

Witch alder is a resilient, multipurpose shrub that can contribute significantly to the landscape and provides seasonal interest.

*Longwood Gardens conducted trials on 12 different varieties, but it was a wild form of *Fothergilla* that took top honors.*

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Wild About *Fothergilla*

Demand has increased tremendously for new cultivars of ornamental shrubs that can be maintained with minimal work and add beauty to a multipurpose landscape. Gardeners are searching for trouble-free, attractive shrubs that flourish throughout the year. *Fothergilla* (witch alder) is a valuable asset in the landscape, whether as a wild species form or as a cultivated selection. These resilient shrubs have great potential for a variety of landscape needs, including specimen or mass plantings.

For the past eight years, Longwood Gardens, Kennett Square, PA, has evaluated more than 1,300 taxa representing 90 genera of landscape shrubs. Designed to evaluate the plants' attractive appeal in the landscape, this project involved the planting of three shrubs of each variety in a Zone 6 site. Following establishment, the shrubs received only limited maintenance, such as irrigation, mulching and weeding, as needed. Students, volunteers and horticulture professionals collected data on these plants based on their habit, stems, foliage, flowers, fruits, presence of injury, pests and pathogens. The ratings were based on a scale of 1.0 to 5.0, with 1.0 being "unattractive" appearance; 2.0, "acceptable"; 3.0, "attractive"; 4.0, "very attractive"; and 5.0, "best in class."



Fothergilla gardenii 'Blue Mist' offers an alternative, blue-green leaf color to brighten the summer landscape.



Fothergilla major leaves are usually twice the size of *F. gardenii* leaves.



The medium-sized leaves of *Fothergilla gardenii* 'Blue Mist' are slightly narrower than other cultivars.



Fothergilla gardenii 'Bill's True Dwarf' is among the cultivars with the smallest leaves.

A circle of friends. Scottish physician Dr. Alexander Garden (1730-1791) came to Charleston, SC, in 1752 to practice medicine. Garden and Swedish botanist Carl Linnaeus (1707-1778) often exchanged letters, and in 1765, one letter discussed Garden's discovery of several new genera, one being *Fothergilla*. At that time, Garden referred to this plant as *Anamelis*, likely in reference to its similarity to *Hamamelis*. In 1774, following a series of letters, Garden and Linnaeus agreed upon the new genus name of *Fothergilla*. It honored Dr. John Fothergill (1712-1780), an English physician who took part in many scientific discussions with Linnaeus, Garden and John Bartram

of Philadelphia (1699-1777). Bartram was a pioneer botanist instrumental in the introduction of new plants from America to Europe, including *Fothergilla*.

Witch alders revealed. The genus *Fothergilla* comprises *F. gardenii* (dwarf witch alder) and *F. major* (mountain witch alder). Native to the southeastern US, *Fothergilla* is found throughout the Atlantic and Gulf Coastal Plain to the upper Piedmont and mountainous regions. Adaptable to various landscape conditions, this shrub generally does best in acidic, moist, but well-drained soil. In its natural, more shaded, woodland understory setting, *Fothergilla* will sucker and form colonies over time, a characteristic slightly more prevalent in *F. gardenii*, the smaller of the two species.

F. gardenii grows near pond edges and in low-lying areas in the Atlantic and Gulf Coastal Plain, from northeastern North Carolina south to the western panhandle of Florida and Alabama. It is a neat, compact shrub that reaches a height of 3 feet with a slightly larger spread. *F. major* prefers higher elevations than *F. gardenii* and is generally found in the Piedmont plateau, from northern North Carolina and Tennessee to northern Alabama. Compared to the smaller species, *F. major* has thick, bolder stems and a loose habit, and may range in height from 3 to 10 feet or larger.

The leathery, green leaves of witch alder resemble those of *Hamamelis* (witch hazel) and are obovate with irregular dentation. A variable degree of dentation is present in both species, and prominent venation on the surface of the leaves adds ornamental interest. The foliage of *F. major* is generally twice the size of *F. gardenii*, and the dentation typically

Assorted colors coat the leaves of the highly rated *Fothergilla major*.



A sweet fragrance adds to the creamy white inflorescences of *Fothergilla gardenii*.



The veins on *Fothergilla gardenii* leaves add a dramatic touch to the fall color.

