

Books of the Week

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ANIMAL PHYSIOLOGY—Knut Schmidt-Nielsen—Prentice-Hall, 2nd ed., 118 p., illus., \$3.95; paper, \$1.75. Covers both animal and human physiology, dwells on the relations of an animal to its environment, and contains definitions and discussions of important concepts.

APPLIED SUPERCONDUCTIVITY—Vernon L. Newhouse—Wiley, 285 p., illus., \$8.50. Deals with superconductivity in bulk materials, theoretical aspects, superconductive films, amplifiers, storage devices, bolometers and heat flow valves.

ATLAS OF FLORIDA—Erwin Raisz and Associates, text by John R. Dunkle—Univ. of Fla. Press, 11"x14", 52 p., illus. in color, \$7.50. Presents with the help of maps, charts, diagrams and pictographs the many facets of the State's development, physical, historical, industrial and cultural.

CATALOG OF FREE TEACHING AIDS—Gordon Salisbury and Robert Sheridan—Catalog of F. T. A., 4th rev. ed., 217 p., paper, \$1.50 direct to either author, P. O. Box 1075, Ventura, Calif. Lists teacher-evaluated materials under subject headings.

CATALOGUE OF DATA IN THE WORLD DATA CENTERS: Annals of the International Geophysical Year, Vol. XXXVI—International Council of Scientific Unions—Pergamon Press (Maxwell Scientific Int'l), 744 p., maps, paper, \$10. Complete data which were exchanged by participating countries for the period of the IGY and IGC, July 1957 to December 1959.

CHEMISTRY IN MEDICINE: A Symposium Held on the 80th Birthday of Donald Dexter Van Slyke—Fed. of Am. Socs. for Experimental Biology, Federation Proceedings May-June 1964, 152 p., illus., paper, \$3 direct to Federation, 9650 Wisconsin Ave., Washington, D. C. 20014. Papers range from discussion of vitamin B-12 and the porphyrins to water and electrolyte losses in cholera.

COMMUNICATIONS IN SPACE: From Wireless to Satellite Relay—Orrin E. Dunlap Jr.—Harper, rev. ed., 260 p., photographs, \$5.95. Tells the story of electrical communication from the beginnings in Maxwell's theory to the globe-spanning communication systems of sound and sight, with special chapter on maser-laser developments.

COOKBOOK FOR DIABETICS—Canadian Diabetic Association—Taplinger, 141 p., paper, \$4. Compiled by dietitians, the recipes are based on the exchange lists used in Canada, but are easily adapted to U.S. exchange lists.

DIRECTORY OF INDUSTRIAL RESEARCH LABORATORIES IN NEW YORK STATE, 1964—Advisory Council for the Advancement of Industrial Research and Development—N.Y. State Dept. of Commerce, 355 p., paper, single copies free upon request direct to publisher, 112 State St., Albany, N.Y. 12207. Lists staff and fields of activity of 1,170 New York laboratories.

ECONOMIC GROWTH AND EMPLOYMENT OPPORTUNITIES FOR MINORITIES—Dale L. Hiestand, foreword by John F. Henning, introd. by Eli Ginzberg—Columbia Univ. Press, 127 p., \$6. Based on analysis of census and other data, shows the impact of changing conditions in different employment fields on the opportunities of Negro men, Negro women and white women.

EDUCATORS' GUIDE TO FREE TAPES, SCRIPTS AND TRANSCRIPTIONS—Walter A. Wittich and Gertie Hanson Halsted, Eds.—Educ. Progress Service, 11th ed., 203 p., paper, \$5.75. Annotated selection of 497 free educational enrichment audio and script materials.

THE EGYPTIANS KNEW—Tillie S. Pine and Joseph Levine—McGraw, 32 p., illus. by Ezra Jack Keats, \$2.95. A combination of science and history for the youngest readers.

