Sempervirens

September 2020 | The Quarterly of the Virginia Native Plant Society

Chris Ludwig's virtual tour of the state's Natural Area Preserves will include visits to Savage Neck Dunes, above, and The Channels. Photos by Gary Fleming.

Annual Meeting goes virtual on Sept. 25

This year we will gather virtually for our annual meeting so you can participate from the comfort of your own home. We will begin with a half hour business meeting where you will meet and vote on members for the board of directors, adopt the annual budget, and hear about the state of the organization. We will send you an official notice by email to register and follow up with reminders.

The VNPS is pleased to have Chris Ludwig as our keynote speaker. For 32 years, Chris explored the flora of Virginia. During his explorations, he documented more than 1,000 rare plant populations and discovered or co-discovered 20 new plant species previously undocumented from the Commonwealth, two of which are new to science. Much of this work took place when Chris worked for the Virginia Natural Heritage Program within the Department of Conservation and Recreation. There he served as Staff Botanist from 1988 to 1996 and Chief Biologist from 1997 until his 2019 retirement.

In 2000, Chris joined Marion Lobstein and Joslin Gallatin to form the Foundation of the Flora of Virginia Project and he worked over the next 12 years to produce the *Flora of Virginia*, a 1,554-page illustrated manual that describes Virginia's vascular plants with details on their taxonomy, morphology, ecology, biological status, and identification. Chris co-authored this work with Alan Weakley and Johnny Townsend. The volume was converted into the Flora of Virginia app that is available on Android and IOS. The app enhances the original work with a graphic key that enables identification by less experienced naturalists. A major update is scheduled in December of 2020.

As most folks interested in the conservation of our native plants and animals know, Virginia has a vibrant system of Natural Area Preserves scattered throughout the Commonwealth from the far reaches of western Virginia all the way to the Eastern Shore. The beauty of these Preserves is that they were protected for their biodiversity by the Virginia Natural Heritage Program and they make up some of the most important protected conservation lands in Virginia.

Further, many of these sites are open to the public and some of our best native plant displays can be found within them. Chris's presentation will provide a virtual tour of the Natural Area Preserve system. It is set up to take us to the preserves during prime viewing time. Along with the botanical highlights, we will learn about other special features such as the outstanding forest of the Crows Nest Natural Area Preserve, the rolling sand dunes of Savage Neck Dunes Natural Area Preserve, the labyrinthian rock formations of The Channels Natural Area Preserve, and the all-but-lost longleaf pine forest being brought back in the Natural Area Preserves of southeastern Virginia.

Look for registration information in your email box. With no travel required, we hope to have record participation for this year's annual meeting. ❖

Native Plant excitement still running high

From the President, Nancy Vehrs

Greetings, everyone! Covid continues to be a menacing presence in our lives, but I hope that you all are well and can find solace in nature. This year I attained the magical age of 62, entitling me to my very own America the Beautiful Lifetime Senior Pass. I had hoped to buy one for myself on my actual birthday, but I had to wait a few months as national park facilities closed for the pandemic. Shenandoah National Park reopened, and I bought myself the coveted "geezer pass," as I affectionately call it. For just $80 this pass "provides entrance or access to pass owner and accompanying passengers in a single, private, non-commercial vehicle at Federal operated recreation sites across the country." I've been to SNP a few times this summer and its refreshingly cool mountain air and vivid wildflowers and butterflies restore the tired soul. We are so fortunate to have such a mountain oasis in our Commonwealth. I hope to continue to take advantage of my pass in the months and years to come.

As you can imagine, the VNPS board decided that this year's annual meeting will be held virtually through Zoom. We will conduct our usual brief business meeting where we hear a few reports and take a vote to consider a change to our bylaws to formalize virtual meetings, elect members to our board of directors, and accept the budget. This will be followed by a presentation by Chris Ludwig, a co-author of the *Flora of Virginia* and formerly on the staff of Virginia's Natural Heritage Program. He will take us virtually around our Commonwealth to visit some of our most precious ecological treasures. While we may not have a chance to renew our friendships through a virtual meeting, we can share a common presentation that has a chance to be our highest attended meeting ever. Virtual meetings allow everyone with internet access the opportunity to participate from afar.

We will present some new members for the board of directors. Emily Ford is completing her

Many people are finding added solace this year during the pandemic by visiting outdoor spaces across the Commonwealth. One of those places is Shenandoah National Park, seen here offering natural views both close-up, like this Tiger Swallowtail on Wild Bergamot (*Monarda fistulosa*), and farther away as seen by the mountains in the distance. Photo by Nancy Vehrs.