Fothergilla can be incorporated into containers to add structure and naturalistic beauty to any garden.

covers two-thirds of the leaf margin above the middle, rather than half of the leaf. However, leaf dentation is a variable characteristic across the genus. The lush foliage remains generally disease-free throughout the summer, ultimately ending in stunning displays of fall reds, purples, yellows and oranges.

From mid-April into early May, *Fothergilla* delights us with a spectacle of creamy white, bottlebrush-like inflorescences accompanied by a sweet fragrance. The petals themselves are absent, and a closer look reveals prominent, 1- to 2-inch-long stamens adorned with white filaments. Flowering occurs prior to the emergence of leaves on *F. gardenii*, leaving the flowers alone to put on the show. The foliage and blooms of *F. major* appear concurrently; peak flowering occurs approximately a week later than the smaller species. Spent, creamy green flower stalks persist through

the end of May and well into June; however, their presence does not take away from the fresh foliage. Additionally, fruit set provides for the existence of discreet, brown seed heads that linger throughout the summer.

Botanists have speculated about the possibility of existing hybrids between *F. gardenii* and *F. major* due to some forms expressing characteristics of both species. Recent research concluded several cultivars of *Fothergilla* variably assigned to either *F. gardenii* or *F. major* are in fact hybrids between these two species, and they have therefore been given a designa-

tion of *F. × intermedia*. It is difficult to identify *F. × intermedia* based on physical characteristics alone, but chromosome and DNA evidence clearly demonstrated the hybrid nature of these plants.

Contestants parade. The shrub trials included 14 different entries of *Fothergilla*. A wild form of *F. major* collected in Burk County, NC, and *F. gardenii* 'Harold Epstein' failed to establish before sufficient data could be collected for evaluation and comparison. The 12 remaining varieties completed the eight-year trial period and included five *F. gardenii*, three *F. major* and four *F. × intermedia*.

The first group of trialed plants represents *F. gardenii*, the lower growing of the two *Fothergilla* species, whose presence in the landscape, however, is considered



In the fall, *Fothergilla gardenii* foliage displays an amazing range of colors.



Fothergilla gardenii 'Jane Platt' is impressive throughout the year, especially during the fall.



Among the top-rated witch alders in spring was *Fothergilla* × *intermedia* 'Sea Spray'.

anything but small. Among the trialed plants was an unnamed form of *F. gardenii* from Spring Meadow Nursery Inc., Grand Haven, MI. A compact cultivar, *F. gardenii* 'Appalachia', was obtained from Roslyn Nursery, Dix Hills, NY, but its original provenance could not be established. *F. gardenii* 'Blue Mist', a selection well-known for its blue-green foliage, was an introduction from Morris Arboretum of the University of Pennsylvania, Philadelphia. *F. gardenii* 'Jane Platt', a low-growing shrub, was named by Gossler Farms Nursery, Springfield, OR, after an avid gardener in Portland. Wild-collected in Aiken, SC, *F. gardenii* 'Bill's True Dwarf' was cloned by Robert McCartney of Woodlanders Nursery for its low-growing form with a height of less than 1 foot.

Several cultivars, such as 'Sea Spray' and 'Red Licorice', described in the past as *F. major*, are now considered to be of hybrid origin. Others, including 'Arkansas

Beauty' and 'KLMG' (Mystic Harbor™), are still regarded as cultivars of mountain witch alder. *F. major* entries in Longwood Gardens' trials, however, did not include any of these cultivars, but were represented by the wild forms from three nurseries. One *F. major* was obtained from Apalachee Nursery, Turtletown, TN, from seed collected in Linville Gorge, NC. The two other entries came from Eastern Plant Specialties, Clark, NJ, and Roslyn Nursery. These three forms represented the exceptional qualities of the species.

The final group of entries represented the hybrids. *F. x intermedia* 'Eastern' (syn. 'Eastern Form') was selected by Gossler Farms Nursery for its tall habit and small, round leaves. *F. x intermedia* 'Mount Airy' was selected by Dr. Michael Dirr of the University of Georgia, Athens, who observed it at Mount Airy Forest and Arboretum, Cincinnati, during the early 1970s. This selection is known for its vigorous

growth, hardiness and consistent fall color. *F. x intermedia* 'Red Licorice' was selected in 1995 by Dr. Paul Cappiello and John Wachter at the Bernheim Arboretum and Research Forest, Clermont, KY, for its bright red fall color. *F. x intermedia* 'Sea Spray' was received from Eastern Plant Specialties; however, the origin of this cultivar remains unknown. This introduction is known for late coloring, compact growth and blue-green foliage.

