

Alaska to Labrador, covering the northern part of the Laurentian Shield as far as the limits of commercial tree growth. Originally, white spruce predominated over this entire belt and it still forms the most important type commercially, although it has suffered severely through forest fires. In the east, balsam fir is an important associate and the spruce-balsam fir type makes up most of the pulpwood resources of eastern Canada. The black spruce-eastern larch (tamarack) type occupies poorly drained areas within this belt. Enormous areas have been burned over by forest fires. Aspen poplar has replaced the spruce and balsam on the best soil in these areas, and is now the most prevalent species, although this condition may not be permanent. Jack pine has taken possession of the dryer, lighter soils, in some cases permanently. Paper birch comes in with aspen poplar toward the east, and balsam poplar occurs in the moister situations. Jack pine, aspen and balsam poplar reach a higher development along the Peace river in northern Alberta than they do elsewhere in America. Along its northern margin this belt merges into the sub-Arctic "tundra," with tree growth confined to narrow strips along waterways. To the northward, balsam fir disappears early from the forest growth, followed by balsam poplar, jack pine, aspen and paper birch, leaving white spruce, black spruce, tamarack or larch, and willow to define the northern limit of tree growth. This may be roughly indicated by a line drawn from the mouth of the Mackenzie river on the Arctic ocean to the mouth of the Churchill river on Hudson bay and across the Labrador peninsula at about 58° N. latitude.

**The Eastern Forests.**—In southeastern Canada a number of belts of forest growth with distinctive characteristics are recognized. The hardwood belts include the Carolinian zone, confined to the north shore of lake Erie and the western part of lake Ontario. This is important only as forming the northern fringe of a type which covers a large area in the Central Eastern United States, and includes a number of species not found elsewhere in Canada. North of this zone, still in the purely agricultural and pastoral area, the original forests were of the commercially important hardwoods, such as maple, elm, basswood, oak, yellow birch, hickory and beech, with patches of pine, hemlock and other conifers on the lighter soils. This area has been largely cleared and devoted to agriculture and the original forest type is to be seen only on farmers' wood lots.

Since the beginning of the lumbering industry in Canada, the region north of this belt, extending, roughly speaking, to the height of land between the St. Lawrence and Hudson bay waters, has been the centre of the most extensive exploitation, and still occupies that position as far as eastern Canada is concerned. The forest types which still exist in this region vary considerably owing to soil and other conditions, but generally speaking white pine occupies the better situations on the lighter soils, and reaches its highest development in this belt. With it is frequently associated the red or Norway pine. On heavier soils, spruce, hemlock 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 as a temporary type. Along its northern border, this mixed hardwood