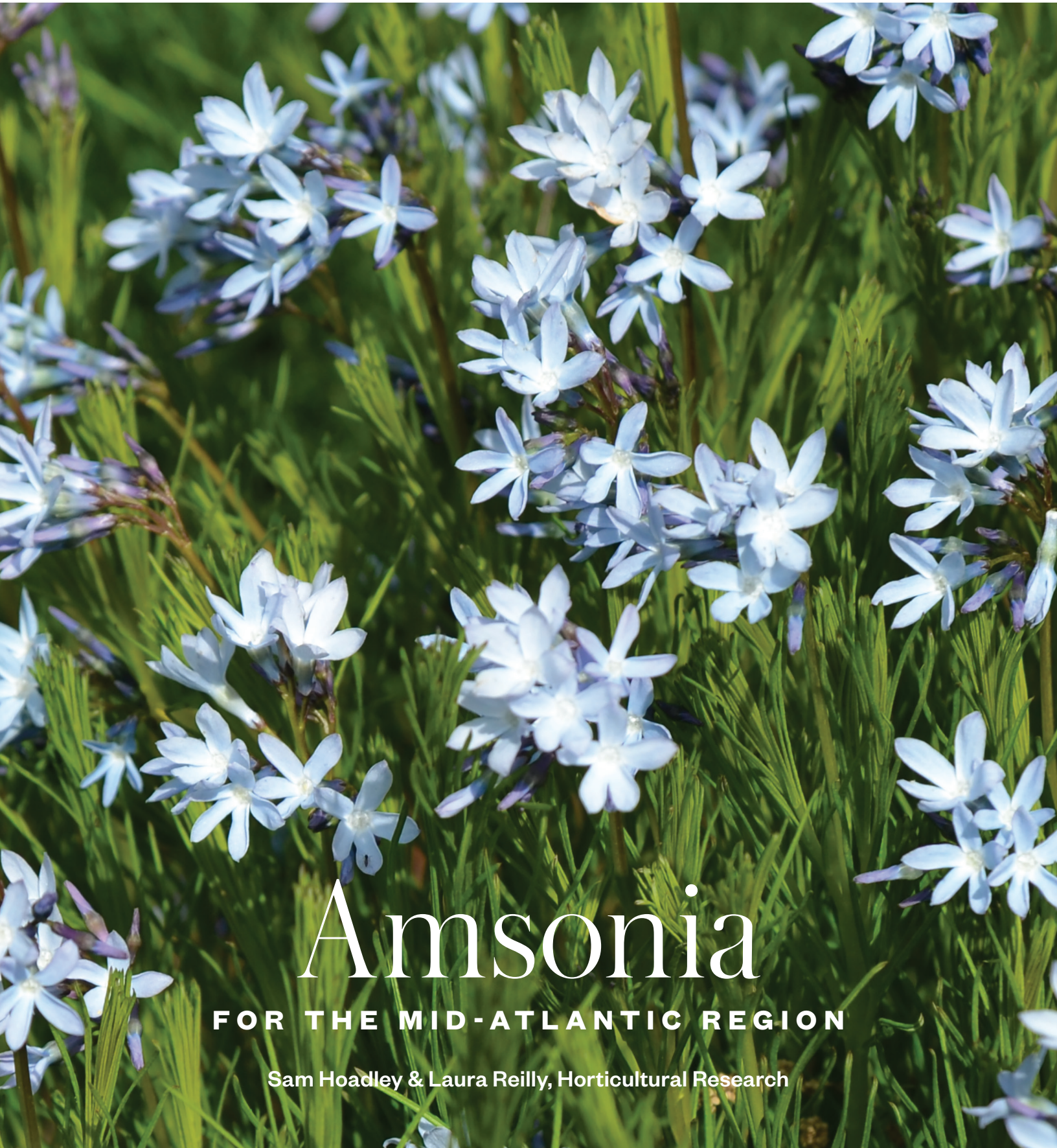
MT. CUBA CENTER | RESEARCH REPORT



Amsonia

FOR THE MID-ATLANTIC REGION

Sam Hoadley & Laura Reilly, Horticultural Research

Amsonia ‘Midway to Montana’

Amsonia trial in May

AMSONIA, named for 18th century Virginia physician and botanist John Amson, is a genus of beautiful, adaptable, and long-lived perennials commonly known as bluestars. Most *Amsonia* are native to the United States and Mexico with two additional species found in Greece and Turkey (*Amsonia orientalis*) and Asia (*Amsonia elliptica*). In this trial, we included representatives of three native species, *Amsonia ciliata*, *Amsonia hubrichtii*, *and Amsonia tabernaemontana*, as well as numerous varieties, cultivars, and hybrids. The non-native *A. orientalis* was also included to allow for direct comparison to the native species.

