



Claytonia

Newsletter of the John Clayton Chapter, Virginia Native Plant Society

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Our Zoom meeting at 7 pm on Sept. 16: Sam Droege on “Your Garden Matters: to Wild Bees”



Your garden is already full of native bees, but you may not notice this. The bulk of the 450 wild bee species in Virginia are the size of a grain of rice. And, they act nothing like honey bees (no stings, no allergic reactions, no honey, no hives, most are

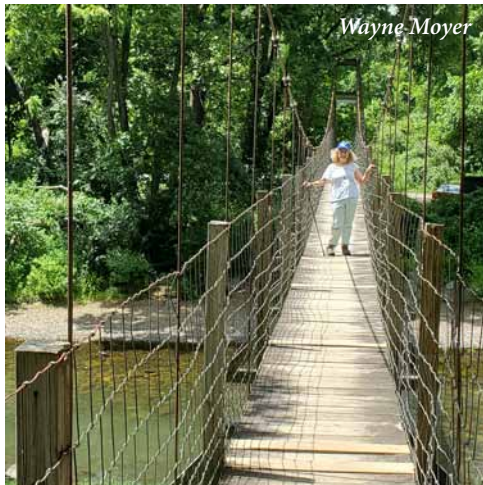
single mom bees producing a handful of young each year). Despite their small size, wild bees need your support. We will talk about how your choices in flowering plants determines how much your garden supports your local wild bees.

Sam Droege grew up in Hyattsville, Maryland, received an undergraduate degree at the University of Maryland and a Master's at the State University of New York–Syracuse. Most of his career has been spent at the USGS Patuxent Wildlife Research Center. He has coordinated the North American Breeding Bird Survey Program, developed the North American Amphibian Monitoring Program, the Bioblitz, Cricket Crawl, and FrogwatchUSA programs, and works on the design and evaluation of monitoring programs. Currently his team is running an inventory and monitoring program for native bees, developing tools and techniques manuals, along with online identification guides for North American bees at www.discoverlife.org, reviving the North American Bird Phenology Program, and producing public domain hi-resolution photographs of bees, insects, and flowers @USGSBIML.



From the President

When the summer began, I had a big urge to go places, so I took a two-day trip to the west of Virginia and to the Shenandoah area of Virginia with friends. The first day we went to The Maury River area in the Goshen Pass Natural Heritage Site in Rockbridge County. It was hot as can be in Williamsburg but we had a lovely picnic next to the river. The air was cool and the river so beautiful.



The Swinging Bridge at Goshen Pass



A view of the Maury River from the bridge

Then we walked on the Swinging Bridge area to cross into the Natural Heritage Site. We walked the lower area to the right of the bridge. We saw a group of rock climbers with their coach practicing on the deep rocks above us. A beautiful area full of green, and growing there were crested iris as if they were a weed. I can imagine how they would look in bloom. After copious drinks of water, we headed to the Shenandoah Valley. We spent the night at the Shenandoah lodge facing a view of the mountains to the west. The next day we hiked the Black Rock trail. It was another beautiful day. We hiked the trail up the mountain area among the trees and ferns. We came to an area where the mountain had collapsed in early times, leaving a legacy of stones going down the mountainside, again with a beautiful, but different view to the west of Shenandoah. As we came down, we passed an area full of blooming Black Cohosh (*Actaea racemosa*). I also saw the big Cow-parsnip (*Heracleum maximum*) on the Shenandoah road.



Wayne Moyer's photo of Lucile ahead of him on the Black Rock Trail



Black Cohosh in bloom



Flowers of Cow Parsnip

The next expedition was the John Clayton Chapter's visit to Cherry Orchard Bog, another Natural Heritage Site. This one is in the Sussex and Prince George area of Virginia. It was a very hot day but the group was full of enthusiasm. I was amazed to learn that one can walk on a bog; the water these plants need is in the soil below us but does not reach our shoes. We walked on native grasses and I saw many amazing plants. (See the article by member Shirley Devan.) Virginia, the more I get to know it, has so many interesting and beautiful places to visit. Take the time to visit our great state.

