of a recent trip to the West Indies for the purpose of studying the economic fruits of the tropics.

D. T. MacDougal,
Secretary pro tem.

DISCUSSION AND CORRESPONDENCE.

BIBLIOGRAPHY OF GEODESY.

To the Editor of Science: In the Report of the United States Coast and Geodetic Survey for 1887 there was published a Bibliography of Geodesy. Since the date named so many important contributions have been made to the literature of this subject that during the last meeting of the International Geodetic Association a resolution was passed requesting the undersigned to prepare a new edition of the Bibliography.

This work is now well under way, and every possible effort will be made towards making it complete. This desirable end can be attained only with the assistance of those authors who are good enough to send as soon as possible titles of their publications to the address given below.

As in the first edition, it is proposed to include all papers, books and reviews, pertaining to geodesy, least squares, figure of the earth, density of the earth and gravity determinations, including theoretical discussions of the pendulum.

In complying with this request, authors should give:

1. Full name.
2. Complete title.

a. If book, give size, number of pages in preface and in body of book, number of plates and illustrations, date and place of publication.

b. If in a serial publication, give name of publication, volume, and year and pages occupied by the contribution.

c. If a review, state the title of work reviewed.

In case the work has been reviewed, give name of reviewer and where the review may be found.

If preferred, in order to insure harmony in the form of making out the titles, publications may be sent to the undersigned. The International Exchange Service of the Smithsonian Institution has graciously consented to transmit such works as may be forwarded with the object named in view. They should be sent in my name to the Smithsonian Institution, Washington, D. C.

By giving this their early attention, author will confer a favor upon the compiler and upon those who may find it necessary to consult the work when published.

J. H. Gore.

Columbian University,
Washington, D. C.

SHORTER ARTICLES.

NOTE ON THE WESTERN TERTIARY.

The recently published discussion on 'The Freshwater Tertiary Formations of the Rocky Mountain Region,' * by Professor W. M. Davis, in which he indicates published evidence to prove those supposed lacustrine deposits not to have deposited in large lakes, but rather in regions of lakes and rivers, explains well the Eocene deposits which I have seen in northwestern Wyoming in the Bighorn basin. This region was visited by a party from the University of Minnesota in the summer of 1899.

The Eocene badlands there show an extent of horizontal strata which, when viewed as it is exposed for miles around one, does suggest at once a large filled lake basin. But there is a rapid alternation of clay and sand strata, and the several diverse kinds observed recur so unequally, and yet often so monotonously that the theory of a large permanent lake does not suffice to explain the phenomena. In fact while exploring for fossils I had the impression that we were not beyond the supposed lake's marginal zone, even when 40 miles or more from the formational boundary, and came finally to believe that this freshwater Tertiary might be different from others of the West. Professor Davis's argument now convinces me that it is not.

In order to find fossils rapidly one had to search out what we called rivers and bogs. The former are shallow trough-shaped beds of sand occurring either as intercalated masses or as thickened parts of a regular stratum. The bogs occurred here and there, more or less

* *Proceedings Am. Acad. Arts and Sci.*, Vol. XXXV., p. 345.