



Valley Views

Volume 37, Issue 4

February/March 2019

Director's Report

By Kristin Alexander, PVAS Executive Director

Happy New Year! This is our first newsletter of 2019, and already there is a lot to report.

In early December you received PVAS's modernized Annual Report summarizing 2019's highlights and accomplishments. Included with that report was a letter asking for your financial support in this time of opportunity and growth.

Our "Annual Appeal" donations allow PVAS to offer the varied and excellent programs and services we provide. I am overwhelmed each year with the generosity of the PVAS community. We are at 55% of our \$53,000 goal, and we are grateful to all who have donated. THANK YOU!

If you missed the annual appeal letter, but would like to contribute, it's not too late. The appeal runs through the end of March. A donation envelope is enclosed for your convenience if you are receiving this by mail. For those reading electronically, a plain old envelope will deliver your check just as well if you send it to PO Box 578, Shepherdstown, WV 25443 with "annual appeal" in the memo line. You can also donate by credit card on our website: <http://www.potomacaudubon.org/support>.

Any way you choose to contribute is gratefully appreciated. Gifts of all sizes and types are appreciated, from cash, to stocks, to IRA transfers - and the donations are 100% tax deductible. You can call me if you have any questions at 304-676-3397 or reach me by e-mail at Kristin@PotomacAudubon.org.

Your contribution supports PVAS's efforts to manage over 500 acres of preserved green space; deliver quality programs for youth and adults; promote and administer conservation programs like the Grassland Birds Initiative; provide citizen science and other volunteer activities.

The programs, preserves, and conservation efforts are geared to help connect people of all ages to the natural world. We can't charge nearly enough to cover the true costs of our education programs; furthermore, we offer free access to our preserves and many of our programs and activities. So we truly appreciate - and rely on - your generosity. Read on to see what you help us accomplish. Together we can make 2019 a great year for preserving, restoring, and enjoying the natural world.

Thank you, Ariana!

It's hard to believe, but our VISTA, Ariana Hagenau, has been with PVAS for a year this February! Sadly, that means her time with PVAS has come to an end, but she's made a lasting impact.

She has been enormously helpful in helping us transition to our new website and database, and was responsible for the new, more professional look of our annual report. Her graphic design background and tech-savvy abilities came at just the right time. We wish her all the best in her next endeavors, and sincerely thank her for her many contributions to PVAS.



Volunteers Wanted for Field Trips

Our field trip season will spring into full activity this April and May.

We are looking for volunteers to help out with the hundreds of children we will be hosting at Cool Spring Preserve, Stauffer's Marsh, and Poor House Farm.

Please send an email to admin@potomacaudubon.org if you want more details on times and locations, or if you are ready to jump right in and support our amazing watershed and school programs.

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

Yellow-rumped Warbler (*Setophaga coronata*)

By Wil Hershberger

Yellow-rumped Warblers are not breeders in our immediate area, but visit us from September through mid-May. These songbirds are a beautiful study of black, gray, white, and yellow. While here, they are typically found in small flocks feeding in deciduous trees and are often associated with a stream or a river. This species was once considered two species, the Myrtle Warbler of the west and the Audubon's Warbler in the east. Large areas of hybridization were found in Canada, and lead the American Ornithologist Union to consider them as one species.

This species breeds in coniferous woodlands from the highlands of West Virginia, throughout the boreal forests of Canada and Alaska, and down through the Rockies and the Cascades of the West. The older the coniferous forest the more they like it. Encroachment of deciduous trees into the evergreen forest will reduce the attractiveness of the area as a breeding site for this species. They can be very abundant in winter, especially along the Atlantic Coast. This wide breeding and wintering range is a result of this species' generalized lifestyle and the broad range of foods eaten.

Since Yellow-rumped Warblers spend the winter so far north, they have the advantage in the spring and can arrive on their breeding grounds weeks ahead of other warbler species that will be breeding alongside them. Yellow-rumped Warbler nests are placed on a horizontal branch of an evergreen, typically at a fork from three to over 30 feet from the ground. Females construct the nest of twigs, grasses, and plant fibers and line the nest with feathers, hair, and mosses or lichens. They then lay four to five smooth, glossy, cream-colored eggs which are incubated almost entirely by the female. The eggs hatch in just under two weeks, and the nestlings are fed by both parents for an additional two weeks. The fledged young are highly mobile and seem to stay near the parents who continue to feed them for another two weeks.