Joey Thompson

term as Education Chair on the board, and Joey Thompson was nominated to succeed her. Thank you, Emily, for your service to VNPS! Joey is a Richmond native and a life-long nature lover. He began studying botany and floristics at the College of William & Mary, and he went on to study barrier island shrub ecology for his master's at Virginia Commonwealth University. Now, Joey works as an environmental scientist for an engineering firm called VHB. At VHB, Joey conducts full floristic inventories and surveys for rare, threatened, and endangered plant species. He also surveys for a variety of other natural resources such as wetland and streams. In his three years at VHB, Joey has conducted floristic inventories in 10 states from Vermont to Florida. Joey also has a love for teaching others about plants. He teaches an introduction to botany course at Lewis Ginter Botanical Garden and leads plant walks for a variety of audiences including the VNPS, VCU classes, the Richmond Garden Club, local high schools, and the Richmond Invasive Plant Task Force. Joey has an awe and fascination for wild plants that he wants to share with everyone. When he is not spending his spare time with friends and family, he is out searching for new sites to botanize and collecting specimens to identify at home.

We are pleased to announce that Kathleen O'Shea has volunteered for the vacant Membership Chair. Kathleen began her career as an archaeologist, which required an understanding of indigenous and anthropogenic plants in the interpretation of landscapes. Her fascination initially focused on edible and medicinal plants, but eventually she discovered the value of flora she could not eat. She was immersed in the world of native plants during her five-plus years working at Huntley Meadows Park, a Fairfax County nature preserve in Alexandria. Her professional experience includes managing park operations, coordinating volunteers, marketing, and public outreach. Of course, she is also very skilled in the use of a wide variety of digging tools. Kathleen was raised in Burke in Northern Virginia and is an alumna of James Madison University. She and her husband live with their two young sons in the Richmond area. She believes in the mission of the VNPS and will focus her efforts on assisting local chapters engage and retain members through outreach and partnerships.

The board of directors appointed Ashley Moulton as Publicity Chair at its quarterly meeting in June. This was a temporary appointment until the next election so she will be on the ballot for the remainder of the term. She initiated our Instagram page and was profiled in the spring issue of *Sempervirens*.

Kathleen O'Shea

I hope that many of you will tune in to our annual meeting on September 25. Remember, the organization is only as strong as its members. ❖

VIRGINIA NATIVE PLANT SOCIETY

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Next submission deadline: Oct. 31, 2020

Quarry Gardens
New Society Registry Site in Nelson County

Article and photos by Charles Smith, Co-Registry Chair

The Virginia Native Plant Society is happy to announce the designation of the Quarry Gardens at Schuyler as our newest Registry Site. The VNPS Registry Program is intended to work with property owners to protect and promote the preservation of and education about Virginia's floristic heritage. The Quarry Gardens at Schuyler is a unique place, seeking to preserve rare plants and communities and the animal species they support, highlight unique geology and human history, restore disturbed lands, introduce native plants species endemic to within 15 miles of the site, and welcome the public in to appreciate and learn from its rich assemblage of biota and the landscape.

The rock walls of the former soapstone quarry are reflected in the water that fills the former mining pit at the Quarry Gardens at Schuyler.

The Quarry Gardens at Schuyler, located in northern Nelson County southwest of Charlottesville, were created through the vision and passion of owners Bernice and Armand Thieblot. Bernice and Armand purchased 600 acres of land that includes former soapstone quarries in 1991. They were inspired to create a conservation site and public garden after visiting the Butchart Gardens in Vancouver, British Columbia, in 2013, which has a portion of the botanic gardens within an old quarry. Bernice and Armand envisioned a site focused on native plant species.

The Thieblots' first step was to understand better what was on the property. They enlisted the services of Devin Floyd of the Center for Urban Habitats in Charlottesville to conduct surveys and develop designs for the gardens as well as restoration and management plans for the remaining natural communities on site.

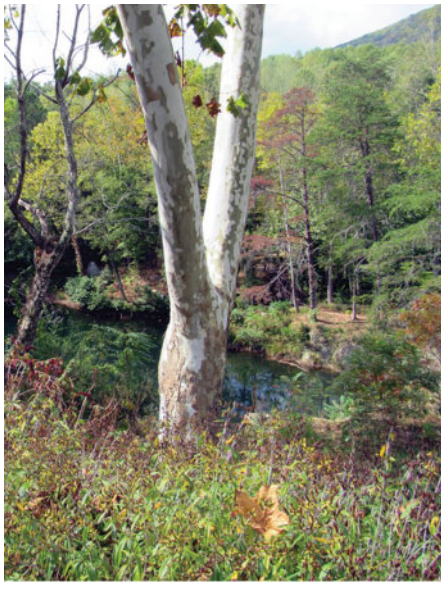
In 2015, the Thieblots placed a conservation easement on a 400-acre buffer around the gardens. A 40-acre area centered on the old quarry pits became the focal point for the gardens and preserved natural plant communities.