Speaking of nature, I read an interesting book, *Wilding*, written by Isabella Tree, the wife of Charles Burrell, who had farmed, like his ancestors, a 3,500-acre estate in Sussex, England. 'A passionately personal, robustly argued and uplifting book' . . . one of the landmark ecological books of the decade, Sunday Times 'Books of the Year', it won the 2019 Richard Jefferies prize for nature writing and was one of the Smithsonian's top ten science books for 2018. It was truly an inspiring book in which she tells what happens when you return an intensely farmed land to nature and let nature decide how to proceed. In 2000, the couple were in debt and had to accept that they could not continue to farm the land in the clay soil of Sussex. They invited a specialist to help them figure out how to save their 700-year-old oaks. His answers made them realize that they had to do something very different, so they sold their cattle and their farm machines and decided to take the bold step of letting the farm become "wild" again. They introduced native deer, horses, and pigs into the land and let them roam free with no intrusion of decisions. The experiment did not please their neighbors, owners of well-manicured lands, but they persisted even when the neighbors complained of native plants that to them were weeds. The biodiversity that resulted yielded amazing results they would never have imagined. Previously, birds and butterflies that were disappearing from the countryside, such as Nightingales, Turtledoves, Peregrine falcons, owls, and butterflies such as Purple Emperor, Fritillaries and Painted Ladies, started appearing in large numbers not seen in a long time. The struggles—physical: how to transport a large quantity of wild deer; cultural: how to face the objections of others; financial: how to convince the grant-giving nature organizations to fund a fence around this area to keep the animals inside. Authorities refused some things such as introducing beavers to control the floods. It is something they hope to do in the future. In the end, the property became a success beyond anyone's expectations. The science and philosophy of ecology makes the book very interesting to read. As one reader wrote, "I began to wish that I had a farm I could return to nature." I wished for the same but, at least, I hope someday to be able to visit this park.

In an article in the *Guardian*, "Days of Wine and Olives: How the Old Farming Ways are paying off in Spain", Stephen Burges in Villafranca del Penedes writes that there is a lovely region in southern Spain called Jaén where the landscape is a spectacular view of olive groves as far as the eye can see. In fact, there is an amazing quantity—70 million

olive trees. There is only one problem with this beauty. This landscape is without hardly a flower, a butterfly, or a bird. This dead landscape is about to change because of the amazing success of a project in Andalucía, Spain. In 2016, Spanish scientists made an experiment. Grasses and wild flowers were allowed to grow, bird boxes were placed by the trees, and ponds installed. The result was a huge increase of native plants, birds, and even rabbits. At the same time, growers and scientists discovered that herbicides were killing the insects that eat the larvae of olive fruit flies (*Bactrocera oleae*), one of the main pests of olive trees. As a result, herbicide treatments were stopped. “What we are doing is returning to more traditional ways. Not ploughing between the trees makes for better water retention, less erosion and run-offs after heavy rains”, says Paco Montabes, who farms 650 hectares (1,600 acres) of picual olives in Jaén’s Sierra Mágina. “The vegetal covering makes the ground sponge-like and absorbs the rain.” Why were the growers ready to accept a change? Erosion and the lack of biodiversity combined with a global glut of olive oil pushed prices too low for them to make a profit. Only the bottling plants and the retailers were making money. The growers save money by having no herbicide or pesticide expenses. The olive oil grown this way is ecologically grown and more valuable. At the same time, a similar return to old ways is happening in the vineyard. Miguel Torres, whose family company is using a regenerative approach in the vineyard, says, “Our objective is to stop ploughing. What we try to do is imitate nature as much as possible, which means we have to give life back to the soil.” This approach also means that animals, soil, and produce are part of a single interrelated system. This means that growers need to stop the mindset that regards any plant other than the desired crop as a weed. Oenologist Marta Casas of the Parés Baltà winery uses a solution of horsetail that reduces the need for copper sulfate. Growers spread copper sulfate on vines to treat mildew. Marta Casas says. “The more you give to the soil, the more it gives back in return.” There are echoes of the rewilding efforts in Spain’s agriculture.

