Magnolia fraseri

by Richard E. Weaver, Jr.

The umbrella magnolias (section Rhytidospermum of Magnolia), are comprised of 8–10 species, variously distributed in the southeastern United States (3–5 species, depending on the taxonomist), the mountains of Mexico (2 species) and eastern Asia from the Himalayas through China and Korea to Japan (3 species). The most conspicuous feature of this group are the large leaves clustered at the ends of the branches, simulating an umbrella and accounting for the common name. The species are not currently popular in American horticulture, perhaps because their bad habits are concentrated in Magnolia tripetala, the most commonly cultivated species and the one to which the name “umbrella magnolia” is often exclusively applied in common usage. With its gaunt habit and undistinguished, ill-scented flowers, this species certainly pales as an ornamental when compared with other magnolias such as M. kobus and its varieties and the numerous cultivars of M. x soulangeana. In addition, the characteristic large leaves of the group make the plants somewhat difficult to site effectively in a landscape situation. In the American M. macrophylla, for instance, they reach enormous proportions — as much as three feet long and a foot broad, the largest simple leaves of any native woody plant. On the other hand, these large leaves impart to the plants a decidedly unusual and exotic appearance, and several species have
attractive, fragrant flowers followed by large and conspicuous, reddish fruit aggregates. A few species combine these favorable characteristics with a refined growth habit, making them first class garden plants worthy of more frequent cultivation. Among these is *Magnolia fraseri*, known as the mountain, eared, or Fraser's magnolia, one of our lesser known, native ornamental trees.

*Magnolia fraseri* was named for John Fraser, a Scot who made numerous trips to North America between 1783 and 1809 in search of plants which might prove to be useful ornamentals in the British Isles. During his second trip, in 1785, he met Thomas Walter near Charleston, South Carolina, who was at work on a compilation of the plants of the Carolinas. When he returned to England, Fraser took Walter's manuscript with him and had it published in 1788. Many plants were described for the first time in Walter's *Flora Caroliniana*, including *M. fraseri* which he named in honor of his benefactor.

Fraser may also have been responsible, in 1786, for introducing *Magnolia fraseri* into cultivation in England, as reported by W. T. Aiton in the second edition (1811) of *Hortus Kewensis*, a catalogue of the plants cultivated at the Royal Botanic Garden, Kew. But, according to J. C. Loudon, this honor must be shared by William Bartram who reportedly also sent the plant to England in 1786. William Bartram was one of the most important as well as one of the most picturesque of early American naturalists and plant explorers. He was the son of the equally illustrious John Bartram, also a plant explorer but, in addition, the founder of a garden on the banks of the Schuylkill River near Philadelphia, which is generally recognized to be the first botanic garden in the United States. From 1773 until 1777 the younger Bartram travelled through the southeastern United States in search of unusual plants and animals for his patron, the insatiable English collector, Dr. John Fothergill. The account of his travels (*Travels through North and South Carolina, Georgia, East and West Florida*, originally published by James and Johnson in London in 1792 but reprinted in facsimile by Beehive Press, Savannah, Georgia in 1973) is one of the classics of American natural history. The following excerpt, describing what is generally taken to be the discovery of *Magnolia fraseri* (then known as *M. auriculata*) in the mountains of western South Carolina, and still one of the best available descriptions of the plant, is a good example of the style which make the *Travels* such a delight to read (Bartram, 1792, pp. 337–8).

This exalted peak I named mount Magnolia, from a new and beautiful species of that celebrated family of flowering trees, which here, at the cascades of Falling Creek, grows in a high degree of perfection: I had, indeed, noticed this curious tree several times before, particularly on the high ridges betwixt Sinica and Keowe, and on ascending the first mountain after leaving Keowe, when I observed it in flower, but here it flourishes and commands our attention.

This tree, or perhaps rather shrub, rises eighteen to
thirty feet in height; there are usually many stems from a root or source, which lean a little, or slightly diverge from each other, in this respect imitating the Magnolia tripetala; the crooked wreathing branches arising and subdividing from the main stem without order or uniformity, their extremities turn upwards, producing a very large rosaceous, perfectly white, double or polypetalous flower, which is of a most fragrant scent; this fine flower fits in the center of a radius of very large leaves, which are of a singular figure, somewhat lanceolate, but broad towards their extremities, terminating with an acuminated point, and backwards they attenuate and become very narrow towards their bases, terminating that way with two long, narrow ears or lappets, one on each side of the insertion of the petiole; the leaves have only short footstalks, fitting very near each other, form an expansive umbrella superbly crowned or crested with the fragrant flower, representing a white plume; the blossom is succeeded by a very large crimson cone or strobile, containing a great number of scarlet berries, which when ripe, spring from their cells and are for a time suspended by a white silky web or thread. The leaves of those trees which grow in a rich, light humid soil, when fully expanded and at maturity, are frequently above two feet in length and six or eight inches where broadest.