The Quarry Gardens opened in the spring of 2017. The gardens are

The visitor center at the Quarry Gardens at Schuyler.

designed on ecosystem modeling principles, taking advantage of the unique characteristics of 14 ecozones and 7 conservation areas. Two miles of trails take visitors through more than 30 designed galleries of local native plant communities, including many plants propagated from the site. The visitor center offers exhibits on native plants, local ecosystems, and the history of the soapstone industry in Schuyler. It also has a classroom where visitors can watch a short film orienting them to the site's resources. A picnic pavilion was completed near the visitor center earlier this year.

Schuyler is the number one source of soapstone, or talc-rich steatite in the world. Soapstone quarrying began there in the 1890s. Quarrying operations on the Thieblots' property took place between the 1950s and 1970s. The quarry pits dominate the setting with 45-foot vertical walls surrounding 45-foot deep pools of water covering the lower half of five of six former quarry pits. The sixth former pit lies between the two ponded areas and was filled with overburden and rejected soapstone rubble.



There are 10 vegetative communities and two geologic formations at the gardens.

A hiker checks out a trail along the quarry edge. There are two miles of trails at the gardens.

Conservation efforts at the site include 10 vegetative communities on two geologic formations. Particular focus is on rare community types including Southern Piedmont Hardpan Forest (Global/State Ranks: G2G3/S2), Piedmont Ultramafic Woodland x Southern Piedmont Hardpan Forest (Global/State Ranks: G2/S1Q) and Southern Piedmont Ultramafic Barren (Ruderal) (Global/State Ranks: G1/S1). Restoration of Piedmont Ultramafic Prairie/ Savanna is also underway.

Conservation activities include invasive and non-native species control, hunting, and the construction of exclosures to limit browse damage by whitetail deer. In March 2020, prescribed fire was used for the first time to promote plant community health by reducing fuel loads, limiting overabundant or non-native species and encouraging regeneration and vigor for fire-adapted native species. Research at the site also includes beds dedicated to the development of native lawns for growing and hardiness zone 7.

Surveys of site biota have revealed 950 species of which 650 are plant species, 48 of which are firsts for Nelson County including blue curls (*Trichostema dichotomum*) and whorled milkweed (*Asclepias verticillata*). Inventory efforts have been conducted by staff from the Center for Urban Habitats along with a large number of volunteers ranging from teens to seniors. In addition, Master Gardeners from Nelson and Albemarle counties regularly assist with garden maintenance.

The Quarry Gardens at Schuyler are open by appointment only. For more information, visit the website at https://quarrygardensatschuyler.org/ . There you can also find photos, maps, news about the site, and a complete description of the plant communities. The website also contains a link to a May 2020 episode of Virginia Home Grown (VHG) where Armand and Bernice describe the history, creation, design, and flora of the gardens. ❖

Understanding Gynodioecy in Wild Geranium

Article by W. John Hayden, Botany Chair

I can remember a botany class field trip from way back in my undergraduate days. It was early fall and we were standing in a field with abundant Evening Primroses, mostly in fruit, but some bearing their last flowers of the season. The professor plucked one of the fruiting stems and was expounding on the morphology of *Oenothera biennis* when, in mid-sentence, he suddenly paused, pulled out his hand lens, and studied the plant closely for a few moments in silence. Then, tossing the troublesome plant over his shoulder, he abruptly pronounced that plant to be, "A mistake of the Lord," and he resumed his discourse with another, more typical, example of the species. The point my professor could have made is that a certain degree of variability is characteristic of every species. But at that moment, his intent was to describe typical morphology for Evening Primrose, and from that perspective, the one oddball plant in the population could be dismissed as not particularly significant. Because nature is complicated, it is only human to seek out and focus attention on what is common and consistent; doing so helps us make sense of the world in which we live.

Most Wild Geranium plants produce flowers that contain both anthers and ovaries, i.e., their flowers make pollen and ovules. Careful study reveals that some plants make no pollen, but their flowers can make viable seeds if cross pollinated. The reproductive biology of Wild Geranium is thus a classic example of the phenomenon of gynodioecy. Photo by Nancy Sorrells.

