

Zeeman effect from the physical laboratory of Johns Hopkins University are contributed by Messrs. Ames, Earhart and Reese. Other articles are by Professor C. Runge, of Hannover; Mr. W. H. S. Monck and Mr. L. E. Jewell.

THE July number of *The Psychological Review* opens with an article by Sig. Gustavo Tosti, discussing the fields and inter-relations of social psychology and physiology. Professor J. H. Hyslop contributes an article entitled 'Psychical Research and Coincidences,' in which he shows that individual cases of premonition may be explained by normal processes of mind. Professor Chas. H. Judd treats the visual perception of the third dimension. There are shorter articles by Professor Caldwell, on 'Professor Titchener's View of the Self;' by Dr. MacDonald, on 'A Temporal Algometer;' by Professor Baldwin, on 'Social Interpretations;' and by Professor Cattell, criticising Professor Münsterberg's article on the 'Danger from Experimental Psychology.'

THE *American Journal of Physiology* issued on July 1st contains the following articles: 'On intestinal Absorption and the Saline Cathartics,' by George B. Wallace and Arthur R. Cushny. 'The Movements of the Food in the Oesophagus,' by W. B. Cannon and A. Moser. 'A Contribution to the Chemistry of Cytological Staining,' by Albert Mathews. 'Notes on Cetraria Islandica (Iceland Moss),' by Ernest W. Brown Ph.D. 'Variations in the Amylolytic Power and Chemical Composition of Human Mixed Saliva,' by R. H. Chittenden and A. N. Richards, B. A. 'The Venometer Nerves of the Hind Limb,' by F. W. Bancroft. 'An Analysis of the Action of the Vagus Nerve on the Heart,' by L. J. J. Muskens. 'A New Method for the Study of the Isolated Mammalian Heart,' by W. T. Porter.

The Open Court for July contains as a frontispiece a portrait of Lobachèvsky taken from the bronze statue placed recently in the square now bearing his name, facing the University at Kazan, and the number contains an interesting account of the great geometer by Professor George Bruce Halsted.

Under the title 'The Fastest Vessel Afloat'

Mr. Cleveland Moffett describes, in the July number of *McClure's Magazine*, the 'Turbina' and a trip upon it in which the extraordinary speed of 40 miles an hour was attained. The writer holds that the Turbine engine will revolutionize steamship travel where there is a plentiful supply of coal.

SOCIETIES AND ACADEMIES.

TORREY BOTANICAL CLUB, MAY 10, 1898.

THE first paper, by Dr. Arthur Hollick and Mrs. Elizabeth G. Britton, was entitled 'A Description of a new Fossil Moss from Seattle, Washington, collected by Professor I. C. Russell.' The paper was read by Dr. Hollick, who also exhibited the original specimen, a fragment sent to Mrs. Britton for identification by Professor F. H. Knowlton, of the National Museum in Washington. Professor Knowlton supplied the following facts: "The specimen was collected by Professor I. C. Russell in July, 1897, near Cle Elum, Kittitas Co., Washington, and occurs in the Roslyn sandstone; its age is probably lower Miocene or Upper Eocene. It is associated with species of *Lygodium*, *Ulmus*, *Planera* and a number of other beautifully preserved leaves. It is in any case the oldest undoubted moss thus far found in this country. The so-called *Hypnum Haydeni* of Lesquereux is with little doubt a *Lycopodium*." The specimen represents only the tip of a branch, about one-half inch in length; it is sterile and has been compared with figures and descriptions of other fossil American mosses, and differs from them all. It is undoubtedly a new species of the *Hypnaceæ*, probably a *Rhynchostegium*, and will be named for its discoverer, Professor Knowlton.

Dr. Hollick showed a drawing of the fossil species and also several drawings made from living species which it most resembles. None of these, however, are exact equivalents.

