

Books of the Week

TO SERVE YOU: To get books, send us a check or money order to cover retail price. Address Book Dept., SCIENCE NEWS LETTER, 1719 N St., N. W., Washington 6, D. C. Ask for free publications direct from issuing organizations.

ACROSS THE TOP OF THE WORLD: A Discussion of the Arctic—M. C. Shelesnyak—Govt. Printing, 71 p., illus., paper, 20 cents. Prepared by the Office of Naval Research, this history of the explorations of the Arctic describes the problems of aviation in this region, emphasizing rescue and survival.

ANNUAL REPORT OF THE SMITHSONIAN INSTITUTION, 1946—Govt. Printing, 440 p., illus., \$2.25. With Appendix.

A.S.T.M. STANDARDS ON COAL AND COKE—Am. Soc. for Testing Materials, 159 p., illus., paper, \$2.00, includes papers on sampling methods, chemical analysis, testing methods, specifications and classifications and definitions of terms.

ATMOSPHERIC POLLUTION—W. C. L. Hemmon and T. F. Hatch—Mellon Inst., 4 p., illus., paper. Free from: Industrial Hygiene Foundation, Mellon Institute, Pittsburgh, Pa.

THE ATOM BOMB AND THE ARMED SERVICES—Bernard Brodie and Eilene Gallo-way—Legislative Reference Service, Library of Congress, 17 p., paper, available to libraries only. Free from: Library of Congress, Washington, D. C.

BASIC BOTANY—Fred W. Emerson—Blakiston, 372 p., illus., \$4.00. For beginning college students, this text emphasizes the scientific method of problem solution.

BENJAMIN SILLMAN: Pathfinder in American Science—John F. Fulton and Elizabeth H. Thomson—Schuman, 294 p., illus., \$4.00. A biography of this famous geologist, chemist, and educator, who became "the father of American scientific education."

CALCIUM AND PHOSPHORUS IN FOODS AND NUTRITION—Henry C. Sherman—Columbia, 176 p., \$2.75. Planned essentially for teachers, nutritionists and advanced students, this book deals with quantitative distribution in the body and in foods, and considers nutritional functions.

CATALOGUE OF TYPE SPECIMENS OF MAMMALIA IN CHICAGO NATURAL HISTORY MUSEUM—Colin Campbell Sanborn—Chicago Natural History Museum, Fieldiana: Zoology, Vol. 32, No. 4, 293 p., paper, \$1.00.

CHEMICAL AND TECHNICAL STENOGRAPHY—James Kanegis—Publ. by the author, 387 p., \$5.00. Shorthand adapted specifically to use in the physical sciences, with emphasis on metallurgy and chemistry.

CHEMICAL INSECT ATTRACTANTS AND REPELLENTS—Vincent G. Dethier—Blakiston, 289 p., illus., \$5.00. Up-to-date and comprehensive data on chemical, botanical, physical and physiological factors.

CHEMICAL PROCESS PRINCIPLES—Part II: Thermodynamics—O. A. Hougen and K. M. Watson—Wiley, 347 p., \$5.00. Practical methods of process design and analysis with minimal experimental data are emphasized in this inclusive and advanced discussion of thermodynamic problems of process industries.

THE CHEMISTRY OF ORGANIC CYANOGEN COMPOUNDS—Vartkes Migrdichian—Reinhold, American Chemical Society Monograph No. 105, 460 p., \$12.00. A widely inclusive survey of the chemistry of cyanogen compounds, with little reference either to specific preparations or to historical matters.

COLCHICINE BIBLIOGRAPHY—O. J. Eigsti, with supplement by P. Dustin, Jr.—Lloydia Library, 114 p., paper, 50 cents.

CONFLICTS OF POWER IN MODERN CULTURE—Lyman Bryson, Louis Finkelstein, and R. M. MacIver, eds.—Harper, 703 p., \$6.50. A symposium of 62 approaches to the basic problems of aggression and power in western culture, and proposed methods for the integration and transformation of that culture.

CORNELL CONFERENCES ON THERAPY: Vol. II—Harry Gold—Macmillan, 354 p., \$3.75. Intended for those having a professional interest in medicine or pharmacy, this book contains sixteen of the Conference discussion on pharmacologic practice.

DIAGNOSIS IN DAILY PRACTICE—Benjamin V. White and Charles F. Geschickter—Lippincott, 693 p., illus., \$15.00. A comprehensive and practical basic book intended to assist physicians in general practice toward establishing diagnosis by evaluating clinical findings.