Amsonia species and cultivars vary in their overall size and ornamental qualities such as foliage texture and bloom time, but all provide multiple seasons of ornamental interest. Spring brings sprays of blue flowers, followed by appealing summer foliage. Many bluestars wrap up the year with outstanding gold or orange fall color, particularly when grown in full sun. Bluestars support early-season pollinators including native bees and hummingbirds and are the host plant for several species of butterflies and moths. As with many members of the Apocynaceae family, including milkweed (*Asclepias*), *Amsonia* produce a milky sap that discourages browsing by deer and other mammals.

Amsonia grow well in a broad spectrum of soil types and sun exposure ranging from full sun to part shade. Bluestars are also exceptionally easy to care for in the landscape. A cutback and cleanup in late winter or early spring is all that is required in terms of yearly maintenance. Since *Amsonia* stems are hollow, leaving 12"–18" of stem after the cutback has the added benefit of providing habitat for native bees. The key to growing *Amsonia* is patience. As with other long-lived perennials, bluestars take a few years to get established before they show their full potential for flowers, foliage, and fall color.

This trial evaluated 20 different *Amsonia* over a ten-year period and focused on their garden performance and ornamental qualities. Diseases were infrequently observed in this trial, and aside from minor chlorosis and rust, the plants were virtually pest and disease free. The *Amsonia* trial was grown in part-to-full sun in “average” soil, best described as clay-loam with a pH near 6.5. Throughout the trial, plants were given minimal care. Supplemental water was provided only during the first year after planting to encourage establishment. Mt. Cuba Center is located near Wilmington, Delaware and is within USDA hardiness zone 7a.

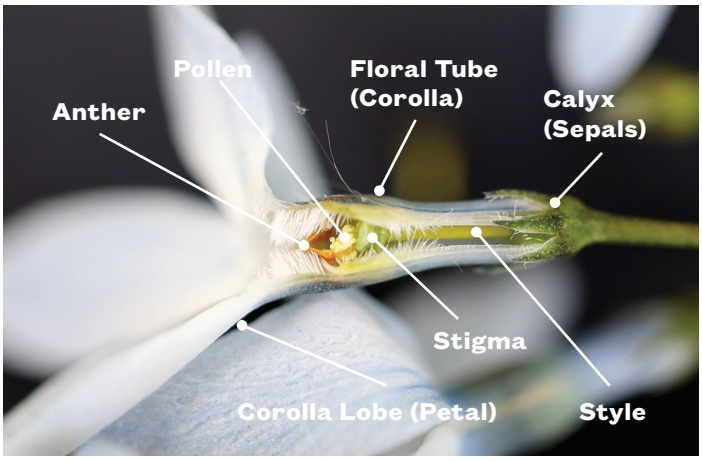
This report employs the scientific and common names of bluestars in use at Mt. Cuba in 2024. Taxonomic classification of *Amsonia* is in a state of flux and some species or varieties may be reclassified and renamed in the future. An additional practical challenge when examining *Amsonia*, especially those in cultivation, is that bluestars readily hybridize, producing plants that defy categorization. The parentage of some trialed hybrids and cultivars is unknown. To facilitate selecting plants based on desired attributes such as size or foliage type, we have grouped similar appearing *Amsonia* together in the descriptions that follow.

AMSONIA FLOWERS

As the common name bluestar suggests, the flowers of *Amsonia* are star-shaped and usually light blue. The blue color is often darkest in the buds and lightens as the flowers open and age. White-flowered forms of some species exist but are uncommon. *Amsonia* bloom for four to six weeks between April and June and display masses of branched inflorescences. Refer to the chart on page 12 for bloom times in 2023.

The five petals of *Amsonia* flowers are fused into a floral tube, also known as a corolla, which houses the reproductive structures of the flower including the pollen and nectar sought by pollinators. The base of the floral tube is covered by the calyx, which is formed by fused sepals. The presence or absence of hairs on the calyx and corolla can aid in the identification of bluestars.