Lucile Kossodo

New Members

We welcome new members **Mike Grose** of Hartfield, **Gwen & Walter Harris** of Yorktown, **Andrew Holland** of Williamsburg, **Jennifer Myers** of Williamsburg, **Stephen Plotnick** of Newport News, **Cindy Hall & John Schmerfeld** of Onemo, **Marci & Stephen Shook** of Yorktown, and **Christine Tombleson** of Gloucester to the John Clayton Chapter!

Upcoming Plant Walks...

✿ Saturday, September 18, 9:00 am—Plants with No Flowers

Meet **Helen Hamilton** at the **Freedom Park Interpretive Center** for a walk to see native ferns and tiny plants. Bring a magnifier to see fern sporangia and moss leaves that are only a few millimeters long. The walk begins back of Go Ape, along a stream, and back through upland woods. Park near the playground beyond Go Ape. Contact Helen at 757-564-4494 or helen48@cox.net to register.

✿ Saturday, October 16, 10:00 am—Glorious Goldenrods

Join **Donna Ware** at the **Williamsburg Botanical Garden at Freedom Park**, Williamsburg. Gather by the little bridge and bald cypress trees adjoining the parking lot in Freedom Park that is adjacent to the Park Office Building. We will make a short walk to the Williamsburg Botanical Garden where we will meet and greet most of the goldenrod species native to the coastal plain of Virginia. We will discuss how to recognize them by type of flower arrangement, leaf and stem characteristics, and their habitat preferences. Please register by email at dmeware1001@gmail.com or by text at 757-719-3414.

Recent Walks...

A Walk in Cherry Orchard Bog Natural Area Preserve on July 21st

The opportunity to visit a Virginia Natural Heritage site normally closed to the public and to be hosted by Natural Heritage Chesapeake Bay Region Steward **Zach Bradford**, was just too irresistible. So Cherry Orchard Bog Natural Area Preserve in Sussex and Prince George Counties was our destination July 21, 2021. Adrienne Frank and Gary Driscoll rode with me to this site that does not appear on any nav apps on a phone or car. After two phone calls to Allen Belden, who was already on site with the group, we found our way and arrived “only” 20 minutes late. Thankfully, Zach Bradford and the rest of the group of 11 waited for us before setting off to explore this unique habitat. By then—11:30—the temperature was about 90 degrees, and the humidity was not far behind. The power lines don’t provide much shade, so we upsized our sun protection and marched off into the bog.

Per the web site:

Cherry Orchard Bog Natural Area Preserve features a Coastal Plain Seepage Bog, which is a seepage wetland within Virginia’s coastal plain supporting a variety of plants and natural communities now extremely limited in distribution and number. Seeps occur near heads of streams where a sloping ground surface intersects with an impervious soil layer. Plant communities associated with coastal plain seepage wetlands are strongly influenced by the low pH and nutrient content of groundwater, and light conditions.



Zach Bradford

This diverse wetland community would historically have been maintained by frequent fires that prevented long-term domination by woody plants. Even with the last century of fire exclusion, Cherry Orchard Bog persists due to a major power-line right-of-way running through the wetland. Right-of-way maintenance provided ample woody vegetation control which, along with a steady flow of acidic nutrient-poor groundwater, has sustained the bog's shade-intolerant herbaceous flora in the absence of fire. Pre-settlement, this site would have experienced frequent fires that kept trees, shrubs, and woody vines at bay.

