Sassafras: A Neglected Native Ornamental

by Richard E. Weaver, Jr.

One of Boston's fine old trees is the specimen of Sassafras (Sassafras albidum) pictured on the opposite page. It is growing in the front yard of a home owned by Mrs. B. Carney at 153 Savin Hill Avenue, Dorchester, and it measures 43 feet in height with a trunk circumference of 6 feet, 5 inches. Although little is known of its history, the tree is certainly more than a hundred years old.

Sassafras is a common and familiar tree throughout most of the eastern half of the United States, from southern Maine west to Iowa and south to Florida and Texas. The picturesque common (and generic) name is of obscure origin, but it was used by the French settlers in Florida as early as the sixteenth century. The tree is characteristically a plant of forest margins and clearings, but it also is often somewhat weedy, appearing in old fields, hedgerows, and along roadsides where it rapidly forms clumps by means of suckers and stolons. It is often thought of as being a rather small tree, but in the southern part of its range it occasionally reaches considerable size. The largest specimen on record (American Forests 75(2):24. 1969), growing in Owensboro, Kentucky, is 100 feet tall with a trunk circumference of 17 feet, 3 inches. Therefore the tree featured in this article is rather a small one in comparison to the "national champion," but still an exceptional specimen considering that it is growing in an urban environment near the northern limit of the species' hardiness range. Still, it is by no means the largest tree of its species in Massachusetts. That distinction goes to a specimen in East Taunton with a height of 56 feet and a trunk circumference of 9 feet, 10 inches. An even larger one, long since gone, was reported (Russell, G. W. 1886. Gardener's Monthly 28: 22.) to have grown in West Cambridge in the mid-nineteenth century.
Sassafras, with one American and two Asiatic species, is a member of the Laurel Family, a large group of primarily tropical woody plants; several genera are native to the United States, but the only other representative in the New England flora is the Spicebush (Lindera benzoin). The family is named for the Grecian Laurel, Laurus nobilis, of the Mediterranean region (not to be confused with the native Mountain Laurel, a member of the Heath Family or Ericaceae), the leaves of which are the source of the bay leaf used as a seasoning in cooking. The leaves, stems, and/or bark of most members of the Laurel Family contain pleasant-smelling oils, and therefore are strongly aromatic when crushed or scraped. These oils are distilled from the wood of Cinnamomum camphora, an Asiatic member of the family, to produce the camphor of commerce: the dried bark of another species of Cinnamomum yields the spice cinnamon.

Various parts of the Sassafras tree also give off a spicy fragrance when crushed, and the oil distilled from the bark of the roots has been used commercially as a flavoring in candies, medicines, and soft drinks, such as root beer and sarsaparilla, and as a perfume in soaps. The oil also has mild antiseptic qualities, and it was used in dentistry as a disinfectant of root canals. In addition, a tea brewed from the roots and served either hot or cold, has long been a popular drink in rural areas of this country, both as a refreshment and as a “spring tonic.”

The healing qualities of Sassafras were once believed to be quite considerable. As early as 1574, soon after the tree’s discovery, various extracts were hailed as a virtual panacea, and they commanded high prices in Europe. Several expeditions were sent to the New World with the express purpose, among others, of collecting Sassafras. Among these was the voyage of Bartholomew Gosnold and Bartholomew Gilbert in 1602, one of the earliest to the coast of New England. Good accounts of this fascinating aspect of our history may be found in the following: Carroll, C. F. 1973. The timber economy of New England. Brown University Press, Providence, pp. 42–44; and Randall, C. E. 1964. A toast to a tree. American Forests 70(5): 22–24; 42.

