

Details and Answers to Chat Questions: QUESTIONS ON WOODY PLANTS

Elaine Mills, presenter of Keystone Species of Native Plants

The plants described during this presentation are generally 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.

General Questions on Woody Plants

- The focus of this presentation was on the “**keystone**” species of native plants, those that have been shown to support the greatest number of butterflies and moths and, in turn, the greatest populations of birds that feed caterpillars to their young.
- Many other tree species, such as those listed in the Virginia Department of Forestry’s *Common Native Trees of Virginia*, are excellent choices for their support of wildlife in general, but they may not all be as supportive of Lepidoptera.
- See Doug Tallamy’s [chart of the top-rated genera](#) in my article on keystone plants at MGNV.ORG.
- **Species** of plants have a two-part scientific name with genus and species. For example, Trumpet Honeysuckle is *Lonicera sempervirens*. **Cultivars** are distinguished from the straight species by the addition of the cultivar name in single quotes. For example, *Lonicera sempervirens* ‘Major Wheeler’ or *Lonicera sempervirens* ‘John Clayton.’
- For a discussion of **straight native species versus cultivars**, see my article [“Making Wise Plant Choices: Part 3: Cultivars.”](#) The initial research conducted by entomologist Doug Tallamy in conjunction with Emily Baisden, a fellow at the Mt. Cuba Center, seemed to indicate that modifications to leaf color, which are the result of a change in the chemistry, are most problematic as far as loss of support for caterpillars as host plants. Changes in stature did not have a negative impact on a plant’s ability to support food webs.

Native Keystone Plants: Addendum

- In an [interview](#) with Kim Eierman of EcoBeneficial, Tallamy mentions, however, that changes in the habit of a tree or shrub could have an impact on nesting birds, and increases in berry size could also be problematic for them.
- The **recommended spacing of trees** from each other depends on their height and spread of their canopies at maturity. In general, the advice is spacing of 6-15 feet for small trees (under 30' tall), 30-40 feet for medium trees (30-70' tall), and 40-50 feet for large trees (over 70' tall). See a recording of our public education class on "[Native Trees: How to Select, Plant, and Transplant](#)" for further helpful information.
- Since a **White Oak** will eventually reach over 70 feet and has a broad crown, it should be planted at least 40 feet from other trees.
- **River Birches** are of medium height at 50-70 feet, so they would best be planted about 30 feet apart.
- Regarding a question on **tree species for coastal exposure**, specifically high winds, the native trees I intended to mention were the Bayberries in the *Morella* (formerly *Myrica*) genus, which are highly salt- and wind-tolerant as well as being highly resistant to deer damage. This [list of salt-tolerant plants](#) (not all native species) from the Norfolk Botanical Garden also mentions those that are suited to other beachfront conditions. [I misspoke when I mentioned plants in the *Morus* genus which are mulberries.]
- Several participants added comments in the chat box recommending Coastal Pines, Loblolly Pines, and Live Oaks.
- **Native evergreen trees** that are in Doug Tallamy's list for the top-rated keystone plants include pines and spruces. The Pine genus (*Pinus*) is ranked at #10, supporting 203 species of Lepidoptera. The Spruce genus (*Picea*) is ranked at #13 and supports 156 species.
- There are nine species of pines listed in the Digital Atlas of Virginia Flora, including the Eastern White Pine (*Pinus strobus*) that I mentioned. The only spruce native to Virginia is Red Spruce (*Picea rubens*), which is only found at the highest elevation in a few counties in the mountain region.
- Three other evergreen trees are native to the Mid-Atlantic, but they are not in the list of the top 20 woody genera. They include American Holly (*Ilex opaca*), Arborvitae (*Thuja occidentalis*), and Eastern Redcedar (*Juniperus virginiana*). Learn more about these and the other tree species from [fact sheets](#) at MGNV.ORG.

Native Keystone Plants: Addendum

- Only certain trees are susceptible to **cedar-apple rust**. It can be a problem for trees in the Rosaceae (Rose) Family, such as crabapples (*Malus* genus) and hawthorns (*Crataegus* genus), mentioned in the talk, as well as serviceberries (*Amelanchier* genus).
- **Cedar-apple rust on hawthorns** doesn't kill the tree but it makes the fruit unsightly and inedible for birds.
- The regime for preventing rust diseases is quite arduous and is not recommended by our Extension agent. See the recording of her class on "[Fruit Producing Trees: Insect and Disease Management Strategies](#)" for more information.
- Contact the Master Gardener Help Desk (mgarlalex@gmail.com) for help dealing with rust diseases.
- Young saplings of most of the trees discussed should be **protected from deer** who may either rub their antlers against the bark or nibble on twigs and branches.
- Rutgers' list of Landscape Plants Rated by Deer Resistance lists Pitch Pine (*Pinus rigida*) as rarely damaged and Eastern White Pine (*Pinus strobus*) as seldom severely damaged.
- See our Extension Agent's class on "[Living with Wildlife without Losing Your Garden](#)" for helpful tips.

