

# Asters in the Mid-Atlantic Region: Performance Evaluation and Recommendations for Landscape Use<sup>©</sup>

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## INTRODUCTION

Those of you who have kept abreast of recent changes in nomenclature will find it surprising that the topic of this presentation is eastern North American asters, since the taxonomists now state that the genus *Aster* is restricted to Eurasia. Those species that were formerly classified as being in the genus *Aster* have now been divided into separate genera, including: *Symphotrichum*, *Ionactis*, *Eurybia*, *Sericocarpus*, *Doellingeria*, *Ampelaster*, and *Oclemena*.

In 1994, Dr. Guy Nesom, a research botanist, attempted to reclassify the genus into a number of smaller units based on morphology (form and structure) and chromosomes. He concluded that none of the American so-called asters were closely related to Eurasian asters. This was initially met with skepticism, but subsequent molecular and taxonomic research supported Nesom's hypothesis. At Mt. Cuba we have decided to adopt these new names in our plant record system and signage. However, in this presentation, I will continue to list them as asters to avoid confusion, adding their new names as a subtitle.

Asters belong to the daisy family, formerly Composite, now Asteraceae. The flowers at the center of the daisy are really groups (inflorescences) of small fertile flowers, generally yellow, called disk florets, which provide nectar and pollen to visiting insects. These are surrounded by structures that look like petals but are actually ray florets, ranging in color from white through pink, blue, and purple, lengthened in design through evolution to attract insects.

## DESCRIPTION OF EVALUATION PROJECT

Asters, the "stars of autumn," are invaluable additions to the late-season garden. They are suitable for many sites and styles of gardening, from rock gardens and meadows to formal bedding and ecological restoration, and are easily grown and propagated.

In 2002, Mt. Cuba Center, located near Wilmington, Delaware (USDA Hardiness Zone 7A/6B) initiated a project to evaluate 56 commercially available species and cultivars of asters predominantly native to the Eastern U.S.A., making a special point to include lesser-known species that have not been fully evaluated for their potential ornamental use. Data were collected from 2003–2005. Our goal was to recommend superior taxa based on the following observations: floral display (flower color, inflorescence size, flower coverage, bloom period); habit (height, width, foliage quality); habit quality (need for staking or pinching); winter hardiness; cultural adaptability; and disease and pest resistance. Ratings were based on a 1–5 scale; 1 = very poor, 5 = excellent. See Table 1 for a summary of this information.

All plants were grown in an 11,000 sq. ft. trial garden, protected by an 18- to 36-inch wire fence, within a 100-acre garden protected by a 10-ft deer exclusion fence. Most beds were in full sun; partial shade was provided to woodland species by several nearby mature pines and sweet gum trees located outside the fence. The clay-loam soil in the trial garden, site of a former cut flower garden, had been amended

Table 1. Asters in the Mid-Atlantic region: Performance evaluation summary.

Aster taxa	Flower color/RHS no.	Flower size (inches)	Peak bloom	Bloom period	Size (inches) (H x W)	Rating*
<i>Ampelaster carolinianus</i> (syn. <i>A. carolinianus</i> )	light violet blue (84B/C)	1 <sup>1</sup> / <sub>4</sub>	11/26	mid Nov – early Dec	83 x 41	3.9
<i>Doellingeria umbellata</i> (syn. <i>A. umbellatus</i> )	white (white)	1/2 – 3/4	8/18	late July – late Aug	23 x 52	4.7
<i>Eurybia divaricata</i> 'Eastern Star' (syn. <i>A. divaricata</i> 'Eastern Star')	white (white)	3/4	9/24	early Sept – mid Oct	25 x 50	4.5
<i>Eurybia divaricata</i> 'Silver Spray' (syn. <i>A. divaricata</i> 'Silver Spray')	white (white)	3/4 – 1	9/10	early – late Sept	40 x 70	4.6
<i>Eurybia divaricata</i> "Raiche Form" (syn. <i>A. divaricata</i> "Raiche Form")	white (white)	3/4 – 1	9/10	late Aug – late Sept	21 x 63	4.6
<i>Eurybia hemispherica</i> <i>A. paludosus</i> subsp. <i>hemisphericus</i> )	dark violet blue (90A-D)	1 <sup>1</sup> / <sub>8</sub> – 1 <sup>1</sup> / <sub>2</sub>	9/22	mid Sept – early Oct	23 x 44	4.5
<i>Eurybia macrophylla</i> (syn. <i>A. macrophyllus</i> )	light violet blue (91B)	1 – 1 <sup>1</sup> / <sub>4</sub>	9/5	late Aug – late Sept	49 x 55	4.2
<i>Eurybia macrophylla</i> 'Albus' (syn. <i>A. macrophyllus</i> 'Albus')	white (white)	3/4 – 1 <sup>1</sup> / <sub>4</sub>	7/21	late July – late Aug	35 x 74	4.3
<i>Eurybia schreberi</i> (syn. <i>A. schreberi</i> )	white (white)	3/4 – 1	7/21	mid July – mid Aug	32 x 19	4.4
<i>Eurybia spectabilis</i> (syn. <i>A. spectabilis</i> )	medium violet (85 A/B)	2 – 2 <sup>1</sup> / <sub>4</sub>	9/24	early Sept – early Oct	14 x 60	4.5
<i>Eurybia</i> x <i>herveyi</i> (syn. <i>A.</i> x <i>herveyi</i> )	light violet (85B)	1 – 1 <sup>1</sup> / <sub>4</sub>	9/15	mid Aug – early Oct	37 x 41	4
<i>Ionactis linariifolium</i> (syn. <i>A. linariifolius</i> )	light violet (88D)	1 – 1 <sup>1</sup> / <sub>4</sub>	9/22	early – late Sept	15 x 25	4.6
<i>Oclemena acuminata</i> (syn. <i>A. acuminatus</i> )	white (white)	3/4 – 1	9/18	early – late Sept	31 x 57	4.6

