

## 2.—Main Types of Forest Growth.

Physiographic, climatic and soil conditions in Canada, generally seem to favor the coniferous type of forest. While the more fertile portions of Ontario, Quebec and the Maritime Provinces supported a heavy virgin growth of hardwoods, the greater part of Canada's forest area is covered with spruce, pine, balsam, Douglas fir and other coniferous softwoods. Three main groups of forest growth in Canada follow the main physiographic divisions already mentioned. These groups are, the Cordilleran, the Great Plains and the Eastern forests.

### 1.—The Cordilleran Forest.

The Cordilleran forest, which covers the greater part of the Pacific slope, may be sub-divided into the Coast belt, the Interior Dry belt, the Interior Wet belt and the Rocky Mountain belt. The Coast belt includes several distinctive forest types, their character being determined by variations in climatic and topographic conditions, among which altitude and precipitation have had the greatest effect on forest growth. Douglas fir and red cedar are the principal species in the southern portion of the belt at altitudes up to 2,000 or 2,500 feet. With these are associated hemlock, white pine, amabilis and lowland fir. Toward the north and at higher altitudes Douglas fir disappears and red cedar and hemlock are the important trees, with amabilis fir and yellow cypress as subsidiaries. In the Queen Charlotte islands and along the coast of the mainland opposite, Sitka spruce and western hemlock form a lowland type.

Western yellow or "bull" pine predominates at low altitudes, bordering on the grass lands in the Interior Dry belt. Douglas fir gradually increases in importance until it predominates at elevations up to 3,500 and 4,500 feet. Western larch covers a limited area between the true yellow pine and Douglas fir types. At the northern latitudinal and upper altitudinal limits of the Douglas fir type, an Engelmann spruce type develops which merges into a spruce-alpine fir type at still higher altitudes. Lodgepole pine has taken the place of Douglas fir, Engelmann spruce, and, in some cases, yellow pine on burned-over areas, and has become to a considerable extent established as a distinct type.

Forest types similar to those of the coast have developed in the Interior Wet belt. In the southern portion of this belt, red cedar predominates in the wetter situations, mixed with Douglas fir, Engelmann spruce, white pine, hemlock, western larch, alpine or lowland fir and cottonwood. On the benches and lower valley slopes, hemlock and cedar are the important species. Engelmann spruce replaces hemlock at higher elevations, cedar gradually disappears and the spruce-alpine fir type stretches up to timber line. To the north, Engelmann, spruce and alpine fir are more prominent, and the other species are gradually eliminated.

The Rocky Mountain belt includes portions of the Dry belt types to the south and those of the Interior Wet belt further north. Otherwise the typical forest of the Rocky mountains is made up of Engelmann spruce, with an increasing proportion of alpine fir as the altitude increases. This type has suffered so severely from fire, especially on the dry eastern slopes, that lodgepole pine has established itself permanently in some cases and temporarily in others 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 foot-hills 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.