

Valley Views

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October/November 2020

Director's Report

By Kristin Alexander, PVAS Executive Director

We've reached the six-month point of our COVID experience. We are so grateful for the amazing support of our members, donors, friends, colleagues, partners, grantors, neighbors and staff who have helped us get through this unprecedented and extremely challenging experience thus far.

Nature teaches us to adapt, and adapt we have. From virtual programming to significantly increased homeschool programming, to new fundraising formats like on-line auctions, our staff and volunteers are rising to every occasion. You'll see PVAS continue to grow into this new paradigm as we increase our skills in virtual learning while offering in-person programs in small groups entirely outdoors.

I just attended the annual Association of Nature Center Administrators (ANCA) Conference (virtually, of course) and it was so inspiring to hear how nature centers and preserves across the country, like us, have been pivoting their programs and visitor experiences to meet the needs of their various audiences in their own communities.

But in the wake of COVID-19, there is national concern about the field of environmental education surviving. In the ANCA conference, a briefing was cited that demonstrated that school shut-downs last spring and current policies limiting or disallowing field trips or outside visitors will severely limit student and teacher experiences - and providers' bottom lines. The educational losses to the youth are significant. The report highlights the value of these experiences for kids which are increasingly difficult to meet under the circumstances: "Participation in informal environmental and outdoor science education programs results in positive cognitive/academic, dispositional, social-emotional, and health outcomes. Environmental education programs in informal settings increase content knowledge and skills, including understanding how human actions contribute to climate change and sustainability. This learning may be magnified when outdoors, because youth learn quickly and demonstrate better attention and longer retention of skills when learning takes place in outdoor environments." To see the report's brief go to: https://www.lawrencehallofscience.org/sites/default/files/EE_A_Field_at_Risk_Policy_Brief.pdf.

We will do everything we can to make sure environmental education doesn't go extinct locally, but it is a serious concern at the national level.

In the meantime, people of all ages are flocking to trails and rivers. It's more important than ever for their physical and mental health to be outside - especially in nature. And it gives us all the opportunity to be reminded at how important the natural world is for humans - not to mention wildlife.

And meanwhile the devastation to the natural world is rampant: record breaking wildfires; so many hurricanes we've run out of letters in the alphabet to name them; floods in some places and droughts in others. Climate change is impacting us here and now. So the importance of what we do is more timely and critical than ever. In David Attenborough's words, "We are at a unique stage in our history. Never before have we had such an awareness of what we are doing to the planet, and never before have we had the power to do something about that."

So how is PVAS responding? We're adding a climate change curricula to our offerings for local schools and homeschool groups. We will continue to provide hundreds of acres and miles of trails to get outside and enjoy the natural world that provide opportunities for education, quiet contemplation, habitat for wildlife and carbon sequestration. We'll be providing programs both in person (small scale and outdoors) and virtually to continue our educational efforts and outreach. The ANCA conference inspired me with new ideas on ways to serve our members, friends, and community (both human and wild) and we look forward to putting them into place.

We also welcome your input on how we can be most relevant and helpful right now. What can we do for YOU and your community? What program topics would you like to see, and how would you like us to provide them? Zoom? YouTube? Facebook? In-person whenever possible when it can be safe? We'd love to hear from you.

With all that's going on, what we do has never been so important. And with the election approaching, I'll also include that your vote has never been so important. Your vote will impact climate change policies, habitat restoration, equity, inclusion and diversity across the conservation field, and educational funding - both traditional and environmental. You'll see voting information in this issue for your convenience to make your vote, in person or absentee, as accessible as possible.

Thank you for all you do to keep our programs and preserves available and safe. 2020 has presented more than its fair share of challenges, but with your support and dedication in support of our mission, I feel confident we have the resilience required to see us through.

Potomac Valley Audubon Society is dedicated to preserving, restoring, and enjoying the natural world through education and action.

Titans of the Detritus – Another Rarity at Cool Spring Preserve

By Wil Hershberger, Nature Images & Sounds, LLC

During the 2019 Singing Insect walk at Cool Spring Preserve, we collected what would turn out to be a new species for West Virginia, the Fast-tinkling Trig (*Anaxipha tinnulacita*)¹. On subsequent visits to find and record these elusive small crickets, I found myself listening to an [unfamiliar song](#)² that was possibly coming from a ground cricket. Long series of trills were emanating from ground level at only a few places along the trail near Bullskin Run.

