

# Linn Log

newsletter of the Merrill W. Linn Land & Waterways Conservancy

fall 2018



## Mission of the Linn Conservancy

To preserve and protect significant ecological sites in Union, upper Northumberland, and contiguous counties and to educate the public on conservation issues critical to the health of our environment.

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## for your calendar

**Friday, September 28:** 7:30 am, Conservation Union meeting, Union County Gov't Center, Lewisburg. Meets last Friday of each month.

**Sunday, September 30:** Fossil hunt, 1-5 pm, Faylor Creek Lake, Beaver Springs

**Sunday, October 7:** Walk in Penns Woods; 1 - 3 pm, Laurelton

**Saturday, October 20, 1 - 3 pm:** Linn Conservancy 30th anniversary celebration, Campus Theatre

**Friday, Saturday, October 26-27:** Susquehanna River Symposium, Bucknell University. Details at <https://www.bucknell.edu/riversymposium>

**Seven Mountains Audubon Society**, third Wednesday monthly at Kelly Township Hall on Ziegler Road at 7:30 pm. Seven Mountains Audubon bird walks, first Saturday of month. Meet 7:30 am in front of old Walmart store near Panera's, Lewisburg. For details, visit [www.sevenmountainsaudubon.org](http://www.sevenmountainsaudubon.org) or follow Seven Mountains Audubon on Facebook.

**Sierra Club** meets second Wednesday, 7 pm, every other month at Union County Govt. Center, Lewisburg. For more information, email [www.otzsierraclub.org](http://www.otzsierraclub.org).

**River Edge Conservation Effort in Lewisburg**  
On Mondays at 6 pm, anyone interested in assisting with some conservation efforts along the river in Lewisburg should meet at the empty lot just north of the boat ramp on St. George St. Tasks vary with the season, but weeding, invasives control, planting and other efforts are underway in that area. Activities will continue into mid-October (maybe later) and resume in spring.

Our **Middle Susquehanna Riverkeeper**, Carol Parenzan, has a number of activities lined up for the fall. She has been very busy this summer with activities related to Loyalsock Creek, which was voted PA River of the Year for 2018, and with issues related to the high water events in July and August. Visit Carol's website [www.MiddleSusquehannaRiverkeeper.org](http://www.MiddleSusquehannaRiverkeeper.org) and Facebook page for details on upcoming events.

*"For most of human history man has had to fight nature to survive; in this century he is beginning to realize that in order to survive he must protect it."*

Jacques Cousteau (written, of course, regarding the 20th century)

## News

Continued from page 1

### Community Fossil Dig Day!

The Linn Conservancy is offering a fossil dig at Faylor



*Brachiopod fossil*

Lake near Beaver Springs, PA, on Sunday, September 30. Participants can join the dig anytime from 1 - 5 pm. Discover and collect fossils from a safe, quiet quarry containing a rich trove of ancient life. Bucknell University professor Jeff Trop and students will guide fossil hunting and identify fossil finds.

Participants can expect to find marine fossils, mainly brachiopods and crinoids; less common are trilobites, bivalves, gastropods, cephalopods, corals, and bryozoans. Wear clothing and footwear that can get dirty. Bring water, snacks, and sunscreen as well as fossils that you would like to have identified. Bring a hammer, chisel (or flathead screwdriver), and safety glasses/sunglasses to aid fossil collecting; a limited supply of equipment will be available to borrow.

Questions? Phone 570-524-8666, email [Linn@ptd.net](mailto:Linn@ptd.net), or visit [linnconservancy.org](http://linnconservancy.org)

#### Directions to Shale Pit Road, Beaver Springs:

- From Mifflinburg, take PA-104 south 4 miles to Penns Creek. Turn right onto Troxelville Road, continue 8.5 miles to Troxelville. Bear left onto PA-235 for 2.5 miles. After Beaver Springs Dragway, turn right onto Middle Creek Road, continue 1.5 miles. Turn left onto Shale Pit Road, continue 0.5 miles. Fossil quarry will be on your right.
- From Middleburg, take PA-522 west 9.3 miles to Beaver Springs. After Beaver Creek Tractor, turn right onto Ridge Road, continue 1 mile. Turn right onto Stage Road, continue 1 mile. Turn sharp right onto Shale Pit Road, continue 1.2 miles. Fossil quarry and parking will be on your left.

