

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 publication direct from issuing organizations.

THE ADOLESCENT PERIOD: A Pictorial Atlas—Frank K. Shuttleworth—*Child Development Publications*, 69 p., illus., paper, \$2.00. A monograph illustrating the processes of physical growth, sexual maturation, and differences in body builds among normal adolescents.

ALKALI SOILS: Their Formation, Properties and Reclamation—W. P. Kelley—*Reinhold*, 176 p., illus., \$5.00. This work is intended primarily for research workers, university teachers of soils and agronomy, and those who work with the soil.

AMERICAN BIRD SONGS, VOLUME II—P. P. Kellogg and A. A. Allen—*Comstock Publishing Company*, Five 12-Inch 78 R. P. M. Vinylite Records, \$10.50. The songs of 51 birds recorded in their natural habitats for the Albert R. Brand Bird Song Foundation, Cornell University.

BIRDS OF MONTEZUMA AND TUZIGOOT—Henry H. Collins, Jr.—*Southwestern Monuments Association*, 13 p., illus., paper, 25 cents. The first in a series of booklets designed to aid the national park visitor in identifying the common species of birds in that area.

BUILDING AMERICA'S MIGHT: Report to the President No. 1—Charles E. Wilson—*Office of Defense Mobilization*, 43 p., illus., paper, 25 cents. An account of the progress made in expanding America's military strength and productive power to meet the challenge of outright communist aggression.

ESSENTIALS OF EXPERIMENTAL CHEMISTRY—Alfred B. Garrett, Joseph F. Haskins, Harry H. Sisler and Margaret H. Kurbatov—*Ginn*, 326 p., illus., paper, \$2.80. A manual which serves the dual purpose of a laboratory workbook and a lecture-demonstration notebook.

EVOLUTION—A. Franklin Shull—*McGraw-Hill*, 2nd ed., 322 p., illus., \$5.00. Those who have used this standard text will welcome this new edition which is largely rewritten.

GENERAL ZOOLOGY—Tracy I. Storer—*McGraw-Hill*, 2nd ed., 832 p., illus., \$6.00. An introduction to zoology dealing with the general principles of animal biology and with the structure and physiology of common and representative types.

GOVERNMENT PROJECT—Edward C. Banfield—*Free Press*, 271 p., \$3.50. An account of the U. S. government's attempt to remake the lives of a few "desperately poor" citizens by establishing a cooperative farm in Arizona.

GREAT EXPERIMENTS IN PSYCHOLOGY—Henry E. Garrett—*Appleton-Century-Crofts*, 3rd ed., 358 p., illus., \$3.50. Describing for the beginning student such important work as Pavlov's Conditioned Reflex, Thorndike's Laws of Learning, the Weber-Fechner Laws, etc.

A HISTORY OF NEUROLOGICAL SURGERY—A. Earl Walker—*Williams and Wilkins*, 583 p., illus., \$12.00. A story that starts with the earliest recorded beginnings and takes you through the initial trials and struggles that led to our most intricate modern techniques.

THE HOUSEFLY: Its Natural History, Medical Importance, and Control—Luther S. West—*Comstock*, 584 p., illus., \$7.50. Useful in planning an all-out war against this enemy of man.

INDUSTRIAL HYGIENE—H. H. Schrenk—*Mellon Institute*, 2 p., paper, free upon request to publisher, 4400 Fifth Avenue, Pittsburgh 13, Pa. A report covering nitrogen oxides, sulfur dioxide, and sulfuric acid mists.

AN INTRODUCTION TO THE CHEMISTRY OF THE SILICONES—Eugene G. Rochow—2nd ed., 213 p., illus., \$5.00. Describing this new family of compounds which has found so many important industrial uses.

AN INTRODUCTION TO THE THEORY OF CONTROL IN MECHANICAL ENGINEERING—R. H. Macmillan—*Cambridge*, 195 p., \$6.00. A book concerned with the methods, principles of the new theory of "control" rather than with specific application.