The VA Department of Conservation and Recreation and the Virginia Natural Heritage staff have managed the site with prescribed fire since 2000 to expand and maintain habitat for rare, fire-dependent plants. In 2014, DCR began longleaf pine restoration work at Cherry Orchard Bog Preserve. To date, about 50 acres of former industrial loblolly pine plantations surrounding the seepage wetland have been restored to young longleaf pine communities using a combination of tree removal, prescribed burning, and planting with containerized, northern range “native” longleaf pine seedlings grown from seeds collected at DCR's South Quay Sandhills Natural Area Preserve.

Per Zach:

DCR last burned this site in March 2020, just before the Covid pandemic shut everything down. Just 15 short months later, the area looks fresh and new with impressive stands of the rare plants we were looking for.

Right away Zach led us to the Sandhills Bog Lily, *Lilium pyrophilum*—a rare lily whose name is up for debate and which was a target species for many of us on the trip.

Thanks to Zach, we enjoyed lengthy looks at these habitat specialists and bounteous photo opportunities:



White-fringed Orchid,
Platanthera blephariglottis



Bog-Button, *Lachnocaulon anceps*



Pink Sundew, *Drosera capillaris*,
a carnivorous plant



The lovely bloom of a
Sandhills Bog Lily



Large Death-camas, or Sand Bay
Death-camas, *Zigadenus glaberrimus*

Zach also pointed out Small's Goldenrod, *Solidago pinatorum*; Kidney-leaf Rosin Weed, *Silphium compositum*; Spurge-nettle, *Cnidoscolus stimulosus*; Vervain Thoroughwort, *Eupatorium pilosum*; Rafinesque's Seedbox, *Ludwigia hirtella*; and Southern Bog Goldenrod, *Solidago stricta*—a goldenrod that will bloom in September/October. In the Flora of Virginia, almost all these plants are described as: "Infrequent in the s. Coastal Plain, south of the James River."

As we headed to our cars, Allen Belden, formerly of the Virginia Natural Heritage Program and a naturalist extraordinaire, showed several interested folks an unusual beetle. According to Allen, "it's *Epicauta atrata*. Neither Art Evans' Book, *Beetles of Eastern North America*, nor BugGuide give a common name. It's one of the blister beetles (family Meloidae)—a group that, other than a couple of common species, I don't see often. It's not rare ... just new to me!" And interesting to the rest of us. Thanks, Allen!

NOTE: From Art Evans' book, *Beetles of Eastern North America*, page 365, "[Blister beetles'] blood and soft tissues contain cantharidin, a caustic chemical released through leg joints that irritates and blisters sensitive tissues and deters predators."

By 1:00 pm we were drenched and parched at the same time. We took off in our air-conditioned vehicles thankful for a memorable morning and the good work that our state agency, DCR's Virginia Natural Heritage Program, does to protect and maintain this rare habitat. Thank you, Zach, for an engaging, knowledgeable, and memorable tour.



Three blister beetles visit a Wild Sweet Potato (*Ipomoea pandurata*) flower.



A group photo—from left, Meaghan Godwin, Shirley Devan, Helen Hamilton, Seig Kopinitz, Alice Kopinitz, John Bunch, Lucile Kossodo, Adrienne Frank, Wayne Moyer, Gary Driscoll, Allen Belden

Article and photos: Shirley Devan

July 24th's Freedom Park Orchid Hike

Ninety-degree weather did not discourage a group led by **Donna Ware**, PhD, from exploring the ravines and stream banks of Freedom Park searching for orchids on Saturday, July 24. Even before the group descended into the ravine, Dr. Ware pointed out a Green Adder's-mouth Orchid (*Malaxis unifolia*) along a berm near the paved path. This species is a small, single-leaved orchid that has recently finished blooming. As the group made its way down the ravine, they searched for the Lily-leaved Twayblade (*Liparis liliifolia*), which also bloomed earlier in the season. Dr. Ware found a few specimens of the low-growing, wide-leaved orchid along the way. In addition to the orchids, the group enjoyed investigating the ferns, mosses, and fungi that were plentiful on the forest floor because of recent rainfall.



