distance from its origin or centrum, is erroneously defined as 'the intensity at the epicenter'; and the diagram on page 186 indicates the intensity of a shock in the locus technically called the pleistoseist as about four ninths of its intensity at the epicenter, whereas the text shows the ratio to be three fourths. Slips of this character, which might have been eliminated by more careful revision of copy and proof, will doubtless be avoided in subsequent editions. They detract but slightly from the general value of the work, which may be commended to the public as a lucid, attractive, and at the same time scientific presentation of a subject so difficult that its modern aspect is little understood outside the circle of its special students.

G. K. Gilbert.

SCIENTIFIC JOURNALS AND ARTICLES.

The American Naturalist for October has papers on 'The Anatomy of the Coniferales' (concluding article), by D. P. Penhallow; 'Studies of the Plant Cell, IV.,' by B. M. Davis, and 'The Affinities of the Ophioglossaceæ and Marsiliaceæ,' by D. H. Campbell.

The Popular Science Monthly for December contains the following articles: 'The Reclamation Service,' by F. H. Newell (deals with the problems of irrigating the arid regions of the west); 'Chinese and Japanese Immigration,' by Allan McLaughlin; 'The Status of American College Professors,' by John J. Stevenson; 'A Decade of Library Progress in America,' by William W. Bishop; 'Nature's Hieroglyphics,' by Richard S. Lull (treats of the fossil footprints of the Connecticut Valley); 'The Present Problems of Physiological Chemistry,' by R. H. Chittenden; 'The Agricultural Distribution of Immigrants,' by Robert DeC. Ward; 'The Conceptions and Methods of Psychology,' by J. McKeen Cattell. There are also shorter articles and notes on the progress of science, the latter including the two hundredth anniversary of the death of Locke and the two hundred and fiftieth anniversary of Columbia University.

The American Museum Journal for October is devoted mainly to an extensive and fully illustrated paper by W. Beutenmüller on 'The Insect-Galls of the Vicinity of New York City.' It also contains many notes relating to the progress of the museum in adding to or installing its collections. The number contains the index to the volume for 1904.

The Museums Journal of Great Britain has articles on 'A Simple Method of Drilling Glass,' 'The Museum Conference at Warrington,' 'The Hankfield Museum, Halifax,' and many notes from various museums. There is an instalment of the museum's directory of Great Britain which brings the matter down to Manchester.

Bird Lore for November–December contains articles on 'How to Study a Bird,' by Ernest Thompson Seton; 'Some Familiar Florida Birds,' by F. W. Roe; 'Bird Life of a Swiss City,' by Wendell Prime; and 'Young Flamingos,' by Frank M. Chapman. There is the seventh paper on 'The Migration of Warblers,' by W. W. Cooke; 'Bird Lore's Christmas Census' and Notes, Reviews, Editorials and the very full Audubon Department.

SOCIETIES AND ACADEMIES.

THE CONVOCATION WEEK MEETINGS OF SCIENTIFIC SOCIETIES.

The American Association for the Advancement of Science, the American Society of Naturalists and the following societies will meet at Philadelphia, Pa., during the week beginning December 24, 1904:

The American Association for the Advancement of Science.—The week beginning on December 27, President, Professor W. G. Farlow; permanent secretary, Dr. L. O. Howard, Cosmos Club, Washington, D. C.; general secretary, President Charles S. Howe, Case School, Cleveland, Ohio; secretary of the council, Professor Clarence A. Waldo, Purdue University, Lafayette, Ind.

Local Executive Committee.—President, Provost Charles C. Harrison; vice-president, Professor Edgar F. Smith; secretary, Dr. Philip P. Calvert; treasurer, Dr. Samuel G. Dixon; chairman of the executive committee, Provost Charles C. Harrison; of the committee on reception and entertainment, Mrs. Charles C. Harrison; of the committee on hotels and boarding houses, Professor Amos P. Brown; of the committee on meeting places and

equipment, Professor Edwin G. Conklin; of the committee on press and printing, Mr. George E. Nitzsche; of the committee on transportation, Mr. Walter Wood; of the committee on finance, Mr. S. F. Houston.

Section A, Mathematics and Astronomy.—Vice-president, Professor Alexander Ziwet, University of Michigan; Secretary, Professor L. G. Weld, University of Iowa, Iowa City, Iowa.

Section B, Physics.—Vice-president, Professor Wm. F. Magie, Princeton University; Secretary, Professor Dayton C. Miller, Case School of Applied Science, Cleveland, Ohio.

Section C, Chemistry.—Vice-president, Professor Leonard P. Kinnicutt, Polytechnic Institute, Worcester, Mass.; secretary, Professor Charles L. Parsons, New Hampshire College of Agriculture, Durham, N. H.