The song of the Yellow-rumped Warbler is a variable, bell-like trill, with either a slight upward or downward accent at the end. (<https://macaulaylibrary.org/asset/85244> <https://macaulaylibrary.org/asset/85231>) As with other songbirds, Yellow-rumped Warbler males learn their songs from other males of the species. During the winter months, both sexes of this species produce calls that are easy to learn and fairly unique (<https://macaulaylibrary.org/asset/132180>). These calls have a husky, metallic quality that is distinctive and easily heard during the quiet winter months. In late April, before they begin heading north, males will start to singing. You can hear an occasional song from foraging males in appropriate habitat at this time of year. The scratchy quality of the song, as well as the variability from one rendition of the song to the next, helps to pin an ID to the bird.

As the remaining coniferous forests of West Virginia age, they become better breeding sites for Yellow-rumped Warblers. There is an apparent increase in the breeding population of this species across most of its breeding range. However, it may be susceptible to climate change as increasing temperatures may kill off large stands of evergreens over most of this species' range.

While birding this winter, visit the Shenandoah and the Potomac Rivers. A walk along Bloomery Road or the C&O canal will produce several small flocks of Yellow-rumped Warblers busily feeding among the limbs of deciduous trees and calling to maintain contact with flock mates. During the breeding season, a trip to the highlands of Tucker, Randolph, or Pocahontas Counties should produce an encounter with breeding pairs and singing males. The

striking, handsome plumage of a breeding male is something to see and relish.



Photos of Yellow Rumped Warblers © Wil Hershberger

PVAS Events

Citizen Science, Birding 101, Natural History Workshops Highlight Upcoming Adult Programs

PVAS offers programming to keep you active, engaged, and learning during the long winter months. Whether in the warmth of Cool Spring Nature Center or on the trails of Eidolon Nature Preserve, exciting and engaging opportunities such as birding, educational programs, and workshops are available for you to experience.



We encourage everyone to join one of the many birding opportunities offered this season. The Great Backyard Bird Count (GBBC) is the perfect solution for birders with a busy schedule or for those who love to bird from the comfort of their home. This popular citizen science event yields valuable data about the presence and change over time in bird populations in a local area. Follow a few simple steps to participate: 1. Register online at www.gbcbirdcount.org; 2. Count birds for at least 15 minutes on one or more days between February 15 and 18, 2019; 3. Enter your observation data on the GBBC website: <http://www.gbcbirdcount.org>. All ages and experience levels can participate in this event, and it provides an accessible introduction to citizen science. Participants can count birds in their backyards or find another location, such as a PVAS nature preserve. For a more social count, join our February 16 bird walk at the USGS Fish Health Lab. Please visit the official website at <http://gbcbirdcount.org/> for more information. Bird walks are an excellent way to stay active and social, and we offer many opportunities for you to participate. Monthly walks at the USGS Fish Health Lab or the “Third Wednesday” walks at Cool Spring Preserve are two examples of free and easy ways to stay engaged. In addition, the extremely popular Birding 101 is set to begin classes on Thurs., April 11. Classes are held four Thursday evenings in a row with field trips to various local birding hotspots on the following Saturday mornings.

PVAS’s calendar is filling up with various exciting events throughout February and March. Join Shawn Walker for his Groundhog Day Winter Tree ID at Eidolon Nature Preserve. Join the walk and be the first to see if the groundhogs of Eidolon come out of their burrows and see their shadows. Attend one of our four Art Inspired by Nature Workshops being held at Cool Spring Preserve: “Drawn from Nature,” John James Audubon and How He Drew the Birds of America by Doug Pifer; a Mandala Watercolor Workshop by Susan Brookreson; Art to Earth: An Ecopsychology Workshop by

Susan Loonsk; and Introduction to Naturalist Field Journals by Carolyn Duckworth. Details and registration are available on our website calendar at <https://www.potomacaudubon.org/calendar/>. In addition, we look forward to seeing you at Potomac Valley Audubon’s Monthly Programs on the second Wednesday evening of each month. The programs are held at 7 p.m. at the Hospice of the Panhandle’s Education Center in January through May and September through November. If you are a Master Naturalist, you are eligible to earn continuing education hours when attending any of these field trips, workshops or monthly programs.

The calendar is continually being updated, so please check frequently for updates and additional programming. <https://www.potomacaudubon.org/calendar/>



“This Race is for the Birds!”

Saturday, April 6

Broomgrass Organic Farm Community near Gerrardstown, WV
Run, Walk or Volunteer!