ELEMENTARY TEACHERS GUIDE TO FREE CURRICULUM MATERIALS, 1964—Patricia H. Suttles, Ed., with John Guy Fowlkes—Educators Progress Service, 21st ed., 311 p., paper, \$7.50. Annotated listing of 1,252 items, 41% new, from 534 sources.

ENCYCLOPEDIA OF FIREARMS—Harold L. Peterson, Ed.—Dutton, 367 p., illus., 300 photographs, \$10.95. Describes different kinds of firearms used throughout the world from the invention of gunpowder to the present day, includes definitions and articles on accessories and ammunition.

ENVIRONMENTAL MEASUREMENT AND INTERPRETATION—Robert B. Platt and John F. Griffiths—Reinhold, 235 p., illus., \$8.75. Handbook and reference manual, written for teachers, researchers and engineers, emphasizes the terrestrial environment and reviews critically the methods of measuring environmental variables.

EXCAVATION OF A PORTION OF THE EAST RUIN, AZTEC RUINS NATIONAL MONUMENT, NEW MEXICO—Roland Richert—Southwestern Monuments Assn., 40 p., illus. maps, paper, \$3.50. Contains discussions about pottery, comparisons with

other contemporary sites, theories, and relates data and materials recovered at the East Ruin.

EXPERIMENTS AND CONSIDERATIONS TOUCHING COLOURS: The Beginning of an Experimental History of Colours—Robert Boyle, new introd. by Marie Boas Hall—Johnson Reprint Corp., 423 p., \$12.50. A facsimile of the London, 1664 edition, the first major contribution in English to the theory of colors.

EXPLOSIVE WORKING OF METALS—John S. Rinehart and John Pearson—Pergamon (Macmillan), 351 p., illus., \$17.50. Comprehensive source of information about the physical basis and the engineering fundamentals and practices of explosive metal working.

FARMING PRACTICES AND CONCENTRATIONS OF FISSION PRODUCTS IN MILK—Warren G. Hansen and others—PHS No. 999-R-6, 44 p., paper, single copies free upon request direct to Public Health Service, Washington, D.C. 20201. Studies showed that levels of strontium-90 and iodine-131 can be moderated by optimal fertilization of the land.

FERTILIZERS: An Annual Review of World Production, Consumption and Trade, 1962—Statistics Div., P. V. Sukhatme, Dir.—FAO (Int'l Doc. Serv., Columbia Univ. Press), 173 p., paper, \$2. Records and analyzes data received from governments up to March 1963, covering a period of six years.

THE FEYNMAN LECTURES ON PHYSICS, Vols. I and II—Richard P. Feynman, Robert B. Leighton and Matthew Sands—Addison-Wesley, multipaged, illus., \$8.75 per volume. In 93 chapters these two volumes present an authoritative modern course in introductory physics based on a program undertaken at Caltech for improved physics teaching.

1400 ANALOGY QUESTIONS: Programmed—Edward C. Gruber—Arco, 106 p., \$4; paper, \$2.50. Essential information about analogy tests, with 1400 programmed frames for self-study.

THE GREEKS OVERSEAS—John Boardman—Penguin, 288 p., illus., 24 plates, maps, paper, \$1.45. Story relates the cultural evidence of how much the Greeks owed and gave to their neighbors as they colonized older civilizations between the eighth and sixth centuries B.C.

GROUNDWATER LEGISLATION IN EUROPE—Legislation Research Branch, Food & Agriculture Organization—FAO (Int'l Doc. Service, N.Y.), 175 p., paper, \$3. Discusses provisions concerning groundwater exploration and use in general, and the implementation by legislation with country-by-country analysis of legislation.

HANDBOOK OF BIBLICAL CHRONOLOGY: Principles of Time Reckoning in the Ancient World and Problems of Chronology in the Bible—Jack Finegan—Princeton Univ. Press, 338 p., \$8.50. A scholarly handbook for specialists, supplies necessary lists and tables for calculations, and establishes full sequence of Biblical dates from 605 B.C. onward.