### Walk in Penns Woods

Join a group on Sunday, October 7, at any of many locations throughout the state for this annual statewide event. Visit [www.WalkinPennsWoods.org](http://www.WalkinPennsWoods.org) for details related to all locations. Below is the information for Union County, but visit the website for updates on locations for other nearby sites that may be posted after publication of this newsletter.

### Union County – Bald Eagle State Forest 1 – 3 pm

Description of Walk – For 20 years the Bald Eagle State Forests, Stony Run Demonstration Forest has provided a unique learning experience to thousands of students, woodland owners, and curious patrons about the importance of proper forest management.

Please join Service Forester Gerald Hoy as he will teach Tree ID, Invasive Plant ID, Wildlife Habitat Strategies, Hemlock Management, Timber Harvesting Practices and more.

Forests are continually changing, so even if you have visited the Stony Run Demo Forest before, you will be surprised to see the changes that have taken place in such a short amount of time. If you have questions about this exciting program or need more detailed direction to the site, please feel free to contact Gerald Hoy at 570-922-3344 or [gehoy@pa.gov](mailto:gehoy@pa.gov).

### Tom Gibson Leaves Linn Board

After serving the Conservancy as a board member for many years, Tom Gibson has decided to leave his seat due to other personal obligations and projects. Tom served as coordinator of our annual Caring for Communities program throughout most of the 15 year history of that series of springtime events. We are pleased that his departure from service to the Conservancy will be gradual as he has agreed to avail himself to assisting in the planning of CFC events for April/May of 2019. We thank Tom for his dedication to the Conservancy's mission and wish him the best in future endeavors.

If you have an interest in serving on one of our committees and/or as a candidate for a seat on our board, we would be happy to talk to you about your responsibilities in any such role. It is always good for us to have a pool of potential candidates for positions as expected and unexpected vacancies arise.

### Easements and Monitoring Update

Several inquiries have come to us in recent months from individuals and families interested in protecting their land. We hope to follow up soon concerning sites in Snyder County and western Union County by way of conservation easements and, in two cases, outright donation of land to the Conservancy. If you care to learn more about safeguarding your land, visit our website and open the drop-down menu titled Protecting Your Land.

Our annual monitoring of easement properties was completed in May. All sites were found to be in compliance with terms of the easements. Such monitoring is an annual obligation of the Conservancy to assure that the terms of the conservation agreements are being adhered to. We thank Allen Schweinsberg, site committee chair, for coordinating the process and those individuals involved in the field.

## President's Message

### *linking landscapes/paying tribute*



Dick Nickelsen

### Paying Tribute by “Going Native”

AS we continue to move forward with the “quiet” portion of the Linn Conservancy’s Campaign for Sustainability, we recognize the need to honor those who have given generously to support the long-term viability of our organization. Given that we are an organization whose mission is all about conservation of land, water, and other natural resources, it seems inappropriate to be honoring our donors with the kind of material items that are more often given to acknowledge their generosity—watches, pins, plaques, and the like. So we came up instead with the idea of planting a native tree in their honor on one of our publicly-accessible conservation easements. The owners of these properties have kindly agreed to participate in this plan, and we are grateful.

Cindy (Helen) Nickelsen was the Campaign’s first major individual contributor; she gave in honor of her husband Dick (Richard) Nickelsen, a former Bucknell Geology professor and a founding member of the Conservancy. Cindy has chosen to have us plant an American chestnut tree on the Conservancy’s Shamokin Mountain easement. Landowners Chris and Warren (Abe) Abrahamson, Ruth Burnham and Wayne McDiffitt were Dick’s close colleagues and friends, so it seems especially fitting for them to host this first tree planting in his honor.

Dick attended Dartmouth College (BS) and Johns Hopkins University (MS, PhD) before teaching for a number of years at Penn State. In 1959, he came to teach at Bucknell, where he eventually served for many years as Geology Department chair, and where he received the Lindback Award for Distinguished Teaching. Before and during his time in Lewisburg, Dick travelled worldwide, including in Alaska with the U.S. Geological Survey and in Norway through a NATO fellowship.

Dick served for many years on the board of the Union County Conservation District. Also an avid birder and a faithful Audubon member, in 2012 he received the Great Egret Award from the National Audubon Society and Seven Mountains Audubon. His friend and fellow birder Allen Schweinsberg recalls, “Dick served as president of Seven Mountains. He led numerous field trips and coordinated our Christmas bird count for nearly twenty years. He was such a delight to be with. What a wonderfully warm person. Our age difference was such that Dick was young enough to be a close friend and old enough to be a cherished father figure.”

