



Claytonia

Newsletter of the John Clayton Chapter, Virginia Native Plant Society

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Our Zoom meeting at 7 pm on Thursday, Jan. 19:



Harmony Dalglish on “The Restoration of American Chestnuts”

Harmony Dalglish grew up in South Dakota and received a BA in biology and environmental science from Grinnell College. She attended graduate school at Kansas State University where she studied clonal reproduction in grasslands at the Konza Prairie Biological Station. After earning her PhD, she had two postdoc positions:

one at Utah State University and another at Purdue University. She joined the Biology Department at William & Mary in 2012, earning tenure in 2018. The main focus of her research is to understand how plant–animal interactions affect plant population dynamics. She studies these questions in two systems: monarchs and milkweed and the restoration of American Chestnut.

From the President



Happy New Year to all of you. I hope all of you had happy, healthy, and enjoyable holidays in December. As I write it is not yet Christmas and although most of the presents are here, I am busy trying to find groceries in sold out supermarkets... Yesterday, however, I began preparations for the coming spring. I started

cold stratification of those native plant seeds that need 60 days of moist, cold stratification. I used the method that Prairie Moon Nursery recommends for seed. You place seeds on a moist paper towel and then place that package in a plastic sandwich bag with the name of the plant and the date it is ready to plant. These bags will stay in the refrigerator until that date, which is going to be February 18. Hopefully they will grow successfully. No, it is not always successful but one can hope.

In my last newsletter I wrote about wanting to grow oak trees to replace trees on my lot where someone cut several trees down without my knowledge. I wanted to plant the acorns that were so plentiful. So far about 5 have grown (see the photos below) and they seem to be mostly Swamp White Oak (*Quercus bicolor*) or maybe Chinquapin Oak (*Quercus muehlenbergii*).



A *Quercus bicolor* (or maybe *Quercus muehlenbergii*) seedling



An unidentified oak seedling

Maybe it is true that the leaves of young Oaks are hard to identify. One baby tree is a bit different from the other five and I am not sure what it is. I wonder if the leaves change as they grow. Inside some of the pots I can see the roots growing downward, but the stems have not started to develop yet. In fact, the roots form first to give the new plant a better chance to survive before a shoot emerges. I took acorns from many sources—my yard, my street, York River State Park, and New Quarter Park. But I should have written the source and photographed the acorn to have good scientific data.

In other news, *The Guardian* US edition had an article about climate change. Connecticut has made climate studies a part of its mandated curriculum in science studies. This means that all students in 5–12 will have to be taught climate change. In 2020 New Jersey became the first state to mandate k–12 climate change education. Connecticut mandated climate change to protect it from budget cuts and climate-denying political views.

“The conservative turn in our country...often starts at a very hyper-local level of local town boards of education. There is this push towards anti-intellectualism, anti-science, anti-reason, and I didn’t want local boards of education to have the power to overturn the curriculum and say, ‘climate change is too political,’ Connecticut state representative Christine Palm told the *Guardian*.

“Anecdotally, I knew that there was no uniform approach and that I felt there should be,” Palm explained. She went on to introduce her climate education bill annually over the last four years until it was finally included in the state budget bill implemented earlier this year. Her determined efforts finally paid off.

“In the public schools, the program of instruction offered shall include at least the following subject matter, as taught by legally qualified teachers... science, which shall include the climate change curriculum,” the current requirement reads, marking a change in language from “which may” to “which shall”. “It sounds like a simple change, but legislatively makes all the difference between a law and an option,” said Palm.

The *Guardian* reports that a global survey was conducted in 2021 amongst 10,000 children and young people across 10 countries including the US, which found that 59% of respondents were very or extremely worried about the climate crisis. They had feelings such as sadness, anxiousness, anger, powerlessness, and guilt. The worst news is that 75 % of respondents feel that the future is frightening. Because of these last views, educators wish to rely not just on teaching the issues, but also solutions. For example, one of the learning goals for high school is the ability to “use computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity”. If this change in curriculum is successful, it may encourage other states to implement climate change in their curriculums.

