

# A Comparative Study of Cultivated Asters

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*Symphyotrichum oblongifolium* 'Raydon's Favorite'



Autumn is the time of asters. In days suffused with the brilliant tones of senescing leaves, asters finally show their true colors in gardens, both cultivated and natural, along roadsides, and in native places. Like clockwork, their starry flowers in rich hues of blue, purple, pink, or white burst forth to mark the change of seasons. A ubiquitous nature often saddles asters with the reputation of looking too wild, but their natural beauty and garden merit cannot be overlooked. Asters blend beautifully with a variety of grasses and perennials in a quintessentially autumnal tapestry.

Approximately 250 types of asters are native to North America, Europe, Asia, and to a lesser extent, the southern hemisphere. Most cultivated asters are herbaceous perennials, but there are annual, biennial, and woody species too. Asters are in the Asteraceae or daisy family, notable for the unique composite floral structure of disk and ray florets. The starburst effect of the aster flower is the origin of both its common and generic names—aster comes from the Greek word for star. There are about 1,300 genera and 21,000 species in Asteraceae, making it

one of the largest and most evolutionarily specialized of plant families. The familial resemblance is evident among aster relatives such as dahlias (*Dahlia* spp.), coneflowers (*Echinacea* spp.), sunflowers (*Helianthus* spp.), Shasta daisies (*Leucanthemum* spp.), and zinnias (*Zinnia* spp.). Recently, changes in the generic names of North American species from *Aster* to less melodious names such as *Doellingeria*, *Eurybia*, and *Symphyotrichum* have complicated matters for gardeners. The new names have not yet been universally embraced—the Royal Horticultural Society has not adopted the new names but most native plant organizations are using the new nomenclature. Nonnative aster species are not immune to this development and changes to additional generic names will undoubtedly be forthcoming.

Aster flowers are made up of numerous disk and ray florets, which collectively give the appearance of a single large flower. The central cluster holds the disk florets, which are tubular with exerted anthers and styles; as many as 300 disk florets can be tightly packed into the circular flower head. Disk florets may be yellow, orange, brownish, purple, or, on occa-

sion, white. The ray florets surround the cluster of disk florets; the number of rays varies from a few to hundreds in some double-flowered cultivars. Each ray floret has one long, narrow ligule that is distinctly petallike in appearance, and acts much like the petal of a typical flower to attract pollinators to the plant. Ray florets come in varying shades of pink, red, lavender, blue, violet, purple, and white; the rays rather than the disks describe the overall flower color. Another attribute of asters is the leafy phyllaries or involucre bracts that surround and protect the ray florets. The shape and prominence of the phyllaries are helpful in distinguishing one aster from another. Aster flowers are either solitary or clustered in multiflowered corymbs or racemes, and bloom for many weeks in summer and autumn.

Aster leaves are simple and may be linear, lanceolate, ovate, or cordate in shape. The leaves on the lower stems or in basal clumps are commonly larger than the leaves on the upper stems. Leaves at the tips of flowering stems are often significantly smaller yet. Foliage may be smooth to pubescent, and occasionally fragrant, as is the case

of aromatic aster (*Symphotrichum oblongifolium*). Plant habits range from less than a foot to over 6 feet tall, and from clumping to rhizomatous (spreading by underground stems). In fact, some species can be aggressive spreaders. A common problem of many garden asters is that their lower leaves desiccate during the summer, becoming unsightly and resulting in bare lower stems. Careful placement in the garden so that other plants mask the dying leaves mitigates this problem.

With such a large and diverse group of plants it is not easy to summarize their cultural needs in a few words. Generally speaking, asters grow best in moist, well-drained soils with plenty of sunlight. A few simple guidelines are helpful in choosing the best locations for specific asters. Asters can be lumped into three broad groups based on their native environments and garden requirements. The first group includes species that are native to meadows, prairies, marshes, and roadsides, and thrive in average to rich, evenly moist soils in full sun. *Symphotrichum novae-angliae* (formerly *Aster novae-angliae*), *S. novi-belgii* (formerly *A. novi-belgii*), *S. lanceolatum* (formerly *A. lanceolatus*), and *Doellingeria umbellata* (formerly *A. umbellatus*) do best with steady soil moisture. *Symphotrichum ericoides*

(formerly *A. ericoides*), *S. laeve* (formerly *A. laevis*), *S. lateriflorum* (formerly *A. lateriflorus*), *S. oblongifolium* (formerly *A. oblongifolius*), *S. oolentangiense* (formerly *A. azureus*), *S. sericeum* (formerly *A. sericeus*), and *S. turbinellum* (formerly *A. turbinellus*) prefer moist soils but are more tolerant of dry sites than others. Tatarian aster, *A. tataricus*, seems to have the greatest adaptability to a wide range of soil conditions.

The second group contains other sun-loving species such as *Aster amellus*, *A. xfrickartii*, and *A. tongolensis* that prefer cool night temperatures and need average to rich soils with excellent drainage for optimum growth. These asters are native to seashores and mountainous areas where good soil drainage is common. This group may be short-lived in gardens, especially if good winter drainage is not provided. The third broad group includes woodland asters that tolerate deep shade but bloom best in light to partial shade. *Symphotrichum cordifolium* (formerly *A. cordifolius*), *S. drummondii* (formerly *A. drummondii*), *Eurybia divaricata* (formerly *A. divaricatus*), and *E. macrophylla* (formerly *A. macrophyllus*) grow best in moist, humus-rich soil but tolerate dry conditions too. Despite their adaptability to shade, these species will produce the best flower displays when given morning sun.

Unfortunately, not all asters are easy-care garden plants. Fast-growing asters such as *Symphotrichum novae-angliae*, *S. novi-belgii*, *S. lateriflorum*, and *Doellingeria umbellata* benefit from regular crown division every few years to reinvigorate the plants. Divide the crown in early spring or fall when centers begin to die out. Tall asters may require staking, especially in partial shade or in exposed windy sites. Asters sheared to half their height in early to mid-June result in shorter plants that may not require staking. Early shearing is helpful in improving uneven habits, too. Deadheading is not usually required but will reduce unwanted seedlings. A number of foliar diseases such as powdery mildew and rusts are problematic for some asters, notably New England aster (*S. novae-angliae*) and New York aster (*S. novi-belgii*). The usual recommendations for reducing or eliminating foliar diseases include choosing disease-resistant plants, improving air circulation by providing good spacing between plants, thinning out one-third of the stems, and minimizing overhead irrigation.

