It is unusually complete and thorough in bibliographic detail. No one interested in the development of stereochemistry can afford to be unfamiliar with it, and to all scientific men it must be of interest as an evidence of the extraordinary fruitfulness during the last ten years of an imaginative hypothesis.

T. W. R.

## SCIENTIFIC JOURNALS AND ARTICLES.

THE last number of the *Journal of Infectious Diseases* contains the following articles:

WARD J. MACNEAL: 'The Life History of *Trypanosoma Lewisi* and *Trypanosoma Brucei*.' (With Plates XI–XVII.)

FREDERICK A. BALDWIN: 'Pathological Anatomy of Experimental Nagana.'

WILDER TILISTON: 'The Blood in Measles.'

H. T. RICKETTS: 'The Reduction of Methylene Blue by Nervous Tissue.'

WILLIAM DODGE FROST: 'The Antagonism Exhibited by Certain Saprophytic Bacteria against the *Bacillus Typhosus* Gaffky.' (With Plate XVIII., Figs. 1, 2.)

E. O. JORDAN, H. L. RUSSELL, F. R. ZEIT: 'The Longevity of the Typhoid Bacillus in Water.'

ALICE HAMILTON: 'The Question of Virulence among the So-called Pseudodiphtheria Bacilli.'

RUFUS I. COLE: 'Experimental Streptococcus Arthritis in Relation to the Etiology of Acute Articular Rheumatism.'

THE contents of *The American Journal of Anatomy* for December, containing 13 plates and 66 text figures, are as follows: Mall, 'On the Development of the Blood-vessels of the Brain in the Human Embryo'; Dwight, 'The Size of the Articular Surfaces of the Long Bones as Characteristic of Sex; an Anthropological Study'; McMurrich, 'The Phylogeny of the Crural Flexors'; Flint, 'The Framework of the Glandula Parathyroidea'; Streeter, 'The Development of the Cranial and Spinal Nerves in the Occipital Region of the Human Embryo'; Price, 'A Further Study of the Development of the Excretory Organs in *Bdellostoma Stouti*.'

BEGINNING with the number for January 1905, Professor Richard Elwood Dodge of the Teachers College, Columbia University, New York City, assumes full responsibility for the editing and publishing of the *Journal of Geography*. The *Journal* will continue in its present form and character and will deal with geographic education in elementary, secondary and normal schools. All communications should be addressed to the editor at the address given above.

## SOCIETIES AND ACADEMIES.

### THE CHEMICAL SOCIETY OF WASHINGTON.

THE 153d regular meeting was called to order by the president at 8:10 o'clock, Thursday evening, December 8, 1904. There were forty persons in attendance. The program for the evening consisted of the following three papers:

'Some American Contributions to Technical Chemistry.' Dr. Marcus Benjamin. In this paper Doctor Benjamin presented a summary of the principal advances made in chemistry applied to the arts in this country from the coming of Priestley in 1774 to the present time, beginning with the description of Count Rumford's work and including the oxyhydrogen blow-pipe by Robert Hare, the vulcanization of sulphur by Charles Goodyear, the processes invented by Castner as well as many others.

This paper has adequate footnotes, giving references to biographical sketches of those who had died, and exact reference to papers discussing the invention while the inventor was still living.

The second paper, entitled 'Association of Boron and Nitrogen in Nature,' was presented by Professor F. W. Clarke. Numerous instances were cited to show that wherever boron occurs in volcanic water, compounds of ammonium are also found. The most plausible hypothesis to account for this occurrence is that of Warington, which is based upon the assumption that boron nitrite (BN) exists at great depths in the earth and is acted upon by volcanic waters. In southern California and in Chili the borates occur associated with sodium nitrate, and it was suggested that these deposits, which are lake deposits, may have derived their boron and nitrogen from hot springs which are common in those regions. The borates at Stassfurt are undoubt-

edly derived from sea water and are not associated with nitrogen.

The last paper was presented by Dr. Allerton S. Cushman, who discussed the 'Action of Water on Rock Powders,' in the light of investigations which have been carried on in the division of tests of the U. S. Department of Agriculture. It has been found that wet grinding increases the binding power. This effect seems to be accompanied with direct decomposition of certain constituents of the rock magma which results in forming colloidal films on the particles. The word 'pectoid' is suggested to describe this condition. Most rock powders that have been ground wet show an alkaline reaction to indicators, but if the water is filtered out the reaction is not usually shown. The analogy betwcen the reactions that take place when Portland cement, powdered glass and rock powders are acted on by water was pointed out. The paper was illustrated with the lantern. Microscopic slides were shown with polarized light and indicated that the pectoid films could actually be seen on the surfaces of the wet ground particles.

A. Seidell,
*Secretary.*

THE PHILOSOPHICAL SOCIETY OF WASHINGTON.

The five hundred and ninety-first regular meeting was held November 26, 1904.

The first paper was by Mr. Edgar Buckingham of the department of agriculture on 'The Aeration of Soils,' describing recent experiments on various kinds of soils to find the rates of diffusion and transpiration through them, and the density and composition of the gas normally in the soil. Among other things it is found that the proportion of $CO_2$ increases downwards while the oxygen decreases, the nitrogen remaining nearly constant at 79 per cent.

Mr. W. P. White, of the geophysical laboratory, then spoke (by invitation) on 'Methods of Measuring the Intensity and Damping of Hertzian Waves.'