It always amazes me how hard it can be to track down, find, and then capture these small musicians of the leaf litter. After eight failed expeditions wherein these diminutive titans of the detritus thoroughly defeated me, I was finally fortunate to corner and collect one male of this unknown singer. He was all black with reddish-tan highlights, certainly a handsome little fellow. Careful examination proved that he was a member of the genus *Allonemobius* – the robust ground crickets. There are ten species in this genus in North America.



Allonemobius walkeri © Wil Hershberger, Nature Images and Sounds

After adjusting to his singing cage, the male ground cricket began to sing for the microphone. Measuring the minutia of his recorded songs revealed that he could be one of two species, Walker's or Fulton's Ground Cricket. Walker's Ground Crickets (*Allonemobius walkeri*) are fond of dry, grassy areas while Fulton's (*Allonemobius fultoni*) prefer areas that are shaded and damp. The specimens that I was listening to and the one that I collected were all singing in shaded, somewhat damp areas within several yards of Bullskin Run. Oh my, I thought, perhaps this could be the very rare Fulton's Ground Cricket. There are only five known specimens that have been collected in the piedmont of the Atlantic coast. How can I tell for certain which species this actually is? Further study and communicating with experts in the field yielded a clue...

All of our crickets and katydids sing by rubbing their [wings together](#)³. More correctly, their front wings. These are highly modified in males and are called tegmina. The underside of the uppermost tegmin of a male sports a ridge with fine teeth, looking for all the world like a miniature file. This file is impacted by a larger, stiffer ridge on the top side of the lower tegmin, the scraper. As the file is drug across the scraper, the tegmina vibrate, which in turn vibrates tiny windows of thin membranes contained in both tegmina (the mirrors). The vibrations set up by the file and scraper resonant with the mirrors to create the loud and wonderful songs that we hear every summer. These songs are species-specific as a result of the number of teeth in the file, the rate at which the scraper is moved along the file, and the shape and size of the mirrors.

So, there was the clue, from the known specimens of Fulton's Ground Cricket, the number of teeth in the file should be in the range of 140-174; for Walker's, the number should be 183-208. Well, I didn't want to extinguish this beautiful little male and quiet his silvery songs, so I kept him well fed and happy; he sang well into December. Once he died of natural causes, I was able to examine his file and found ~190 teeth – squarely within the range of Walker's Ground Cricket. However, other morphological measurements, such as the length of the femur, the length and width of the pronotum, and the length of the body, were inconclusive. If this is a Walker's, he was a small individual for that species.

So, the mystery deepens, is this truly a Walker's Ground Cricket, a Fulton's Ground Cricket, or something else. Either species would be a first for West Virginia. From correspondence with other researchers, there is some debate as to whether there is actually a Fulton's Ground Cricket species at all. Some are inclined to lump them with Walker's. But, then there's the apparent dichotomy of preferred habitats for the two species. Could one species be found both in dry, sunny, grassy areas and in the shaded, damp, leaf litter of a woodland understory? Only further research will solve this puzzle.

¹ Check out the story of the Fast-tinkling Trig in the [2019 December/January issue of Valley Views](#)⁴.

² <https://soundcloud.com/wilhershberger/wh19t-465-allonemobius-walkeri-song-male-2-jefferson-co-wv-01.wav>

³ <http://songsofinsects.com/biology-of-insect-song>

⁴ https://www.potomacaudubon.org/wp-content/uploads/2018/07/PVAS-Valley-Views-December-2019_January-2020-3.pdf

PVAS Events

Adult Programs

By Krista Hawley, PVAS Adult Programs Coordinator

Here at PVAS, we are embracing autumn's cooler temperatures, crisp morning air and gorgeous colors! We are excited to be out at our preserves, walking the trails and observing the changing of the seasons. What transformations are you noticing in your yard or neighborhood park? Did you visit Cool Spring Preserve in September and see the expansive display of Goldenrod in the meadow? Were you part of Joy Bridy's Nature Gathering up at Eidolon where the journalers were able to study Marguerite Zapoleon's original field notes, enhancing and building on their own autumn observations?