Along with goldenrods (*Solidago* spp.), asters are classic autumnal flowers of gardens, roadsides, and native landscapes. They are wonderful companions to a variety of other late-season perennials and



*Symphotrichum novae-angliae* 'Honeysong Pink'

grasses, whether peppered through a landscape or planted in large sweeps. Some species such as East Indies aster (*Aster tongolensis*) bloom in early summer. Asters come in a diversity of sizes and habits, adapting to perennial borders, rockeries, woodland gardens, and naturalistic landscapes. For example, white wood aster (*Eurybia divaricata*) and heath aster (*Symphotrichum ericoides* 'Snow Flurry') mound beautifully into exceptional ground covers. Robust bushy species such as calico aster (*S. lateriflorum*) and aromatic aster (*S. oblongifolium*) have shrublike habits that work well for massing. Many asters are good in mixed containers for seasonal display, while the use of certain asters as replacements for fall mums has become popular.

### The Evaluation Study

Between 2003 and 2009, the Chicago Botanic Garden (USDA Hardiness Zone 5b, AHS Plant Heat Zone 5) evaluated 119 different asters in full-sun and partial-shade trials. The goal of the comparative trial was to identify outstanding asters for Upper Midwestern gardens. The study included species, cultivars, and hybrids of native and nonnative asters. While the typical evaluation period for perennials is four years, the average evaluation period for the asters was six years.

Five plants of each taxon were grown in side-by-side plots for easy comparison of ornamental traits and landscape performance. The evaluation garden was exposed to wind from all directions and received approximately ten hours of full sun daily during the growing season, which averaged 165 days per year for the trial period. Three taxa, *Eurybia divaricata*, *E. divaricata* 'Eastern Star', and *Symphotrichum drummondii* var. *drummondii*, were grown in partial-shade beds adjacent to the full-sun plots. The clay-loam soil, in both the sun and shade beds, was amended with composted leaves and had a pH of 7.4 throughout the evaluation term. The sites were normally well drained, but at times the soil retained moisture for short periods in summer and winter.

Maintenance practices were kept to a minimum, thereby allowing plants to thrive or fail under natural conditions. Water was provid-



*Symphotrichum ericoides* 'Snow Flurry'

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ed via overhead irrigation as needed and a mulch of shredded leaves and wood chips helped with water conservation and weed suppression. Moreover, plants were not fertilized, winter mulched, or chemically treated for insect or disease problems. The test garden was surrounded by an electrified fence to deter deer browsing but did not exclude rabbits.



*Aster tongolensis* 'Wartburgstern'

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### The Performance Report

In spring 2003, 104 taxa of asters were planted in the trial gardens, and 15 additional taxa were added the following year. The asters were evaluated on four general criteria: 1) cultural adaptability to the soil and environmental conditions of the test site; 2) disease and pest problems; 3) winter hardiness or survivability; and 4) ornamental qualities associated with flowers, foliage, and plant habit. Final performance ratings are based on flower production, plant health, habit quality, and winter hardiness. Plant traits and final performance ratings for 116 of the 119 taxa are noted in Table 1. Excluded from the table are *Aster anomalus*, which was determined to be incorrectly identified; *Eurybia divaricata* 'Raiche Form', which is a synonym of 'Eastern Star'; and *Symphotrichum* 'Pink Star', which is a synonym of 'Ochtendgloren'.

Seven asters received five-star excellent ratings for their overall performance, including *Aster tataricus* 'Jindai', *Eurybia divaricata*, *Eurybia divaricata* 'Eastern Star', *Symphotrichum ericoides* 'Snow Flurry', *Symphotrichum lateriflorum*, *Symphotrichum lateriflorum* 'Lady in Black', and *Symphotrichum oblongifolium* 'Raydon's Favorite'. Top-rated asters displayed consistently strong habits, superior flower production, excellent disease resistance, and full winter hardiness throughout a six-year evaluation term. Additionally, 19 asters received four-star good ratings for their strong performances.

