trying upon the English Ivy which covers many of the older buildings in New Brunswick, New Jersey. The leaves are mostly brown, many of them dead, and have the appearance of having been scorched by fire. It may be that the plants will revive with warm weather, but these old vines, which have been the pride of the city, are just now anything but attractive.

SOCIETIES AND ACADEMIES.

BIOLOGICAL SOCIETY OF WASHINGTON.

AT the meeting of April 20 Dr. Frank Baker exhibited specimens and gave descriptions of two anomalous forms of human lumbar vertibræ hitherto undescribed.

Dr. Theobald Smith read a paper entitled 'An Infectious Entero-hepatitis of Turkeys, Caused by Protozoa.'

The first intimation of the existence of this hitherto unrecognized disease was given by some diseased organs sent by Mr. Samuel Cushman of the Rhode Island Experimeet Station in 1893. In 1894 the speaker had an opportunity of studying a number of cases in various stages of the disease.

This begins in the cæca and manifests itself by a more or less uniform thickening of the wall. When this has continued for some time an exudate is poured out from the mucous membrane, which coagulates firmly and occludes the tube itself more or less completely. The cause of the thickening of the cæcal wall is a protozoon from 6 to 10 μ in diameter, which multiplies very rapidly within the connective tissue interstices of the mucous and submucous tissue. The irritation produced by these bodies induces proliferation of the connective tissue cells. The thickening is further increased by cell infiltration, due to inflammatory processes which appear later on, and which may be due to the absorption of bacterial products from the denuded mucosa.

In almost every case the liver is secondarily and usually very severely involved by the transportation of these protozoa from the seat of the disease in cæca through the portal system. The liver becomes covered with round isolated and confluent patches of a yellowish or brownish color, which represent necrotic foci in the substance of the liver itself. Within these, in the earlier stages, large numbers of the same protozoa may be found.

The protozoon, as stated above, is a spherical or slightly oval body, of a homogeneous appearance and containing an exceedingly minute ring-like nucleus. It has shown none of the characters of sporozoa. Its rapid multiplication within the tissue spaces, where it may be seen either isolated or in groups of two, three, four or many individuals, as well as the absence of any intercellular stage, has induced the writer to place it, at least provisionally, in the genus Amœba, and, in consultation with Dr. Stiles, to denominate it *Amœba meleagridis*. A detailed account of this investigation is to appear in a forthcoming bulletin of the Bureau of Animal Industry.

Dr. G. Browne Goode read a paper on 'The Horizontal and Vertical Distribution of Deep Sea Fishes.' The paper had for its object to demonstrate that the accepted ideas in regard to the distribution of deep sea fishes, having been founded on incomplete data, are erroneous; and that, contrary to the commonly accepted opinion, no separation of deep sea fish life into horizontal strata is possible. On the other hand, the idea that the fish fauna of the depths of the sea is the same in all parts of the world is without foundation.

Through the application of a percentage method eleven well marked faunal regions were shown to exist, as well as two subregions. The regions proposed were as follows:

1. Boreal Atlantic.
2. Eastern Atlantic or Lusitanian, with a Mediterranean sub-region.

3. Northwestern Atlantic or Virginian, with a Caribbean-Mexican sub-region
4. Southwestern Atlantic or Brazilian.
5. Boreal Pacific or Aleutian.
6. Eastern Pacific or Galapagean.
7. Northwestern Pacific or Japanese.
8. Polynesian.
9. Zealandian.
10. Antarctic.
11. Indian.

M. B. Waite,
Recording Secretary.

BOSTON SOCIETY OF NATURAL HISTORY.

The annual meeting was held on Wednesday, May 1st.

A paper was read by Mr. J. L. Tilton *On the Geology of the Southwestern part of the Boston Basin.*

Reports of the officers were received and officers for 1895–6 were elected as follows:

President, William H. Niles.

Vice-Presidents, Nathaniel S. Shaler, William G. Farlow, Charles P. Bowditch.

Curator, Alpheus Hyatt.

Secretary, Samuel Henshaw.

Treasurer, Edward T. Bouvé.

Librarian, Samuel Henshaw.

Councillors for Three Years, Hermon C. Bumpus, Charles B. Davenport, William A. Jeffries, George G. Kennedy, Augustus Lowell, Miss Susannah Minns, Thomas A. Watson, Samuel Wells.

Samuel Henshaw,
Secretary.

SCIENTIFIC JOURNALS.

AMERICAN JOURNAL OF SCIENCE, MAY.

James Dwight Dana.

Color Relations of Atoms, Ions and Molecules: By M. C. Lea.

Further Notes on the Gold Ores of California: By H. W. Turner.

Some Relations between Temperature, Pressure and Latent Heat of Vaporization: By C. E. Linebarger.

Double Halides of Cæsium, Rubidium, Sodium and Lithium with Thallium: By J. H. Pratt.

Argon, Prout's Hypothesis, and the Periodic Law: By E. A. Hill.

Improved Rock Cutter and Trimmer: By E. Kidwell.

Relation of the plane of Jupiter's orbit to the mean-plane of four hundred and one minor planet orbits: By H. A. Newton.

Chemistry and Physics; Geology; Miscellaneous Scientific Intelligence; Obituary.

BULLETIN OF THE TORREY BOTANICAL CLUB, APRIL.

Notes on Some Florida Plants: Geo. V. Nash.

John H. Redfield: Wm. M. Canby.

A Fossil Marine Diatomaceous Deposit at St. Augustine, Florida: Charles S. Boyer.

New Species of Parastic Fungi: S. M. Tracy and F. S. Earle.

The Systematic Botany of North America; Botanical Notes; Proceedings of the Club; Index to Recent Literature Relating to American Botany.

AMERICAN JOURNAL OF CHEMISTRY, MAY.

On the Two Isomeric Chlorides of Orthosulphobenzoic Acid: Ira Remsen.

I. The Action of Aniline and of the Toluidines on Orthosulphobenzoic Acid and its Chloride: Ira Remsen and C. E. Coates, Jr.

II. Further Study of the Action of Aniline on the Chlorides of Orthosulphobenzoic Acid: Ira Remsen and E. P. Kohler.

III. Separation of the Two Chlorides of Orthosulphobenzoic Acid: Ira Remsen and A. P. Saunders.

The Sugar of the Agave Americana: W. E. Stone and D. Lotz.

The Law of Mass Action: J. E. Trevor.

Chromates of the Rare Earths: Chromates of Thorium: Chase Palmer.

On a New Method for the Separation of Copper and Cadmium in Qualitative Analysis: Allerton S. Cushman.

Reviews.