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ARCTIC AND WESTERN PLANTS IN CONTINENTAL ACADIA.

SPECIAL CAUSES WHICH HAVE OPERATED UPON THE DISTRIBUTION OF PLANTS IN ACADIA.

[Read before the Natural History Society of New Brunswick, 13th April, 1869.]
[Abridged from the Canadian Naturalist.]

BY G. F. MATTHEW.

BESIDE two agents, Winds and Migratory Birds, which have had a world-wide influence in spreading vegetation from one region to another, there is a third, which, from the important part it has played in modifying the flora of Acadia, deserves special attention. This is the floating ice, and drift-wood of the Polar Current, and of the St. John River.

Traces of the influence of this current on the climate of this region, long anterior to the time when the present assemblage of plants first covered it, may still be detected. To form any conception of the vegetation which covered Acadia in those early times, we must fall back upon the researches of Geology. As regards its modern botanical aspect, the history of Acadia begins with the Postpleiocene epoch. The clay beds of this period, which cover wide areas in Southern New Brunswick, have yielded no determinable remains of plants, except sea-weeds, and these are of common occurrence in connection with fine clays near the coast. Thus we are left to infer the character of the vegetation from the climatic conditions indicated by the presence of Arctic and sub-Arctic animals in the Acadian seas of the Postpleiocene epoch, and to the known flora of this period in Canada. At Green's Creek, on the