<i>Oclemena nemoralis</i> (syn. <i>A. nemoralis</i> )	medium purple (75A)	1	9/1	late Aug – early Sept	11 × 40	3.9
<i>Symphotrichum concolor</i> (syn. <i>A. concolor</i> )	medium violet blue (90C/D)	3/4 – 1	10/25	mid Oct – late Nov	19 × 35	dead
<i>Symphotrichum cordifolium</i> (syn. <i>A. cordifolius</i> )	light violet (85C)	1/2 – 5/8	10/7	late Sept – late Oct	34 × 77	4.4
<i>Symphotrichum cordifolium</i> 'Photograph'	light purple (76A)	1 – 1 1/4	9/24	late Sept – late Oct	36 × 56	4.2
<i>Symphotrichum drummondii</i> (syn. <i>A. drummondii</i> )	light violet (85B)	3/4 – 1	10/7	mid Sept – mid Oct	60 × 80	4.5
<i>Symphotrichum dumosum</i> (syn. <i>A. dumosus</i> )	light violet (85A/B)	5/8	9/15	late Aug – late Sept	48 × 45	4.6
<i>Symphotrichum dumosum</i> 'Rose Serenade'	light purple (76A)	1 – 1 1/4	9/24	mid Sept – mid Oct	27 × 62	4.3
<i>Symphotrichum dumosum</i> 'Rose Serenade'	light purple (76A)	1 – 1 1/4	9/24	mid Sept – mid Oct	27 × 62	4.3
<i>Symphotrichum eliotii</i> ( <i>A. eliotii</i> )	medium purple (77C)	1 – 1 7/8	12/3	late Nov – early Dec	80 × 72	3.6
<i>Symphotrichum ericoides</i> 'Pink Star'	light purple violet (80B/C)	3/4 – 7/8	9/22	mid Sept – mid Oct	60 × 36	3.8
<i>Symphotrichum ericoides</i> var. <i>prostratum</i> 'Snow Flurry'	white (white)	1/4	10/14	mid – late Oct	9 × 50	3.8
(syn. <i>A. ericoides</i> f. <i>prostratus</i> 'Snow Flurry')						
<i>Symphotrichum georgianum</i> (syn. <i>A. georgianus</i> )	medium violet (88A)	2 1/4 – 2 1/2	11/4	mid Oct – late Nov	48 × 80	4
<i>Symphotrichum grandiflorum</i> (syn. <i>A. grandiflorus</i> )	medium violet (88A)	1 1/2 – 1 1/4	10/27	mid Oct – late Nov	46 × 72	4.6
<i>Symphotrichum laevis</i> 'Bluebird'	medium violet blue (90D)	1 1/4 – 1 1/2	9/27	late Sept – late Oct	48 × 40	4.8
(syn. <i>A. laevis</i> 'Bluebird')						
<i>Symphotrichum laevis</i> 'Calliope'	medium violet (85A/B)	1 – 1 1/2	9/26	mid Sept – early Oct	32 × 67	2.6
(syn. <i>A. laevis</i> 'Calliope')						

