

Societies and Academies.

PARIS.

Academy of Sciences, October 3.—M. Léon Guignard in the chair.—J. Costantin: Alpine biology. The modifications of the fungus *Pleurotus Eryngii* produced by an Alpine climate.—A. Rateau: A new locking screw nut. The system described and figured is suitable only for special work in which the cost is not of first importance. It permits an adjustment of the screw to 1/240th of a turn, with an absolutely safe lock.—G. Giraud: Non-linear partial differential equations of the second order of the elliptical type.—M. Drouin: Contribution to a general study of unlimited algorithms.—O. Cahen: A new aerial float. The use of an evacuated rigid envelope (sheet aluminium on a wooden framework) is suggested in place of a non-rigid balloon filled with a light gas.—L. Rodès: Does the earth exercise an influence on the formation of sun-spots?—E. Perucca: The Volta effect in a vacuum and in highly rarefied gases. The couples studied included Zn|Hg, Cd|Hg, Bi|Hg, and Sb|Hg, the experiments with the Zn|Hg couple being given in detail. There would appear to be a Volta effect in the absence of a superficial gas layer, -0.17 volt for Zn|Hg. Water vapour exerts no special influence on the voltages, but the effect of oxygen, even when dry, is very marked.—M. Curie: The action of the infrared rays on phosphorescence. According to a recent theory of Ives and Lukiesh, there should be a diminution in the intensity of the X-rays reflected from the 110-face of a crystal of cubic blende when infra-red radiation is allowed to fall on the face of the crystal. The experiment has been made by the author, with a negative result.

WASHINGTON, D.C.

National Academy of Sciences, Proceedings, vol. 6, No. 8, August, 1920.—G. P. Merrill: On chondrules and chondritic structure in meteorites. A study with detailed bibliography discussing the nature and origin of the chondrule.—A. A. Michelson: The vertical interferometer. The vertical interferometer is designed to obviate the difficulties of maintaining parallelism of the moving mirror.—A. A. Michelson: On the application of interference methods to astronomical measurements. A report on the determination of the orbit of Capella.—A. A. Michelson: A modification of the revolving mirror method for measuring the velocity of light.—W. Duane and W. Stenström: On the K series of X-rays. Data are provided for testing the following: (a) The existence of a third line in the α -group; (b) the separation of the critical adsorption from the line of shortest wave-length in the emission spectrum, namely, the γ -line; (c) the experimental and theoretical relations between the various lines in the K, L, M, etc., series; (d) the relative intensities of the emission lines; and (e) the equations for the wave-lengths that may be deduced from theories of the structure of atoms and the mechanism of radiation.—H. Shapley and Helen N. Davis: Studies of magnitude in star clusters, XII. Summary of a photometric investigation of the globular system Messier 3.—F. Boas: The influence of environment upon development. A discussion of several series of observations resulting apparently in a confirmation of the conclusion that environmental conditions play an important part in the determination of the bodily form of the adult.—R. H. Goddard: The possibilities of the rocket in weather forecasting. A discussion of the rocket as a means of realising the conditions desirable for obtaining high altitude data, and the extent to which the conditions necessary for a satis-

factory rocket method have been realised.—C. Barus: Note on a pneumatic method of measuring variations of the acceleration of gravity.—C. Barus: Note on torsional measurement of variations of the acceleration of gravity by interference methods.—D. H. Campbell: The genus *Botrychium* and its relationships.

Books Received.

The Fixation of Atmospheric Nitrogen. By Dr. J. Knox. (Chemical Monographs.) Second edition. Pp. vii+124. (London: Gurney and Jackson.) 4s. net.

Rocks and Fossils and How to Identify Them. By J. H. Crabtree. Pp. 63. (London: The Epworth Press.) 1s. 9d. net.

Notes on Inorganic Chemistry for First-Year University Students. By Prof. F. Francis. Pp. viii+244. (Bristol: J. W. Arrowsmith, Ltd.; London: Simpkin, Marshall and Co., Ltd.) 8s. 6d. net.

Australasian Antarctic Expedition, 1911-14, under the Leadership of Sir Douglas Mawson. Scientific Reports. Series C: Zoology and Botany. Vol. 6, Part 3: Polychæta. By Dr. W. B. Benham. Pp. 128+plates 5-10. (Sydney: Government Printing Office.) 12s.

Selected Poems in Somerset Dialect. (The Somerset Folk Series, No. 1.) Pp. 99. (London: Somerset Folk Press.) 1s. 6d. net.

A Practical Handbook of British Birds. Edited by H. F. Witherby. Part 12. Pp. 257-352. (London: H. F. and G. Witherby.) 4s. 6d. net.

Publications of the University of Manchester: Economic Series, No. 16. Bleaching: Being a *Résumé* of the Important Researches on the Industry Published during the Years 1908-20. By S. H. Higgins. Pp. vii+137. (Manchester: University Press; London: Longmans, Green and Co.) 10s. 6d. net.

Fifty Years of Electricity: The Memories of an Electrical Engineer. By Prof. J. A. Fleming. Pp. xi+371+plates. (London: Wireless Press, Ltd.) 30s. net.

The Riddle of the Rhine: Chemical Strategy in Peace and War. By Victor Lefebure. Pp. 279. (London: W. Collins, Sons and Co., Ltd.) 10s. 6d. net.

Shooting Trips in Europe and Algeria: Being a Record of Sport in the Alps, Pyrenees, Norway, Sweden, Corsica, and Algeria. By H. P. Highton. Pp. 237. (London: H. F. and G. Witherby.) 16s.

A History of the Whale Fisheries: From the Basque Fisheries of the Tenth Century to the Hunting of the Finner Whale of the Present Date. By Dr. J. T. Jenkins. Pp. 336. (London: H. F. and G. Witherby.) 18s.

An Introduction to Organic Chemistry. By D. Ll. Hammick. Pp. viii+258. (London: G. Bell and Sons, Ltd.) 6s.

An Inquiry into the Nature and Causes of the Wealth of Nations. By Dr. Adam Smith. (Bohn's Standard Library.) Reprinted from the sixth edition. Vol. 1. Pp. xxxvi+502. Vol. 2. Pp. vi+552. (London: G. Bell and Sons, Ltd.) 2 vols., 12s. net.

Plane Geometry: Practical and Theoretical *Pari Passu*. By V. Le Neve Foster. (Mathematical Series for Schools and Colleges.) Vol. 1. Pp. xi+220+xi. Vol. 2. Pp. xii+220-423+xi. (London: G. Bell and Sons, Ltd.) 3s. each vol.

Botany for Students of Medicine and Pharmacy. By Prof. F. E. Fritch and Dr. E. J. Salisbury. Pp. xiv+357. (London: G. Bell and Sons, Ltd.) 10s. 6d. net.