HANDBOOK OF MATHEMATICAL FUNCTIONS with Formulas, Graphs and Mathematical Tables—Milton Abramowitz and Irene A. Stegun, Eds.—NBS (GPO), 1,046 p., \$6.50. Includes a maximum of useful information to serve as a definitive reference for scientists in all fields. Rational approximation formulas, tailored to the computer, are included for all the functions, ranging from Airy to Riemann Zeta Functions.

INDEPENDENT ADOPTIONS: A Follow-Up Study—Helen L. Witmer and others—Russell Sage Foundation, 463 p., \$7.50. Data and findings of a follow-up investigation involving 447 families, ten years after they had been granted adoptions in Florida, reports detailed interviews and discusses some of the reasons for success or failure of adoptions.

INTRODUCTION TO APPLIED MATHEMATICS—Francis D. Murnighan—Dover, 389 p., paper, \$2. Unabridged reprint (1948).

JOURNALISTS IN ACTION—Dean Edward W. Barrett, Robert F. Hewes, Asst. Ed.—Channel Press, 305 p., \$5.95. Presents writings by a distinguished group of Columbia's Graduate School of Journalism alumni on problems of their craft, lessons learned, big stories covered, people, ventures and the profession in general.

KINETIC THEORY OF GASES, Parts I and II—Jesse H. Day—Fearon Pubs., 27 p., 44 p., paper, 50¢ each. Programmed instruction designed for college students and suitable for self-study by the gifted high school student.

LABORATORY GUIDE IN PHARMACOLOGY—Tom S. Miya and others—Burgess, 2nd ed., 162 p., illus., paper, \$3.50. Experiments intended to acquaint the beginning student with various pharmacological principles in general, without complicated and costly equipment.

LECTURES ON MODERN MATHEMATICS, Vol. II—T. L. Seaty, Ed.—Wiley, 183 p., illus., \$5.75. Among topics covered are general linear partial differential equations, quasiconformal mappings, and differential topology.

LIFE HISTORIES OF NORTH AMERICAN WOODPECKERS—Arthur Cleveland Bent—Dover, 334 p., 39 plates, paper, \$2.75. Monograph, originally (1939) published as Smithsonian Institution National Museum Bulletin 174.

MATHEMATICS—David Bergamini and the Eds. of LIFE—Time Inc. BK. Div., 200 p., illus., \$3.95

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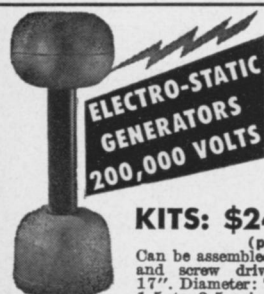


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THE NATURAL GEOGRAPHY OF PLANTS—Henry A. Gleason and Arthur Cronquist—Columbia Univ. Press, 420 p., photographs, \$10. Describes the factors involved in plant distribution, the conditions on which plant migration and habitat depend, and discusses common species and plant communities of the ten floristic provinces of North America.

NEW HANDBOOK OF THE HEAVENS—Herbert J. Bernhard, Dorothy A. Bennett and Hugh S. Rice—McGraw, rev. ed., 360 p., illus., paper, \$2.75. For the beginner and the more advanced amateur, includes carefully prepared lists of good celestial objects and the best nights for their observation.

NONFICTION: From Idea to Published Book—Harry Edward Neal—Funk, 236 p., \$3.95. A most readable and practical guide to writing and selling the nonfiction article and book.

POPULATION, EVOLUTION, BIRTH CONTROL: A Collage of Controversial Readings—Garrett Hardin—Freeman, 341 p., \$4.50; paper, \$2. A representative selection of short articles from the population literature, with teaching notes.