THE DISTRIBUTION OF LEUROGNATHUS: A Southern Appalachian Genus of Salamanders—Clifford H. Pope and Nelson G. Hairston—Chicago Natural History Museum, Fieldiana: Zoology, Vol. 31, No. 20, 8 p., illus., paper 10 cents.

THE FERNS OF NEW JERSEY—Mintin A. Chrysler and J. L. Edwards—Rutgers Univ. Press 201 p., illus., \$4.00.

FM SIMPLIFIED—Milton S. Kiver—Van Nostrand, 347 p., illus., \$6.00. This handbook explains FM radio clearly, describing practical applications in construction, operation, installation and servicing of all existing FM equipment.

THE FUNDAMENTAL WORK ON THEORY, APPARATUS, AS WELL AS PROCEDURES OF DISTILLATION AND RECTIFICATION—H. Stage and G. R. Schultze—Hobart, 179

p., paper, \$6.75. Reproduced by authority of the Alien Property Custodian, this comprehensive German compilation of the literature from 1920 to 1944 will be of considerable interest to American technologists.

FUNDAMENTALS OF NEUROLOGY—Ernest Gardner—Saunders, 336 p., \$4.75. The basic principles of the nervous system, with particular attention to the human.

GENETICS IS EASY—Philip Goldstein—Garlan Publ., 72 p., illus., paper, 75 cents. This handbook, intended for students and teachers, explains genetics in understandable terms and answers many questions.

HAWAIIAN AMERICANS—Edwin G. Burrows—Yale Univ. Press, 228 p., \$3.00. An anthropologist's lucidly-written account of the mingling of the four races and cultures of the Hawaiian Islands.

HENRY PHIPPS INSTITUTE FOR THE STUDY, TREATMENT AND PREVENTION OF TUBERCULOSIS 31ST REPORT: 1944-1946—Each paper separately paged, paper, available only to organizations. Free from: Seventh and Lombard Sts., Philadelphia, Pa.

HISTORY OF AIR NAVIGATION—Arthur J. Hughes—Macmillan, 154 p., illus., \$2.75. The author presents briefly the background of marine navigation, then describes the development of flight calculation and its instruments.

HOW LIFE IS HANDED ON—Cyril Bibby—Emerson, 159 p., \$2.00. The entire process of reproduction, together with the attitudes inculcated by tradition, education, and social standards, is described clearly for children and younger adolescents.

HOW MAN DISCOVERED HIS BODY—Sarah R. Riedman—International, 128 p., illus., \$2.25. This adroitly-illustrated, interestingly written book for young people not only describes the functionings of our bodies but also recounts the history of major discoveries concerning them.

HOW MUCH AND HOW MANY—Jeanne Bendick—Whittlesey House, 188 p., illus., \$2.00. For young people, this interesting and cleverly illustrated book defines terms, describes weights and measures in their many usages, historical and present.

THE INDIANS OF THE AMERICAS—John Collier—Norton, 326 p., illus., \$3.75. Written by the former U. S. Commissioner of Indian Affairs, this book recounts the colorful history of the American Indians from Paleolithic times to the present, correlating the Indian records of Spain with those of the United States.

INSECTS AND HUMAN WELFARE—Charles T. Brues—Harvard Univ. Press, 154 p., \$2.50. How insects affect man's welfare—his health, his household, agricultural and forestry pursuits—and how insects may be controlled, in an up-to-date, well-written presentation of widespread interest.

INTERMEDIATE ALGEBRA—Jack R. Britton and L. Clifton Snively—Rinehart, 337 p., \$2.00. Designed for college students.

JACK MINER AND THE BIRDS—Jack Miner—Reilly and Lee, memorial ed., 302 p., illus., \$3.50. The unique, self-revelatory record of a man who loved birds and in his own way tried to befriend them.

MACARONI MANUAL—Crosby Gaige—Barrows, 192 p., \$2.00. A wide variety of recipes utilizing macaroni, spaghetti, noodles, and their many variants; includes recipes for 50 different sauces.

Emerson Books, Inc., Dept. 82-D, 251 W. 19th St., N. Y. 11

MANAGING YOUR ARTHRITIS—I. G. Carll—*Dorrence*, 173 p., \$2.50. The author here considers many important questions concerning arthritis, including procedures in treatment and prospects for cures.

MARRIAGE IS ON TRIAL—John A. Sbarbaro—*Macmillan*, 128 p., \$2.00. Written by a judge having long experience on the divorce bench, this book discusses problems associated with marriage from the standpoint of those contemplating marriage, those already married, and those considering divorce.

