Claytonia

Newsletter of the John Clayton Chapter, Virginia Native Plant Society

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Our Zoom meeting at 7 pm on March 18: C. Colston Burrell on "Obsession and Exploitation: The Cultural History of Trilliums"

Connections between trilliums and humans have existed since indigenous peoples employed their medicinal powers. They are celebrated in song and rhyme, featured on stamps, and their perfect symmetry has been abstracted into logos, symbols and art. Their name is exploited to sell products and housing developments. The story of trilliums is one of obsession and exploitation.

C. Colston Burrell is an acclaimed lecturer, garden designer, and photographer. The author of 12 gardening books, Cole has twice won the American Horticulture Society Book Award. A certified chlorophyll addict, Cole is an avid and lifelong plantsman, gardener and naturalist. He is a popular lecturer internationally on topics of design, plants and ecology, sharing his knowledge and enthusiasm with professional and amateur audiences for 40 years. He escorts garden and natural history tours throughout the United States and abroad through Garden and Nature Tours with C. Colston Burrell. He is principal of Native Landscape Design and Restoration, which specializes in blending nature and culture through artistic design. In 2008 Cole received the Award of Distinction from the Association of Professional Landscape Designers for his work promoting sustainable gardening practices. His work is part of the Smithsonian Archive of American Gardens. He gardens on 10 wild acres in the Blue Ridge Mountains of Virginia.

From the President

I celebrate as I write this newsletter because even though we may see some snow, the true signs of spring are here. I can see the daffodils growing taller. Soon the Claytonia will show, along with Bloodroot. We are rounding the corner from winter.

Since I do most changes to my yard in winter, this year the pandemic gave me many opportunities to think about changes I could make. It was fun to dream about it. Japanese gardens inspired me. I ordered a Japanese stone lantern and began digging the path leading to it with a tool called little Pulaski. It has a flat area that digs into the soil and lifts it out. I filled three big pots with soil from that area. Yesterday, with the help of a friend we hammered in the metal path borders. No, it was not easy. I looked online for stones but in the end went to Toano and found stones I could afford. I have yet to get the stones but when it stops raining, I will get them. The path leads to the right side of my yard where the lantern sits at the end. The feeling of accomplishment is good for the soul and the soreness in the hammering arm feels alive. I still have to cut the tall grasses, and in late March I will clear the native plant fenced area and add Butterfly weed baby plants to that area.

Our plant sale inventory is smaller than last year due to fewer plant digs, but we have ordered some wonderful natives to fill in our offerings. If you have natives to offer your chapter, bring them to a spring potting party. If you are unable to come to a future potting party, drop your plants off at my house, 229 West Queens Drive, Williamsburg, VA 23185 (cell 757-784-2882). We absolutely cannot accept any plants on the day of the sale since there will be no time to label, price, and place plants in the appropriate location for the sale. We will have our plant sales like last year, one in Newport News and one in Williamsburg, by appointment and masked for members and their friends. We have not yet set the sale times, but we are planning to extend the sale hours to give more people time to buy. Look for further information from your Plant Sale Committee.

Speaking about mysteries and plants, Paola Rosa Aquino wrote in the *Guardian* article of January 21, 2021 about the remains of a cypress tree forest that grew 60,000 years ago! Where is this forest located? It is in a particular stretch of water off the coast of Alabama, which the Gulf of Mexico inundated and preserved from decomposition. Nothing like it exists in the US in size or scale. How did Alabamians discover it? Giant waves driven by Hurricane Ivan in 2004 uncovered the underwater forest. Thank goodness, efforts are underway to preserve it as a marine sanctuary. Some companies want to salvage the wood for commercial sale or to see if it has new compounds for medicine. Let us hope

Location of the underwater cypress forest, *above*, and some of its preserved trees, *left*

that they can save it. Scientists tested by carbon dating three times to be sure the results were correct. In addition, scientists took core samples from the floor to confirm the findings. "Ben Raines and Kristine DeLong formed a partnership to extract as much knowledge from the site as possible while also preserving it. From a scientific perspective, it's a goldmine of information that we just don't have access to anywhere else," Delong says. "She has worked with a cadre of scientists—from dendrochronologists to geologists and marine biologists—using only non-invasive instruments to collect rare information on Ice Age-era climate, rainfall, insects, and plants." They found, for instance, that these had shipworms, a type of clam that likes eating wood; its other name is "termite of the sea." Scientists collect all the marine creatures from their depth of the underwater forest hoping to produce life-saving medicines on land.

