

Books of the Week

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AGRICULTURAL CHEMICALS—W. T. Thomson—Simmons Pub. Co., 219 p., spiralbound, paper, \$5. Manual lists trade names, index of chemical formulas, and gives descriptions and pertinent information on chlorinated hydrocarbons, organic phosphates, botanicals and inorganics.

ANCIENT AND MEDIEVAL SCIENCE: From the Beginnings to 1450—Rene Taton, Ed., transl. by A. J. Pomerans—Basic Bks., 552 p., illus., \$17.50. First of a four-volume general history of science that aims to present an objective and accurate survey of the development of science as an essential aspect of our culture. Volume I deals with ancient science in the East, in the Greco-Roman world, and with pre-Columbian, Arabic, Byzantine and medieval science in the West.

ANTARCTICA: Polar Research and Discovery During the International Geophysical Year—Carl R. Eklund and Joan Beckman—Holt, 157 p., photographs, maps, \$2.50. Concise and up-to-date account of our present scientific knowledge of Antarctica.

ATOMIC ENERGY ENCYCLOPEDIA IN THE LIFE SCIENCES—Charles Wesley Shilling, Ed., asst. by Miriam Teed Shilling—Saunders, 474 p., illus., \$10.50. Authoritative source of information, ranging from quick definitions to full-length articles, on more than 1,200 entries in fields such as health physics, radiation instrumentation, radioisotope uses, animal metabolism studies, and professional organizations.

BETWEEN THE SUNLIGHT AND THE THUNDER: The Wild Life of Kenya—Noel Simon, foreword by Roger Tory Peterson—Houghton, 384 p., photographs, maps, \$6. An eloquent and authoritative book about the fauna of Africa, the past and present status of each species of game animal and an analysis of the interplay between man and beast, written by the founder of the Kenya Wild Life Society.

COLLEGIATE DICTIONARY OF ZOOLOGY—Robert W. Pennak—Ronald, 583 p., \$8.50. Contains about 19,000 selected entries of which about 8,000 are proper names, emphasis is on items and terminology used in the U.S., written for students, research zoologists, high school and university teachers of biology and zoology.

COSMIC RAYS—A. W. Wolfendale, foreword by G. D. Rochester—Philosophical Lib., 222 p., illus., \$12. Introduction to the subject for students at undergraduate level and for scientists working in other fields.

CRYSTALS AND LIGHT: An Introduction to Optical Crystallography—Elizabeth A. Wood—Van Nostrand, 160 p., illus., paper, \$1.95. A well-illustrated study of crystals and their appearance in cross-polarized light.

ELECTRICAL MOTOR CONTROLS & CIRCUITS—J. David Fuchs and Stephen W. Garstang—Sams, 288 p., diagrams, paper, \$4.95. A handbook for designers, installers and maintenance personnel.

ELECTRONIC COMPONENT TESTS & MEASUREMENTS—Robert G. Middleton—Sams, 159 p., illus., paper, \$2.95. More than 100 simplified tests for resistive, capacitive, inductive, high-frequency and gaseous components.

FIRST SUPPLEMENT, 1964: 16mm Educational Films—International Film Bureau, 16 p., paper, single copies free upon request direct to publisher, 332 S. Mich. Ave., Chicago 4, Ill. Annotated list of 62 new films in mathematics, foreign languages, health and science.

A HISTORY OF COMMUNICATIONS, Vol. 9 of The New Illustrated Library of Science and Invention—Maurice Fabre—Hawthorn Bks., 112 p., designed by Erik Nitsche, \$3.95. More than 150 illustrations, many full-page in color and a chronology from 20,000 B.C. to 1963, make this a handsome and concise survey of man's systems of communication.

HUMAN RESOURCES IN THE URBAN ECONOMY—Mark Perlman, Ed.—Resources for the Future (Johns Hopkins Press), 265 p., paper, \$4.50. Papers presented at a conference of the Human Resources Sub-committee of the Committee on Urban Economics, 1962.

INTRODUCTION TO COMPARATIVE ENTOMOLOGY—Richard M. Fox and Jean Walker Fox—Reinhold, 450 p., illus., \$9.50. This textbook about insects, myriapods and arachnoids, written for zoologists, treats the three arthropod classes comparatively.

INTRODUCTION TO MATHEMATICAL LOGIC—Elliott Mendelson—Van Nostrand, 300 p., \$7.25. Text offers a compact course in mathematical and symbolic logic, including Gödel's theorems, Church's theorem, undecidable theories and consistency of the axiom of choice.

KEOEIT: The Story of the Aurora Borealis—William Petrie—Pergamon (Macmillan), 134 p., photographs, illus., \$5. Presents in readable form the subject of the aurora in history, describes the main instruments and observatories, form, variation and cause of auroras.

KEYS TO THE VERTEBRATES OF THE NORTHEASTERN STATES (Excluding Birds)—Allen H. Benton and Margaret M. Stewart—Burgess, 57 p., illus., paper, \$2.90. Provides key to the mammals, reptiles and amphibians of New England, New York, New Jersey and Pennsylvania.

A LABORATORY STUDY OF THE VERTEBRATES—C. Lynn Hayward—Burgess, 75 p., illus., \$2.75. Provides material for about 30 laboratory periods.

LECTURES ON BOOLEAN ALGEBRAS—Paul R. Halmos—Van Nostrand, 147 p., paper, \$2.95. Corrected and revised notes on lectures given at the University of Chicago in 1959.

LIST OF UNIVERSITIES AND COLLEGES IN JAPAN: Natural and Applied Sciences—Scientific Information, Science, Higher Education and Science Bureau, Ministry of Education, Japan—Japan Soc. for the Promotion of Science, 107 p., paper, \$1. English-language guide to Japanese institutions with faculties in science and engineering.