Section D, Mechanical Science and Engineering.—Vice-president, Professor David S. Jacobus, Stevens Institute, Hoboken, N. J.; secretary, Professor Wm. T. Magruder, Ohio State University, Columbus, Ohio.

Section E, Geology and Geography.—Vice-president, Professor Eugene A. Smith, University of Alabama; secretary, Dr. Edmund O. Hovey, American Museum of Natural History, New York, N. Y.

Section F, Zoology.—Vice-president, Dr. C. Hart Merriam, U. S. Dept. of Agriculture; secretary, Professor C. Judson Herrick, Denison University, Granville, Ohio.

Section G, Botany.—Vice-president, Professor B. L. Robinson, Harvard University; Secretary, Professor F. E. Lloyd, Teachers College, Columbia University, New York, N. Y.

Section H, Anthropology.—Vice-president, Dr. Walter Hough, U. S. National Museum; secretary, George H. Pepper, American Museum of Natural History.

Section I, Social and Economic Science.—Vice-president, Martin A. Knapp, U. S. Interstate Commerce Commission, Washington; Secretary, Dr. J. F. Crowell, Bureau of Statistics, Washington, D. C.

Section K, Physiology and Experimental Medicine.—Vice-president, Professor H. P. Bowditch, Harvard University.

The American Society of Naturalists.—December 27, 28. President, Professor E. L. Mark, Harvard University; secretary, Dr. Chas. B. Davenport, Station for Experimental Evolution, Cold Spring Harbor, Long Island, N. Y.

The Astronomical and Astrophysical Society of America.—December 28, 29. President, Professor Simon Newcomb; secretary, Professor Geo. C. Comstock, Washburn Observatory, Madison, Wis.

The American Physical Society.—December 30. President, Professor Arthur G. Webster; secretary, Professor Ernest Merritt, Cornell University, Ithaca, N. Y.

The American Chemical Society.—December 28–31. President, Professor Arthur A. Noyes, Massachusetts Institute of Technology; Secretary, Professor William A. Noyes, the Bureau of Standards, Washington, D. C.

The Geological Society of America.—December 29–31. President, Professor J. C. Branner, Stanford University; secretary, Professor Herman L. Fairchild, Rochester, N. Y.

The Botanical Society of America.—December 27–31. President, F. V. Coville; secretary, Dr. D. T. MacDougal, N. Y. Botanical Garden, Bronx Park, New York City.

The Society for Plant Morphology and Physiology.—December 28, 29, 30. President, Dr. G. T. Moore, Department of Agriculture, Washington; secretary, Professor W. F. Ganong, Smith College, Northampton, Mass.

The Botanical Club of the Association.

The Fern Chapter.

Sullivant Moss Chapter.

Wild Flower Preservation Society of America.

The Society for Horticultural Science.—December 27. President, Professor L. H. Bailey, Cornell University; secretary, S. A. Beach, Geneva, N. Y.

The Society for the Promotion of Agricultural Science.—December 26. Secretary, Professor F. M. Webster, University of Illinois, Urbana, Ill.

The Association of Plant and Animal Breeders.

The Association of Economic Entomologists.—President, Professor A. L. Quaintance, Washington, D. C.; secretary, Professor H. E. Summers, Ames, Iowa.

The Entomological Club of the Association.

The American Society of Zoologists (Eastern Branch).—December 27, 28. President, Professor E. A. Andrews, Johns Hopkins University; secretary, Professor Gilman A. Drew, University of Maine.

The American Society of Vertebrate Paleontologists.—December 28–30. President, Professor H. F. Osborn, Columbia University; secretary, Dr. O. P. Hay, American Museum of Natural History, New York City.

The Society of American Bacteriologists.—President, Professor F. G. Novy, University of Michigan; secretary, Professor F. P. Gorham, Brown University, Providence, R. I.

The American Physiological Society.—December

27, 28. President, Professor R. H. Chittenden, Yale University; secretary, Professor Lafayette B. Mendel, New Haven.

The Association of American Anatomists. December 26, 27, 28. President, Professor Charles S. Minot, Harvard Medical School; secretary, Professor G. Carl Huber, 333 East Ann St., Ann Arbor, Mich.

American Folk-Lore Society.

The American Anthropological Association.—December 27–Jan. 2. President, Dr. W J McGee, Washington; secretary, Dr. Geo. Grant MacCurdy, Yale University, New Haven, Conn.

The American Psychological Association.—December 28, 29. President, Professor William James, Harvard University; secretary, Professor Livingston Farrand, Columbia University, New York City.

The American Philosophical Association.—December 28, 29, 30. President, Professor George T. Ladd, Yale University; secretary, Professor H. N. Gardiner, Northampton, Mass.

The Sigma Xi Honorary Scientific Society.—President, Professor S. W. Williston, University of Chicago; secretary, Professor Edwin S. Crawley, University of Pennsylvania, Philadelphia, Pa.