Flowers of *Amsonia ciliata* var. *tenuifolia* 'Spring Sky'



Cross section of *Amsonia ciliata* var. *tenuifolia* flower

AMSONIA FRUITS AND SEEDS

A pollinated *Amsonia* flower develops elongated fruits, known as follicles, that are often produced in pairs. The orientation of the follicles, pendent or upright, can be a useful tool for identification. When the fruits ripen in late summer and early fall, the follicles split open to reveal neatly stacked cylindrical seeds.

Growing *Amsonia* from seed is a relatively simple process that can be achieved by sowing ripe seed directly into garden beds in fall or maintaining seed in a cool moist location for at least 60 days, after which seeds will readily germinate. Keep in mind that *Amsonia* have the potential to hybridize, and hybrid seedlings are likely if seed was collected in a garden where multiple bluestar species are present.

Amsonia tabernaemontana var. *tabernaemontana* seed

Upright follicles on *Amsonia tabernaemontana* var. *salicifolia*

Pendent follicles on *Amsonia tabernaemontana* var. *illustris*

AMSONIA FOLIAGE

Amsonia leaf forms vary between species. Some bluestars, such as *A. hubrichtii* and *Amsonia ciliata* var. *tenuifolia*, produce fine-textured, thread-like leaves. Others, including *Amsonia tabernaemontana* var. *tabernaemontana*, produce broader leaves that result in a coarser texture in the landscape. Additional foliar details that can aid in identification include the presence or absence of hairs, leaf margin undulation, and surface sheen.

The *Amsonia* in the Trial Garden were planted in a location that receives morning and early afternoon sun and is then partially shaded for the rest of the day. Fall color was generally good; however, plants sited in sunnier locations in Mt. Cuba's naturalistic gardens produced an exceptional autumn display each year.

From left to right, leaves of *Amsonia tabernaemontana* var. *salicifolia*, *Amsonia tabernaemontana* var. *illustris*, *Amsonia tabernaemontana* var. *tabernaemontana*, *Amsonia* 'Seaford Skies', *Amsonia hubrichtii*

HABIT AND GROWTH

Most *Amsonia* in the trial can be categorized as clump-forming plants that develop a semi-woody crown known as a caudex. Due to the dense nature of this crown and the deep root system, they can be challenging to divide or move once established. Three bluestars in the trial, *A. orientalis*, *Amsonia* 'Blue Ice', and *Amsonia ciliata* var. *tenuifolia* 'Georgia Pancake', have a different habit. These plants spread slowly via underground rhizomes and can be used as a ground cover.

Amsonia produce an initial flush of growth in early spring, and inflorescences are located at the apices of the stems. After flowering, vegetative growth continues via secondary stems that emerge from below the flowers. The continued growth of the plants after blooming is useful to note when determining plant spacing. Information on the dimensions of the trialed *Amsonia* both in spring bloom and at the end of summer can be found on page 15.

Various sizes and habits of *Amsonia* in the trial

AMSONIA TRIAL

Mt. Cuba's ten-year *Amsonia* evaluation aimed to determine the horticultural value of 20 bluestars, some readily available in commerce and others less well known. The trial was planted in 2013, systematic ratings were recorded between 2015 and 2018, and follow-up observations continued through 2023. Each week in spring and summer, the plants were rated on a scale of 1–5 (1 being very poor and 5 being excellent) for ornamental qualities including habit, vigor, and floral display. Ratings from each year were averaged to determine the final score for each bluestar.

After the results were tabulated, almost every plant in this evaluation could be considered a top performer, with only 3 of the 20 bluestars scoring below a 4.0. The following pages contain descriptions of the trialed species, varieties, and cultivars, with plants of similar size and texture grouped together. In this section, ratings were averaged when there was more than one example (accession) of a variety, as noted within the tables. The complete information on individual plants and their ratings is found in the chart on page 15.

Amsonia ciliata (fringed bluestar) and similar large cultivars

Name	Rating	Size Category	Habit	Foliage Texture	Floral Display
Amsonia ciliata	4.5	large	clumping	fine	good
Amsonia 'Seaford Skies'	4.7	large	clumping	fine	good
Amsonia 'Halfway to Arkansas'	4.6	large	clumping	fine	excellent
Amsonia 'Midway to Montana'	4.7	large	clumping	fine	good

Amsonia ciliata

Amsonia 'Seaford Skies'

Amsonia ciliata, also known as fringed bluestar, is a large, fine-textured species found in dry sandy soils in the southeastern and south-central United States, although it is adaptable to average garden soils. In the wild these plants reach 2' to 3' in height, but in the hospitable conditions of the Trial Garden, these attained a size of 4' high and 7' wide and were some of the largest plants in the trial. The specific epithet *ciliata* refers to tiny hairs found on new leaves and stems and is a helpful feature to differentiate *A. ciliata* from the similar-appearing *A. hubrichtii*. In the trial, we found *A. ciliata* to be larger with a coarser foliage texture compared to *A. hubrichtii*.