But to ignore variability completely is to dismiss fundamental aspects of biology. Variability, for example, is one of the cornerstones of evolutionary theory. And sometimes, variability is a fundamental aspect of how populations of living things function. Flower structure and breeding system of the VNPS wildflower of the year, *Geranium maculatum* (Wild Geranium) provides an instructive example.

Linnaeus named *Geranium maculatum* in his *Species Plantarum*, published in 1753; in that monumental work he classified this and several additional species in class Decandria, because Geraniums typically have 10 stamens per flower. For almost two and a half centuries, the 10 stamen count for *Geranium maculatum* was reaffirmed in essentially all subsequent publications . . . until a paper published in 1991.

Agren and Willson (1991) studied eight populations of *Geranium maculatum* from Illinois very carefully during the flowering season, plant by plant, flower by flower, and day after day. What they discovered is that in seven of the eight populations, some plants never produced any fully functional stamens at all and, further, that other plants made something less than the full complement of 10 stamens. These botanists had discovered that the breeding system of *Geranium maculatum* is an example of what is known, in technical terms, as gynodioecy, i.e., that this species is variable in sex expression, some individuals being strictly pistillate while most are bisexual. Gynodioecy is the long-overlooked aspect of Wild Geranium autecology that I alluded to at the close of my previous article in this year's Wildflower of the Year series (Hayden 2020).

Why was the presence of strictly pistillate individuals in *Geranium maculatum* overlooked for so long? Part of the explanation, I am sure, is that pistillate individuals are minority constituents of Wild Geranium populations. Agren and Willson's data reveal pistillate plants at rates of 0.5% to 24.3% of the total. And it is not hard to imagine that any other sharp-eyed botanist who may have noticed stamens absent or withered, would be quick to assume that these were late anthesis flowers, having (hypothetically) shed their pollen during the previous day or two. It was probably all too easy to explain away oddly variant strictly pistillate flowers. But failure to recognize the existence of pistillate individuals makes incomplete any attempt to

understand essential aspects of reproductive biology of Wild Geranium.

In a gynodioecious reproductive system, females can transmit genes to the next generation only through ovules, but bisexual individuals can do so through both pollen and ovules. If all other factors are equal, one might hypothesize that females are at a genetic disadvantage relative to bisexual individuals in contributing to the genetic makeup of each successive generation. Thus, it has been proposed that, for gynodioecious reproductive systems to persist through time, some aspect of the female-only condition must confer a compensating advantage. In other words, all other factors in the reproductive processes of females and bisexuals must not be equal. Considerations such as these are the inspiration and motivation underlying both theoretical ("armchair") and empirical (field-based) studies of gynodioecious reproductive systems in plants. I will not delve into the theoretical studies; those readers of *Sempervirens* with a burning desire to brush up on their college calculus might find the literature on gynodioecy a good venue to do so. What follows summarizes a few empirical studies that have been published on the gynodioecious breeding system of *Geranium maculatum*.

Agren and Willson (1991) found that pistillate and bisexual plants did not differ in size of vegetative portions of the plant, whole plant survival over the two-year time course of their study, flower number, frequency of flowering, nor seed size. However, petals of pistillate flowers are slightly smaller, on average, than petals of bisexual flowers. Further, pistillate individuals begin flowering somewhat earlier than bisexual plants and pistillate plants produce 1.6 times as many seeds as bisexual plants. Willson et al. (1979) had shown previously that cross pollination is more effective in producing viable seeds than self-pollination in Wild Geranium. Pistillate flowers of Wild Geranium cannot self-pollinate; when pistillate flowers do form seeds, those flowers received pollen from bisexual flowers, i.e., those seeds form by cross-pollination. The known advantage of cross-pollination in producing viable seeds for Wild Geranium may well be one compensating factor for pistillate plants that offsets the limitation inherent in passing genes to the next generation only through ovules.

Chang (2006) took Agren and Willson's (1991) study a little further, finding that seeds of pistillate plants were somewhat larger than those from bisexual plants, and that, further, these slightly larger seeds were more likely to germinate, and tended to produce seedlings with greater biomass when compared to seeds from bisexual plants. However, as is the way of science, Chang's results did not stand up to subsequent study. Van Etten et al. (2008) grew bisexual and pistillate plants in carefully controlled conditions and found no differences between the two in terms of seed size, seed mass, and fruit set; they also found no differences in terms of photosynthetic rate nor water use efficiency. But Van Etten et al. (2008) did find more flowers and more fruits on pistillate plants than on bisexual plants.