MEDICAL CARE AND COSTS IN RELATION TO FAMILY INCOME: A Statistical Source Book—Helen Hollingsworth, Margaret C. Klem, and Anna Mae Baney—Federal Security Agency, Bureau Memorandum No. 51, 2nd ed., *Gov't Printing*, 349 p., paper, \$1.25.

MEN OUT OF ASIA—Harold Sterling Gladwin—*Whittlesey House*, 390 p., illus., \$4.00. Where the American Indians came from and how their culture evolved.

MIND AND BODY: Psychosomatic Medicine—Flanders Dunbar—*Random House*, 260 p., \$3.50. The role played by mental and emotional processes in physical disorders.

MONSIEURS, WITS AND LOGIC—Lillian R. Lieber and Hugh Gray Lieber—*Norton*, 240 p., illus., \$3.00. Logic done in drawings and what looks like free verse—but isn't.

MODERN CLINICAL PSYCHIATRY—Arthur P. Noyes—*Saunders*, 2nd ed., 570 p., \$5.00. Extensive revision of earlier presentation of a number of psychiatric concepts now accepted as fundamental; a chapter on psychiatric aspects of general medicine has also been added.

A MONOGRAPH OF THE EXISTING CRINOIDS—Austin Hobart Clark—*Gov't Printing*, U. S. National Museum Bulletin 82, Vol. I—The Comatulids, 473 p., paper, \$2.75.

MOVING WEATHER, Part I: Private and Introduction to Commercial—Russell R. Spafford—*Tenn. Flight Operators Assn.*, 69 p., illus., \$2.40. Adapted to self-instruction, this book furnishes illustrated text materials and movable models to assist the student of private or commercial flying in outdoor study of weather.

THE NAMING OF THE TELESCOPE—Edward Rosen—*Schuman*, 110 p., illus., \$2.50. Fresh light on the obscure early history of the telescope, and a close-up view of

Italian Renaissance intellectual and scientific activity.

NATURE AND PREVENTION OF PLANT DISEASES—K. Starr Chester—*Blakiston*, 2nd ed., 525 p., illus., \$5.00. A revised, up-to-date study of this important subject, suitable for the beginning student of agriculture.

NEWSPAPER DESIGNING—John E. Allen—*Harper*, 478 p., \$6.00. A technical, yet clear, treatment of all aspects of newspaper design, including comprehensive review of historical background and development of newspapers, their news technique, and probable future trends.

NOTHING SO STRANGE—James Hilton—*Little, Brown*, 308 p., \$2.75. The struggle for the atomic bomb is the background for this novel, with Prof. Framm a composite of Nazi scientists and Dr. Bradley a plausible young American physicist.

NUTRITION IN RELATION TO CANCER—Charles Glen King, et al.—*N. Y. Acad. of Sciences, Annals*, Vol. XLIX, Art. 1, 139 p., illus., paper \$2.00.

ORIGIN AND DEVELOPMENT OF CRATERS—T. A. Jaggar—*Geol. Soc. of Am.*, Memoir 21, 508 p., illus., \$6.00. Extensive chronicling of physical processes of Hawaiian craters, covering the field of volcanic activity for the first half of the twentieth century; a section is devoted to the principles of crater evolution.

OUR FLOWERING WORLD—Rutherford Platt—*Dodd, Mead*, 278 p., illus., \$6.00. This absorbing, beautifully illustrated book describes not only flowers and trees existing in the world today, but traces their origins from prehistoric plant forms.

PAINTING PATTERNS FOR HOME DECORATORS—Ruth Wyeth Spears—*Barrows*, 128 p., illus., \$3.50. Complete instructions on technique for the use of paint in home decorations, including actual-sized tracing patterns for many popular designs.

PATENT NOTES FOR ENGINEERS—*RCA Review*, 165 p., \$2.50. This reference book will assist the engineer and inventor in understanding patent law.

THE PLACE OF PSYCHOLOGY IN AN IDEAL UNIVERSITY—Report of the University Commission to Advise on the Future of Psychology at Harvard—*Harvard Univ. Press*, 42 p., \$1.50. Report of 12 authorities on what psychology is and should be and recommending a doctor's degree in that science.

PLANT BIOLOGY—Paul Weatherwax—*Saunders*, 2nd ed., 451 p., illus., \$4.25. Presented in a revised version, this concise text summarizes for the college student the basic essentials of botany.