<i>Symphytotrichum lanceolatum</i> (syn. <i>A. lanceolatus</i> )	light violet (85C)	$\frac{3}{4}$ – 1	9/18	early – late Sept	50 × 36	3.5
<i>Symphytotrichum lateriflorum</i> 'Lady in Black' (syn. <i>A. lateriflorus</i> ) 'Lady in Black'	white (white)	$\frac{1}{2}$	9/30	mid Sept – mid Oct	45 × 55	4.5
<i>Symphytotrichum lateriflorum</i> 'Lovely' (syn. <i>A. lateriflorus</i> 'Lovely')	light violet (84C)	$\frac{1}{2}$	9/18	early – late Sept	30 × 52	4.7
<i>Symphytotrichum novae-angliae</i> 'Andenkenan Alma Pötschke' (syn. <i>A. novae-angliae</i> ) 'Andenkenan Alma Pötschke'	medium red purple (67A/B)	$1\frac{1}{4}$ – $1\frac{1}{2}$	9/20	mid Sept – early Oct	37 × 45	3.6
<i>Symphytotrichum novae-angliae</i> 'Barr's Blue' (syn. <i>A. novae-angliae</i> ) 'Barr's Blue'	medium violet (88B)	$1\frac{3}{4}$ – 2	9/30	mid Sept – early Oct	38 × 36	3.9
<i>Symphytotrichum novae-angliae</i> 'Hella Lacy' (syn. <i>A. novae-angliae</i> ) 'Hella Lacy'	medium violet (88A/B)	$1\frac{1}{2}$ – $1\frac{3}{4}$	9/27	mid Sept – early Oct	52 × 48	2.5
<i>Symphytotrichum novae-angliae</i> 'Honeysong Pink' (syn. <i>A. novae-angliae</i> ) 'Honeysong Pink'	medium red purple (70B/C)	$1\frac{1}{4}$ – $1\frac{1}{2}$	9/20	early – late Sept	61 × 48	3.5
<i>Symphytotrichum novae-angliae</i> 'Lachsglut' (syn. <i>A. novae-angliae</i> ) 'Lachsglut'	medium red purple (68A/B)	$1\frac{1}{4}$ – $1\frac{1}{2}$	9/24	mid – late Sept	58 × 45	3.5
<i>Symphytotrichum novae-angliae</i> 'Mrs. S.T. Wright' (syn. <i>A. novae-angliae</i> ) 'Mrs. S.T. Wright'	medium violet (88C)	2 – $2\frac{1}{2}$	9/24	mid – late Sept	38 × 64	3.9
<i>Symphytotrichum novae-angliae</i> 'Purple Dome' (syn. <i>A. novae-angliae</i> ) 'Purple Dome'	medium violet (87A)	$1\frac{1}{2}$ – $1\frac{3}{4}$	9/24	mid Sept – early Oct	25 × 44	3.9
<i>Symphytotrichum novae-angliae</i> 'Rosa Seiger' (syn. <i>A. novae-angliae</i> ) 'Rosa Seiger'	medium red purple (64B/C)	$1\frac{1}{4}$ – $1\frac{1}{2}$	9/24	mid – late Sept	36 × 72	3.9