For Wild Geranium, the conclusion that seems best supported by the available evidence, is that, pistillate plants simply make more flowers than bisexual plants and, when pollinated, those flowers are always the result of cross pollination, resulting in more fruits and more seeds per plant than found on bisexual plants. This combination of producing more flowers and eliminating less effective self-pollination appears to compensate for the inability of pistillate individuals to pass genes to the next generation via pollen.

I still marvel that Wild Geranium, a showy plant common in the woodlands and waysides of eastern North America, a species included in all the popular wildflower books of the region, a denizen of one of the botanically best known regions of the world, was not recognized to be gynodioecious until some 30 years ago. Certainly, human nature played a hand; we expect regularity, we expect conformity in nature, we tend to dismiss odd specimens and toss them, literally or figuratively, behind us. When observing Wild Geranium flowers with malformed or shriveled anthers, how many people, lay persons and professional botanists alike, over the span of more than two centuries, simply dismissed the evidence as a meaningless aberration, not ever imagining the window into this species' biology that such plants could have unlocked? ❖

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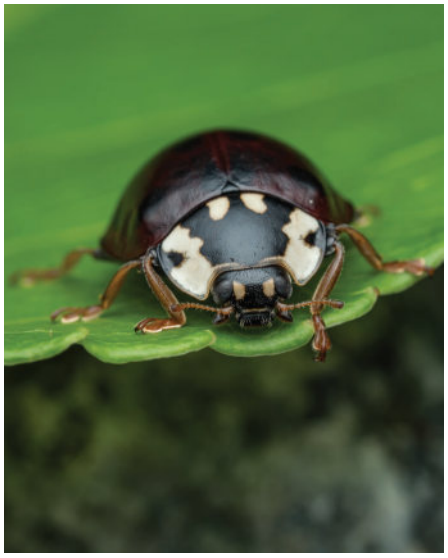
Tips & Tricks for better macro photographs

Article and photos by Lou Staunton and Jeremy Squire

A simple composition with an uncluttered background and foreground shows off the bright colors of this Locust Borer Beetle on yarrow (*Achillea millefolium*). Photo by Jeremy Squire.

While we primarily photograph the insects and other small critters found on native plants, we also take close-up photographs of the plants themselves, fungi, slime molds, salamanders, and other small subjects. If you want to get better close-up or macro photos, here are some tips that may help.



A native 15-Spotted Lady Beetle peers over the edge of a leaf. This photograph was taken in direct sun, and Jeremy used his body to create shade to avoid over-exposed, blown-out highlights. Photo by Jeremy Squire.

FRAMING YOUR SHOT

Before you take a photograph, we recommend that you look carefully at your subject and try to visualize the photo you want. In our experience, slowing down almost always leads to better results. Think about the following as you do this:

What parts of the plant do you want in the photograph?

From what angle do you want to take your photograph? Directly above? From the side? From slightly below?

Which angle will provide a complete view—or provide a view of the subject as you want others to see it?

The most straightforward shot may not be the most effective. For example, photographing *Claytonia virginica* from above will show off the beautiful flowers and leaves. But if you place your camera on the ground and use your articulated screen (or lie down and use the viewfinder or take advantage of a well-positioned plant on a bank) and photograph it from the side or slightly below, you'll capture an angle that's potentially more engaging.

The plant is the star of the show. Is there anything in the background or foreground that will distract from the star? For example, is there a blade of grass in the foreground that will create a weird blur across the bottom of the photo? Or, is there a leaf in the background that will be a distracting bright blob in your final photo? The human eye is drawn to bright spots, so try to avoid any in your photo that detract from the subject. Consider temporarily removing dead leaves or bending twigs or grass so they're excluded from your final photo.

As the star of the show, you'll typically want the subject to dominate the picture. There are two easy ways to do this. You can move your f-stop to a low number (thereby opening your aperture), which leaves the subject sharply in focus and the background softly out of focus. Or, you can position yourself so the subject stands alone against a neutral background such as the sky or a distant tree. Some photographers prop a piece of colored board behind their subject. Preferably, this background will be out of focus and not draw the viewer's attention. A shot that isolates the subject is usually more attractive and engaging than a jumble of leaves and twigs requiring the viewer to hunt for the subject of the photo.

LIGHT

The middle of a sunny day is about the worst time for photography—but that also happens to be when many flowers are fully open, and pollinators are busy. Direct sunlight is harsh, and you are more likely to end up with blown-out highlights (areas where no color or detail shows) and deep shadows. Both conditions obscure detail. We recommend shooting in the late afternoon or early morning, but there are a couple of tricks if you need to photograph in the bright sun. The first is to bring an umbrella—the larger, the better—and use it to shade your subject. A second trick is to position yourself (or a friend) to cast shade on your subject.