**Table 1:** Performance Ratings and Summary of Plant Traits

Overall Rating	Aster	Flower Color	Flower Size <sup>1</sup>	Bloom Period	Flower Coverage <sup>2</sup>	Plant Height	Plant Width	Mildew Resistance <sup>3</sup>	Rust Resistance <sup>4</sup>
★★★★	<i>Aster amellus</i> ‘Doktor Otto Petschek’	lavender	1¼ in.	mid Sept-late Oct	excellent	20 in.	36 in.	excellent	excellent
★★	<i>Aster amellus</i> ‘Rudolph Goethe’	dark lavender	1½ in.	mid Jul-late Sep	excellent	20 in.	25 in.	excellent	good
★	<i>Aster ×frikartii</i> ‘Flora’s Delight’	lavender	2 in.	mid Jun-mid Oct	poor	12 in.	6 in.	excellent	good
★	<i>Aster ×frikartii</i> ‘Jungfrau’	violet	2 in.	late Jul-early Oct	fair	18 in.	18 in.	excellent	excellent
★★	<i>Aster ×frikartii</i> ‘Mönch’	lavender-blue	2 in.	late Jul-late Oct	good	22 in.	32 in.	excellent	poor
★★	<i>Aster ×frikartii</i> ‘Wunder von Stäfa’	lavender-blue	2 in.	late Jul-mid Oct	fair	23 in.	32 in.	excellent	fair
★★★★★	<i>Aster tataricus</i> ‘Jindai’	violet-blue	1 in.	late Sep-late Nov	excellent	40 in.	32 in.	excellent	excellent
★★★★	<i>Aster tongolensis</i> ‘Wartburgstern’ (‘Wartburg Star’)	violet-blue	2 in.	early Jun-mid Jul	good	20 in.	24 in.	excellent	good
★★★★	<i>Doellingeria umbellata</i>	white	½ in.	early Aug-mid Oct	excellent	60 in.	55 in.	excellent	excellent
★★★★★	<i>Eurybia divaricata</i>	white	¾ in.	early Aug-early Nov	excellent	24 in.	46 in.	excellent	excellent
★★★★★	<i>Eurybia divaricata</i> ‘Eastern Star’	white	1¼ in.	early Aug-early Nov	excellent	21 in.	36 in.	excellent	excellent
★★★	<i>Eurybia macrophylla</i>	light purple	1½ in.	late Jul-mid Oct	excellent	49 in.	36 in.	excellent	very poor
★★	<i>Symphyotrichum</i> ‘Ariel’	lavender	1 in.	early Sep-late Oct	good	32 in.	29 in.	excellent	very poor
★★★	<i>Symphyotrichum</i> ‘Bill’s Big Blue’	lavender-blue	1 in.	early Oct-mid Nov	poor	58 in.	52 in.	good	excellent
★★★★	<i>Symphyotrichum</i> ‘Cape Cod’	white	¾ in.	mid Sep-early Nov	excellent	49 in.	62 in.	excellent	excellent
★★★	<i>Symphyotrichum</i> ‘Cassie’	light purple	1¼ in.	early Sep-mid Oct	good	36 in.	30 in.	fair	excellent
★★	<i>Symphyotrichum</i> ‘Celeste’	violet	1 in.	early Sep-late Oct	fair	35 in.	28 in.	excellent	very poor
★★	<i>Symphyotrichum</i> ‘Coombe Fishacre’	pink	¾ in.	late Aug-late Oct	fair	34 in.	34 in.	very poor	excellent
★★	<i>Symphyotrichum</i> ‘Dragon’	violet-blue	1¼ in.	early Sep-early Nov	good	18 in.	18 in.	excellent	very poor
★★	<i>Symphyotrichum</i> ‘Judith’	violet-blue	1¼ in.	early Sep-early Oct	poor	36 in.	34 in.	good	very poor
★★	<i>Symphyotrichum</i> ‘Karmijn Milka’	bright purple	¾ in.	mid Sep-late Oct	poor	37 in.	24 in.	good	very poor
★★★★	<i>Symphyotrichum</i> ‘Kylie’	pale pink	¾ in.	early Sep-mid Oct	excellent	46 in.	40 in.	excellent	excellent
★★	<i>Symphyotrichum</i> ‘Lilac Blue Admiral’	lavender	¾ in.	mid Sep-early Oct	very poor	39 in.	34 in.	good	very poor
★★	<i>Symphyotrichum</i> ‘Little Carlow’	violet-blue	¾ in.	mid Sep-early Nov	fair	31 in.	23 in.	good	very poor
★★	<i>Symphyotrichum</i> ‘Little Dorritt’	purple-pink	¾ in. D	early Sep-mid Oct	poor	30 in.	22 in.	excellent	very poor
★	<i>Symphyotrichum</i> ‘Loke Viking’	red-purple	1½ in.	late Aug-early Oct	poor	10 in.	14 in.	excellent	excellent
★	<i>Symphyotrichum</i> ‘Magic’	purple	1 in.	late Aug-early Oct	fair	9 in.	12 in.	excellent	excellent
★★	<i>Symphyotrichum</i> ‘Melba’	lavender-pink	1 in.	mid Sep-mid Oct	fair	14 in.	24 in.	fair	fair
★★	<i>Symphyotrichum</i> ‘Melody’	lavender	1½ in.	late Aug-early Nov	good	27 in.	24 in.	very poor	very poor
★★★	<i>Symphyotrichum</i> ‘Milka’	light violet	1 in. D	late Sep-early Nov	good	36 in.	28 in.	good	fair
★★★	<i>Symphyotrichum</i> ‘Miss Bessie’	lavender	1 in.	begins early Nov	n/a	59 in.	40 in.	good	good
★★★	<i>Symphyotrichum</i> ‘Ochtendgloren’	purple-pink	¾ in.	early Sep-late Oct	good	40 in.	40 in.	excellent	very poor
★★	<i>Symphyotrichum</i> ‘Pixie Dark’	purple	¾ in.	late July-mid Oct	poor	29 in.	27 in.	very poor	excellent
★★	<i>Symphyotrichum</i> ‘Puff’	white	1 in.	late Aug-mid Oct	fair	35 in.	36 in.	very poor	poor
★★	<i>Symphyotrichum</i> ‘Purple Viking’	purple-blue	1 in.	early Aug-late Sep	poor	35 in.	33 in.	fair	good
★★	<i>Symphyotrichum</i> ‘Red Star’	magenta	1½ in.	early Aug-late Sep	poor	15 in.	21 in.	very poor	poor
★★	<i>Symphyotrichum</i> ‘Royal Opal’	pale lavender	1¼ in.	late Aug-mid Oct	good	21 in.	24 in.	excellent	excellent
★	<i>Symphyotrichum</i> ‘Sunny Almog’	vivid pink	1 in.	mid Sep-late Oct	poor	9 in.	12 in.	excellent	very poor
★★★	<i>Symphyotrichum</i> ‘White Climax’	white	1¼ in.	early Sep-late Oct	good	50 in.	36 in.	poor	excellent
★★	<i>Symphyotrichum cordifolium</i>	pale lavender	½ in.	late Sep-early Nov	excellent	34 in.	24 in.	excellent	excellent
★★★	<i>Symphyotrichum cordifolium</i> ‘Ideal’	lavender	¾ in.	mid Sep-early Nov	excellent	60 in.	35 in.	excellent	poor

