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Natural History Notes



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THE BALSAM FIR



Balsam Fir

A tree indicative of the northwoods, not only by its appearance but also by its smell, is the balsam fir. While firs and spruces look somewhat similar they are really two distinct groups of trees and each includes several species. The following traits will help distinguish one from the other.

Fir trees retain their needles long after the needles die, while spruces shed their needles more quickly. If you closely examine the bark on the limb of a fir tree you will find it is smooth, in contrast to the spruce's bark which is rough after the needles are shed. The branches of the fir trees usually stick straight out, while spruce branches droop, especially in larger trees. Also a fir's cones stand erect on the branch, compared to spruce cones which hang down.

The balsam is one of ten fir species native to North America. It ranges from the Labrador peninsula west to the Yukon River and south to New England and Minnesota. It is also found along the higher elevations of the Appalachians. The balsam is generally a tree of cool climates and well-drained but moist soils.

The balsam fir averages fifty to sixty feet in height, occasionally up to ninety feet. The trunk grows to about twelve to eighteen inches in

diameter. Its shape is an attractive symmetrical pyramid with wide spreading branches. It grows rapidly and rarely lives longer than 150 years. The bark on the young trees is grayish brown, thin, smooth, and contains many resin blisters. On older trees the bark becomes scaly, reddish brown, and can be up to one-half inch thick. The needles are a dark shiny green on the upper surface and a silvery whitish green underneath, with blunt ends. The strongly aromatic needles are sometimes used to stuff pillows.

The oblong balsam cones are usually two to four inches long, 1-1/4 inches wide, and stand erect on the upper branches. When the quarter-inch seeds ripen the scales of the cone drop off and leave a woody core on the branch. The balsam usually has heavy cone crops every two to four years. It has a relatively shallow root system and is easily blown down, resulting in dangerous fire traps. The worst enemy of this tree is the spruce budworm; however, there are also several species of fungi which harm the balsam.

The resin blister on the fir's bark produce a greenish yellow sticky fluid which dries nearly transparent. This is called Canada balsam and is used in pharmaceuticals and varnish making. It is also used as a medium for mounting microscope slides.

Balsam wood is light about twenty-six pounds per cubic foot when air dry. It is coarse-grained and pale brown in color, streaked with yellow. The wood is not strong or long lasting. It is harvested primarily for pulp, although some is used for packing crates and interior trim. The balsam fir is seldom used successfully as a cultured ornamental. It is intolerant of city smoke and air pollution and needs constant soil moisture. Perhaps the major value of the balsam is its use during the Yuletide season. A large number are harvested as Christmas trees and shipped to cities throughout the country. Its beautiful shape and aroma, along with its tendency to retain its needles and color long after they are dried out, make this tree a favorite Christmas tree. Its boughs are also used in wreaths. The aesthetic value of this tree is high and is best enjoyed in its native habitat.