Both with Audubon and as a founding member of the Merrill Linn Conservancy, Dick led countless field trips throughout the region and was instrumental in laying out the extremely popular Dale’s Ridge Trail. His colleague and fellow Conservancy board member Warren (Abe) Abrahamson remembers his friend this way: “I cherish my memories of the numerous hikes that Dick and I shared – often to remote bogs and remarkable forests. His deep passion for the natural world was contagious to all who hiked with him. Dick instilled in me a better understanding of Pennsylvania’s landforms while we shared our enthusiasm for birds, plants, and ecology.” Abe added, “Wayne and Ruth and Chris and I are deeply honored to have an American chestnut in Dick’s memory planted on our conservation-easement protected Shamokin Mountain property. Dick was a dear friend and an outstanding mentor.”

Since Dick’s passing, the Linn Conservancy has further benefitted from Cindy’s continued generosity and commitment to conservation through her underwriting of a Linn Conservancy-developed native-plant and butterfly garden at RiverWoods Senior Living Community in Lewisburg where she and Dick moved in 2012. Supported additionally by William Metzger Sr., RiverWoods staff, and fellow residents, the garden includes many native pollinating flowers including milkweed, which has already attracted the attention of the Monarch butterflies!

In addition to making this garden a reality, and a model for backyard gardeners across the region, the Linn Conservancy is profoundly grateful to Cindy for her contribution to the Conservancy’s Campaign for Sustainability honoring Dick’s memory. And we are proud to hold our first Commemorative Native Tree Planting event to permanently pay tribute to them both.

Susan Warner-Mills, President



## Linn Conservancy Celebrates 30 Years: *Linking Landscapes, Promoting Sustainability*

Save the date! On Saturday, October 20, the Merrill Linn Conservancy will officially mark its 30th anniversary with a celebration—open to all—at the Campus Theatre in Lewisburg. From 1 pm to 3 pm, the Conservancy and Buffalo Creek Watershed Alliance (BCWA) will host friends, members, and preschoolers to adults at the free event that will include environmental activities, drone videos, displays, games, live music, and refreshments.

Biology professor Chris Martine, Bucknell's David Burpee Chair in Plant Genetics & Research, will present his latest video in the acclaimed "Plants Are Cool, Too" YouTube series. The video was shot at Shikellamy State Park Overlook where the filmmakers rappelled the bluffs to find three rare plant species, including one that is globally imperiled.

Professor Martine is recognized as an evangelist for the plant sciences, spreading the word through social media, blogging, community education, and his "Plants Are Cool, Too" online video series. This past summer, the American Society of Plant Taxonomist honored professor Martine with the presentation of its 2018 Peter Raven Award for exceptional outreach to non-scientists.

Singer-songwriter Billy Kelly, whose "Trees" album received a Grammy nomination for best children's album in 2016, will provide musical entertainment—and possibly some comedy, his latest venture in the entertainment field.

Both the Linn Conservancy and BCWA will present videos featuring drone footage of protected land and waterways. The Conservancy's video will explore the diverse terrain of visually outstanding conservation easements as well as dramatic views of Shikellamy

State Park Overlook. BCWA's video will track significant stretches of Buffalo Creek from its headwaters in Centre County to St. Anthony Street in Lewisburg where the waters of Buffalo Creek join the Susquehanna.



*Join us at the Campus Theatre on October 20.*

Nature photos by local photographers of all ages and abilities will be displayed via PowerPoints at computers stationed in the theatre. Conservancy and BCWA members are encouraged to submit up to three nature photographs captured in 2018. (DPI 300) Email photos to [naturephotos30@hughes.net](mailto:naturephotos30@hughes.net).

Displays from like-minded organizations including The Sierra Club, Middle Susquehanna Riverkeeper, Susquehanna Greenways, and the Union County Conservation District will be mounted in the theatre's mezzanine area. The Lewisburg Children's Museum will also be present, offering children's activities. The Conservancy will invite children to participate in a native plants activity that challenges them to match colorful native flower stickers to plant descriptions.

Free refreshments will be available throughout the day. Mini-quiches, bruschetta, and other savories will be served along with a variety of desserts and drinks. Plan to attend and join in the celebration!