Fall migration is in full force and Steve Hartmann and Deb Hale have been up at Bolivar Heights Scenic Overlook watching for Sharp-shinned Hawks, Cooper's Hawks and others as they migrate through our region. Join one of the October watches but be sure to sign up early as registration is required and limited.

If you are a regular on any of our monthly bird walks at Cool Spring Preserve or the USGS Fish Health Lab, you have probably noticed fall's subtle changes creeping in each month. Observing the sights, sounds and smells of fall is easily accomplished while quietly walking along the trails in search of birds. These bird walks continue through the winter months so be sure to register for one today!

Despite the limitations that the pandemic throws at us, continuing to explore and learn about the natural world that surrounds us is a safe and healthy option for many. While some of our beloved programs aren't feasible or safe at this time, we are happy to be able to gather when possible. In order to keep everyone safe and follow guidelines, registration for in-person events is limited and required.

Some programs will continue to be held virtually. PVAS's Monthly Programs in October and November will be conducted via Zoom. In October, we are excited to welcome Christine Lepine, Research Associate with the Conservation Fund's Freshwater Institute. Christine will discuss Land Based Aquaculture Research. The link to join this virtual program will be on our website's calendar, but can also be found here: <https://www.potomacaudubon.org/event/potomac-valley-audubon-societys-monthly-program-land-based-aquaculture-research/>.

November's Monthly Program, Road Warriors, will also be via zoom with a special presenter, PVAS's one and only Ellen Murphy. Ellen teamed up with Susan Fluharty to prepare a fascinating program on common weeds found along our roadsides. The link to this zoom program can be found on our website calendar and here: <https://www.potomacaudubon.org/event/potomac-valley-audubon-societys-monthly-program-road-warriors/>

We look forward to seeing you at a program soon, either in-person or virtually!

Bird Seed Sale Pick-up Dates

While the deadline of October 1 has likely passed, we want to remind you about pickup dates and locations for your high-quality bird seed. Thank you for supporting PVAS as well as your backyard birds through your purchase!

On Saturday, November 7th, don't forget to pick-up your items at the location you selected when placing your order. Here are the pick-up locations/ time frames:

Audiology, Inc. (400 W. King St., Martinsburg, WV 25401): 10 a.m. to 12 noon

Cool Spring Preserve (1469 Lloyd Road, Charles Town, WV 25414): 9 a.m. to 12 noon

Warehouse on Union Street (Berkeley Springs, WV 25411): 10 a.m. to 12 noon

Sunny Meadows Garden Center (7437 Sharpsburg Pike, Boonsboro, MD 21713): 9 a.m. to 12 noon

November 7th through Saturday, February 27th: Pick-up items at Sunny Meadows Garden Center during their normal business hours – please note that all items must be picked up by February 27th.

If you have any questions, please contact kristin@potomacaudubon.org or (681) 252-1387.



Fish photo courtesy of The Conservation Fund



PVAS Events

PVAS's Auction

Thank you so much to all who supported PVAS's first on-line auction. A heartfelt thank you goes to the MANY generous donors who supplied the items and services to be auctioned off. We had 175 items in the end! And a huge thank you as well to you bidders - especially those who stayed up 'til the bitter end - who enthusiastically participated in the process.

And finally, the events committee deserves utmost thanks for helping collect the items, photograph them, troubleshoot the process, prepare items for delivery, and coordinate the hand-off of the items to their forever homes. There are just a few more expenses to account for, but we will have raised over \$7,000! Thanks so much for your support! In this COVID time, this was a wonderful way to support PVAS "from a distance."

Volunteer Spotlight

Have you met Kevin Moore?

Kevin is a PVAS member who also happens to be the father of naturalist Amy Moore. Over the years, Kevin has become an integral part of PVAS's volunteer base. Last year, Kevin helped Amy design and build a bridge over the Bull Skin Run that allows students and campers creek access in a way that doesn't harm the sensitive stream bank. This spring, Kevin took down a handful of trees that were shading Cool Spring's solar panel array, helped move the 6 ft diameter hollow Sycamore log to the Cool Spring PlaySpace, built and designed a tank for our new turtle education ambassador, Willow, built a work bench for land manager KC, and built expansive storage shelves for program supplies in the Cool Spring barn.

