work dates from 1832 is calculated to mislead others, it seems desirable to call attention to the facts in the case.

The earliest American edition of the work, entitled 'The American Edition of the New Edinburgh Encyclopædia,' was published at Philadelphia by Edw. Parker and Jos. Delaplaine, Edw. Parker, and Jos. Parker (the firm changing twice apparently), in 18 volumes, each in two parts, making 36 volumes in all. Each has the full title printed on the outside cover, together with the date of publication, which ranges from 1812 to 1831.

This edition was probably printed directly from the Edinburgh one, as fast as the parts came out. Of this, however, I am not sure, as I have not the dates of the latter at hand.

After this publication was finished, extra copies, which were apparently struck off from the same type, as they are absolutely identical, were bound up in 18 volumes with a new title page: 'The Edinburgh Encyclopædia conducted by David Brewster, first American edition,' all the volumes bearing date of 1832.

The statement 'first American edition' probably misled Dr. Allen, though except for the title page and introduction, this edition seems to be identical with the real first American edition of 1812–1831. Both 'editions' are in the library of the Academy of Natural Sciences of Philadelphia. Witmer Stone.

THE SPENCER-TOLLES FUND OF THE AMERICAN MICROSCOPICAL SOCIETY.

To the Editor of Science: At the annual meeting of the American Microscopical Society, held in New York City during the last week in June, the especial attention of the Society was directed toward the Spencer-Tolles fund. As many are unfamiliar with the movement, permit us to state its history briefly as follows:

After the death of Charles A. Spencer in 1881 and of Robert B. Tolles a few years later, it was deemed fitting that a sum should be raised to provide a proper memorial to the father of American microscopy and his distinguished pupil, as a tribute due their services to the scientific world. The first notice of the movement was sufficient to bring, unsolicited, from the Royal Microscopical Society of London a contribution for this purpose. Additional sums subscribed by the members and others, together with the natural increase under the careful management of the Custodian, have brought the sum to a total at date of $756. The recent death of Herbert R. Spencer, the last of the three famous American workers, to whose efforts toward the perfecting of microscopic objectives the entire scientific world is so deeply indebted, serves as the immediate impulse of this movement toward the enlargement of the fund to a point at which its income may be sufficient to encourage in some way the advancement of science. It is accordingly desired that this tribute to the Spencers, father and son, and to their co-worker, Mr. Tolles, should be increased at once to the sum of at least $1,200, in order that the income therefrom may be offered each year under proper conditions as a reward for or assistance toward some scientific work or investigation of suitable character.

To this end the undersigned were appointed by the Society to secure cooperation in the effort to increase the fund, and to solicit contributions toward that end. We believe that the object will appeal to every one who is called upon to use the microscope in any capacity whatever, and contributions will be welcomed from all. Remittance should be made to Mr. Magnus Pflaum, Custodian of the Spencer-Tolles Fund, Bakewell Law Building, Pittsburg, Pa., who will at once return a proper receipt for the same.

For the American Microscopical Society.

Committee:

Henry B. Ward, The University of Nebraska, Lincoln.

Adolph Feiel, 520 East Main St., Columbus, Ohio.

Henry R. Howland, 217 Sumner St., Buffalo, N. Y.

Custodian:

Magnus Pflaum, Bakewell Law Building, Pittsburg, Pa.

SOCIETIES AND ACADEMIES.

TORREY BOTANICAL CLUB, OCTOBER 9, 1900.

The scientific program consisted of reports of summer work.

Mr. Harper reported collections in Georgia during three and a half months, traversing all the geological formations from the mountains to the sea, and collecting 754 numbers.

Dr. Rydberg reported two months spent in southern Colorado, with several new species; among them an interesting cactus from elevation of 8,000 feet in the Bitter Root mountains, now growing at the Botanic Gardens.

Dr. Howe reported nine weeks spent in collecting marine algæ at three very different stations, Bermuda, Martha's Vineyard (at Edgartown), and at Seguin Island, near the mouth of the Kennebec, an island four miles from the mainland, of about 150° elevation, its only inhabitants the three lightkeepers and families. Dr. Howe discussed the Bermuda flora in the light of the *Challenger* report, which recognizes 326 species, of which 144 are indigenous (in 109 genera and 50 families); out of the 144, 109 occur in the southeastern United States and 108 in the West Indies. The Bermuda vegetation is essentially West Indian in character, and includes only eight endemic species. Among the few found also at New York are *Osmunda regalis* and *cinnamomea*, *Woodwardia Virginica*, *Solidago sempervirens* and *Typha augustifolia*. Practically the only trees are the Palmetto and the Bermudian Cedar, the latter 20 to 50 feet high, and only one or two feet thick, though some old shells are five feet. The oleander is naturalized and in some quarters covered the whole landscape with bloom. Because of the practical absence of frost, tropical trees are acclimated with surprising success. The coffee tree has run wild in the sink-holes. About 25 ferns were known and eight Musci and six Hepaticæ had been already observed. There is nowhere any brook, and only one moss and one hepatica are common; the others are in the Devonshire marsh and the sink-holes of the Walsingham region. These are open caves 30 or 40 feet deep, with more moisture and shade and less wind, and therefore showing quite a different flora. There Dr. Howe discovered as many as 15 Hepaticæ. He also greatly increased the number of the marine algæ beyond the 132 of the *Challenger* report. The marine flora seems at first scanty on account of the absence of *Fucus* and *Ascophyllum*, but proves to be varied and interesting. It is practically that of southern Florida and the West Indies.

