

The Fothergillas

The variety and abundance of native woody plants has long impressed visitors to the rich mountain forests and coastal swamps of the southeastern United States. From this rich and varied flora have come many of our cultivated flowering trees and shrubs. Perhaps the most famous of these, famous because of its history, rarity and beauty, is *Franklinia alatamaha*, discovered in southeastern Georgia by John and William Bartram in 1765. Other notable southeastern natives include the Sweet Shrub or Carolina Allspice (*Calycanthus floridus*), the Silverbell tree (*Halesia carolina*), and several of the Stewartias, Rhododendrons, and Magnolias. Less well known than these, but undeservedly so, are those plants of the genus *Fothergilla*.

These lovely shrubs are members of the same family as the Witch Hazel (Hamamelidaceae) and markedly resemble that plant in their foliage and the shape and structure of the fruits. The flowers, however, are quite different, at least with casual inspection. Rather than having the four narrow, yellow or reddish petals as in Witch Hazel, the flowers of *Fothergilla* are without petals, and even the sepals are greatly reduced. The conspicuous parts are the 12 to 32 stamens with creamy-white, narrowly club-shaped filaments and minute yellow or purplish anthers. The individual flowers are small, less than $\frac{1}{8}$ inch across, but they are massed in dense, showy spikes which may be as much as three inches long and one-and-a-half inches broad.

Although such colorful names as "Bottle-Brush Bush," "Granny Gray-Beard," "Spring-Scent," and "Witch Alder" (the last the one most commonly used in the technical manuals), have been applied to these shrubs, none are in general use. As is the case with the Rhododendrons and the Magnolias, the scientific name has become the popular name.

Dr. John Fothergill, in whose honor the genus was named, was a Quaker physician and philanthropist of London who maintained a life-long interest in natural history. At Upton, in Essex, he established an extensive garden in which he grew plants from all over the world in greenhouses reputed, at the time, to be the most extensive anywhere. It was as a patron however, that Dr.

Fothergill rendered his most important service to eighteenth century natural history. Among other important contributions, he subsidized William Bartram's travels in the southeastern United States; and Philip Miller's *The Gardener's Dictionary*, one of the earliest works devoted to gardening and horticulture, was begun and finished under his patronage.

At present, two species of *Fothergilla* are recognized, both of these native to the southeastern United States. *F. gardenii* (also known in the past as *F. alnifolia* or *F. carolina*) is restricted in its natural range to the Atlantic and Gulf Coastal Plains from northeastern North Carolina to the western panhandle of Florida and adjacent Alabama. Uncommon to rare in various parts of this range, *F. gardenii* is a plant of one of the characteristic Coastal Plain vegetation types — the pocosin or shrub bog. Pocosins are low-lying areas, moist but without permanent standing water, which support a characteristic vegetation composed primarily of broad-leaved evergreen shrubs including Sweet Bay (*Magnolia virginiana*), Red Bay (*Persea borbonia*), Wax Myrtle (*Myrica cerifera*) and several species of Holly (*Ilex*). The vegetation is dense and frequently covered with a dense mat of one of the Catbriers (*Smilax laurifolia*), a combination which discourages exploration. Fortunately for one interested in collecting it, as I was during my graduate days at Duke University, *F. gardenii* generally grows only around the edges of the pocosins. The peak of flowering in North Carolina, where it is most abundant, is during the second and third weeks of April, a time when few other shrubs are blooming. An exception, unfortunately for the collector, is one of the low Shadbushes (*Amelanchier*) which is much more common and which strongly resembles *F. gardenii*, especially from a car window.

Fothergilla major (including a plant known in the past as *F. monticola*), in contrast to *F. gardenii*, is a plant of the southeastern highlands. It occurs in scattered localities from northwestern North Carolina and northeastern Tennessee along the Appalachians into north-central Alabama, with a very few isolated populations in the Piedmont of central North Carolina. Growing at elevations several thousand feet higher than *F. gardenii*, the flowering season of *F. major* is consequently later, the peak in North Carolina occurring from late April to early May. Although *F. major* is infrequently encountered, it should not rightly be considered a rare plant since it is usually abundant in the localities where it occurs. The plants spread profusely by means of underground stems and often form large, virtually pure stands. *F. major* is occasionally found in mature,



Fothergilla major. Photo: H. Howard.



Fothergilla major in natural habitat near Hillsborough, N.C.
Photo: R. Weaver.

mesic forests, but its most characteristic habitats are disturbed areas or dry ridges, areas unfortunately also favored by one of the more unpleasant residents of the Southern Appalachians. One of my most vivid memories of those otherwise delightful summers in the southern mountains is of the day when I discovered that I had been sharing, who knows for how long, the largest patch of *Fothergilla* I have ever seen with a four-foot Timber Rattlesnake. Ever after I entered and explored *Fothergilla* patches with the greatest caution.

The two species of *Fothergilla* have often been confused by professionals and amateurs alike. There are, however, several characters by which they may easily be distinguished. *F. major*, or the Tall Fothergilla, is a profusely branched, medium-sized to tall shrub, usually three to six feet in height but occasionally becoming nearly twenty feet tall, at least in the wild state. The flowers appear with the leaves. The leaves are very similar to those of the common Witch Hazel (*Hamamelis virginiana*), both in size and shape; the major difference is that the leaves of Witch Hazel are toothed to the base while those of *F. major* are toothed only in the upper two-thirds. *F. gardenii*, or the Dwarf Fothergilla, on the other hand, is a low, sparsely branched shrub, very seldom more than 2½ feet tall. The flowers appear before the leaves. The leaves are much smaller and narrower than those of *F. major*, and they are toothed only above the middle, if at all.