Over the years, he has contributed to the Cool Spring Nature PlaySpace, built Cool Spring's compost bins, and done many odd jobs to help with the upkeep of Cool Spring cottage. Kevin is one of those people who gets the job done before you can blink an eye. We appreciate all of the quality work that Kevin has done for PVAS. PVAS is so lucky to have Kevin and all our other volunteers that help keep us growing and thriving!

All of our PVAS volunteers are great! If you know someone who deserves a shout out, please contact Kristin at Kristin@PotomacAudubon.org.



Don't forget to VOTE!

Voting has a significant impact in local, state, and national environmental legislation, so mark your calendars for Tuesday, November 3rd!

If you are concerned about in-person voting, we encourage you to request a mail-in ballot as soon as possible. See links below to information about requesting a mail-in ballot for Maryland and West Virginia.

West Virginia (Request must be received by October 28th): <https://sites.omniballot.us/54/absentee/app/home>

Maryland (Request must be received by October 20th): <https://elections.maryland.gov/voting/absentee.html>

PVAS Events

Welcome Hannah Donnelly!

PVAS welcomes the newest staff person, Hannah Donnelly, to the PVAS Team.

Hannah is our new “Communications/Marketing Manager.” (This is similar to the position previously held by Erin Shaw.) Hannah grew up in Virginia, but went to college at Columbia College Chicago to study film and video editing. She went on to work in Los Angeles as a post-production coordinator in TV for several years before the pull of family brought her back east in 2018.

She’s been working at Lost River Trading Post and Wardensville Garden Market and has volunteered at The River House in Capon Bridge. She brings skills and experience in video/photo production and editing (critical in COVID times), as well as social media, website, graphic design, project management, and client relations/customer service. She has a passion for wildlife preservation and sustainable living, and she looks forward to supporting PVAS’s mission through her work with us.

If you’d like to welcome Hannah, you can reach her at admin@PotomacAudubon.org.



Family and Youth

Introducing...

Our new AmeriCorps team for 2020-2021! Please welcome Emily Sperling and Abigail Freidline to the PVAS youth environmental education team. For the next year, they will be working with Amy to provide nature education to children at our new Outdoor School, our virtual Watershed programs for 4th graders, family programs, pre-school programs and summer camps. Additionally they will all be learning the ins and outs of land management with KC and will be assisting her in many volunteer work-days.

Abigail (who prefers “Abby”) graduated in May 2020 from Christopher Newport University in Newport News, Virginia where she received a Bachelor of Science degree in Organismal Biology with a minor in Environmental Studies. Throughout her undergraduate studies, Abby participated in several field labs that consisted of sampling and documenting biodiversity of the Chesapeake Bay to assessing human impact on the local environment. When she wasn’t in the field, Abby was volunteering at the Virginia Living Museum where she was a naturalist interpreter for museum guests. Outside of work, she enjoys horseback riding with family, crafting and art, and spending time outdoors. Abby hopes to instill her passion for the natural world on the next generation of environmental stewards.



Abigail Freidline and Emily Sperling, AmeriCorps environmental educators

Emily Sperling is a Maryland native who grew up in Carroll County. She graduated from Salisbury University in 2019 with a B.A. in Environmental Studies and a minor in Geography. Her love for Environmental Education began while working at summer camps and running school programs where she led activities such as hiking, camping and fishing. In her free time she likes to go horseback riding, running, hiking and boating. Additionally, she worked as an Interpretive Outreach Assistant on the Chesapeake Roving Ranger traveling around the watershed teaching the public about the Chesapeake Bay. She is looking forward to having the opportunity to keep learning and teaching about the natural world.

Family and Youth Programs

What do Youth Programs Look Like this Fall?

By Amy Moore, Lead Teacher & Naturalist/Audubon Discovery Camp Director

COVID has required us to get creative as we considered how to provide environmental education to children this fall. Luckily, creativity and idea generation is our program staffs' specialty.

Summer camp was a great way for us to practice adapting youth programming during the age of COVID. We quickly learned how to adjust teaching styles and the way we led activities to keep children safely distanced from each other. As the summer progressed and families shared their fall plans, we discovered that many families were opting out of in-person schooling, planning instead to try homeschooling or at-home schooling this year.

