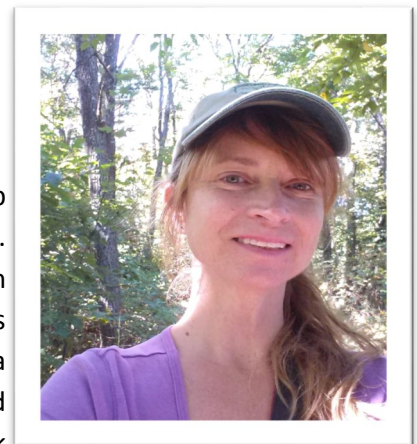




Summer 2019

The Backbone of Darby Creek Valley Association

By DCVA Director Susan Miller



Volunteers are backbone of Darby Creek Valley Association. Volunteers help with fund raising, administrative work, and on the ground programs and projects. DCVA is an all-volunteer organization and would not exist without volunteers. Much of our volunteer work force is involved in the cleanup; we had over 900 volunteers this year. We removed over 52 tons of debris from our waterways. Normally, this is a one or two day event, this year it was six days, but there are 365 days in a year, and there are a plethora of other programs and projects that utilize the volunteer work force.

This year, I had a wonderful group of volunteers who assisted DCVA in many ways. Christopher Mason wrote our 35-year case study that discusses DCVA beginnings and its growth through out the years. A copy of the case study can be found on our website. Walter Beck designed our new organizational brochure, which is just amazing. Madeline Steward has written donor letters, Shanai Bemis is working on two press releases for DCVA. All the above named are professionals in their field and offered their serves to DCVA to produce professional quality products. These donated services saved DCVA \$14,634.

As I mentioned before there were over 900 volunteers for the clean up and I can't name them all, but each and every one of them are just as vital to DCVA as the professionals who volunteered their time. Though their efforts are priceless to DCVA and to the watershed, their efforts in dollar amounts equal over \$67,500. That number is not including the behind the scenes efforts of other volunteers such as David Bennet who worked tirelessly to make the clean-up possible and Cynthia Bennet who tolerated her house becoming overrun with DCVA clean- up supplies.

The volunteers who give their time to other programs and projects throughout the year are all vital to DCVA. I would like to mention Ann Jackson for her dedication to the Meadow Brook Run project. Gerry Kreig deserves recognition for everything he does for our Folcroft property including applying his great artistic abilities on fliers, soliciting donor and sponsors for the clean-up and his help with the Canoe Ramble. Aurora Dizel developed and is running DCVA's Young Naturalist Program.

I would also like to thank the Penn State Extension Master Watershed Stewards and Master Gardeners. Megan Hopkins-Doerr is the coordinator for Delaware and Chester County Master Watershed, and Chester County Master Gardeners programs: Michelle Smith, Rich Mooney, Dale Weaver, George Petropoulos, Robert Powers, Rebecca McCafferty, Stephen Hinds. The volunteers from these programs are high energy passionate volunteers. They have assisted in numerous workshops, programs and projects. Carol Armstrong, Donna Dufoe, Peg Friese, Derron LaBrake,

Continued from previous page.... Beth Iannelli, George Seed, Heather Gosse, Ann Jackson and Cindy Mehallow and others have stepped up to further the mission of DCVA. These volunteers have conducted workshops, assisted in setting up and maintaining monitoring DYI meters, helped with sampling, wet land restoration, tree plantings, outreach, and numerous other activities. Meagan helped me set up our auction tables and to check people in for our 35th Anniversary Gala. Beth Iannelli, brought extra help to our tree planting event came as a participant to the Canoe Ramble, then stayed to help clean up, and has been instrumental with the organization of our September 14th On The Water Clean-Up. Carol Armstrong, at the last minute, came to the rescue when a DCVA speaker was unable to fulfill a speaking engagement. There are many other volunteers, too many to mention, who support DCVA. Every single volunteer named or unnamed are the backbone of DCVA. I would like to acknowledge here also our officers and board members, some of whom were founders of DCVA, for their hard work too. DCVA could not carry out its mission without you! If you have not yet joined our army of volunteers, please volunteer for an hour or hundred hours. Your time, your talent, your energy, will be greatly appreciated. Each volunteer is priceless. **Thank you!!**



An Intern's Outlook:

The Progress with Plastics and Damage from Dumping

By Jolie Jaycobs, DCVA Summer Intern

I started my work with DCVA in early June, propelled by hope but terrified by all I had learned in school about Earth's melting ice caps, drowning cities, suffocating sea life, and plastic filled oceans. As a 20-year-old college student I have a lot of ideas about how things should work, but virtually no experience in any job with a base in real policy or advocacy. When I began working with DCVA I had no idea what to expect and in all honesty, four weeks in I am still clueless on most matters.