THE BIOLOGICAL SOCIETY OF WASHINGTON.

The 391st regular meeting was held Saturday evening, November 19, 1904. In response to the call for brief notes, B. W. Evermann spoke of the abundance of waterfowl at Lake Maxinkuckee, Ind., on or about November 5, 1904. At that time there were estimated to be on the lake 10,000 coots, 2,500 ducks, including at least 500 canvas backs, 100 to 125 brant and 36 swans.

Dr. E. L. Greene presented a paper entitled 'A Chapter in the Evolution of Generic Nomenclature.' A retrospect over the rise, gradual prevalence and subsequent exclusion from nomenclature of generic names in botany formed by the mere adding of *oides* to the name of an already established genus. For example, the sixteenth century name for the genus *Carex* was *Cyperoides,* for *Festuca* it was *Bromoides,* for *Phaca, Astragaloides;* and in the course of the half-century preceding the year 1753 there were taxonomists of excellent standing, like Vaillant, Micheli and Scheuchzer, with whom it seemed to be the rule to construct new generic names in this cheap and easy fashion. There were something like one hundred and fifty or, perhaps, nearer two hundred of these *oides* names prevalent in about the year 1740. At this juncture Linnæus, as if feeling that this kind of name-making was already carried *ad nauseum,* proposed in the 'Philosophia Botanica' that all *oides* names be rejected from plant nomenclature; and in both his 'Genera' and 'Species' he boldly carried the proposal into effect. In this he must have had the full sympathy of almost the whole body of the botanists of that time, for they followed his lead promptly. Only Adanson, whose feeling for Linnæus was bitter, had the hardihood to restore a few of the discredited *oides* names. From 1753 to 1893, not one of the great makers of modern botany adopted an *oides* name.

Unfortunately, by a too ready following of Dr. Otto Kuntze, a few *oides* names, after their long banishment from all botany, have reappeared in American books. In such books *Nicandra* has given place to the earlier *Physaloides, Nemopanthes* to *Ilicoides, Corydalis* to *Capnoides,* and *Luzula* to *Juncoides.* And so there has begun what seems to be the inauguration of another epoch of this kind of degeneracy in nomenclature. For if *Juncoides* be permitted to stand in place of *Luzula,* other such onomastic deformities will be justified, and what is worse, novices will be found who will take pride in coining new generic names on that very model long ago discredited, and these names will have to be admitted as valid.

In a communication entitled 'A New Seed-bearing Fern,' David White laid before the society specimens and drawings of the sterile fronds and seeds of a new species of *Aneimites, A. fertilis,* from the lower Pottsville of southern West Virginia. The genus *Aneimites,* better known under the name *Adiantites,* constitutes the third group of filicoid plants to reveal a seed fructification. It is, therefore, to be referred to the 'Cycadofilices' (Pteridospermeæ), though on account of its typically filicate fronds its fern nature, in the absence of all knowledge respecting its fructification, has hitherto been unquestioned.

Wilfred H. Osgood,
Secretary.

AMERICAN CHEMICAL SOCIETY.
NEW YORK SECTION.

A REGULAR meeting of the section was held at the Chemists' Club, Friday evening, November 11.

Dr. Hugo Schweitzer introduced the following resolution, which was seconded by Mr. T. J. Parker:

> The speedy introduction of the metric system of weights and measures by appropriate laws is most desirable in order to rid our country of a most illogical and cumbersome system, which is one of the greatest obstacles to the development of our export trade, and in order to place our country on a parity with other great manufacturing countries.

After some discussion by Messrs. Peckham, Schweitzer and Parker, the resolution was adopted without dissenting vote.

The regular program was then taken up and the following papers read:

The Determination of Ammonia in Milk. H. C. SHERMAN and W. N. BERG.

This paper summarized the work thus far accomplished, the preliminary results of which were presented at the Providence meeting in June, 1904.

The Boussingault-Shaffer method (slightly modified) in which the sample is mixed with methyl alcohol, made alkaline with sodium carbonate and distilled under diminished pressure, had been found to be sufficiently delicate for the determination of ammonia in milk where the amount is often less than 0.001 per cent.

With an alkalinity corresponding to 0.5 per cent. sodium carbonate in the mixture of milk and alcohol, a cleavage of ammonia from organic matter appeared to be brought about by this process in the case of stale, but not fresh milk.

If the boiling mixture be saturated with sodium chloride, to reduce the hydrolytic dissociation of the alkali, this cleavage is largely, if not entirely, prevented. The results thus obtained are believed to represent very closely the true amount of preformed ammonia in the samples, while the amount of 'cleavage ammonia' yielded by a sample, when submitted to this process without the addition of salt, appears to be of value as an indication of the condition of the proteid matter.

