

SCIENCE

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FRIDAY, SEPTEMBER 22, 1899.

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THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

ADDRESS TO THE MATHEMATICAL AND PHYSICAL SECTION.*

THE members of this Section will, I am sure, desire me to give expression to the gratification that we all feel in the realization of the scheme first proposed from this chair by Dr. Lodge, the scheme for the establishment of a national Physical Laboratory. It would be useless here to attempt to point out the importance of the step taken in the definite foundation of the Laboratory, for we all recognize that it was absolutely necessary for the due progress of physical research in this country. It is matter for congratulation that the initial guidance of the work of the Laboratory has been placed in such able hands.

While the investigation of nature is ever increasing our knowledge, and while each new discovery is a positive addition never again to be lost, the range of the investigation and the nature of the knowledge gained form the theme of endless discussion. And in this discussion, so different are the views of different schools of thought, that it might appear hopeless to look for general agreement, or to attempt to mark progress.

Nevertheless, I believe that in some directions there has been real progress,

* MSS. intended for publication and books, etc., intended for review should be sent to the responsible editor, Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

* Given at the Dover meeting on September 14, 1899, by the President of the Section.

gives the results of investigations, both in this country and Europe, relative to the spruce and pine interests, and the insects predaceous and beneficial to them.

MESSRS D. APPLETON & Co. announce the following new volumes in their library of 'Useful Stories': 'The Living Machine,' by Professor H. W. Conn; 'The Alphabet,' by Edward Clodd and 'Organic Chemistry,' by Professor G. F. Chambers.

THE continuation of several important publications by The Macmillan Company, namely the second volume of the 'Scientific Papers,' by John Couch Adam; the third volume of the text-books of 'Embryology of Invertebrates,' by Drs. E. Korschelt, K. Heider, and the second part of the translation of Professor Van Zittel's text-book of paleontology.

BOOKS RECEIVED.

Liquefaction of Gases. WILLET L. HARDIN, New York and London. 1899. Pp. viii + 250. \$1.50.

The Kinetic Theory of Gases. H. S. BURBURY, Cambridge. At the University Press. 1899. Pp. viii + 157.

The History of the European Fauna. R. F. SCHARFF, London, Walter Scott, Ltd. 1899. Pp. 364.

Untersuchungen über die Vermehrung der Laubmoose durch Brutorgane und Stecklinge. CARL CORRENS, Jena, Fisher. 1899. Pp. xxiv + 472. 15 Marks.

Annuário publicado pelo observatório do Rio de Janeiro, 1899. Rio de Janeiro. L. MALAFAIA, JR. 1899. Pp. x + 318.

Das Tierreich. 5 Lieferung, *Sporozoa.* ALPHONSE LABBÉ, Berlin, Friedländer. 1899. Pp. xx + 180. Subscription price, 8.80 Mark. Single 12 Mark.

Catalogus Mammalium tam Oventum quam fossilium. E. L. TROUSSERT. Fasciculus VI. Index, alphabeticus, Berolini, Friedländer. 1899. Pp. 1265-1469.

Electric Motive Power. ALBION T. SNELL. New York, D. Van Nostrand; London, The Electrician Printing and Publishing Co., Ltd. 2d Edition. Pp. vi + 403. \$5.00.

Methods of Knowledge. WALTER SMITH, New York and London, The Macmillan Company. 1899. Pp. xxii + 340.

Hand-book of Optics. WILLIAM NORWOOD SUTER, New York and London, The Macmillan Company. 1899. Pp. viii + 209. \$1.00.

Inorganic Chemical Preparations. FELIX LENGFELD. New York, The Macmillan Company. 1899. Pp. xviii + 55.

Naturæ Novitates. Berlin, Friedländer. 1898. Pp. 780. 4 Mark.

The University Geological Survey of Kansas, Vol. V. Special Report on Gypsum and Gypsum Cement Plasters. G. P. GRIMSLEY and E. H. S. BAILEY, Topeka, J. S. Park. 1899. Pp. 83.

Mineral Resources of Kansas. ERASMUS HAWORTH, Lawrence, University of Kansas. 1899. Pp. 128.

Sextus Empiricus and Greek Scepticism. MARY MILLS PATRICK. Cambridge, Deighton, Bell & Co.; London, George Bell & Sons. 1899. Pp. viii + 163.

SCIENTIFIC JOURNALS AND ARTICLES.

American Chemical Journal, August. 'On Nitromalonic Aldehyde': By H. B. Hill and J. Torrey, Jr. 'Contributions to the Study of Aqueous Solutions of Double Salts': By H. C. Jones and N. Knight. The evidence is in favor of the view that the double chlorides exist as such in concentrated solutions and are only dissociated at great dilution. 'On the Rearrangement of the Thiocarbamic Esters': By H. L. Wheeler and B. Barnes. 'Dimethyldianthracene, A Polymeric Modification of β -Methylanthracene': By W. R. Orndorff and H. A. Megraw. 'The Action of Chromic Acid on Hydrogen': By C. L. Reese. Experiments carried out under various conditions and temperatures showed that hydrogen is oxidized only very slightly, if at all, below a temperature of 100°. 'Action of Sulphuric Acid on Nitroheptane': By R. A. Worstell.

J. E. G.

THE *National Geographical Magazine* for September contains the following articles:

The Commercial Development of Japan, by O. P. Austin.

Bad Lands of South Dakota, by N. H. Darton.

The West Indian Hurricane of August 7-14, 1899, by E. B. Garriott.

The Return of Wellman, by J. Howard Gore.

The International Cloud Work of the Weather Bureau, by Frank H. Bigelow.

The number also contains several shorter articles, as 'The Rediscovery of Porto Rico,' 'Through Franz Josef Land,' and 'The Isthmian Canal Route,' besides a good deal of geographic miscellanea.