

Plant Evaluation Notes

Fall-blooming Anemones

Mark R. Rudy, Plant Evaluator

Even the most well-designed gardens experience days without flowers as they transition from one season to the next. Late summer and early fall often represent a challenge as summer-blooming plants begin to fade and fall bloomers have not quite reached their peak. Fall-blooming anemones stand out as harbingers to summer's end, welcoming shorter days and cooler weather.

Anemone boasts a rich garden heritage, dating back to the 17th century and likely earlier. European plant explorers brought back exciting news from Japan, which included the existence of *Anemone japonica*, or Japanese anemone. They had no way of knowing that this plant, now correctly named *A. hupehensis* var. *japonica*, was a native of China and had naturalized in Japan after escaping from gardens there. Because of this history, species such as *A. hupehensis*, *A. ×hybrida* and *A. tomentosa* are all commonly called Japanese anemones, although fall-blooming anemone and windflower are also common names. In 1947, Bowles and Stearn published *The History of Anemone japonica* in the *Journal of the Royal Horticultural Society*, which, to this day, represents the most comprehensive commentary on the origin and naming of fall-blooming anemones.

Fall-blooming anemones consist of the species *Anemone hupehensis*, *A. ×hybrida*, *A. tomentosa* and *A. vitifolia*, and their subspecies and cultivars. Along with *A. hupehensis*, *A. ×hybrida* is the most recognizable of the fall bloomers and was developed in Britain from a cross between *A. vitifolia* (entire leaves and single flowers) and *A. hupehensis* var. *japonica* (subdivided leaves and semi-double to double flowers). The majority of current cultivars are attributed to *A. hupehensis* and *A. ×hybrida*.

The dark green leaves of fall-blooming anemones are usually three-parted and softly pubescent beneath. They have clumping habits but spread by rhizomes once established in the garden. Most are less than 3 feet tall, but some cultivars can reach 5 feet when in bloom. Fall-blooming anemones are also known as windflowers because their 2- to 3-inch flowers are held on wiry stems that sway in the breeze. Flower colors range from pure white to dark pink and purple, and flower forms vary from single, with four to six broad tepals, to semi-double and double with 30 or more tepals. The tepals of fall-blooming anemones are colorful, petal-like structures that take the place of both sepals and petals. Similar structures make up the flowers of

lilies and tulips, as well as other members of the buttercup family (Ranunculaceae) such as *Clematis* and *Thalictrum*.

Fall-blooming anemones prefer alkaline soils that are moist but well-drained. They thrive in light to medium shade, but full sun is not an issue in soils that stay moist. Too much shade can result in leggy plants that flop over more readily. While their rhizomatous habit may be desirable in larger landscapes, anemones can out-compete smaller herbaceous plants in close quarters. Fortunately, their roots are shallow and fibrous, allowing for the easy removal of unwanted sprouts. In spite of this tendency to spread, they are not considered invasive in the Upper Midwest.

FALL-BLOOMING
ANEMONES STAND OUT
AS HARBINGERS TO
SUMMER'S END,
WELCOMING SHORTER DAYS
AND COOLER WEATHER.



Left to right: 'Max Vogel' and 'Alice'

Fall-blooming anemones have earned their place in the autumn garden. Flowering as early as July and continuing into November, their appearance is an indication of midsummer winding down and giving way to cooler temperatures and shorter days. Charm-like flowers float above the border as warm-season plants fade and fall standards come into their own. Combined with perennials like stonecrop (*Sedum*), bugbane (*Cimicifuga*) and goldenrod (*Solidago*), fall-blooming anemones bring life to the late summer garden and persist to contribute to the crescendo of autumn.

The Evaluation Project

In 1998, the Chicago Botanic Garden (USDA Hardiness Zone 5b, AHS Plant Heat Zone 5) evaluated commercially available *Anemone* taxa in a six-year study.

Observations of the initial evaluation group began in 1998, with subsequent additions as the trial expanded to include newly available cultivars. The project concluded in November 2003. The goal was to recommend superior taxa based on general health, habit quality, length of bloom period and winter hardiness. When possible, cultivar names were confirmed using the Royal Horticultural Society Plant Finder.

Anemone taxa were grown in the Shade Evaluation Garden, where all plants received morning shade with periods of direct sun in the afternoon. Shade was provided by mature trees including birch, maple and pine, and protection was provided throughout the garden by wood fencing. The clay-loam soil, amended with composted leaves, had a pH of 7.4 throughout the evaluation term.