## RiverWoods Dedicates Native Plants/Butterfly Garden



*Above, left to right: UCCD Manager Bill Deitrick and Conservancy members John Tonzetich, Warren Abrahamson, Marilyn Murphy and Diane Donato*

*Right: Helen (Cindy) Nickelsen and William (Bill) Metzger*

Residents and friends of RiverWoods gathered in the RidgeCrest dining room on July 25 to dedicate the Native Plants/Butterfly Garden installed on the RiverWoods campus in memory of Bucknell Geology Professor Dick Nickelsen (See President's Message on page 3.) The afternoon event included refreshments and a screening of the Nova/PBS film, "The Incredible Journey of the Butterflies," which follows the 2,000-mile annual migration of Monarch butterflies.

Cindy Nickelsen, who invited Conservancy members to design and install the butterfly garden, provided financial backing for the project. Fellow RiverWoods resident William Metzger enthusiastically supported the project, underwriting interpretive signage, plant markers, and a garden bench where RiverWoods residents and visitors can pause to enjoy the garden.



## Where Conservation Decisions Are Made – Part II

### Beyond the Zoning Map

*Contributed by Shawn McLaughlin, Union County Planner*

As you may recall from Part I of this series, which appeared in the Spring 2018 *Linn Log*, zoning is a tool that local governments may deploy for conservation purposes. Zoning regulations control how land is used and can be implemented to limit development and protect working farms, natural and scenic resources such as forests, wetlands, water resources and floodplains. Zoning is voluntary and can be controversial as some local elected officials do not support enacting regulations that may restrict how landowners may use their private property, even though the United States Supreme Court in 1926 upheld zoning as furthering a legitimate government interest for protecting the public health, safety, and general welfare.

In upper Northumberland, Snyder, and Union counties just over half of the 51 municipalities have zoning. If you live in a borough or township that does have zoning, have you reviewed the zoning map recently to see how different land areas are zoned? Or have you delved deeper by examining the zoning regulations to determine what they really mean?

In simple terms the zoning map splits the geography of a local government into different land use zones such as agriculture, low, medium, or high density residential, forest preservation, commercial, and industrial for example. However just because a zoning map shows a large portion of your community zoned for agricultural or forestry does not necessarily mean the zoning ordinance is constructed in a way to truly conserve those important resources. You have to go beyond the zoning map and dig a little deeper to get a complete picture of what could really happen in the future as the map alone can be misleading.

There are townships in the region that have agricultural/agricultural preservation zoning districts that are in name only. Meaning that if you open up the zoning book and look at the regulations you would find that an unlimited

number of residential housing units could be built on one-acre lots throughout these areas. In reality such zoning districts are rural residential areas that promote suburban sprawl and just happen to allow agricultural activities. In other cases the zoning ordinance may permit entire farms to be split into smaller 10 acre farmettes, sometimes referred to as estate lots.

The same can be said for many of the forest and woodland preservation zoning districts across the region. There are townships with woodland preservation zones that allow forested tracts to be developed into an unlimited number of one (1) to three (3) acre residential lots. Where smaller lots are not the norm many municipalities still permit large forested tracts to be split into unlimited 10-acre lots.

In both these cases the zoning is not effective

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*To be effective, agricultural and forest zoning districts need to limit development to a truly rural scale through restrictions on new residential development and parcel fragmentation.*

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at conserving or protecting the productive agricultural soils, forests, natural habitats, and open spaces in our region. To be effective,

agricultural and forest zoning districts need to limit development to a truly rural scale through restrictions on new residential development and parcel fragmentation. The zoning districts should also only allow land uses compatible with land conservation goals. For example many forest/ woodland preservation zoning districts often permit land uses that by their very nature require the clearing of vegetation from large areas. Does that make sense in a forested zone? Similarly agricultural zoning districts may allow golf courses, schools, churches, and large residential subdivisions which can quickly consume significant green fields for buildings and parking lots.

What can you do as a resident concerned about conservation and the future of where you live? If your community has zoning take a few minutes online or visit your municipal office to

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look over the zoning map and corresponding ordinance. If you are unsure how to interpret the ordinance language, ask someone, such as the zoning officer, to explain it to you in simple terms. For example you might ask them what is allowed to occur on a 150-acre parcel in the agricultural or forest/woodland zoned areas in terms of allowed uses, the amount of development that can occur, and how many new parcels could be created. You can also ask your county planning office to help you understand what your municipal zoning means.

