

THE FLORA OF CANADA.¹

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INTRODUCTION.

It is a well known fact that, at a geologically recent period, practically the whole of Canada from the Rocky mountains east was covered with glacial ice which, slowly advancing southward, reached as far as central Missouri in the United States. Whatever vegetation may have flourished in Canada before the glacial period was gradually forced to migrate southward as the ice advanced. During this retreat many species were no doubt wiped out of existence, but a certain number, belonging perhaps largely to types which now are found in the arctic regions, managed to survive. In fact, we must surmise that, during the glacial period, the vegetation immediately in front of the continental ice was arctic in character and that, when the glaciation reached its maximum, those parts of the United States which were immediately to the south of the ice had a flora similar to that now existing in the far north.

With the return of a warmer climate and the gradual recession of the continental ice, vegetation began to move back northward, with the Arctic types as a vanguard followed by more temperate and southern ones. Generally speaking, the Canadian flora, as it exists today, may therefore be said to be composed of immigrants that took possession of the country after the glacial period and established themselves in botanical provinces in accordance with their specific requirements. These botanical provinces, generally referred to as zones, will be briefly described in the following pages. For the boundaries of the various zones, see the accompanying map.

The Arctic Zone.—Botanically, the arctic zone is the region lying north of the tree line. In Canada it extends far to the south of the arctic circle, especially in the eastern parts of the Dominion. Its southern limit is, roughly, a line running from the estuary of Mackenzie river to the mouth of Churchill river on the west coast of Hudson bay. East of Hudson bay, the tree line, i.e., the southern boundary of the arctic zone, runs from about lat. 56° on Richmond gulf to the mouth of George river on the eastern shore of Ungava bay, and from there in a southeasterly direction along the coast of Labrador to Hamilton inlet. South of Hamilton inlet a narrow strip along the coast as far south as the strait of Belle Isle and extending a short distance to the west from there is also barren of real trees and therefore has an arctic aspect. This strip can hardly be included in the arctic zone proper, however, although a few arctic plants may be found there; the lack of trees and the barren appearance in general are caused by the arctic current which flows from the north along the coast and through the strait of Belle Isle.

¹This article is a revised and popularized edition of a paper, entitled "Flora of Canada," by the late Mr. J. M. Macoun, C.M.G., F.L.S., and the writer, published in Canada Year Book, 1915, and also as Museum Bulletin No. 26, Geological Survey, Department of Mines, Ottawa, 1917.