

# Books of the Week

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**AUTOMATION IN INDUSTRIAL PHARMACEUTICAL PROCESS AND QUALITY CONTROL**—Andres Ferrari, Ed.—N.Y. Acad. of Sciences, Annals, Vol. 130, Art. 2, 365 p., illus., paper, \$9. Conference papers discuss application of automation to clinical chemistry, spectrophotometry, antibiotic assay, serology and enzyme synthesis.

**BACKACHE, STRESS AND TENSION: Their Cause, Prevention and Treatment**—Hans Kraus, M.D.—Simon & Schuster, 185 p., illus., \$4.50. Features a physician's tested suggestions for special, muscle-relaxing exercises.

**THE BOOK OF MOTORCYCLES, TRAIL BIKES & SCOOTERS**—Erik Arctander—Arco, 96 p., 200 photographs, \$2.50. About new developments in two-wheel sport vehicles.

**CARDIOVASCULAR COMPENDIUM, Vol. 1, No. 1**—Gerald L. Brodsky, Ed.—Compendium Publications, 37 p., paper, monthly, individual subscription \$48 per year. Publishes abstracts dealing with original research selected from leading cardiovascular journals of the world.

**CREATIVE PRODUCT EVOLVEMENT**—Joseph Liston and Paul E. Stanley—Balt Publishers, multipaged, illus., \$5. Text for college students and practicing engineers, designed to develop procedures for conceiving, describing, proving and communicating new product ideas.

**THE DC-3: The Story of a Fabulous Airplane**—Carroll V. Glines and Wendell F. Moseley—Lippincott, 203 p., photographs, \$5.50. Recounts the achievements of one of the most dependable military aircraft now in its fourth decade of service.

**DYNAMICAL THEORY OF GROUPS AND FIELDS**—Bryce S. DeWitt—Gordon & Breach, 248 p., \$5.95; paper, \$2.95. Series of lectures published in 1964 as part of a larger volume titled RELATIVITY, GROUPS AND TOPOLOGY.

**ELECTROMAGNETIC THEORY: Static Fields and Their Mapping** (formerly titled: Electromagnetic Fields Theory and Applications)—Ernst Weber—Dover, 590 p., diagrams, paper, \$2.75. Reprint (1950).

**ELECTROMAGNETISM AND THE EARTH'S INTERIOR**—Tsuneji Rikitake—Elsevier Pub. Co. (N.Y.), 308 p., diagrams, \$22.50. Deals with the geomagnetic field and its secular variations, electromagnetic induction theories, electrical conductivity in the mantle, earth currents and magnetotellurics, and conductivity anomaly in the crust and mantle.

**EXPLORING SCIENCE IN YOUR HOME LABORATORY**—Richard Harbeck—Four Winds Press (Scholastic), 128 p., illus. and photographs by author, \$2.50. Tells how to set up and equip a laboratory at home, explains basic procedures and gives some ideas for projects.

**FORMS OF WATER IN BIOLOGIC SYSTEMS**—Joseph F. Saunders and John E. Flynn, Eds.—N.Y. Acad. of Sciences, Annals, Vol. 125, Art. 2, 523 p.,

illus., paper, \$10. Interdisciplinary conference papers and discussion of experimental data on the behavior of water molecules, and the structure and function of water in living systems.

**A HISTORY OF GENETICS**—A. H. Sturtevant—Harper, 165 p., \$5.50. Covers the development of ideas and techniques, from the time of Aristotle to about 1950, with emphasis on biographical aspects. Includes chronology and diagrams of intellectual pedigrees.

**A HISTORY OF SPACE FLIGHT**—Eugene M. Emme—Holt, 224 p., illus., \$2.95. Traces the development of man's concept of space, and examines the evolving space technology from its beginnings to current projects.

**LABORATORY AND WORKSHOP NOTES, 1962-1964**—Ruth Lang, Ed.—Edward Arnold Ltd., 278 p., illus., \$9. Seventh selection reprinted from Journal of Scientific Instruments for The Institute of Physics and The Physical Society.

**LET'S GET WELL**—Adelle Davis—Harcourt, 580 p., \$4.50. Well-indexed, up-to-date and authoritative information on how to renew and maintain health through proper nutrition.

**MANNED SPACE FLIGHT**—Max Faget—Holt, 176 p., illus., \$2.95. Expert, yet nontechnical explanation showing in graphic detail the intricate problems involved in the design of current spacecraft, and in schemes for navigation and guidance, tracking and reentry.

**MICROBIOLOGY AND SOIL FERTILITY**—C. M. Gilmour and O. N. Allen, Eds.—Ore. State Univ. Press, 164 p., illus., \$4.50. Proceedings of the 25th Annual Biology Colloquium concerned with the interactions occurring within the boundaries of the soil-plant microbial complex and its profound influence on soil fertility.