PROTEIN METABOLISM IN THE PLANT—Albert Charles Chibnall, new foreword by H. B. Vickery—Yale Univ. Press, 306 p., illus., \$6.50; paper, \$1.95. Expanded version of the Silliman Lectures (1939), a book long out of print which has become a classic on plant biochemistry.

PROVING GROUND: An Account of the Radiobiological Studies in the Pacific, 1946-1961—Neal O. Hines—Univ. of Wash. Press, 366 p., photographs, maps, \$6.75. Interim report based on findings of the Laboratory of Radiation Biology, presents scientific interpretation and synthesis of the environmental investigations conducted in the Pacific for the Atomic Energy Commission.

150 PUZZLES IN CRYPT-ARITHMETIC—Maxey Brooke—Dover, 72 p., paper, \$1. Arithmetical puzzles that are solved by examination of the number relations between the various groups and symbols.

RECREATIONS IN THE THEORY OF NUMBERS: The Queen of Mathematics Entertains—Albert H. Beiler—Dover, 349 p., diagrams, paper, \$2. New book dealing exclusively with the recreational aspect of such subjects as perfect numbers, divisors, scales of notation, oddities about squares, and endless decimals.

SCIENCE AND POLITICS—Quintin McGarel Hogg, formerly Viscount Hailsham—Encyclopedia Britannica Press, 110 p., \$2.95. Britain's first Minister for Science discusses the relationship between science and government in a free society.

SOVIET EDUCATION—Nigel Grant—Penguin, 190 p., map, paper, 95¢. Describes the different types of schools and colleges in the U.S.S.R., and examines the system as a whole against its geographical, historical and political background.

A STUDY OF CHARACTERISTICS AND METHODS OF DETECTION OF FOOD POISONING MICROORGANISMS WITH PARTICULAR EMPHASIS ON CLOSTRIDIUM PERFRINGENS—John E. Despaul—Defense Supply Agency, Lab. Div. of Tech. Operations, 156 p., paper, free upon request direct to publisher, 1819 W. Pershing Rd., Chicago 9, Ill. Reports on research at the Universities of Kentucky and of Cambridge, and on methods studied at the Food Hygiene Laboratory in London, England.

STUDY OF THE PLANETS BY MEANS OF THE POLARIZATION OF THEIR LIGHT—Audouin Dollfus, transl. from French—NASA (OTS), 133 p., illus., paper, \$2.75. Analysis of weakly polarized light resulting in new data on the physical conditions of the visible surface of Mercury, Venus, Jupiter and Mars.

THEORIES OF MOTIVATION IN LEARNING: An Enduring Problem in Psychology. Selected Readings—Richard C. Teeran and Robert C. Birney, Eds.—Van Nostrand, 215 p., diagrams, paper, \$1.75. Collection of readings on topics such as primary motivation, concept of acquired drives, and stimulus-response theory of drive.

THEORY OF THE INTEGRAL—Stanislaw Saks, transl. from French edition, notes by Stefan Banach—Dover, 2nd rev. ed., 343 p., paper, \$2.25. Reprint (1937).

THESAURUS OF ENGINEERING TERMS—Eugene Wall, Ed.—Engineers Joint Council, 319 p., paper, \$16.50. A list of engineering terms and their relationship for use in vocabulary control in indexing and retrieving engineering information, worked out under the general guidance of the EJC Information Systems Committee.

THE THEORY OF GROUP REPRESENTATIONS—Francis D. Murnighan—Dover, 369 p., paper, \$2.35. Unabridged and corrected republication of work first published in 1938.

THIRTY-THREE TROUBLESOME CHILDREN—D. H. Stott—Nat'l Children's Home, 134 p., charts, \$1.50 direct to publisher, Highbury Park, London, N.5, England. Studies the causes of maladjustment from the angle of the family situation, chronic ailments, and neurological impairments.

TRADE IN AGRICULTURAL COMMODITIES IN THE UNITED NATIONS DEVELOPMENT DECADE, Vols. I and II—FAO Commodity Review 1964, B. R. Sen, Dir.-Gen.—FAO (Int'l Doc.