Over the past year, plastic bans seem to have become all the rage. Walking around school this year I have noticed more and more reusable water bottles decorated with "Skip the Straw" stickers, and when I go to the supermarket my friends and I would not dream of forgetting our reusable bags because no college student wants to unnecessarily lose even 5 cents. But how did we get here? I have known about the dangers of plastic in our oceans since elementary school, but only recently do we see a movement with momentum behind it, spreading like wildfire in cities across the country.

Last week, I spent three days at the Mid-Atlantic Marine Debris Summit hearing presentation after presentation on different organizations and a variety of dreams all revolving around how we can avoid having more plastic than fish in our oceans by 2050. While there I was overtaken by inspiration from artists, professors, therapists, and business owners who all found ways to integrate this issue into their work and advocate for future generations. This touched my heart and left me feeling hopeful. There are people out there making progress and that mass of people is not small. The progress continues every day. On June 20th, Philadelphia City Council proposed a plastic bag ban – another small advancement in an ever-active web.

However, my research on the home-front has not been quite as inspiring. The Darby Creek Watershed encompasses 31 municipalities for which I have spent hours searching and sorting through ordinances on litter and illegal dumping. I have found hundreds of pages outlawing the accumulation of trash in private spaces, public spaces, highways, water ways, you name it. Any space that's not a literal dump – it's banned. Many of these ordinances originated in the 1980's and many of them name individuals and organizations in charge of enforcing such laws. So why do we still

Continued from previous page: see litter on the streets and dumping on our river banks? In my opinion, the problem is twofold: enforcement and education. In researching previously successful litter reduction campaigns I have found they must have both of these elements. Many local police departments and governments do not respond to the issue, and governments and residents alike do not fully understand the environmental and infrastructural repercussions of litter and illegal dumping. Furthermore, these detailed laws are not actively promoted or easily accessible. Some townships have mandatory right-to-know forms that must be filled out in order for a resident to gain access to such information.

My research, in terms of better understanding what sort of enforcement methods can continue to stifle this issue, is still in the works. But over the past four weeks my experience with Darby Creek Valley Association has taught me this much: change is happening and everyone's participation counts. It would have been easy for me to walk away from the Mid-Atlantic Marine Debris Summit feeling relieved, thinking "all these other people are working on this problem, so I do not have to." However, all this work and recent progress lays the foundation for the next city, the next state, the next issue. I have come to believe that all this effort truly has potential to translate to a less wasteful economy, a less wasteful culture, and a new generation of innovative dreamers. Sometimes local governments and old habits seem impenetrable, but they are not. We have nationwide examples to prove that now. Our watershed is important, the waste we deposit leads to the Delaware and the Atlantic. Our waste has the power to sicken our oceans and our neighbors, but we all have the power to make a difference. That might seem naïve, and perhaps to some degree it is, but just in four weeks I have heard so much from so many people who have all found ways to make concrete change. So, support DCVA and other organizations like it with your time, your money, or most importantly your voice. This issue has momentum. Let's take a stand here so that others may follow.



The Circuit Coalition of Greater Philadelphia: Bicyclist and Pedestrian Trails from Florida to Maine Update

By David Bennett

The Circuit Coalition was founded in 2012 in order to create a network of connecting off-road trails to accommodate travel for bicyclists and pedestrians in Southeastern Pennsylvania and Southern New Jersey. The goal is that there would eventually be no need to go on streets where there are motor vehicles (ideally) in order to get around for recreation as well as work and other important errands. DCVA joined the Circuit Coalition as a supporting member in 2015.

This writer (David Bennett) is the official liaison to the Circuit representing DCVA and attending the meetings twice a year. At this point in time, there are more than 53 member organizations of the Circuit.