Eventually Sassafras fell into disrepute as a panacea, and recently oil of sassafras actually has been found to be potentially hazardous. Experiments carried out by Lehman (Assoc. Food Drug Officials U.S., Quart. Bull. 25: 194. 1961.) under the auspices of the United States Food and Drug Administration, found that if safrol, one of the primary constituents of
Foliage, male flowers (#1), female flowers (#2), and fruits of Sassafras albidum. From Michaux, F.A. 1818. The North American Sylva, vol. 2, plate 81 (as Laurus sassafras).
the oil, were fed to rats in large quantity, they developed liver cancer, and if fed in smaller quantities, it produced other, non-cancerous damage. And, as reported in the 25th edition of the *Dispensatory of the U.S.A.* (1955), safrol, if taken in sufficient dose, quickly kills by paralysis of respiration; lesser doses cause death by "widespread fatty deterioration of the heart, liver, kidneys, etc." The same reference also reports, from the December 1888 *Cincinnati Lancet-Clinic*, that a teaspoon of the oil itself "... produced in a young man vomiting, collapse, somewhat dilated pupils, and pronounced stupor." The FDA, as a result, placed a ban on sassafras oil in 1960.

Sassafras lumber has never been of commercial importance, partly because trees of timbering size are few and far between and partly because the wood is brittle and coarse-grained. However, since it is quite resistant to rot and it shrinks very little upon drying, the wood has been used for fence rails, railroad ties, buckets, barrels, and small boats.

Even though its wood is weak, its healing powers mostly fable, and its oil a potential hazard, Sassafras is still a useful tree and a very beautiful one as well. Few of our native trees have so many ornamental qualities and yet are so infrequently cultivated.

Sassafras is attractive at all seasons. The yellow-green flowers appear in the springtime before the leaves, in late April or early May at the Arnold Arboretum, and although individually they are not showy, a tree in full bloom is pleasing, giving about the same effect as a Norway Maple, Spicebush, or Cornelian Cherry. The leaves are a fresh yellowish-green during the summer, and they are unusual in that basically three different types are found on an individual tree (see illustration). The fruits are of a type unique to the Laurel Family. Those of Sassafras resemble a small dark blue cherry perched atop a red stalk-like structure reminiscent of the shape of a golf-tee. The fruits, though attractive, are seldom seen for several reasons: (1) Sassafras trees are basically either male or female, as in hollies, so not all individuals produce fruit; (2) fruit production is evidently sporadic, even in basically female trees; and (3) the fruits are eaten by a variety of bird species as soon as they ripen. The color and the effect of the fall foliage is about as spectacular as that of any tree, the leaves typically turning orange with tints of yellow, red, and salmon, and for this reason alone the tree deserves more recognition as an ornamental. Finally, Sassafras is attractive even in the winter with its bright green twigs and picturesque profile. In younger individuals,
the branches are horizontal with upturned tips, while older specimens, like the one pictured here, develop a rugged, craggy crown.

Little information is available on the behavior of Sassafras in cultivation. It has not been used as a street tree to any appreciable extent, so it is not known whether or not it would be a suitable species for this purpose. The fact that such a large apparently healthy specimen is present in Dorchester, however, suggests that it will tolerate urban conditions. Sassafras apparently prefers acidic, sandy, well-drained soils, but I have seen it growing perfectly well in heavy limestone soils. It is not susceptible to any serious diseases, and the Japanese Beetle is its only major insect pest. The larvae of several other species do feed on the leaves of the tree, causing but minor damage, but this may not be an unfavorable attribute since two of them, the Spicebush Swallowtail and the Prometheus Moth, are among our more attractive insects.

Sassafras is somewhat difficult to propagate and definitely difficult to transplant, perhaps helping to explain why it is not more frequently cultivated. According to Mr. Alfred Fordham, Propagator at the Arnold Arboretum, the seeds germinate readily if stratified when fresh, but they are seldom available in large quantities. Propagation by cuttings is difficult if not impossible, unless the cuttings are taken from sucker shoots. The root system is extensive and the roots themselves are fleshy; only seedlings or small saplings can be successfully transplanted as a rule. But perhaps with the ascendency of sophisticated containerized growing by nurserymen, the Sassafras, one of our most ornamental native trees, will become more readily available to the horticultural public.