of electrolytic dissociation, that I have felt compelled to call attention to the real status of the experimental facts underlying these deductions."

J. L. H.

The Popular Science Monthly for October has for its opening article 'The Progress of Science,' by R. S. Woodward, being the address of the retiring president of the American Association. George Stuart Fullerton discusses 'Free-will' and the 'Credit for Good Actions' and Alexander McAdie presents some 'Fog Studies on Mount Tamalpais,' hinting at the possibility of dissipating such fogs as the one in which the steamer *Rio de Janeiro* was lost. Hugh M. Smith describes 'The French Sardine Industry' pointing out incidentally improvements that might be made in that of the United States. 'The Late Epidemic of Smallpox in the United States' is considered by James Nevins Hyde who makes a strong plea for vaccination. Edward Atkinson treats of 'Food and Land Tenure,' considering that the free land tenure of the United States is at the bottom of our great agricultural development. The final article is by W. Ramsay on 'The Inert Constituents of the Atmosphere,' describing the methods by which some of these have been discovered. The number completes Vol. LIX. and the index is appended.

The American Naturalist for September contains the third instalment of W. M. Wheeler's important and interesting description of 'The Compound and Mixed Nests of American Ants,' which includes in the present part the slave-keeping ants. The bulk of the number is taken up with the seventeenth of the 'Synopses of North American Invertebrates,' in which H. S. Jennings treats of the Rotatoria, the paper being illustrated by nine plates comprising 171 figures.

The *Museums Journal* of Great Britain for September contains a brief account of the work of 'The International Zoological Congress,' which includes some notes on the museums of Berlin and Hamburg, a paper by H. M. Platnauer, 'To Utilize Specialists,' and an account of the 'Museum of Science and Art, Edinburgh,' a very popular institution if one may judge by the annual attendance of 350,000. A number of samples of labels used in the U. S. National Museum are given and there are notes concerning various museums and art galleries in different parts of the world.

SOCIETIES AND ACADEMIES.

NEW YORK ACADEMY OF SCIENCES, SECTION OF ASTRONOMY, PHYSICS AND CHEMISTRY.

The section met on October 7, at the Chemist's Club. Professor Wm. Hallock reported that he had tried and failed to obtain permission of the Calumet and Hecla Company to make measurements of underground temperatures in their shaft at Keweenaw Point during the summer. He described and exhibited before the Section a new and very simple form of wind musical instrument which he found on sale at the Buffalo Exposition. The instrument was operated by blowing through the nose, the mouth cavity of the operator acting as the resonance chamber of the instrument. The tone quality was very similar to that of a flute.

Professor J. K. Rees reported that the Astronomical Department of Columbia had received from the Lick observatory a number of star photographs which were to be measured for the determination of parallax. Professor Harold Jacoby reported upon some photographs of stars near the celestial poles which had been received by the department.

Professor R. S. Woodward reported the results of an investigation he had carried on upon the effects of secular cooling and meteoric dust on the length of the terrestrial day. His investigation showed that, due to secular cooling, the length of the day will not change or has not changed, as the case may be, by so much as a half second in the first ten million years after the initial epoch, and that the total effect from secular cooling will accrue before the effect from meteoric dust will begin to be appreciable.

Professor DeRemus gave a brief account of the research laboratory in chemistry which had been lately established at Schenectady, N. Y.

F. L. Tufts,
Secretary.

THE ELISHA MITCHELL SCIENTIFIC SOCIETY.

THE 136th meeting of the Society was held at the University of North Carolina, on Tuesday evening, October 8, when the following papers were presented:

'Interpretation of the Value $\frac{0}{0}$': PROFESSOR WILLIAM CAIN.

'The Work of the Beaufort Laboratory during the Season of 1901': PROFESSOR H. V. WILSON.

'Note on the Existence of a New Element associated with Thorium': PROFESSOR CHAS. BASKERVILLE.

The permanent secretary, President F. P. Venable, reported some four or five hundred exchanges as continued, and favorable progress in the cataloging and binding of the journals received in exchange.

The following officers were elected for the year: *President*, Dr. H. V. Wilson; *Vice-President*, Dr. A. S. Wheeler; *Secretary*, Dr. Chas. Baskerville.

CHARLES BASKERVILLE,
Secretary.

DISCUSSION AND CORRESPONDENCE.

AN INSTITUTE FOR BIBLIOGRAPHICAL RESEARCH.

TO THE EDITOR OF SCIENCE: In these days when large endowments are made for furthering scientific research in many directions, it is only natural that bibliographers and librarians should look forward eagerly to an endowment in the interest of that science which is the foundation of library work and, in a way, of all scientific investigation. Without bibliographies knowledge of what has been previously done in the various sciences would be wellnigh impossible; the investigator would be groping in the dark, and many a work would be written to demonstrate what had already been well demonstrated. Without bibliographies the building up of an ever so modest library would be beset with difficulties without end.

The thought that such an endowment must be made was in everybody's mind at the meeting this summer of the American Library Association. The plans for cataloging at one place books for all libraries in the country, which were discussed at the last two conferences of the Association (Montreal, 1900, and Waukesha, 1901), presuppose a central bureau of some kind to organize the work and carry it out. The generous way in which the Librarian of Congress met the Publishing Board of the Association gives assurance that the cataloguing of the current literature will be taken care of through the National Library. But this is only one part of the needed work. If thus the American literature of the new century will be permanently recorded (it is to be hoped that the work will be retrospective so as to cover the whole of the year 1901) we shall still lack an accurate bibliography of the American literature of past times.

There are other works of great importance that should be undertaken. Let me mention a few:

Bolton's catalogue of scientific and technical periodicals covers only one group of sciences and does not cover that one completely. A complete and accurate catalogue of serial publications of all kinds, including such as are published by societies, academies and other institutions, is a desideratum.

There is no critical and complete bibliography of bibliographies in existence. Petzholdt's monumental work does not go beyond 1866, and Henri Stein's recent volume, while bringing his predecessor's work fairly down to date, is anything but critical. It is doubtful whether a really authoritative catalogue of bibliographies can be produced without the cooperation of bibliographers and specialists in this country and Europe.

The catalogue of scientific literature undertaken under the auspices of the Royal Society of London has met with gratifying support from American libraries. But the 'Regional Bureau' for America that should do our part of the work is not yet founded. The Smithsonian Institution has provisionally undertaken to act as 'Regional Bureau,' but with all the other demands on it it is uncertain how long it can continue to cooperate in this work.

This catalogue is planned to cover only the natural and physical sciences. It is of the utmost importance that other sciences also should be covered by similar catalogues.

Furthermore, the Royal Society catalogue