplementary text to enrich undergraduate chemistry curriculum.

COMPUTER BASICS, Vol. 1: Introduction to Analog Computers. Vol. 2: Analog Computers—Mathematics and Circuitry. Vol. 3: Digital Computers—Mathematics and Circuitry. Vol. 4: Digital Computers—Storage and Logic Circuitry. Vol. 5: Computers—Organization, Programming and Maintenance—Technical, Education and Management, Inc.—*Bobbs*, 288 p., 224 p., 224 p., 256 p., 222 p., illus., paper, \$4.95 each; boxed.

COMPUTER HANDBOOK—Harry D. Huskey and Granino A. Korn, Eds.—*McGraw*, 1228 p., 1099 diagrams, \$25. Comprehensive, practical reference book covering the design of analog and digital computers, and systems and their application to science and engineering.

CURRENT EXPENDITURES PER PUPIL IN PUBLIC SCHOOL SYSTEMS: Urban School Systems, 1958-59—Gerald Kahn; Walter H. Gaumnitz, Dir.—*Off. of Educ. (GPO)*, 82 p., paper, 50¢. Presents detailed data and analysis.

EARTH: The Stuff of Life—Firman E. Bear—*Univ. of Okla. Press*, 238 p., \$3.95. Agricultural chemist discusses for the general reader the problems of soil conservation in the light of present-day practices.

EASY SCIENCE EXPERIMENTS—Louis W. Kleinman—*Hart Pub. Co.*, 192 p., illus. by Justin Pearson, \$2.95. Describes and explains 100 simple experiments for young boys and girls.

ELEMENTARY THEORY OF NUMBERS—William J. LeVeque—*Addison-Wesley*, 132 p., \$5. Intended as introductory course in number theory in arts and sciences curricula, in teacher-training programs or enrichment programs offered to gifted high school students.

THE FORD FOUNDATION: Annual Report, Oct. 1, 1960 to Sept. 30, 1961—John J. McCloy, Chmn.—*Ford Foundation*, 176 p., illus., single copies free upon request direct to publisher, 477 Madison Ave., New York 22, N. Y. See story, *SNL*, 83:43, January 20, 1962.

GAMEBIRDS: A Guide to North American Species and Their Habits—Alexander Sprunt IV and Herbert S. Zim—*Golden Press*, 160 p., 266 illus. in color by James Gordon Irving, \$3.50. A handbook of basic data, helpful in identifying waterfowl, shorebirds and gamebirds.

GEOCHEMICAL AND RESISTIVITY PROSPECTING METHODS: A Field Investigation in Pend Oreille County, Wash.—James W. Crosby III and Richard E. Cavin—*Wash. State Univ.*, 206 p., maps, plates, paper, \$3. Detailed discussion of methods gives this report more than local interest.

GLOSSARY OF TERMS FREQUENTLY USED IN NUCLEAR PHYSICS—Robert L. Stearns—*Am. Institute of Physics*, 38 p., paper, single copies

free upon request direct to publisher, 335 E. 45th St., New York 17, N. Y. Definitions of terms concerned with nuclear structure.

GRAVITY—George Gamow—*Doubleday*, 157 p., illus. by author, paper, 95¢. Highly readable explanation of the theory of universal gravity, from Galileo's pioneering work to post-Einsteinian speculations.

HERBS: How to Grow and Use Them—Louise Evans Doole—*Sterling*, 128 p., illus., \$2.50. Descriptive list of herbs and practical information on how to cultivate and harvest them.

A HISTORY OF MATHEMATICS—H. A. Freebury—*Macmillan*, 198 p., illus., \$3.95. Presents picture of the mathematical contributions of the key civilizations, from the Sumerians, around 4000 B.C., to Leibnitz's infinitesimal calculus in the 17th century.

INDUSTRIAL APPLICATION OF NUCLEAR ENERGY: Third Inter-American Symposium on the Peaceful Application of Nuclear Energy, Rio de Janeiro, 1960—Inter-American Nuclear Energy Commission and Brazilian Nuclear Energy Commission—Pan Am Union, OAS, 369 p., illus., paper, \$2.50. Scientific papers with abstracts in the three working languages.

THE INFLUENCE OF TEMPERATURE ON THE MECHANICAL PROPERTIES OF METALS AND ALLOYS—E. M. Savitsky, transl. by D. Sherby; Oleg D. Sherby, Ed.—*Stanford Univ. Press*, 303 p., illus., \$9. First English edition of recognized Russian study in the field of mechanical metallurgy, a reference for research metallurgists and materials specialists.

INTELLIGENCE AND EXPERIENCE—J. McV. Hunt—*Ronald*, 416 p., illus., \$8. Not primarily a textbook, the author examines first the historical roots for the concepts of fixed intelligence and predetermined development, then goes on to the more recent evidence of central processes of intelligence modified through encounters with environment.

MAGNETISM: From Lodestone to Polar Wandering—D. S. Parasnis—*Harper*, 128 p., illus., \$2.50. Concise outline of magnetic phenomena, from elementary account of the quantum theory of magnetism to a summary of our present knowledge of the earth's magnetism, for the nonspecialist.

SEA GULLS-AND SUCH: Shore Birds of the Pacific Coast—Lillian Grace Paca—*Pacific Bks.*, 32 p., illus. by author, paper, \$1. Nontechnical descriptions with many drawings.

SENECA THANKSGIVING RITUALS—Wallace L. Chafe—*Smithsonian Inst., (GPO)*, 302 p., \$2.25. This ethnological work presents two texts in the Seneca language with translations and grammatical commentary.

SHOCK AND VIBRATION HANDBOOK. Vol. 1: Basic Theory and Measurements. Vol. 2: Data Analysis, Testing and Methods of Control. Vol. 3: Engineering Design and Environmental Conditions—Cyril M. Harris and Charles E. Creede, Eds.—*McGraw*, multipaged, illus., \$47.50. Complete reference library of authoritative information in three volumes.

THE STUDY OF PUBLIC PROBLEMS: A Report on Activities of The Brookings Institution, 1954-1961—Robert D. Calkins, Pres.—*Brookings*, 154 p., illus., paper, free upon request direct to publisher, 1775 Mass. Ave., NW, Washington 6, D. C. Reviews the range of studies and publications over the seven-year period.

THE UNCONCIOUS BEFORE FREUD—Lancelot Law Whyte—*Doubleday*, 211 p., paper, 95¢. Reprint of book first published in 1960.

A WRITER'S GUIDE FOR ENGINEERS AND SCIENTISTS—Robert R. Rathbone and James B. Stone—*Prentice-Hall*, 348 p., illus., \$7.95. Analyzes common problems and offers practical advice on how to convey technical information clearly, concisely and effectively.

• Science News Letter, 81:60 January 27, 1962

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