Our Native Plant Society has a well-developed system for native plant rescues. The Plant Rescue groups from the various chapters find out about areas in woods and in towns which are either being developed for building of homes, restaurants and shops. They ask permission from the owners of the land to rescue native plants. When approved volunteers go with shovels, pots and soil and take the plants. The plants are then stored. At other times a rescue is needed because a museum or public building is expanding its space. The plants in the area where the building is expanding are removed and replanted in the areas adjacent to the building being built or elsewhere in the property. These native plants are either replanted immediately or stored until the construction is completed. By Native Plant Society rules, these plants may not be sold but are planted in parks, schools, shoreline restoration, and around public buildings. In an article written by Mindy Cooper. I read last summer on “The Appalachian Voice” about a different system for rescuing native plants. In Knoxville, Tennessee there is a nonprofit staffed by volunteers in co-ordination with builders, developers and landowners to rescue native plants like we do in Virginia. The Native Plant Rescue Squad as they call themselves work out of the Knoxville Botanical Gardens. Joy Grissom and Gerry Moll created this group because they wanted not simply to rescue native plants but also to build a relationship between people and the amazing biodiversity that is here” Not everyone can just go harvest and sell native plants. The Native Plant Rescue Squad has permits and is insured with the Department of Agriculture, which allows to enter contractual relationships with landowners to dig in designated areas. Then the native plants are sold at

farmers markets, by landowners, co-ops, and area greenhouses. As Gerry Moll explains, a yard with native plants is less susceptible to diseases than one with turf grass, needs less water and less fertilizers. In 2021 the Rescue Squad has rescued 5,000 native plants with about 700 volunteers. Each volunteer learns about saving native plants. To learn more about this group visit NativePlantRescueSquad.org.

Lucile Kossodo

✿ New Members

We welcome **Lynn Goeke** of Gloucester, **Grace Hanners** of Port Haywood, **Phyllis Karppi**, **Zach McFatridge**, and **Chloe Harner**, all of Williamsburg, **Douglas Simpson** of Yorktown, and **Sky Tilley** of Newport News to the John Clayton Chapter!

✿ There are no Plant Walks scheduled for January and February.

✿ From Helen...

Garlic Mustard – Driver or Passenger?

Garlic Mustard (*Alliaria petiolata*) has been listed by many conservation groups as a highly invasive plant. It was introduced to North America in 1868 likely by settlers for medicines and food, but there are few herbarium records of the plant until over a hundred years later in the late 1980's. By then the landscape was quite different—more people, more carbon dioxide, higher air temperatures, longer growing seasons, all environmental changes favorable to Garlic Mustard. Now many scientific studies are suggesting that Garlic Mustard is not highly invasive but simply responding to habitat changes, becoming abundant where local conditions are suitable.

Because Garlic Mustard is highly publicized as an aggressive invasive species, conservation groups get volunteers together to hand-pull its 2–3 foot stems—I did so in Potomac Gorge, many years ago. But pulling adult plants disrupts soil structure, spreads weed seeds and damages native plant seedlings. Resource managers suggest cutting flowering stalks early in the spring to prevent seed set. Some studies have found that left alone, populations decline over the years, and native species remain in place. Over time, growth of Garlic Mustard changes the soil so the plant can no longer survive in the same area.

Garlic Mustard produces root chemicals that kill the mycorrhizal fungi native plants need to draw nutrients from the soil. But evidence suggests most native plants and their fungi develop resistance to these sulfur-containing compounds. Additionally, research plots have demonstrated the decline of Garlic Mustard



Helen Hamilton

plants due to pathogens and parasites in the soil that feed on the toxic chemicals. Pulling the plant could disturb this activity and allow seeds to spread while trampling native plants.

Native deer avoid Garlic Mustard due to its strong odor and taste. Since they feed on potentially competitive native plants instead, their presence has been blamed for the rampant growth of Garlic Mustard. Additionally, deer create open soil with their tracks, and while foraging under leaf litter they increase habitat for the prolific seeds produced by Garlic Mustard. But human development—use of the land for agriculture, housing, industry—also destroys native plant habitat and creates good areas for invasive plant seed germination.

Garlic Mustard is found in most counties of the Piedmont and mountain regions, but sparsely here in the Coastal Plain. Dots on the digital atlas show its presence in York, Charles City, and New Kent counties, so it is creeping eastward.