Overall Rating	Aster	Flower Color	Flower Size <sup>1</sup>	Bloom Period	Flower Coverage <sup>2</sup>	Plant Height	Plant Width	Mildew Resistance <sup>3</sup>	Rust Resistance <sup>4</sup>
★★★★	<i>Symphyotrichum drummondii</i> var. <i>drummondii</i>	lavender-blue	¾ in.	late Sep-early Nov	good	49 in.	45 in.	good	excellent
★★	<i>Symphyotrichum ericoides</i> 'Blue Star'	pale blue	½ in.	early Sep-late Sep	excellent	33 in.	50 in.	excellent	very poor
★★★★	<i>Symphyotrichum ericoides</i> 'Erlkönig'	pale lavender-blue	½ in.	early Sep-mid Oct	excellent	42 in.	56 in.	good	good
★★★★	<i>Symphyotrichum ericoides</i> 'First Snow'	white	½ in.	late Aug-late Oct	excellent	19 in.	40 in.	excellent	fair
★★★★★	<i>Symphyotrichum ericoides</i> 'Snow Flurry'	white	¾ in.	mid Sep-late Oct	excellent	8 in.	48 in.	excellent	excellent
★★	<i>Symphyotrichum laeve</i>	lavender	1 in.	early Sep-mid Oct	fair	44 in.	39 in.	fair	excellent
★★	<i>Symphyotrichum laeve</i> 'Bluebird'	violet-blue	1 in.	late Aug-mid Oct	fair	49 in.	36 in.	excellent	good
★★	<i>Symphyotrichum laeve</i> 'Calliope'	lilac-purple	1¾ in.	mid Sep-late Oct	good	57 in.	60 in.	excellent	very poor
★★	<i>Symphyotrichum laeve</i> 'Kurt'	violet	1¼ in.	early Sep-mid Oct	good	16 in.	12 in.	good	excellent
★★★	<i>Symphyotrichum lanceolatum</i> var. <i>lanceolatum</i>	white	¾ in.	early Sep-late Sep	fair	72 in.	70 in.	fair	fair
★★★★★	<i>Symphyotrichum lateriflorum</i>	white	¾ in.	late Aug-mid Oct	excellent	39 in.	60 in.	excellent	excellent
★★★★★	<i>Symphyotrichum lateriflorum</i> 'Lady in Black'	white	½ in.	early Sep-late Oct	excellent	34 in.	50 in.	excellent	excellent
★★★★	<i>Symphyotrichum lateriflorum</i> 'Lovely'	pale purple	¾ in.	early Sep-mid Oct	good	25 in.	26 in.	excellent	excellent
★★★	<i>Symphyotrichum lateriflorum</i> var. <i>horizontale</i>	white	¾ in.	mid Sep-mid Oct	fair	29 in.	30 in.	excellent	excellent
★★★	<i>Symphyotrichum novae-angliae</i>	purple	1¾ in.	late Sep-mid Nov	excellent	69 in.	60 in.	fair	excellent
★★★	<i>Symphyotrichum novae-angliae</i> 'Andenken an Alma Pötschke'	cerise-pink	1½ in. D	early Aug-late Oct	excellent	38 in.	60 in.	fair	excellent
★★★	<i>Symphyotrichum novae-angliae</i> 'Andenken an Paul Gerbe'	purple-pink	1½ in.	early Sep-late Oct	good	52 in.	49 in.	fair	excellent
★★★	<i>Symphyotrichum novae-angliae</i> 'Barr's Blue'	purple-blue	1½ in. D	early Sep-late Oct	excellent	55 in.	68 in.	poor	excellent
★★★★	<i>Symphyotrichum novae-angliae</i> 'Harrington's Pink'	rosy pink	1¼ in.	early Sep-mid Oct	excellent	60 in.	50 in.	fair	excellent
★★	<i>Symphyotrichum novae-angliae</i> 'Hella Lacy'	light violet-blue	1 in.	late Sep-early Nov	poor	34 in.	48 in.	very poor	excellent
★★★★	<i>Symphyotrichum novae-angliae</i> 'Honeysong Pink'	deep pink	1½ in.	early Sep-mid Oct	excellent	59 in.	40 in.	fair	excellent
★★★	<i>Symphyotrichum novae-angliae</i> 'Lachsglut'	deep pink	1½ in.	late Aug-mid Oct	excellent	50 in.	40 in.	very poor	excellent
★★★	<i>Symphyotrichum novae-angliae</i> 'Mrs. S.T. Wright'	purple	2¼ in. D	early Aug-mid Oct	good	49 in.	53 in.	poor	excellent
★★★	<i>Symphyotrichum novae-angliae</i> 'Purple Dome'	violet-purple	1½ in.	early Sep-early Nov	excellent	16 in.	24 in.	fair	excellent
★★	<i>Symphyotrichum novae-angliae</i> 'Septemberrubin'	purple-red	1½ in.	mid Aug-mid Oct	fair	45 in.	54 in.	very poor	excellent
★★★	<i>Symphyotrichum novae-angliae</i> 'Treasure'	purple	2 in.	early Aug-early Oct	excellent	64 in.	38 in.	poor	excellent
★★★	<i>Symphyotrichum novae-angliae</i> 'Wedding Lace'	white	1¾ in.	early Aug-mid Oct	excellent	64 in.	54 in.	poor	excellent
★★	<i>Symphyotrichum novi-belgii</i>	purple	1½ in.	early Jul-early Oct	excellent	44 in.	40 in.	excellent	fair
★★	<i>Symphyotrichum novi-belgii</i> 'Alice Haslem'	light red	1½ in.	early Aug-early Oct	excellent	12 in.	20 in.	very poor	excellent
★★★★	<i>Symphyotrichum novi-belgii</i> 'Blaubox'	light lavender	1½ in.	mid Sep-mid Oct	excellent	28 in.	32 in.	very poor	good
★★	<i>Symphyotrichum novi-belgii</i> 'Blue Danube'	lavender-blue	1¼ in.	mid Sep-mid Oct	poor	50 in.	26 in.	good	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Blue Gown'	lavender-blue	1¼ in.	early Sep-late Oct	excellent	50 in.	52 in.	excellent	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Blue Lagoon'	violet-blue	1 in.	early Sep-mid Oct	excellent	19 in.	28 in.	excellent	very poor
★★★	<i>Symphyotrichum novi-belgii</i> 'Blue Lake'	violet-blue	1 in.	mid Sep-mid Oct	fair	55 in.	50 in.	excellent	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Boningale White'	white	2 in. D	early Aug-mid Oct	fair	21 in.	21 in.	very poor	excellent
★★	<i>Symphyotrichum novi-belgii</i> 'Bonny Blue'	lavender	1 in.	early Sep-late Oct	excellent	8 in.	27 in.	excellent	fair
★★	<i>Symphyotrichum novi-belgii</i> 'Brigitte'	pale blue	1 in.	early Sep-mid Oct	fair	36 in.	34 in.	excellent	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Butterfly Blue'	lavender	¾ in.	early Sep-mid Oct	fair	32 in.	22 in.	very poor	good
★★★	<i>Symphyotrichum novi-belgii</i> 'Choristers'	white	½ in.	late Sep-late Oct	excellent	64 in.	75 in.	excellent	poor