Methods in which the milk is made alkaline and boiled under atmospheric pressure to expel the ammonia, gave high results even when the dilution of the alkali was very great. Attempts to correct the amount of ammonia given off in a second period of distillation were not satisfactory.

Preliminary experiments indicate that while milk tends to develop both acidity and ammonia on standing, there is no necessary connection between the two, since either may increase rapidly while the other increases slowly, if at all.

Report of Committee on Methods for the Determination of Zinc. G. C. STONE. *Uniformity of Technical Zinc Analyses.*

Early in 1903 the committee sent out three samples of zinc ore: 'A' a pure blende from Joplin containing about 2 per cent. each of iron and lead and 0.3 per cent. of cadmium; 'B' an ore from New Jersey containing considerable amounts of manganese and iron; 'C' a Colorado blende containing about 14 per cent. of lead and 7 per cent. of copper. These were analyzed by forty-two chemists who reported from 56.97 to 59.79 zinc and 2.10 to 3.26 iron in 'A'; from 12.20 to 39.22 zinc and 18.04 to 21.92 iron in 'B'; and from 28.90 to 38.86 zinc and 8.40 to 15.00 iron in 'C.' As the results were so disgraceful the committee have classified the methods in eight groups and discussed them and the results at considerable length. They find that the discrepancies are largely due to the attempt to apply to ores to which they are totally unsuited quick methods that were devised for special cases. For the bad work the committee think the poor instruction given in many of the schools is largely to blame. The only method that gave uniformly good results is that described by Waring (*Jour. Amer. Chem. Soc.*, January, 1904, p. 9); the only reason that they do not recommend its general adoption is that it has only been tried by a very small number of analysts. In conclusion they ask for volunteers to test some of the methods more fully.

In discussing the foregoing paper Professor E. H. Miller pointed out the results obtained at Columbia University on the three samples sent out by the committee, which showed a very good agreement with the standard adopted by the committee, considering that they were done, as requested by the committee, by the method usually employed and without special precautions. Method 8, description of which appeared in the *Journal of the American Chemical Society,* for December, 1903, was discussed at considerable length by Professor Miller. The more important points brought out were: (1) That Waring's statement that the silica should be removed before the precipitation of ferric hydroxide was entirely correct, and the failure to observe this precaution might give rise to an error of 1 per cent. as shown by experiments made by Mr. Falk. (2) That Waring's method for the precipitation of zinc sulphide under pressure is excellent. (3) That the statement that zinc and cadmium can not be separated by hydrogen sulphide is absolutely wrong. The separation can be effected in a hot solution (90° C.) containing one cubic centimeter of concentrated HCl in each fifty cubic centimeters of solution, exactly the conditions given by Fresenius on page 457 of the Nacher's translation. That these conditions must be carefully maintained was shown by a series of experiments made by Mr. Falk to test the separation. (4) That a three per cent. uranium nitrate solution is preferable to uranium acetate as an indicator. (5) That the precipitation of zinc as zinc ammonium phosphate is excellent and was confirmed by the experience of fifteen years in the laboratory. (6) That the separation of zinc and manganese by oxidizing agents requires careful investigation and is not free from error as carried out at present.

The remainder of the evening was devoted to 'A Discussion of Radioactivity,' by Messrs. Wm. Hallock, Hugo Lieber, Jerome Alexander, G. B. Pegram and Charles Baskerville.

F. H. Pough,
Secretary.

DISCUSSION AND CORRESPONDENCE.

CONVOCATION WEEK.

To the Editor of Science: The writer has been interested in the series of letters in Science relating to the affairs of the American Association for the Advancement of Science, and he has an idea that the editor is encouraging these communications as a study in psychology. It is evident that the opinions and suggestions are so very diverse that no plan will be satisfactory to the whole membership. In response to the request for a contribution to the discussion the writer will briefly speak of the general outlook and policy of the association, which is the vital matter that involves all the minor questions of meetings and conduct.

During its earlier life, say from 1840 to 1880, the 'advancement' of science through popular summer meetings was doubtless a useful and successful function of the association; but now the diffusion of scientific education and the great volume of scientific literature have supplanted the association for this work of popularization. For ten years the country at large has paid practically no attention to its meetings. The large cities in which the meetings are held are equally indifferent. The leading citizens will allow their names to be used on local committee lists and will subscribe funds to bring visitors to the town, but not one in ten, probably not one in fifty, go to any session or pay the slightest attention to the meeting, although a few may join the society for a time, and thus give financial aid. The advancement of science through publicity of meetings has become an inconsequential element of the association's work. The reasons for this state of affairs are more or less obvious and are not the fault of the society.

The publication of scientific literature was never an important part of the work of the association, and it has become practically nothing, except as indirectly aided through the columns of Science.

While the sections of the society are still active it must be admitted that in the case of several sections this is only through the