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Magnolias and Firs: The John Fraser Connection

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By R. Kelly Coffey

Range maps of firs and magnolias generally show the trees to be located hundreds of miles apart. The flowering magnolia is popularly associated with the balmy South; the fir- a conifer- with the frigid North.

Yet, as is true of so many other plants, the unique geography of the Southern Appalachians has brought two species of these trees together: Abies fraseri (Fraser fir) and Magnolia fraseri (Fraser magnolia). The only place in the world where these particular species are found is in the southern mountains.

Fraser fir and Fraser magnolia have a number of common characteristics. In addition to the name they share, both trees have a limited range in the southern Appalachians. As a result, the two species were discovered relatively late compared to other North American trees.

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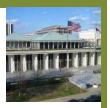

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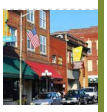

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An Elusive Magnolia

Although several magnolia species are found in the Appalachians, the Fraser magnolia is somewhat obscure. A range map of the tree shows that its greatest distribution is in western North Carolina and eastern West Virginia, with much smaller ranges in other states of the southern Appalachians.

The tree grows best with little competition, thus it is frequently found along the woods edges, or in spots where large, fallen trees have left a gap in the forest canopy. Fraser magnolia favors mid-level elevations around 3,000 feet, but even in the most favorable locations it constitutes no more than 10 percent of the forest trees.

As the growing season progresses, the Fraser magnolia develops red, oblong fruiting pods. In September the pods harden and take on a conelike appearance, eventually releasing seeds from numerous capsules. The mature seed pod itself is one of the more attractive features of the Fraser magnolia, being covered with red, thornlike structures.

After the seeds have dispersed, the tan interior of the capsules creates a pleasing contrast with the dark brown and red of the rest of the pod. The seed pods have ornamental value because, like conifer cones, the pods will keep indefinitely if brought indoors.

In 1775, botanical explorer William Bartram discovered the Fraser magnolia in northern Georgia, but waited 16 years before publishing a description of it. In the meantime, British nurseryman John Fraser came to America and collected a specimen of the tree from northwestern South Carolina in 1787. While in South Carolina, Fraser met Thomas Walter, who published a botanical book the following year crediting Fraser with finding the new magnolia. Although Bartram is recognized

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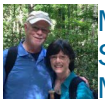
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today as the discoverer of the tree, Fraser's name remains.

The Rise & Fall Of Fraser Fir

The Fraser fir shares not only the nurseryman's name with the magnolia, but it also has a similar geographic range. Like the Fraser magnolia, the conifer is endemic to the southern Appalachians. It grows naturally only in three states — North Carolina, Tennessee, and Virginia — and only at elevations over 5,000 feet.

Ironically, the Fraser fir was once a little-known tree, but now it is a commodity found in thousands of homes every December. The nursery industry has discovered that the Fraser fir has all the characteristics of a perfect Christmas tree: soft needles, a symmetrical shape, and rigid twigs that hold ornaments well. Another critical characteristic is that it can be cultivated at lower elevations.

Consequently, the Fraser fir has become one of the most popular Christmas trees, being grown as an important agricultural crop in many mountain counties, and having a major economic impact in those areas. Yet, in another ironic twist, the natural firs on the mountain peaks are dying. Much of the blame can be placed on the balsam woolly adelgid, an insect introduced from Europe. But many experts also point to air pollution as a major contributor to the decline of the high-elevation trees.

Professional and national rivalries played a role in the discovery of the Fraser fir. In 1787, the famous French botanist Andre Michaux set out from Charleston, South Carolina with John Fraser as a traveling companion. Michaux soon grew tired of Fraser's company, claiming that he talked too much.

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At one point on the journey, their horses wandered off in the night. Michaux, seeing an opportunity to get rid of Fraser, persuaded him to continue on the route while Michaux looked for the horses. As Fraser pressed on into the mountains, he came upon an unknown species of fir, and correctly received credit for its discovery. Having come so close to finding the new fir himself probably annoyed Michaux, for he considered himself a superior botanist to Fraser and thought Fraser was motivated by gaining recognition for Britain at the expense of France.

Two trees that are so botanically different have surprising similarities. Besides being found in limited areas only in the southern Appalachians, both the Fraser magnolia and the Fraser fir have a connection with British nurseryman John Fraser, and were discovered within a few years of each other. Each of these discoveries in some way involved two other famous botanists. The story of the Frasers illustrates the botanical richness of the southern mountains, and the region's international reputation for plant uniqueness and diversity.

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