THE MODULAR METHOD IN DWELLING DESIGN—Housing and Home Finance Agency—*Govt. Printing Office*, 54 p., illus., paper, 25 cents. This booklet illustrates graphically how the architect and the people who design their own home may save material and construction costs through a design which makes use of standard sizes of materials.

OBSERVING THE HEAVENS—Peter Hood—*Oxford University Press*, 64 p., illus., \$1.75. A picture book to introduce young people to the heavens.

THE PHILOSOPHY OF REHABILITATION—J. E. M. Thomson—*Mellon Institute*, 3 p., paper, free upon request to publisher, 4400 Fifth Avenue, Pittsburgh 13, Pa. This pamphlet stresses the need to restore the handicapped person to economic independence.

POWELL OF THE COLORADO—William Culp Darrah—*Princeton University Press*, 426 p., illus., \$6.00. This is the life story of Major John Wesley Powell, who organized and led two great expeditions down the Colorado to chart its course and collect scientific data.

QUANTITATIVE ORGANIC MICROANALYSIS: Based on the Methods of Fritz Pregl—Julius Grant—*Blakiston*, 5th ed., 342 p., illus., \$5.50. An up-to-date textbook covering the methods of leading microanalysts and with full bibliography.

SCIENCE AND THE LAND: The 71st Annual Report of the New Jersey Agricultural Experiment Station, 1949-1950—*Rutgers University*, 168 p., illus., paper, free upon request to New Jersey Agricultural Experiment Station, Rutgers University, New Brunswick, N. J. Information on agriculture presented in a question and answer form.

THE SCIENTIFIC PAPER: How to Prepare It, How to Write It—Sam F. Trelease—*Williams and Wilkins*, 2nd ed., 163 p., \$2.50. A handbook for students and research workers in all branches of science.

STUDIES IN THE BROMELIACEAE, XVI: Contributions from the U. S. National Herbarium, Volume 29, Part 10—Lyman B. Smith—*Govt. Printing Office*, 91 p., illus., paper, 50 cents. This paper is the sixteenth of a series of studies of the botanical family Bromeliaceae and includes 16 new species.

A SURVEY OF INDIAN RIVER ARCHAEOLOGY, FLORIDA—Irving Rouse—and CHRONOLOGY AT SOUTH INDIAN FIELD, FLORIDA—Vera Masius Ferguson—*Yale University Press*, 358 p., illus., paper, \$4.00. The two papers in this volume are published in connection with the 1944-1949 Florida project of the Caribbean Anthropological Program, Yale Peabody Museum.

TABLES RELATING TO MATHIEU FUNCTIONS: Characteristic Values, Coefficients, and Joining Factors—*Columbia University Press*, 278 p., \$8.00. Tables prepared by The Computation Laboratory of the National Applied Mathematics Laboratories, National Bureau of Standards.

WORKERS IN SUBJECTS PERTAINING TO AGRICULTURE IN LAND-GRANT COLLEGES AND EXPERIMENT STATIONS 1950-1951—Mildred T. Jackson—*Govt. Printing Office*, 213 p., paper, 45 cents. A directory.

Science News Letter, July 21, 1951

INVENTION

New Process Yields More Furfural from Corncobs

► FURFURAL, for making nylons and for many other industrial applications, is made from corncobs, oat hulls, or cottonseed hull brans and rice hulls in greatly increased quantities by a process on which a patent has been issued.

Inventors of the process, technically for the production of furfural from pentose liquors, are John W. Dunning, Charles F. Frye and Elbert C. Lathrop, all of Peoria, Ill. Patent 2,559,607 was awarded to them. Rights have been assigned to the United States government as represented by the Department of Agriculture.

Production by the process is from aqueous solutions of pentoses, particularly xylose. It is a continuous process that consists of heating a solution containing 1.5% to 10% xylose and 1.5% to 5% sulfuric acid, at about 150 degrees Centigrade, to convert the xylose to furfural. Important in the method is maintaining the concentration of furfural in the conversion below 0.7%, which is done by a special removal process.


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