If you then feel the zoning regulations in your municipality are lacking bring it to the attention of your local planning commission and elected officials. They may not realize certain parts of the ordinance are ineffective and might be willing to make corrective amendments. Many zoning ordinances were written over 20 years ago, often

by consultants or county staff that made recommendations to the community. Often local officials made their decisions based on the advice they were given by professionals at that time. In other instances property owners, who viewed zoning as an infringement on their rights or were unfamiliar with the concept, may have pressured local officials into implementing less effective ordinance language but now may feel differently.

If your community does not have zoning, you could ask local officials why not and inquire as to whether there are any plans to change that in the near future. In these areas the work of the Linn Conservancy is even more important because without the temporary conservation protection offered by zoning literally anything can go on the landscape. Therefore, helping to spread the word about the advantages and values of conservation easements and the work of the Linn Conservancy to friends and neighbors should be foremost on the “to do” list of every Conservancy member.



*Conservancy board members  
Adrienne Gemberling and Jeff Trop*



*Ann Gelnett*



*Susan Warner-Mills and  
Samantha Pearson*

## **Conservancy's May Banquet at Shade Mountain**

We were afforded another beautiful evening for our annual banquet at Shade Mountain Winery and Vineyard. Seventy-eight attendees, including many first-timers, enjoyed the hors d'oeuvres and meal provided by *That Kitchen Witch* and a presentation about riparian buffers by board member, Adrienne Gemberling. Our Service Award was presented to Ann Gelnett who, for 30 years, has served as our historian and maintained a scrapbook of news articles, CFC calendars, banquet programs, and more. Our Environmental Leadership Award went to Samantha Pearson, Executive Director, Elm Street Manager, Lewisburg Neighborhoods Association. Our evening concluded with our auction of over 20 items including gift certificates to local restaurants, for canoe/kayak trips, massages, Campus Theatre passes, member-made wood carvings, magazine subscriptions, and more.



# Wetland Restoration & Wildflower Meadow

## Highlight Changes on Koons Easement

by Ryan Sabo

The Koons Trail in Mifflinburg along Buffalo Creek has been one of the region's few urban/suburban natural recreation opportunities for nearly 30 years. Created when Miss Mary Koons granted a conservation easement on 30 acres of land to the Merrill W. Linn Land and Waterways



*Wetlands north of Hassenplug Bridge*

Conservancy, the trail has been a much loved part of the community for a generation. Recently, the trail and surrounding lands have

undergone some changes, and new and planned trail expansions will nearly double the length of the trail available to the public.

The original trail measures approximately one mile of loops through riparian habitat along the south bank of Buffalo Creek, beginning and ending at the historic Hassenplug Covered Bridge. The habitat along the trail is in a state of succession since the removal of ash trees killed by the emerald ash borer beetle - an invasive species that is devastating the ash population throughout the northeast woodbasket. Hikers who haven't visited the trail in the last year will be greeted with a riparian buffer in transition, as the plant and tree species adapt to the loss of the ash. It will be interesting to watch as nature compensates after the predominant tree species is removed from the ecosystem, so visitors will have something new to see with each passing year.

While many people are familiar with the Koons Trail itself, very few realize that the easement granted by Mary Koons encompasses many more acres in the heart of the borough. Over the past several years, numerous public and private organizations and individuals have cooperated to improve the natural habitats surrounding Buffalo Creek and the trail. The improvements have been remarkable.

North of the Hassenplug Bridge, two sections that were historically drained for agriculture production have been restored to functioning wetlands. Drainage tile and swales were removed, potholes and marshes were created, some bird boxes were installed, and invasive species eradication has begun. There is much work to be

done, but the habitat improvements quickly attracted bird and mammal species that hadn't been observed on the property prior to the restoration. Amphibian and reptile numbers and diversity has improved remarkably. On the east side of 4th Street, a large 8' high knoll has been created for visitors to observe the wetlands from an elevated advantage point. Work to improve the wildlife habitat is ongoing, and new trails are planned to be established through this fall and winter.



*Meadow south of Hassenplug Bridge*

South of Hassenplug Bridge, between 4th Street and Ward Way, six acres of agriculture land most recently in hay production have been transitioned into bird and pollinator habitat. In 2017, the mixed hay crop was removed, and wildflowers and

warm season grasses established. The meadow is now in the second growing season, about halfway through the establishment period, and it is clear that the meadow is going to thrive. The wildflower and grass species diversity is excellent, and the pollinators have arrived en masse.