Wanting to provide nature programming that best served our community's needs during this difficult time, we decided to create the PVAS Outdoor School where children participate in STEAM (Science, Technology, Engineering, Art, and Math) learning in the natural environment. Parents sign their children up by the month to attend once every week. Not only is this allowing parents a kid-free day once a week, but children are also able to safely engage in social interactions with other children. Many participants have not had the chance to learn and play with other children for a long time.

We are also continuing to provide our Wee Naturalist Pre-school program twice a month at Cool Spring Preserve where parents and/or guardians attend an hour-long nature program with their pre-schooler, exploring various nature topics together. This fall the program themes include butterflies, animal homes, worms, deer, turkeys, and animals in winter.

Finally, we will also be providing our 4th grade Watershed Program to 4th graders in the Panhandle. This year will be a bit different since we will be teaching virtually. But they will still explore unique properties of water, run-off, erosion, sources of water pollution and benthic macroinvertebrates, and their connection to the Chesapeake Bay watershed. It will be new and challenging to teach virtually, but we are ready to embrace this challenge with open arms!

Here's to a different - yet fun and successful - fall semester!



Camp Programs

A Summer Camp Thank You

A note received on the last day of camp, shared with permission, from a summer camp mom.

Dear Amy,

I wanted to write and say "thank you," to you and everyone, that put so much into making sure that this summer, camp was on and running safely and smoothly!

My two kids have had a great time over the past few weeks. They come home with the best stories, and tell me all the time, that 6 hours of camp only feels like a few minutes. They came home this week, explaining that they used pawpaw seeds to buy and sell materials for their forts - every new idea I hear - I say "Amy is brilliant!" And I always know that, no matter the weather, you will make sure the kids are safe and having fun. Never once did the kids complain about the super hot days or super rainy days - because the weather is a part of the fun.

These past three weeks have felt very "normal" in a time when the world seems upside down. I cannot say thank you enough times for the gift that you have given our family by supporting the kids - in nature, with other kids, having a blast, and learning all the time - while so much fear, uncertainty, and unknown looms about everywhere else.

I believe that you have handled the COVID situation beautifully - taking special precautions to make this a safe and fun experience. You, and all of the staff, have given the gift yourselves, of not being frozen in fear, and showing up to support your community in the hardest time that I have ever witnessed. I am very excited to sign the kids up for your fall programming.

You should mark this a special day - and celebrate the culmination to a great summer camp session, during the most challenging of circumstances. Thank you many times over!



Conservation

Plant Sale Success

By KC Walters, PVAS's Land and Facilities Manager

September was a busy month full of native plant sales! The Monarch Alliance (TMA) held their annual fall native plant sale at Sunny Meadows Garden Center on September 12th and then two weeks later, PVAS followed up with a native plant sale at Cool Spring Preserve on the 25th and 26th. While we were a little nervous about holding in-person events, both plant sales were held completely outdoors and all of our guests were exceptionally respectful, wearing masks and maintaining spacing.

The TMA sale highlighted milkweed and pollinator perennials perfect for gardens. We had folks ready to start picking out their plants well before 9am. Within 45 minutes of the start of the sale, we sold out of milkweed. It was truly amazing to see so many people looking to help Monarch Butterflies. By the end of the sale, three quarters of the beautiful native plants we had to offer were on their way to home gardens all across our service area and beyond.

The PVAS sale highlighted our wonderful native trees and shrubs. We had over 300 trees and shrubs ready to find their forever homes. We also had a dozen vendors join in the sale. From herbaceous plants, to honey, to homemade soaps, to hand painted bowls, to adorable crocheted critters, our vendors brought in something for everyone. While things were hectic at times, our wonderful volunteer force kept the sale running smoothly.

In 2021, we are looking forward to merging the plant sales hosted by PVAS and TMA to make them even better. We will expand our partnership with Sunny Meadows, bringing you more native plants. There will be two sales, one in the spring focused on herbaceous species and one in the fall focused on trees and shrubs, with the goal of honing in on the ideal seasons to plant our native species for the greatest success and benefit.



We will be bringing back the online pre-order and pick-up system with both Sunny Meadows and Cool Spring as pick-up locations. You will also have the option to shop in-person on the day of the sale. Finally, we have just received permission from the WV Master Naturalist council to allow our Master Naturalists to serve with PVAS and TMA as volunteers at Sunny Meadows during these plant sales in spite of the Maryland location. We are exceedingly grateful we were granted this exception. We are very excited to grow our native plant sales and help you achieve your planting-for-conservation goals!



