

Alberta. Certain species such as Douglas fir, Englemann spruce and alpine fir are also found in western Alberta and the lodgepole pine is found as far east as the Alberta-Saskatchewan boundary in the Cypress hills.

**The Forests of the Great Plains.**—East of the Rockies lies the Great Plains Region sloping gradually eastward and northward, which is divided into the Prairie, Semi-Prairie, Northern Forest and Sub-Arctic Belts.

The Prairie Belt extends from the International Boundary to the 55th parallel along the foothills of the Rockies, gradually tapering toward the east to the southeastern corner of Manitoba. The greater part of this area is treeless and is at present purely agricultural or pastoral country. Its treeless condition is due primarily to climatic, topographic and soil conditions though fire may have had some influence. The underlying rocks are Cenozoic or Mesozoic. The climate of the prairies of Alberta is extremely variable in winter due to the warm dry Chinook winds which extend their influence north to the Peace river and east to Saskatchewan. Rainfall is below the average and the temperatures moderate. Throughout the Prairie Belt patches of tree growth in protected situations are chiefly of aspen, with some white spruce and jack pine.

The Semi-Prairie Belt forms a transition zone between the treeless plains and the Northern Forest Belt. Here the area is largely covered with poplar, interspersed with open grasslands with spruce and jack pine in some places. The soil is potentially agricultural and the tree growth of local value only.

The Northern Forest Belt, lying beyond the transition zone and largely unexplored, is from 300 to 400 miles wide and extends from Alaska to Labrador, covering the greater part of the Laurentian Shield as far as the limits of commercial tree growth. The underlying rock formation is Laurentian and Precambrian. The climate in the southern portion is temperate but toward the north is too severe for continuous successful agriculture, although precipitation is above the average for Canada.

The southern portion of the Northern Forest Belt includes some potential agricultural land which is still well forested. Toward the north, tree growth becomes lighter and still further north the region merges into the Sub-Arctic Belt. Originally, white spruce predominated over this area and still forms the most important commercial type in spite of repeated fires. Balsam fir as an associate increases in importance toward the eastern part of the belt. The black-spruce type with eastern larch or tamarack occupies poorly drained areas. Burned-over areas of white spruce and balsam usually grow up to aspen and white birch on the better soils and to jack pine on sandy sites. Jack pine, aspen and balsam poplar reach a higher development along the Peace river in northern Alberta than elsewhere in America.

In the Sub-Arctic Belt the tree growth is for the most part confined to narrow strips along waterways and is of value primarily for local use. This region gradually merges into the treeless sub-Arctic tundra of muskeg and bare, glacier-worn rocks.

Balsam fir disappears early from the forest growth, followed by balsam poplar, jack pine, aspen and paper birch, leaving white spruce, black spruce, tamarack, larch and willow to define the northern limits of tree growth. The white spruce probably extends further north in Canada than any other of the arborescent conifers.

**The Eastern Forests.**—The basin of the Great Lakes and the St. Lawrence and the Maritime Provinces contain a great variety of topographical and geological types. The north shores of lake Superior and Georgian bay, the upper Ottawa