A new trail has been created through the new meadow. Visitors to the Koons Trail will have nearly a quarter-mile of mown path to explore this



*Ryan Sabo, second from left, leads Conservation Union members along the new meadow trail.*

incredible habitat. Meadows are always in transition - from season to season and year to year, each and every week brings new plants, insects, and birds into the

spotlight, so there is always something new to see. The Meadow Loop will begin and end on the original Koons Trail and will be fully open to the public beginning on Saturday, September 1.

*Continued on page 8*

## Wetlands Reconstruction

*Continued from page 7*

Follow the signs from the trailhead at the Hassenplug Bridge, and be sure to bring a camera!

It is truly special to have such wonderful habitat and recreation opportunities within the heart of a small town. Much work remains to complete the restorations and trail installations, and the ongoing maintenance is considerable. The Linn Conservancy and the landowners would like to take the opportunity to thank all those who have helped bring the project to the point we are today. We feel that it is important for our membership and the public to know that projects like the work being done around the Koons Trail wouldn't be possible without significant cooperation.

We would like to thank:

- USDA's Natural Resources Conservation Service for financial and technical assistance. NRCS was the lead contributor to the project and Shane Eia specifically contributed a tremendous amount of effort to the project.
- Union County Conservation District for ongoing support.
- Pennsylvania Game Commission for guidance and conservation recommendations.
- Pennsylvania Fish and Boat Commission
- Bucknell University Management 101 for volunteer hours to install bird boxes and remove invasive species.
- The membership and volunteers of the Merrill W. Linn Conservancy who contributed volunteer hours to help restore the trail after the loss of the ash trees.
- U.S. Fish and Wildlife Service who restored the function of the wetlands and planted the meadow.

If you would like information on habitat restoration on your land, or if you would like to contribute to the ongoing work at the Koons Trail, please contact the Conservancy at [linn@ptd.net](mailto:linn@ptd.net) or 570-524-8666. Contact landowner Ryan Sabo at [ryan.p.sabo@gmail.com](mailto:ryan.p.sabo@gmail.com) or 570-898-1543

## **PALTA Releases 2017 Census Report**

The PA Land Trust Association (PALTA) recently released its biennial census noting that 26 percent of all conservation accomplished by land trusts occurred in the past decade. Between January 2008 and December 2017, the census identified 87 private charitable organizations that have completed conservation real estate transactions.

In total they have increased the amount of preserved land by 36 percent in that decade to a

total of 189,000 acres (295 square miles). In 2016 and 2017 alone, land trusts protected 22,000 acres (34 square miles). In our 30-year history, the Linn Conservancy has assisted in the protection of nearly 1800 acres through 16 conservation easements, purchase and hold, purchase and transfer to the state park system and referral to county agricultural land preservation programs.

## **Bucknell Students Work On Behalf of Conservancy**

During Bucknell's spring semester, students from two different classes did projects on behalf of the Linn Conservancy. A Management 101 team, the ConservanTees, whose team leader was sophomore Fiona Cardamone, did a fundraising project to support site work at the Koons easement in Mifflinburg and at the Dale/Engle/Walker (D/E/W) easement near Lewisburg.

The team's fundraising effort included design and sale of 300 long-sleeved tee shirts on campus which provided over \$600 that they used for site project costs and a donation of over \$1100 to the Conservancy.



Work at Koons included building and installation of several bluebird boxes in the recently created wetlands and removal of invasive species within the wetlands and along the (Buffalo) creek side trail. Their time devoted to invasive removal on that property will also count as a dollar match required for a grant awarded for stream restoration work along Buffalo Creek in 2019.

At D/E/W, the team created new flower beds, refurbished the "victory gardens" near the house and worked to remove invasive honeysuckle along portions of the Dale's Ridge Trail.

In total, the 28-member class spent six days on our sites and devoted an estimated 250 hours to physical work on the properties. We want to recognize Professors Tammy Hiller and Jamie Hendry for providing guidance for these students to successfully complete this work on behalf of the Conservancy.



