

Elaine Mills, presenter of “Underutilized Native Perennials”

In response to a question about the **relative nutritional value of aster cultivars and straight species:**

- We don’t have direct information about the composition of the nectar and pollen of various plants, although researchers at the Oregon State University’s Garden Ecology Lab have begun collecting samples of West Coast plant species to be analyzed.
- The best means we have available to judge the value of floral resources is to measure the relative number of visits by pollinators to various types of plants.
- In Penn State Extension’s Bees, Bugs & Blooms trial (2012-2014), several species of asters were compared with cultivars from the point of view of visitation by pollinators.
 - The straight species of New England Aster ([Symphyotrichum novae-angliae](#)) had 341 visits as compared to 66 for the ‘Purple Dome’ cultivar.
 - On the other hand, the ‘Bluebird’ cultivar of Smooth Aster (*S. laeve*) had more pollinator visits than the species (461/304). ‘Bluebird’ also ranked in the top 10 plants (of 86 species/cultivars) for total pollinator visits (461), although the straight species was in the top 10 plants for insect diversity.
 - The ‘October Skies’ cultivar of Aromatic Aster (*S. oblongifolium*) outperformed both the straight species and the ‘Raydon’s Favorite’ cultivar.
- In similar plant trials conducted by Annie White for her PhD. thesis at the University of Vermont (2012-2015), a variety of native species were compared with cultivars.
 - New England Aster received 2,100 pollinator visits compared with 234 for the ‘Alma Pötschke’ cultivar.
- Among 14 direct comparisons in the Penn State trial, species were deemed better than the cultivar about 50% of the time, leading to the conclusion that “it is not possible to generalize that the cultivar is better than or poorer than the species.” Annie White summarized her study by deciding that cultivars “need to be evaluated on an individual basis”.

For participants seeking **more details on these plant trials and other scientific studies**, see the recording of my presentation on [“Native Plant Species & Cultivars”](#) and accompanying resources on the MGNV website.

In response to a question **about an absence of stems in the middle** of an Aromatic Aster:

- In dry years, the center of Aromatic Aster ([Symphyotrichum oblongifolium](#)) may look somewhat sparse as stems arch and droop toward the ground.
- Dead sections at the center of this perennial can also indicate a need for division to improve its vigor and appearance. Like New England Aster, this species can benefit from division every three to five years.



- See a table on Dividing Native Perennials among the resources accompanying the recording of my presentation on [“Caring for Your Native Plants Garden”](#) for information on the care of many native perennials.
- A Master Gardener attending the talk mentioned trimming back the ‘October Skies’ cultivar in a demonstration garden to prevent flopping and give the plant a denser appearance.

In response to a question about the **pollinator attraction of *Liatris spicata* ‘Alba’** as compared with the straight species which has red-purple flowers:

- I am not aware of any scientific studies comparing the two plants, but white-flowered ‘Alba’ is apparently a naturally occurring form of the plant.

In response to a question about **substituting [Dwarf Crested Iris](#) for native wetland Iris species:**

- *Iris cristata* grows best in moist, well-drained, acidic soil, although it can tolerate drought and dense shade, once established.
- *I. cristata* will require sufficient soil moisture if sited in full sun.

In response to a question about a **checklist of Lepidoptera host plants,**

- Probably the best source which shows specific plants to support specific butterflies and moths is the [Native Plant Finder](#) prepared by the National Wildlife Federation in collaboration with entomologist Dr. Douglas Tallamy of the University of Delaware.
- To make use of the resource, you enter your zip code. You can then see a listing of native plants ranked by the number of Lepidoptera species that use them as host plants.
- For example, Goldenrod (*Solidago*) is the top genus for my zip code in Northern Virginia, supporting 114 species. When I [select the image for the Goldenrod genus](#), I can see 8 Goldenrod species that are native in my area and the top 15 Lepidoptera that use these plants.
- See also a list in the article on container gardening mentioned below.

In response to a question about **survival of Eastern Solomon’s-plume in Northern Virginia:**

- *Maianthemum racemosum* has a native range across most of North America north of Mexico from Zones 3 through 9, so it should grow in Zones 7 and 8 in Virginia.
- Wisconsin Extension states that the plant prefers moist, rich, well-drained soils in partial to full shade, but that it can tolerate drier, rockier conditions.

- Photos of the plant which I included in the presentation were taken at Winterthur; the National Arboretum; Long Branch Nature Center in Arlington, Virginia; and the North Carolina Arboretum, demonstrating that it grows in a range of zones.
- The specimens planted at the Glencarlyn Library Community Demonstration Garden in Arlington have not fared well this year, but that is because we lost a huge, canopy-size maple tree, and what was once a shady bed is now exposed to strong sun.

Regarding the use of **native plants in containers** in addition to *Amsonia tabernaemontana*:

- Other plants mentioned in the presentation were
 - Blazing Star/Gayfeather ([Liatris spicata](#)), to protect from rabbits
 - Clustered Mountain-mint ([Pycnanthemum muticum](#)), to control spread
 - Swamp Rose-mallow ([Hibiscus moscheutos](#)) [need to keep moist]
 - Turk's-cap Lily ([Lilium superbum](#))
- Many native plants can be used in container gardening, taking into consideration site conditions, such as sun and wind exposure, size of the mature plant, and size of the container. Species with preferences for similar growing conditions can also be grouped together in one pot.
- For general tips on container gardening with native plants and some suggestions on plant combinations, see my presentation on [“Small Space Gardening for Pollinators”](#) beginning at 1:09:50.
- A page on the Plant NoVA Natives website on [“Container Gardening for Earth Renewal”](#) includes a few suggestions of easy plant combinations for a medium-sized pot.
- For more technical details on containers and potting soil, steps for creating small water gardens, recommended plant combinations, and lists of which plants attract hummingbirds and butterflies, see the article [“Captivating Containers with Native Plants”](#) by Leigh Pickering, a co-coordinator of the Audubon at Home Wildlife Sanctuary Certification Program.

