SCIENCE

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE, PUBLISHING THE OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

FRIDAY, JUNE 21, 1901.

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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.

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

A NATIONAL association for the advancement of science occupies at the beginning of the twentieth century a dominant position. The greatest achievement of the nineteenth century was the progress of science; its most definite tendency was towards the voluntary organization of individuals for the accomplishment of certain ends. The advance of science, the movement that is of the greatest importance for civilization, requires for its guidance the strongest association of individuals. Such an association will certainly arise, and will develop from existing institutions.

The organization of science in America has progressed parallel to the advance of science. Local societies concerned with the whole field of knowledge, and especially with its utilitarian aspects, were first established in Philadelphia, in Boston and in other cities. These societies were modeled on the similar institutions of Europe; the Philosophical Society of Philadelphia following the Royal Society of London, and the Academy of Arts and Sciences of Boston, the Paris Academy of Sciences. As centers of scientific activity increased in number,

he duly describes. In all, 72 genera are recognized, of which 25 were first named by Mr. Simpson, while many others, credited to various authors, were first properly defined by the same writer. All this amounts to a revolution in naiadology, comparable with that produced by Pilsbry in the study of the Helicidæ.

Of interest to general biologists will be the map given showing the distribution of the naiades. In the Old World the regions of Sclater and Wallace are respected by the fresh-water mussels, except that New Guinea goes with the Oriental region, as also do Japan, Corea and Manchuria. In America the neotropical region is valid for naiades, but North America is divided into three primary regions, the Atlantic, the Mississippi and the Pacific, but the last is considered a part of the Palearctic! In all about 1,117 species are recognized, many having long lists of synonyms. Concerning the innumerable so-called species described from France by the followers of Bourguignat, Mr. Simpson says: "Life is too short and valuable to be wasted in any attempt at deciphering such nonsense, and I have not even cumbered the pages of this work with a list of these new species." It is indeed unfortunate that the interesting character of the European fauna should be obscured by the treatment it has received at the hands of its students. The fresh-water mollusca, in particular, exhibit a wonderful polymorphism, which in the highest degree merits the attention of the evolutionist; but when every varying phase is designated a species the result is mere chaos. When I lived in England, I knew of a number of ponds producing special forms of *Limnæa* (particularly *L. stagnalis*), which were so different that they could be recognized at a glance; one of the most distinct of these varieties abounded in a pond no bigger than a large rug, and was found nowhere else. The same sort of thing is true of the European naiades, and a careful comparative study of all the forms called species by the Bourguignat school, with an account of the several conditions under which they exist, would be an extremely valuable contribution to biology.

As is inevitable in so great a work, a few errors of nomenclature occur. The new genus *Dromus* will be considered by some too similar in name to *Dromius*, Bon., but I think it should be allowed to stand. The genus *Nodularia* Conrad, 1853, is preoccupied by *Nodularia* Oken, 1815. This will apparently oblige us to call the genus *Lanceolaria* Conrad, with *Lanceolaria grayana* (Lea) as the type, while the section of *L. douglasiæ* (Gray) can be called *Nodularidia* n.n. On p. 851, *Ptychorhynchus incertus* should be *P. murinus* (Heude), and on p. 897, *Spatha tristis* should be *S. rochebrunei* Jousseaume.

T. D. A. Cockerell.

East Las Vegas, N. M., May 12, 1901.

SCIENTIFIC JOURNALS AND ARTICLES.

The leading article of the *Botanical Gazette* for May is the 'Genetic Development of Forests of Northern Michigan, a study in Physiographic Ecology,' by H. N. Whitford. The factors that influence tree growth are divided into three groups—climatic, ecologic and historical. Favorable climatic factors make possible a forest formation; ecologic factors bring about the plant society condition; and the historical factors, by changing the physiographic features, change the plant societies. The life histories of five series of plant societies are discussed, *viz.*, sand, clay, rock, swamp and clearing societies. In four cases there is a gradual progression from xerophytic societies to a mesophytic forest. In the case of the swamp the progress is from hydrophytic societies to a mesophytic forest. The article is illustrated with eighteen half-tone reproductions of photographs. E. W. D. Holway contributes his third paper on 'Mexican Fungi,' in connection with Dr. Dietel, describing thirty-one new species of Uredineæ. Mr. G. M. Holferty gives the results of his study of the ovule and embryo of *Potamogeton natans*, clearing up a number of gaps in our knowledge of this primitive monocotyledonous type. The paper is illustrated by two excellent plates. Mr. Charles T. Druery, of London, writes upon 'Fern Variation in Great Britain,' and calls the attention of American students to the great scientific value of looking after fern 'sports.' Mr. D. G. Fairchild, agricultural explorer of the U. S. De-

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*.)