Service, N.Y.), 103 p., 196 p., paper, \$7. Reviews trends in agricultural exports from developing countries, prospects and problems for different commodities, and presents detailed statistical data.

A TREE IS BORN—J. M. Guilcher and R. H. Noailles—Sterling, 100 p., 127 photographs, \$2.99. Handsome little book showing the stage-by-stage development of the horse chestnut, oak, walnut and pine tree.

THE TYRANNY OF SCHOOLING: An Inquiry into the Problem of "Stupidity"—Lewis Anthony Dexter—Basic Bks., 182 p., \$4.50. Some very controversial thoughts on the subject of the slow learner and below-average graduate of the U.S. public school system.

THIRD ANNUAL AEROSPACE RELIABILITY AND MAINTAINABILITY CONFERENCE, June 29-July 1, 1964—John de S. Coutinho, Chmn.—Soc. of Automotive Engineers, 658 p., illus., paper, \$15.50. Conference was cosponsored by SAE, ASME and AIAA for the professional reliability/maintainability engineer and his management.

THIS AWESOME CHALLENGE: The Hundred Days of Lyndon Johnson—Michael Amrine—Putnam, 283 p., \$4.95. The behind-the-scenes story of the critical hours and days when a man unknown to most of the world inherited the most powerful and demanding office in the world.

ULTRASONIC THERAPY: A Textbook for Physiotherapists—W. Sumner and Margaret K. Patrick—Elsevier Pub. Co. (N.Y.), 163 p., illus., \$5. Treats the physics of ultrasound and discusses the principles of ultrasonic therapy, including the techniques, effects, uses and contra-indications involved.

WHAT ARE THE FACTS ABOUT THE POPULATION CRISIS?—National Health Education Committee, 17 p., ill., paper, single copies free upon request direct to publisher, 135 E. 42nd Street, New York 17, N.Y. Popular summary of research findings.

ZEPHYR—Charlotte Truepenney—Scribner, 190 p., photographs, drawings, \$3.95. Story about a pet Vervet monkey on an African bush farm.

• Science News Letter, 86:156 Sept. 5, 1964

Nature Note

Poison Ivy

► Every Monday morning, during the summer, countless Americans wake up with an itch, and became sadly aware that they have an unwanted souvenir of their weekend picnic—poison ivy rash.

This unpleasant affliction is caused by contact with the poison ivy plant, *Toxicodendron radicans*, and may consist of anything from a slight itch to severe inflammation and blistering. The rash usually appears 24 to 48 hours after contact.

The poison ivy plant is common throughout most of eastern North America, and is easily recognized by its clusters of three scalloped leaves. These leaves, which are shiny when young, contain the irritant urushiol, a yellowish oil. It is this oil which causes the rash.

Sensitivity to poison ivy is acquired—most people become sensitive through early contact in childhood, but become less sensitive with age. Once sensitivity decreases, it rarely increases again.

The poison ivy plant is related to poison oak and poison sumac, and all three produce similar reactions. Poison ivy oil retains its potency on clothes and other items for a year or more, and will cause reaction in highly sensitive subjects even when diluted 50 million times. The rash can also be acquired by contact with smoke from burning poison ivy plants.

Most commercial preventatives or cures are less than 100% effective, but the rash can be prevented by washing in a five percent solution of ferric chloride in alcohol and water, either immediately before or after contact with the plant. Immunizing pills and shots are also available.

• Science News Letter, 86:157 Sept. 5, 1964

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To acquaint the readers of this publication with the easy-to-follow rules for developing rapid reading skill, the company has printed full details of their interesting self-training method in a new book, "Adventures in Reading Improvement," which will be mailed free to anyone who requests it. No obligation. Simply send your request to: Reading Improvement Program, 835 Diversey Parkway, Dept. 2646, Chicago, Illinois 60614. A postcard will do.