PLANTS—Herbert S. Zim—*Harcourt, Brace*, 398 p., illus., \$3.00. This profusely illustrated book deals with all types of plants—from the simple one-celled organisms to the giant sequoia trees—and surveys the practical hobby activities which may be developed through interest in the plant kingdom.

PRACTICAL JOB POINTERS—Nelson L. Burbank—*Simmons-Boardman*, 211 p., illus., \$4.00. A practical manual surveying the most effective methods in current usage for carrying out a variety of jobs connected with home building and repair.

PREHISTORIC INDIANS OF THE SOUTHWEST—H. M. Wormington—*Colorado Museum of Natural History*, Popular Series No. 7,

191 p., illus., paper, \$1.50; cloth \$2.50. Written for the layman and undergraduate student, this history of Southwestern archaeology traces the development of southwestern cultures from many millennia before the opening of the Christian era through the time of the Spanish Conquest.

PRINCIPLES OF CHEMISTRY—Joel H. Hildebrand—*Macmillan*, 5th ed., 446 p., illus., \$4.25. New edition of a text for college students.

PSYCHOLOGICAL TESTING—James L. Mursell—*Longmans*, 449 p., \$4.00. A textbook on the theory and use of mental tests with analysis of typical tests and an exhaustive bibliography; a knowledge of basic statistics is assumed.

THE PUBLIC SPEAKER'S TREASURE CHEST—Herbert V. Prochnow—*Harper*, 414 p., \$3.50.

PUBLICATIONS OF THE NATIONAL FOUNDATION FOR INFANTILE PARALYSIS—Publication No. 48, one double sheet, free. Available from 120 Broadway, New York 5, N. Y. An annotated bibliography, listing free literature and visual aids available on loan.

REBUILDING THE WORLD ECONOMY—Norman S. Buchanan and Friedrich A. Lutz—*Twentieth Century Fund*, 434 p., \$3.50. A compendium on the history of world trade and its present status, the urgent need for, and obstacles thwarting, a redevelopment of world trade, and presenting a program of specific means toward reconstruction of multilateral trade.

RESEARCH: A Journal of Science and Its Applications—*Butterworth's Scientific Publications, Ltd.*, Vol. I, No. 1, 48 p., illus., paper \$10.00 per year. The first issue of a magazine devoted to both pure science and its practical applications. Available from: 4, 5, 6, Bell Yard, Temple Bar, London, W.C.2, England.

ROMPING THROUGH MATHEMATICS—Raymond W. Anderson—*Knopf*, 152 p., illus., \$2.50. Simple and amusing clarifications of arithmetic, algebra, geometry, trigonometry, and calculus, with clear, informative diagrams and drawings.

THE ROYAL BOTANICAL EXPEDITION TO NEW SPAIN—Harold William Rickett—*Chronica Botanica*, Vol. 11, No. 1, 86 p., illus., paper, \$2.50. A history of Mexico's botany from 1787 to 1820, as culled from the records of the Expedición Botánica sent by Charles III in 1787.

SCIENCE AND THE LAND: Annual Report 1945-46—N. J. Agric. Experiment Station—*Rutgers Univ.*, 109 p., illus., paper, free. In question and answer form, this

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report covers many phases of farm life and activity. Free from: Rutgers University, New Brunswick, N. J.

THE SELECTED WRITINGS OF BENJAMIN RUSH—Dagobert D. Rune, ed.—*Philosophical Lib.*, 433 p., \$5.00. Excerpts from the writings of this great naturalist and physician who was one of the fiery, uncompromising spirits of the American Revolution.

SUNSPOTS IN ACTION—Harlan True Stetson—*Ronald*, 252 p., \$3.50. Information from various fields of science is here brought together, with emphasis upon the sun's effect on the atmosphere of the earth; factual evidence regarding sunspots is set forth, and the author also examines critically certain hypotheses concerning the earth's relationship to its cosmic environment.

SURVEY OF EXISTING INFORMATION AND DATA ON RADIO NOISE OVER THE FREQUENCY RANGE 1-30 Mc/s—H. A. Thomas and R. E. Burgess—*His Majesty's Stationery Office*, Department of Scientific and Industrial Research, Radio Research Special Report 15, 126 p., illus., paper, 60 cents. Available from: His Majesty's Stationery Office, London, England.

THEORY OF FUNCTIONS—J. F. Ritt—*King's Crown Press*, 181 p., paper, \$3.00. This basic college text emphasizes the complex variable, and prepares the student for more advanced courses on the real variable.