An article in *Live Science* written by Harry Baker in December 2020 explained that a third of U.S. rivers have changed color since they were first photographed as satellite images. The colors changed from blue to yellow and green. According to the article, the change depends on the amount of suspended sediment algae, pollution, or dissolved organic matter. Apparently, algae blooms and less sediments cause the green color. On the other hand, more sediment seems to cause the yellow color. In the North and West, rivers tended to become greener, whereas the eastern regions of the U.S had a trend toward yellow rivers. Larger waterways such as the Ohio basin and Upper Mississippi basin also moved to blue-green. These color changes do not need to be permanent if the cause is poor management of the river's health. One nice thing is that while color changes are not precise numbers for the water's quality and ecosystem's health, it is a much easier way for scientists to measure color than water quality.

An article by Phoebe Weston in the *Guardian* article dated January 29 writes that alpine flowers could go extinct as glaciers disappear. She calls it "escalator to extinction." What she means is that as the alpine flowers die from climate change, aggressive species take over, threatening the entire mountain ecosystem. These proglacial environments are very delicate. As the alpine plants decline due to climate change, plants from below the alpine area move upwards, establish themselves, and destroy the biodiversity of the mountains. Lead researcher Dr Gianalberto Losapio, an ecologist from Stanford University, studied the Italian Alps. He states: "I think we can be relatively confident that our results can be extended elsewhere in the Alps and other mountain ecosystems, like the Himalayas, the Karakoram, and the Andes." In addition, even Great Britain's mountains. What would the areas look like? Losapio says: "Like the boreal forest in Scandinavia or Canada, if it rains a lot it could be a continuous forest, with wet, humid, deep productive soil. If it doesn't, it will look more like the Sierra Nevada in Spain or California," What can we do? As well as working to reduce emissions, education and awareness about fragile mountain ecosystems would help protect them. Encouraging people to stay on paths and not build more ski slopes is another suggestion.

Lucile Kossodo

New Members

We welcome new members **Laura Grove** of Williamsburg, **Heywood Jennings** of Yorktown, and **Jacqueline Turner** of Williamsburg to the John Clayton Chapter.

From Helen…

Spring Ephemerals

They come early, but do not stay long, only a few weeks. Most grow in woodlands, using the sunshine of early spring to grow, flower, get pollinated, and produce seeds, all before leaves appear on the trees. How do they do it? Who/what are the pollinators?

Bees are the major pollinators of flowering plants—no other insect has a body covered with hairs that attract pollen. As they gather pollen and mold it into a cavity on their hind leg, pollen grains stick to their body hairs to be transferred to receptive stigma on the next flower they visit.

Most bees are generalists—they take pollen from any available plant, all of it for their brood cells since pollen grains will germinate only on matching stigma. Others are specialists and will feed from a few or only one plant species, and all the pollen is available for reproduction.

Three of our native spring ephemerals host specialist pollinators, a group known as mining bees. These are ground nesting bees that include bumblebees, sweat bees, leafcutter and mason bees. They are solitary, are not aggressive, do not sting, and live only a few weeks, long enough to mate, construct a nest, and deposit an egg and provisions.

These bees prefer nest sites in dry soil, often sand, or bare patches in the lawn or garden, usually under shrubs for protection from heat and frost. Nests are often in groups, usually recognized by a small mound of soil, or small holes. Mining bees are well named, since the females often dig holes and tunnels with legs and mandibles. After depositing a single egg, she rolls a ball of nectar and pollen to feed the emerging young, seals the brood patch and constructs others. The new bee emerges just as the flower opens with nectar and pollen for food.