MANOMETRIC TECHNIQUES: A Manual Describing Methods Applicable to the Study of Tissue Metabolism—W. W. Umbreit, R. H. Burris, J. F. Stauffer and chapters on specialized techniques by M. J. Johnson and others—Burgess, 4th ed., 305 p., illus., \$6.50. Informs the beginning graduate student on the best methods suitable for his research, and on new developments in manometry.

MANUAL OF CONTRACEPTIVE PRACTICE—Mary Steichen Calderone, Ed., introd. by Nicholson J. Eastman—Williams & Wilkins, 295 p., illus., \$9.95. A book written by physicians for physicians, presenting a comprehensive survey of contraception in its many relationships, evaluating basic techniques and local, systemic and permanent methods of contraception.

MATHEMATICAL DISCOURSES: The Heart of Mathematical Science—Carroll V. Newsom—Prentice-Hall, 125 p., \$5. Treatise on the development of the concept of mathematical discourse and on its utilization in man's intellectual endeavors.

MYTH AND CULT AMONG PRIMITIVE PEOPLES—Adolf E. Jensen, transl. by Marianna Tax Choldin and Wolfgang Weisleder—Univ. of Chicago Press, 349 p., \$8.75. German anthropologist examines primitive religious phenomena, illustrating the culture-morphological approach with selected examples.

1964 NORTH AMERICAN RADIO-TV STATION GUIDE—Vane A. Jones—Sams, 128 p., maps, paper, \$1.95. Handbook with more than 7,000 listings of AM, FM, VHF and UHF stations by city, state and frequency.

ORGANIC CHEMISTRY—Donald J. Cram and George S. Hammond—McGraw, 2nd ed., 846 p., illus., \$10.75. Revised edition includes many of the exciting results of the past five years in the chemistry of carbon-containing compounds and their derivatives, reactions are discussed class by class, with chapters on heterocyclic compounds, natural and synthetic polymers, spectra and nomenclature.

PHILOSOPHY OF EDUCATION—Wanda Walker—Philosophical Lib., 160 p., \$3.75. A documented history of American philosophy of education, prize-winning work in 1962 Philosophical Library Essay Contest.

PLANNING YOUR FAMILY: The Complete Guide to Birth Control, Overcoming Infertility, Sterilization, with a Special Section on Abortion—Alan F. Guttmacher with Winfield Best and Frederick S. Jaffe—Macmillan, 329 p., illus., \$5.95. Newly revised and greatly expanded edition of The Complete Book of Birth Control (1961).

PROCEEDINGS OF THE 1963 INSTITUTE IN TECHNICAL AND INDUSTRIAL COMMUNICATIONS—Herman M. Weisman, Ed.—Inst. in Technical & Indust. Communications, Colo. State Univ., 147 p., illus., paper, \$6. Papers on current techniques, communication problems, training requirements and reading problems.

PROFESSIONAL ACHIEVEMENT FOR ENGINEERS AND SCIENTISTS: How to Earn More Money and Greater Success in Engineering and Science—Tyler G. Hicks—McGraw, 372 p., \$7.95. Experienced engineer's compilation of sound advice for professional and personal advancement.

PROJECT APOLLO: Man to the Moon—Tom Alexander—Harper, 234 p., illus. by Tom Turner, \$4.50. A well-researched, readable account, from early development stages and basic principles to the mechanical means used in the complex project of landing a man on the moon.

SCIENCE AND TECHNOLOGY FOR DEVELOPMENT: Report on the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas, Vol. I: World of Opportunity—U.N. (International Pubs., N. Y.), 267 p., \$6. First of eight-volume permanent record, presenting in readable form the contributors' papers and the oral discussions.

SCIENTIFIC AND TECHNICAL SOCIETIES IN JAPAN 1962—Scientific Information Section, Higher Education and Science Bureau—Japan Soc. for the Promotion of Science, 109 p., paper, \$1. Information on 334 organizations, grouped by subject, includes name index and index of scientific periodicals.

SNAKE LORE—John Crompton—Doubleday, 152 p., illus., \$3.95. An informal and informative account of man's encounter with snakes around the world.

TRADITIONAL BUILDING FORMS FOR DESIGN OF BUILDING FOR HOT CLIMATES—Ezra D. Ehrenkrantz—Building Research Institute, 3 p., paper, \$3. Facts about indigenous building forms of primitive cultures that protect effectively against heat.

WAVES AND OSCILLATIONS—R. A. Waldron—Van Nostrand for The Commission on College Physics, 135 p., diagrams, photographs, paper, \$1.75. Investigates specific wave properties and attributes, resonance and interference, and draws analogies between one kind of wave and another.

THE YMCA GUIDE TO ADULT FITNESS—Harold T. Friermood, Ed.—Association Press, 127 p., illus. by Andre Ecuyer, \$2.95; paper, \$1.95. A balanced and practical approach to the maintenance of physical health, based on the YMCA's long experience.

• Science News Letter, 85:76 Feb. 1, 1964

POPULATION

Government to Study World Population Stress

► U.S. GOVERNMENTAL action is now being taken to assay the effect of crowding the earth with people.

A recent act of Congress authorizes AID (Agency for International Development) to conduct research into the population growth explosion that scientists have long considered as a dangerous problem affecting many facets of life on earth.

The once vast reservoirs of land and resources are fast being used up, a survey by the Population Reference Bureau in Washington, D. C., showed. There are more traffic jams and often there is standing room only in theaters and restaurants. Even the great wilderness is being whittled away.

With 7,500 more people added to earth each hour, the problems of space, food, decent living and other economic and social factors become more acute.

Congressional action emphasizes the fact that the unbalanced population growth is endangering economic development.

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