Overall Rating	Aster	Flower Color	Flower Size <sup>1</sup>	Bloom Period	Flower Coverage <sup>2</sup>	Plant Height	Plant Width	Mildew Resistance <sup>3</sup>	Rust Resistance <sup>4</sup>
★★★★	<i>Symphyotrichum novi-belgii</i> 'Climax'	lavender-blue	1¼ in.	early Sep-early Nov	excellent	46 in.	40 in.	excellent	excellent
★★	<i>Symphyotrichum novi-belgii</i> 'Crimson Brocade'	purple-red	1½ in.	early Sep-early Oct	poor	26 in.	26 in.	fair	good
★★	<i>Symphyotrichum novi-belgii</i> 'Daniela'	purple	1¼ in. D	late Sep-early Nov	fair	12 in.	24 in.	excellent	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Eventide'	lavender-blue	2 in. D	early Sep-early Oct	excellent	22 in.	14 in.	fair	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Fellowship'	pale pink	1¼ in. D	early Sep-early Oct	poor	29 in.	33 in.	excellent	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Freda Ballard'	purple-red	1¼ in. D	late Aug-early Oct	poor	20 in.	18 in.	poor	excellent
★★	<i>Symphyotrichum novi-belgii</i> 'Harrison's Blue'	violet-blue	1½ in. D	early Sep-mid Oct	excellent	36 in.	38 in.	poor	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Heinz Richard'	purple-pink	1½ in.	early Jul-late Sep	fair	11 in.	30 in.	good	very poor
★	<i>Symphyotrichum novi-belgii</i> 'Jenny'	purple-red	1½ in. D	late Jul-mid Oct	fair	14 in.	17 in.	excellent	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Kiesapphire' Sapphire	vivid violet	1½ in.	mid Sep-mid Oct	fair	24 in.	22 in.	excellent	very poor
★★★★	<i>Symphyotrichum novi-belgii</i> 'Lady in Blue'	lavender-blue	1¼ in.	early Sep-mid Oct	fair	14 in.	30 in.	excellent	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Marie Ballard'	lavender-blue	1¾ in. D	late Aug-early Oct	fair	32 in.	20 in.	poor	fair
★★★★	<i>Symphyotrichum novi-belgii</i> 'Mariore'	pink	1¼ in.	mid Sep-mid Oct	excellent	18 in.	30 in.	very poor	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Niobe'	white	1½ in.	early Sep-mid Oct	fair	14 in.	13 in.	good	good
★★	<i>Symphyotrichum novi-belgii</i> 'Patricia Ballard'	pink	1¾ in. D	late Aug-early Oct	fair	32 in.	26 in.	fair	very poor
★★★★	<i>Symphyotrichum novi-belgii</i> 'Porzellan'	light purple	1½ in.	early Sep-early Nov	excellent	62 in.	60 in.	good	very poor
★★	<i>Symphyotrichum novi-belgii</i> 'Professor Anton Kippenberg'	lavender-blue	1 in.	late Aug-early Oct	fair	11 in.	26 in.	excellent	very poor
★	<i>Symphyotrichum novi-belgii</i> 'Richness'	purple	1 in. D	late Aug-late Sep	fair	26 in.	26 in.	excellent	very poor
★★★★	<i>Symphyotrichum novi-belgii</i> 'Rosenwichtel'	purple-pink	1¼ in.	early Sep-mid Oct	excellent	12 in.	30 in.	excellent	excellent
★★	<i>Symphyotrichum novi-belgii</i> 'Sailor Boy'	purple-blue	1¾ in. D	early Sep-mid Oct	excellent	19 in.	24 in.	fair	fair
★★★★	<i>Symphyotrichum novi-belgii</i> 'Schneekissen' ( 'Snow Cushion' )	white	1 in.	early Sep-mid Oct	good	10 in.	16 in.	excellent	good
★★	<i>Symphyotrichum novi-belgii</i> 'Starlight'	violet	1¼ in.	early Sep-mid Oct	good	10 in.	14 in.	excellent	very poor
★★★★	<i>Symphyotrichum novi-belgii</i> 'Violet Carpet'	violet-blue	1 in.	mid Aug-late Oct	fair	9 in.	36 in.	excellent	good
★★	<i>Symphyotrichum novi-belgii</i> 'White Swan'	white	1½ in. D	early Sep-late Oct	good	36 in.	28 in.	very poor	excellent
★	<i>Symphyotrichum novi-belgii</i> 'Winston S. Churchill'	purple-red	1½ in.	early Sep-mid Oct	fair	19 in.	31 in.	excellent	excellent
★★★★	<i>Symphyotrichum novi-belgii</i> 'Wood's Blue'	lavender-blue	1½ in.	late Aug-late Oct	fair	11 in.	30 in.	good	excellent
★★★★	<i>Symphyotrichum novi-belgii</i> 'Wood's Light Blue'	light blue	1 in.	late Aug-mid Oct	excellent	8 in.	24 in.	excellent	excellent
★★★★	<i>Symphyotrichum novi-belgii</i> 'Wood's Purple'	purple	1¼ in.	early Aug-late Oct	good	9 in.	18 in.	excellent	excellent
★★★★★	<i>Symphyotrichum oblongifolium</i>	lavender-blue	1½ in.	early Aug-early Nov	good	36 in.	40 in.	excellent	excellent
★★★★★	<i>Symphyotrichum oblongifolium</i> 'Fanny's Aster'	light purple	1¼ in.	mid Oct-frost	good	47 in.	40 in.	good	excellent
★★★★★	<i>Symphyotrichum oblongifolium</i> 'October Skies'	lavender-blue	1¼ in.	early Aug-late Oct	good	35 in.	50 in.	fair	excellent
★★★★★	<i>Symphyotrichum oblongifolium</i> 'Raydon's Favorite'	blue-purple	1¼ in.	early Aug-early Nov	excellent	38 in.	53 in.	excellent	excellent
★★★★★	<i>Symphyotrichum oblongifolium</i> var. <i>angustatus</i>	lavender-blue	1¼ in.	early Sep-early Nov	fair	35 in.	65 in.	excellent	excellent
★★★★	<i>Symphyotrichum oolentangiense</i>	lavender	1 in.	early Sep-late Oct	fair	45 in.	28 in.	fair	excellent
★★★★	<i>Symphyotrichum sericeum</i>	purple-blue	1½ in.	mid Aug-late Sep	fair	22 in.	32 in.	excellent	excellent
★★★★★	<i>Symphyotrichum turbinellum</i>	violet-blue	1¼ in.	early Sep-early Nov	excellent	58 in.	56 in.	good	excellent

Overall Ratings: ★★★★★ excellent, ★★★★ good, ★★★ fair, ★★ poor, ★ very poor

<sup>1</sup>D indicates double flower form

<sup>2</sup>Flower Coverage: excellent 100-80%; good 79-60%; fair 59-40%; poor 39-20%; very poor <20%

<sup>3</sup>Mildew Resistance: excellent, no infection; good <25% infection; fair 26-50% infection; poor 51-75% infection; very poor >76%

<sup>4</sup>Rust Resistance: excellent, no infection; good <25% infection; fair 26-50% infection; poor 51-75% infection; very poor >76%

### Top-rated Asters

*Aster tataricus* 'Jindai' is somewhat of an enigma among garden asters. Large, coarse basal leaves, nearly 2 feet long, are more reminiscent of horseradish than of a typical aster. Rhizomatous stems create vigorous clumps that make 'Jindai' a good massing plant. Flower stems begin to grow in August, eventually reaching up to 4 feet tall before flowers open in late September. The lovely violet-blue and yellow flowers continue blooming well into late November or early December at the Chicago Botanic Garden. 'Jindai' is 2 feet shorter than the species and is a wonderful late-season aster with a distinctive habit.

White wood aster, *Eurybia divaricata*, is one of the few asters that grow well in shady gardens, although morning sun encourages more flower production. The smallish white flowers with yellow centers, produced in profusion from early August to early November, are borne on dark burgundy, wiry stems. Its mounded bushy habit was more upright than 'Eastern Star'. Differences between the species and 'Eastern Star' were minor but noticeable in side-by-side comparisons. 'Eastern Star' featured larger flowers, darker green leaves, and a slightly shorter stature. The arching dusky stems were a bit more recumbent than the species, especially during the bloom period. The white wood aster is particularly fetching planted in drifts in high-shade landscapes.

