

Elaine Mills, presenter of “Best Bets: Native Plants for Wet Conditions”

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The majority of the plants described during this presentation are native to Arlington County and the City of Alexandria in Northern Virginia, and most of them are also indigenous to the Mid-Atlantic Region.

- Viewers from other areas of Virginia will want to look for regional native plant guides. Links to free PDF versions of these guides can be found on the website for the Virginia Native Plant Society at <https://vnps.org/virginia-native-plant-guides/>
- Viewers watching from other states may wish to consult county-level maps at <https://plants.sc.egov.usda.gov/java/> to confirm the presence of the plants in their regions. State native plant societies and local Extension offices should also be able to provide information on locally native species.

Viewers who indicated their locations in the chat can use these links for further information:

Blacksburg, VA:

- [Plant Southwest Virginia Natives](#)

La Plata, MD:

- [Maryland Native Plant Society](#)
- [University of Maryland Extension, Charles County](#)

Roxboro, NC

- [North Carolina Native Plant Society](#)
- [North Carolina Cooperative Extension, Person County](#)

North Georgia:

- [Georgia Native Plant Society](#)
- [University of Georgia Extension, Fulton County](#)

Questions on Soil

- In answer to a question on **soil amendments** for growing native plants in wet conditions, the recommendation is generally to add organic material such as compost and leaf mulch. This will gradually improve soil texture, increasing the size of the pore spaces and allowing water to infiltrate more easily rather than remaining on the surface.
- Addition of organic matter will help to **prevent ponding**.
- **Soils in Virginia** are naturally acidic, and, on average, soil in Northern Virginia is around 5.0 on the pH scale. While this may be too acidic for lawns, it will be ideal for native shrubs, like Inkberry (*Ilex glabra*) that prefer acidic conditions.
- **Coconut coir** is often used as a soil amendment in potting mixes for container plants. It is considered to be more sustainable than peat moss. For in-ground planting, the addition of locally available compost and leaf mulch will be the most sustainable choice for amending soil. See the public education presentation [“Build Healthy Soil and Manage Water in Your Yard “](#) for more information.

Questions on Planting in Specific Conditions

- With regard to planting in a **riparian zone with occasional flooding**, the Virginia Department of Conservation & Recreation has an excellent brochure, [Virginia Riparian Buffer Zones](#), that lists categories of plants by region and light and moisture requirements. It recommends some of the species discussed as well as many others that may be suitable.
- [The Plant NoVA Natives Guide](#) (pg. 30) has suggestions for planting in locations like a **wet meadow**. It includes the species discussed in the presentation and many others. Both wet and dry meadows tend to be dominated by graminoids (grasses, sedges, and rushes).
- Some of the shorter shade-loving perennials from the list above, such as Cardinal Flower (*Lobelia cardinalis*), Virginia Bluebells (*Mertensia virginica*), and Golden Ragwort (*Packera aurea*), as well as moisture-loving ferns would work well in **wet lawn areas** in the shade of trees where grass won't grow.
- Examples of native grasses to be used in wet soil **along a fence for privacy purposes** include Switchgrass (*Panicum virgatum*) and River Oats (*Chasmanthium latifolium*). The latter is especially fast-growing and can spread vigorously. It may not be quite as tall as the Switchgrass.
- Good ground covers for **areas that are periodically flooded** include Common Rush (*Juncus effusus*), Golden Ragwort (*Packera aurea*), Marsh Marigold (*Caltha palustris*).



Several sedges may also fill the bill: Tussock Sedge (*Carex stricta*), Squarrose sedge (*Carex squarrosa*), and Gray's Sedge (*Carex grayi*).

