

SCIENCE

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FRIDAY, DECEMBER 2, 1898.

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THE ASSOCIATION OF AMERICAN AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS.

THE Association of American Agricultural Colleges and Experiment Stations, which held its twelfth annual convention at Washington, D. C., November 15th–17th, includes in its membership many of the State universities and scientific institutions in which instruction in many technical lines besides agriculture is carried on. It is a delegate body, each college being represented by its president or other officer, and each agricultural experiment station by its director or some other member of its expert staff. The institutions represented in this Association employ over 1,500 persons in their faculties, who are giving instruction to about 30,000 students. These institutions have over \$50,000,000 in permanent endowments, buildings and equipment, and an annual revenue of nearly \$6,000,000, of which more than \$2,000,000 is derived from funds granted by the United States. Besides the work of instruction, they are carrying on original research in different directions. This is especially true in many scientific lines relating to agriculture, over a million dollars being spent for this purpose annually. There are now pending in Congress propositions to establish, in connection with these institutions, experiment stations for investigations in mechanic arts and naval engineering, for which some of

Geological Conference, November 15, 1898. MR. J. E. WOODMAN presented brief notes on two local features, 'Fifty Years' Change in Lynn Beach,' and 'A Section through the Newtonville Esker.' Thirty years ago, according to the statement of a stage driver of that time, the road across Lynn Beach, from Lynn to Nahant, was passable for the stage only at low tide. The constructive action, which has resulted in the present, broad, high beach, takes place chiefly during winter storms and on the east side. Attention was directed to some significant bedding recently exposed in a section through the Newtonville esker. The subglacial stream cut the ice on the outside of its curve, just as meandering streams cut their banks to-day, for the east of the old channel shows higher beds unconformably overlapping lower ones on the outside of a bend.

Mr. A. W. Grabau spoke on the 'Siluro-Devonian Contact in Western New York.' In the region considered, the Onondaga limestone, at the base of the Devonian, has generally been held to rest unconformably upon the Water-lime, at the top of the Silurian. Five sections exposed in the Buffalo cement quarry, near Buffalo, N. Y., tend to show that these beds are not only unconformable, but also that they are separated, locally, by a thin layer of conglomerate. The so-called 'bull-head' limestone, which forms the upper seven feet of the Water-lime, contains few fossils except near the top, where the following have been found: exterior molds of a new coral; two species of Leperditia, and five species of brachiopods. All the species show Lower Helderberg affinities. The evidence afforded by fossils and by stratigraphic position indicates that this bed is the western extension of the Lower Helderberg, and that the overlying limestone conglomerate, with quartz sand in the cement, is the equivalent of the Oriskany. Mr. Grabau proposes to call this important capping member of the Silurian the Greenfield limestone. The name is taken from the town in Ohio near which this bed both attains strong development and afforded the first fossils described from it.

One portion of the contact discussed exhibits an irregular, ancient fissure about ten feet deep and up to two feet in width. This fissure

penetrates the entire stratum of the Greenfield limestone and a portion of the Water-lime, and is filled with compact, quartz sandstone, containing angular fragments of the limestone.

J. M. BOUTWELL,
Recording Secretary.

NEW BOOKS.

A Treatise on Universal Algebra with Applications. ALFRED NORTH WHITEHEAD. Cambridge, University Press; New York, The Macmillan Company. Volume I. Pp. xxvi + 586. \$7.50.

Foot Notes to Evolution. DAVID STARR JORDAN. New York, D. Appleton & Co. 1898. Pp. xviii + 392. \$1.50.

Text-Book of Physiology. Edited by E. A. SCHÄFER. Edinburgh and London, Young J. Pentland; New York, The Macmillan Co. 1898. Pp. xviii + 1036. \$8.00.

Anatomy and Histology of the Mouth and Teeth. I. NORMAN BROOMELL. Philadelphia, P. Blakiston's Sons & Co. 1898. Pp. viii + 428. \$4.50.

Text-Book of Histology. PHILIPP STÖHR. Second American Edition translated from Seventh German Edition by DR. EMMA BILLSTEIN. Philadelphia, P. Blakiston's Sons & Co. 1898. Pp. xviii + 424. \$3.00.

Human Anatomy. HENRY MORRIS. Philadelphia, P. Blakiston's Sons & Co. 1898. Pp. xxix + 1274. \$6.00.

Annual Report of the Board of Regents of the Smithsonian Institution. 1896. Washington, Government Printing Office. 1898. Pp. xliii + 727.

Outlines of Industrial Chemistry. FRANK HALL THORP. New York and London, The Macmillan Company. 1898. Pp. xvii + 541. \$3.50.

Fertilizers. EDWARD B. VORHEES. New York and London, The Macmillan Company. 1898. Pp. xiv + 335. \$1.00.

Instinct and Reason. HENRY RUTGERS MARSHALL. 1898. Pp. xii + 574. \$3.50.

Erratum: On page 675 above first column, line 33, for *Wabash* Creek read *Walnut* Creek.