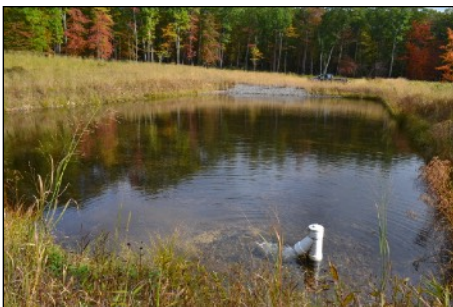
## News from Buffalo Creek Watershed Alliance of the Merrill Linn Conservancy

### Buffalo Creek Acid Remediation Site Stewardship Report

*by Thom Fantaskey*

Buffalo Creek bubbles to the surface in a remote forested ridgetop a few miles north of Laurelton. The water flows for 8 miles through Bald Eagle State Forest, plunges through a wild section known as The Gooseneck, enters agricultural land and then flows 20 more miles to the Susquehanna River at Lewisburg. Buffalo Creek Watershed Alliance (BCWA) was formed in 2002 to monitor water quality in Buffalo Creek. Since sampling began in 2005, I have enjoyed sampling a gorgeous section of Penns Woods extending from the headwaters and into the Gooseneck.

Initial sampling revealed major differences in pH along the creek's course. Above the agricultural lands, pH was very low (acidic). It is believed that industrially-produced acid, introduced into the atmosphere to our west, falls as acid precipitation (rain/snow) within the watershed. The lack of buffering capacity on the sandstone ridgetops allowed the pH to drop in this 8-mile stretch to levels that aquatic life could not survive. In 2010 BCWA entered into an agreement with DCNR Forestry to construct an acid remediation site near the headwaters. Two ponds containing limestone were built; the limestone buffers the acid and raises the pH of the water. A portion of stream water is diverted from the creek, passes through the ponds and then reenters the stream with a near neutral pH. This project has been enormously successful to the point where aquatic insects and native brook trout, which had been absent from this section of Buffalo Creek for decades, have returned.



*The limestone pond*

Beyond monitoring water quality, BCWA is committed to maintaining the site in an operable state and keeping the area that was cleared for the installation free of invasive species while natural forest succession occurs. Since the installation of the ponds in May 2011, Tom Duck and I have sampled water quality and performed maintenance tasks at the site on a semi-annual basis. After each sampling/maintenance event we provide a written report to the

BCWA board. In order to provide awareness to a larger audience, the following is a brief look at our June 2018 visit to the Buffalo Creek Acid Remediation Site.

The field north of the limestone pond (ALB) is very healthy, full of grasses with some sweetfern and huckleberry. The seedling conifers BCWA planted are



*Redwing blackbirds nest among the cattails in the compost pond.*

doing very well with significant growth this year though there is not much evidence of the deciduous trees that were planted. There is still some invasive thistle which Tom Duck will return to treat as last year's treatment was effective but not complete. Overall this field is healthy and provides a diverse habitat within the forest zone.

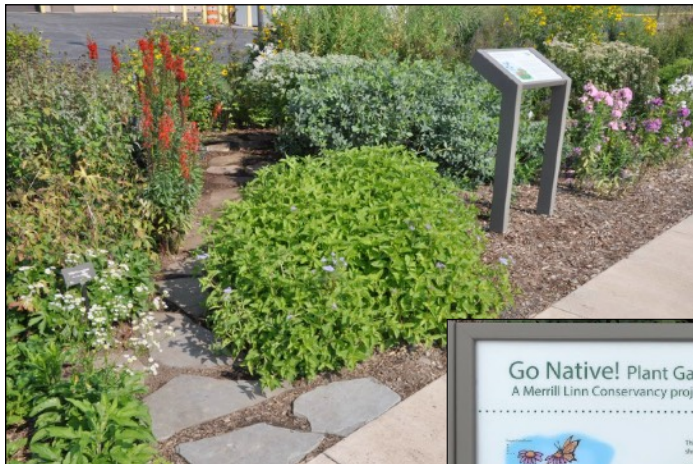
The compost pond (ACLB) is full of cattails except for a few open patches remaining from the damage done by muskrats. The bank restoration project is complete and looks good. There is no evidence of new activity by muskrats!

The limestone pond is at normal height and very clear. There was a brisk flow into the pond from the diversion pipes. The limestone bottom is visible and clear of debris.

The water sample results (conductivity, pH, alkalinity, temperature, flow rate) from all three sites (above the intake dam, in the ACLB, below the exit weir) were consistent with results over the years since installation.

Overall the system is working well, the modified landscape blends into the environment, and the health and quality of the water in Buffalo Creek's upper reach has been improved by this project. Plants, animals, and people all benefit from this. BCWA has a long-term commitment to maintaining this site and it is important that we find more people to become interested and involved to ensure its continuation. Please contact BCWA if you have an interest in participating in this project.





