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"Itasca" Wilson Park,
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XIV.—*Marine Algæ of New Brunswick.* By GEO. U. HAY. *With an Appendix containing a List of the Marine Algæ of the Maritime Provinces of the Dominion of Canada, with Notes.* By GEO. U. HAY, Ph. B., St. John, and A. H. MAC-KAY, B.A., B. Sc., F. S. Sc., Principal of Pictou Academy, N.S.

(Communicated by Mr. J. Fletcher, May 25, 1887.)

The following paper includes observations that have been made on the marine Algæ of New Brunswick during the past two years, together with some remarks on their economic value, the occurrence of some rare species, etc. The localities visited have been various points on the southern shore of New Brunswick, including the Island of Grand Manan, and the coasts of Caraquet and Tracadie, with the Islands of Shippegan and Miscou on the Gulf of St. Lawrence. To this is appended a preliminary list of the marine Algæ of the Maritime Provinces, which the writer, with the assistance of Mr. A. H. MacKay, of Pictou, has recently compiled for the Natural History Society of New Brunswick. The list includes some eighty species of marine Algæ, which, with the exception of an Introductory List of New Brunswick Algæ, published by the writer in 1886, is the first attempt to arrange our Algic flora in such a form as shall lead to a closer investigation of these interesting plants, and stimulate further study in this direction. No Diatomaceous or other microscopic forms are included in the subjoined list, but only those which may be easily detected by the eye, including chiefly the larger forms and those parasitic upon them. Of 130 species mentioned in Dr. Farlow's "Marine Algæ of New England," there have been observed, up to this time, on the shores of the Maritime Provinces, over eighty species.

The marine flora of the Maritime Provinces is essentially Arctic in character, as may be inferred from their boreal position and their exposure to cold currents from the Arctic seas. In the case of New Brunswick, the paucity of the more delicate species of Algæ may be accounted for chiefly in two ways:—

(1.) The action of the tides on the southern shore, as they sweep in and out of the Bay of Fundy, renders it impossible for any but the stronger forms to maintain themselves, except in sheltered coves, and such favored positions are rare on this coast. From one of these localities (Frye's Island) in the neighborhood of Passamaquoddy Bay over thirty species were collected in July, 1886.

(2.) The low sandy shores extending into the Gulf of St. Lawrence do not furnish a favorable habitat for Algæ. A marked exception to this, however, was found on the northern shores of Miscou and Shippegan, just within Bay Chaleurs, where, at low-water mark, were detected several interesting species not observed on the southern shores. These are referred to in another part of this paper.

The Fuci and Laminariæ, which make up the great bulk of our Algæ, are distributed in abundance along the whole coast of New Brunswick. The Fuci occur between tide marks, and are found in this position in greatest abundance on the southern coast, where