

and the commercial hardwoods occupy a minor position. Cedar, tamarack and black spruce form typical stands in poorly drained situations. Hardwood ridges, carrying chiefly maple and yellow birch, occur throughout this belt. The extensive lumbering operations of the past century, together with repeated forest fires, have greatly modified these original types. The exclusive cutting of white and red pine, practised until recently, has resulted in the displacement of these species by spruce, balsam fir, jack pine and the hardwoods, the spruce-balsam fir pulpwood areas being the most valuable type remaining. Jack pine has come in extensively on burned-over areas on lighter soils, and aspen and paper birch are being rapidly established. Along its northern border, this mixed hardwood and softwood type merges into the Northern Forest belt already described, with the disappearance of the white and red pines, hemlock and the commercial hardwoods.

The Acadian belt covers the Maritime provinces and the south shore of the St. Lawrence in Quebec. The forest is similar to that of the New England states, being characterized by red spruce. With this are found varying proportions of white spruce and balsam fir. In the mixed softwood and hardwood type, which also occurs in this belt, white pine and hemlock occur, with yellow birch, maple and beech representing the commercial hardwoods. Cedar is fairly abundant in the western portion of this region. Burned-over areas in the Acadian belt are chiefly occupied temporarily by aspen and white birch.

3.—Important Tree Species.

In Canada there are approximately 160 different species and varieties of plants reaching tree size. Only thirty-one of these are coniferous, but the wood of these forms 80 per cent. of our standing timber and 95 per cent. of our sawn lumber. While the actual number of species of deciduous-leaved trees seems large in comparison to their commercial importance, out of a total of some ninety species and varieties only four or five are worthy of comparison with the conifers.

Spruce.—The five native spruce species are all of commercial importance, furnishing nearly one-third of the total production of lumber. Spruce pulpwood is used in preference to all others, and forms over two-thirds of the total quantity of pulpwood consumed in Canadian pulp mills and exported in the raw or unmanufactured state. The wood has a long, tough, colourless fibre, and, on account of its freedom from resin, is considered in the markets of the world to be the best material for pulp manufacture. Spruce is also used for railway ties, poles, cooperage and mining timbers. Of the five native spruce species the white spruce (*Picea canadensis*) is the most abundant and the most important commercially. With black spruce (*Picea mariana*) it ranges from Labrador to Alaska, extending northward almost to the limit of tree-growth and southward into the United States. The black spruce (*Picea mariana*) is of less value, as it is a smaller, slow-growing tree, often confined to swampy situations and reaching sawlog or pulpwood sizes only under more favourable conditions of growth. The red spruce (*Picea rubra*) is confined to the province of Quebec and the Maritime provinces. Its wood is considered to be of greater technical value than that of the other spruce species. The western species, Engelmann and Sitka spruce (*Picea Engelmanni* and *Picea sitchensis*), are not found east of the Rocky mountains. Their wood is of high technical value, and can usually be obtained in larger dimensions than that of the other spruces, as the trees attain great size in this region.

Pine.—There are nine distinct pine species native to Canada, of which six are of great commercial importance. Eastern white pine (*Pinus Strobus*) is the