

## Plant Evaluation Notes

# An Evaluation Report of Meadow Rues

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The merits of meadow rues (*Thalictrum*)—their delicate flowers, handsome foliage and graceful habits—are treasured by many gardeners. From the diminutive *T. kiusianum* to the titanic *T. pubescens*, they possess a distinctive charm. Meadow rues are a diverse group of perennials well-suited to a variety of garden settings including sunny borders, woodlands and rockeries. The wealth of meadow rues available to gardeners ensures a profusion of pretty blossoms from spring into fall.

*Thalictrum* is a member of the buttercup family (Ranunculaceae), which includes other important garden perennials such as *Aquilegia*, *Delphinium* and *Helleborus*. Many of the 130 worldwide species of *Thalictrum* are indigenous to northern temperate zones. Meadow rues are perennial herbs with clump-forming or rhizomatous habits ranging from several inches to over 10 feet tall. Their fine-textured leaflets are arranged pinnately (featherlike) or ternately (divided one or more times into groups of three), giving

some meadow rues a decidedly fernlike appearance. Leaflet shape and color varies as well, being round, oval or linear and blue-green, gray-green or green.

Meadow rues have small flowers that feature clusters of stamens but lack true petals. In some species, colorful and persistent petaloid sepals subtend the sta-

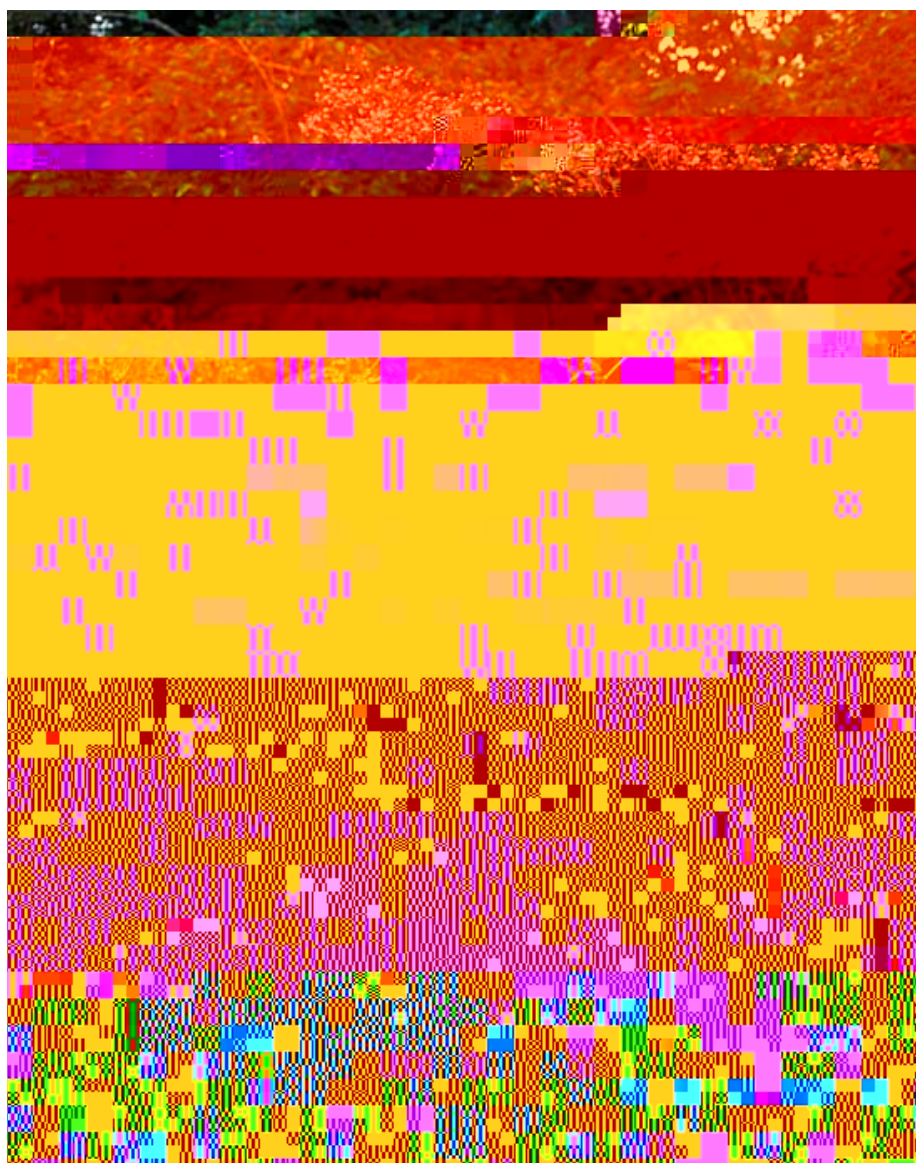
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mens; whereas, other species have insignificant sepals that may fall off early, leaving only the stamens to provide the floral display. For example, the pendulous flowers of *Thalictrum rochebruneanum* have conspicuous lavender sepals surrounding a boss of primrose-yellow stamens, while the flowers of *T. aquilegifolium* are fuzzy pompons of lilac-colored stamens only. The yellow, pink, violet, white or greenish flowers are borne in terminal or axillary clusters in late spring and summer. Columbine meadow rue (*T. aquilegifolium*) is the first to bloom in mid-May, while 'Elin' and *T. rochebruneanum* have flowers lasting late into the summer and early autumn.