Spring Beauty, *Claytonia virginica*, is pollinated specifically by a mining bee, *Andrena erigenia*. Other bees and flies may visit and take nectar, but the pollen they carry is wasted on flowers other than Spring Beauty. This little early bloomer is well named, with loose clusters of star-like white flowers, the petals striped with pink veins. A small plant with thin stems 4–6 inches tall, Spring Beauty is spectacular in large patches, like a sea of pink foam. Dark green grass-like leaves continue to grow as the flowers finish blooming and may eventually reach 9–12 inches tall before disappearing in late spring.

The specialist pollinator for Cut-leaf Toothwort, *Cardamine concatenata*, is another mining bee, *Andrena arabis*. This little woodland flower has a cluster of white to pink flowers at the top of each stem. Below is a pair of dark green leaves, cut deeply

into 3 lobes. The name "toothwort" could refer to these sharply lobed leaves, but the name actually comes from tooth-like projections on the underground stems.

Andrena erythronii, another mining bee, collects pollen from Trout Lily, *Erythronium americanum*, that gets its name from its mottled green leaves that apparently resemble brook trout. This bright yellow flower droops toward the ground (Mary Hyde Berg always told us "its eyes look downwards"). The flowers don't last long, but the leaves remain as ground cover throughout the growing season. The seeds are distributed by ants, who are attracted to small bodies of dead cells and lipids (elaiosomes). After being eaten, the seeds are deposited in the ants' feces not too far away from the sources, where they sprout to form colonies.

Bees and their flowers have evolved simultaneously to ensure a food supply and pollination. When the adults emerge from overwintering, nectar and pollen is available from flowers.

The habitats for ground nesting bees are threatened, so it's a good idea to leave a little bare spot in a home garden for these bees. They are solely dependent on flowers for food, and their pollination services are irreplaceable.

Spring ephemerals are gone by early summer—their tops have faded, and their roots are storing energy for next early spring. Here are a few more spring ephemerals that are native to Virginia's Coastal Plain. Some, but not all, will do well in shaded woodland gardens.

One of the first to appear in our area is Pennywort, *Obolaria virginica*. Only 6 inches tall, the white-purplish flowers clustered at the top of the stem are easily overlooked in winter's leaf litter. Pennywort blooms in late February, just before the other spring ephemerals, in rich moist woods and thickets.

Round-lobed Hepatica, *Hepatica americana*, is one of the earliest spring wildflowers. Light blue flowers emerge in leaf litter from a tattered clump of leathery, burgundy-brown tinted leaves from the previous year. New leaves appear only after the flowers bloom and are seen frequently throughout the growing season.

A sure sign of spring are the flowers and leaves of Bloodroot, *Sanguinaria canadensis*. Sometime in March brown tips will emerge from forest soil, each with a leaf inside wrapped around the stalk. Delicate white flowers appear above the still-folded leaf. After the flower is done, the petals drop and the leaf with 5–7 wavy lobes slowly opens. Once expanded, the bright green heavily-veined leaf shades the developing fruit. The appearance and actions of the leaf are as interesting as the satiny white flower petals. This is another plant that ants visit to feed on the small appendages on seeds, later leaving them behind in feces to germinate in rich organic material.

Rue Anemone

Another early bloomer is Rue-anemone, *Thalictrum thalictroides*. Its flowers are small, in whorls of white petal-like sepals above blue-green leaves that are divided into three round lobes. This is a nice plant for a woodland garden—Rue-anemone prefers part shade but will tolerate deep shade and drought.

Rue-anemone is very attractive with Common Blue Violet, *Viola sororia*, a host plant for the larva of fritillary butterfies, other butterflies, some moths, and several specialist *Andrena* bees including the mining bee, *Andrena violae*, that only visits violets.

Common throughout Virginia is Field Pansy, *Viola bicolor*, that covers lawns and fields in early spring with small white-blue flowers.

Field Pansy

Tiny Bluets, *Houstonia pusilla*, are everywhere in March—along roadsides, in lawns and fields, usually in dry, disturbed areas, creating large swaths of deep purple. These little flowers are only ¼-inch across, on stalks only an inch long with ½-inch leaves.