<i>Symphotrichum novi-belgii</i> 'Alert' (syn. <i>A. novi-belgii</i> 'Alert')	medium purple violet (80A)	1 – 1 <sup>1</sup> / <sub>8</sub>	9/20	mid – late Sept	17 × 28	4.4
<i>Symphotrichum novi-belgii</i> 'Heinz Richard' (syn. <i>A. novi-belgii</i> 'Heinz Richard')	medium purple violet (82C)	1 <sup>1</sup> / <sub>8</sub> – 1 <sup>1</sup> / <sub>4</sub>	9/20	mid – late Sept	20 × 36	4.1
<i>Symphotrichum novi-belgii</i> 'Nesthäkchen' (syn. <i>A. novi-belgii</i> 'Nesthäkchen')	medium violet (84B/C)	1 – 1 <sup>1</sup> / <sub>4</sub>	9/20	mid – late Sept	16 × 30	3.4
<i>Symphotrichum novi-belgii</i> 'Richness' (syn. <i>A. novi-belgii</i> 'Richness')	medium violet (87A)	1 <sup>1</sup> / <sub>8</sub> – 1 <sup>1</sup> / <sub>4</sub>	9/20	mid – late Sept	37 × 72	2.9
<i>Symphotrichum novi-belgii</i> 'Wood's Light Blue' (syn. <i>A. novi-belgii</i> 'Wood's Light Blue')	medium violet blue (90C/D)	1 <sup>1</sup> / <sub>4</sub>	9/20	mid – late Sept	22 × 42	3.5
<i>Symphotrichum novi-belgii</i> 'Wood's Pink' (syn. <i>A. novi-belgii</i> 'Wood's Pink')	light red purple (74D)	1 <sup>1</sup> / <sub>8</sub> – 1 <sup>1</sup> / <sub>2</sub>	9/20	mid – late Sept	16 × 33	3.5
<i>Symphotrichum novi-belgii</i> 'Wood's Purple' (syn. <i>A. novi-belgii</i> 'Wood's Purple')	medium violet (88B/C)	1 – 1 <sup>1</sup> / <sub>4</sub>	9/20	mid – late Sept	14 × 32	4.6
<i>Symphotrichum oblongifolium</i> (syn. <i>A. oblongifolius</i> var. <i>angustatus</i> )	medium violet blue (90C)	1 <sup>1</sup> / <sub>2</sub> – 1 <sup>3</sup> / <sub>4</sub>	11/1	mid Oct – mid Nov	31 × 48	4.4
<i>Symphotrichum oblongifolium</i> 'Fanny's' (syn. <i>A. oblongifolius</i> 'Fanny's')	medium violet blue (90C)	1 <sup>1</sup> / <sub>2</sub> – 1 <sup>3</sup> / <sub>4</sub>	11/15	late Oct – late Nov	35 × 76	4.3
<i>Symphotrichum oblongifolium</i> 'October Skies' (syn. <i>A. oblongifolius</i> 'October Skies')	medium violet blue (90B/C)	1 <sup>1</sup> / <sub>8</sub> – 1 <sup>1</sup> / <sub>4</sub>	10/14	late Sept – late Oct	25 × 38	4.7
<i>Symphotrichum oblongifolium</i> 'Raydon's Favorite' (syn. <i>A. oblongifolius</i> 'Raydon's Favorite')	medium violet blue (90C)	1 <sup>3</sup> / <sub>4</sub>	10/24	mid Oct – mid Nov	36 × 72	4.6

<i>Symphotrichum patens</i> (syn. <i>A. patens</i> )	dark violet (88A)	1 – 1 <sup>1</sup> / <sub>8</sub>	10/7	late Sept – mid Oct	37 × 18	3.4
<i>Symphotrichum pilosum</i> (syn. <i>A. pilosus</i> )	white (white)	<sup>5</sup> / <sub>8</sub>	9/25	mid Sept – mid Oct	54 × 48	3.4
<i>Symphotrichum prenanthoides</i> (syn. <i>A. prenanthoides</i> )	medium violet blue (91A)	<sup>5</sup> / <sub>8</sub>	9/30	mid Sept – mid Oct	48 × 87	3.4
<i>Symphotrichum puniceum</i> (syn. <i>A. puniceus</i> )	medium violet blue (94C)	1 – 1 <sup>1</sup> / <sub>4</sub>	10/3	late Sept – late Oct	93 × 180	3.7
<i>Symphotrichum reflexum</i> (syn. <i>A. retroflexus</i> )	medium violet blue (90D)	1 <sup>1</sup> / <sub>4</sub> – 1 <sup>1</sup> / <sub>2</sub>	9/30	late Sept – mid Oct	45 × 29	4.1
<i>Symphotrichum turbinellum</i> (syn. <i>A. turbinellus</i> )	medium violet (85A/B)	1 <sup>1</sup> / <sub>4</sub> – 1 <sup>1</sup> / <sub>2</sub>	10/7	late Sept – mid Oct	38 × 68	4.8

\* Overall Ratings — 5 = excellent, 4 = good, 3 = fair, 2 = poor, 1 = very poor

over the years with composted leaves. It had an average pH of 7.0. The planting rows were mounded 2–4 inches to assure good drainage.

Maintenance was minimal to simulate home gardening conditions. Beds were periodically weeded and hand watered during periods of drought. The beds were not fertilized and were mulched with shredded leaves and hardwood bark. Plants were routinely deadheaded to prevent reseeding. Winter protection was not provided.

### TOP-RATED ASTERS

*Symphotrichum laeve* 'Bluebird' (syn. *Aster laevis* 'Bluebird', smooth aster). The reasons for its high rating include attractive and pest-free foliage that is generally pleasing throughout the seasons, vigorous, upright habit that under most conditions does not require staking and can be controlled through pinching, excellent flower coverage and quality, and drought tolerance. It may grow taller and perhaps open up on rich soils.

