

limits of the white and the red pine. West of lake Winnipeg the sub-arctic forest is bounded to the south and west by the prairies and the foothills of the Rocky mountains, respectively. The Gaspé peninsula and sections of New Brunswick may also be included in the sub-arctic forest zone.

The sub-arctic forest, as the name indicates, is decidedly boreal. The trees do not reach any imposing height and the number of species which make up the forest is small in comparison with the number occurring in the hardwood forest zone to the south. The sub-arctic forest is largely coniferous in character, the black and white spruce being the dominating trees. Of the other coniferous trees the Banksian pine is the most important species. It reaches perfection in the western part of the zone and constitutes the chief source of supply of lumber for the northern prairie region. The other trees characteristic of the zone in general are aspen and balsam poplar, white birch, larch, and balsam fir. Between the gulf of St. Lawrence and lake Winnipeg, white cedar, white elm, and ash are occasionally met with, but these trees can not be considered to belong to the sub-arctic forest proper.

Perhaps the most striking characteristic of the sub-arctic forest is the abundance of berry shrubs; as examples may be mentioned gooseberries, currants, blueberries, raspberries, yellow-berries, and high-bush cranberries. Another striking feature in the complexion of the sub-arctic forest is the remarkable uniformity, in general character as well as in species, exhibited throughout the zone. This lack of variety is especially striking in the vegetation of the bogs, which are very numerous throughout the zone, the species encountered in the bogs of any one part of the zone being characteristic of practically the whole sub-arctic forest.

On the whole, the herbaceous flora of the sub-arctic forest is remarkably uniform throughout, and hardly a species is found that does not occur either in the arctic zone or in the hardwood forest zone to the south. A noteworthy exception to this rule is a small water lily, in fact the smallest of the water lilies, which is found in the sub-arctic forest zone only.

The sub-arctic forest zone is as yet almost undisturbed by settlers except in some sections of the eastern provinces, for instance in parts of the so-called clay belts of northern Quebec and Ontario. It forms a vast reserve of national wealth and may in the future, subject to judicious management, furnish the chief supply of wood for the pulp and paper industries in eastern North America.

The Hardwood Forest Zone.—The hardwood forest zone includes all eastern Canada south of the sub-arctic forest, with the exception of a small region in southern Ontario which extends between the shore of lake Erie and a line running approximately from Toronto to Windsor.

The hardwood forest zone is characterized chiefly by deciduous trees, the principal ones being basswood, sugar maple, red maple, black ash, white ash, white elm, yellow birch, red oak, burr oak, and