The habit of white heath aster, *Symphotrichum ericoides* 'Snow Flurry', set it apart from any other asters in the trial. The low, arching stems create an undulating mounded habit only 8 inches tall but nearly 4 feet wide. The mat-forming habit makes a great ground cover and is an excellent choice to cascade over walls or containers. 'Snow Flurry' is aptly named for the snowstorm of white flowers that blanket plants in September and October. No description of the small white flowers does justice to the actual stunning floral display. 'Snow Flurry' is also disease free and tolerant of dry conditions.

Calico aster, *Symphotrichum lateriflorum*, is another aster with a singular habit and floral display. Wiry stems terminate in horizontally arched branches that give the plant its graceful habit. Sprays of small white blossoms cover the upper sides of the horizon-



*Aster tataricus* 'Jindai'

Richard Hawke

tal branches in late August to mid-September. New leaves emerge bronze but fade quickly to dark green. On the other hand, the leaves of 'Lady in Black' remain strongly purple all summer—full sun is essential to get the best color. While its bushy, vasselike habit is similar to the species, 'Lady in Black' was slightly more compact in our trial. As the flowers age, the disks change from yellow to purplish pink, which is particularly pleasing against the purple leaves. Calico aster was untroubled by powdery mildew despite the fact that many neighboring species were infected. Unfortunately, all calico asters were browsed periodically by rabbits.

'Raydon's Favorite' is one of the popular cultivars of the aromatic aster, *Symphotrichum oblongifolium*. The slightly sticky, aromatic leaves superficially resemble *S. novae-angliae* but in this case the basal lobes do not clasp the stems. An abundance of blue-purple flowers are produced over a long period beginning in early August; in fact, precocious flowers often pop up a few weeks before blooming begins in earnest. The billowy habit of 'Raydon's Favorite' has an informal look that suits it well to mass plantings and naturalizing. Aromatic aster is a good alternative to New England aster because it is more resistant to powdery mildew.

### Observations

Our trial featured an array of fall-blooming species and hybrid cultivars, as well as summer-blooming species such as the *Aster xfrickii* and *A. tongolensis*. Generally, the asters were strong bloomers, typically producing copious flowers for an extended period. Flowers ranged from less than half an inch to slightly over 2 inches wide, and were single to semi-double to double in form depending on the number of ray florets present. While most cultivars are probably best described as semidouble because they had more than a single row of ray florets, cultivars with an excess of ray florets are distinguished as double-flowered in Table 1. Lower flower production was usually due to disease issues, animal browsing, or lack of vigor caused by winter crown loss. The flower production of *Symphotrichum* 'Miss Bessie' was unrated because it began blooming in early November, too late in the season to observe its full potential before frost halted the bloom cycle.

Asters are known primarily for their floral display rather than their foliar display since most species have simple, somewhat nondescript leaves. However, the leaves of some asters are notable for their color, texture, or fragrance. The new leaves of *Symphotrichum lateriflorum* are nicely bronzed, while *S. lateriflorum* var. *horizontale* has a purple cast to its upper leaves and 'Lady in Black' features purple leaves all summer. Smooth blue aster, *S. laeve* 'Bluebird' has attractive blue-green leaves, and *S. laeve* 'Calliope' displays purple terminal leaves that eventually become dark green with purple midribs and stems. From a textural standpoint, the soft, silvery leaves of silky aster (*S. sericeum*) live up to their name. At opposite ends of the spectrum are the fine-textured, grasslike leaves of 'Cape Cod' and the coarse basal leaves of *A. tataricus* 'Jindai'. In our trials we observed that the boldly textured 'Jindai' was perfectly juxtaposed to the tiny leaves on the flowering stems of 'Raydon's Favorite'. Although fragrance is not a common trait of asters, the leaves and phyllaries of aromatic aster (*S. oblongifolium*) have a pleasant minty aroma.

Aster habits ranged from clump-forming to rhizomatous, with the degree of spreading varying between species and cultivars. For example, *Aster tongolensis* 'Wartburgstern'

spread slowly to form a small, dense mat over several years; whereas, *Symphotrichum novi-belgii* 'Blue Lake' spread aggressively to the point of weediness by the second growing season. Other taxa with vigorously spreading habits include *S.* 'Bill's Big Blue', *S.* 'Miss Bessie', *S. laeve* 'Calliope', *S. lanceolatum* var. *lanceolatum*, *S. novi-belgii* 'Choristers', and *S. novi-belgii* 'Porzellan'. *Aster tataricus* 'Jindai' is also strongly rhizomatous but its growth rate was not considered overly aggressive in the trial plots.

Relaxed habits late in the season were not uncommon for many asters, especially as plants came into full bloom. However, a small number of taxa had unkempt habits with floppy to lodged stems by early September of each year. Among the taxa with consistently poor habits were *Symphotrichum* 'Celeste', *S.* 'Little Carlow', *S. novae-angliae* 'Septemberrubin', *S. novae-angliae* 'Treasure', and *S. novi-belgii* 'Blue Danube'. Measurements noted in Table 1 were taken before flopping occurred. In a few cases, discrepancies were noted between the expected plant sizes and what we actually saw. At 54 inches tall, *S. novi-belgii* 'Choristers' was nearly 2 feet taller than noted in literature citations. And while there was a slight difference in flower color between 'October Skies' and 'Raydon's Favorite', plants of 'October Skies' were nearly twice the anticipated height in our trial. The asters were not deadheaded during the trial and seedlings of several species were commonly observed in the trial plots, although none were overly prolific. Seedlings of *Eurybia divaricata*, *S. novae-angliae*, and *S. oblongifolium* were not attributed to any specific cultivar.

The asters were generally adaptable to the conditions of the test site, whether planted in the full-sun or partial-shade plots. Unfortunately, the cultivars of *Aster xfrickartii* were adversely affected by the winter wetness of the soil and did not persist in the trial. Many asters seemed to thrive with the limited level of maintenance provided; however, overhead irrigation of the trial beds likely contributed to an increase in disease issues. In fact, growing so many asters together in a common garden greatly increased the propensity for, and severity of, diseases such as powdery mildew or rust. The upside to growing a large number of similar taxa in



*Eurybia divaricata*

close proximity is that the plants not troubled by foliar diseases are most likely inherently disease resistant.