Three hybrid cultivars in the trial had very similar features and performance to *A. ciliata* and therefore are discussed here. The first, *Amsonia* 'Seaford Skies', is a hybrid between *A. hubrichtii* and *A. tabernaemontana* that originated in the Virginia garden of plantswoman and author Pamela Harper. Plant Delights Nursery subsequently introduced this superior bluestar into cultivation. The leaves of Seaford Skies hybrid bluestar are intermediate in width between the two parents and are very similar to those of *A. ciliata*. One of the

most notable features of *A.* 'Seaford Skies' is the late May display of cornflower-blue blooms that have a darker color than other large bluestars.

Two other cultivars, *Amsonia* 'Halfway to Arkansas' and *Amsonia* 'Midway to Montana', were introduced by Intrinsic Perennial Gardens in Hebron, Illinois. Although the parentage of these plants is not known, they are very close in appearance and performance to *A.* 'Seaford Skies' and *A. ciliata* and could be used in a similar fashion in the landscape.

Amsonia 'Halfway to Arkansas'

Amsonia ciliata var. *tenuifolia* (fringed bluestar) and similar small cultivars

Name	Rating	Size Category	Habit	Foliage Texture	Floral Display
Amsonia cilata var. *tenuifolia* (accessions A, B, C)	3.9	small	clumping	fine	good – excellent
Amsonia ciliata 'Spring Sky'	4.9	small	clumping	fine	excellent
Amsonia ciliata var. *tenuifolia* 'Georgia Pancake'	3.9	small	spreading	fine	fair

Amsonia ciliata var. *tenuifolia* is a smaller variety of *A. ciliata* with narrower foliage. Five accessions were included in the trial: three plants from Mt. Cuba's collection that originated from the southeastern United States, and two cultivars. Each plant has a compact habit, never surpassing 2' high, and very fine-textured, thread-like foliage. *Amsonia ciliata* var. *tenuifolia* forms neat clumps, although there is a tendency for stems to flop, a trait that could be improved by siting the plants in lean dry soils and full sun.

Amsonia ciliata var. *tenuifolia*

The cultivar *Amsonia ciliata* 'Spring Sky', introduced by local plantsman Rick Darke, has slightly broader foliage and a showier floral display than the wild-type plants. This cultivar is much smaller than the examples of *A. ciliata* described in the previous section, so it is discussed here with plants of similar stature. The second cultivar, *Amsonia ciliata* var. *tenuifolia* 'Georgia Pancake', is noteworthy for its prostrate habit. Discovered by plantsman Bob McCartney in Georgia and later introduced by Plant Delights Nursery, this is often sold as a cultivar of *Amsonia ciliata* var. *filifolia*, a synonym of *A. ciliata* var. *tenuifolia*. Georgia Pancake fringed bluestar has a height of 9" and spreads slowly by rhizomes, eventually forming a unique groundcover.

Amsonia ciliata 'Spring Sky'

Amsonia hubrichtii (Hubricht's bluestar)

Name	Rating	Size Category	Habit	Foliage Texture	Floral Display
Amsonia hubrichtii	4.7	large	clumping	fine	good

Native to the Ouachita mountains of Arkansas and Oklahoma, this *Amsonia* was discovered by naturalist Leslie Hubricht in 1942. The habit, large size, and fine texture resemble *A. ciliata*, but *Amsonia hubrichtii* has much narrower foliage and lacks hairs on the young leaves. Although *A. hubrichtii* has a small range in the wild, it has become one of the most popular and widely cultivated bluestars, and was awarded the Perennial Plant of the Year by the Perennial Plant Association in 2011. Hubricht's bluestar is lauded for its soft, thread-like foliage that produces a billowing feathery texture and extends the season of ornamental interest well beyond flowering. This species displays exceptional golden fall color, especially when grown in full sun.

VARIETIES OF *AMSONIA TABERNAEMONTANA*

Three varieties of *Amsonia tabernaemontana*, *Amsonia tabernaemontana* var. *illustris, Amsonia tabernaemontana* var. *salicifolia, and Amsonia tabernaemontana* var. *tabernaemontana*, were evaluated in Mt. Cuba's trial. Identification of the varieties is based on distinct anatomical features outlined in the chart below. In addition, three dwarf forms of *A. tabernaemontana* were examined (page 10).

