

*American Naturalist* and *Natural Science* and has the coöperation in England of Sir John Lubbock and in America of Professor J. Mark Baldwin. Subscriptions may be addressed to Dr. Paulo Celesia via Assarotte 46. Genoa.

MESSRS. JOHN BALE, Sons and Danielsson, London, announce the publication of a *Journal of Tropical Medicine* to be edited by Mr. James Cantlie, who for some years practiced in Hong Kong, and by Dr. W. J. Simpson, who was until recently medical officer of health for Calcutta.

THE State Board of Health of Michigan has established a Teachers' Sanitary Bulletin to be issued monthly. It promises to contain information of great value to the teacher, and sets an example that could be followed to advantage in other States. The first numbers contains an address by Dr. F. G. Novy on 'germs, what they are, and how they produce diseases,' and an article by Dr. H. B. Baker on 'isolation and disinfection of persons and things.' The number also contains several statistical charts.

MR. JAMES G. BIDDLE, of Philadelphia, has begun the publication of a monthly Bulletin intended to be of interest to those who use scientific instruments. The subscription price is 50 cents per annum.

#### SOCIETIES AND ACADEMIES.

##### GEOLOGICAL SOCIETY OF WASHINGTON.

AT the 80th meeting, held in Washington on May 25, 1898, Dr. A. C. Spencer and Dr. Geo. H. Girty read a joint paper on the Devonian in Southwestern Colorado.

In one of the early bulletins of the Hayden Survey, F. B. Meek described a small collection of fossils which had been brought in from the southwestern part of Colorado by F. M. Endlich. The specific characters of a *Rhynchonella*, which was very abundant, led him to designate the age of the limestone in which they occurred as Devonian. Some weight was added to this opinion by associated forms which were only generically recognizable. During the field season of 1897 *Rhynchonella endlichi*, which has since been assigned to *Camarotoechia* (*Plethorhyncha*), was found associated with a number of forms which corroborate Meek's determination as against those who have supposed

a probable Carboniferous age. The Devonian strata lie in apparent conformity with a supposed Carboniferous section.

The stratum from which the fossils were obtained is a heavy limestone about 100 feet thick. Below it there are about 50 feet of shales not well exposed and a heavy quartzite 50 feet in thickness which rests upon an eroded surface of crystalline rocks. A basal conglomerate is locally present. The following forms have been identified by Dr. Girty: *Fenestella* sp.; *Orthothetes Chemungensis*? *Productella* cf. *spinulicosta*; *Rhynchonella* sp.; *Camarotoechia* (*Plethorhyncha*) *Endlichi*; *Cyrtia* n. sp. a; *Cyrtia* n. sp. b; *Athyris* sp.; *Naticopsis gigantia*? *Euomphalus* sp.

The last paper of the evening was one by Mr. S. F. Emmons, on the 'Geology of Southern Russia,' illustrated by lantern slides. This included some account of Donetz Basin, which has been developed within the last ten or fifteen years, and promises to become one of the most important industrial centers of the Empire, containing large areas of coal of various kinds as well as important deposits of mercury and rock salt, together with ores of gold, silver, lead, zinc and iron as yet imperfectly developed. Some account was given of the Caucasus mountains, their geological structure and the varied races that dwell within their valleys; also of the important deposits of petroleum in the Tertiary beds along their flanks, especially of those at Bakou, on the Caspian Sea, which already rival in the amount of their production those of the United States. The enormous deposits of glauber salts in the Karabugas gulf, on the eastern side of the Caspian, their origin and their bearing upon the origin of petroleum, were also described. Likewise the peculiar conditions of the waters of the Black Sea, their greater salinity, higher temperature, contents of  $H_2S$  and entire absence of organic life below the 100-fathom level, and the points of resemblance between their condition and those that prevail in the Arctic Ocean, as found by Nansen. Finally, the interesting geological features of the Crimean peninsula, which appears to be a segment of the northern flanks of the Caucasus, left upon engulfment of the rest of this portion of the range beneath the waters of the Black Sea.