The easy-to-grow meadow rues generally prefer moist, organic soils in partial shade to full sun. In some cases, such as *Thalictrum aquilegifolium*, consistent moisture is beneficial for success in sunny gardens. Plants that become ragged after flowering can be pruned to the ground to rejuvenate plant health and encourage new growth. Meadow rues are generally trouble-free, although powdery mildew and leaf miners are occasional pest problems for some species.



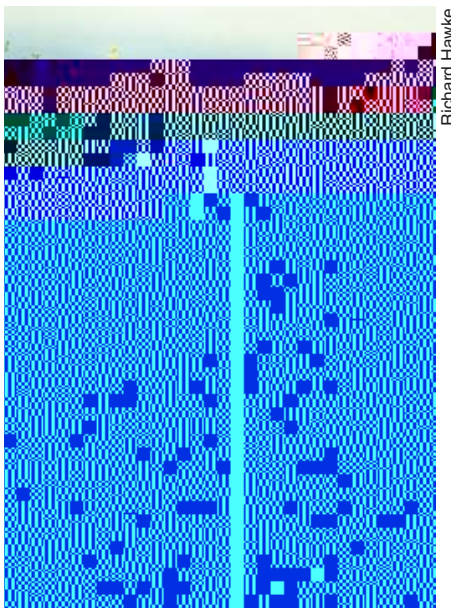
Photographed in the garden of Linda Cochran, Bainbridge Island, WA by Richard Hawke

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Meadow rues are used formally or informally in borders, meadows and woodland gardens. As a rule, tall meadow rues are best at the back of the border, but the statuesque, yet airy *Thalictrum rochebruneum* has a see-through quality that makes it a good accent in the midborder too. Small species such as *T. kiusianum* and *T. ichangense* may be overwhelmed by neighboring plants in the perennial border but are well-suited to rock gardens. Pairing the fine-textured meadow rues with bold-leaved perennials such as rodgersias (*Rodgersia*) and ligularias (*Ligularia*) creates a dramatic contrast. In full sun, meadow rues combine nicely with daylilies (*Heemerocallis*), phloxes (*Phlox*) and ornamental grasses; while yellow waxbells (*Kirengeshoma*), turtleheads (*Chelone*) and ferns make delightful companions in shady gardens.

### **The Evaluation Study**

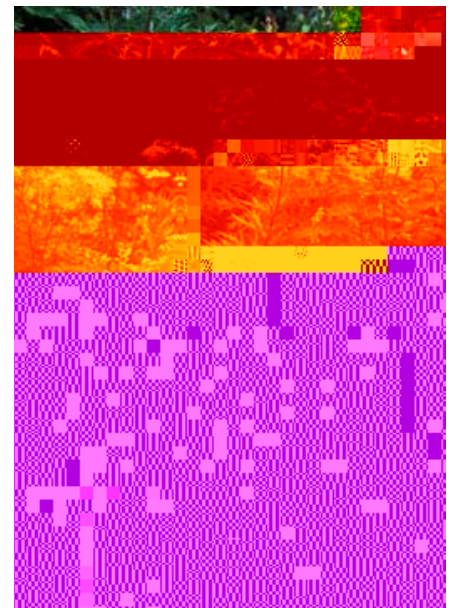
The Chicago Botanic Garden



Richard Hawke

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Photographed at Olbrich Botanical Gardens, Madison, WI by Richard Hawke

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Mist', *T. 'Elin'* and *T. aquilegifolium* 'Purpureum'.

*Thalictrum flavum* ssp. *glaucum* (yellow meadow rue) was a robust, rhizomatous plant with stems spreading up to 6 feet from the original plot by the fourth year of the trial. The rhizomatous stems did not grow into a thicket but instead developed satellite plantlets nearby the original plants. Emerging leaves and young stems were purple, eventually changing to dusty blue-green in June. The yellow flowers, comprised of stamens only, were held in broad, 6-inch wide terminal inflorescences in June and July. Some repeat bloom in late August was noted in the lower leaf axils. Plant health commonly declined after flowering, so stems were regularly pruned to the ground at the end of August. Stem regeneration was robust, resulting in bushy mounds several weeks after pruning. Leaf miners caused slight cosmetic damage in 2001 and 2003 only. *Thalictrum flavum* ssp. *glaucum* 'True Blue' was comparable to yellow meadow rue in floral display and flower production, but its stems were typically uneven in height among the plants and often lodged early in the season.