Seasonal appraisal. Witch alders exhibit strong qualities throughout the year, making them an extraordinary asset to any landscape. The trialed wild form of *Fothergilla* consistently demonstrated all of the features noted in the genus, whereas selected clones typically focused on one or more qualities. No matter what species or cultivar is considered, *Fothergilla* can contribute significantly to the landscape and provides seasonal interest throughout the year.

Fothergilla adds an interesting dimension to the winter scene. Stem details and overall structure become clearly evident when used as a single plant. Upright, light-colored, fine stems and prominent terminal buds were commonly noted. Some species had thicker, light gray branches, often developing a reddish hue, especially on the current season's growth. *F. x intermedia* 'Eastern' best represented these characteristics and appropriately received the highest overall winter rating of 3.0. *F. gardenii* from Spring Meadow Nursery and *F. x intermedia* 'Mount Airy' both established a tight, well-defined branch structure that stood out from the upright forms.

The spring floral display of *Fothergilla* was an inspiring sight regardless of the setting. Plants in the wild are commonly established in shaded locations, such as the forest understory, and tend to have a diminished display of flowers. Modest flowering in a woodland setting, however, can have a huge impact in the landscape, where white spikes of flowers in combination with other characteristics enliven the dormant, early spring scene. This characteristic was evident in woodland areas at Longwood Gardens where only approximately 30 percent of the entire shrub was in bloom. In an open, sunny location, a colony of *Fothergilla* had approximately 70 percent to 80 percent coverage of white blooms. Plants in the shrub trial grew in full sun and generally began to bloom prolifically the last week of April through the first week of May. Depending on the year and cultivar, earlier flowering may occur.

F. gardenii from Spring Meadow Nursery received an average spring rating of



Even before the spring show has begun, tiny green buds on *Fothergilla* × *intermedia* 'Mount Airy' enliven the landscape.



Woodland edges are covered in heaps by the deep red foliage of *Fothergilla* × *intermedia* 'Mount Airy'.

3.0, with records showing that by April 17, 90 percent of the plant was already in bloom. *F. gardenii* 'Jane Platt', with a spring rating of 2.4, was also among the earliest to flower. *F. major* from Roslyn Nursery garnered a 2.1 spring rating for its 90 percent to 100 percent floral display, and *F. × intermedia* 'Sea Spray', with a 3.0 rating, flowered through the second week of May.

An outstanding feature of the genus *Fothergilla* is its leathery foliage — a fresh, long-lasting green color persisting through the summer months, exhibiting negligible signs of disease or insect dam-

age. *F. × intermedia* 'Red Licorice' came out on top for summer ratings with a 3.1. Described as "sage green," its textured foliage ranged from light to dark green. 'Red Licorice' was dually noted for its lack of marginal chlorosis seen in a few other plants and prominent venation visible on the surface of the leaves. The typical wild form of *F. gardenii* from Spring Meadow Nursery, a consistently dense and trouble-free form, received the next highest summer rating of 2.8. *F. gardenii* 'Blue Mist', with a summer rating of 2.6, introduced a blue-green shade to the landscape along with a somewhat elongated and delicate

leaf shape. *F. × intermedia* 'Eastern' displayed prominent leaf venation similar to *F. × intermedia* 'Red Licorice'. This characteristic, common to both cultivars, provided added texture and interest during the summer months.

In the fall, evaluators were drawn to the "sunset" display of leaf colors, ranging from yellow and orange to purple and red. All members of the genus consistently began to show fall color in the first and second week of October. At times, the fall color enhanced the veins of the leaves, adding even more autumn interest. This spectacle lasted throughout October and into late November. In woodland areas at Longwood Gardens, *Fothergilla* glowed in shades of yellows and stood out among the rest of the green surroundings. On the edges of the woods, waves of deep purples and reds swept across a grove of *F. × intermedia* 'Mount Airy' and *F. gardenii*. In the trials, *F. gardenii* 'Bill's True Dwarf' received the highest fall rating of 3.5 for its exceptional, reddish burgundy fall color. The wild form from Spring Meadow Nursery and the form of *F. major* from Eastern Plant Specialties demonstrated the outstanding quality of fall color evident in the genus with the next highest ratings of 3.3 and 3.2, respectively.