Variety	Common Name	Calyx	Fruit	Leaf	Leaf Shape
illustris	Ozark bluestar	hair present	pendent	shiny, undulating	lanceolate
salicifolia	willowleaf bluestar	hairless	upright	matte	lanceolate
tabernaemontana	wideleaf bluestar	hairless	upright	matte	ovate

Amsonia tabernaemontana var. *illustris*

Amsonia tabernaeomtana var. *salicifolia*

Amsonia tabernaemontana var. *tabernaemontana*

Amsonia tabernaemontana var. *illustris* (Ozark bluestar)

Name	Rating	Size Category	Habit	Foliage Texture	Floral Display
Amsonia tabernaemontana var. *illustris* (accessions A,B,C)	4.4	large	clumping	medium	good

Amsonia tabernaemontana var. *illustris*, formerly known as *Amsonia illustris*, is a large and beautiful bluestar variety from the south-central United States, where it is found in sandy or rocky soils along streams. This plant appears very similar to a different variety, *A. tabernaemontana* var. *salicifolia*, but details of the flowers, fruit, and foliage can be used to differentiate the two. Close examination of the flowers of Ozark bluestar will reveal hairs along the margin of the calyx in contrast to the hairless calyxes of *A. tabernaemontana* var. *salicifolia*. Once the flowers have been pollinated, the ripening fruit of Ozark bluestar hangs downward instead of being held upright. Finally, Ozark bluestar has beautiful shiny leaf surfaces and undulating leaf margins, which is a unique and highly ornamental feature amongst the trialed *Amsonia*.

Amsonia tabernaemontana var. *salicifolia* (willowleaf bluestar) and *A. tabernaemontana* 'Fontana' (Fontana wideleaf bluestar)

Name	Rating	Size Category	Habit	Foliage Texture	Floral Display
Amsonia tabernaemontana 'Fontana'	4.4	medium	clumping	medium	good

Willowleaf bluestar has a large natural range extending from the central and midwestern states to the Southeast. This variety has narrow willow-like leaves that lack the sheen and undulation found in *A. tabernaemontana* var. *illustris*. The stems and calyxes of willowleaf bluestar are hairless and often have a waxy coating, and the fruit is held upright. Although we did not trial *A. tabernaemontana* var. *salicifolia*, we did evaluate a cultivar, *Amsonia tabernaemontana* 'Fontana', that botanically appears as *A. tabernaemontana* var. *salicifolia*. Brent Horvath of Intrinsic Perennial Gardens selected *A. tabernaemontana* 'Fontana' for its attractive dark stems and darker blue flowers compared to other *A. tabernaemontana*. This cultivar measured 3.5' high and 4' wide making it a great option for gardens that do not have room for the larger species and cultivars.

Amsonia tabernaemontana 'Fontana'

Amsonia tabernaemontana var. *tabernaemontana* (wideleaf bluestar)

Name	Rating	Size Category	Habit	Foliage Texture	Floral Display
Amsonia tabernaemontana var. *tabernaemontana*	4.6	medium	clumping	coarse	excellent

Amsonia tabernaemontana var. *tabernaemontana*, also known as wideleaf bluestar is a geographically widespread species found in similar locations to *A. tabernaemontana* var. *salicifolia*. This variety has broader ovate leaves and displays the coarsest foliage texture of the trialed bluestars. Like *A. tabernaemontana* var. *salicifolia*, the stems and flower calyxes are hairless and have a waxy coating. Additionally, the fruit is held vertically as opposed to the pendent fruit of *A. tabernaemontana* var. *illustris*. This was one of the first bluestars to emerge in the spring, with stems evocative of asparagus shoots. The stems emerge with a dark purple coloration, but the color fades as the growing season progresses. Wideleaf bluestar is one of the first *Amsonia* varieties to bloom, producing attractive sky-blue flowers arranged in airy inflorescences in mid-to-late April.

A newer selection of this variety from Plant Delights and Walters Gardens, *Amsonia tabernaemontana* 'Storm Cloud', has even darker stems and retains that coloration for a much longer period.