**MONSTERS OF THE SEA**—Barbara Lindsay—Four Winds Press (Scholastic), 48 p., photographs, illus. by William Bartlett, \$2.50. Reveals facts about sharks, whales, sting rays, manatees and species thought to be extinct millions of years ago.

**NEWER METHODS OF NUTRITIONAL BIO-CHEMISTRY: With Applications and Interpretations, Vol. II**—Anthony A. Albanese, Ed.—Academic Press, 558 p., \$18.50. Includes discussions of body composition, energy metabolism, abnormal metabolites of amino acid origin, and anabolic steroids.

**OSMOTIC REGULATION IN AQUATIC ANIMALS**—August Krogh—Dover, 242 p., illus., paper, \$1.75. Reprint (1939).

**PERSONNEL DOSIMETRY FOR RADIATION ACCIDENTS**—C. N. Welsh, Ed.—IAEA (Internat'l Publications, N.Y.), 714 p., illus. \$14. Proceedings of a symposium on personnel dosimetry for accidental high-level exposure to external and internal radiation held jointly by the International Atomic Energy Agency and the World Health Organization in Vienna, 8-12 March, 1965.

**POVERTY: The Sick, Disabled and Aged**—Task Force on Economic Growth and Opportunity—Erwin D. Canham, Chmn.—Chamber of Commerce of the U.S., 263 p., \$2. Presents papers outlining basic facts and issues, and discussion and recommendations by panel members.

## LANGUAGES? Easy!

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**PROGRAMMED TEACHING: A Symposium on Automation in Education**—Joseph S. Roneck, Ed.—Philosophical Lib., 194 p., \$10. Annotated articles exploring the uses of programmed instruction and experimentation in this field.

**THE PUBLIC LIBRARY AND THE CITY**—Ralph W. Coant, Ed.—M.I.T. Press, 216 p., \$6.75. Various articles in which specialists provide insights into the educational, cultural, demographic, political and financial aspects of the library in the changing metropolis.

**SCIENCE POLICY AND ORGANIZATION OF SCIENTIFIC RESEARCH IN THE CZECHOSLOVAK SOCIALIST REPUBLIC**—Czechoslovak Academy of Sciences—UNESCO (Unesco Pub. Center, N.Y.), 88 p., paper, \$1. Describes the planning of science and research in Czechoslovakia today.

**THE SECRET ISLANDS**—Franklin Russell—Norton, 238 p., photographs by author, map, \$5.95. A chronicle on the bird life, natural phenomena and inhabitants of a group of small islands off the coast of Newfoundland.

**SMITHSONIAN INSTITUTION: Annual Report of the Board of Regents, 1964**—S. Dillon Ripley, Sec.—GPO, 553 p., plates, \$4. Besides Secretary's report on operations for year ended June 1964, contains special articles on Stonehenge, the satellite-tracking program, recent events in relativity, the neutrino, animal toxins and other fields of research.

**THE THEORY OF ELECTROMAGNETIC WAVES**—Morris Kline, Ed.—Dover, 393 p., illus., paper, \$3. Reprint (1951).

**TREATISE ON THE FUGUE**—Andre Gedalge, transl. from French and edited by Ferdinand Davis, foreword by Darius Milhaud—Univ. of Okla. Press, 435 p., \$10. A text concerned with the scholastic fugue and the art of developing a musical idea, illustrated with many examples from the masters of contrapuntal writing.

**WHO GOES WHERE TO COLLEGE?**—Alexander W. Astin—Science Research Associates, 125 p., \$5.32; paper, \$2.82. Comprehensive information and tabulated data on the main characteristics of freshmen student bodies and the relationships between these characteristics and environmental characteristics of the colleges.

**YEARBOOK OF ASTRONOMY 1966**—Patrick Moore—Norton, 181 p., illus., paper, \$4.50. Designed specially for the amateur astronomer, presents astronomical events of the coming year.

• Science News Letter, 89:60 January 22, 1966

## AGRICULTURE

### Crops Without Tilling Advocated in Britain

► NEW METHODS of sowing and harvesting crops to take advantage of "chemical ploughing" have created interest in Britain.

The British Government's Agricultural Research Council reports that the complete control of vegetation by chemicals is possible. This growing without tilling warrants a reassessment of cultivation systems regarded for centuries as essential to good farming.

Already a new method of sowing small-seeded crops has been developed. Seeds are suspended in fluids and injected into the ground through slit incisions. The fluid acts as a carrier for the seeds and provides water for germination.

The Scottish station of the National Institute of Agricultural Engineering has developed an X-ray machine to aid in harvesting potatoes. It guides nylon fingers to reject earth and stones, which fall to the ground and leave the potatoes clear.

The mining industry might use an adapted form to sort coal from stone.

The East Malling, Kent, station has cured apple rot by immersing the apples in warm water, instead of spraying with chemicals.

The Wellesbourne station is working on better use and safeguards on organo-chlorine insecticides. These chemicals do not always control pests effectively after the first dose and can leave residues in soils for years.

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## RAY GUN! Want to build a Laser?

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