There appear at present to be no named horticultural varieties of either of the species of *Fothergilla*. During the nineteenth century several varieties of *F. gardenii* were described from cultivated material in England. These were based on minor characteristics and do not merit recognition as cultivars. There are, however, two distinct types of *F. major*. The typical material has leaves which are distinctly whitish beneath; a form, which has been called *F. monticola*, has leaves which are green beneath. These types, which grow side by side in the wild, do not constitute biological species or even varieties but may well be worthy of recognition as cultivars. In addition to these rather distinct types, there is considerable clonal variation in shape, autumnal coloration, and profusion of flowering within the presently cultivated *F. major*. A selection program could well result in the establishment of several superior cultivars.

Although restricted in their natural ranges to the southeastern United States, the Fothergillas are hardy as far north as New England, at least one specimen of *F. major* prospering in the Arnold Arboretum for the last 95 years. *F. gardenii* is evidently

the more tender of the two species. The specimens of this species which have been grown at the Arnold Arboretum have not thrived, although one has survived for nearly 75 years.

The rarity of the Fothergillas in cultivation is certainly not due to a lack of desirable characteristics. Although wild specimens bloom sparingly, the cultivated plants at the Arnold Arboretum are covered with spectacular masses of the unusual "bottle-brush" inflorescences in May. The flowers are decidedly fragrant, the scent being somewhat difficult to describe but nevertheless very pleasant. In the fall the shrubs are again a mass of color, the foliage varying from a brilliant scarlet to a more subdued russet. *F. major*, the more desirable of the species, becomes a dense, well-formed, erect or more or less spreading shrub; the largest specimen at the Arnold Arboretum is eight feet tall and about as broad. It is a particularly attractive subject for specimen planting and would also appear to be suitable in situations where a tall, informal hedge or barrier is desired. *F. gardenii*, a low, spreading shrub, is a fine subject for the shrub border, at least, in the Northeast, in sheltered spots.

The first recorded collection of a Fothergilla was by Dr. Alexander Garden, a Scottish physician who settled in Charleston, South Carolina in 1752. Dr. Garden was an avid student of natural history. He corresponded extensively with the great naturalists of his time, notably Linnaeus, and he was a good friend of John Bartram. *Fothergilla gardenii* was named in his honor as was the familiar *Gardenia*. In a letter to Linnaeus dated May 18, 1765, Garden sent the "characters" of what he considered to be seven new genera of plants. One of these was *Fothergilla (gardenii)*. At a later date, Garden sent specimens of these plants, both dried and pickled in "spirits of wine." In a series of letters from 1765 to 1773, Garden and Linnaeus carried on an argument concerning the classification of *Fothergilla*. Linnaeus maintained that it should be classified under *Hamamelis* (Witch Hazel) because of the similarity in the leaves; Garden persisted in pointing out the numerous differences between Fothergilla, which he called "Anamelis," and Hamamelis. Garden finally won the argument and in a letter to Linnaeus dated May 15, 1773, he wrote, "I am very glad that the most elegant shrub, called by me Anamelis, has at length obtained its proper place, for I was much afraid that it must have submitted to range under the banners of another." Garden was justifiably proud of his victory in the argument with the great Swedish naturalist. In a letter to his friend John Ellis, dated May 15, 1773, he wrote: "You would see by his [Linnaeus] last letter



Fothergilla gardenii Murr. From *Tableau encyclopédique et méthodique, Botanique*, by Lamarck and Poirét. 1799. Drawing by J. E. de Séve.

that I came off conqueror in our dispute about the new genus *Anamelis*, on which I plume myself not a little, but his candor charms me." Although he alluded to *Fothergilla* twice in descriptions of *Hamamelis virginiana*, the common Witch Hazel, Linnaeus never published a formal description of it. The founding of the genus, and the formal description of *F. gardenii*, is attributed to J. A. Murray (1774), a pupil of Linnaeus who revised a portion of his master's work.

Fothergilla gardenii was evidently already cultivated in England in 1765, the year of its discovery. It was grown at Kew Gardens as early as 1789, and seeds were offered for sale by several nurseries in England and France at the beginning of the nineteenth century. Although *F. major* was not formally described until 1820, drawings representing this plant, from material cultivated in England, appeared as early as 1780. A *Fothergilla*, probably *F. gardenii*, was grown in John Bartram's garden near Philadelphia under the name "Gardenia" around the year 1785, the first record of its cultivation in America. Herbarium records show that the *Fothergillas* are rarely cultivated in their native Southeast at present. Their cultivation in this country appears to be concentrated in the New England and Middle Atlantic States. Elsewhere, there are a few records from England, France, Germany, and Switzerland.

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Top: Grandfather Mountain, North Carolina.
Dry, rocky ridges, resembling the favorite habitat of
Fothergilla major. Photo: R. Weaver.
Bottom: *Fothergilla major*. Photo: H. Howard.