Merits examined. The genus *Fothergilla* stands out from other landscape shrubs due to its many unique characteristics.

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Annual average ratings of 12 *Fothergilla* entries trialed

<i>Fothergilla gardenii</i> (Spring Meadow Nursery Inc.)	2.82
<i>Fothergilla</i> × <i>intermedia</i> 'Mount Airy'	2.77
<i>Fothergilla</i> × <i>intermedia</i> 'Sea Spray'	2.70
<i>Fothergilla gardenii</i> 'Bill's True Dwarf'	2.58
<i>Fothergilla</i> × <i>intermedia</i> 'Red Licorice'	2.56
<i>Fothergilla gardenii</i> 'Jane Platt'	2.53
<i>Fothergilla major</i> (Eastern Plant Specialties)	2.47
<i>Fothergilla gardenii</i> 'Blue Mist'	2.45
<i>Fothergilla</i> × <i>intermedia</i> 'Eastern'	2.27
<i>Fothergilla gardenii</i> 'Appalachia'	2.17
<i>Fothergilla major</i> (Apalachee Nursery)	2.15
<i>Fothergilla major</i> (Roslyn Nursery)	2.07

The 12 trial entries can be divided into four groups based on specific aesthetic traits significant to landscapes: dwarf and compact growth habit, intense fall color, attractive summer foliage and interesting branch structure. The first group is the dwarf and compact growing selections. The smallest of the cultivars, *F. gardenii* 'Bill's True Dwarf', reached a final height of just under 1 foot, but was described as being "upright" and "leggy." Reaching a maximum height of 1 foot, *F. gardenii* 'Appalachia' was the next smallest. *F. gardenii* 'Jane Platt' was slightly larger than the others in this group and reached a size of 2 feet tall by 3 feet wide. It had smaller, upward-facing leaves with distinct and prominent dentation.

A number of *Fothergilla* cultivars have also been selected for superior fall color. Entries in the trials exhibited significant variability with respect to their autumn beauty. *F. major* from Apalachee Nursery received a fall rating of 2.8. With an upright, sparse, natural appearance typical for this species, this particular form stood out with its "sunset-like" fall color. *F. × intermedia* 'Mount Airy' also had impressive fall color in the trial with a fall rating of 2.8, but excelled on the woodland border at Longwood Gardens, dazzling visitors with its brilliant displays of red autumn color. In the trials, *F. × intermedia* 'Red Licorice', selected for its vibrant red fall color, did not produce such results and had a relatively low fall rating of 2.0. *F. gardenii* 'Bill's True Dwarf' received the highest fall rating with a 3.5. Comparing the overall ratings revealed that the straight species, *F. gardenii* from Spring Meadow Nursery, performed just as well as the cultivars selected for fall color with a rating of 3.3.

While the beautiful spring display and magnificent fall color often steal the show, there is also summer foliage to keep in

mind. During the summer, a sweep of lush green foliage covers the landscape. *F. gardenii* 'Blue Mist', with a 2.6 summer rating, offered a welcome break from the mundane greens with an attractive splash of bluish foliage. The leaves appeared to be more pointed than other cultivars and had mild dentations, which gave it a more delicate appearance. The genus as a whole plays an essential role in the summer landscape with its attractive, deep green foliage that remains consistently trouble-free. *F. × intermedia* 'Red Licorice' and *F. gardenii* from Spring Meadow Nursery both received outstanding summer ratings of 3.1 and 2.8, respectively.

Although no selections have been made specifically for this trait, branch structure in *Fothergilla* offers wonderful winter interest. The form of *F. gardenii* from Spring Meadow Nursery had a slightly curvy, yet uniform, round habit, a quality that made it stand out in the leafless landscape. This trait was also demonstrated in *F. × intermedia* 'Sea Spray'. *F. intermedia* 'Eastern' had a slightly spreading habit that was less compact, yet vigorous. *F. major* from Roslyn Nursery had a "bolder texture" with a very upright form. *F. major* from Eastern Plant Specialties was described as "awkward" and "sculpture-like," alluding to its possible use as an interesting specimen plant.

