

small and of poor quality. It is, however, of great local value in the mining industry and to trappers. The principal type is the spruce-alpine fir, with lodgepole pine on poorer sites, and poplar and willow on richer soils on burned-over areas.

Most of the commercially important species of the Cordilleran region are confined to British Columbia. The spruce-fir-lodgepole pine type of the northern interior extends across the Rockies into the foothills of Alberta. Certain species, such as Douglas fir, Engelmann spruce, lowland and alpine fir and lodgepole pine, are also found in western Alberta, but in few cases do they extend any great distance eastward.

The Forests of the Great Plains.—The Great Plains region may be divided into the Prairie, Northern Forest and sub-Arctic belts. There are no great variations in altitude in the region, and latitude and soil conditions, especially drainage, determine the distribution of forest types. The Prairie belt in southern Alberta, Saskatchewan and Manitoba extends north from the International Boundary for 200 to 400 miles. Patches of tree growth in protected situations are made up chiefly of aspen poplar, with some white spruce and jack pine. North of this purely agricultural and pastoral area is the great Northern Forest belt, from 300 to 400 miles wide, which extends from Alaska to Labrador, covering the greater 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 type, frequently associated with eastern larch (tamarack), 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 it will eventually be replaced by conifers where natural reproduction is possible. Over vast areas, however, there is no immediate prospect of securing a return to coniferous forest by natural agencies. 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. Vigorous tree growth and fairly large timber are found along these shallow valleys as far north as 67°, indicating that soil conditions, especially drainage, are more important than climate in defining the limits of tree growth. 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 such as tulip, sassafras, etc., not found elsewhere in Canada.