Maintenance practices were kept to a minimum to simulate home garden culture. A combination of overhead sprinklers and hand watering provided moisture as needed, and no fertilizer was applied. Trial beds were weeded and mulch

consisting of shredded leaves and wood chips was placed around the plants for weed suppression and water conservation.

Observations

Twenty-six fall-blooming anemones were examined throughout the trial period. Plants encountered variable environmental conditions including early fall frosts, drought, torrential rains, and extreme heat and cold—conditions indicative of weather in Chicago and the Upper Midwest. As the group matured and spread, competition among plants also became a problem. The *Anemone* varieties under study met these challenges with varying success as indicated by the final ratings in Table 1.

Although evaluations are conducted using up to 28 descriptors, four main criteria determined overall ratings: plant health; habit quality; length of bloom period; and winter hardiness. Each criterion was scored excellent to very poor and given equal weight toward the overall rating. In order to receive an excellent overall rating, a variety would need to

receive excellent marks for each of the four criteria. None of the varieties in the current trial received excellent ratings in all four criteria; therefore, no variety was given a perfect 5-star overall rating.

Plant health was generally determined by the condition of the leaves throughout the growing season. The appearance of weak growth, wilted leaves, or foliar pests or diseases could negatively impact this rating. To receive a good health score, plants were expected to maintain clean, healthy foliage without signs of damage. An excellent rating was assigned if plants appeared to be at optimum health and exhibited extraordinary vigorous growth.

Habit quality is an important factor in evaluating plants in the program, and it was especially significant in the case of *Anemone*. The majority of the foliage is located on the bottom half of the plant and the flowers are suspended on long stalks, or scapes. While in bloom, it can be a challenge for the long flower stems to remain upright, especially in wind or rain. For this reason, to receive a good habit

Table 1: Plant Characteristics and Performance Summary Ratings

Overall Rating	Anemone	Flower Color	Flower Form	Bloom Period	Height	Width
★★★★	<i>hupehensis</i> 'Hadspen Abundance'	pale purple	single	mid Sep-early Nov	27 in.	40 in.
★★★★	<i>hupehensis</i> 'Praecox'	pink	single	late Jul-early Oct	50 in.	33 in.
★★★★	<i>hupehensis</i> 'Splendens'	rose pink	single to semi-double	late Aug-early Nov	25 in.	34 in.
★★★★	<i>hupehensis</i> 'Superba'	lavender pink	semi-double	early Sep-early Nov	26 in.	29 in.
★★★	<i>hupehensis</i> var. <i>japonica</i> 'Bressingham Glow'	deep pink	semi-double to double	early Sep-early Nov	20 in.	32 in.
★★★★	<i>hupehensis</i> var. <i>japonica</i> 'Pamina'	deep pink	semi-double to double	late Aug-late Oct	30 in.	28 in.
★★★★	<i>hupehensis</i> var. <i>japonica</i> 'Prinz Heinrich'	rose pink	semi-double to double	early Sep-early Nov	28 in.	31 in.
★★	× <i>hybrida</i> 'Alba'	white	single	mid Sep-late Oct	n.d.	n.d.
★★★★	× <i>hybrida</i> 'Alice'	pale pink	semi-double	mid Sep-early Nov	32 in.	37 in.
★★★★	× <i>hybrida</i> 'Andrea Atkinson'	white	single to semi-double	late Aug-mid Nov	35 in.	20 in.
★★	× <i>hybrida</i> 'Avalanche'	white	double	mid Aug-late Oct	n.d.	n.d.
★★★★	× <i>hybrida</i> 'Honorine Jobert'	white	single to semi-double	mid Sep-mid Nov	40 in.	33 in.
★★★	× <i>hybrida</i> 'Königin Charlotte'	pale pink	semi-double	late Sep-early Nov	36 in.	31 in.
★★★★	× <i>hybrida</i> 'Kriemhilde'	pink	single to semi-double	late Aug-early Nov	30 in.	19 in.
★★	× <i>hybrida</i> 'Lady Gilmour'	pale pink	single	late Sep-late Oct	n.d.	n.d.
★	× <i>hybrida</i> 'Loreley'	pink	semi-double	n.d.	n.d.	n.d.
★★★★	× <i>hybrida</i> 'Margarete'	deep pink	semi-double to double	late Aug-early Nov	22 in.	30 in.
★★★★	× <i>hybrida</i> 'Max Vogel'	pink	semi-double	mid Aug-early Nov	43 in.	35 in.
★★★	× <i>hybrida</i> 'Montrose'	pale purple	double	mid Sep-early Nov	27 in.	30 in.
★★★★	× <i>hybrida</i> 'Richard Ahrens'	pink	single to semi-double	mid Sep-late Oct	27 in.	31 in.
★★★★	× <i>hybrida</i> 'Robustissima'	pink	single	late Aug-mid Nov	41 in.	40 in.
★★★★	× <i>hybrida</i> 'September Charm'	pale purple	single	late Aug-early Nov	30 in.	20 in.
★★★★	× <i>hybrida</i> 'Serenade'	pink	semi-double	mid Aug-late Oct	23 in.	40 in.
★★★★	× <i>hybrida</i> 'Victor Jones'	pale pink	single	late Aug-mid Oct	31 in.	35 in.
★★★★	× <i>hybrida</i> 'Whirlwind'	white	semi-double	early Sep-early Nov	27 in.	35 in.
★★	<i>tomentosa</i> 'Alba'	white	single	late Sep-early Nov	n.d.	n.d.