It is an edible plant; while it has significant amounts of hydrogen cyanide, chopping, soaking, and cooking reduces its levels. It's high in vitamin C, zinc, and vitamin E. In small quantities, the taste is bitter, like garlic and onion, and the leaves add zest to stir-fries, salads and pesto.

So, pulling the plant apparently does more harm than good, but foraging for its leaves is OK. Garlic Mustard may not be an invader so much as a passenger on the environmental changes. Ecological events are always complex.

See these articles for lots more information:

New Scientist Jan–Feb 2023

Midwest Invasive Plant Network, Sept 2021

National Geographic, April 26, 2021



Below is the abstract of a research article by Helen in a recent issue of *Banisteria*, a journal published by the Virginia Natural History Society, which is devoted to the natural history of Virginia:

Bryophyte Survey of the College Woods and Campus of the College of William and Mary

While botanists search for larger flora (trees, shrubs, and herbaceous plants), small plants like bryophytes are easily overlooked. In many areas of Virginia that are well documented with vascular plants there are sparse collections of bryophyte flora. This is especially true in the Coastal Plain, where habitats are often less suitable for mosses, liverworts, and hornworts that prefer cooler moist, shaded areas. This study is part of an effort by the author to add bryophytes to plant collections of the Coastal Plain. Throughout 2016–2022, 176 bryophyte collections were made representing 57 moss species and 23 liverworts. Among these, 39 mosses and 17 liverworts had not been reported by earlier collectors from this study area. Ten mosses

and four liverworts were new records for James City County. Eight mosses and two liverworts show a disjunct distribution in which they are present in the mountain/western Piedmont counties but are absent, or largely absent, from the remainder of the Piedmont. All of these except one moss show a significantly stronger representation in the mountains/western Piedmont than in the Coastal Plain, a pattern that has been documented for numerous species of vascular plants.

From Betsy Washington, Northern Neck Chapter...

American Persimmon, *Diospyros virginiana*,

November 2022 Plant of the Month

Everything about the November Plant of the Month is distinctive and picturesque. This small to mid-sized tree typically grows to about 35–60 feet with crooked artistic branches, broad rounded crown, and pendulous lower branches -similar in structure to a Japanese Bonsai. A member of the Ebony Family, American Persimmons have very dark nearly black bark broken into distinctive thick chunky, square blocks, divided by deep furrows, and sometimes described as pebbly or like alligator hide. In fact, it is easy to recognize this tree just by the bark alone. The leaves are also distinctive -oblong and glossy dark green up to 6" long. In fall, they turn handsome red, burgundy to orange or yellow, but this can be variable depending on the tree and weather. Persimmons are dioecious, meaning that there are separate female and male trees, so to produce the tasty fruit you will need both. Small extremely fragrant bell-shaped creamy white to yellowish flowers bloom in May and attract a variety of pollinators, including several specialist bees, and the blooms are an important nectar source for honeybees.

The distinctive fruit ripen in fall and are 1 to 1.5 in. in diameter, turning orange blushed with red. When ripe, the soft, sweet flesh can be eaten straight from the tree. In fact, the botanical name, *Diospyros* means "fruit or food of the gods." But beware! Unripe fruit is extremely astringent, instantly drying and puckering your mouth. Ripe fruit should be soft with a pinkish -orange tint and a frosted appearance. The orange fruits often remain on the trees well after the leaves have fallen, making a stunning sight against the deep blue sky. The fruit has a high sugar content and is excellent when used in desserts such as puddings, sherbets, or custards.



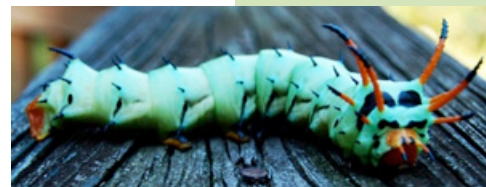
A Persimmon's distinctive chunky bark



Ripe Persimmon fruits

These fruits, as you may well imagine, have high wildlife value and are eagerly eaten by birds, small mammals, deer, foxes, raccoons, and black bear, giving rise to common names like Possumwood, Possum Apple and Sugar Plum.

American Persimmon is the larval host plant for the beautiful Luna moth and the Regal Moth, which can reach up to 6" wide. Their caterpillar, the Hickory Horned Devil (*Citheronia regalis*), is equally spectacular, maturing to an eye-catching turquoise green with branched, black-tipped orange horns, and can be nearly the size of a hot dog. They look ferocious but are harmless.