Conservation

Leaf Catching

By Herb Peddicord, Retired Forester and Board Member

Most of us that are reading this, know that trees are amazing. I love them and enjoy them almost daily. Through the years I have asked the question a hundred times to various groups: “What are some of the benefits of trees?” The first answer is mostly that they give us oxygen and that is important. I have never heard anyone say that they give us leaves to catch in the fall. Perhaps you are a closet leaf catcher like me, or maybe this is something you or your children or grand children have never done. So here is an abbreviated guide to leaf catching.

Why abbreviated? Well there is a lot to talk about. I have been doing this for 50 years. Forestry you say? No, catching leaves. I will have to skip over all the weather conditions, or all the different places, or whether and when to use two hands or gloves, or most of the different ways that leaves tumble to the earth. (You can learn that on your own and give your own names to the tumbling patterns that you see.) I assume you will find a nice place to catch leaves on a spur of the moment when the conditions are right for leaf catching. I do my leaf catching mostly when I am running and when no one is looking.

“What is that old man doing Mommy?”

“I don’t know honey, but let’s hurry along now. We do not have time for that silly nonsense.”

I do want to discuss the three trees that lend good success in this leaf catching endeavor.

#1 Maple – This is it, the #1 by far. Many of the maple leaves are soft when they fall and they have a lot of surface area to float. The attached stem helps them to have many falling patterns such as the inverted umbrella, the spinner, the glider, or the tumbler. Yes even the tumbler can have a pattern that repeats itself as it falls although many tumblers are random and difficult to catch.



#2 Tulip Tree – These leaves are also soft when they

fall so they can have patterns. The leaves are large and the trees are tall so there is an added advantage to focusing on that falling leaf from a distance and running it down.

#3 Sycamore – These leaves are not what I would call soft when they fall. They have dried out most of the time and they lose their shape. Although most of these leaves are tumblers, due to the large size of them they rank #3 in leaf catching success.

Honorable mention – The leaves in the red oak group, due to their size and softness. (They are mostly tumblers.) Leaves in the white oak group sometimes do not even fall until the next spring.

Most difficult to catch are, of course, the small-leaved species and leaves coming from small trees, due to the reduced reaction time. Also any tree with a compound leaf is generally difficult because many of them will lose leaflets instead of the whole leaf. If you want to challenge yourself, try catching the tiny locust tree leaflets.

So I wish you or your family good luck in your leaf catching. You can get some exercise and practice your coordination skills at the same time. You can practice your tree ID skills as well. I hope you will find that right tree somewhere on that perfect day this fall.



Notes from the Preserves

Fall In the Preserves

By KC Walters, PVAS's Land and Facilities Manager

Volunteers are back in action at the preserves! A successful and productive volunteer workday was held at each preserve in August and September. It was great to see familiar faces and equally awesome meeting some new volunteers. As long as these workdays continue to occur safely, we will continue to offer them for the remainder of 2020. For the time being, the volunteer cap of five will remain in place, so, if you wish to volunteer, please register on the website.

The inauguration of the Weed Warrior Program over the summer was a huge success. We now have a grand total of 44 certified PVAS Weed Warriors. Keep your eyes peeled for these folks wearing awesome t-shirts and wielding loppers out on trails this fall. If you would like to join the elite ranks of the Weed Warriors, the training will be offered again beginning in the late spring of 2021.

The Scouts have been busy as well. Over the summer, Matthew Puzzini completed his Eagle Scout project at Cool Spring. He led a team in cleaning up and repainting the front of the barn as well as showing the rain garden some much needed care with fresh mulch and new pollinator friendly plants. At least two other scouts are planning projects at the PVAS preserves and we could not be more grateful to them for their time and service!

Eidolon is getting an upgrade! Thanks to a generous donation from an anonymous friend of Eidolon, the preserve will soon have new trail signs. The swanky new signs will be the traditional brown with yellow engraved text like the signs at Yankauer and Stauffer's Marsh. They are being created by Davis Designs of Martinsburg.