The leaves of Virginia Bluebell, *Mertensia virginica*, appear early in spring, first a deep purple, then turning green. They are large, 2–8 inches long, and somewhat fragile, as the stems are nearly hollow. Funnel-shaped flowers are first pink and turn blue as they open—truly a beautiful pendant cluster. Early on this lovely flower made the trip to Europe, where it quickly became a regular in English gardens, as the handsome Virginia cowslip. Virginia Bluebell is a plant of Virginia's mountain and piedmont areas, rather than coastal regions, so it must be given a moist, shady environment.

A few mosses are ephemerals also. Urn moss, *Physcomitrium pyriforme*, produces copious numbers of goblet-shaped capsules (the sporophyte generation) from each rosette of leaves. Quickly they open, disperse spores, and by early summer the leaves are brown and shriveled.

Yellow stalk moss, *Ditrichum pallidum*, makes a "forest" of tall thin yellow stalks, topped with capsules. Nothing else looks like this plant in early March in the forest litter and lawns.

Clayton's Garden

Little is known about John Clayton's actual garden, but early letters indicate it was more beautiful and impressive than that of Thomas Jefferson. Since his garden no longer exists, one can only guess at what it actually contained. No records survive indicating its contents, but there are letters and records sent to other botanists and friends indicating plants, trees, and shrubs that impressed Clayton, and we can assume that they were part of his garden.

The following shrubs were favorites of Clayton, and he often sent specimens to other persons:

1. *Stewartia malacodendron*, native to coastal plains, also known as Silky Camellia.
2. *Hamamelis virginiana*, native throughout Virginia, commonly known as Witch Hazel.
3. *Chionanthus virginicus*, native throughout Virginia, also known as Fringe Tree.
4. *Halesia carolina*, native to southwest Virginia, also known as Silverbells.
5. *Callicarpa americana*, native to coastal plains and known as Beautyberry.
6. *Ilex* species

The following plants were mentioned by Clayton in some correspondence:

1. A pinkish *Chelone*; most likely it was *Chelone obliqua* (Turtlehead) found growing in the Gloucester area. It could also have been *Chelone cuthbertii* (entirely pink) or *Chelone glabra*, which is white, often with pink fringes.
2. *Amsonia tabernaemontana*, native to coastal plains. This plant, also known as Bluestar, was named by Clayton for a friend in Williamsburg.

Clayton was extremely interested in both ferns and mosses, and letters indicated he had them on his property.

The following plants contain the clayton name in the genus or species:

1. *Osmunda claytoniana* (Interrupted Fern), native to piedmont and mountainous areas. There was a record in James City County, but this plant appeared to be lost from this area until a few plants were recently discovered by chapter member Donna Ware.
2. *Osmorhiza claytoni*, native to coastal plains, also known as Sweet Cicely.
3. *Claytonia virginica*, native throughout the state, also known as Spring Beauty.
4. *Claytonia caroliniana*, native to mountains and southwest Virginia, also known as Carolina Spring Bauty.

It is known that Clayton lived in an area where there were small streams flowing through the property, and there is some mention of *Symplocarpus foetidus* (Skunk Cabbage) and *Caltha palustris* (Marsh Marigold).

Some letters indicate an interest in species of *Phlox* and the mint genus *Agastache* (Giant Hyssop).There are two species: *nepetoides* in the coastal plain and *scrophulariafolia*, a mountain species.

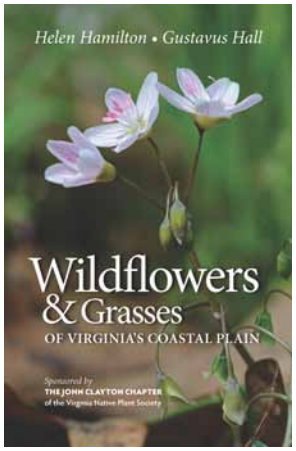
Other plants more certainly in his garden would have been Columbine, Virginia Heartleaf, Wild Ginger, Trout Lily, Foamflower, Verbena, Fire Pink, Ground Cherry, Bloodroot, Mayapple, and Spring Beauty.

Pat Baldwin

From Donna…

Thank you, **Sue Voigt**, for alerting us about the opportunity to write our legislators in support of the study about controlling invasive plants in the horticultural trade (HJ 527). Now two other very important bills are at hand in the Virginia Senate that need our support: HB 1902 to ban plastic and styrofoam carry-out containers (at long last!) and HB 2159 to ban balloon releases. Please email Senator Norment. Thanks!

