

nisms into "fragmenting" and "non-fragmenting."

The 834 pages cover too wide a scope of subjects even to list here by topics or authors, as is evidenced by the admirable 77-page summary (chapter VIII), which shows, to paraphrase, "as in a Glass, [not so] darkly, the shapes of things to come." Altogether, this fascinating volume is a "must" for all biologists, whether biochemically or genetically orientated, and whether their interests are specific or general.

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Professional Amateur. The biography of Charles Franklin Kettering. T. A. Boyd. Dutton, New York, 1957. xii + 242 pp. Illus. \$4.50.

He who reads *Professional Amateur* unconsciously recalls two other inventive Americans who ministered to their country's industrial advance—Franklin and Edison. Charles Franklin Kettering more closely resembles the former in his wide and general concern, which even verges on the philosophical, but is more like Edison in that he gears his endeavors to the practical developments of which his time has need.

For dollar-minded readers, this is truly an American success story. For Kettering, the reward was principally reckoned by other standards. His start was in a farm home and a country school, with a very bothersome handicap—poor eyes—that delayed his graduation from college until his 28th year. After graduation from Ohio State University's College of Engineering, he was employed by the National Cash Register Company. There, in 5 years, he guided the production of three major improvements in their machines. In that period he also developed a program of private research which, by 1909, prompted his withdrawal from the laboratory of the National Cash Register Company. In the 10 years that followed, he and his associates improved automobile ignition, developed and set up a factory for the Delco Lighting System, demonstrated the virtues of high-octane gasoline, and put a self-starter on the Cadillac automobile. In 1919, he accepted, with some reservations, the headship of the newly established General Motors Research Laboratory. From that laboratory, during the 27 years of his direction, came "ethyl" gasoline, new finishes for quick car-painting, a new, efficient diesel engine for use in marine and rail service, and a high-compression automobile engine, ready for production.

His marginal activities during these years included a share in the study of

heat for medical therapy, the production of a pilotless plane for use in World War I, and a part in the planning and financing of an institute for cancer research. His response, even though reluctant, to a call for help is credited with "saving the Winters National Bank of Dayton [Ohio] from collapse" in 1924. It was his own initiative, however, that put him in business with a home-town (Loudonville, Ohio) concern in order "to elevate living conditions and general prosperity of the people of the town." The success of this venture was, in dollars, about 30 times greater than he had expected.

Kettering retired in 1947. Since that time he has been almost as active as before. Four interests claim his attention—cancer research, photosynthesis, magnetism, and the design of better and less expensive light airplanes. In pursuit of the last, he has resumed flying and is now the owner of three planes. He is a frequent visitor at Antioch College, for it is there, under the auspices of the Kettering Foundation, that 30 scientists are trying to find out "why grass is green." No doubt his plane often lands at La Grange, Ill., where his son Gene is chief engineer of the Electro-Motive Division, which produces rail diesel engines. It is the diesel's inventor, as well as the father and grandfather, who makes these visits.

T. A. Boyd, a former research associate of Kettering's, makes generous use of quoted excerpts from the latter's writings and speeches in this book. For Kettering, like Franklin, is very apt in phrasing semiphilosophical asides in his conversation and speeches. The author is frankly laudatory and gives scant space to mention of any personal quirks. However, the book's chronicle does effectively bring to the reader a sense of actual encounter with "Boss Ket" in person. And, withal, it does this through an interesting, absorbing narrative.

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New Books

A Revision of the Australian Chafers (Coleoptera: Scarabaeidae: Melolonthinae), vol. 1, E. B. Britton. British Museum (Natural History), London, 1957. 193 pp. £4.

Experimental Designs. William G. Cochran and Gertrude M. Cox. Wiley, New York; Chapman & Hall, London, ed. 2, 1957. 630 pp. \$10.25.

Physiology of Prematurity. Transactions of the first conference, 21–23 Mar. 1956, Princeton, N.J. Jonathan T. Lanman, Ed. 151 pp. \$3.25. *Neuropharmacology.* Transactions of the third conference, 21–23 May 1956, Princeton, N.J. Harold A. Abramson, Ed. 381 pp. \$4.50. Josiah Macy, Jr., Foundation, New York, 1957.

The Molecular Theory of Solutions. I. Prigogine. North-Holland, Amsterdam; Interscience, New York, 1957. 468 pp. \$13.25.

The Physiology of Induced Hypothermia. Proceedings of a symposium 28–29 Oct. 1955. Publ. 451. Robert D. Dripps, Ed. National Academy of Sciences–National Research Council, Washington, D.C., 1956. 460 pp. \$3.50.

Plymouth Marine Fauna. Notes on the local distribution of species occurring in the neighborhood of Plymouth, including some other records of species found on the south coasts of Devon and Cornwall and the adjacent offshore waters of the English Channel. Marine Biological Association of the United Kingdom, ed. 3, 1957 (order from the director of the laboratory, Citadel Hill, Plymouth, Devon). 500 pp.

Prevention of Chronic Illness. vol. 1 of *Chronic Illness in the United States.* Commission on Chronic Illness. Published for the Commonwealth Fund, Harvard University Press, Cambridge, Mass., 1957. 360 pp. \$6.

Pure Food and Drugs in California. August F. Glaive. National Press, Palo Alto, Calif., 1957. 214 pp. \$4.50.

The Quicksilver Doctor. The life and times of Thomas Dover, physician and adventurer. Kenneth Dewhurst. Wright, Bristol, England, 1957. 201 pp. 21s.

Science Looks at Smoking. A new inquiry into the effects of smoking on your health. Eric Northrup. Coward-McCann, New York, 1957. 190 pp. \$3.

Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to Science, but to the publisher or agency sponsoring the publication.)

South African Pollen Grains and Spores. pt. II. E. M. Van Zinderen Bakker. Balkema, Amsterdam, Netherlands, and Cape Town, S.A. 1956. 71 pp. 15s.

Considerations about Cesalpinus' and Harvey's Works on the Blood Circulation Discovery. Alcmæon Publications, 217 E. 116 St., New York 29, 1957. 27 pp.

Blood Tests in Mental Illness. Papers and discussions presented at the Annual Scientific Conference of the Brain Research Foundation, Chicago, Ill., 12 January 1957. Brain Research Foundation, Chicago, 1957. 47 pp.

Meteorological Programme, Lists of Stations, International Geophysical Year 1957–1958. World Meteorological Organization, Geneva, Switzerland, 1957. 108 pp. F. 8.

The Population Council, Inc., Reports of the Executive Officers for the Year Ended December 31, 1956. The Council, 230 Park Ave., New York, 1957. 20 pp.

*Hormones Controlling the Chromatophores of the Dwarf Crawfish, *Cambarellus shufeldti*: Their Secretion, Stability, and Separation by Filter Paper Electrophoresis.* Studies in Zoology, vol. 5, No. 7. Milton Fingerman and Mildred E. Lowe. Tulane University, New Orleans, La., 1957. 21 pp. \$0.40.