Overall ratings: ★★★★★ excellent; ★★★★ good; ★★★ fair; ★★ poor; ★ very poor; half-star ratings are included in table. n.d. = no data collected: plants did not reach mature developmental stage for data to be collected.

Table 2: Average Bloom Period Length

Anemone	Bloom Length (days)
<i>hupehensis</i> var. <i>japonica</i> 'Prinz Heinrich'	64.8
× <i>hybrida</i> 'Andrea Atkinson'	64.7
× <i>hybrida</i> 'Serenade'	64.5
× <i>hybrida</i> 'Robustissima'	63.0
× <i>hybrida</i> 'Max Vogel'	62.5
<i>hupehensis</i> 'Splendens'	61.2
× <i>hybrida</i> 'Kriemhilde'	56.0
<i>hupehensis</i> var. <i>jap.</i> 'Bressingham Glow'	54.2
× <i>hybrida</i> 'Alice'	53.5
× <i>hybrida</i> 'Victor Jones'	53.4
<i>hupehensis</i> 'Praecox'	51.8
× <i>hybrida</i> 'Margarete'	49.3
× <i>hybrida</i> 'Richard Ahrens'	48.7
× <i>hybrida</i> 'September Charm'	48.2
<i>hupehensis</i> 'Superba'	47.2
<i>hupehensis</i> var. <i>japonica</i> 'Pamina'	46.8
× <i>hybrida</i> 'Honorine Jobert'	45.8
<i>hupehensis</i> 'Hadspen Abundance'	45.2
× <i>hybrida</i> 'Montrose'	43.5
× <i>hybrida</i> 'Whirlwind'	41.1
× <i>hybrida</i> 'Avalanche'	37.0
× <i>hybrida</i> 'Königin Charlotte'	25.4
× <i>hybrida</i> 'Alba'	24.0
<i>tomentosa</i> 'Alba'	22.0
× <i>hybrida</i> 'Lady Gilmour'	16.0
× <i>hybrida</i> 'Loreley'	0.0

quality rating, plants needed to maintain an upright habit during flowering and not flop over in adverse conditions.

One of the most attractive aspects of fall-blooming anemones is their extended bloom period. It is not uncommon for these plants to bloom continuously for more than two months. When rating a flowering perennial, it is a common practice for our program to use peak flower coverage as the main indicator of flowering potential. Peak flower coverage among fall-blooming anemones varied to such a large degree from one year to the next that it was not realistic to employ this element as a significant criterion for judging plant performance. Instead, bloom period length was used to determine flowering success. All plants that averaged bloom periods of 60 days or greater were given an excellent rating for this specific criterion. Average bloom periods of 40 to 59 days, 20 to 39 days and one to 19 days were rated good, fair and poor, respectively. A complete absence of flowers resulted in a very poor rating. Average bloom period length for each variety is listed in Table 2.

