

Books of the Week

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ADVANCES IN CARBOHYDRATE CHEMISTRY, Vol. 2—W. W. Pigman and M. L. Wolfrom, eds.—*Academic Press*, 320 p., illus., \$6.60. An annual volume containing critical reviews of special topics in the field of carbohydrates, including sugars, polysaccharides, and glycosides, prepared by recognized authorities.

AROUND THE GARDEN—Dorothy H. Jenkins—*Barrows*, 206 p., illus., \$2.50. A discussion for month-by-month use of what to do in the garden for eye-catching results.

DOMESTIC HEATING IN AMERICA—Report of a Joint Party from the Ministry of Fuel and Power and the Dept. of Scientific and Industrial Research—*British Information Service*, 152 p., paper, \$1. A study of heating, cooking, and hot water supply in small houses in the U.S.A. and Canada.

ESCUELA AGRICOLA PANAMERICANA YEAR-BOOK—*Middle America Information Bureau*, 38 p., illus., paper, free. Dedicated to the first graduating class from this school which is spreading improved agricultural methods in the American tropics.

GUIDE BOOK TO THE RUINS OF COPAN—Gustav Stromsvik—*Carnegie Inst. of Wash.*, 76 p., illus., paper, \$1. A convenient complete list of Mayan buildings, statuary and stele at this site.

INDIANS BEFORE COLUMBUS—Paul S. Martin, George I. Quimby, and Donald Collier—*Univ. of Chicago Press*, 582 p., illus., \$6. A history of the development of basic cultural trends among the pre-Columbian Indians of North America is traced through 20,000 years.

PHYSICAL CHEMISTRY—Herschel Hunt—*Crowell*, 610 p., illus., \$4.75. A college text on the fundamentals of physical chemistry emphasizing the mathematical formulation of ideas with selected and graded problems covering each topic.

THE PLASTICS INDUSTRY—Josephine Perry—*Longmans*, 127 p., illus., \$2. A readable account of the two branches of this industry, the material manufacturers and the producers of finished articles, in non-technical language for young people.

THE PROBLEM OF ODORS IN INSTITUTIONS—Dewey H. Palmer—*Hospital Bur. of Sids. and Supplies*, 11 p., paper, 50 cents. This tells the types and sources of odors in institutions and how to get rid of them.

PUERTO RICAN PARADOX—Vincenzo Petruolo—*Univ. of Pa. Press*, 180 p., \$3. An interpretation of the relationship today between Puerto Rico and the United States with suggestions for improvement.

REPORT OF THE FAO PREPARATORY COMMISSION ON WORLD FOOD PROPOSALS, Washington, D. C., USA, 28 Oct. 1947—24 Jan. 1947—*Food and Agriculture Organization of U.N.*, 84 p., paper, free. A statement of international proposals and agreements to raise nutritional standards.

RHEUMATIC FEVER, Childhood's Greatest Enemy—Herbert Yahres—*Public Affairs Committee*, Pamphlet No. 126, 30 p., 10 cents. A comprehensive discussion of a pressing health problem.

SEMIMICRO LABORATORY EXERCISES FOR HIGH SCHOOL CHEMISTRY—Fred T. Weisbruch—*Heath*, 268 p., illus., paper, \$1.48. A well planned manual resulting from practical classroom experience in adapting this cleaner and less expensive procedure for high schools.

THE SOCIAL SYSTEM OF THE MODERN FACTORY; The Strike: A Social Analysis—W. Lloyd Warner and J. O. Low—*Yale Univ. Press*, Yankee City Series, Vol. 4, 240 p., \$3. The industrial history of "Yankee City" traced, showing the changed status of managers and workers, why the strike occurred, and how it progressed.

THE THEORY OF FUNCTIONS OF REAL VARIABLES—Lawrence M. Graves—*McGraw-Hill*, 298 p., \$4. An exposition of the more fundamental and generally useful parts of this mathematical field, together with some theorems on implicit functions, differential equations, and Lebesgue and Stieltjes integrals.

THOMAS ALVA EDISON; Builder of Civilization—H. Gordon Garbedian—*Julian Messner*, 231 p., illus., \$2.50. This absorbing story of the "man of a thousand patents" should challenge teen-agers.

UNITED STATES NATIONAL COMMISSION FOR THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION. Report on the First Meeting, September 1946—Dept. of State Publ. 2726, U.S.—U.N. Info. Series 14, Govt. Printing Office, 41 p., paper, 25 cents. The organization of America's end of UNESCO.
Science News Letter, March 8, 1947

PLANT PHYSIOLOGY

Fungus Injections Make Gum Ooze from Pines

➤ BETTER YIELDS of turpentine and rosin can be obtained by deliberately inoculating the pine trees with spores of a disease fungus at the time they are tapped, Dr. George H. Hepting, U. S. Department of Agriculture plant pathologist, has discovered in experiments at the Southeastern Forest Experiment Station in Asheville, N. C., according to *Science* (Feb. 21).

He had noticed that pine branches infected with a species of *Fusarium*, one of the worst of plant-disease fungi, oozed quantities of resinous gum for a long time. It occurred to him to try induced infections on the slashes made on the tree trunks when the gum was wanted

for production of naval stores.

He made mass cultures of the fungus and prepared a filtrate containing its spores. With the help of a colleague, E. R. Roth, he brushed this onto slashes cut through the bark of a number of trees, and into holes bored into the trunks of others. As a control, some of the same filtrate that had been boiled to kill the spores was applied to other trees.

The trees treated with the live spores yielded far larger quantities of gum, and continued the flow much longer, than did the uninfected control trees. Now Dr. Hepting is undertaking further experiments, to determine whether there are any long-time ill effects on the trees that would offset the immediate advantages of using induced infection to get more gum with less work.

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ZOOLOGY

Laughing Grave Robbers Come to Philadelphia Zoo

➤ THE PHILADELPHIA ZOO'S latest additions include a quartet of grave robbers, who arrived with peals of weird laughter.

Zoo officials hasten to explain that their new grave robbers, four hyenas, are actually useful scavengers who do some of nature's "dirty work" cleaning up the remains of dead and decaying animals. But the hyenas do get into graveyards once in a while.

Two of the newcomers are laughing hyenas, spotted animals from Africa with a weird, demoniacal laugh. The other two hyenas are striped animals found both in Africa and southern Asia.

Arriving with the hyenas were two antelopes, the large and beautiful greater kudu and the rare blesbok. Rounding out the strange animal party were a pair of servals, small leopard-like animals from Africa.

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