*Symphotrichum turbinellum* (syn. *Aster turbinellus*, prairie aster). This aster was highly rated because of its attractive mounding habit, excellent foliage and flower texture and color, excellent flower coverage, health, and vigor. It is drought tolerant and disease resistant. It may open up on rich soils, but because of its billowy habit, the overall appearance it not unattractive.

*Symphotrichum lateriflorum* 'Lovely' (syn. *Aster lateriflorus* 'Lovely'), calico aster. Reasons for recommendation include its dwarf, bushy habit and texture reminiscent of a dwarf conifer, excellent flower number and coverage, drought and disease tolerance, and its attractive appearance without the need of frequent division. When in flower, it hums with insects,

making it a great pollinator. As the plant ages, it has a slight tendency to open up in the middle.

***Symphotrichum oblongifolium* ‘October Skies’ (syn. *Aster oblongifolius* ‘October Skies’), aromatic aster.** It is recommended because of its smaller stature and tighter habit compared to *S. oblongifolium* ‘Raydon’s Favorite’ and var. *angustatus*, its aromatic foliage, disease and pest resistance, attractive flower color, coverage and persistence, mounding, cloud-like habit, and vigor. It doesn’t need pinching, and the branches support each other; if the foliage opens up it fills in with time.

***Doelingeria umbellata* (syn. *Aster umbellatus*), flat-topped white aster.** We rated this plant highly because of its attractive floral display that fades to an attractive greenish white color for weeks after peak bloom and its clean, neat foliage, attractively arranged on the stems that are ornamental and can stand alone after the plant flowers. It is drought tolerant and pest and disease resistant.

***Oclemena acuminata* (syn. *Aster acuminatus*), mountain aster.** This plant received a high rating because of its attractive foliage, initially light to medium green, acquiring coppery overtones as it matures, which remains ornamentally attractive throughout the season. It has burgundy stems and a pleasing mounding habit. The flowers are well presented at the ends of the stems, and there is a pleasing contrast between the white flowers and the foliage. If the stems do splay as they mature, the plant throws new stems at its middle, making it a good groundcover.

***Eurybia divaricata* “Raiche Form” (syn. *Aster divaricatus* “Raiche Form”), white wood aster.** This plant can be recommended because of its attractive foliage, mounding habit, pleasing arrangement and excellent coverage of nice-sized flowers. Multiple pinching produces a more attractive habit and prevents splaying. It is tolerant of dry shade and disease and pest resistant. *Eurybia divaricata* ‘Silver Spray’ is very similar in appearance but did not seem quite as vigorous in our trial.

***Symphotrichum dumosum* (syn. *Aster dumosus*), bushy aster.** The reason for its high rating is because of its attractive flower color displayed well around the stem, clean foliage that persists so that it doesn’t become bare-kneed, and disease and pest resistance. It performed well during a very wet summer. Pinching the plant early in the season produces a denser floral display.

***Symphotrichum grandiflorum* (syn. *Aster grandiflorus*), large-flowered aster.** It forms an attractive upright oval, which can be pinched to produce a bushier habit and denser floral display. It performed well throughout a wet year, is pest and disease resistant, and does not need frequent division.

***Ionactis linariifolium* (syn. *Aster linariifolius*), stiff aster.** It is highly recommended because of its low stature, conifer-like texture, upright-facing flowers produced in abundance, disease and pest resistance, and drought tolerance. It occasionally opens up in the center but will fill in with time. It doesn’t need frequent division.

***Symphotrichum drummondii* (syn. *Aster drummondii*), Drummond’s aster.** It has potential as a cut flower, is pest and disease resistant, and drought tolerant.

***Symphotrichum novi-belgii* ‘Wood’s Purple’ (syn. *Aster novi-belgii* ‘Wood’s Purple’), New England aster.** It is recommended because of its relatively clean

foliage, rich flower color, vigor, attractive low mounding habit with or without pinching, branches that do not splay open, and almost complete flower coverage

***Eurybia hemispherica* (syn. *Aster paludosus* subsp. *hemisphericus*), prairie wood aster.** This plant is recommended because of its very attractive flower color, pleasing and unusual foliage texture, relatively clean foliage, and spreading habit that is not aggressive. The stems do have a tendency to be floppy, which suggests using them for bank planting where this could be used create a cascading effect.

***Eurybia spectabilis* (syn. *Aster spectabilis*), showy aster.** The reasons to recommend this plant include its large flowers produced over a long period of time, nice fall and winter burgundy-colored foliage, insect and disease resistance, and rhizomatous habit that is not aggressive. Its chief problem is its stems, which tend to splay open rather than remaining upright.

#### ADDITIONAL READING

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