The "mountain magnolia," one of the common names for *M. fra
er*, refers to the tree's natural habitat in the southern Appalachian Mountains, extending from Virginia and West Virginia south to Georgia and Alabama. The forests covering these mountains, particularly those in Great Smoky Mountains National Park on the North Carolina–Tennessee border, are well known for the diversity and abundance of the spring-blooming plants they harbor. The annual excursions to the Smokies sponsored by the University of Tennessee are aptly called "Wild-flower Pilgrimages," for to be in that region during late April and early May is an almost transcendental experience for the lover of our native woodland flora. The diversity of species and the abundance of bloom are concentrated in areas known locally as coves or hollows—sheltered areas in a gap between mountains, usually the valley of a crystal-clear and cascading stream. Here many of our hardwood tree species reach their best development and here, in reserves such as the Smokies, we are still able to glimpse the grandeur of what was once the most extensive and magnificent of temperate forests. The mountain magnolia is one of the trees typical of these cove forests, and it grows along with the cucumber magnolia (*Magnolia acuminata*), the tulip poplar (*Liriodendron tulipifera*), the sweet buckeye (*Aesculus octandra*), and the silverbell (*Halesia carolina*).

Although a relatively minor component of the cove forests, *M. fra-
A specimen of Magnolia fraseri in bloom in the wild of Ashe County, North Carolina. Unlike other umbrella magnolias, the flowers of this species appear before the leaves have fully expanded. Photograph by R. Weaver, Jr.
M. fraseri is not easily overlooked. The trees normally have several trunks, the smooth bark almost obscured by growths of crustose lichens and leafy liverworts. But the early-unfolding purplish leaves, encircling the saucer-sized, fragrant flowers, stand boldly against the soft yellow-green canopy. Cove forests are found at elevations generally between 1000 and 3000 feet, but *Magnolia fraseri* occasionally grows also at higher elevations in strikingly different situations. In the windswept, cloud covered gaps between the high mountains of this region, which reach their peak in Mt Mitchell at 6684 ft., *Magnolia fraseri* can also be found. The American beech (*Fagus grandifolia*) is the most common tree here (the places are known locally as “beech gaps”), but *M. fraseri* is occasionally found along with *Aesculus octandra*. Here the trees are stunted, gnarled and covered with lichens, very different in appearance from those of the same species at lower elevations. The leaves are smaller than in the coves below, and it blooms several weeks later. Although the tree looks out of place here, it prospers and its leaves and flowers are surprisingly seldom marred by the effects of wind and cold.

Like those of all its close relatives the leaves of *Magnolia fraseri* are large in size, usually 10 to 15 inches long and 6 inches or more broad. But unlike both its American relation, *M. tripetala*, or its oriental relatives, the base of the leaf is drawn out into two rounded lobes, one on each side of the petiole. These lobes, technically “auricles” or less technically “ears” gave rise to the infrequently used common name “eared magnolia,” and to a now incorrect Latin name for the species, *M. auriculata*.

Several foliar features combine to make *Magnolia fraseri* one of the best ornamentals among the umbrella magnolias. The leaves are less coarse than those of its relatives, particularly at flowering time. The first flowers appear while the leaves are still quite small so a tree in bloom is much showier than one of those species in which the flowers appear after the leaves have fully expanded. The unfolding leaves are colored a deep, reddish-purple. In most clones this color fades rapidly, while in others it persists well into the growing season. Unfortunately none of the latter appear to be in cultivation. Finally, *M. fraseri* has better autumnal foliage color than most magnolias. The leaves first turn yellow with the veins edged in golden brown. The brown color spreads to eventually cover the leaf; it varies in intensity almost to mahogany in some individuals but it is never dull and lifeless.

The flowers of *Magnolia fraseri* are its primary adornment. They are pleasantly fragrant and saucer-shaped, with the tepals wide-spreading at maturity, and from 7 to 12 inches across. The nine tepals arranged in two series are normally a pale cream color, but Savage (1976) reports that during cool weather they become yellowish, approaching the color of lemons. In Great Smoky Mountains National Park, near the southern part of its natural range, flowering commences during the last week of April. In the Philadelphia area the trees are normally in full bloom during early May, and in the Boston
area they bloom from mid- to late May into early June. Judging from herbarium records the blooming period lasts about two weeks in the Boston area.

The flowers are followed by the cone-like fruit aggregates typical of magnolias. In *Magnolia fraseri* these are reddish and 3 to 4 inches long. They reportedly mature around the middle of August, considerably before those of most other *Magnolia* species. However, I collected mature fruits in the central mountains of North Carolina during the second week of September in 1979.