"Come look at this!"



Green Rein Orchid

Once at the bottom, Green Rein Orchids (*Platanthera clavellata*), also known as Small Green Wood Orchids, grew at the ridge along the stream bank. These orchids had a much narrower leaf than the other orchids and tiny, white flowers on a stem.



Judy Kinshaw-Ellis, Claudia Kirk, and Gary Driscoll walk in the creek bed.

As the group splashed along the creek bed, Dr. Ware pointed out two poisonous plants: Blue Monkshood (*Aconitum uncinatum*), a member of the buttercup family; and Spotted Water Hemlock (*Cicuta maculata*). Spotted Water Hemlock, native to North America, is a close relative of Poison Hemlock (*Conium maculatum*), believed to have been the plant that killed Socrates.

Among the last orchids the group viewed in the boggy soil near the creek were Shadow Witch Orchids (*Ponthieva racemosa*), a fall-blooming species. One patch was so extensive and dense that Dr. Ware called it a "*Ponthieva* pavement".

The group made its way through the woods and back to the paved path, where they found a Crane-fly Orchid (*Tipularia discolor*) ready to bloom. The Crane-fly Orchid blooms in the summer and its distinctive leaves that are spotted on top and purple underneath emerge in the fall and persist through the winter.

Time allowed for a short detour to see a patch of Crested Orange Bog Orchids (*Platanthera cristata*), a delightful and infrequently encountered orchid at the peak of its bloom. It, too, is a narrow-leaved orchid and grows to about 18 inches tall.



Left, Crested Orange Bog Orchid;
below, a closeup of its flowers



This was the second orchid walk this season for the John Clayton Chapter, and the 2½-hour foray explored areas of Freedom Park that many of the group members had not seen. The fall blooming orchids are growing in a large colony and should provide a lovely show in the months to come.

Judy Kinshaw-Ellis



Most of the Freedom Park walkers;
the group included Gary Driscoll, Adrienne Frank, Betsy Washington, Donna Ware, Claudia Kirk, Judy Kinshaw-Ellis, Shirley Devan, Kevin Howe, and Helen Hamilton.

Freedom Park Mosses, Ferns, and Worts with Helen Hamilton on August 21st

The threat of rain held off, and about a dozen stalwart citizens headed into the woods of Freedom Park behind **Helen Hamilton** to examine a few of the many moss, fern, and wort species that live in the park. A fairly wet summer has kept the plants thriving.

For the average person, moss is just moss, but a closer examination with a loupe or even the naked eye shows the differences in these beautiful, but tiny, plants that people pass by each day and barely notice. Before the group left the parking lot, Helen pointed out both cushion (*Leucobryum albidum*) and fern (*Thuidium delicatulum*) mosses. Cushion mosses are the beautiful, mounded mosses that we often see



Above, Cushion Moss, and below, Fern Moss



around the base of a tree; the water that runs down trees when it rains makes a good environment for them to grow and reproduce. The fern moss had delicate leaves that look like ferns.

A third moss, Slender Starburst (*Atrichum angustatum*), was also growing nearby. It has small leaves that look like tiny pine branches (or starbursts).

As we started the trek into the woods, Helen noted that mosses are more likely to grow on hardwood trees than pines, while the green you see on pines is often lichens. In addition to growing on trees, moss grows on most surfaces where it is shady and damp. It reproduces by spores which are carried by wind and water.

Many of the trees that have fallen in the woods look as if they are covered in moss. The group learned that the tiny green plants covering the downed trees are liverworts (*Marchantiophyta*), which thrive once the tree has lost its bark (decorticated). Several species of liverwort are native to the park, but identification is difficult in the field. They, too, are spore-producing plants.



Helen explains how rain running down trees helps moss species reproduce at the base of trees.