The Circuit is led by a Steering Committee which serves two year terms. The Chair is Sarah Clark Stewart (Executive Director of the BCGP) and the Co Chair is Patrick Starr, Vice President of the Pennsylvania Environmental Council (PEC). Among the main organizations who help and support the effort are the Delaware Valley Regional Planning Commission (Chris Lynn and Shawn Legendre), and Rails to Trails.

*Continued from previous page...*the main framework of the Circuit includes the East Coast Greenway (ECG) Trail which, when complete, will connect Key West, Florida to Calais, Maine and roughly parallel Route I 95. The path will leave Delaware on Route 13, follow Route 291 through Southern DELCO, and divide into two paths at Route 420: one off road through John Heinz Wildlife Refuge (JHWR), and one through Tinicum Township as far as 84th Street. The route then goes through Eastwick and gets to Bartram Gardens where it will follow the Schuylkill River Trail as far as Spring Garden Street and then head over to the Delaware River Trail system where it will connect to New Jersey at Trenton. The State of Delaware has recently completed their portion of the ECG. They have built a trail called the Jack Markell Trail connecting New Castle with Wilmington and then following the Northern Delaware Greenway, north of Wilmington, and connecting to Route 13 before getting to Marcus Hook.

The other big spine of the trails is the Schuylkill River Trail which will connect Bartram Gardens to Schuylkill County way north of Reading. New Jersey has been very busy constructing trails on their side of the Delaware that mirror the network on the Pennsylvania side. Last week, the bike ramp to the Ben Franklin Bridge in Camden was opened to the public providing a way to ride across the bridge without dismounting.

The focus for the Darby Creek Valley Association is to help insure the completion of a Darby Creek Trail that would connect Radnor to the John Heinz National Wildlife Refuge. There are two ways to do that. "Trail Guru" Bob Thomas is working on a route from Valley Forge to John Heinz that for the most part follows Cobbs Creek through Haverford, Upper Darby, and Philadelphia. Along Darby Creek, Haverford Township has planned, and is near completion of, three sections of trail from the Community Recreation and Environmental Center (CREC) to the Upper Darby Border. (there are several roadblocks to overcome on Reed Road) Upper Darby has recently been working on their portion and it appears as if they have solved most of the problems there. The plan is to connect the trail from Reed Road to Township Line, to go through Drexelbrook property to Rosemont Avenue, and then along the Darby Creek to the Swedish Cabin. From the Cabin, there is a beautiful finished trail to Kent Park. (The Kent Park which is in Upper Darby).

In Lansdowne, the trail stops at a large outcropping of rock on Scottsdale Road. We must find a way to get to the Little Flower/ Penn Pines property in Darby and Upper Darby in order to get to Darby Borough as well as continue on to JHWR. Any suggestions from readers of this article are welcome to contact me, David Bennett, dster21@comcast.net with new ideas. There is public land available to go through but getting to those parcels is complicated.

David Bennett served as the Chairman of the Delaware County Cycling Committee of the BCGP for 7 years, has been a member of the East Coast Greenway Pa. Committee for at least 15 years, is a member of the Valley Forge to John Heinz Steering Committee, and currently represents DCVA on the Circuit Coalition. For more information please go to www.circuittrails.org.



Home Sweet Home

By Woody McSqueek

Hello: My name is Woodrow Amadeus Bjorn Cornelius McPherson, McGillicuddy McSqueek the 487th, (I am from a VERY old family). Everybody simply calls me Woody, the Woodburne Mouse. I was born here along the Darby Creek, as were all my ancestors going all the way back to 1642 when the first McSqueek, my great-great-great-great (486 times) grandfather, arrived with Johannes Printz on the *Kalmar Nikel*. I was told Printz was a large man, over 6 feet and some 400 pounds. The Indians called him "Big Belly" and he must have been like me in his enjoyment of good food. I understand he arrived with specific instructions from the Swedish Crown to treat the "Wild Nations" here with humanity and respect and give them better prices on trade goods than they were getting from either the Dutch or the English. As a matter of fact, the Great Minquas Path passed over this land and sometimes Susquahannocks would camp here on their way to the fur-trading posts along the Delaware and Schuylkill Rivers. My family lore includes stories about how those travelers sometimes would drop bits of pemmican which was chewy but delicious!