<https://www.potomacaudubon.org/race/>



Volunteer Spotlight**Have You Met Paul Breitenbach?**

Paul Breitenbach is not afraid of taking on thankless and sometimes tedious tasks. He has spent countless hours researching new laptop and projector systems for the Master Naturalist program; researching volunteer tracking software; getting volunteers to TRACK their hours; organizing state and local Master Naturalist conferences and gatherings; and serving on the Master Naturalist Coordinating Committee. In addition to all of these administrative tasks, he can be found at Cool Spring Preserve quite often monitoring homes for native bees. He has picked up and delivered pollinator plants for our native plant sales and even driven to South Mountain Creamery to pick up ice cream for our annual “Fireflies, Fiddles and Frogs” event. His dry wit accompanies him through all tasks and generous contributions to PVAS. We heartily thank him for his significant volunteer service.

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

**Family and Youth Programs****Homeschool and Pre-school Programs**

This spring, we will be offering a variety of **Homeschool programs** on exciting nature topics such as skull identification, animal tracking, animal defenses, herpetology, and scavengers. Each two-hour program explores the program theme through games, stories, and nature investigations during a hike on Cool Spring Preserve.

For our pre-school **Wee Naturalist program**, we will be exploring topics such as animal tracks, camouflage, animals that fly, egg-laying animals, and insects. These one-hour programs typically include a story, craft, and hike, all of which reinforce the program topic of the day.

We welcome newcomers, in addition to our regulars, to join us on these fun-packed programs where we use nature as our classroom.

**Spring Watershed Programs**

This spring, we will be offering our fourth grade **Watershed Education** program to seven schools in both Berkeley and Jefferson counties. Our Watershed program ends with a field experience where students will go to a local stream to conduct water quality testing and study macro invertebrates.



We have a heavy schedule of 13 field experiences scheduled either at Cool Spring Preserve, Stauffer’s Marsh, or Poor House Farm in Berkeley County this spring.

We are always in need of volunteers to help lead students in activities at our Watershed field experiences. If you think you might be interested in volunteering at a field trip, contact our Program Administrator, JiJi Russell at admin@potomacaudubon.org.

Camp Programs

2019 Summer Camps

Audubon Discovery Camp registration will open on February 1. Our day camps, which run from June 10 to August 2, include themed sessions for preschoolers all the way up to high school students, with the majority of camps geared for elementary-age children. Our camps are offered at both Yankauer Nature Preserve in Berkeley County and at Cool Spring Preserve in Jefferson County. In our 16th year of summer camp, we are eager to continue to offer nature experiences for youth in our community.

Our camps offer hands-on, experiential learning, as campers engage in active investigations in a variety of natural habitats. Our goal is for campers to gain a better understanding of their role in the natural world using all five senses and exploring with mind and body.



Our all-time favorite camp theme, **Camp Survivor**, returns once again, offering campers an opportunity to learn survival skills such as shelter building, orienteering, and fire building. Last year our **Water Week Camp** was also very popular, as we found that campers wanted nothing more than to be wet. Go figure! In response, we are introducing **Splish Splash Camp** at Cool Spring Preserve, where campers will be getting wet as they explore Bull Skin Run and build waterproof forts. Also new this year is our **Wild Child Camp**, which includes basically everything nature related. This camp will be very sensory focused, encouraging kids to play in mud, build forts, and create their own camouflage. For the creative, artsy campers, we'll offer **Earth Art Camp**. Campers wanting use their detective skills to investigate our preserves and learn about the animals that live there will enjoy **Nature Detectives Camp**.

Another new highlight is our high school **Eco-Careers Camp**, designed by PVAS's AmeriCorps volunteers, October and Matt. The goal of this camp is to introduce high schoolers to many fascinating environmental career paths by bringing in local experts in a variety of fields such as forestry, entomology, wildlife biology, and more. We'll expose campers to different research techniques such as bird banding, stream sampling, and land management. We hope that this camp might inspire high school students to pursue future studies in the environmental field.

For middle schoolers, we are offering two **Outdoor Adventure Camps**. For our session at Cool Spring, campers will visit FLOC Outdoor Learning Center in Shannondale to try out the high ropes course, and then canoe on the Shenandoah River. Our Yankauer session includes caving at Whittings Neck Caves, located just a few miles from Yankauer, and stream sampling the Potomac River.

Camps for preschool-aged kids include **Wee Naturalist Camp** for young campers and their parents, and **Nature Explorers Camp** for campers entering kindergarten and first grade.

Please help us spread the word about camp. If you know of a kid who loves spending time in nature, or even a kid who is willing to give it a try, encourage them to register. They'll have so much fun they won't know how much they're learning.