Wild trees normally grow with several separate trunks although most cultivated specimens have only a single trunk which is often branched near the base. Height seldom exceeds 40 feet although the largest known wild specimen in Great Smoky Mountains National Park (measured in 1949) is 65 feet tall with a spread of 54 feet and a trunk circumference of 7 feet, 7 inches. The champion tree in the United States, however, is one cultivated in Philadelphia. In 1968 this tree was 65 feet tall with a spread of 50 feet and a trunk circumference of 8 feet, 4 inches. The largest specimens cultivated in England are of similar proportions. In New England they are generally smaller, probably in response to the relatively unfavorable climate. A plant in the Sargent Road Trust, formerly Holm Lea, the estate of Charles S. Sargent in Brookline, Mass., is currently 33 feet tall. Its age is not certain, but it is probably a fully mature specimen dating from Sargent's time.

The pyramid magnolia (*Magnolia pyramidalata*) is closely related to *M. fraseri* and is probably only a variety of that species. It is a plant of
The smooth bark of an unusual single-trunked specimen of Magnolia frasen on Professor Sargent's former estate in Brookline, Mass. Photograph by P. Del Tredici.
the Atlantic and Gulf Coastal Plains from South Carolina to eastern Texas, and therefore its range does not overlap with that of typical *M. fraseri*. The major differences between the two are ones of size, *M. pyramidata* being a shorter, shrubbier plant (although the champion specimen, from eastern Texas, is 60 feet tall) with shorter stamens and fruit aggregates than typical *M. fraseri*. Judging from its natural range, the former plant is probably not as hardy as its mountain counterpart, but it is so rare in cultivation that this statement is merely a guess. It has survived to flowering size in Illinois and Indiana.

Reports concerning the hardiness of *Magnolia fraseri* itself are confusing. Wyman (1965, p. 283) lists the species as being hardy in the Arnold Arboretum Zone 5, which includes Boston, but then describes it as being unreliable in the Boston area. On the other hand, Leach (1973) reports that it was not at all damaged during a severe freeze (−35°F) in his Pennsylvania garden when most all of his other species of magnolia suffered to varying degrees. Few records are available for specimens cultivated in New England. The one on Professor Sargent's former estate, estimated to be 70 years old, has already been mentioned. One specimen, grown from seed from a New Jersey nursery, lived for 68 years in the Arnold Arboretum before it was "disposed of" in 1947; a plant grafted from it lived for 64 years. Both of these plants survived temperatures of −15°F. Since magnolias are comparatively short-lived trees in general, our experience at the Arnold Arboretum would indicate that *M. fraseri* is quite reliably hardy here. At any rate the species occupies a considerable latitudinal as well as elevational range in the wild. Presumably individuals collected from Virginia or West Virginia would be the best ones for cultivation in New England. At present we have seedlings at the Arnold Arboretum collected from three stations in the North Carolina mountains, including one from the northern part of the state. These are being tested for hardiness here and they will shortly be available for testing elsewhere.

Basic culture for *Magnolia fraseri* is similar to that for other magnolias. The plant thrives in a rich, moist, slightly acid soil, and it blooms well in partial shade. It should be planted in a somewhat protected location since the large leaves are sometimes damaged by wind and rain. There are no reports of serious diseases or insect pests, and I have never noticed insect damage to my plant or to wild ones. Growth rate is moderate, and my seven year old plant is now 10 ft. tall. It has not yet flowered, although Treseder (1978) reports that the species usually reaches blooming size in five to six years.

To my knowledge there are no cultivars of *Magnolia fraseri*. However, selections for richness and persistence of purple foliar color, as well as yellow floral pigment could result in plants exceptional in ornamental value and hybridization potential. We at the Arnold Arboretum would welcome any information on exceptional variants of this species.
Magnolia fraseri is presently rare in cultivation, and I know of only two nurseries that presently offer it for sale: Gardens of the Blue Ridge, Pineola, North Carolina 28662; and Little Lake Nursery, P.O. Box 782, Willits, California 95490. Although records at the Arnold Arboretum show that seeds germinate readily after three months of cold stratification, fresh seeds are not easily available. We have not tried to propagate it from cuttings, but all of our attempts at grafting it have failed. Gossler Farms Nursery in Springfield, Oregon, one of the foremost magnolia nurseries in the country, has also reported repeated failure with cuttings and grafts, although these problems can hopefully be overcome with further experimentation.

Many of our fine native plants remain rare in cultivation in our own country for a variety of reasons, overfamiliarity with them as wild plants; lack of commercial availability; ignorance as to culture and propagation; or plain snobbishness. Many are far better appreciated abroad. It is hoped that this article will stimulate more interest in Magnolia fraseri, a truly fine native plant, not only among magnolia fanciers but also among the general gardening public.
References


—— 1838b *Magnolia auriculata* In, *Arboretum et Fruticetum Britannicum* Vol 1 pp 276–277