A Hickory Horned Devil

American Persimmons are found across much of eastern and central North America ranging from Florida north to southern Connecticut and west to Texas and Iowa and in nearly every county in Virginia. This adaptable tree is virtually pest free and grows in a tremendous variety of habitats from dry, sterile, sandy flatwoods, to river bottoms, to rocky hillsides and on “virtually any soil”.

Growing best in moist, well-drained, sandy soils in full sun to partial shade, grand old Persimmons have reached well over 100' high in these conditions. Persimmons have a deep tap root and are very difficult to transplant at larger sizes. They naturally tend to sucker from the roots when disturbed and can form attractive colonies along fences or hedge rows. They can be readily maintained as a single trunk tree by removing any suckers or simply mowing regularly.

Indigenous Americans have cultivated the American Persimmon for centuries. The inner bark and unripe fruit have been used to treat fevers, diarrhea, and hemorrhaging, and an indelible ink was made from the fruit. The heartwood is nearly black and extremely hard and has been used to make golf clubs, billiard cues, and loom shuttles.

This distinctive tree is perfect for many garden uses, including as a specimen tree, in edible gardens, children's gardens, pollinator or butterfly gardens, winter gardens, or for naturalizing and colonizing difficult sites. Invite this charming tree into your garden or enjoy it along country roads, fences, or woodland edges. In late fall when the fruit has ripened sufficiently, pucker up and try some “fruit of the gods”.

Southern Bayberry or Wax Myrtle, *Morella cerifera*,

December 2022 Plant of the Month

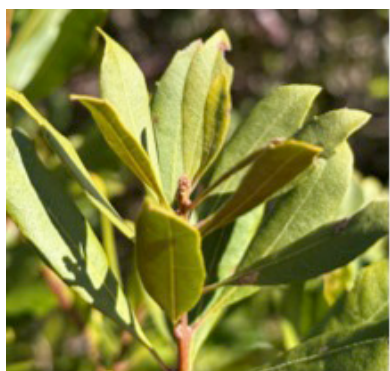
Our evergreen Wax Myrtle or Southern Bayberry is handsome in every season of the year but it particularly sparkles in the winter after the leaves of deciduous trees have fallen leaving a gray and brown landscape. Not only are Wax Myrtles a beautiful native evergreen (large shrub or small tree depending on how you prune it) but they are also tremendously adaptable and easy to grow. They offer a handsome fine-textured, billowy habit growing quickly to about 10 to 15 feet in height but are capable of reaching 25 feet. All parts of the shrub are delightfully aromatic, with a strong bayberry fragrance. The narrow wedge-shaped leaves are a lustrous olive green if you look closely,



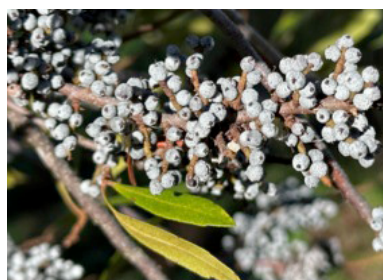
Wax Myrtle can be limbed up into a beautiful small evergreen tree. (Reedville Fishermen's Museum Shoreline Garden)

berries are covered in a thick whitish waxy coating from which bayberry candles are made. Wax Myrtles are usually dioecious meaning they have separate male and female plants; only female plants produce the fragrant fruit, but occasional populations produce both female and male flowers on the same plants, rather unusual but a useful adaptation. You will need both to insure the handsome fruit.

you can see they are dotted on both the upper and lower surface with yellow and brownish resin glands that yield the spicy bayberry aroma when rubbed or crushed (hmmm, that wonderful smell). In fall the females produce small round pewter-gray fruits that are densely clustered along the branches. These persist throughout the winter providing beauty for our landscapes and food for all our wintering songbirds. The



Resinous evergreen leaves



The showy gray fruits are covered in an aromatic waxy coating.