THE THEORY OF MATHEMATICAL MACHINES—Francis J. Murray—*King's Crown Press*, 116 p., illus., paper, \$3.00. Basic principles of mathematical devices, covering both mechanical and electronic methods of operation.

TOUCHSTONE FOR ETHICS—T. H. Huxley and Julian Huxley—*Harper*, 257 p., \$3.00. Reprints of the Romanes Lectures by grandfather and grandson, seeking a moral and scientific basis for insuring that emergent new civilizations will be founded on principles harmonious with those of present day morality.

A TRIP THROUGH MELLON INSTITUTE—*Mellon Institute*, 4th ed., 20 p., illus., paper. History of the Institute's Fellowship system and a tour of its physical plant. Free from: Mellon Institute, Pittsburgh, Pa.

UNDERSTANDING YOURSELF AND YOUR SOCIETY—John M. Ewing—*Macmillan*, illus., 357 p., illus., \$2.25. For high school seniors, this book on individual and social psychology and sociology is non-technical, practical, and refreshingly-written.

UNITED STATES ARMY IN WORLD WAR II: The Army Ground Forces—The Organization of Ground Combat Troops—Kent Roberts Greenfield, Robert R. Palmer, and Bell I. Wiley—*Govt. Printing*, 540 p., \$3.25. Issued by the Historical Division, Department of the Army, this is the first in a long series of volumes documenting World War II, and describes the mobilization and preparation for combat of the ground army.

WAX AND FATTY BYPRODUCTS FROM SUGARCANE—Royal T. Balch—*Sugar Research Found.*, Technological Report Series No. 3, 62 p., paper. Sugar cane is analyzed for other useful products which may be extracted from it. Free from: 52 Wall St., New York 5, N. Y.

WEATHER HORIZONS—Frances Day Ashley, *American Meteorological Society*, 79 p., paper. A series of articles discussing various types of careers in meteorology, and the factors influencing them. Free from: 5 Joy St., Boston 8, Mass.

WHAT YOU CAN DO FOR HIGH BLOOD PRESSURE—Peter J. Steincrohn—*Double-day*, 191 p., \$2.50. Written for the layman, this book gives valuable information concerning the symptoms and treatment of high blood pressure, with suggestions for the hypertensive's adjustment to a new way of life.

WIND TUNNEL TESTING—Alan Pope—*Wiley*, 319 p., illus., \$5.00. This first thorough study in the field presents data concerning all types of wind tunnels.

WORD FINDER—J. I. Rodale—*Rodale Press*, 1317 p., \$6.50. Planned as an aid to the writer, this work assists in effective sentence structure by supplying associative modifying and action words.

Science News Letter, November 8, 1947

PSYCHOLOGY

Mentally Ill See Less Motion in Still Pictures

➤ ORDINARILY it is the mentally ill person who sees things that are not there. But when it comes to seeing people dancing, running, or moving about in a still picture, the normal person is better.

In fact, a test based on this ability to see figures in motion on cards of varying shading and contours, can be used to distinguish between normal and abnormal individuals. Drs. Joseph Zubin, David M. Levy, and Ralph Rust, of the New York Psychiatric Institute, have reported to the American Psychological Association.

Science News Letter, November 8, 1947

THE CHEMICAL ELEMENTS
Compiled By
PHILIP S. CHEN, Ph. D.
PROFESSOR OF CHEMISTRY, ATLANTIC UNION COLLEGE

WALL CHART
(Actual Size 38 x 50 inches)
CONTAINS THE FOLLOWING UNBELIEVABLY VAST AMOUNT OF INFORMATION CONCERNING EACH ELEMENT

Periodic table (based on atomic numbers)
Periodic table (based on atomic weights)
Group and family
Name in English, German, and French
Derivation
Discovery
Date, discoverer, nationality
Symbol and atomic number
Arrangement of electrons in orbits
Atomic weight
Logarithm of atomic weight
Isotopes and valence
Crystalline form and color
Specific gravity or density
Melting and boiling points
Specific heat

Heats of vaporization and fusion
Heat conductivity
Electrical resistivity
Coefficient of thermal expansion
Occurrence, preparation, and uses
The radioactive elements
Activity series
Distribution in earth's crust, in ocean, in atmosphere, and in human body
Mechanical properties of principal metals
Map showing production in U. S. A.
Alchemical symbols for gaseous elements
Critical constants for gaseous elements
Flame and hot bead tests
Index to the elements

The chart is so self-explanatory that a key, which is usually necessary for other charts, is not necessary for its intelligent use. Numerical values are given for constants that are represented in other charts by signs and varying lengths of lines or columns.

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