

extends from James Bay north-westward to the Yukon. In 1897 Mr. Henry O'Sullivan, D.L.S., C.E., explored the country between Lake St. John and the mouth of the Nottaway River. In his report he says: "Pulp is the industry of the coming age, spruce is the king of woods for pulp-making, and this country is the home of the spruce." He might have added that the immense waterfalls in every part of the country furnish unlimited power for saw, pulp and paper mills.

The black larch (*Larix americana*, Michaux), or tamarack, grows everywhere throughout the peninsula, and probably stands next to the black spruce in abundance. It is the hardiest tree of the sub-arctic forest belt, and continues as a tree to the very edge of the northern margin, where the black spruce is dwarfed to a mere shrub. In the interior it grows in all the cold swamps and is always the largest tree in the vicinity. Of late years, however, the European larch saw-fly has destroyed most of the larch between Lake St. John and Lake Mistassini, and the pest is spreading northward. The wood is rather coarse-grained, hard, heavy and very strong. In color it is a light brown, with thin, nearly white, sapwood, and contains broad, very resinous dark-colored bands of summer cells, a few obscure resin ducts, and numerous, hardly distinguishable medullary rays. This explains why it is such a stiff wood, and is so durable in contact with the soil. It is well adapted for use as scaffold poles, joists, rafters, railway ties, fence posts, telegraph and telephone poles, and for ship-building purposes. When thoroughly dry it weighs 39 pounds per cubic foot, and its fuel value of 62% seems to indicate that it is a trifle better than red maple (*Acer rubrum*) as a heat producer.

The balsam fir (*Abies balsamea*, Miller) prefers a wet alluvial soil, and occurs more or less plentifully about the margins of the large streams and lakes almost to the edge of the treeless area. From latitude fifty-six in the interior it ranges south-eastward to Cape Harrison, and south-westward to the mouth of the Great Whale River. In the Mistassini region and along the lower Rupert, it grows in abundance with white spruce, aspen and canoe birch.

The wood is very light, soft, coarse-grained and perishable. The heartwood is of a pale-brown color, often streaked with yellow. The sapwood is lighter in color, is quite thick, and contains conspicuous narrow vessels of smaller summer cells and numerous obscure medullary rays. Fuel value, 38%; specific gravity, 24 pounds per cubic foot; makes a good pulp, and is sometimes sawn into boards for the manufacture of packing boxes, or even laths and shingles, if nothing better can be obtained.

Beneath the smooth bark of the tree a transparent straw-colored resin, faintly tinged with green, collects in "blisters" or