Birding News and Events

Christmas Bird Count Report 2018-19

By Bob Dean

The 119th Christmas Bird Count season was hampered by the same conditions that plagued local residents for much of 2018, which became the year for record rainfall in West Virginia. The Charles Town count, held on Dec. 15th, was wetter than any your compiler can recall. It rained from the 4 a.m. start of owling until we gathered at the Cool Spring Preserve for the post-count tally rally, and feasted on Gary Sylvester's fabulous offerings. It was a most generous contribution and we thank you very much, Gary!

Nonetheless the 27 intrepid participants were able to dig out 62 species for the count, well below the recent 10-year average of 76.6, but a total which included the count's first ever painted bunting. This is the second showing of this species (likely the same bird) at the same feeder in the Bakerton area, and we were lucky that it arrived before the count and stayed to be added to our growing species list.

There were some notable absences from the list: grebes, shorebirds, Horned Lark, Red-breasted Nuthatch, Hermit Thrush, Eastern Towhee, only seven species of ducks, and the only owls were two Great-horned.

The list does include some uncommon winter residents like Eastern Phoebe, Yellow-rumped Warbler, Winter Wren, Ruby-crowned Kinglet, American Tree Sparrow, Swamp Sparrow, Eastern Meadowlark, Purple Finch, and Pine Siskin. Bufflehead, wild turkey, and Red-shouldered hawk were seen in record numbers for the Charles Town count.

The Inwood count was held on Jan. 5th, and the 32 participants tallied 67 species; only slightly below the recent 10-year average of 67.6. The highlight was an Osprey found for the first time on this count. There were many other "good" birds on the list like Cackling Goose, Wood Duck, Green-winged Teal, Red-headed Woodpecker, Merlin, Eastern Phoebe, Ruby-crowned Kinglet, and Swamp Sparrow.

There were, as well, some unfortunate misses: Horned Lark, Winter Wren, Yellow-rumped Warbler, Eastern Towhee, Eastern Meadowlark, and in this year of winter invasions Purple Finch and Pine Siskin could have been encountered. Seen in record numbers for the Inwood count were Wood Duck, Turkey Vulture, Bald Eagle, Red-shouldered Hawk, Red-tailed Hawk, Eastern Screech Owl, and Red-winged Blackbird.

It's nice to have another year of CBCs in the book, and we hope that both local counts will once again be so well supported by local birding enthusiasts and the Potomac Valley Audubon Society in the next Christmas Bird Count season. A little less rain would be welcome.

The next opportunity for bird counting is quickly approaching. The Great Backyard Bird Count will be held on February 15-18 this year. This is a fantastic opportunity for all levels of birders to count any birds, anywhere at any time! Plan a get together with friends, settle in with some coffee or perhaps wine, and watch your feeders from the warm comfort of your house. It's that easy and that much fun. For more information on the Great Backyard Bird Count, including how to submit your lists, visit <http://www.gbcbirdcount.org>.



Birding 101 is open for registration

Thursday evening classes held April 11, 18, 25 & May 2 with corresponding
Saturday morning field trips

<https://www.potomacaudubon.org/event/natural-history-workshop-birding-101/>

Notes from the Preserves

Volunteer Accomplishments, Opportunities Featured

By KC Walters

This winter is turning out to be just as wet as all of 2018. While the weather has impacted a few of the volunteer workdays, my wonderful land management volunteer crew has still made progress on several exciting preserve projects.

The rain gardens at Cool Spring are coming along nicely. Volunteers were able to clear out weeds from both gardens adjacent to the parking lot, fill the gardens with mulch, and add some lovely native shrubs. We look forward to continuing this project in the spring until both gardens are filled with beautiful, water-loving, native species!

The December Yankauer workday resulted in completion of the outdoor classroom expansion. The expanded learning and play area was made level in the fall by bringing in fill dirt from the drainpipe project. This fill dirt then needed a support system to prevent erosion. So, a rockstar group of lady volunteers built a rock support wall around the outer edge of the outdoor classroom. They also finished hauling and spreading mulch in the area. It was a lot of hard work, but the end result was worth the effort. We are all so excited that the campers this summer will have an open space to play and learn in the woods.

Winter has given us chances to not only catch up on trail work at Eidolon and Stauffer's Marsh, but also to actually get ahead of it before the next growing season. The battle against invasive species and overgrown trails will continue into the early spring during the upcoming workdays. A few preserve needs cropped up over the winter. We are in need of a bicycle tire pump to keep the wheelbarrows functional, and a new bookshelf for the Nature Center. If you have one of these items that you are willing to donate, please reach out to me at katelyn@potomacaudubon.org. Thank you!