Continued from previous page... The Bartram family bought this land from William Penn around 1680 and life on the farm was hard but there were always good things to eat here along the Darby Creek. I have also heard stories of a British encampment here on what was called the "Heights of Darby" in 1777, during the British occupation of Philadelphia, and how we McSqueaks found scraps of food after their tea and crumpets which were also delicious. Then came the Scott years and the stories I have heard about the parties here after Mr. Edgar Scott built the mansion in 1906 make my mouth water just to think about. YUM. Then the Sisters of the Divine Redeemer bought the property in 1936. They didn't like us hanging around the kitchen but sometimes the orphans, who also lived here, left us little tidbits of food. Along with food there was a lot of love and laughter. I miss those days. In 2005 everybody left and things became very quiet. Sometime around 2014 bad people stole part of the roof and things became very, very wet. In 2016 we saw people from something called "the County" and we were hoping the leaks would stop but so far they haven't. The building still has strong stone walls and stout timbers and we hope that someday there will again be life and laughter here.....and good eating for all.

Once Upon a Time There was Woodburne...Why Woodburne?

By Jan Haigis

The fate of County-owned Woodburne Mansion, overlooking Darby Creek, is in the balance. The magnificent 55 room Mansion designed by Horace Trumbauer for Pennsylvania RR heir Edgar Scott in 1906 has been horribly damaged from water infiltration caused when scappers stole copper covering from 17 dormers allowing water into the building. The land on which it stands holds riches of heritage and history of both Delaware county and the USA from much earlier. The Minquas Indian Trail, along which native tribes traveled to trade their furs with the Swedes and the Dutch, passed by the site on their way south to Fort Beaversrede (the Beaver Road).

When William Penn sent new colonists to mix with the Swedes, Dutch, and free people of color who already lived in the area, the tract of land on which Woodburne now stands was purchased by the grandfather of famed botanist John Bartram. The site included the Bartram farm where the botanist was born and raised, which in 1902 became Eden Cemetery, the first US cemetery owned by African Americans. Eden is the resting place of Julian Abele, the first African American to graduate from University of Pennsylvania with a degree in architecture. Abele worked for Trumbauer during the time Woodburne was designed and built.

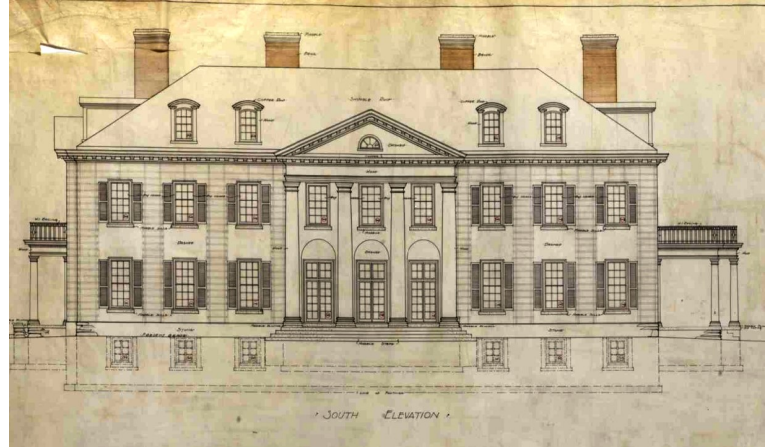
The 1687 Holmes map of Pennsylvania shows that the original Bartram land grant, in addition to the current Eden Cemetery land, extended across what is now Springfield Road and past Woodburne on the Heights all the way down to the Darby Creek below.

During the American Revolution, British troops were encamped on the land where the mansion now stands. By the time of America's Civil War, the Heights of Darby belonged to George McHenry, a Philadelphia businessman and southern sympathizer who helped ships get through the American blockade to trade with the South. McHenry's land was confiscated and was next owned by Thomas Scott, who was President Lincoln's Assistant Secretary of War and later VP and then President of the Pennsylvania Railroad. After the mansion Thomas Scott had built burned down, his son, Edgar Scott Sr., commissioned Trumbauer to build the current Woodburne in 1906 in neoclassical style with stout timbers and 4 foot thick stone walls.