TRIPODS AND THEIR ALTERNATIVES

The reason for using a tripod is that you can use a small aperture (large f-stop

Magnifying filters, such as a Raynox DCR-250 may help capture detail on small subjects like this 10 millimeter Tortricidia genus Slug Moth caterpillar found on an oak leaf. Available for under $70, it attaches to the front of most camera lenses via an adaptor. Photo by Lou Staunton.

number) so that you can increase the depth of field on a close-up shot. But if, for example, you use f/16 in relatively poor light, your shutter speed may then need to drop to the point that you cannot handhold the camera without blurring the shot. And you don't want to increase the ISO and risk introducing noise.

But tripods are annoying contraptions, and we prefer a workaround that helps us become the tripod and provide a stable platform for our camera. A collapsible camping stool or step stool, knee pads or elbow pads, or a gardener's kneeling pad all allow you to get comfortable, brace your camera against your body, and reduce movement. This allows you to use a lower shutter speed and still obtain a sharp photograph.

FLASH

Using flash is yet another alternative that can help reduce blur and help avoid the need for a tripod. Most modern cameras have a flash compensation feature that allows you to increase or decrease your flash power to do away with over- or under-exposure. If you feel you're getting too much light using flash, try taking a step back from your subject to naturally diffuse and decrease the light reaching your subject. Experiment to see what provides the best result and remember you can crop the photo a little if you've stepped back from the subject.

COLOR

We've all looked at our photos and had an "Uh-oh" moment where we realize the color of the final image is not how we remember our subject. If you save your photos as JPG files, here's an important step.

Flash helps even out the lighting on this *Helianthus* and its Juniper Stink Bug and helps capture their detail. Lou sat on a folding step stool and steadied her elbows on her knees—forming a human tripod—to get this shot. Photo by Lou Staunton.

Cameras made by Nikon, Canon, Sony, and the other major brands render color differently. If you use the camera's default settings, the overall look of your photographs will reflect the manufacture's idea of how most people want their photos to appear, which may not work as well for nature photography as it does for photographs of birthday parties. Luckily for us, there are usually several color "presets" in our settings. The names vary by manufacturer, but typically they use terms such as "neutral," "vivid," "bright," "intense," "natural," or "warm." These presets can make a massive difference to the overall colors in your final picture.

We recommend that you take a few minutes to do the following: On a bright but overcast day, set up a simple flower arrangement outdoors. Include flowers of different colors and a green leaf. You are going to take one photo of the arrangement from the same angle using each of your camera's presets. Get some bits of paper or sticky notes and write the names of each preset on each piece. Put the note on the flowers when you take each photo. Be sure to use the same exposure (f-stop, ISO, and speed) on each photo.

When you load the images to your computer, you may be surprised! Choose the preset that renders the color in the way you want to see it and use that preset for taking your native plant pictures.

We recommend doing the same experiment with any white balance settings on your camera as they affect color greatly, too. In many cases, though, using the camera's auto setting for white balance works very well.

If you photograph using RAW and process your photographs on your computer, you'll already know that you have a variety of post-processing options and that you can adjust color and white balance using software.

EXPERIMENTATION

One of the most important tips we can pass along is to experiment to find what works best for you and your camera equipment. Every combination of photographer and camera equipment has strengths and weaknesses. Experimenting lets you identify those strengths and use them.

Lou Staunton and Jeremy Squire specialize in macrophotography of insects and small creatures in the field and are based in Virginia. All photos included with this article were shot in Virginia with an Olympus OM-D E-M1ii, M.Zuiko 60 mm lens, and Godox flash. You can see more of their photography from around the world at www.eyetoeyewithnature.com and www.jeremysquire.com. Email: loustaunton@icloud.com and jeremysquire@icloud.com.

Karen York celebrates milestone at Society

On April 30, our office manager Karen York celebrated 20 years with the Society. Raised in rural Pennsylvania, Karen lives in White Post with husband Robin. They raised three children, with the youngest just having graduated from college. Learn more about Karen from her conversation with Nancy Vehrs.

Nancy: How did you learn about the VNPS job opening and what interested you about it? What kind of work did you do before the VNPS?

Karen: *A friend saw the ad in the paper and knew I was looking. What interested me was the location (only five minutes from my house) and it was part-time. These two perks (location and part-time) allowed me to take my three young kids to and from school and their other activities.*

I worked for the Civil War Society doing their membership and circulation then later I started facilitating their event planning and promoting Civil War seminars. I booked the speakers, hotels, buses and food, and I also handled all of the registrations for the quarterly events.

