

The abundance and quality of each kind varies much, of course, within these boundaries. Occasional or chance trees and depauperated representatives of some of the species shown on the map, are known to occur beyond the limits laid down, but as these lines are intended to represent the general boundaries, they could not fairly be extended so as to include such cases. More or less extensive outliers or colonies of some trees occur in situations entirely separated from the main areas occupied by the species to which they belong. The southern boundaries of some of the more northern species, such as the white spruce, Banksian pine and balsam poplar, might be nearly included within the map, but to avoid confusion it is considered best to show only the northern limits. Most of our forest trees extend far to the south of the confines of Canada, so that at any point which we choose to select within the Dominion, we are apt to find in the forest nearly all the species whose northern limits lie to the north of it. Professor Charles S. Sargent, of Harvard College, a special commissioner in connection with the tenth census of the United States, is preparing maps illustrative of the distribution of the woods, prairies and barren grounds of North America, and at his request the writer has had much pleasure in assisting him in this work so far as Canada is concerned.

A knowledge of the limits of our different forest trees is also valuable as indicative of climate. Some of these will be found to correspond with the northern limits of the successful cultivation of particular crops. Certain trees cease to exist when they come to regions subject to severe spring or summer frosts, or where early autumn frosts prevent them from maturing their fruits. Locally, the presence of a particular group of trees is serviceable as a guide to the quality of the soil, but owing to differences in the character of the climate and other circumstances, it is obvious that such a test, although quite reliable within a limited area, may not be at all applicable to another region.

Some species appear to find their appropriate conditions in different latitudes by a change in their habitat: for example, the larch, balsam fir and white birch, which in the north grow freely on dry or hilly ground, towards the southern limits seek the cold