Woodburne was primarily a summer home for both Edgar Scott Sr and his son Edward Scott Jr. Both Sr and Jr were active in ambulance work in France during WWI where Edgar Sr died 22 days before the Armistice. Edgar Jr married Hope Montgomery and when his Harvard roommate wrote the play *The Philadelphia Story*, he based his character Tracy Lord (portrayed by Katherine Hepburn) on Edgar Jr.'s wife Hope Montgomery Scott.

Continued from previous page... The Scott estate Woodburne was sold to the Sisters of the Divine Redeemer in 1936 and was converted into Little Flower Institute, a home for orphans and displaced adults who also lived there and helped care for the children. It later became a home for retired nuns and other ladies and was known then as Villa St Theresa. The sisters kept it open in Woodburne mansion until 2005. The woman who founded the Sisters of the Divine Redeemer was beatified on September 9, 2018 at a ceremony at her birthplace in France.

In 2016, Woodburne and its 32 acres was purchased by Delaware County for a park. Now it's up to us as citizens to preserve the mansion and its many stories for future generations. A Friends of Woodburne group has been incorporated to work with the County and other individuals and groups toward the appreciation, preservation, and reuse of this unique treasure.



Top: Original plan of Woodburne Mansion from the Trumbauer drawings which are now lodged at the Historical Society of Pennsylvania but are part of the County's "Little Flower Open Space Master Site Development Plan"

Middle: "The Shining Woodburne" photo by John Haigis

Bottom Right: Recent photo of the roof of the mansion and the dormers from which the copper was stolen.



35th Annual Cleanup:

A Perspective

By Susan Miller

Since 1984, the Darby Creek Valley Association has organized friends and neighbors to take care of our local treasure- the Darby Creek watershed. In our 35th Annual Creek Cleanup in April 2019, we harnessed the power of 923 volunteers to remove trash from throughout the Darby Creek/ Cobb Creek watershed. Working in 52 sites scattered across Delaware, Chester, Philadelphia, and Montgomery Counties, our volunteer teams scoured creek banks and roadways. Together, we removed 109,600 pounds of trash from 126 linear miles of these creeks and their tributaries. I am grateful for our enthusiastic volunteers and proud of the work we accomplished together.

Yet as I paddled my kayak through these waters last week, I gained a new perspective from what you might call a “duck’s eye view.” I happened to have an extra garbage bag with me, and as I paddled along, I casually gathered up trash that was floating in the water or caught in the reeds. Into the bag went the plastic straws, food wrappers, Styrofoam cups, and soda cans. In went dozens of plastic bottles and two (yes, Five) old basketballs. In a matter of minutes, my bag was full. Clearly, we have more work to do. The DCVA will lead the way, with extended cleanup efforts on the water this summer.

The DCVA will host our very first “On The Water Cleanup” on September 14, 2019. We’ll have teams at three launch sites—John Heinz National Refuge, the Morton Morton House, and Ridley Township Municipal Marina—and will cover a large swath of the navigable waters of Darby Creek. We’ll rally boaters, kayakers, and canoers to join us for a fun day at the forefront of environmental action in Delco. Sign up online at dcva.org.

We’re ready to take action, but we need your help to make this happen. Donate to the Darby Creek Valley Association and together we’ll clean up our local waters. Please visit www.dcva.org/donate to make your gift today.



Top right: Debris seen on Sue’s kayak trip on the creek
Other photos at right: 2019 Clean– Up volunteers
Photos by Susan Miller



Easttown Township Representatives were pleased to accept a certificate of participation from DCVA for sponsoring four stream clean-up sites during the DCVA annual clean-up. 2019 was the first year that clean-up sites were held in Easttown Township. The township hosted lunch for all of the participants. Thank you to Mary Westervelt for coordinating the clean-up with the township. From left to right:

DCVA board member Mary Westervelt, Assistant Township Manager Gene Briggs, DCVA board member Kate Doms, and Easttown Township Supervisor Marc Heppe.

