

By Elaine Mills, presenter of “Celebrating Native Trees”

Many questions posed during the live session required interesting additional research. Here are the answers to these questions

For registrants who would like to refer to the PowerPoint slides, a [recording of the 2022 presentation](#) is available in the Master Gardener Virtual Classroom, along with the [earlier addendum document](#) for that screening.

In response to a question about the **use of bark by Indigenous People as a bandage**:

- My research indicates that **Willow** species, including Black Willow (*Salix nigra*) were used by Indigenous People for their antiseptic, antibiotic, and pain-killing properties. The trees’ active component, salicin, is the chemical precursor of aspirin.
 - In *Medicinal Wild Plants of the Prairie*, Kelly Kindscher states that the Cheyenne fastened a strip of willow bark around a cut to stop the bleeding.
 - The *Learn Your Land* website states that the Cree used the outer bark of willow (*Salix* species) to bandage burns. The inner bark was combined with pitch and grease as an ointment for scabs and rashes.
 - In *Gwich’in Ethnobotany*, the authors report that the bark of young willow shoots can be peeled into strips, wrapped around a cut like a bandage and tied in place with a cloth.
- Apparently other types of bark were used as well.
 - An article on aboriginal use of bark products in British Columbia, Canada, states that the inner bark of **Devil’s Club** was used as a poultice for dressing wounds. **Yellow Cedar** bark, which has anti-inflammatory properties, was frequently applied as a tourniquet or a dressing for wounds.
 - Kuse Nature Preserve reports that the fresh, mucilaginous inner bark of **Basswood** was used by native peoples as a bandage for wounds.
- Interestingly, an [article](#) published last year in the *Journal of Agricultural and Food Chemistry* reports that willow bark is currently being studied for its antibacterial properties in potential wound dressing applications.

The term “marcescence” refers to the retention of leaves by some species of trees, such as oaks.

A [scholarly article](#) by J. Mason Heberling and Rose-Marie Muzika discusses **six proposed hypotheses for its potential evolutionary benefit**:

- Marcescence has no adaptive function but is rather an evolutionary byproduct.
- Marcescent leaves deter winter-browsing herbivores.
- Leaf retention through winter improves nutrient resorption during autumn senescence.

- Prolonged leaf shedding into spring minimizes nutrient leaching and promotes decomposition.
- Marcescent leaves protect overwintering buds from frost or desiccation.
- Marcescent canopies provide winter cover for animals (including insects, birds, bats).

Cedar-apple rust is a disease which requires the proximity of both cedars and members of the rose family. Because cedar trees are so prevalent, and naturally propagate in unpredictable locations, it is difficult to know where to site members of the rose family in home landscaping.

- According to our Extension Agent, a 2- to 3-mile radius between affected species is recommended.
- For further helpful information, see this [article on Gymnosporangium rusts](#) by the Wisconsin Horticulture Division of Extension and this [fact sheet](#) by the Clemson Cooperative Extension.

In response to the inquiry about the **spacing of water-friendly trees from a creek or stream**, there is no single answer because the bank bordering the water may be either abrupt and steep or extensive and flat.

- For those looking to plant a riparian buffer, my recommendation would be to contact a local agency (in Virginia it would be a [Soil and Water Conservation District](#)) for advice. Staff can provide technical advice and describe federal cost-sharing programs for the installation of appropriate trees and shrubs. There are even non-profit organizations that can help cover the remaining expense incurred by homeowners.
- See the *Virginia Department of Forestry* website for information on [Riparian Forest Buffer Cost-Share Programs](#).

Regarding **characteristics to distinguish native Red Mulberry from invasive White Mulberry**:

- The pure species of these two trees are usually easy to tell apart, but they regularly hybridize, making it more difficult to accurately identify all plants.
- **Red Mulberry** (*Morus rubra*) leaves measure 4 to 7 inches long and are a dull, dark green with a distinctly pubescent underside and a conspicuous tapered tip. The tree has shiny buds that point away from the twig and grayish bark with scaly ridges. The fruit is long, measuring 2 to 3 centimeters, and is often borne singly in leaf axils and spread out throughout the tree.
- **White Mulberry** (*Morus alba*) has very shiny, medium-green leaves that measure 3 to 4 inches long. It has orange buds that stay close against the twig, and orange-brown bark with deep, twisting furrows. The fruit is shorter and more rounded, measuring 2 centimeters at most. It is often borne in clusters with more berries per cluster.

- The native tree mostly occurs inside mature bottomland forests, while the invasive tree is a pioneer species which will grow on a forest margin or in disturbed habitats.
- See [excellent comparison photos](#) at bplant.org.

In answer to questions regarding **native Persimmon** (*Diospyros virginiana*):

- The Penn State Extension notes that this tree has a deep taproot, making it difficult to transplant or grow in a container.
- Several Extension websites explain that pruning is not usually needed for this tree. In home gardens, however, the Purdue Extension explains that the tree can be grown as a multi-stemmed plant, and it will become more shrub-like, which would make fruit easier to harvest.
- Volunteer trees can be difficult to transplant because of the deep taproot, but several websites suggest that it should be possible. Various recommendations include:
 - Attempt when dormant, getting as much soil as possible.
 - Root prune an older volunteer before attempting transplanting.

Here are **features that distinguish American Holly from European Holly**:

- **American Holly** (*Ilex opaca*) has dull foliage and dull fruits which are usually solitary and form on twigs of the current season's growth. All the leaves usually have spines, although they may decrease on leaves higher up on the tree. The spines are also firm and painful to the touch.
- **European Holly** (*Ilex aquifolium*) has shiny or glossy foliage with softer, less painful spines. The leaf margins between the spines are more curved, and spines per leaf decrease markedly towards the top of mature trees. The shiny fruit usually forms in clusters and is produced in the axils of the previous season's growth.
- See [excellent comparison photos](#) at bplant.org.

Regarding **gloomy scale on Red Maple**:

- The UMD Extension states that while physical removal of the scale is the most environmentally friendly approach, it is not always practical because the insects may populate inaccessible parts of the tree.
- One mechanical option is to use a strong spray of water, combined with a soft scrub brush to dislodge scale covers or remove their protective wax, leaving them vulnerable to predators and desiccation. Another approach would be to prune out branches that have drastically declined or died.
- If chemical treatment is warranted, a combination of dormant oil applications and the use of systemic insecticides is the most effective approach.

- See this [publication from the NC State Extension](#) for more details.

To propagate Eastern Redbud (*Cercis canadensis*):

- The Lady Bird Johnson Wildflower Center indicates the simplest way to grow the tree is to scarify—soften the seed coating of—the seeds for 10 to 20 minutes in concentrated sulfuric acid and before planting outdoors in the fall.
- [Additional information](#) is provided by NDSU.

In response to a question on **when to plant Redbud Saplings**:

- Containerized trees can be planted in the spring or fall, but it is very important to cut any circling roots that have formed as these can cause improper growth when they are planted.
- Trees can grow in full sun at the northern end of their range but will benefit from some shade in more southerly locations. Best growth will occur in a light, rich, moist soil with supplemental watering during periods of drought.

A question was posed regarding various **species of serviceberry** (*Amelanchier*).

- An [article](#) by Wisconsin Horticulture, Division of Extension, compares several species, including Downy, Allegheny, and Canadian.
- It appears that *Amelanchier canadensis*, which occurs naturally in bogs and swamps, may be the best choice for wet garden sites, while *Amelanchier arborea* is tolerant of pollution and may be better suited to suburban settings.