The next big project will be expanding our natural playspace at Cool Spring. PVAS recently accepted a grant from the Eastern Area Health Education Center Freedom's Run Community Grant Fund. The funds will be used to make our existing playspace safer with wood chips and adding in new elements of play. Check the *Month-at-a-glance* calendar, or visit our website and stay tuned to our Facebook page to find out when we will be working on the playspace. It's never too early to earn your 2019 volunteer hours. Your help at the nature preserves is invaluable, and I look forward to working with new and returning volunteers this year. Registering for workdays on our website or sending an email to katelyn@potomacaudubon.org, helps me to better plan the workday activities and communicate with you about changes or cancellations.



Checkered Sculpin – an Endemic Species Found at Cool Spring Preserve

By October Greenfield, Matt Wuertzer, and Zachary Kelly

On November 21, 2018, Than Hitt and Zachary Kelly from the U.S. Geological Survey came to Cool Spring Preserve to survey the diversity of fish in local Bullskin Run after the discovery of several potentially rare fish during October's BioBlitz event. A fish of particular interest to Hitt and Kelly was the Checkered Sculpin, a species recognized by ichthyologists but formally undescribed in the scientific literature. The species is endemic to streams of the central Potomac watershed and seemingly occurs only in cold spring runs.

Hitt and Kelly, along with PVAS employee Amy Moore and PVAS AmeriCorps volunteers October Greenfield and Matt Wuertzer, sampled 100m of Bullskin Run with a backpack electrofisher and dipnets.

Hitt felt that there was a good chance that the checkered sculpin could be inhabiting the stream, based on the water quality and physical habitat they observed. The fish species observed during this survey included Blacknose Dace, Pearl Dace, Green Sunfish, Fantail Darter, and the species of interest: Checkered Sculpin!

More than 60 checkered sculpin individuals were captured during the survey. Hitt and Kelly collected some of the sculpin for a behavioral study at the USGS Leetown Science Center. The goal of their study is to understand effects of water temperature and groundwater on native sculpin species. Checkered Sculpin appear to be limited to cold water spring creeks, so they may be affected as temperatures rise due to climate change. Due to its restricted range and habitat requirements, it is important to study and conserve the Checkered Sculpin, an endemic species at the Cool Spring Preserve.

For more information about this species you can contact Dr. Nathaniel (Than) Hitt at nhitt@usgs.gov.



Notes from the Preserves

Cool Spring is Solar Powered

By KC Walters

On an ordinary December day, the extraordinary happened: Bill Anderson of Milestone Solar flipped the switch and made the Cool Spring Nature Center solar powered!

The project, which has been over a year in the making, all started with VISTA volunteer, Erin Shaw, applying for and receiving a grant from the Appalachian Stewardship Foundation for a 24-panel, 7000-kilowatt system. With \$24,700 of funding secured we entered the research, learning and decision-making phase for all things solar. Should we have a roof-mounted or ground-mounted system? Will we need to fence the system? Which solar installation company should we use?

Some choices were easier than others. After several months of careful planning, we decided on a ground-mounted, grid-tied system. Our building was not ideal

for roof-mount. It is not south facing and it is difficult to tie in

the solar panels to the Structural Insulated Panels from which the roof is made. This left us with the ground-mount option, but also with a new decision about where to place the panels. For placement, our desires for tree preservation had to be balanced with our fear of vandalism, while also factoring in the locations of our existing utilities. Ultimately, we were able to select a great location on top of the hill behind the nature center.

Per our specifications, we received three different system proposals and were then faced with our final big decision. In the end, Milestone Solar proposed a system that could not be beat. Our system is comprised of Panasonic 330 HIT panels, SolarEdge P400 optimizers and a SolarEdge 7600 inverter. The panels came with a 25-year workmanship and a 25-year linear power warranty. They operate at a whopping 20% power efficiency and are expected to produce an average of 11,200-kilowatt hours of energy per year. And, the system came in under budget!

PVAS would like to thank Erin for chasing this opportunity for us; the Appalachian Stewardship Foundation for investing in our green energy future; and Bill and his Milestone Solar crew for



PVAS Director Kristin Alexander and Bill Anderson of Milestone Solar in front of the panels

Potomac Valley Master Naturalist Program

is still accepting applications for the 2019 class year.

Visit

<https://www.potomacaudubon.org/education/adult/masternat/>

for details and applications or email

adultprograms@potomacaudubon.org

for more information.

Summer Camp Alert!

The much-anticipated registration for Summer Camp opens in February.

Check out our website for session details and online registration:

www.potomacaudubon.org/education/youth/discovercamp/

Camp **scholarships** will be available again this year. For information, contact Camp Scholarship Committee chair Mary Etta Boesl at meboesl@yahoo.com

Conservation

Raise the Roost is Revitalized!