A New DCVA Education Program: The Young Naturalist Program

By Susan Miller

DCVA is pleased to announce our new monthly Young Naturalist Program, developed and lead by youth educator Aurora Dizel. The program enjoyed great success in spring 2019 when it was initiated. This educational, indoor and outdoor, nature immersion program is for children 5- 10 years of age. The program focuses on nature exploration, team building, and honing observational skills. The program is held the 3rd Saturday of the month, between 10:30am-12:00pm at the Haverford Community Recreation and Environmental Center. Some of the up coming topics are Wiggly Worms, Butterflies, Bees and Me, and Water Critters.

In the fall we will have a special presentation that is open to people of all ages. A presenter from PA Bat Rescue will speak about the importance of bats, their natural history, environmental impacts, and how people can help bats. There will be an opportunity to observe some bats that the presenter will bring along (bats that are under the care of PA Bat Rescue, they are not capable of living in the wild). Visit dcva.org for upcoming topics and adventures.



Children in the Young Naturalist Program.

Photo by Susan Miller

Darby Creek Salt Levels Reach Toxic Levels

By Susan Miller

DCVA , along with our other Delaware River Watershed Initiative (DRWI) Up Stream Philadelphia Suburban Cluster partners participated in the Izaak Walton League (IWL) National Salt Watch Program. Under the direction of Kevin Roth, Educational and Outreach Coordinator for Pennypack Ecological Trust, Citizen Scientists signed up and received a free test kit from IWL and began sampling our local water ways for chloride level which is an indicator of salt levels in water. They uploaded their data to Water Reporter, a social media app for watershed organizations.

The Izaak Walton League released a press release of the findings and on May 28th the *Philadelphia Inquirer* ran the article “Road Salt Levels in some Philadelphia-area streams hit toxic levels”. Fresh water streams should contain little to no salt, and levels over 230 ppm can be toxic to aquatic life. The chloride levels in Philadelphia area waterways ranged from 318 ppm – 800 ppm. The two highest levels were in the Darby Creek—Berwyn (Easttown Township, Chester County) at 800 ppm in the western headwaters and Drexel Hill (Delaware County) lower in the watershed at 583 ppm.

Increased salt levels in our streams corrode pipes, harm our pets, and reduce the amount of clean water available to fish and wildlife. Water treatment plants are not equipped to filter out excess salt, so that salt can end up in our tap water, which can cause health concerns for people with high blood pressure or even create high blood pressure particularly in pregnant women (Khan et al. 2011. *Environmental health perspectives* 119, no. 9 (2011): 1328-1332).

Government officials and community members need to work together to limit salt use on roads and sidewalks, find alternatives to road salts, and stop the pollution of our nation’s streams and rivers. For more information about road salts or join the Winter Salt Watch program visit iwla.org/saltwatch. To find out more about DCVA’s Citizen Science Program email director@dcva.org.

The full *Philadelphia Inquirer* article can be found at:

https://www.inquirer.com/news/delaware-river-watershed-salt-levels-20190528.html?_vfz=medium%

Non-Native, Invasive Plant Species Are Ecologically Castrating the Landscape In PA, But There Is A Solution

by Carl Dupoldt

On October 2, 2018, the [Senate Agriculture and Rural Affairs Committee](#) held a hearing on the interrelationship between invasive plant species on our landscapes and the loss of native plants, and the negative impact of those changes on pollinators-- bees, butterflies, other insects, birds-- and on us. It really underscored the need for educational [events like Pollinator Week - June 17-23](#) for the public to better understand these unfolding ecological changes and their impact on us... and what we can do about it. One highlight of the hearing was a presentation by [Dr. Doug Tallamy](#) of the Department of Entomology & Applied Ecology at the University of Delaware who outlined how homeowners and landowners can play a major role in strengthening natural diversity in our landscape so it can better support wild-life, pollinators and humans.

“We have a basic problem, not just here in Pennsylvania but everywhere. As we have expanded the human footprint, we’re destroying the natural world. We used to think that was OK because there was a lot of nature, but there’s not a lot of nature any more. If we destroy the natural world, humans will not persist on this planet. We absolutely need it, but there is a solution,” said Tallamy. “We have to learn how to coexist with nature where we live, work and farm. Nature is a series of specialized relationships, especially as it relates to food sources and it always starts with plants,” he said.