A null method was used, which eliminated the effect of variations in the spark to such an extent that determinations could be made to agree within one fifth per cent. Fine platinum wire bolometers in vacuo were used, which are more sensitive than thermocouples. When the wire is very fine the resistance and sensitiveness are such as to make aperiodic receivers practicable. The problem of getting interference curves in free air seem thus to be solved. This also renders possible a new method of measuring damping, in which one of two interfering wave trains has its intensity varied by a polarizing mirror. Practically exact interference between the overlapping portions of the two trains is thus secured, and by varying the length of the unquenched portion the intensity of the separate oscillations can be measured, one by one. Like all interference work with damped trains, this method requires pure waves.

Both papers led to considerable discussion.

Charles K. Wead,
*Secretary.*

THE TORREY BOTANICAL CLUB.

The meeting was called to order at the usual hour November 30, at the New York Botanical Garden, Professor L. M. Underwood in the chair, twenty members being present. The following were elected to membership: Miss Mabel Denton, of Paterson, N. J.; C. B. Robinson, of New York, and Dr. G. H. Shull, of Cold Spring Harbor, N. Y.

The first paper on the scientific program was entitled 'Recent Contributions to our Knowledge of Paleozoic Seed Plants,' and was by Edward W. Berry. It consisted of a brief discussion of recent contributions to our knowledge of those Paleozoic pteridophytes which had formed, or approximated, the seed habit, the work of Professors Scott, Oliver, Kidston, Grand, Eury, Zeiller and Renault. Especial attention was given to the work of Scott and Oliver and to what amounted to a demonstration by them of seed bearing in the cycadofilicean genus *Lyginodendron* (*Sphenopteris*).

C. B. Robinson presented 'Remarks on the Flora of Northern Cape Breton.' To the north of the Bras d'Or Lakes the island of Cape Breton consists of hills 800 to 1,500 feet in height, bordered by lowland of no great

width along much of both coasts and in the numerous river valleys. The interior of the island is a plateau with large areas covered by barrens and sphagnum bogs. In passing eastward from New Brunswick to Nova Scotia the flora becomes distinctly poorer, many species dropping out and few new ones appearing. Cape Breton with a smaller area than the rest of the province and forming its northeastern limit shows a further decrease, although a comparatively large number of forms are known from the island that do not occur on the mainland, while others grow more luxuriantly there, even at the extreme north. Among the former may be mentioned *Samolus floribundus* H.B.K., *Peramium Menziesii* (Lindl.) Morong, *Parnassia parviflora* DC. and *Galium kamtschaticum* Steller; among the latter *Cypripedium reginæ* Walt., *Caltha palustris* L., *Anemone canadensis* L., *Blephariglottis blephariglottis* (Willd.) Rydb., *Vagnera stellata* (L.) Morong and *Rubus Chamæmorus* L. The dwarf mistletoe, *Razoumofskya pusilla* (Peck) Kuntze, apparently of wide distribution in northern Nova Scotia, extends at least fifty miles up the west coast of the island. The ferns are also noteworthy. All the common and a majority of the rarer species of the mainland grow at least as well in Cape Breton, together with two additional species, *Dryopteris Felix-mas* (L.) Schott and *Polystichum lonchitis* (L.) Roth., the former widely distributed, but the latter known only from two widely separated localities.

The third paper, by Le Roy Abrams, was on 'Notes on the Flora of Southern California.' After speaking briefly of the topography and general climatic conditions of southern California Mr. Abrams called attention to the extreme variation in the flora and exhibited a series of specimens illustrating the coastal and mountain floras. Among these specimens were three of his recently described new species: *Cheiranthus suffrutescens, Heuchera elegans* and *Godetia Dudleyana.*

Other especially interesting plants exhibited were *Romneya trichocalyx* Eastw., *Quercus Engelmanni* Greene and *Calochortus Catalinæ* Wats.

EDWARD W. BERRY,
*Secretary.*

## *DISCUSSION AND CORRESPONDENCE.*

### THE NOMENCLATURE OF PHYSIOGRAPHY.

TO THE EDITOR OF SCIENCE: I regret very much that the technical nomenclature of the comparatively new science of physiographic geology does not suit Dr. Eastman, of Harvard.

It is essential to ultimately possess a descriptive name for every topographic form. This is a difficult task, and one, in which a field worker, like myself, who seldom has the leisure or opportunity to devote to closet study, finds most difficult, but we do the best we can, and some people manage to understand us.

If I am not mistaken, the science of paleontology, which is indebted to Professor Eastman for his editorial and linguistic assistance, has been floundering for over a century in the throes of an obscure and specialized nomenclature which may be as unintelligible to the physical geographer as the verbiage of the latter seems to Professor Eastman.

It is my opinion, founded on some experience, that language is only an instrument for recording ideas, and that so long as the work is accomplished, the kind or character of the tool is irrelevant. No one appreciates more than I the importance of simple English to good literary form; but I think Professor Eastman is wasting words, SCIENCE'S useful space, and myself and most valuable time, in discussing an elementary lack of literary style, weakness inherent in most men except a few rare literary geniuses, whom, so far as I am aware, have not been noted for their acumen in scientific research, or even in scientific statement.

ROBT. T. HILL.

### A PECULIAR HABIT OF THE BADGER.

ONLY now, in reviewing the classic work of Dr. Elliot Coues on 'Fur Bearing Animals,'* have I been brought face to face with his statement regarding a peculiar habit of the badger. Otherwise, the information here given would have been made public long ago.

On p. 288 of that volume he quotes Audu-

* U. S. Geol. Surv., Hayden. Misc. Pub., VIII., 1877.