## Conservancy's Go Native! garden at East Buffalo Twp. property thrives

*Above: Shaffer Landscapes donated stones for a garden pathway.*

*Right: An interpretive garden sign, installed by EBT, anchors the garden. Plant markers were also added for selected species.*



Haven't visited the Linn Conservancy's Go Native garden this year? There is still time. Late summer rains have extended the perennials' growing season and are keeping the native grasses fresh and green.

The Go Native! garden was made possible by a DEP Environmental Education mini-grant, a PPL Foundation grant, and private donations. Many organizations and individuals have donated time and talent to the creation and maintenance of the native garden, including Bucknell University, the Union County Conservation District, East Buffalo Township, and the Lewisburg Garden Club. To learn more about the garden visit: [www.gonativegardens.org](http://www.gonativegardens.org)

Photos by Warren Abrahamson, Geoff Goodenow, and Diane Donato.





## thank you!

**New members:** Ben and Tiffany Ranck, Lewisburg

**Donations:** In memory of Mary Goodenow from Bob and Barbara Koch and from Lorraine Poore; from Cynthia Kessler in memory of her nephew Jeff Bowers

**Thank yous:** To Marilyn Murphy for chairing the Annual Dinner auction and to auction donors: Canoe Susquehanna, Vargo Outdoors, Dahle Bingaman, Reba & Pancho, La Primavera, Roy Fontaine, Warren and Chris Abrahamson, Massage Naturally (Laura Wolfberg), Erica Shames, Nancy and Larry Shinn, Sarajane Snyder, Susan Chlebowsky, Pivot Performance, John Gardner, Campus Theatre, Chris Snyder, Don and Nancy Bowman

**Caring for Communities** leaders/presenters: Tom Gibson, Diane Donato, Carol Parenzan, Michael Gross, Shanon Burkland Stamm, Jason

Fellon, Lina Ferrara

**Jey Bailey**, Bucknell University Information Technology, for assistance with computer matters

**Dale's Ridge Trail** monthly monitors and chief steward Tom Travis

Thank you to all who contributed to the Conservancy during the March 2018 **Raise the Region** event. Your donations came to about \$2900, part of which we shared with our subsidiary, the Buffalo Creek Watershed Alliance

**East Buffalo Township** for installation of native plant demonstration garden signage and use of their community room for native plant workshops.

**Shaffer Landscapes** (Middleburg) for donation of stepping stones for the native plant demonstration garden walkway at the East Buffalo Twp. grounds.

### Eel Study Continues in Buffalo Creek

*by Julie Devers of the USF&WS*

The Annapolis office of the US Fish & Wildlife Service (USF&WS) continues to monitor eels in Buffalo Creek. Service personnel were in the creek again during the week of August 27. They typically collect information about eel number, eel size and extent traveled. In previous surveys over 2000 eels have been recaptured. If you'll remember, the eels were stocked in Buffalo Creek at around 5 inches in length. Last summer the longest eel found was almost 32 inches in length. The majority of the eels were around 10 to 20



*This was one of 2000 eels that were counted and measured, then returned to the creek.*

inches in length. They have found that females grow about 3 inches per year and males grow around 1 inch per year. Eels are finding their way into the upper part

of the watershed and have been found in Raymond Winter Park lake.

Some of the results of the USF&WS research will be published soon in a journal called *Ecological Applications*. A link will be sent to the Conservancy once the publication comes out. Also, a USF&WS biologist from the Annapolis office will be presenting information on the eel surveys at the American Fisheries Society meeting in Atlantic City at the end of August. USF&WS will be conducting fish and mussel surveys to wrap up the project in the summer of 2019.

### Thanks to Our Business Partners for 2018

Your membership renewal letter contained your business partner card for 2018. We thank the business owners who have agreed to participate again this year and are most grateful for their many years of commitment to this program.

Each offers you, as a Conservancy member, a special discount on service or merchandise as noted on your card. Please be sure to patronize these businesses and thank them for supporting the Conservancy's mission.

- Bertoni's Pizza, Montandon
- Lewisburg Studio, Vargo Outdoors, and Canoe Susquehanna, Lewisburg
- Shaffer Landscapes, Inc., Middleburg



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fall 2018

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- 30th Anniversary Celebration —Saturday, October 20
- 'Where Conservation Decisions Are Made, Part II' by Shawn McLaughlin
- Koons property wetlands restoration, meadow update by Ryan Sabo
- 'Paying Tribute by Going Native' by Susan Warner-Mills

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