Donna Ware



Almost gone!

From an initial printing of 2500 copies in 2014, fewer than 20 copies now remain in the BRIT warehouse for purchase through Barnes & Noble and Amazon. Helen has a few copies for special gifts.

Helen Hamilton

The Northern Neck Chapter's Plant of the Month for February 2021: Common Hackberry, *Celtis occidentalis*

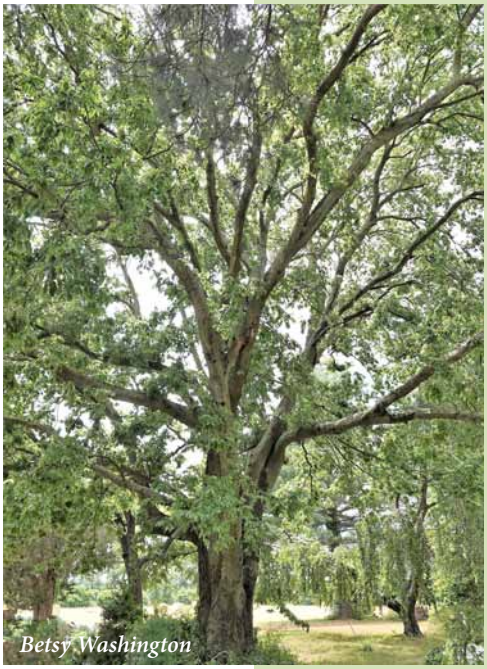
The Common Hackberry is one of our most adaptable native shade trees and is also among the best trees to plant for wildlife. The trunk of hackberries has smooth gray bark covered with distinctive warts, bumps, and corky ridges and is one of its most recognizable features, especially in winter. They have a graceful upright habit with arching limbs and fine-textured, pendulous branch tips, often tinged red in winter. This rugged tree is full of ornamental character sometimes with picturesque twisting branches and small twiggy, tangled growths at the tips of twigs, known as 'witches brooms.'

The 3–4″ long rough-textured leaves alternate along the stems and are oval with fine teeth along the margins, and, like their cousins the elms, taper to

A Hackberry's warty trunk

a long point and have an asymmetrical or lopsided base. They turn a handsome yellow in fall.

The insignificant greenish-yellow flowers bloom in spring with both sexes on the same tree and are wind pollinated. The prolific fruits are small, leathery, pea-sized drupes or "sugar" berries that turn orange-red as they ripen in late summer and fall, then turn a dark purplish-black color and persist through much of the winter. The drupes have a hard leathery covering with a single hard pit, but the flesh is thin, sweet and edible, reminiscent of a raisin. Songbirds relish the fruit and eat the entire drupe, then excrete the hard seeds thereby dispersing them. The sugary berries are especially important food for migrating songbirds in fall and again in spring. Flocks of hungry cedar waxwings, robins and other migrants often descend on Hackberry trees and devour the berries. Residents such as yellow-bellied sapsuckers, wild turkeys, and mockingbirds also depend on the persistent sweet berries when winter food is limited. Squirrels as well as other mammals and even an occasional turtle also rely on the fruit.



A majestic Common Hackberry in summer finery in Westmoreland County

Hackberry's wildlife value does not stop with vertebrates. They are also the host for caterpillars of some of our showiest and most sought-after butterflies including: the adorable Snout, the curious Question Mark and the Comma, the early Mourning Cloak, and the sometimes 'friendly' Tawny and Hackberry Emperors butterflies. These last two are well known to often land on amazed humans, apparently attracted to the minerals in our sweat and on our skin or clothing.

Hackberries are not only beautiful, but extremely adaptable trees. They attain their best growth and are most frequently found in moist bottomlands, floodplain forests, and alluvial, nutrient-rich soils where they grow quickly and achieve their best growth, often reaching 60–80 feet in height. They transplant readily into clay or sandy soils and prefer sunny sites. They are also tough and tolerant of challenging conditions, including both high pH and acidic soils, both drought and short-term flooding, and can also be found on dry rocky ridgetops, on calcareous soils, and in hedgerows along old fields. Tolerant of air pollution and salt spray, they make outstanding urban or street trees. In challenging sites, hackberries are more typically mid-sized trees, reaching only 30–50 feet in height.