The leaves of *Thalictrum flavum* 'Illuminator' emerged yellow with a bronze tint, eventually changing to blue-green as flower buds swelled in June. Stems remained upright throughout the bloom period, but were occasionally cut

back after flowering to rejuvenate plant health. A small amount of leaf miner damage was observed in 2002 and 2003, but was superficial and did not have an effect on plant health.

*Thalictrum kiusianum* (Kyushu meadow rue) was the smallest species in the trial, only 2 inches tall without flowers. Flower production was especially strong each year, smothering the green foliage in fuzzy pink flowers at peak bloom. Kyushu meadow rue remained healthy throughout the trial and performed better than the slightly taller *Thalictrum ichangense* in the environment of the test garden. No winter injury was observed, but like *T. ichangense*, it did not compete well with weeds early in the season.

Linear leaflets differentiated *Thalictrum lucidum* from other meadow rues in the trial. The bi- to tri-ternately compound leaves emerged purple, eventually changing to lustrous green. This species put on an outstanding show in bloom, with puffs of pale yellow flowers in pyramidal clusters up to 9 inches wide. The fluffy effect was due to clusters of prominent stamens subtended by tiny, insignificant sepals. *Thalictrum lucidum* had a robust habit with stems that remained upright all summer.

*Thalictrum minus* 'Adiantifolium' (lesser meadow rue) featured flowers with pendulous yellow stamens held in loose clusters above the foliage; the greenish

sepals were inconspicuous and abscised early. The floral effect was more textural than colorful due to the small size of the flowers and the openness of the inflorescences. The fine-textured foliage, resembling the fronds of maidenhair fern (*Adiantum*), emerged with a bronze cast before turning blue-green. Stems stayed upright during the bloom period, but typically declined late in the summer. In some years, stems were cut back in August and quickly regenerated into healthy foliar mounds. Lesser meadow rue had a slow-growing, rhizomatous habit but plants remained discrete during the trial period.

The trial plants of *Thalictrum pubescens* (tall meadow rue) were grown from wild-collected seed received from Mt. Cuba Center, Greenville, Delaware. Consequently, variation in habit, stem height and flower production was noted among the seedlings. In general, *T. pubescens* exhibited heavy flower production and robust habits with stiff stems. The creamy white flowers, comprised of stamens only, were produced on stem terminals and in lower leaf axils. The upper portion of the stems typically defoliated after flowering, thus creating an open effect in late summer. Stems were cut back twice in the trial, followed by a speedy regeneration of basal leaves.

Flowers of *Thalictrum rochebruneum* (lavender mist or lavender

mist meadow rue) feature prominent lavender sepals surrounding a cluster of yellow stamens. The persistent and colorful sepals set this species apart from many of the other taxa in the trial. Leaves emerged purple, eventually fading to blue-green by late May. Lavender mist typically has a sparse or see-through quality to its habit. This trait was accentuated by the fact that the lush lower leaves present in the early season gradually turned yellow and dropped throughout the summer. Stems remained upright all summer with secondary bloom noted in the lower leaf axils into September.

There was no discernible difference in the floral traits and floral displays of *Thalictrum rochebruneanum*, 'Lavender Mist' and 'Purple Mist'. In addition, the cultivars emerged with purple leaves and



Carol Freeman

*T a c a e* 'Purpureum'



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resulted in rapid foliar decline after flowering. On the other hand, these meadow rue were the earliest to bloom so their premature decline may have been partially due to natural senescence, which was exacerbated by the conditions of the site. In addition, powdery mildew was a minor to moderate problem following the bloom period in all years of the trial.

*Thalictrum actaeifolium* (baneberry-leaf meadow rue) was one of three taxa that received a poor final rating. In this instance, the poor rating was due to low flower production, lack of plant vigor and excessive winter injury. The fuzzy flowers were made up of bicolored stamens with lavender filaments and white anthers, but were sparsely produced each year. Stems remained upright during the bloom period but became floppy soon afterward. Plants were weakened by crown damage in the winter of 1999-2000 and never fully recovered their health in subsequent years. In addition, seven plants were killed in the winter of 2002-03, leaving only one plant alive in the final year of the trial.

*Thalictrum delavayi* (Yunnan meadow rue) was the only taxon with a general lack of plant vigor attributed to poor establishment after planting. Poor health and a weakened condition during the first summer likely contributed to the death of seven of the eight plants over the winter of 1998-99. The remaining plant survived

for two more years, ultimately dying in the winter of 2000-01. Unfortunately, this taxon was not retested to determine

ruess in the study thrived in full sun and are recommended for gardens with similar cultural conditions. Eleven different meadow ruess, from tiny *Thalictrum kuisianum* to lofty 'Elin', received top honors—a four-star good rating based on higher flower production, superior plant habits, winter hardiness and good plant health. Conversely, *Thalictrum aquilegifolium* is not recommended for full sun unless consistent soil moisture is provided. Meadow ruess are easy-care perennials for a variety of garden uses, showing exceptional diversity in their flowers, foliage and habits. They offer gardeners tempting design potential because of their versatility.

### References

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