SCIENTIFIC JOURNALS.

The Astrophysical Journal for November opens with an article on the probable range of temperature on the moon by Dr. Frank W. Very, in which the subject is taken up from its experimental side. There are short articles by Dr. J. Hartman on an interpolation formula for the prismatic spectrum; by Professor P. Tacchini on solar observations made at the Observatory of the Roman College, and by Professor E. E. Barnard on the great Nebula of Andromeda. More than half of the number is devoted to abstracts of papers read at the second Conference of Astronomers and Astrophysicists.

The November number of the *American Geologist* contains the following articles:

Geographical Phenomena resulting from the Surface Tension of Water: George E. Ladd.

The Occurrence of Copper and Lead in the San Andreas and Caballo Mountains: C. L. Herrick.

Giants' Kettles near Christiania and in Lucerne: Warren Upham.

Origin of the Archean Igneous Rocks: N. H. Winchell.

Glacial Theories—Cosmical and Terrestrial: E. W. Claypole.

Intraformational Conglomerates in the Galena Series: F. W. Sardeson.

Editorial Comment—Drygalski's Glacial Studies in Greenland.

We note with much regret the discontinuation of *Science Progress*, after the publication of seven volumes, first as a monthly and during the past two years as a quarterly review of current scientific investigation. It has been conducted by Sir Henry Burdett and edited by J. Bretland Farmer, with the cooperation of a strong editorial committee, the contributions always maintaining a high standard of excellence. The notice of discontinuation does not hesitate to emphasize the merits of the journal, remarking as it does: "*Science Progress* is admittedly the best scientific serial publication which has been issued from the English press, and it is disappointing to find that scientists generally, whilst expressing appreciation of the publication, have failed to support it by becoming subscribers. For nearly five years, relying upon its excellence, the publishers have continued the publication. The result shows, however, that at the present time scientists will not subscribe in sufficient numbers to enable a publication of the high type of *Science Progress* to be financially successful." The real difficulty has, however, been that all the sciences have been included in the scope of a single journal, and each science has often been treated in a manner too technical to be interesting or even intelligible to those who are not special students of the science. But it is unfortunate that public spirit and enlightened self-interest are not sufficiently developed to support a journal the discontinuation of which is a serious loss to science.

SOCIETIES AND ACADEMIES.

NATIONAL ACADEMY OF SCIENCES.

The Academy held its autumn meeting for the reading of scientific papers on November 15th. Twenty-seven members were present. The following papers were read:

I. Anatomy of *Nautilus pompilius*, W. K. Brooks and L. E. Griffin. (Not read.)

II. On solid solutions of colloidal glass, C. Barus.

III. Three phases of vertebrate development, Charles S. Minot.

IV. Notes on mammalian embryology, Charles S. Minot.

V. The influence of alcohol and alcoholic fluids on digestion, R. H. Chittenden.

VI. On the conditions modifying the excretion of kynuremic acid, Lafayette B. Mendel. (By invitation.)

VII. Perturbations of Minerva, with a preliminary determination of its orbit, W. S. Eichelberger, presented by Simon Newcomb. (Read by title.)

VIII. On a series of native skulls from New Guinea, O. C. Marsh.

IX. On the reputed prefrontal bones in recent mammals, O. C. Marsh.

X. Sodium tungstate as a retainer for boric acid, F. A. Gooch and Louis Cleveland Jones.

XI. The ammonium-magnesium phosphate of analysis, F. A. Gooch and Martha Austin.

XII. The chemical composition of Tourmaline, S. L. Penfield. (By Invitation.)

XIII. On the nature and origin of the marine fauna of Bermuda, A. E. Verrill.

XIV. On the ability possessed by certain animals to recover after complete freezing, A. E. Verrill.

XV. Further researches in the two isomeric chlorides of orthosulphobenzoic acid: A study in tautomerism, Ira Remsen.

XVI. On the brecciated fossil marble from Kishiu, Japan, O. C. MARSH.

XVII. On some rare antiquities from Mexico, O. C. MARSH.

XVIII. Report upon work in spectrum analysis carried on by help of the Bache Fund, H. A. ROWLAND.

XIX. Observations on the Zeeman effect with the echelonspectroscope, A. A. MICHELSON.

NEW YORK SECTION OF THE AMERICAN CHEMICAL SOCIETY.

THE November meeting of the New York Section of the American Chemical Society was held on Friday evening, the 11th, at the College of the City of New York, and was of unusual interest.

The first paper was descriptive of a 'New Apparatus for the Determination of Volume,' by Dr. C. F. McKenna. The instrument is designed to obviate the defects in other forms, such as those of Schumann or Candlot in respect to accuracy of readings, leakage of ground-glass joints, etc. In the apparatus proposed the powdered solid is introduced through one tube, and the reading is made on another, so slender that tenths of a cubic centimeter can be easily read and hundredths quite accurately estimated. This avoids the difficulty in reading which frequently occurs where the powdered substance is introduced through the same tube on which the readings are made.

Professor Venable, of the University of North Carolina, reviewed the 'Present Status of the Periodic Law,' exhibiting tables and calling attention to the imperfect knowledge of the elements as the cause of much, if not all, the difficulty in arranging the elements in satisfactory groups under Mendelejeff's periodic or natural system.

Mention was made of the peculiar position of hydrogen, and the light which may be thrown on it if the various new gases recently discovered shall fall into a group of which hydrogen is at present the only known member. The question as to the elemental character of the accepted elements was also touched upon in connection with the seven concordant groups. Speaking of the want of accuracy in many of the determinations of atomic weight, Professor Venable thought it quite possible that the fractional parts of these values might be of great importance, which would, of course, emphasize the need for accuracy in their determination.