Hackberries have no serious pests or diseases although tiny (Eriophid) mites and a fungus often cause 'witches broom', a distinctive tangle of twiggy branchlets at the end of branch tips. These are typically only a superficial blemish, adding character and winter interest to the silhouette. Common Hackberries have been reported to be "allelopathic," releasing chemicals that discourage some

plants from growing under them. A great solution is to simply allow the natural leaf litter and native plants that survive there to make a living groundcover beneath the tree. This has the crucial benefit of allowing the over-wintering butterfly cocoons (chrysalis) and other beneficial wildlife (e.g. insects and amphibians) to safely overwinter in the fallen leaves to delight you again the following year.

While I love these trees, I must add that their abundant fruit, so favored by our feathered friends, can cause a mess when a hackberry is planted over a driveway where your car is parked, as birds excrete the drupes. So, plant your hackberries in a natural area where you can enjoy the parade of wildlife but not have to clean up after them! The fallen berries will still be relished by wildlife.

Common Hackberries will make a splendid addition to your garden as a shade tree, elegant in habit, but tough as nails in constitution. But best of all, Hackberries are superlative wildlife trees, and this is reason enough to plant one in your yard. If you are lucky enough to have an extra sapling in your yard, call me!

Betsy Washington

2021 JCC VNPS Plant Sale—Save the Dates!

2021 is brightening up! Spring is on the way and we are beginning to be vaccinated. Life will be a little lighter in the coming months.

With your help, the JCC VNPS is pleased to offer a Limited Plant Sale again this spring. Despite COVID, we are preparing for a sale. We have collected native plants from members and others in the community, and have ordered native plants to supplement.

Please consider helping out with the Plant Sale this spring. For potting parties and the plant sale, we will continue to use COVID precautions, by inviting members to sign up for time slots and keeping physical distances. **We need your help with digging and potting plants, transporting plants (to and from our sale location), sorting and labeling plants, and setting up and cleaning up on the sale day.**

Saturday, March 27: Potting Party at **Stonehouse School garden**.
Sue Voigt, who coordinates efforts at the garden, will organize digging and potting of plants. Stonehouse School is located just off of Rochambeau on School House Lane.

Saturday, April 3: Potting Party at **Joan and Jim Etchberger's** at **100 Woodland Road, Williamsburg** to pot plants, label, and sort in preparation for the sale.

Saturday, April 24: Limited Plant Sale. **Meegan Wallace and Chuck Deffenbaugh** have offered their front yard at **1212 Country Club Road in Newport News** for the sale. We have tried hard to offer similar plants at both locations. After April 24, leftover plants will be transported to Williamsburg.

Saturday, May 1: Limited Plant Sale at 100 Woodland Road, Williamsburg. The Etchberger's home has many advantages for our plant sale team. Many plants have overwintered there and more plants will be delivered. Stay tuned for more details.

If you have any thoughts or questions about the sale, please contact Adrienne Frank at Adrienne-gary@cox.net.

Thank you from the 2021 Plant Sale Committee,
Adrienne Frank, Cathy Flanagan, Sue Voigt, and Lucile Kossodo

Cathy took these photos during potting parties in 2018:

John Clayton Chapter Calendar

Thursday, March 18	**7:00–9:00 pm: C. Colston Burrell on Zoom: "Obsession and Exploitation: The Cultural History of Trilliums"**	(See Page 1.)
Saturday, March 27	**Potting Party at Stonehouse School Garden**	
Saturday, April 3	**Potting Party at Joan & Jim Etchberger's**	(See Page 10 for details)
Saturday, April 24	**2021 Native Plant Sale at Meegan Wallace & Chuck Deffenbaugh's home**	(See Page 10 for details.)
Saturday, May 1	**2021 Native Plant Sale at Joan & Jim Etchberger's home**	(See Page 10 for details)

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.

Make your check payable to **VNPS** and mail to: VNPS Membership Chair
400 Blandy Farm Lane, Unit 2
Boyce, VA 22610