- Perennials to site at the **base of downspouts** include the Blue Flag Irises, Cardinal Flower (*Lobelia cardinalis*), White Turtlehead (*Chelone glabra*), and Joe Pye Weed (*Eutrochium dubium*). Suggested shrubs include Buttonbush (*Cephalanthus occidentalis*), Sweet Pepperbush (*Clethra alnifolia*), and Winterberry (*Ilex verticillata*).
- Penn State Extension has compiled this [list of plants tolerant to Black Walnut](#).
- Plants that control erosion can help absorb water in **areas of puddling**. Some of those mentioned in the presentation were Sweet Pepperbush (*Clethra alnifolia*), Inkberry (*Ilex glabra*), Winterberry (*Ilex verticillata*), Virginia Sweetspire (*Itea virginica*), Common Rush (*Juncus effusus*), and Switchgrass (*Panicum virgatum*).

Questions on Rain Gardens

- Rain gardens, also known as bioretention areas, are a landscape element that allows rainwater and snowmelt to be absorbed into the ground. Sited downslope from downspouts, these gardens feature a sand layer and a soil layer filled with plants. They are designed to capture and hold runoff on site in a ponding area until the rain accumulation can infiltrate the soil layers below, usually within 24 hours.
- **Little Bluestem** (*Schizachyrium scoparium*) would not be an effective grass in a rain garden. It prefers very dry conditions in lean soil and will flop when it receives too much water. Better choices of graminoids would be Common Rush (*Juncus effusus*), Switchgrass (*Panicum virgatum*), and Tussock Sedge (*Carex stricta*) for the wet zone and Broomsedge (*Andropogon virginicus*) for the middle zone.
- With regard to **recommended plants** for rain gardens, Penn State Extension has compiled this [list of plants](#) sorted by the three zones. The webinar [Raingardens for Homeowners](#) presents many more details on building these landscape features.
- As far as **creating four-season interest** in a rain garden, a plant like Golden Ragwort (*Packera aurea*) will provide early spring color; Cardinal Flower (*Lobelia cardinalis*), White Turtlehead (*Chelone glabra*), Blue Vervain (*Verbena hastata*), Swamp Rose-mallow (*Hibiscus moscheutos*), and Swamp Milkweed (*Asclepias incarnata*) will carry bloom into the summer; and New England Aster (*Symphotrichum novae-angliae*), Swamp Sunflower (*Helianthus angustifolius*), and Sneezeweed (*Helenium autumnale*) will flower in the fall.
- If there is enough space, adding shrubs will also create multi-season interest with spring blossoms, summer to fall fruit, and autumn foliage color.

Questions on Specific Plants

- An easy way to distinguish between **Bald Cypress** (*Taxodium distichum*) and **Dawn Redwood** (*Metasequoia glyptostroboides*) is by examining the arrangement of leaves. The leaves of the redwood are opposite with rounded tips and a groove on each needle-like leaf, while those of Bald Cypress are alternate with pointed tips and spirally arranged around the stem.
- Examples of **fast-growing trees** for moist to wet condition are Sweet Gum (*Liquidambar styraciflua*), River Birch (*Betula nigra*), Bald Cypress (*Taxodium distichum*), and Black Gum (*Nyssa sylvatica*).
- The straight species of **Sweet Pepperbush** (*Clethra alnifolia*), also known as Summersweet, will grow 6 to 12 feet high and 3 to 6 feet wide. The scent of its flowers is described as strong but not cloying, recalling honeysuckle, rose, clove, and heliotrope.
- It will be difficult to keep a **Buttonbush at a height under 3 feet**. The ‘Sugar Shack’ cultivar of *Cephalanthus occidentalis* has been bred to a shorter stature, but even that plant may grow up to 4 feet by 4 feet. Better choices for wet conditions would be the ‘Hummingbird’ cultivar of Sweet Pepperbush (*Clethra alnifolia*) or the ‘Little Henry,’ ‘Merlot,’ or ‘Scentlandia’ dwarf cultivars of Virginia Sweetspire (*Itea virginica*).
- The most reliable way to **tell the sex of Inkberry** (*Ilex glabra*) plants is by examining the flowers closely. The male flowers will have multiple short stamens with anthers at the end bearing yellow pollen, while the female flowers have prominent green berry-like centers. Seeing fruit in the fall guarantees that a plant is female, but the absence of fruit could indicate either that the plant is male or that it is a female whose flowers were not pollinated.
- **Dioecious plants**, such as Inkberry (*Ilex glabra*) and Winterberry (*Ilex verticillata*), can be planted anywhere within about 40 to 50 feet of each other. Some landscapers advise placing fruit-bearing female plants in more prominent garden locations and tucking the required male plant in a more out-of-the-way spot.
- Winterberry (*Ilex verticillata*) could be a good **replacement for Nandina**, a nonnative invasive shrub. Remember that you would need to plant at least one male and female to have some fruit. Another excellent choice would be Strawberry Bush, also known as Hearts-a-Bustin’ (*Euonymus americanus*). It has a similar airy habit and brilliant fruit and matures at around 4 to 6 feet.
- There are several species of **Ash trees** (genus *Fraxinus*) native to Virginia. They tend to grow in medium wet soil in full sun. They prefer hums-rich soil, but they can adapt to a range of growing conditions once established. These trees are facing a potentially devastating threat from the Emerald Ash Borer, so it is important to monitor them for