Foliar rust and powdery mildew are limiting factors to growing asters successfully. Both diseases are debilitating to plant health and disfiguring to leaves and plant habits. Rust diseases produce reddish, orange, or brown pustules on the undersides of leaves and along stems of the entire plant. Rust fungi rarely kill infected plants because they need living plants to survive; however, rust infections diminish the ornamental display by reducing flower production and weakening plants. Rust was more prevalent on *S. novi-belgii* cultivars and related hybrids that were most affected by rust were: *Aster xfrickartii* 'Mönch', *Eurybia macrophylla*, *Symphotrichum* 'Ariel', *S.* 'Celeste', *S.* 'Dragon', *S.* 'Judith', *S.* 'Karmijn Milka', *S.* 'Lilac Blue Admiral', *S.* 'Little Carlow', *S.* 'Little Dorritt', *S.* 'Melody', *S.* 'Ochtendgloren', *S.* 'Puff', *S.* 'Red Star', *S.* 'Sunny Almog', *S. cordifolium* 'Ideal', *S. ericoides* 'Blue Star', *S. laeve* 'Calliope', and *S. novi-belgii* cultivars 'Blue Danube', 'Blue Gown', 'Blue Lagoon', 'Blue Lake', 'Brigitte', 'Choristers', 'Daniela', 'Eventide',

'Fellowship', 'Harrison's Blue', 'Heinz Richard', 'Jenny', 'Kiesapphire', 'Lady in Blue', 'Mariore', 'Patricia Ballard', 'Porzellan', 'Professor Anton Kippenberg', 'Richness', and 'Starlight'.

Conversely, cultivars of *Symphotrichum novae-angliae* were more troubled by powdery mildew than by rust. Powdery mildew is a fungus that grows mainly on the upper surfaces of the leaves, but can infect stems and flowers too. The white fungal patches may be spotty or coalesce to completely cover the leaf surface. Severely infected plants look unsightly and may likely defoliate. Occasionally, the severity of infected plants was less noticeable at a casual glance, but upon closer inspection, many of the diseased leaves were hidden within the tightly mounded plants. Among the *S. novae-angliae* cultivars that appeared healthier than actual infection levels might indicate were 'Barr's Blue', 'Harrington's Pink', 'Honeysong Pink', and 'Mrs. S.T. Wright'. Powdery mildew among all asters in the trial was less of a problem than expected based on the reputation of their mildew susceptibility, the number of closely planted asters, and our use of overhead irrigation.



Rabbits and deer were occasional pests in the trial garden. A deer-exclusion fence surrounded the trial garden, but there was no attempt to keep out rabbits. Rabbit browsing was commonly observed in all years of the trial, resulting in infrequent to repeated damage on some but not all asters. Rabbit browsing affected the ornamental display by causing irregular stem heights, reducing flower production, and/or delaying bloom times. Asters damaged by rabbits in each year of the trial included: *Symphotrichum* 'Celeste', *S.* 'Melody', *S.* 'Ochtendgloren', *S.* 'Purple Viking', *S.* 'White Climax', *S. ericoides* 'Erlkönig', *S. novi-belgii* 'Blue Gown', and *S. novi-belgii* 'Daniela'. In addition, *S.* 'Cape Cod', *S.* 'Little Carlow', *S.* 'Milka', *S. cordifolium*, *S. laeve* 'Kurt', *S. lateriflorum*, *S. lateriflorum* 'Lady in Black', *S. lateriflorum* 'Lovely', *S. lateriflorum* var. *horizontale*, *S. novi-belgii* 'Porzellan', and *S. turbinellum* were rabbit-browsed in more than one year but not in all years. Due to the electrified exclusion fence, fewer asters were damaged by deer, except over a several-night period in 2003 when failure to secure the gate resulted in a fair number of taxa being browsed. Among the deer-browsed asters were: *S.* 'Bill's Big Blue', *S.* 'Cassie', *S.* 'Coombe Fishacre', *S.* 'Little Carlow', *S.* 'Little Dorritt', *S.* 'Melba', *S.* 'Milka', *S.* 'Ochtendgloren', *S.* 'Puff', *S.* 'Purple Viking', *S.* 'Royal Opal', *S.* 'Sunny Almog', *S.* 'White Climax', *S. laeve*, *S. lanceolatum* var. *lanceolatum*, *S. lateriflorum* 'Lady in Black', *S. novae-angliae*, *S. novae-angliae* 'Andenken an Alma Potschke', *S. novae-angliae* 'Harrington's Pink', *S. novae-angliae* 'Hella Lacy', *S. novae-angliae* 'Honeysong Pink', *S. novae-angliae* 'Mrs. S.T. Wright', *S. novae-angliae* 'Purple Dome', *S. novae-angliae* 'Treasure', and all 38 cultivars of *S. novi-belgii*. The extent of damage observed during this short period indicates that asters are generally quite appealing to deer.

Seventy percent of the asters suffered plant loss, crown injury, or both in winter. Approximately 45 percent of the taxa had all plants killed over one or more winters; 15 percent of taxa had one or more plants killed over winter but with some representatives alive at the end of the trial; and ten percent of taxa had some degree of crown loss in one or more winters but no plant loss noted. Nearly 30 percent of the taxa were uninjured in any winter during the trial period including

*Eurybia divaricata*, *E. divaricata* 'Eastern Star', *Symphotrichum* 'Cape Cod', *S.* 'Kylie', *S.* 'Miss Bessie', *S. drummondii* var. *drummondii*, *S. ericoides* 'Erlkönig', *S. ericoides* 'First Snow', *S. ericoides* 'Snow Flurry', *S. laeve* 'Calliope', *S. lateriflorum*, *S. lateriflorum* 'Lady in Black', *S. novae-angliae*, *S. novae-angliae* 'Andenken an Paul Gerbe', *S. novae-angliae* 'Barr's Blue', *S. novae-angliae* 'Harrington's Pink', *S. novae-angliae* 'Honeysong Pink', *S. novae-angliae* 'Lachsglut', *S. novae-angliae* 'Mrs. S.T. Wright', *S. novae-angliae* 'Purple Dome', *S. novae-angliae* 'Treasure', *S. novae-angliae* 'Wedding Lace', *S. novi-belgii* 'Blaubox', *S. novi-belgii* 'Blue Lake', *S. novi-belgii* 'Choristers', *S. novi-belgii* 'Mari-

ore', *S. novi-belgii* 'Porzellan', *S. oblongifolium* 'Fanny's Aster', *S. oblongifolium* 'October Skies', *S. oblongifolium* 'Raydon's Favorite', *S. oblongifolium* var. *angustatus*, and *S. turbinellum*. A handful of taxa lived for one summer and died in the first winter, including *Aster xfrickartii* cultivars 'Flora's Delight', 'Jungfrau', and 'Wunder Von Stafa', as well as *Symphotrichum* 'Loke Viking', *S.* 'Magic', *S.* 'Sunny Almog', *S. novi-belgii* 'Jenny', *S. novi-belgii* 'Richness', and *S. novi-belgii* 'Winston S. Churchill'.