Dr. MacDougal reported work in northern Idaho in the Priest River basin which had perhaps never been visited by a botanist before. There was frost nearly every night. The tangled wildwood could not be penetrated more than four miles a day, except as it is entered by meadows stretching back from the lake. Beaver-dams a quarter mile long cross these meadows and convert the upper portions into sedgy marshes. A colony of beavers was active within 400 yards of his camp. Great stretches of *Drosera* carpet the marshes. Interesting plants were collected to 325 numbers.

Mrs. Britton sent in a brief report of her discovery of the protonema of Schizaea, observed as a green mat of thread-like bodies on the ground. On bringing them to the Botanic Gardens and cultivating them, she proved their development into Schizaea, and found the branching protonema to bear 2 to 15 flask-like archegonia on basal parts and a number of globose antheridia toward the apex. Description will follow in the November *Bulletin*. Dr. MacDougal remarked upon his observation of a mycorhizal association of a fungus in enlarged cells of this protonema. A similar association has been seen in the prothallus of Botrychium.

Professor Lloyd reported upon work on the Gulf coast begun after the close of his classes at the Columbia University summer school. Professor Lloyd and Professor Tracy procured a barge at Biloxi, Miss., by which they explored the flora of the islands of the Mississippi Sound and of the delta proper. It was necessary to sail for miles in two feet of water, occasionally jumping out to push. Always a furrow of mud followed in their wake. The islands bear a pine-barren and a sand-dune flora, with masses of *Pinguicula* and *Drosera*. The island surfaces are flat and form remnants of the tertiary Mississippi delta; they average only two feet above water, with a ridge a foot higher on the seaward side, composed of shell-fragments and continually shifted inward by the wind, the waves meanwhile gnawing off the seaward edge at the same rate.

Professor Burgess reported his continued ob-

servations on certain asters at stations near Lake Erie, Boston, the White Mountains, New York City, etc., at each of which he has kept certain varying species under scrutiny for some years, to determine their range of variation in nature under unchanged environment.

Professor Underwood reported herbarium work at Kew, the British Museum, and Paris, with particular reference to the herbarium of Cosson which is very rich in ferns, especially of South America and the West Indies. An interesting week was given to a trip to Biarritz, Spain, and the Landes, with views of the turpentine industry now flourishing among pine forests of the Landes originally planted as a protection from the sand-dunes. These pines average about ten inches in diameter. Maize was seen cultivated in the Basque provinces and to Bordeaux, the tops being cut off to favor the ripening of the ears, as in our South.

Edward S. Burgess,
Secretary.

NOTES ON OCEANOGRAPHY.

The deepest fiord on the Labrador coast.

An expedition on the schooner *Brave* spent the past summer exploring the northeastern coast of Labrador. Twenty-one soundings in Nachvak Bay sufficed to show that it is a typical fiord. The line of dangerous reefs two miles to seaward from the mouth of the bay belongs to a rock-sill which bars off the inlet from the deeper water of the Atlantic. Already at the mouth the depth is 107 fathoms. Six miles to westward, in the axis of the bay, the depth is 110 fathoms; for the next six miles it averages 100 fathoms. Then the bottom rapidly shoals to a narrow bar covered by no more than 18 fathoms. On account of its continuity with a projecting spur of bed rock on each side, it was concluded that the bar is composed of the same material. From the summit of this submerged ridge a second steep slope leads to a depth of 80 fathoms which persists to a point opposite the Hudson Bay Company's Post. Twenty miles from the mouth, a second bar of similar composition gave only 15 fathoms; it is flanked by depths of 60 fathoms. The bay has two branches, each heading about 25 miles from the bay-mouth, and is from one to two miles wide. Precipitous cliffs from 2,000 to 3,400 feet high appear in the profile of the U-shaped cross-section which is the rule in all parts of the bay. The deepest sounding recorded on the Admiralty charts for the bays of this coast is 100 fathoms in Hamilton Inlet.

The temperatures on August 30th were: at 110 fathoms, —1°.7 C. (29° F.); at 50 fathoms, —1°.4 C. (29°.4 F.); at 20 fathoms —1°.2 C. (29°.9 F.); at the surface, + 6°.8 C. (44°.3 F.). The temperature of the water from 20 fathoms downward to 50 fathoms is colder than the water at corresponding depths in the open Atlantic outside. The bottom temperature is very close to that characteristic of the envelope of brackish water formed about a piece of sea-ice melting in normal open-Atlantic water. Drift-ice finally left Nachvak Bay this year as late as the first week in July.

Drift-ice and the theory of ocean currents.

The extraordinary smoothness of the sea covered by drift ice, even when the pans are widely spaced, is truly astonishing to one making his first voyage in such waters. His sailing ship may be favored with a fresh breeze and yet the ocean surface be quite level, save for the minute rippling characteristic of a small pond ruffled by a summer breeze; ground-swell does not exist. It is a matter of common knowledge among the fishermen of the Atlantic Labrador coast that the Labrador current, or 'tide,' as they invariably express it, often shows high velocity, although its surface, for a length of a thousand miles and a breadth of from one hundred to three hundred miles, is covered with loose pan-ice. At such times, the wind is, or has just been, strong and from a northerly quarter. We are justified in believing that the pans act as the sails which, in ice-free waters are represented by wind-waves. Floes and pans project above the surface from one to twenty feet or more. They may be expected to exert a coercive force on the film of relatively fresh water derived from the melting of the ice in contact with the heavier salt water beneath. According with the behavior of such 'dead water,' as described by Nansen and others, the light surface layer will tend to