Native from southern New Jersey and Delaware south to Florida and Texas, Wax Myrtle or Southern Bayberry is a southern species, hardy only to zone 7. A closely related species, Northern Bayberry (*Morella pensylvanica*), occurs along the northern coastal plain from Newfoundland south to North Carolina but differs in its smaller size and its semi-evergreen to deciduous foliage. This Northern Bayberry is common along our outer Coastal Plain like Eastern Shore and Virginia Beach but otherwise rare in the inner Coastal Plain where the Wax Myrtle (Southern Bayberry) is widespread. The Wax Myrtle (Southern Bayberry) is found in a wide variety of Coastal Plain habitats from the upper dunes and interdune swales to maritime swamps and forests to tidal marshes and swamps to successional pine-hardwood forests.

Wax Myrtles are adaptable shrubs tolerant of poor sterile soils, high winds, waterlogged soils, salt and salt spray and can grow in sun or part shade. Their roots contain nitrogen fixing bacteria producing the needed nitrogen to allow the Wax Myrtle to thrive in extremely poor, infertile soils. Tolerance of salt and salt spray makes them an excellent plant for use near the coast and Chesapeake Bay. They prefer acidic soils but will prosper in sandy, loam and even heavy clay soil. Their ability to sucker into colonies is ideal for bank or shoreline stabilization and they are quite useful in wetland restoration gardens and riparian buffer plantings. They are useful for naturalizing but are also at home in more formal landscapes where they can be pruned into a handsome evergreen hedge as in the Herb Garden at the National Arboretum in Washington, D.C. or they can be limbed up into a handsome small evergreen tree, revealing the smooth gray, almost white bark.

The persistent fruit of Wax Myrtles provide critical food for a variety of songbirds through the winter months. In fact, the beautiful Yellow-rumped Warblers, once named Myrtle Warbler for their affinity for this shrub, are already busy cruising the Wax Myrtles near my shoreline feeding on the fruit. Other songbirds that relish the fruit include tree swallows, bluebirds, catbirds, kingbirds, Carolina wrens, and a variety of sparrows and woodpeckers. Wax Myrtles also provide critical shelter for a variety of wildlife at other times of year as well as being a host for the Red-banded Hairstreak butterfly.

Humans have also long used the fruit of this species for medicinal purposes and to make bayberry candles, soaps, and sealing wax. Colonists made delightfully fragrant bayberry candle wax from the berries by picking and boiling up to 15 pounds of berries to make just 1 pound of wax. Considering that the abundant berries are only 1/8" in diameter, that's a lot of berry picking! Colonial folklore states that if you light a new bayberry candle on Christmas Eve, you'll have health, wealth, and prosperity in the coming year. Plant this aromatic and tough shrub in your garden or along your shoreline and light a bayberry candle this Christmas Eve or Winter Solstice and enjoy the wealth of life and the benefits this beautiful shrub will bring to your garden.

All photos by Betsy Washington

John Clayton Chapter Calendar

**Thursday,
Jan. 19** **7:00 pm: Our January Zoom Meeting—Harmony Dagleish
on “The Restoration of American Chestnuts”**

(Details on Page 1)

Keep a lookout for announcements about any additional walks or other events in the local newspapers and on our website at [**www.vnps.org/johnclayton**](http://www.vnps.org/johnclayton).

Renew online at www.vnps.org or use the membership renewal form below.
Please contact Membership Chair **Cathy Flanagan** at 757-879-1997 or at flanagan.catherine@gmail.com
with questions about your membership.

Membership Form for John Clayton Chapter, Virginia Native Plant Society

(Place checks in the boxes below next to your selections.)

I am a ☐ **new member** of the John Clayton Chapter ☐ **renewing member** of the John Clayton Chapter

Name		
Address		
City	State	Zip
Email*	Phone*	

☐ I would like to receive my newsletters electronically at the email address above.

Membership dues

☐ Individual (\$30) ☐ Family (\$40) ☐ Patron (\$50) ☐ Sustaining (\$100) ☐ Life (\$500)

☐ Student (\$15) ☐ Associate (\$40) —for groups who designate one person as delegate

I wish to make an additional contribution in the amount of \$ ☐ to John Clayton Chapter ☐ to VNPS

☐ This is a gift membership; please include a card with my name as donor.

I have ☐ time ☐ a little time ☐ no time to help with activities.

☐ I do not wish to be listed in a chapter directory.

**Please Note:* John Clayton Chapter does not distribute any of our membership information to other organizations.
It is used only by the officers and chairpersons of our chapter.

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