In the discussion following, it was remarked by Mr. Hollick that fossil mosses are extremely rare. All specimens known are Tertiary or later, one reported from a Carboniferous horizon being now thought doubtful; but the existence of mosses in Jurassic times is inferred from the existence of an insect then, the present repre-

sentatives of which feed upon mosses. The only fossil moss heretofore recorded from the United States is Lesquereux's *Hypnum Haydeni*, now believed to be instead a species of *Lycopodium*. Fragments from the Pleistocene have been reported from Canada. The species described this evening is probably the first distinct American species. Thirty or more foreign fossil *musci* have been described, many of them members of *Hypnum*, many of them of *Harpidium* and of *Sphagnum*. To this genus *Sphagnum* belongs the only fossil moss as yet known in fruit, a Tertiary specimen preserved in brown iron ore.

Discussion followed regarding the reasons for the rarity of moss fossils, Dr. Underwood, Dr. Britton, Mrs. Britton and the Secretary participating. Dr. Hollick said that, besides the negative reasons presented by lack of extensive search and by the small size of the plant in question, an important reason for the scarcity of moss-remains is the fact that mosses do not shed their leaves. Small plant-remains in Carboniferous rocks occur not in place, but in débris. Were moss-leaves deciduous there would have been greater chance of their accumulation and preservation in such masses of driftage.

The second paper, by Dr. L. M. Underwood, was entitled 'The Species of *Botrychium* of the *B. ternatum* Group.' The paper, which will soon be published, was accompanied by numerous specimens and followed by discussion at length of the principal Eastern representatives, especially of *B. intermedium*.

Mrs. Britton followed with remarks on the Muhlenberg collection of mosses recently transferred from the Philosophical Society of Philadelphia to the Philadelphia Academy of Sciences. They are preserved exactly as Muhlenberg left them, even to the replacing of a knothole. The plants are wrapped in leaves torn from Testaments printed in Low Dutch. With each specimen is preserved the number he had originally given it, the number he had used in sending it to Hedwig, and the name given it by Hedwig.

The bulk of Muhlenberg's ferns went to Willdenow at Berlin.

Among the collections at the Academy of Sciences in Philadelphia, besides those of Schweinitz, Sullivant, Nuttall and Darlington,

is that of Pursh, whose herbarium is still a series of scattered sheets, neither mounted nor classified, but with labels supplied in his own hand.

Dr. Britton announced the recent purchase, by the N. Y. Botanic Garden, of the herbarium and botanical collections of Professor Lewis R. Gibbs, of Charleston, S. C., through his daughter, Miss Maria R. Gibbs. The herbarium of Elliott is in bad preservation and much of it gone entirely. The Gibbs herbarium is deemed of special value as illustrative of Elliott's plants.

EDWARD S. BURGESS,
Secretary.

ENGELMANN BOTANICAL CLUB.

THE Club met on June 23d at the St. Louis Medical College, fourteen members present.

Mr. Walter Kirchner read a paper on fossil plants of Florissant, Colorado, and exhibited a number of specimens, several of them being new species.

Mr. J. B. S. Norton made a report of the field meet held at Cliff Cave, six miles south of St. Louis, on June 4th. The locality was a wooded ravine with limestone cliffs next the river and some upland woods. The woods may be characterized by *Hydrophyllum Canadense*, *Aralia quiquefolia* and *Carex latifolia*. The character of the limestone out-crop formation may be represented by *Celtis pumila*, *Dodecatheon media*, *Agave Virginica*, *Tecoma radicans*, the latter covering the cliffs. Specimens of the *Agave* with red spotted leaves very close to var. *tigrina*, and compound leaves of *Vitis cinerea*, were exhibited.

J. B. S. NORTON,
Acting Secretary.

NEW BOOKS.

Biological Lectures Delivered at the Marine Biological Laboratory of Woods Holl, 1896-7. Boston, Ginn & Co. 1898. Pp. 242.

The Play of Animals. KARL GROOS. Translated by ELIZABETH L. BALDWIN. New York, D. Appleton & Co. Pp. xxvi+341. \$1.75.

The Doctrine of Energy. B. L. L. London, Kegan, Paul, Trench, Trubner & Co., Ltd. 1898. Pp. 108. 2s. 6d.