signs of infestation. Refer to this [brochure from the Virginia Department of Forestry](#) for more information on management.

- **Milkweed** is seldom severely damaged by deer due to its latex sap. There are several species native to Northern Virginia, and they grow in different conditions: Swamp Milkweed (*Asclepias incarnata*) and Purple Milkweed (*A. purpurascens*) prefer wet soil; Common Milkweed (*A. syriaca*), Whorled Milkweed (*A. verticillata*), and Butterfly Weed (*A. tuberosa*) are drought-tolerant, preferring hot, dry soils.
- The two irises mentioned in the presentation, Northern and Southern Blue Flag (*Iris versicolor* and *I. virginiana*) are the only **native irises for wet conditions**. Dwarf Crested Iris (*I. cristata*) is a woodland plant rather than a wetland species. Non-native Siberian Iris (*Iris siberica*) would also be suitable for a rain garden. On the other hand, Bearded Iris need to be planted in areas with good drainage to avoid rhizome rot.
- **Cardinal Flower** (*Lobelia cardinalis*) can readily self-seed and naturalize in moist meadows, rain gardens, and along the edges of streams and ponds.
- **Virginia Bluebells** (*Mertensia virginica*) should be divided and transplanted in the fall when they are fully dormant. Dividing them in the spring will disrupt their blooming.
- Most **ferns** don't have a noticeable **fragrance**, but the fronds of Hay-scented Fern (*Dennstaedtia punctilobula*) release a scent reminiscent of fresh mown hay when brushed with a hand, crushed, or bruised.

Question on Cultivars

- It is generally best to use straight species of native plants as opposed to cultivars because these are the forms that have evolved with local fauna and will provide the best support to them.
- Some genetic diversity is lost in utilizing cultivars because these plants are reproduced clonally (from cuttings) rather than sexually. This may make them less adaptable to changes in climate.
- Purchasing a cultivar for size considerations should not affect a plant's ability to support wildlife. Selections based on the aesthetic tastes of humans, such as flower shape and foliage color, will have the greatest impact on wildlife. For example, double flowers may no longer have nectaries with nectar and pollen. When the normal foliage color has been modified from green to red or purple [not normal fall color change], anthocyanins replace the chlorophyll, preventing use of the leaves by the caterpillar stage of Lepidoptera for food.

Additional Details & Answers to Chat Questions

- ‘Red Sprite’ and ‘Jim Dandy’ are female and male cultivars of Winterberry (*Ilex verticillata*). Their flowers and fruit will be equally attractive to pollinators and birds as the straight species.
- Some dioecious shrubs can be purchased from native sellers as either straight species or paired cultivars, e.g., ‘Red Spite’ and ‘Jim Dandy.’ Most of the larger nursery chains will favor the named cultivars. Selecting the cultivars will make it easier to be certain you find both male and female plants and they should provide support services equal to those of the straight species.

Growing Native Plants

- As a reminder, the website for locating **native-only plant sellers** in Northern Virginia is [Plant NoVA Natives](#).
- Information on **growing native perennials from seed** is available in an [article by the Ecological Landscape Alliance](#). Seeds and plugs will be less expensive than potted plants.