Dwarf forms of *Amsonia tabernaemontana* (wideleaf bluestar)

Name	Rating	Size Category	Habit	Foliage Texture	Floral Display
Amsonia tabernaemontana "dwarf form"	4.6	medium	clumping	medium – coarse	excellent
Amsonia tabernaemontana 'Montana'	4.7	medium	clumping	medium – coarse	excellent
Amsonia tabernaemontana 'Short Stack'	4.8	medium	clumping	medium – coarse	excellent

The dwarf forms of *Amsonia tabernaemontana* are something of a horticultural enigma. These plants were first introduced into the trade as *Amsonia montana*, a name now considered invalid. They most closely resemble a compact form of *A. tabernaemontana* var. *tabernaemontana*, as they emerge from dormancy around the same time in early spring and have a similar bloom time in mid-April through May. Minor differences can be observed in the flowers and in the narrower foliage of the dwarf forms when compared to wideleaf bluestar. This trial included three dwarf forms, *Amsonia tabernaemontana* 'Montana', *Amsonia tabernaemontana* 'Short Stack', and *Amsonia tabernaemontana* "dwarf form". All three are exceptional garden plants, providing an excellent floral display and attractive foliage.

Non-native *Amsonia orientalis* (European bluestar) and *Amsonia* 'Blue Ice' (Blue Ice hybrid bluestar)

Name	Rating	Size Category	Habit	Foliage Texture	Floral Display
Amsonia orientalis	—	small	spreading	medium	fair
Amsonia 'Blue Ice'	—	small	spreading	medium	good

Amsonia 'Blue Ice' (left) and *Amsonia orientalis* (right)

Blue Ice hybrid bluestar was first discovered by plantsman Michael Dodge amongst *Amsonia tabernaemontana* plants at Sunny Border Nursery in Connecticut and selected due to its diminutive habit and large periwinkle-blue flowers. It was offered for sale, first as *Amsonia* 'WFF Selection', and then, in the late 1990s, as *Amsonia* 'Blue Ice'. This cultivar was extensively distributed and is still widely available. *Amsonia* 'Blue Ice' has been marketed as a compact selection of *A. tabernaemontana* or, more commonly, as a hybrid, since the flowers, form, and habit are different from the species.

Gardeners have noted that *Amsonia* 'Blue Ice' more closely resembles the European bluestar, *Amsonia orientalis*, than the North American native *A. tabernaemontana*. Sometimes attributed to the genus *Rhazya*, *A. orientalis* is a critically endangered plant in the wild where it may be found in seasonally wet locations along bodies of water in Turkey and Greece.

When grown side by side in the trial, the similarities between *Amsonia* 'Blue Ice' and *A. orientalis* were undeniable. Both plants have a rhizomatous habit which is very uncommon in the *Amsonia* genus. Each slowly spreads to create a 1.5' tall carpet and neither develops the congested woody crown produced by most bluestars. *Amsonia* 'Blue Ice' and *A. orientalis* also share a bloom time from mid-May through June and produce nearly identical buds and flowers. Finally, both plants were extremely susceptible to rust, a pathogen that had minimal effect on other *Amsonia* in the trial. *Amsonia* 'Blue Ice' is more floriferous and has deep blue flowers compared to the more purple flowers of *A. orientalis*. These minor variations are not unusual within a species and the similarities between these plants far outweigh the differences. Based on trial observations over 10 years, Mt. Cuba now considers *Amsonia* 'Blue Ice' a horticulturally superior form of the non-native species, *A. orientalis*.

Bumblebee visiting *Amsonia ciliata*

AMSONIA POLLINATOR INTERACTIONS

From April through June of 2023, Trial Garden staff recorded pollinator visits on each of the 20 *Amsonia* taxa in the evaluation. On a near-daily basis, one plant of each accession was randomly selected and observed for 60 seconds, and the total number of insect visits to the selected plant were recorded. Observers noted a surprising diversity of visitors, including monarch butterflies, a variety of native bees, and even hummingbirds; however, the absolute numbers of insect pollinators were unexpectedly low. *Amsonia* 'Halfway to Arkansas' and one accession of *A. tabernaemontana* var. *illustris* had the most visits, averaging 3 per observation; however, the remainder of the *Amsonia* had very few visitors. It is unclear why pollinator numbers were low in the trial. Possible explanations include the siting of the trial in part shade, undetected nocturnal pollinators, or an abundance of other nectar and pollen resources nearby that might have been preferred by insect pollinators. Interestingly, the non-native *A. orientalis* and *Amsonia* 'Blue Ice' were amongst the plants that attracted the fewest pollinators, with only a single insect observed on *A.* 'Blue Ice'.