A shrub of distinction. Plantsmen across the country have worked hard to develop improved forms of *Fothergilla*, keeping up with the demands of modern-day gardeners. New cultivars are expected to illuminate targeted qualities of a plant, offering something out of the ordinary and superior to the previous selections. As a result, a number of cultivars with distinct attributes have been named and put on the market, presenting greater opportunities for use in the landscape. The

tremendous amount of variation that exists in *Fothergilla* has led to some exceptional cultivars exhibiting characteristics, such as blue-green foliage, compact habit and brilliant fall color.

A humbling finding in the case of *Fothergilla*, however, was the unimproved, wild form from Spring Meadow Nursery stood out above the rest when considering year-round performance (graph, page 22). Comparisons of the overall yearly averages of the 12 entries placed *F. gardenii* from Spring Meadow Nursery as the one with the highest overall rating. Thus, it is not necessary for gardening enthusiasts to hunt down the best cultivars, but instead to embrace the typical wild form of witch alder. Furthermore, seed-propagated plants may reveal the true potential of variation locked in this genus.

Another opportunity worth considering is the use of *Fothergilla* as a native alternative to exotic species. Today, certain widely overused species have escaped from cultivation and continue to invade natural habitats. When utilized in the right setting, *Fothergilla* may replace plants, such as *Berberis thunbergii*, *Euonymus alatus* and *Spiraea japonica*, the problematic trademarks of the present-day utilitarian landscapes. Witch alders are multipurpose shrubs that can be used en masse or as a single-specimen plant. In a sunny or more shaded location, these plants add swaths of color and bring an architectural element to the landscape. Smaller, compact cultivars can be used as a hedge, mixed among herbaceous plantings and even incorporated into containers. Herbaceous plants combined with witch alders introduce an extra element of beauty, especially in the spring.

Fothergilla has a great deal of potential, not only as a trouble-free, native shrub, but also as a plant that lends flexibility and offers numerous options for today's gardeners.

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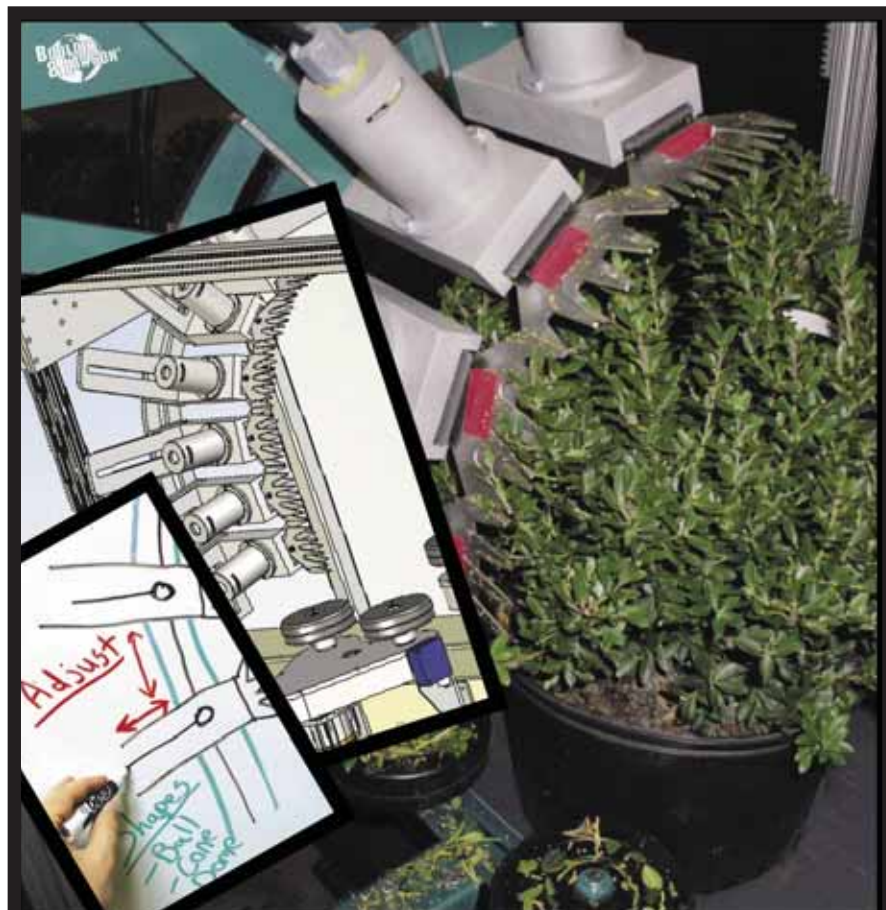
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