Regarding **perennials that do not respond to cutting back**, a technique sometimes referred to as the “Chelsea Chop”:

- Perennials that flower on a single stalk, such as Beardtongue (*Penstemon digitalis*) and Blazing Star ([Liatris spicata](#)), or that have very fine flower stalks, such as Eastern Columbine (*Aquilegia canadensis*) and Hairy Alumroot ([Heuchera villosa](#)) are not suitable for that technique.
- Plants with whorled leaves, such as Culver's-root ([Veronicastrum virginicum](#)) can be cut back to reduce the need for staking, but the architectural effect of the foliage will be altered.
- See the table [Cutting Back and Deadheading Native Perennials](#) to see which plants can benefit from the practice.

Regarding alternatives to chemical control of poison ivy:

- Virginia Creeper ([*Parthenocissus quinquefolia*](#)) has been suggested as a native plant that could compete with poison ivy. I would personally find a way to remove the poison ivy first so that the two plants wouldn't be intermixed. Then the native vine could spread as a ground cover in the area. Note that it can spread extensively, so its growth should also be monitored. For example, it's best not to allow it to climb up into trees.
- According to the University of Georgia Extension, poison ivy will not tolerate repeated tillage, cutting, or mowing. Repeated clipping of the plant at the ground level for several years will eventually control it. Waterproof gloves should always be worn when handling all parts of this toxic plant to prevent any contact with the poison.
- Golden Ragwort ([*Packera aurea*](#)), which I mentioned during the presentation, is a vigorous native ground cover that is highly recommended by the Audubon at Home program in Northern Virginia as a replacement for English Ivy. It may also be a substitute for poison ivy once that toxic plant is removed.

In response to questions about the spread and use of Spring Beauty:

- Spring Beauty ([*Claytonia virginica*](#)) is one of the spring-blooming wildflowers whose spread is facilitated by ants through myrmecochory, the process I described in the presentation. As many as 30% of ephemeral species have evolved to take advantage of this process.
- For more information on ephemerals and myrmecochory, see [“A Carpet of Spring Beauty, Woven by ... Ants!”](#) and my recorded presentation on [“Native Spring Ephemerals.”](#)
- Spring Beauty can begin flowering as early as late March, so if it were interplanted between shrub-like [*Amsonia tabernaemontana*](#), it should be able to bloom without being shaded out by the larger plants which flower in late April to May.

The three keystone genera of herbaceous plants mentioned in the presentation:

- Keystone genera are those that *support a high number of butterflies and moths* as larval host plants; that is, the caterpillar stage of these insects feeds on the foliage for nourishment. These caterpillars, in turn, play an important role in the garden food web, serving as easily digestible food for the young of 96% of our songbirds.
- These same keystone plants also provide critical floral resources (nectar and pollen) to a wide variety of insect pollinators, including native bees. The plants are especially *important to specialist bees who only collect the pollen from specific plants* to provision nests for their young.
- **Goldenrods** (*Solidago*) support caterpillars of 115 species of butterflies and moths as larval host plants. Blue-stemmed Goldenrod (*S. caesia*) was the specific species mentioned.

- **Asters** (*Symphyotrichum* and *Eurybia*) support 112 species of Lepidoptera. Aromatic Aster (*S. oblongifolium*) was the specific plant described.
- **Geraniums**, such as Wild Geranium (*G. maculatum*), support 23 species.
- **Sunflowers** (*Helianthus* genus) were not mentioned, but they support 73 species.
- See this helpful list of [Keystone Native Plants for Ecoregion 8](#) (referred to as “Eastern Temperate Forests”) which encompasses the Eastern half of the United States.

In response to a request for a list of **perennials with a long bloom time**:

- In the Penn State Extension plant trials, Clustered Mountain-mint ([Pycnanthemum muticum](#)) was rated #1 for lengthy bloom period (10 weeks from July to September).
- Smooth Oxeye ([Heliopsis helianthoides](#)) and Swamp Milkweed (*Asclepias incarnata*) also ranked well.
- Other long-blooming species include
 - Anise Hyssop ([Agastache foeniculum](#)) [not locally native to NoVA]
 - Coastal Plain Joe-pye-weed ([Eupatorium dubium](#))
 - Cup Plant (*Silphium perfoliatum*)
 - Eastern Columbine ([Aquilegia canadensis](#))
 - Garden Phlox ([Phlox paniculata](#)), including the ‘Jeana’ cultivar
 - Hyssop-leaf Thoroughwort ([Eupatorium hyssopifolium](#))
 - Orange Coneflower ([Rudbeckia fulgida](#))
 - Threadleaf Coreopsis ([Coreopsis verticillata](#))

In response to a question about the **spreading of Foxglove Beardtongue**:

- *Penstemon digitalis* can spread quite easily by self-seeding. You can take advantage of this to create a good-sized drift in a garden bed or meadow to attract pollinators and facilitate their nectaring.
- Plants that spread to areas where they are not wanted can easily be uprooted and either moved to a better location or shared with other gardeners.
- Prompt removal of the seed heads, cutting stems back to the desired height after blooming, can prevent this spread. Stems can be later cut back all the way to the evergreen basal foliage to create a winter ground cover.