Nancy: Can you relate any anecdotes or funny events during your 20-year tenure?

Karen: *I have to say a funny and embarrassing time was about a month after I was hired. I was asked to send out WOY brochures and I truly had no idea what that was. I looked everywhere in the storage determined to find what this WOY was all by myself. Finally, after of couple of days, I asked my co-worker [Kim Strader] if she knew anything about the WOY brochure. [I'll] never forget Kim looking and me and saying, "Oh, you mean the Wildflower of the Year."*

Nancy: What is it like working at Blandy as part of the University of Virginia system? Any special perks? (Participation in special events? Access to knowledgeable people? Walking the grounds?)

Karen: *First, Blandy is just a beautiful place and being able to go every day is a great perk, looking out my office window and watching the birds and squirrels on the holly tree is a great treat. I also work with some amazing and knowledgeable people who are a great source of information.*

Nancy: Tell us a little about the historic town/village of White Post and your house.

Karen: *White Post village has nationally important connections to the colonial era of America, having been the chosen location for the residence of the English Lord Fairfax, who oversaw a territory of over 5.5 million acres, reaching from the Chesapeake Bay to the western tip of Maryland, and who was responsible for issuing land grants for the settlement of this area before the American Revolution.*

White Post also has direct ties to the Founding Fathers of the United States, in that George Washington's first occupation was based in White Post, when he was a land surveyor for Lord Fairfax. As a result, White Post is listed on the National Register of Historic Places twice, as well as being on the Virginia Register.

The "White Post," which gives our area its name, derives from an actual wooden white post, a directional marker in the center of the crossroads of White Post village to this day. There has been a post in some form at the crossroads of the village since at least 1750. Legend has it that George Washington might have been involved with planting the first White Post. In any case, the White Post is our defining symbol, and one of the few traffic or road landmarks from the colonial era of Virginia still in existence.

Robin and Karen York

Our house was built in 1890 and was originally used as the local doctor's office from 1912-1953. After purchasing the house in 1995, we've had many locals stop to tell us stories about coming to the house to see Dr. Dermott and his famous talking parrot that he kept in his examination room. We are told that the parrot was taken care of very well in Dr. & Mrs. Dermott's will and $2,500 was left for his care.

Nancy: Is there anything else you would like to share?

Karen: *I want to thank everyone at VNPS for giving me the opportunity to work for such a great organization. I have met so many great people throughout the past 20 years and I am just grateful to have learned so much about native plants and truly feel I have made some awesome friends. Thanks so much!*

Nancy: And, thank you, Karen, for 20 years of service!❖

Rare plant surveys continue despite COVID


From Your
Natural Heritage Program
By Anne Chazal & Johnny Townsend

The Botany and Ecology teams (Staff Botanist Johnny Townsend, Field Botanist Jennifer Stanley, Vegetation Ecologist Gary Fleming, Vegetation Ecologist Karen Patterson) at the Virginia Natural Heritage Program have been busy surveying for Virginia's rarest and most threatened plant species despite many COVID-related restrictions in place. The team's work is paying off with new or updated locations of rare species. This chart contains a list of species that the Botany and Ecology teams have found in 2020. For more information about what plants are tracked by the Virginia Natural Heritage Program, as well as definitions of terms like Global Rank, visit the Natural Heritage website (https://www.dcr.virginia.gov/natural-heritage/document/plantlistjun2020.pdf).

Of particular interest is the discovery of *Isotria medeoloides* (Small-whorled Pogonia) at the new parcel of the Mount Joy Ponds Natural Area Preserve (MJPNAP) in Augusta County. The story of this parcel began before this finding. Prior to DCR ownership, VNPS's Sally Anderson and Richard Cooper were able to purchase this tract and protect it from development. In 2018, the 85-acre parcel was added to MJPNAP with funds from the Du-Pont–Waynesboro Natural Resource Damage Assessment and Restoration Settlement (https://www.fws.gov/northeast/virginiafield/pdf/contaminants/dupont_waynesboro/20170110_VAFO_NRDAR_fact_sheet_final.pdf). Using those funds, VNPS bought the property and turned it over to DCR-Natural Heritage as a dedicated addition to the MJPNAP. Under DCR's ownership, a more complete inventory of the property's natural heritage resources is being conducted and one of the largest populations of the federal and state listed *I. medeoloides* in Virginia was found. Adding to that observation, summer botany technicians at Natural Heritage, Liz Kiely and Jimmy Francis, also found *I. medeoloides* while conducting inventories for the U.S. Forest Service in the nearby Pedlar Ranger District.