The weather is cooling down and the preserves look forward to seeing you! Now is the perfect time to stroll among the goldenrod at Cool Spring, hear the crinkle of leaves as the wind blows through the trees at Yankauer, admire the display of colors at Eidolon and observe the migrating waterfowl at Stauffer's Marsh. While you're out and about, be sure to take your camera. Please send your preserve photos to Katelyn@PotomacAudubon.org for a chance to be featured on our website and/or social media pages.

Reminder: fall means deer hunting season is upon us. Hunting is not permitted at Cool Spring, Yankauer or Stauffer's Marsh, however, hikers are advised to wear at least one item of blaze orange or another bright color, as neighboring properties may allow hunting. Deer hunting is permitted at Eidolon. Eidolon remains open during bow hunting with hiking hours restricted to 10am-3pm, daily. It is closed to hikers during all firearm seasons. Check our website for complete details and a calendar of preserve closures.



Eidolon trees © Rhonda Jackson



Preserve Work Days

Want to get to know our preserves while helping to care for them? Join us for a work day with our Land and Facilities Manager, Katelyn "KC" Walters.

Pre-registration required as space is limited to 5 people/date for safety.

All work days are scheduled from 10am - 1pm.

October 9: Eidolon,
 October 15: Stauffers
 October 23: Yankauer
 October 29: CSP
 November 12: Eidolon
 November 20: Stauffers
 December 3: Yankauer
 December 11: CSP

Register on the website calendar.

PVMN

Master Naturalists Update

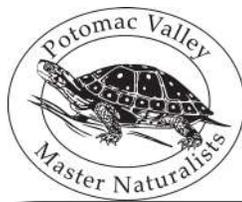
The Master Naturalist Coordinating Committee continues to meet monthly, analyzing options for how to safely resume classes and field work. At this time, most of the venues we regularly use are not available. The committee is dedicated to ensuring a safe return to programming as soon as possible. The top priorities are:

- Offering the full program (classes and field study) to the 2020 cohort
- Providing students from previous cohorts the possibility to complete their certification via the necessary classes,
- Providing ample opportunities for all Master Naturalists to continue to earn their recertification through volunteer service and continuing education.

As always, the volunteer and continuing education opportunities are listed on the Events Calendar under Master Naturalist and emails will continue to be sent to Master Naturalists with additional information and events.

The Coordinating Committee is examining the option of holding the Annual Meeting outdoors in the spring or summer of 2021, as an indoor meeting in January is not safe or realistic during the pandemic.

In addition, the state is looking to potentially waive some of the requirements for volunteer or continuing education hours necessary for recertification in 2020. We will update the Master Naturalists as more information becomes available.



Advocacy

The Present Effects of Climate Change in West Virginia

By Neal Barkus, Panhandle Progressive

We regularly hear dire predictions of what the future will hold because of our warming climate. But the fact that most of the catastrophic effects of climate change will be felt decades from now makes it hard for people to take this problem seriously. Politically complex and expensive policy changes are more difficult to make because of this. So what effects of climate change are being felt now? It turns out there are several right under our noses.

First the good news. West Virginia is in a favorable location to avoid the absolute worst effects of climate change now and in the future. We have no coastline so rising sea levels will not affect us. Further, increases in the number and intensity of hurricanes might affect us indirectly in the form of rainfall, but we will be spared the heavy wind and storm surge damage felt in coastal areas.

Average temperatures in West Virginia have risen .6 to 1 degree F in the last century. This is somewhat less than in most of the United States. "West Virginia's climate has become milder with warmer winters, cooler summers and generally more humid conditions year-round," says Evan Kutta, the climate sciences program manager for West Virginia University's Institute of Water Security and Science.

But temperatures have risen at a faster rate recently. The National Oceanic and Atmospheric Administration says that the last five years have been the hottest on record nationwide, and predicts with 99% certainty that most of the years in the next decade will rank among the ten warmest.

The practical effect of warmer atmospheric temperatures is warmer ground temperatures. This leads to increased evaporation of surface and ground water. For every 1 degree C the globe warms, the amount of moisture in the atmosphere increases by about 5 percent. This returns to the ground in the form of heavier rainfall. Rainfall in the Eastern Panhandle has increased between 10% and 20% from 1900 to the present.

