

semiaquatic grasshopper (by Carbonell) and of the morphology of the head of Chironomidae (by Gouin) to meta-chemogenesis (by Rockstein) and a physiological approach to the relation between prey and predator (by Roeder). Other subjects covered are eye pigmentation, the onychophoran head, the first leg segments, spinasternal musculature, the mechanism of feeding in flies and Hemiptera, morphological adaptation, shaping of egg strings in copepods, molecular organization of insect cuticle, the nervous system of a grasshopper, the thoracic musculature of Diptera and moths, and the phylogenetic significance of entognathy.

This is a splendid collection of papers, many of them beautifully illustrated, and the volume is a credit to the authors and to the members of the committee, headed by J. F. G. Clarke, who planned and arranged it.

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New Books

Aquarium Book for Boys and Girls. Alfred Morgan. Scribner's, New York, 1959. 223 pp. \$3.

Bigger's Handbook of Bacteriology. For students and practitioners of medicine. F. S. Stewart, Ed. Williams & Wilkins, Baltimore, Md., ed. 7, 1959. 621 pp. \$8.

A California Flora. Philip A. Munz and David D. Keck. Univ. of California Press, Berkeley, 1959. 1681 pp. \$11.50.

Catalytic Models in Epidemiology. Hugo Muench. Harvard Univ. Press, Cambridge, Mass., 1959. 121 pp. \$4.50.

Elementary Decision Theory. Herman Chernoff and Lincoln E. Moses. Wiley, New York; Chapman & Hall, London, 1959. 379 pp. \$7.50.

Fluidization. Max Leva. McGraw-Hill, New York, 1959. 340 pp. \$11.50.

Gmelins Handbuch der Anorganischen Chemie. System No. 5, *Fluorine*, 1959, 276 pp., \$36; System No. 15, pt. C, *Silicium*, 1958, 513 pp., \$67.44; System No. 59, pt. D, *Iron*, 1959, 618 pp., \$77.04. Verlag Chemie, Weinheim, Germany.

The Historical Development of Physiological Thought. A symposium. Chandler McC. Brooks and Paul F. Crane. Hafner, New York, 1959. 414 pp. \$6.

Introduction to Mathematical Physics. William Band, Van Nostrand, Princeton, N.J., 1959. 336 pp. \$7.25.

A Laboratory Manual of Cryptobranchus Alleganiensis Daudin. Hazel Elisabeth Branch. Vantage Press, New York, ed. 2, 1959. 79 pp. \$2.95.

Linear and Stereoregular Addition Polymers: Polymerization with Controlled Propagation. Norman G. Gaylord and Herman F. Mark. Interscience, New York, 1959. 581 pp. \$17.50.

Man's Journey through Time. A first

step in physical anthropochronology. L. S. Palmer. Philosophical Library, New York, 1959. 199 pp.

The Mast Cells. James F. Riley. Livingston, Edinburgh; Williams & Wilkins, Baltimore, Md., 1959. 192 pp. \$6.75.

Mathematics in Physics and Engineering. J. Irving and N. Mullineux. Academic Press, New York and London, 1959. 900 pp. \$11.50.

Medical Chemistry. vol. IV. Wiley, New York; Chapman & Hall, London, 1959. 3437 pp. \$12. The literature search for this review included the references found under the heading "Barbituric acid" in *Chemical Abstracts* (1907-56) and in *Chemische Zentralblatt* (1897-1944, with the exception of the years 1940 and 1943). Microfilm No. 1720 of the War Department Army Medical Library, which describes more than 200 barbituric acid derivatives that were tested at the I.-G. Farben-Industrie plant, was also reviewed.

Principles of Biochemistry. Abraham White, Philip Handler, Emil L. Smith, DeWitt Stetten, Jr. McGraw-Hill, New York, ed. 2, 1959. 1162 pp. \$15.

Principles of Radiation Dosimetry. G. N. Whyte. Wiley, New York; Chapman & Hall, London, 1959. 131 pp. \$7.

Probability and Related Topics in Physical Sciences. Mark Kac. With special lectures by G. E. Uhlenbeck, A. R. Hibbs, Balth. van der Pol. Interscience, New York, 1959. 279 pp. \$5.60.