By KC Walters

Over the last several months, PVAS has been working with general contractor, Jim Schmitt, of Schmitt Construction located in Shepherdstown to redesign the Chimney Swift tower in a more economical way. Schmitt is a Shepherd alumni and longtime friend to PVAS. He has been integral in researching and conceptualizing alternative materials to fit the needs of the chimney swifts while also being mindful of our budget.

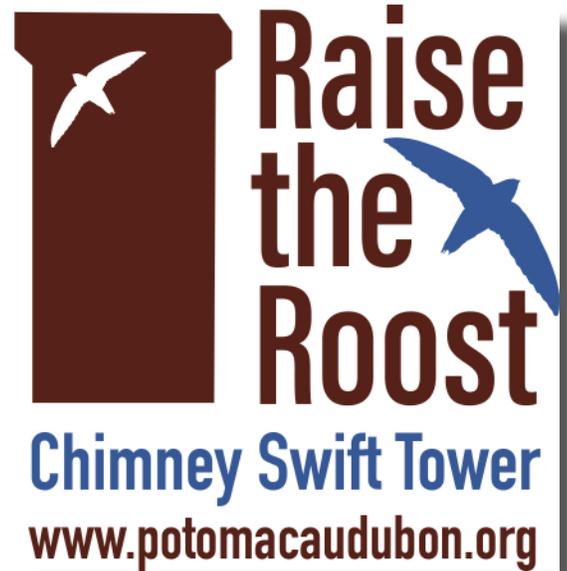
The new plan is to use pre-cast, stamped concrete in lieu of bricks. This stamping pattern will provide similar habitat and 'footholds' for the birds to the brick and mortar, at a drastically reduced cost. This new tower design is expected to have the same 100-year lifespan. This revolutionary design may set the stage for other organizations to build roosting towers for Swifts along their migration route, without suffering the high cost of building a brick chimney.

PVAS is working hard to finalize the plans with Schmitt and amend the Memorandum of Agreement with Shepherd University. We are hoping to have the tower built by early spring.

We greatly appreciate every contribution that has been made over the last two years and are proud to announce that we are halfway to our \$100,000 goal! We are continuing to fundraise to fully fund this project and help save this charismatic species that is so important to our community.

If you would like to contribute to our efforts to "Raise the Roost" you can donate to this project specifically by mail or on our website at: <https://www.potomacaudubon.org/conservation/conservation-initiatives/chimneyswifts/>.

To learn more about Chimney Swifts and the "Raise the Roost" project, join Kristin and KC for the PVAS Monthly Program on March 13. They will be sharing their knowledge and passion for swift conservation in our community.



Top 5: Signs of Spring

By October Greenfield

Spring is just around the corner. The weather is starting to get warmer, and the days are getting longer. Spring is a great time to get outside and notice all of the changes occurring in nature. Here are a few things to look and listen for.

1. One of the first signs of spring is the songs of birds filling the air. Spring is when birds start defending their nesting territories and trying to attract mates. Listen for the songs of warblers, the drumming of woodpeckers, and the caterwauling of owls.
2. They say April showers bring May flowers, but many flowers start blooming earlier than that. Keep an eye out for spring wildflowers such as Wild Geranium and Spring Beauty.



3. Whether we like it or not, the bugs will be back in full force soon. As the flowers begin to bloom, butterflies will be returning as well. And of course, as you spend more time outdoors, you should be more diligent about checking for ticks.

4. A classic sign of spring is the sound of spring peepers. As the weather warms up, these small frogs will start peeping along streams and wetlands.

5. As you wander out and about this spring, watch for trees starting to bud. Soon, green leaves and flowers will reappear and fill the woods. It'll be hard to miss the beautiful blossoms of Redbuds before their leaves emerge.



Advocacy

Microplastics: An Emerging Concern for Animal and Human Health*By Neal Barkus, Panhandle Progressive*

I cannot claim to be the most environmentally aware person in my neighborhood. I drive a car that is way too fond of gas, and often leave the lights on when I shouldn't. So maybe I can be excused for not having heard of microplastics until now.

Plastic, which is a petro-chemical product, is produced in prodigious quantities around the world and has been an important advancement in modern life. But all this plastic has created its own set of problems. One visible problem is the huge amount of plastic trash – containers, fishing nets, straws – that floats around on the surface of the oceans. Plastic products also shed or deconstruct to tiny, sometimes invisible, particles and fibers. The effects of these microplastics are poorly understood now, but they are sure to become a concern for animal and human health.