Finally, the foe of many perennials in the Midwest is the winter season. Although the past few years have been mild on aver-

age, there are a number of unfavorable circumstances that emerge in winter. In addition to cold temperatures, soil that was well-drained during the growing season can become soggy during numerous freeze-thaw cycles that are especially prevalent in mild winters. Under these conditions, it is often not cold temperatures, but winter moisture, that kills off the dormant roots and crowns of these plants. In the case of winter losses, we were ultimately uncertain what combination of winter wetness and cold temperatures resulted in the demise of plants. Given this context, plants that suffered no winter injury were given top marks on this rating criterion. Ratings were reduced when crown injury occurred, or if entire plants were lost.

Varieties that suffered losses to winter injury were retested as trial space and commercial availability allowed. Those retested included *A. hupehensis* 'Superba', *A. hupehensis* var. *japonica* 'Bressingham Glow', *A. hupehensis* var. *japonica* 'Pamina', *A. hupehensis* var. *japonica* 'Prinz Heinrich' and *A. ×hybrida* 'Margarete'. In contrast, five taxa lost all plants within the first two years of the trial and were not retested, including *A. ×hybrida* 'Alba', *A. ×hybrida* 'Avalanche', *A. ×hybrida* 'Lady Gilmour', *A. ×hybrida* 'Loreley' and *A. tomentosa* 'Alba'.

Nearly half of all the anemones included in the trial received overall ratings of good or higher. Although none received a perfect five-star excellent rating, three varieties were deemed superior and received 4.5 stars. All three were cultivars of *Anemone ×hybrida*, including 'Andrea Atkinson', 'Max Vogel' and 'Serenade'. 'Andrea Atkinson' features clear white flowers with five to 10 relatively broad tepals encircling a creamy yellow center. This plant boasts one of the longest average bloom periods of 64.7 days and no hint of winter injury, maintaining three healthy plants for the duration of the trial. At nearly 3 feet tall, 'Andrea Atkinson' is medium-sized compared to other fall-blooming anemones. Although these plants had a tendency to lean late in the season after flowering, they did not end up lying flat like other varieties. Along with other white-flowered varieties such as *A. ×hybrida* 'Honorine Jobert', 'Andrea Atkinson' is a worthy addition to brighten the partially shady corners of any garden.

The other top performers, 'Max Vogel' and 'Serenade', have similar pink flowers with 10 to 15 narrow, overlapping tepals surrounding a yellow, globe-like center of



Left to right, top row: 'Robustissima', 'Honorine Jobert', 'September Charm', unidentified; row 2: 'Hadspen Abundance', 'Prinz Heinrich', 'Praecox', 'Victor Jones'; row 3: 'Splendens', unidentified, 'Bressingham Glow', 'Andrea Atkinson'; bottom row: 'Superba', 'Max Vogel', 'Pamina', 'Margarete'.

anthers. Both selections had extended bloom periods, exceeding 60 days on average, and they exhibited vigorous growth and strong stalks that were less susceptible to flopping. However, plant size and habit were the most significant differences between the two varieties. 'Max Vogel' maintained an upright, clumped habit and, at 43 inches, was significantly taller than 'Serenade' at 24 inches. Conversely, 'Serenade' exhibited greater ground cover potential, quickly growing together in the first two years and spreading beyond the bounds of the initial planting.

Although top honors went to varieties with either white or pink flowers, a number of plants receiving good ratings had other interesting flower colors. *Anemone hupehensis* 'Splendens' and *A. hupehensis* var. *japonica* 'Prinz Heinrich' are two varieties with rose-pink flowers that received high marks. While their flowers are similar in color, flower forms differ between the two varieties. The blossoms of 'Splendens' comprise five to 10 tepals, compared to 'Prinz Heinrich' with 15 to 30 tepals. Possessing a different flower color than most other anemones, *A. ×hybrida* 'September Charm' boasts a single whorl of broad pale purple tepals that appear in late summer to early fall.