Liverworts on a fallen tree trunk

As the group got closer to the ravine that runs through that area, they were treated to a site of abundant Christmas Ferns (*Polystichum acrostichoides*) and a few Ebony Spleenwort (*Asplenium platyneuron*). Christmas Ferns, the group learned, are green throughout the year. The leaf-lets look like a tiny Christmas stocking. On the Christmas Fern, the group was able to see the spores formed on the back of the leaves and learned about the life cycle of the ferns. Ebony Spleenwort is very small—its leaves are about as wide as a finger.



Ebony Spleenwort



Christmas Ferns as far as the eye can see!

Because of the wet summer, there were abundant fungi along the path as well. They were not the topic of the walk, but the group enjoyed seeing them and noting the different species.



John Hayden has tentatively identified this fungus as *Phellodon niger* (Black Tooth).



A group photo, left to right: Pat Daley, Karen Hines, Sherry Brubaker, Judy Kinshaw-Ellis, Susan Zickel, Maryann Teed, Camille Fisher, Ann Streb, Stacy DeMeo, Libbey Oliver, Helen Hamilton, Susan Neidlinger, Carol Fryer
(Photo by Ned Neidlinger with Judy's camera)

Article and photos: Judy Kinshaw-Ellis

From Out in Left Field...



Joe Pye's Big Brother

A few weeks ago, we were driving in the mountains of West Virginia to go hiking in the Spruce Knob Wilderness. It's kind of...in the middle of nowhere. Perfect place to hike.

On the 30+ mile drive along the paved(!) road from Harman to the Laurel Fork campground, we saw no buildings, no people, no cars. Then, along the roadside, there it was...gigantic Joe Pye Weed! We'd seen it before in the area, but I didn't have a good photo of it. I leapt out of the car and got Mac to take a shot of me. I had to scramble a bit up the slope to get even with it, and we were, once again, floored (or ceilinged?) by its height!

So, now that I had the photo I needed to PROVE how big it is, I had to identify it. We were at about 3400 feet above sea level. At that altitude, this kind of surprise (like the big Appalachian Tiger Swallowtail, or "Appy") pops up in front of you every now and then.

The best match I found online is *Eutrochium fistulosum*, aka "Hollow Joe Pye Weed." Jim Vanderhorst, a Vegetation Ecologist with the W.Va DNR's Natural Heritage Program, chimed in: "I think that picture is *Eutrochium fistulosum*, which is usually our tallest joe pye."

I also found, online, that it supposedly grows 4 to 7 feet tall. The one in that photo looks a bit bigger, right? I'm, for a reference point, 5'3" or so. Donna Ford-Werntz, Herbarium Curator at the University of West Virginia, did say this:

"Kathi, WV has 4 Joe Pye species; all grow variably tall (thus dwarf cultivars sold for gardens). In my yard, height varies from year to year, but has increased with age (unless deer predation). I am not aware of any official nomenclature distinction for larger/taller plants (great picture!)."

I also found a posting on the USWildflowers web site, which said that the stems are smooth and glaucous purple, and leaves in whorls of 4–7.

So, my preliminary judgement is that it is a particularly tall Hollow Joe Pye Weed. I just offered, on the USWildflowers web site, to send them my photo, and am waiting for a reply.



Joe Pye on steroids!

Kathi Mestayer

John Clayton Chapter Calendar

Thursday, September 16 **7:00 pm: Our September Zoom Meeting**
Sam Droege will speak on **"Your Garden Matters to Wild Bees."** (See Page 1.)

Saturday, September 18 **9:00 am: Plants with No Flowers**
Join **Helen Hamilton** for a walk around **Freedom Park Interpretive Center** to see native ferns and tiny plants. (See Page 4.)

Saturday, October 16 **10:00 am: Glorious Goldenrods**
Join **Donna Ware** at the **Williamsburg Botanical Garden at Freedom Park** to meet and greet most of the goldenrod species native to the coastal plain of Virginia. (See Page 5.)

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.

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