Questions on Specific Woody Plants

- Current efforts to restore the **American Chestnut (*Castanea dentata*)** are focused on creating hybrids with the blight resistance of the Chinese species that are as genetically close to the American species as possible. [Studies on hybrids](#) bred by The American Chestnut Foundation are being conducted at Penn State's Lake Erie Regional Grape Research and Extension Center. Other universities, such as the University of Tennessee, are conducting [similar studies](#) to identify blight-resistant strains and develop blight-resistant hybrids.
- See more on the [website of The American Chestnut Foundation](#).
- **White Oak trees (*Quercus alba*)** can live up to 500 to 600 years in the proper conditions (deep, well-drained soil), so a healthy specimen estimated to be 150 years old would not be in decline.
- White Oaks are extremely sensitive to soil compaction and are intolerant of alkaline, shallow, or overly wet soil. To keep them healthy, they should be planted a slightly acidic, deep, moist, well-drained soil.

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- They develop notably strong branches, the lowest of which may need to be pruned off when the tree is young. See a helpful [fact sheet](#) from Alexandria, Virginia, for detailed information on how this should be done.
- A question regarding a HOA prohibition on growing oaks in a golfing community elicited many comments in the chat. One participant pointed out that all deciduous trees lose their leaves. Another commented that the thin leaves of Willow Oak would not pose as much of an issue with clean-up. A third person added that the Audubon program used to certify golf courses based on environmentally-friendly practices.
- **Live Oak (*Quercus virginiana*)** is a larval host plant for Horace's Duskywing, Juvenal's Duskywing, White-M Hairstreak, Banded Hairstreak, Gray Hairstreak, and the Northern Hairstreak, as well as Imperial Moths.
- The stems, leaves, and **seeds of Wild Cherry (*Prunus serotina*)** all contain cyanide and are highly toxic and likely to cause death in humans and pets, if ingested.
- **Red Maple (*Acer rubrum*)** is a native shade tree (40-80 feet tall) with 3- to 5-lobed green leaves that have serrated edged and white undersides. It is noted for its bright fall foliage that is often red.
- **Japanese Maple (*Acer palmatum*)** trees were introduced to the United States from Japan and Korea as ornamental accent trees. Their foliage is palmate (like the fingers of a hand) and often deeply cut into pointed lobes and reddish-purple in color throughout the year.
- Please note that Japanese Maples have been designated as invasive species in parts of the country, including Arlington County, Virginia.
- Regarding various species of pines:
 - **Shortleaf Pine (*Pinus echinata*)** is found throughout Virginia, particularly in the Piedmont and Coastal Plain and is the most widely distributed of the southern yellow pines in the southeast. It grows 50-100 feet in sun to part shade and dry to moist soils. It is the larval host to the Elfin Butterfly and provides cover, nesting sites, and seeds for birds and small mammals.
 - **Virginia Pine (*Pinus virginiana*)** is a considerably shorter tree, reaching 30-60 feet. It is an early successional species that does well in poor soil. This tree drops its lower branches as it grows, leaving stubs behind.
 - **Loblolly Pine (*Pinus taeda*)** is native to southern Virginia, and **Pitch Pine (*Pinus rigida*)** is found in the mountains.

Native Keystone Plants: Addendum

- The Plant NOVA Trees website recommends that the **Eastern White Pine (*Pinus strobus*)**, which I described in the talk, not be planted near a house as it can be blown over by wind.
- Native **Trumpet Honeysuckle (*Lonicera sempervirens*)** does not spread aggressively. While branch tips that touch the ground may root, they are easily dug up with their new roots to share with friends.
- In plant trials conducted at the University of Georgia campus in Griffin, GA, the **‘Major Wheeler’ cultivar** was found to be among the top plants for attracting pollinators. That cultivar is also recommended by the staff at the University of Tennessee Gardens. Washington State University lists the cultivar as the longest blooming variety of honeysuckle with “a superior flower for hummingbirds and butterflies.” Several other universities list ‘Major Wheeler’ in plant guides or plant sale lists.
- The **fruit** of Trumpet Honeysuckle is nutritious for birds but mildly toxic to humans and pets due to the saponins it contains.
- **Aphids on honeysuckle** can be washed off the plant with a water spray. The encouragement of beneficial natural enemies (predatory or parasitic insects) in the garden can also be of help in their control. These include lady beetles, lacewings, syrphid fly larvae, soldier beetles, and parasitic wasps.
- Regarding a question on **Honey Locust (*Gleditsia triacanthos*)**, North Carolina State Extension mentions that the tree is highly salt- and wind-tolerant, drought-tolerant once established, and resistant to damage by deer. Despite these positive characteristics, the tree is not recommended for landscapes because of its thorns and seed pods that are unattractive on the tree and messy when they fall onto lawns and walkways. In addition, the tree can spread and become a weed problem, and mowing or cutting increases the number of sprouts.