Cultural problems and disease issues rather than cold hardiness were determined to be the common causes of winter injury among the asters. New York aster (*Sympho-*



*Symphotrichum lateriflorum* 'Lady in Black'

*trichum novi-belgii*), which is considered cold hardy to USDA Zone 4 (minus 30 degrees Fahrenheit), actually suffered more winter loss than any other species in our trial. Of the 62 *S. novi-belgii* types, including cultivars and hybrids, roughly ten percent of the taxa died outright in the first winter, 37 percent of the taxa died out fully during the second winter, and six percent were never injured. The significant plant loss recorded during the second winter of 2004-05 did not correspond to the most severe winter conditions during the trial period. In fact, the 2004-05 winter was the mildest of the trial years with only two days of subzero temperatures and significant snowfall (see Table 2). However, the health of many plants was greatly reduced during the 2004 growing season due to severe rust infections that contributed to their demise in the subsequent winter. In the end, the severe plant loss incurred in winter resulted in only 18 *S. novi-belgii* taxa with one or more plants alive at the end of the trial. In the case of other asters, plant loss over winter was directly related to poor plant health observed in the previous summer. In addition, the *Aster xfrinkartii* cultivars (USDA Zone 5-8), were killed over winter due to excessive soil wetness rather than cold temperatures. This species requires sharp drainage for optimum growth.



Richard Hawke

*Symphyotrichum turbinellum*

A number of hybrid cultivars in the trial were developed as floricultural alternatives to seasonal mums but were under evaluation to determine their longevity as garden perennials. This type of aster is typically a hybrid of *Symphyotrichum novi-belgii*, and in our trial included 'Ariel', 'Celeste', 'Dragon', 'Judith', 'Karmijn Milka', 'Loke Viking', 'Magic', 'Melody', 'Milka', 'Pixie Dark', 'Puff',

'Purple Viking', and 'Sunny Almog'. While most of these cultivars performed well in the first year or two of the trial, they typically languished and/or gradually died out in subsequent years. Based on their performance, floricultural asters are recommended for use as seasonal annuals rather than long-term perennials in northern gardens.

**Table 2: Weather Summary for 2003-2009**

	2003	2004	2005	2006	2007	2008	2009
Lowest temperature °F (°C)	-5(-21)	-9(-23)	-2(-19)	-8(-22)	-10(-23)	-6(-21)	-17(-27)
Lowest temperature date	1/27	1/30	12/7	2/18	3/5	1/20	1/16
Highest temperature °F (°C)	98(37)	93(34)	100(38)	100(38)	96(35)	93(34)	96(35)
Highest temperature date	8/22	6/6	6/24	7/31	7/9	7/17	8/9
Number of growing season days <sup>a</sup>	150	155	158	143	196	181	175
Number of days below 0°F (-18°C)	4	10	2	2	11	16	8
Number of days above 90°F (32°C)	15	5	24	15	20	6	7
Last frost date	5/4	5/3	5/4	5/7	4/16	4/30	4/18
First frost date	10/1	10/5	10/23	10/12	10/28	10/28	10/10
Annual rainfall in inches (cm) <sup>b</sup>	31.7(80.5)	35.5(90.2)	24.4(61.9)	42.5(107.9)	41.0(104.1)	49.5(125.7)	38.8(98.5)
Annual snowfall in inches (cm) <sup>c</sup>	15.6(39.6)	27.2(69.1)	44.4(112.7)	23.4(59.4)	38.5(97.8)	78.5(199.4)	28.8(73.2)

<sup>a</sup>Normal growing season is 162 days

<sup>b</sup>Average rainfall is 35.8 inches (90.9 cm)

<sup>c</sup>Average snowfall is 38.1 inches (96.8 cm)

Data collected at Chicago Botanic Garden weather station

Latitude: 41°51'N. Longitude: 87°37'W. Altitude: 578.74 ft. (176.4m)



*Doellingeria umbellatus*

## Summary

Our review of cultivated asters was the largest trial undertaken at the Chicago Botanic Garden. Of the 116 unique taxa in the trial, 26 taxa received top ratings for strong habits, flower production, disease resistance, and winter survivability throughout a six-year evaluation term. Seven asters received exceptional five-star excellent ratings for their overall performance, including *Aster tataricus* 'Jindai', *Eurybia divaricata*, *E. divaricata* 'Eastern Star', *Symphotrichum ericoides* 'Snow Flurry', *S. lateriflorum*, *S. lateriflorum* 'Lady in Black', and *S. oblongifolium* 'Raydon's Favorite'. Furthermore, 19 asters received four-star good ratings for their strong performances.

Foliar diseases such as powdery mildew and rust are limiting factors to growing asters well. Selecting disease-resistant plants is the gardener's first defense against these often debilitating and disfiguring pests. Despite varying degrees of susceptibility to foliar diseases amongst the asters, there were 26 taxa that demonstrated high resistance to both powdery mildew and rust. While some asters in this group were not overly strong performers, 17 of the 26 taxa received good or excellent ratings including *Aster amellus* 'Doktor Otto Petschek', *A. tataricus* 'Jindai', *Doellingeria umbellata*, *Eurybia divaricata*, *E. divaricata* 'Eastern Star', *Symphotrichum* 'Cape Cod', *S. 'Kylie'*, *S. ericoides* 'Snow Flurry', *S. lateriflorum*, *S. lateriflorum* 'Lady in Black', *S. lateriflorum* 'Lovely', *S. lateriflorum* var. *horizontale*, *S. novi-belgii* 'Climax',

*S. novi-belgii* 'Rosenwichtel', *S. oblongifolium*, *S. oblongifolium* 'Raydon's Favorite', and *S. oblongifolium* var. *angustatus*.

Despite the popularity of New England and New York asters, they proved to be rife with cultural and health issues; therefore, few cultivars can be recommended without reservations. In addition, New York asters tended to be short-lived perennials, with only 18 of 62 taxa having one or more plants alive at the end of the trial. In the end, just four cultivars of New York aster and two New England aster cultivars received good ratings. While the diversity of flower color and plant size is not as great, aromatic asters (*Symphotrichum oblongifolium*) are better alternatives to either of these commonly grown asters.

Copious flowers adorn asters in a stellar show of late-season color, blending beautifully with other perennials and ornamental grasses. The variety of plant habits and flower colors makes it easy to find an aster for almost any situation. *Symphotrichum ericoides* 'Snow Flurry' is good for rock gardens or grown on a low wall where the prostrate stems cascade downward. Bushy asters such as *S. oblongifolium* 'Raydon's Favorite', *S. lateriflorum* 'Lady in Black', and *Aster tataricus* 'Jindai' are excellent choices for perennial gardens or naturalistic landscapes. With so many possibilities, selecting the best asters can be overwhelming, but any of the proven asters from the Garden's trials are a good place to begin.

Mark Rudy



*Symphotrichum novi-belgii* 'Blaubox'

Richard Hawke

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