Since plastics were first widely used in the mid-20th century, roughly nine billion tons of it have been produced, most of which has become trash. This trash doesn't biodegrade. A recent article in the excellent magazine *High Country News* speculates that scientists in the distant future will come upon a brightly colored layer of plastic material deposited in our time. Some geologists today refer to the current period as the Plastocene, and even recognize a type of rock made from naturally fused plastic and sediment called plastiglomerate.

Microplastics are particles smaller than five millimeters in diameter. Some have broken down from larger objects like tires or plastic bags. Some have been intentionally manufactured. In the 1990s, concern about microbeads, tiny plastic scrubbers in toothpaste and exfoliant washes, led to a federal ban on them in personal care products beginning in 2017. But perhaps the greatest concern now is the tiny synthetic fibers shed by clothing.

Synthetic fibers are long, thin strands of plastic woven into threads, much like wool. It is estimated that 58% of today's clothing is woven with them. The fleece that keeps us warm in the winter is full of synthetic fiber. Synthetic blankets, sweaters and shirts also. A researcher in Australia set up three washing machines with special filters that trapped the microfibers after washing fleece garments. He found that they shed up to 1900 tiny fibers each time they were washed. These are too small to be captured by typical washing machine filters or municipal sewage systems. They go directly into our open water.

We are beginning to realize how widely microplastics are being taken up by animals in the lower orders of the food chain, such as invertebrate sea creatures, worms and insects. Mosquito larvae are also capable of eating microplastics and then retaining the plastic as adults. Dragonfly and midges, which also begin life as underwater larvae, are similar. Larger fish and sea animals that predate on the lower level creatures are likely to take up microplastics into their gut. And birds that make meals of insects are equally likely to take up microplastics.

Studies between 1962 and 2012 have revealed that 59% of examined seabird species have ingested plastics. Albatrosses, petrels and shearwaters contain more plastic than other species, probably because they feed in the open ocean and mistake floating plastic for prey. Most of this comes from pecking or otherwise ingesting small pieces of bottle caps, plastic bags, balloons, buttons and plastic lighters.

In the case of birds and other animals, it is unclear whether the plastic transfers from the gut to other organs and muscles. It may simply be ground up and pass through undigested. It is clear, however, that mortality rates increase among the birds that ingest large amounts of plastic. This could be caused by obstruction in the digestive tract, or an inverse correlation between the amount of plastic ingested and the amount of body fat the bird produces.

There have been no proper studies of the effects on humans of plastic uptake by fish and birds. Even scientists who work in the area concede that we have more serious environmental problems like carbon dioxide emissions and coastal erosion that require attention immediately.

But you can expect more attention to be paid to microplastics in the future. One reason is that they often act as sponges for other organic pollutants such as dioxins and PCBs. The molecules of these notably harmful chemicals shelter in the water-free environment found between the long carbon chains that make up plastics. A Japanese study found that three-millimeter-wide plastic resin pellets found in Tokyo Bay contained organic pollutants one million times their concentration in ordinary sea water.

So how can an environmentally retarded person, such as I am, act appropriately when it comes to plastic? One thing I do is ask for paper bags at the Food Lion. The check-out people see me coming and immediately go on break. Too bad – they will just have to get used to it. I also try to buy products packaged without plastic, but this is near impossible. Recently I found a big jug of olive oil in a glass bottle and snagged it. The more people do this the sooner manufacturers will get the message. And I will start buying cotton and wool garments, avoiding space-age synthetics. No more Speedo swimsuits.

But aside from modifying individual behavior, what can be done? West Virginia counties and cities still have the freedom to pass ordinances prohibiting one-use plastic packaging like shopping bags and water bottles. Last year, our ultra-libertarian Senator Patricia Rucker led a group of like-minded legislators in an effort to prohibit municipalities from passing ordinances relating to packaging and similar left-leaning issues. This effort failed, but she is likely to try again this year. If our newly-found environmental consciousness in Jefferson County has continuing strength, perhaps we can prevail on our local governments to tackle the plastic issue promptly.

PVMN

Potomac Valley Master Naturalists Gear Up for 13th Year

The Potomac Valley Master Naturalist Program ushers in its 13th year of offering high quality continuing education and expert volunteer services to our community. Coordinating Committee members have been busy scheduling classes, reserving classroom space, securing instructors, and ordering materials. The deadline for submitting applications was January 31; however, if you are interested in applying, please do so as there are a few remaining spaces available.

Every year the program covers very similar core and elective classes; however, it's the students, instructors, committee members and certified Master Naturalists that are the heart and soul of the program. Classes such as aquatic habitats, mammals and ecology provide the core, but the informative instructors and hands-on field learning are where the passion and excitement for continued education lies.

