

partment of Agriculture, contributes his fourth 'Notes of Travels,' dealing with 'Coffee growing in Brazil and the giant Jequitibá trees.' The usual Book Reviews, Minor Notices, Notes for Students, Open Letters, and News Items close the number.

Terrestrial Magnetism and Atmospheric Electricity for May contains the following articles:

'Summary of the Results of Recent Investigations in Atmospheric Electricity' (Concluded): F. EXNER.

'The Physical Decomposition of the Earth's Permanent Magnetic Field—No II.'; 'The Composition and Characteristics of the Uniform Magnetic Field': L. A. BAUER.

'Résumé of Magnetic Work at Bombay Observatory in 1897.'

'The Magnetic Work of the Norwegian North Polar Expedition, 1893-1896': D. L. HAZARD.

'Summary of Results of Recent Comparisons of Magnetic Instruments': L. A. BAUER.

'Schuster's Researches on the Solar Rotation and the Lunar Period in the Earth's Magnetism.'

'Biographical Sketch of William Ellis' (with portrait).

THE number of *Popular Astronomy* for the months of June and July has for its frontispiece the orbit of the new comet discovered by Halls, of Cape Colony; the elements and ephemeris as computed by Dr. Kreutz accompanies a brief article upon the comet. Among the other short articles is one by E. C. Pickering on the 'Variability of Light of Eros.' From the *British Journal of Photography* there is reprinted an article on the scientific value of photography for astronomical investigations. The recent eclipse is still too near us to have obtained full knowledge of the results, but a discussion of 'What Eclipses Teach Us,' comes from the pen of David P. Todd, who went out with the Amherst party to Sumatra. Miss Mary Clark Traylor gives an explanation of the method of computing an ephemeris of a planet or comet, of interest to the amateur astronomer. Spectroscopic notes, planet notes and the usual planet tables are included in the number.

THE Museums Association of Great Britain will commence in July the publication of a monthly journal devoted to the interests of museums in general. Besides the proceedings of the Museums Association it will contain

current news of museums and art galleries, illustrated descriptive articles, reports of museums, reviews of books and brief notes. Mr. F. A. Lucas, of the U. S. National Museum, will act as the American correspondent of the journal, and he will be glad to receive any articles, no matter how brief, pertaining to the work of museums in the United States, or they may be sent directly to the editor, Mr. E. Howarth, of the Sheffield Museum, England.

SOCIETIES AND ACADEMIES.

PHILOSOPHICAL SOCIETY OF WASHINGTON.

THE 536th regular meeting was held May 11, 1901. The special order of business was to consider the question of incorporating the Society under the general laws of the United States for the District of Columbia. After discussion it was unanimously

Resolved, That the Philosophical Society adopt the recommendation of the General Committee to incorporate the Philosophical Society of Washington, and that the carrying into effect of the foregoing resolution be entrusted to the General Committee.

The 537th meeting was held May 25, 1901. The Chairman, V. P. Rathbun, stated that pursuant to the instructions of the Society at the last meeting the General Committee had filed Articles of Incorporation on May 20, 1901, said Articles being signed by three of the founders of the Society and 23 past presidents and other officers of the Society. He also stated that at a meeting of the incorporators just held all the members of the Society had been elected to the incorporated society.

A code of by-laws was adopted, and the former officers were elected to corresponding positions in the new Society.

President Walcott then took the chair. In response to a question, and after discussion, he ruled that the organization was to be continuous, and that the present meeting did not begin a new series.

The first regular paper was by Dr. G. M. Sternberg on the 'Transmission of Yellow Fever by Mosquitoes.' (This paper will appear in *The Popular Science Monthly*.)

Mr. J. W. Frolely then described some 'Appliances for describing Oval and Circular Arcs of very large radius.' The principal one depended on the fact that a uniform elastic bar, bent by equal oppositely directed forces takes the form of a circular arc. The presentation was too mathematical to be condensed here.

The Society then adjourned till October.

CHARLES K. WEAD,
Secretary.

TORREY BOTANICAL CLUB.

At the meeting of April 9, 1901, the scientific program consisted of a 'Report on a Recent Visit to the Royal Gardens at Kew, England,' by Mr. George V. Nash. Mr. Nash was absent about six weeks; nearly the entire time on the other side being spent at the Royal Gardens, Kew, securing specimens of living plants for the New York Botanical Garden. The collections were carefully inspected under the guidance of the officers of the institution, and such duplicate material picked out as was desired. In this way much valuable material was secured, both for the outside and conservatory collections. Many of these were procurable only at a botanical garden, and a number of them were not obtainable elsewhere than at Kew. Of the large number of plants selected, over 1,000 species have already been received and incorporated in our collections. These include about 550 species of herbaceous plants, 350 shrubs and trees, and 150 succulents. The remainder of the material will follow as fast as the authorities at Kew can select it.

Dr. Britton remarked that the favor accorded by Sir William Dyer in permitting Mr. Nash to select duplicates of living plants from the rich collections at Kew would be most gratefully appreciated not alone by the managers and members of the New York Botanical Garden, but by all American botanists.

Dr. Britton presented a communication on a tree new to the American continent, a white birch from the Alaska region, collected by Mr. R. S. Williams and Mr. Tarleton and represented in the U. S. National Herbarium also by two specimens collected by Miss E. Taylor.

At the meeting of April 24th a paper by Professor Francis E. Lloyd, entitled, 'The

Genus *Lycopodium*: A Criticism,' in the absence of the author, was read by the secretary pro tem. This was a review and criticism of the treatment of the genus *Lycopodium* by Pritzel in the recently published part of Engler and Prantl's 'Die natürlichen Pflanzenfamilien' dealing with the Lycopodiaceae. The paper will be published in full in an early number of *Torrey*.

Professor Underwood remarked on segregations in the *Selaginella rupestris* group, stating that Dr. Hieronymus, of Berlin, had recently recognized twenty-seven species in this group, some of them American, outside of those recently proposed in this country.

MARSHALL A. HOWE,
Secretary pro tem.

THE ACADEMY OF SCIENCE OF ST. LOUIS.

At the meeting of May 20, twenty-six persons present, Professor George Lefevre presented a comprehensive address on the advance made in the science of zoology during the nineteenth century.

Professor F. E. Nipher presented a paper determining the specific heat of a nebula, in process of gravitational contraction. It is found to be equal to the constant for the gas, provided by the mechanical equivalent of heat. This is also equal to the difference between the specific heats, at constant pressure and at constant volume. The relation between pressure and volume of the gaseous mass during contraction is determined in terms of the fundamental constants, the gravitation constant, the constant of the gas and the mass of the contracting nebula. In the same way, the relation of pressure to temperature and of volume to temperature are determined. It is a matter of profound significance that a cosmical gaseous mass can apparently pull itself together, and at the same time become warmer, as it might if compressed by some external force. It raises the question whether the mass does really contract itself when it gravitates into a smaller volume, or is gravitation, after all, a force acting from without and upon the two bodies which seem to attract each other?

One person was elected to active membership.

WILLIAM TRELEASE,
Recording Secretary.