AMSONIA BLOOM TIMES 2023

Name	early April	mid April	late April	early May	mid May	late May	early June	mid June	late June	early July
Amsonia ciliata var. *tenuifolia* (accession A)										
Amsonia ciliata var. *tenuifolia* (accession B)										
Amsonia ciliata var. *tenuifolia* (accession C)										
Amsonia ciliata 'Spring Sky'										
Amsonia tabernaemontana var. *tabernaemontana*										
Amsonia tabernaemontana 'Montana'										
Amsonia tabernaemontana 'Short Stack'										
Amsonia tabernaemontana "dwarf form"										
Amsonia tabernemontana 'Fontana'										
Amsonia hubrichtii										
Amsonia ciliata										
Amsonia 'Seaford Skies'										
Amsonia 'Halfway to Arkansas'										
Amsonia 'Midway to Montana'										
Amsonia tabernaemontana var. *illustris* (accession A)										
Amsonia tabernaemontana var. *illustris* (accession B)										
Amsonia tabernaemontana var. *illustris* (accession C)										
Amsonia ciliata var. *tenuifolia* 'Georgia Pancake'										
Amsonia orientalis (non-native)										
Amsonia 'Blue Ice' (non-native)										

Snowberry clearwing visiting *Amsonia tabernaemontana* "dwarf form"

Snowberry clearwing caterpillar on *Amsonia ludoviciana*

AMSONIA AS HOST PLANTS

While pollinator visits are an easy way to observe wildlife interactions with *Amsonia*, bluestars can support insect life even when they are not in bloom. *Amsonia* plants are a food source, or host plant, for the caterpillars of several species of butterflies and moths. At Mt. Cuba, the caterpillar of the snowberry clearwing moth (*Hemaris diffinis*) was observed feeding on the foliage of *Amsonia ludoviciana* (Louisiana bluestar) in an auxiliary trial bed. Adult snowberry clearwing moths were regularly seen in the Trial Garden nectaring on various blooming *Amsonia* species and cultivars. Snowberry clearwings are some of the most charismatic garden visitors with hovering flight patterns that are reminiscent of hummingbirds.

Fall color of *Amsonia hubrichtii* in Mt. Cuba's meadow garden

Amsonia tabernaemontana at Mt. Cuba Center

Amsonia ciliata var. *tenuifolia* in Mt. Cuba's rock and scree garden

AMSONIA AT MT. CUBA CENTER

Amsonia have been long been incorporated into the formal and naturalistic gardens at Mt. Cuba where they are valued for their reliability, longevity, and myriad ornamental features, including exceptional fall color. Through careful siting of various *Amsonia*, the horticultural staff have utilized bluestars to their maximum potential in the landscape. One such example is *A. ciliata* var. *tenuifolia*, which is often found in dry, sandy soils in its natural range. In the comparatively moist and rich soils of the Trial Garden this species often ended the growing season with a poor, floppy habit. However, when planted in dry rocky soils in sections of Mt. Cuba's naturalistic gardens, its habit is dramatically improved.

In the decade since this trial began, a number of the *Amsonia* cultivars studied have become difficult to procure. Fortunately, interest in bluestars has increased, and many new options are available. Selections have been made for compact habit, improved fall color, and greater flower numbers. In addition, some unusual species that were challenging to source have become more accessible. Preliminary observations suggest that garden-worthy cultivars and species include *Amsonia* 'Bases Loaded', *Amsonia* 'Butterscotch', *Amsonia* 'Seventh Inning Stretch', *Amsonia* 'Starstruck', *Amsonia* 'String Theory', *Amsonia ciliata* "Arkansas Form", *Amsonia ciliata* var. *tenuifolia* 'Verdant Venture', *Amsonia ludoviciana*, *Amsonia rigida*, and *Amsonia tabernaemontana* var. *tabernaemontana* 'Storm Cloud'.

As the results in the following table indicate, the trialed *Amsonia* are universally healthy, long-lived, and attractive from spring through fall. *Amsonia* pair well with other perennials, and the larger selections are striking when planted en masse. Gardeners merely need to choose a preferred size and foliage texture and make a selection from the growing list of available cultivars and species.