In addition to the above, Dr. W. F. Hillebrand read an important paper on the 'Distribution and Quantitative Occurrence of Vanadium in the Rocks of the United States,' but to attempt to abstract it here would not give satisfactory results.

WM. F. MORSELL.

#### TORREY BOTANICAL CLUB.

THE scientific program on March 30th included three papers, of which the first, by Dr. V. Havard, Surgeon U. S. A., was upon 'The English Names of Plants.' He said that, the necessity for English names being recognized, botanists should decide on the principles which are to determine their selection and formation, so as to secure greater uniformity, simplicity and usefulness. To each plant an authorized vernacular binomial should be assigned, so that ambiguity and confusion may be avoided. In the absence of suitable English names, already recognized, it seems best to adopt the Latin genus name, if short and easy, like *Cicuta*, *Parnassia*, *Kalmia*, *Hibiscus*, or a close translation thereof, when possible, like *Astragal*, *Chenopody*, *Cardamin*, while the specific English name should be an equivalent of the Latin one or a descriptive adjective.

As to construction, the rules recommended are as follows: In case of all English binomials clearly applying to well-known individual species and no others, all substantives are capitalized without hyphen, as in Witch Hazel, May Apple, Dutchman's Pipe. In all genera in which two or more species must be designated, the genus name is compounded into one word without hyphen, as Peppergrass, Sweetbrier, Goldenrod, Hedgenettle, etc., except in long names, where the eye requires the hyphen, as Prairie-clover, Forget-me-not. Genus names in the possessive case (St. John's-wort) are written with the hyphen followed by a lower-case initial. Plants commemorating individual men (Douglas Spruce, Coulter Pine) are written without the marks of the possessive. In specific names participial endings are suppressed, the participle becoming a substantive which is added as a suffix, without hyphen, thus Heart-leaved Willow is changed to Heartleaf Willow.

Discussion followed, Dr. Britton, Mr. Clute,

Mr. Rydberg, the Secretary and others participating. Commendation was given to the attempt to simplify, to make use of the vernacular, and to secure greater euphony. President Brown and Dr. T. F. Allen deprecated the manufacture of book-names. Dr. Allen also pointed out the confusion which has resulted from the improper transfer of English and German names to plants which are kindred but not identical. Professor Burgess defended the use of vernacular names, saying that they deserve more attention, and that in their absence the generic name should be used unchanged. "Many Latin names, as *Portulaca*, win their way without change as soon as once fairly made familiar. Coined names seldom live; a name to be successful must be a growth, as language is. Allowance must be made for new discoveries, even in supposed monotypic genera. Names like Witch-hazel are fitly treated as themselves generic, not binomial. To drop the possessive often loses from our thought an association with the discoverer which is worth preserving. To drop the participle ending -ed is often, however, a distinct gain, both in securing compactness and expressiveness."

The second paper, by Dr. N. L. Britton, 'The Genus *Parthenium* in Eastern North America,' was a description of a new species of *Parthenium*, from near Charlotte, Va., intermediate in leaf-margin between the pinnatifid leaves of tropical species and the subentire leaves of the type *P. integrifolium*. Plants of the latter from White Sulphur Springs, Va., are now cultivated at the New York Botanic Garden.

The third paper, 'The Influence of the Nucleus upon the Formation of Cell Walls,' was by Professor C. O. Townsend. "It was observed by Klebs (Pfeffer, *Untersuch. a. d. Botan. Institut. z. Tübingen*, Bd. II., p. 500) in 1888 that when cell contents are separated into two or more parts by plasmolysis, only the part containing the nucleus is capable of forming a new cell wall. In the following year Palla (*Flora*, p. 314) performed a series of experiments in which cell walls seemed to be formed around the nucleus-free protoplasmic masses. The experiments undertaken in 1895 by the writer (*Pringsheim's Jahrbücher*, 1897) were solely to determine whether or not the nucleus is neces-

sary for the formation of cellulose. It was found that when the cell contents were plasmolysed, the protoplasmic masses usually remained connected by protoplasmic threads. When these threads were broken, so that there was no possible connection with a mass of protoplasm containing a nucleus, no new cell walls were formed. If a protoplasmic mass was completely separated from the nucleus in its own cell it was found that the influence necessary for the formation of cell walls could travel from the adjacent cells by means of the protoplasmic connections. Simple contact without living protoplasmic connections was not sufficient to induce the formation of cell walls. If, however, the protoplasmic connections were not broken the influence of the nucleus was capable of traveling over a distance of several millimeters."