Like other perennials that bloom into late October and November, such as asters (*Aster*) and toad lilies (*Tricyrtis*), fall-blooming anemones can have their displays affected by frost in northern



Mark Rudy

Anemone xhybrida 'Whirlwind'

Jenny Lee

Anemone hupehensis 'Praecox'

Mark Rudy

Anemone xhybrida 'Andrea Atkinson'

gardens. From 1998 to 2003 the average first frost at the Chicago Botanic Garden occurred on October 10, with the earliest on October 1, 2003 and the latest on October 20, 1999. Frosts at this time of year have the potential to adversely affect flowering by either reducing flower production or ending flowering altogether. A number of *Anemone* varieties routinely bloomed well past first frost without any observable reduction in flower production. These included *A. hupehensis* 'Hadspen Abundance', *A. hupehensis* 'Splendens', *A. hupehensis* 'Superba', *A. hupehensis* var. *japonica* 'Bressingham Glow', *A. hupehensis* var. *japonica* 'Pamina', *A. hupehensis* var. *japonica* 'Prinz Heinrich', *A. xhybrida* 'Alice', *A. xhybrida* 'Andrea Atkinson', *A. xhybrida* 'Honorine Jobert', *A. xhybrida* 'Königin Charlotte', *A. xhybrida* 'Max Vogel', *A. xhybrida* 'Richard Ahrens', *A. xhybrida* 'Robustissima', *A. xhybrida* 'September Charm' and *A. xhybrida* 'Whirlwind'.

Diseases generally do not trouble fall-blooming anemones, but foliar nematodes occasionally afflict their foliage. Although it can give a virus-like appearance to the foliage, the dark tracks or mottling associated with nematode damage is actually a consequence of the small worm feeding within the leaves. Damage usually is not widespread, as nematodes are confined to limited portions of the leaves by heavier plant tissues such as veins. In this trial, nematode damage was observed in a few

plants early on; however, it did not appear to affect the overall health and performance of the plants. All cultivars of fall-blooming anemones are equally susceptible to infestation, and the occurrence of nematodes in a particular variety should not discourage gardeners from planting the same variety again in the future.

Summary

Due to questionable origins and multiple name changes, fall-blooming anemones confounded sticklers for proper nomenclature for years. What is not a secret to the astute gardener is the wonderful effect fall-blooming anemones have in the late summer and autumn. A variety of flower colors and forms, as well as an extended bloom period, make these plants a welcome part of the late-season garden.

Half the *Anemone* varieties in the trial had overall ratings of good or higher, pointing to their fine performance as a group. Performance ratings were based on plant health, habit quality, bloom period length and winter injury. The three top performers were *A. xhybrida* 'Andrea Atkinson' (white flowers), *A. xhybrida* 'Max Vogel' (pink flowers) and *A. hupehensis* 'Serenade' (pink flowers). The lowest ratings were given to plants that died out in the first two years of the trial and were not retested. These included *A. xhybrida* 'Alba', *A. xhybrida* 'Avalanche', *A. xhybrida* 'Lady Gilmour', *A. xhybrida* 'Loreley' and *A. tomentosa* 'Alba'.

Whatever you choose to call them—Japanese anemones, windflowers or fall-blooming anemones—these plants put on a spectacular show when summer-flowering plants are fading. Keeping a low profile throughout the summer months, they burst forth with sprays of white, pink, rose and purple blooms in the late summer and fall, marking the end of one season and ushering in the next. Fall-blooming anemones are worthy of prominent placement in the garden as their flowers frolic in the first breezes of autumn and sparkle as the sun sets on another year in the garden.

References

- Bowles, E.A. and W.T. Stearn. 1947. The History of *Anemone japonica*, Part I. *Journal of the Royal Horticultural Society* 72(7): 261-268.
- Bowles, E.A. and W.T. Stearn. 1947. The History of *Anemone japonica*, Part II. *Journal of the Royal Horticultural Society* 72(8): 297-308.
- Herman, R. 2004. Fall-blooming Anemones. *Fine Gardening* 99: 48-52.
- Lord, T., principal editor. 2003. RHS Plant Finder 2003-2004, Sixteenth Edition. London, U.K.: Dorling Kindersley Limited.
- McKendrick, M. 1990. Autumn Flowering Anemones. *The Plantsman* 12(3): 140-151.
- McKendrick, M. 1998. Japanese anemones. *The Garden* 123(9): 628-633.

The Plant Evaluation Program is supported by the Woman's Board of the Chicago Horticultural Society and the Searle Research Endowment. Thanks to Richard G. Hawke and Jenny S. Lee for their assistance in collecting data.

Plant Evaluation Notes® are periodic publications of the Chicago Botanic Garden. For more information or copies of back issues, contact the Plant Evaluation Program, Chicago Botanic Garden, 1000 Lake Cook Road, Glencoe, Illinois 60022. The Chicago Botanic Garden is owned by the Forest Preserve District of Cook County.

