

lighter in colour than red pine, and is now used extensively as a substitute for white pine. The two jack pines (*Pinus Banksiana* of the east and north, and the lodgepole pine, *Pinus contorta* var. *latifolia*, of the Rocky mountains and British Columbia) are not considered as valuable lumber-producing trees, although they are both used locally for rough construction. Jack pine railway ties are used to an enormous extent, chiefly on account of the strength, cheapness, and abundance of the wood. Jack pine has a well-established use in the manufacture of kraft pulp, and in the manufacture of pulp for newsprint. There are three other species of the genus *Pinus* that reach tree size in Canada, but these are only of local importance.

Douglas Fir.—The Douglas fir (*Pseudotsuga taxifolia*) of British Columbia and the Pacific coast, often erroneously called "Oregon pine", is the only representative of its genus in Canada. It probably yields more lumber annually than any other single species in America. The tree in Canada is not found east of the Rocky mountains, the greater part of the lumber being produced in the Coast Region of British Columbia. This is Canada's largest tree, and from it larger structural timbers can be obtained than from any other tree in America. It is used chiefly for structural purposes, but on account of its attractive appearance it is also used extensively for interior finish. The wood is also important in Canada as a material for railway ties and mining timbers. It is noted chiefly for its strength and durability, and the large dimensions in which it can be obtained.

Hemlock.—There are three hemlock species in Canada's forests, two of which are valuable timber trees. The eastern hemlock (*Tsuga canadensis*) is abundant throughout its range in the eastern provinces, but is not found west of the province of Ontario. The wood is used chiefly for construction, especially in house-framing. It supplies the demand for a cheap, strong material for many purposes, including railway ties, poles, mining timber, pulpwood and firewood, and its bark is a valuable source of tannin. The western hemlock (*Tsuga heterophylla*) is found in Canada only in the province of British Columbia, and is becoming more valuable each year as its qualities are better appreciated. The western species is used more extensively than the eastern in pulp manufacture.

Balsam Fir.—There is only one balsam fir in Northern and Eastern Canada (*Abies balsamea*), which is found from Labrador almost to Alaska. Its wood is sawn into lumber only to take the place of more valuable woods for rough construction, as it has few technical qualities which would recommend it for any other use as lumber. The purpose for which the wood is best suited is the manufacture of wood-pulp for paper making. The tree occurs in the forest mixed with spruce and it is cut and marketed with that wood. Balsam fir has the requisite length and toughness of fibre for pulp-making, and, in spite of the fact that it gives a slightly lower yield of pulp per cord and contains a higher percentage of resin than spruce, its use is increasing.

There are three western balsam fir species, the wood of which is very similar to that of the eastern tree. The most important of these for lumber at present is probably the alpine fir (*Abies lasiocarpa*), although the two coastal species, lowland and amabilis fir, are used for pulp. Where the wood of these western species is utilized, it is put to uses similar to those of the eastern species. These western balsams are confined to the Rocky mountains and the Pacific slope.