

cellulose is exclusively treated with particular emphasis upon oxidation, hydrolysis, esterification, and solubility. The hemicelluloses are discussed from the standpoint of occurrence, preparation, and composition. An extensive review of lignin chemistry is also given.

Part III, "The Extraneous Substances" contains chapters by L. E. Wise, E. F. Kurth, G. C. Harris, M. A. Buchanan, and H. Erdtman. This section deals principally with wood substances extracted with neutral organic solvents. It contains a detailed description of the volatile oils (essential or ethereal), wood resins, tannins, coloring material, and other less easily classified extractives of wood. There is also an interesting discussion of the coniferous extractives in relation to taxonomy.

Volume II is divided into four parts. Part IV, "Surface Properties of Cellulose Materials" is a chapter by A. J. Stamm that discusses such factors as adsorption of gases including water vapor, selective adsorption from solution, dimensional changes resulting from sorption, thermodynamic changes, specific volume, mechanical properties, electrical properties, capillary structure, and chemical treatment of wood.

Part V, "Industrial Wood Chemistry" contains chapters by L. F. Hawley, A. W. Goos, E. E. Harris,

E. C. Jahn, W. F. Holzer, Holger Erdtman, and F. H. Yorston. The combustion of wood, its thermal decomposition, hydrolysis, chemical behavior, delignification and bleaching are discussed.

Part VI, "Decomposition of Wood by Microorganisms" consists of a chapter by W. G. Campbell which treats this subject in considerable length.

Part VII, "The Chemical Analysis of Wood" contains six chapters by B. L. Browning and one by Browning and I. H. Isenberg. In this section a lengthy and complete discussion of analytical methods is presented in usable form.

These new volumes contain a vast amount of information and extensive literature references. At several points, so many references are presented that the text becomes a series of brief uncritical abstracts of the literature. On the whole, the text is well written and critically presented. Very few proofreaders' errors were noted. The reviewer was impressed by the extensive and complete treatment given to most subjects. The volumes will prove of great value to everyone interested in the components of wood. Although written primarily for the chemist, the biologist will also find much valuable information.

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Scientific Book Register

Acanthocephala of North American Mammals. Illinois Biological Monographs, Vol. XXIII, Nos. 1-2. Harley J. Van Cleave. Urbana: Univ. Illinois Press, 1953. 179 pp. Illus. \$5.00; \$4.00 paperbound.

The Study of Human Nature. David Lindsay Watson. Yellow Springs, Ohio: Antioch Press, 1953. 262 pp. \$3.50.

Groups in Harmony and Tension: An Integration of Studies on Intergroup Relations. Muzafer Sherif and Carolyn W. Sherif. New York: Harper, 1953. 316 pp. + plates. \$3.50.

Our Neighbour Worlds. V. A. Firsoff. New York: Philosophical Library, 1953. 336 pp. Illus. + plates. \$6.00.

Basic Mechanics of Fluids. Hunter Rouse and J. W. Howe. New York: Wiley; London: Chapman & Hall, 1953. 245 pp. Illus. \$4.50.

Explorations in Science. Waldemar Kaempffert. New York: Viking Press, 1953. 296 pp. \$3.50.

A Herd of Mule Deer. A record of observations made on the Hastings Natural History Reservation. Jean M. Linsdale and P. Quentin Tomich. Berkeley: Univ. Calif. Press, 1953. 567 pp. Illus. \$8.50.

Mr Tompkins Learns the Facts of Life. George Gamow. New York: Cambridge Univ. Press, 1953. 88 pp. Illus. \$2.75.

***Progress in Biophysics and Biophysical Chemistry*, Vol. III. J. A. V. Butler and J. T. Randall, Eds. New York: Academic Press, 1953. 386 pp. Illus. + plates. \$9.50.**

Tables for Rocket and Comet Orbits. National Bureau of Standards, Applied Mathematics Series 20. Samuel Herrick. Washington, D.C.: Government Printing Office, 1953. 100 pp. \$1.75.

Endosymbiose der Tiere mit Pflanzlichen Mikroorganismen. Reihe der Experimentellen Biologie, Band 12. Paul Buchner. Basel-Stuttgart: Verlag Birkhäuser, 1953. 771 pp. Illus. Sw. fr. 66.50; paperbound 62.40.

Plant Diseases in Orchard, Nursery and Garden Crops. Ernst Gram and Anna Weber; trans. from 2nd Danish ed. by Evelyn Ramsden, R. W. G. Dennis, Ed. New York: Philosophical Library; London: Macdonald, 1953. 618 pp. Illus. + plates. \$18.50.

General Biochemistry. William H. Peterson and Frank M. Strong. New York: Prentice-Hall, 1953. 469 pp. Illus. + plates. \$6.50.

Tool Engineers' Data Book. Gerhard J. Gruen. New York: Reinhold, 1953. 219 pp. \$5.50.

Our Physical Environment: A Problem Approach. Leonard W. Gaddum and Harold L. Knowles. Boston: Houghton Mifflin, 1953. 625 pp. Illus. \$5.50.

Brown Coal: Its Mining and Utilization. A series of post-graduate lectures delivered in the School of Engineering, University of Melbourne. P. L. Henderson, Ed. Melbourne: Melbourne Univ. Press; New York: Cambridge Univ. Press, 1953. 351 pp. Illus. + plates. \$7.50.

Studies in Econometric Method. Cowles Commission Monograph #14. W. C. Hood and Tjalling C. Koopmans, Eds. New York: Wiley; London: Chapman & Hall, 1953. 323 pp. \$5.50.

Soils and Land of Michigan. J. O. Veatch. East Lansing, Mich.: Michigan State College Press, 1953. 241 pp. Illus. + map. \$7.50.

Vorstellungen vom Aufbau der Materie im Wandel der Zeiten. Eine historische Übersicht. Fritz Lieben. Vienna: Franz Deuticke, 1953. 384 pp. \$7.20.