Mr. R. H. Atwater read a paper on 'Chemical Glassware,' in which he took up the questions relating to the ordinary forms of glassware used in the chemical laboratory, referring to the proper form of necks, lips and stoppers of reagent bottles, engraved, etched, molded and sandblast labels, the best method of protecting the lips and mouths from dust, etc.

Referring to the nature and properties of glass, he said that glass is not usually a true salt, but a compound of true crystalline salts with an indefinite proportion of uncrystalline glass or flux. Soda glass is hygrosapic, therefore lead glass is much more satisfactory for electrical non-conductors.

In at least one factory in this country polarized light is used for testing the character of the annealing.

In conclusion, Mr. Atwater said that the American market for chemical glassware is the best in the world, and would reward the home manufacturers for making ware of as good a quality as that made abroad.

In the discussion of the paper Dr. Squibb recommended reagent bottles with loose caps over the stopper to keep away dust, and advised inverting bottles with 'set stoppers' in water over night.

A communication from the General Secretary was then read stating that the invitation from the Section to the Society at large to hold the winter meeting in New York had been accepted by the Council, and the date fixed for December 27th.

DURAND WOODMAN,
Secretary.

CHEMICAL SOCIETY OF WASHINGTON.

THE regular monthly meeting was held on October 13, 1898.

The first paper of the evening was read by Dr. H. W. Wiley, and was entitled 'Preliminary Report on the Vienna Congress of Applied Chemistry.' Dr. Wiley gave an interesting account of the proceedings of the Third International Congress of Applied Chemistry. Some of the more important papers which were pre-

sented were mentioned. The two most notable papers were those on the synthesis of albumen, by Lilienfeld, and on fermentation without cells, by Buchner. The entertainments afforded to visiting members were also described. A full report will soon be published in the *Journal of the American Chemical Society.*

The second paper of the evening was read by Dr. H. C. Bolton, and was entitled 'Chemical Bibliography.' The author described, in an interesting manner, the methods pursued by him in the collection of bibliographic references and related some of his experiences in Europe.

Mr. Tassin called the attention of the Society to a new solution for determining high specific gravities, which consists of a solution of acetylene tetra-bromide in benzol or toluol. It has the advantage of being stable, cheap and easily made, has a high refractive index and does not decompose with metallic oxides or metals.

WILLIAM H. KRUG,
Secretary.

HARVARD UNIVERSITY: STUDENTS' GEOLOGICAL CLUB, OCTOBER 25, 1898.

MR. J. M. BOUTWELL gave a paper on 'Nipissing Pass, An Ancient Outlet of the Great Lakes.' After briefly reviewing the post-glacial history of the great lakes, he described the results of a day's study of the region between Trout Lake and Nipissing Lake. Along the southern slope of the heights to the north, and overlooking the low, swampy divide between these lakes, are well developed and only slightly dissected bars, spits, terraces, and boulder-strewn beaches. These correlate with similar features, observed by Taylor, Gilbert, Spencer and others, about the upper Great Lakes, and mark the position, character, and recency of one of their post-glacial outlets.

Geological Conference, November 1, 1898. In a communication entitled 'Minerals of the Ural Mountains,' Dr. Charles Palache described the localities, occurrences, and important features of the ores, gems and rare minerals of that region. Native gold occurs in paying quantities in quartz veins which traverse the granite, syenite, metamorphic rocks and sediments older than Devonian, and also in placers, which are mainly in streams that drain eastward. Platinum is found locally in association with serpentine and chrome-iron. Chalcopyrite occurs in limited areas with an altered surface zone of malacite. Along the axis of the mountains are valuable deposits of magnetite that are associated with porphyry dikes. Siderite, with its alteration products, and manganese oxide are found as beds in the Devonian. Beryl, topaz and tourmaline occur only in pegmatites, which cut the granite, gneiss, and metamorphic rocks of the central Urals. Both are found in large, perfect crystals of the blue variety, and are used as gems. In addition to the valuable specimens of epidote, garnet, vesuvianite, perofskite, ilmenite and massive rhodenite, which occur at the contact of basic eruptives with Paleozoic limestone, this region affords several minerals that are unknown elsewhere.

Mr. J. B. Woodworth described a recent visit to 'The Glaciers of Chamonix, France.' Two phenomena, found repeatedly, were a 'shingling' arrangement of boulders in the lower, lateral moraines, due to a shoving method of deposition by the ice; and a manifest overthrusting of the upper layers of the ice, in the manner observed by Chamberlin in certain Greenland glaciers. At a point in the Glacier d'Argentière a sharp, overthrust fault showed characteristic, drag features. Current photographs fail to do justice to the height of the Alpine moraines.

J. M. BOUTWELL,
Recording Secretary.

NEW BOOKS.

Elementary Text-book of Botany. SYDNEY H. VINES. London, Swan, Sonnenschein & Co., Ltd.; New York, The Macmillan Company. 1898. Pp. xv+611. $2.25.

The Metric System of Weights and Measures Used by the Hartford Steam Boiler-Inspection Company, Hartford, Conn. 1898. Pp. 196. $1.25.

Leçons de chimie physique. J. H. VAN'T HOFF. Translated from the German by M. CORVISY. Paris, A. Hermann. 1898. Pp. 263. 10 fr.

The Living Organism, an Introduction to the Problems of Biology. ALFRED EARL. New York and London, The Macmillan Company. 1898. Pp. xiii+271. $1.75.