Proceedings of the Fourth Symposium on Magnetism and Magnetic Materials. Supplement to the *Journal of Applied Physics*, vol. 30, 1959. For the American Inst. of Physics. McGraw-Hill, New York, 1959. 323 pp. \$10. This volume contains more than 240 papers written by more than 350 specialists in the field. The papers are presented under the following headings: "Ferrites," "Computer components," "Macromagnetics: domain walls," "Magnetic properties of metals and alloys," "Fine particles," "Amplifiers, microwave applications," "Resonance," "Metallurgical considerations," "Fundamental interactions," "Instrumentation," "Thin films," "Neutron diffraction and irradiation," "Garnets and other compounds," "Anisotropy, other than in thin films."

Programming Business Computers. Daniel D. McCracken, Harold Weiss, Tsai-Hwa Lee. Wiley, New York; Chapman & Hall, London, 1959. 527 pp. \$10.25.

Rocket Encyclopedia Illustrated. John W. Herrick and Eric Burgess, Eds. Aero, Los Angeles 26, Calif., 1959. 607 pp. \$12.50. In the preface the editors state that "It has been the policy . . . to collect, in a convenient and understandable reference book, as many as possible of the facts and theories concerning the new technology of rocket propulsion." The entries are alphabetically arranged. Nearly all entries are presented in two parts: a concise definition, in technical phrases that are intended to satisfy the needs of members of the rocket industry, and an explanation which gives more detailed information about the term in language intended to be within the capabilities of a high-school graduate. In the explanation

sections, each term that the editors believe might need additional clarification is printed in italics. This signifies that the term is fully defined and discussed in its own alphabetical position in the book.

Sampling Inspection Tables. Single and double sampling. Harold F. Dodge and Harry G. Romig. Wiley, New York; Chapman & Hall, London, ed. 2, 1959. 235 pp. \$8.

Servomechanisms and Regulating System Design. vol. 1. Harold Chestnut and Robert W. Mayer. Wiley, New York; Chapman & Hall, London, ed. 2, 1959. 697 pp. \$11.75.

Solid Propellant and Exothermic Compositions. James Taylor. Interscience, New York, 1959. 163 pp. \$4.25.

The Structure of Metals. A modern conception. Iliffe, London; Interscience, New York, 1959. 124 pp. \$4. The papers published in this volume were offered as lectures at the annual refresher course of the Institution of Metallurgists (1958). The lectures are "The electron structure of metals" (G. V. Raynor); "Experimental aspects of the electron theory of metals" (J. A. Gatterall); "Dislocations in metals" (A. G. Quarrell); "Seeing dislocations" (J. Nutting).

Target for Tomorrow. Space travel of the future. I. M. Levitt. Fleet Publishing Corp., New York, 1959. 328 pp. \$4.95.

The Theory of Elementary Particles. J. Hamilton. Oxford Univ. Press, New York, 1959. 494 pp. \$12.

Thermodynamics and Statistical Thermodynamics. John Geldart Aston and James John Fritz. Wiley, New York; Chapman & Hall, London, 1959. 570 pp. \$8.25.

Reprints

Amusements in Mathematics. Henry E. Dudeney. Dover, New York, 1958. 258 pp. \$1.25.

The Canterbury Puzzles. And other curious problems. Henry Ernest Dudeney. Dover, New York, 1958 (reprint of ed. 4). 250 pp. \$1.25.

Fruit Key and Twig Key to Trees and Shrubs. Fruit key to northeastern trees; twig key to the deciduous woody plants of eastern North America. William M. Harlow. Dover, New York, 1959 (reprint of ed. 1 of *Fruit Key* and rev. ed. 4 of *Twig Key*). 106 pp. \$1.25.

General Homogeneous Coordinates in Space of Three Dimensions. E. A. Maxwell. Cambridge Univ. Press, New York, 1959 (reprint of ed. 1, 1951). 169 pp. \$2.75.

Mathematical Puzzles of Sam Loyd. Martin Gardner, Ed. Dover, New York, 1959 (selection of puzzles from *Sam Loyd's Cyclopedia of Puzzles*). 181 pp. \$1.

The Measurement of Power Spectra. From the point of view of communications engineering. R. B. Blackman and J. W. Tukey. Dover, New York, 1959 [republication of pts. 1 and 2 of "The measurement of power spectra from the point of view of communications engineering," *Bell System Tech. J.*, 37, Jan. and Mar. (1958)]. 190 pp. \$1.85.