Two journal articles are in press and will describe new species to the Virginia flora. The first, a new *Viola,* is found in a small area in Bath and Alleghany counties. It was recognized in 2013 by Harvey Ballard, a national expert on violets, during field work with

(See Rare Plants, page 12)

Scientific Name	Common Name	Global and State Rank	Fed and State Legal Status	County where observed
Asclepias purpurascens	Purple Milkweed	G5? S2		Culpeper
Astragalus neglectus	Cooper's Milkvetch	G4 S2		Botetourt
Boechera serotina	Shale barren rock cress	G2 S2	LE LT	Alleghany, Bath
Cardamine micranthera	Small-anthered Bittercress	G2 S2	LE LE	Patrick
Carex davisii	Davis's Sedge	G4 S1		Amelia, Powhatan
Cheilanthes castanea	Chestnut lip fern	G5? S2		Halifax
Chenopodium foggii	Fogg's goosefoot	G2G3 S1?		Bath
Coreopsis delphiniifolia	Larkspur coreopsis	G3? S1		Halifax
Dichanthelium sp. nov.	Appalachian Witch Grass	GNR S1		Bath
Eleocharis compressa	Flattened spikerush	G4 S2		Augusta
Epilobium ciliatum ssp. ciliatum	American willow-herb	G5 S2		Madison
Eryngium yuccifolium var. yuccifolium	Northern rattlesnake-master	G5T5 S2		Louisa, Powhatan
Erysimum capitatum var. capitatum	Western Wallflower	G5TNR S2		Alleghany
Forsstroemia producta	Sullivant's Bark Moss	G5? S1		Botetourt
Hypericum tubulosum	Lesser Marsh St. John's-wort	G5 S2		Amelia, Powhatan
Isotria medeoloides	Small Whorled Pogonia	G2G3 S2	LT LE	Augusta
Lythrum alatum	Winged loosestrife	G5 S2		Halifax
Melica nitens	Three-flower Melic Grass	G5 S1		City of Lexington, Rockbridge
Maianthemum stellatum	Starry Solomon's-plume	G5 S1S2		Augusta
Marshallia obovata	Piedmont Barbara's-buttons	G4G5T3T5 S1		Halifax
Mitreola petiolata	Lax Hornpod	G5 S1		Halifax
Platanthera grandiflora	Large purple fringed orchid	G5 S2		Amherst
Pycnanthemum torreyi	Torrey's Mountain-mint	G2S2		Appomattox
Scutellaria incana	Hoary Skullcap	G5 S2		Amelia
Solidago rigida var. rigida	Stiff Goldenrod	G5T5 S2		Botetourt
Verbena scabra	Rough Vervain	G5 S1		York
Viola sp. 1	A violet	G1 S1		Bath

Rare Plants

(Continued from page 11)

Staff Botanist Johnny Townsend. The species will hopefully be described before the beginning of the new year. Johnny is also co-authoring a paper (with Richard LeBlond and Chris Ludwig) describing two new species of *Dicanthelium* (Witch Grass), one of which is currently known from only six sites in the mountains of Virginia and Pennsylvania, the other known only from Difficult Creek Natural Area Preserve. This paper has been accepted for publication in the *Journal of the Botanical Research Institute of Texas* (JBRIT) in the fall 2020 edition.

Townsend and Ludwig will have a second paper in JBRIT published this fall on the flora of Difficult Creek Natural Area Preserve (DCNAP). This preserve is located in Halifax County and includes a Piedmont mafic woodland that is undergoing restoration by Virginia Natural Heritage's Natural Areas Stewardship staff. By opening the canopy and reintroducing fire, DCNAP now features an extraordinarily diverse flora on a scale rarely seen in the Piedmont. Be on the lookout for 'Floristics of Difficult Creek Natural Area Preserve: A Piedmont Mafic Woodland Complex in Halifax County, Virginia, U.S.A.'

Dicanthelium sp. nov. from Bath County

This year's botanical surveys throughout the state will continue through September. Botany staff will look for *Amaranthus pumilus* (Sea-beach amaranth) (G2 S1, LT LT) in Accomack County; clamber over shale barrens looking for rare plants, including the state and federally listed *Boechera serrotina*, (Shale Barren Rockcress) (G2 S2, LE LT) and monitor several populations of rare plants restricted to utility rights-of-way, which provide the open habitats they require. ❖

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