Amsonia ciliata var. *tenuifolia* 'Georgia Pancake'

Amsonia	**Rating**	**Bloom Time**	**Floral Display**	**Size Category**	**Avg. HxW (In bloom)**	**Avg HxW (late summer)**	**Foliage Texture**	**Growth Habit**
Amsonia 'Halfway to Arkansas'	4.6	early May – mid June	excellent	large	45" x 70"	55" x 82"	fine	clumping
Amsonia 'Midway to Montana'	4.7	early May – mid June	good	large	31" x 44"	54" x 70"	fine	clumping
Amsonia 'Seaford Skies'	4.7	early May – mid June	good	large	38" x 50"	55" x 80"	fine	clumping
Amsonia ciliata	4.5	early May – mid June	good	large	40" x 57"	48" x 83"	fine	clumping
Amsonia ciliata 'Spring Sky'	4.9	mid April – late May	excellent	small	22" x 38"	21" x 54"	fine	clumping
Amsonia ciliata var. *tenuifolia* (accession A)	3.7	mid April – late May	good	small	17" x 35"	14" x 64"	fine	clumping
Amsonia ciliata var. *tenuifolia* (accession B)	4.2	mid April – late May	good	small	16" x 29"	24" x 47"	fine	clumping
Amsonia ciliata var. *tenuifolia* (accession C)	3.7	mid April – late May	excellent	small	15" x 27"	12" x 52"	fine	clumping
Amsonia ciliata var. *tenuifolia* 'Georgia Pancake'	3.9	mid May – mid June	fair	small	9" x 29"	6" x 42"	fine	spreading
Amsonia hubrichtii	4.7	early May – late May	good	large	33" x 35"	48" x 50"	fine	clumping
Amsonia tabernaemontana "dwarf form"	4.6	mid April – early June	excellent	medum	22" x 38"	36" x 57"	medium – coarse	clumping
Amsonia tabernaemontana 'Fontana'	4.4	early May – late May	good	medium	27" x 39"	41" x 46"	medium	clumping
Amsonia tabernaemontana 'Montana'	4.7	mid April – late May	excellent	medium	24" x 32"	36" x 56"	medium – coarse	clumping
Amsonia tabernaemontana 'Short Stack'	4.8	mid April – late May	excellent	medium	17" x 28"	28" x 44"	medium – coarse	clumping
Amsonia tabernaemontana var. *illustris* (accession A)	4.3	early May – early June	good	large	30" x 54"	50" x 64"	medium	clumping
Amsonia tabernaemontana var. *illustris* (accession B)	4.8	early May – mid June	good	large	33" x 45"	54" x 52"	medium	clumping
Amsonia tabernaemontana var. *illustris* (accession C)	4.2	early May – late June	good	large	39" x 66"	56" x 79"	medium	clumping
Amsonia tabernaemontana var. *tabernaemontana*	4.6	mid April – late May	excellent	medium	27" x 36"	44" x 63"	coarse	clumping
Amsonia orientalis (non-native)	—	mid May – mid June	fair	small	22" x 58"	17" x 63"	medium	spreading
Amsonia 'Blue Ice' (non-native)	—	mid May – mid June	good	small	21" x 42"	22" x 47"	medium	spreading

Measurements taken from data collected in 2018 (5 years after planting).

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ABOUT MT. CUBA CENTER

Mt. Cuba Center is a botanic garden that highlights the beauty and value of native plants to inspire conservation. Once the private estate of Pamela and Lammot du Pont Copeland, Mt. Cuba opened to the public in 2013 and now spans 68 acres of gardens and over 1,000 acres of natural lands. Featuring formal and naturalistic gardens and three miles of scenic trials, Mt. Cuba's stunning landscapes demonstrate how native plants can enrich our environment. Mt. Cuba is recognized as a leader in native plant research, education, and open space preservation, having protected 15,000 acres in the mid-Atlantic region. The gardens are open Wednesday – Sunday, April – November, with lively events throughout the season. Gardening, art, conservation, and wellness classes are offered year-round. Learn more at **mtcubacenter.org**.

ABOUT TRIAL GARDEN RESEARCH

Mt. Cuba Center's Trial Garden, managed by Sam Hoadley and Laura Reilly, evaluates native plants and related cultivars for their horticultural and ecological value. This research aims to provide gardeners and the horticulture industry with information about superior plants for the mid-Atlantic region as well as highlight the important ecosystem services native plants provide. Mt. Cuba has conducted Trial Garden research since 2002, including previously completed evaluations of *Carex*, wild hydrangea, *Echinacea*, *Helenium*, *Phlox*, *Monarda*, *Baptisia*, *Coreopsis*, *Heuchera*, and asters. These reports and additional information about some trials are available at **mtcubacenter.org/research/trial-garden**.

RESOURCES

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FRONT COVER: *Amsonia ciliata* var. *tenuifolia*