

Balsam Fir (*Abies balsamea*)

An evergreen tree from the Pine Family (Pinaceae)



3-5	20'	70'	slow	full sun to partial sun	symmetrically pyramidal to open	moist, acidic soils
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Balsam Firs not native to Ohio, but is found as an escape into the wild in small areas of northeastern Ohio and Appalachia, where the winters are coldest and the soil is more acidic. It is rarely planted as an ornamental evergreen in urban areas, where its growth rate is slow. The soft wood of this tree is used in Canada as pulp for paper production. It is also prized as a Christmas tree that holds its needles especially well after cutting.

Balsam Fir is native to much of Canada, New England, and the northernmost states of the central United States and Great Lakes region. Mature specimens found in the open may grow to 70 feet tall by 20 feet wide, with a columnar growth habit and layered branching. As a member of the Pine Family, it is related to other Firs, as well as to the Larches, Spruces, Pines, and Hemlocks.

Planting Requirements- Although not native to Ohio, Balsam Fir achieves reasonable growth in. Placement near bodies of water so that its deeper roots can tap into the water table (or watering with an irrigation system, such as at Christmas tree farms) assists its summer survival, as does general shelter from the drying winds of summer. As with any evergreen, it may be used as a screen or windbreak. It grows in full sun to partial sun, from zones 3 to 5, and strongly prefers areas with cool summers and cold winters.

Potential Problems- Firs are generally disease- and pest-free once established, as long as they are sited in relatively cool summer climates. Balsam Fir is occasionally prone to trunk canker as a disease, and woolly adelgid and spruce budworm as pests, but not usually so.

The tree shown in the top photo is sited in a cemetery in Columbus, Ohio, and has obviously survived many hot and dry summers in the center of the state to achieve state champion status. It is predictable that, like most tall and isolated trees, it eventually falls victim to either lightning or strong winds. This tree was struck by lightning in 1993 and has many dead individual branches, but still survives today.

Leaf Identification Features



The true firs are distinguished from other evergreens by short flat needles that tend to curve above the stem plane. In addition, their needles are non-stalked (that is, without a short petiole) and merge with the twig directly by a suction-cup type of attachment. Upon needle drop a few years later, firs leave behind depressed circular areas on the otherwise smooth twigs.



Like many evergreens, the spring needle growth on Balsam Fir is bright green, and contrasts sharply with the shiny, dark green uppersides of the older needles. Mature needles have two silver bands on their lower sides, creating an interesting effect when viewed up-close. Balsam Fir has needles that are about one inch long, with the needles arranged in two rows on either side of the twig, curving upwards with a narrow V-shaped empty space along the top of the twig. No needles are found on the bottom of the twig, except at the very tips. Balsam Fir has needles that are especially fragrant when bruised or brushed against.

Other Identification Features



Like many evergreens, Balsam Fir is monoecious, having its male flowers open in early spring and distribute wind-blown pollen to its female flowers (or to those of nearby trees of the same species). Female flowers are often never seen, as they are usually found only in the upper canopies of trees at least twenty feet tall.



Later in the summer, purple to green cones may be seen at the top of Balsam Fir, and binoculars reveal that they are held upright, rather than pendulous. In the true firs like Balsam Fir, the stiff scales of the cones disintegrate soon after releasing their seeds in autumn and early winter, leaving only their central spires on the winter twigs.



Firs (and some of the Spruces) tend to have a geometry where all of the twigs line up in the plane of the branch, creating a distinctly layered effect. With Balsam Fir, this "planar geometry" also has the soft flattened needles curving upward above the smooth gray twigs and branchlets.



The mature bark of Balsam Fir looks like that of most of the Firs and Spruces - gray to brown, composed of flakes and plates and flattened ridges, often sprinkled with numerous light-colored sap drippings.