

## Book Reviews

**Advances in food research.** (Vol. I.) E. M. Mrak and George F. Stewart. (Eds.) New York. Academic Press, 1948. Pp. xv + 459. (Illustrated.) \$7.50.

This book contains reviews on the following subjects: the physiology and chemistry of rigor mortis, with special reference to the aging of beef; factors influencing the vitamin content of canned foods; the physiological basis of voluntary food intake (appetite); biochemical factors influencing the shelf life of dried whole eggs and means for their control; factors affecting the palatability of poultry with emphasis on histological post-mortem changes; deterioration of processed potatoes; the influence of climate and fertilizer practices upon the vitamin and mineral content of vegetables; nonenzymatic browning in fruit products; microbial inhibition by food preservatives; and high-polymer pectins and their deesterification.

Each of the reviews is accompanied by a suitable bibliography to the sources of information on which it is based. Every contributor is an experienced investigator in his segment of food research.

Researches on foods have been accelerated by the great advances in our knowledge of biochemistry and the biological sciences. Original communications are scattered in journals devoted to biochemistry, bacteriology, mycology, and nutrition. Technologists, researchers, and teachers find it almost impossible to examine the original literature which bears upon their interests. In various fields of knowledge the annual volume devoted to thorough reviews and criticism has done much to assist those interested in keeping informed about research progress. The references help them to find readily what they most need to examine at first hand. The present volume is an

excellent addition to the list of special volumes devoted to advances in special fields of knowledge.

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**A textbook of heat for upperclassmen.** LeRoy D. Weld. New York: Macmillan, 1948. Pp. x + 437. \$5.00.

As explained by the author in the preface, "The content of this book is based upon material which the author has been using, with frequent revisions, as lecture notes in a junior-senior course in heat for the past thirty-five years." A lot of ground is covered: calorimetry, dilatometry, phase transitions, properties of gases, kinetic theory of gases, thermodynamics, properties of mixtures, heat transfer, and thermometry. In less than 400 pages of actual text, many of these topics could be given only brief mention.

The author has an easy, fluent style. His explanations and examples are lively and interesting. There are many well-drawn graphs, some of them to scale. The best material in this reviewer's judgment is that on kinetic theory—the poorest on the foundations of thermodynamics. It is to be regretted that the author has retained the old-fashioned point of view with regard to the use of the term "heat"—a point of view at variance with current usage by physicists, chemists, and engineers. One cannot help but complain also about the author's symbolism which ignores almost completely the published lists printed in the *American Journal of Physics* and elsewhere. There is no excuse, in these times, for using complicated bold-face Gothic characters for thermal capacity, efficiency, resistance, etc.

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## Scientific Book Register

BARNES, H. F. *Gall midges of economic importance: gall midges of ornamental plants and shrubs.* (Vol. IV.) London: Crosby Lockwood, 1948. Pp. 165. (Illustrated.) 15/-.

BRILL, A. A. *Basic principles of psychoanalysis.* Garden City, New York: Doubleday, 1949. Pp. xv + 298. \$3.45.

BUROS, OSCAR KRISEN. (Ed.) *The third mental measurements yearbook.* New Brunswick, N. J.: Rutgers Univ. Press, 1949. Pp. xiv + 1047. \$12.50.

CHANCE, BRITTON, et al. (Eds.) *Waveforms.* (Massachusetts Institute of Technology Radiation Laboratory Series.) New York-London: McGraw-Hill, 1949. Pp. xxii + 785. (Illustrated.) \$10.00.

CLARKE, HANS T., JOHNSON, JOHN R., and ROBINSON, SIR ROBERT. (Eds.) *The chemistry of penicillin: report on a collaborative investigation by American and British chemists under the joint sponsorship of the Office of Scientific Research and Development, Washington, D. C., and the Medical Research Council, London.* (Compiled under the auspices of the National Academy of Sciences, Washington, D. C.) Princeton, N. J.: Princeton Univ. Press, 1949. Pp. x + 1094. (Illustrated.) \$36.00.

ZIPF, GEORGE KINGSLEY. *Human behavior and the principle of least effort: an introduction to human ecology.* Cambridge, Mass.: Addison-Wesley, 1949. Pp. xi + 573. (Illustrated.) \$6.50.