Each class seems to form a special bond among its members, and participants enjoy learning in a casual, but challenging way. There are no tests, just opportunities for adults to learn from experts in the field. Most members also find ways to deepen their knowledge on favorite topics

Classes for the 2019 program year will be held at a variety of locations including the National Conservation Training Center in Shepherdstown, Cool Spring Preserve in Jefferson County, and Cacapon State Park in Berkeley Springs. The program begins in March with a full weekend of classes and will continue one Saturday a month through October. Students in the course receive 62 classroom/field hours and must complete 30 hours of volunteer service in order to earn their certification.



Some students complete the coursework and volunteer hours in one year while others spread the experience over a couple of years. The core classes are mandatory, and while they are offered annually through the PVMN Program, they also can be taken through another chapter's Master Naturalist Program if necessary. Volunteer hours can be obtained anywhere in West Virginia through a wide range of opportunities such as tree planting, leading a bird walk, judging a middle school science fair, stream clean-up, etc.

Applications and scholarships for next year's program can be found online on the PVAS website (www.PotomacAudubon.org/masternat).

BECOME A PVAS MEMBER!

ALL of your dues will stay here to support local PVAS efforts and help us grow! And here's what you'll get:

- Ten-percent member discount to many PVAS programs and events.
- A subscription to *Valley Views*, the PVAS newsletter.
- Free or reduced admission to participating nature centers and/or their programs across the country.
- E-mail alerts about events and programs (upon request).
- An invitation to a PVAS Members annual gathering.
- Discounts to participating **local businesses**.

Membership Form

To become a local member, send in the form below and enclose a check. Dues are \$50/household, \$35/teachers (covering membership for everyone in your household for one year), or \$20/full-time adult student (benefits apply to member only). Make the check out to "PVAS." For details, go to: <http://potomacaudubon.org/member>.

Name: _____

Address: _____

City: _____ State: _____ Zip code: _____

Phone (optional): _____

E-mail: _____

To save postage costs, PVAS regularly sends its newsletter by e-mail. You can be assured that we do not share email addresses with anyone. If you would prefer to receive the newsletter by U.S. mail check here: ___.

Clip and mail this form to:

Membership Chair, PVAS
PO Box 578
Shepherdstown, WV 25443



Thank you for your support!

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.



Potomac Valley Audubon Society
 P O Box 578
 Shepherdstown, WV 25443
 Return Service Requested

NON-PROFIT ORG.
 US Postage
 PAID
 Permit No. 30
 Shepherdstown, WV

<http://www.potomacaudubon.org>

DATED MATERIALS

A proud partner of the United Way of
 the Eastern Panhandle and the Com-
 bined Federal Campaign.
 CFC#29061



CFC#29061

MAIL TO:

February/March 2019

Printed on 100% post-consumer waste recycled paper

Volume 37, Issue 4

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.

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

PVAS Officers and Board Members (year of term expiration in parentheses)

- President: Suzanne Offutt (2020)
- Past President: Michael Sullivan (2020)
- Vice President: Michael Sullivan (2019)
- Secretary: Georgia Jeppesen (2020)
- Treasurer: Dan Cogswell (2019)
- Board Members-at-Large: Patty Bain Bachner (2020)
- Susan Brookreson (2020)
- Don Campbell (2019)
- Laura Davis (2020)
- Amy Evrard (2019)
- Mina Goodrich (2019)
- Shannye Carroll (2020)
- Tiffany Lawrence (2020)
- Stephen Paradis (2020)
- Rod Snyder (2019)

Emerita Board Member Jean Neely

Special Contacts

- Executive Director: Kristin Alexander (304-676-3397) Kristin@PotomacAudubon.org
- Land/Conservation Mgr: KC Walters (304-283-7319) katelyn@potomacaudubon.org
- Lead Teacher/Naturalist: Amy Moore (240-818-4714) Amy@PotomacAudubon.org
- Adult Prog. Coord: Krista Hawley (703-303-1026) AdultPrograms@PotomacAudubon.org
- Program Administrator: JiJi Russell (681-252-1387) Admin@PotomacAudubon.org
- WV Promise VISTA Volunteer: Ariana Hagenau Ariana@PotomacAudubon.org
- Web Master: Kathy Bilton kathy@fred.net
- PVAS Wildlife Rescue Coord: Diana Mullis (304-754-3753) dianamullis7@gmail.com
- Valley Views* editor/publisher: Charlotte Fremaux (301-404-8639) newsletter@potomacaudubon.org

PVAS BOARD

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