EDWARD S. BURGESS,  
Secretary.

NEW YORK ACADEMY OF SCIENCES—SECTION  
OF GEOLOGY AND MINERALOGY,  
MAY 16, 1898.

MR. GEO. F. KUNZ exhibited specimens of quartz crystals found in massive gypsum from Gallineo Springs, New Mexico, and announced the discovery of a new meteorite from Ottawa, Kansas.

The first paper on the program was by Professor D. S. Martin on 'The Geology of Columbia, South Carolina, and its Vicinity.' Professor Martin described the granitic and gneissic rocks of that region and their residual products. He also commented on the character of the Potomac, Lafayette and Columbia formations, which are well exposed in the railroad cuts to the south of the city.

The paper was discussed by Professor Dodge and Dr. Ries.

The next paper of the evening was by Professor Kemp, entitled 'Some Remarks on Titaniferous Magnetites.' The speaker discussed the formula of ilmenite, and stated that it was probably a mixture of  $\text{FeOTiO}_2$  and  $n\text{Fe}_2\text{O}_3$ . The amount of titanium present in the titaniferous magnetites is very variable, running sometimes as high as 40%; in the Adirondack areas it is 10–20%.

Magnetic separation has not yet proved successful for the elimination of titanium from these ores. Nearly all of the titaniferous magnetites show small amounts of  $\text{MnO}$ ,  $\text{Cr}_2\text{O}_3$ ,  $\text{CoO}$ ,  $\text{NiO}$  and  $\text{MgO}$ . The latter suggests the presence of spinel.  $\text{SiO}_2$  and  $\text{Al}_2\text{O}_3$  have also been found, and  $\text{V}_2\text{O}_5$  has been recorded in a few instances. Professor Kemp suggested that these minor constituents might have some influence on the metallurgical behavior of the ore. Phosphorus and sulphur are very rare. The native and foreign occurrences of the titaniferous magnetites were also alluded to.

The paper was discussed by Professor Martin, Dr. Ries and Mr. Kunz.

HEINRICH RIES,  
Secretary of Section.

BOTANICAL SEMINAR OF THE UNIVERSITY OF  
NEBRASKA.

At the meeting of the Botanical Seminar of the University of Nebraska on April 23d papers were read as follows: 'Recent Investigation of the Cyanophyceæ,' by F. E. Clements; 'The Morphology of Ginkgo,' by C. E. Bessey; 'Hitchcock's Ecological Plant Geography of Kansas,' by Roscoe Pound; 'Cell Division in Ascomycetæ,' by A. T. Bell.

At the meeting on May 21st the following papers were read: 'The Proper Conception of Plant Ecology and Plant Geography,' by Roscoe Pound; 'Vegetation Pressure,' by F. E. Clements; 'The Development of the Pistils of Alismaceæ, Ranunculaceæ and Rosaceæ,' by Ernest A. Bessey.

#### NEW BOOKS.

*Revised Text-book of Geology.* JAMES D. DANA.  
Edited by WM. NORTH RICE. New York,  
American Book Co. 1898. Pp. ix+482.

*La famille Néuropathique.* CH. FÉRÉ. Paris,  
Alcan. 1890. Pp. 352.

*A Manual of Quantitative Chemical Analysis.*  
E. F. LADD. New York, John Wiley & Sons.  
1898. Pp. vi+82.

*Political Crime.* LOUIS PROAL. New York, D.  
Appleton & Co. 1898. Pp. xxii+355.

*Die Zelle und die Gewebe.* OSCAR HERTWIG.  
Jena, Gustav Fischer. 1898. Pp. viii+314.  
7 Marks.