And heavier rainfall with the flooding it causes are the most significant present effects of climate change in West Virginia. West Virginia is prone to flooding to begin with based on its terrain and development patterns. Steep mountain hillsides and narrow valleys permit heavy rainfall frequently to convert into catastrophic flash flooding. Building in the narrow valleys increases runoff during these periods.

According to the National Centers for Environmental Information, there have been 2,302 flood events in West Virginia between January 1993 and July 2017, resulting in an estimated \$1.8 billion in property damages and 103 deaths. The NCEI also reports that in the period 2005 to 2014 the state received 16

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Advocacy

Climate Change continued from previous page

FEMA disaster declarations, 12 of which were related to severe storms and flooding events.

In 2016 West Virginia experienced what has been described as a “once-in-a-millennium” flood. What a coincidence that we are living just at the right time in that thousand years to experience the event! Eight to ten inches of rain fell in a period of 12 hours causing 23 deaths in West Virginia and nearby Virginia counties. Forty-four roads were closed. The Elk River rose to an all-time high of 33.37 ft. Some might argue that this flood was a one-off event not part of a statistically significant trend.

But flooding events seem to be happening with increasing frequency. Looking at the emergency declarations issued by the Governor over the last several years, there is a troubling pattern. In June 2019 flash flooding in West Virginia resulted in 24 deaths and a federal disaster was declared in 44 counties. Then in February 2020 and June 2020 there were separate states of emergency declared by Governor Justice resulting from flooding.

But flooding is not the only climate-related problem we now have. There are also human health effects from climate change presently being felt in West Virginia and elsewhere. There is such a close link between warming temperatures and the spread of disease-bearing ticks that in 2014 the EPA added Lyme disease as a new indicator to track and measure the impact of climate change.

West Virginia has seen an increase in human Lyme disease cases during the past few years. As of July 24, 2019, there were 288 Lyme disease cases in West Virginia. Compared to the same time in 2015, there were only 126 reported cases. An endemic disease is one that is constantly present at a baseline level in a geographic area without external inputs. As of 2016, there were eleven counties in West Virginia considered endemic for Lyme disease: Berkeley, Hampshire, Hancock, Jefferson, Kanawha, Marshall, Mineral, Morgan, Roane, Wetzel, and Wood.

As I see it, the problem with the approach by the environmental movement to the climate change debate has two components. First we often want to fix blame for climate change on industries whose help we will need to fix the problem. Are we surprised that we get strong opposition? Blame is not a strategy – a call to action is. Second, we tend to over-hype the disastrous future effects of climate change when it is hard for people to accept and make sacrifices to avoid future problems.

I am no expert in these matters. But in my opinion greater success in the fight against climate change can be made by treating it as a process with present effects that people can get their arms around. Americans are pretty good at coming together to deal with a national problem when it is clear we have one. In West Virginia there are present effects of climate change that everyone can recognize, and if we use a poised explanation of how these present effects will get far worse unless we start doing something -- well then we have a winning strategy.

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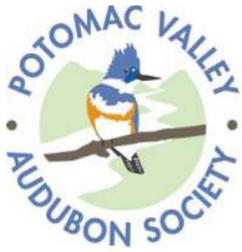
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About the National Audubon Society

National Audubon has a membership program that is separate from PVAS. To become a National member, go to the Society's website at www.audubon.org, and click on “join.” If you join National Audubon and reside in Berkeley, Jefferson, or Morgan counties in West Virginia, or in Washington County Maryland, you will automatically become an affiliate of PVAS, but not a full PVAS member. Affiliates will have access to our communications, and invitations to our events. However, all National Audubon dues go to the National Audubon Society and are not shared with PVAS. We heartily invite you to become a dues-paying member of both organizations.



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The Potomac Valley Audubon Society meets at 7:00 p.m. on the second Wednesday of each month, September through May. Programs are free and open to the public. For additional information about PVAS or its programs and activities, please contact any of the board members listed here or see <http://www.potomacaudubon.org>. PVAS serves the Eastern Panhandle of West Virginia and neighboring Washington County, Maryland.

PVAS BOARD
 PVAS Board meetings take place the first Thursday of every other month (September through June). Meetings are open to all PVAS members. Please contact the President or Vice President if you would like to attend.

All Officers, Board Members, and Staff can be contacted at 681-252-1387.

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