Tallamy used Carolina chickadees as an example of these specialized relationships. He said most people believe they are seed eaters, but they feed their young insects because young chickadees cannot eat seeds. He explained that many native bird species feed their young insects and most of those insects are caterpillars. "The point here is you cannot have breeding birds in a landscape that does not have enough caterpillars," said Tallamy. "96 percent of birds in North America are rearing their young on insects and not seeds." He said. "It's simple-- no insects, no baby birds". Based on a 3-hour survey in his backyard, Tallamy documented chickadees bringing back 17 species of caterpillars to a nest to feed their young. They foraged for the caterpillars within 50 meters of their nest in his yard. He has counted up to 877 species of caterpillars in his yard.

The point is that we should strive to increase and maintain diversity in the food web because diversity creates stability-- so that regardless of the weather conditions, there will be enough caterpillars to support breeding birds. Abundance is also important- A chickadee pair brings 390-570 caterpillars to the nest per day to feed their young and they do that for 16 days before the young fledge which means 6,240 to 9,120 caterpillars per season per nest. "If we want to have birds where humans are we have to have the landscapes that generate the insect life and caterpillars to support them," said Tallamy. He noted that chickadees are tiny birds-- about a third of an ounce, 4 pennies worth. Larger birds and the diverse mixture of bird species people prefer to see require much more food.

Taking the specialized relationships one step further, Tallamy explained the importance of native plant species in our local ecosystem. 90 percent of the insects that eat plants can develop and reproduce only on the plants with which they share an evolutionary history (i.e. native plants) because they have developed the adaptations to feed on those plants. Therefore to support a vast and abundant array of native insects, humans need to grow native plants in their yards and support native plantings in our communities.

Tallamy used the monarch butterfly as an example of this relationship. The milkweed plant is protected from being eaten by most insects due to its white, latex sap. Monarch caterpillars, however, developed a specialized approach to eating the milkweed leaves without having its mouth glued shut by the sap. The down side of specialization is that milkweeds are the only plant that monarchs can eat. If we take milkweeds out of our landscapes, like we have in so many places, we lose the monarchs. There has been a 96.4 percent decline in monarchs since 1976 because we have eliminated their food supply by turning fields of native plants into homes and shopping centers.

Pound for pound there is twice as much protein in insects as there is in beef; insects are critical parts of most of the food webs in nature. Toads, frogs, red foxes and even black bears rely on insects for a major part of their diets. Tallamy said we are losing insect species populations around the world, so it is not just a local problem. Insect populations have already declined 45 percent globally since 1974. Tallamy said because we have lost insect populations, 432 species or one-third of North American birds are at risk of extinction and 46 species have lost half of their popula-

A third of the plants in our fields and yards are invasive species and they simply do not support the insects and caterpillars needed to support wildlife and us. The contrast between the number of species and individual caterpillars supported by native and non-native species is vast- Tallamy counted 19 species and 410 caterpillars around the base of a native white oak on one day in July. Black cherry, same thing-- 14 species and 239 caterpillars. He said this is the natural relationship between native trees and insects and there is no damage to the tree. Compare that to the Asian Callery pear tree of about the same age that many people plant because they look nice-- there was 1 species of caterpillar and 1 caterpillar. Same thing for non-native burning bush-- 1 species, 2 caterpillars. Invasive species "ecologically castrate" all the land around them by spreading beyond their initial planting sites to neighboring areas.

Tallamy said we don't have to guess any more what kinds of trees and plants we should populate our landscapes with to support insects, wildlife and diversity. He helped develop a tool with the National Wildlife Federation property owners can plant to support wildlife -- [Native Plant Finder](#) or the Audubon Society's

[Plants for Birds](#) webpages. Tallamy said there are real consequences from the way we landscape our yards. “How many species do we need to preserve? We need all of them because they produce the ecosystem services that support humans.” He said we can’t just rely on parks and preserves to maintain diversity because they are too isolated. “That’s where nature is huddling right now, but they are not sustainable, they are too small. This has got to happen on private property. “We are not talking about good land stewardship, we are talking about essential land stewardship,” added Tallamy. If we lose our pollinators, it will not only hurt agriculture, but also the 80 to 90 percent of the plants that depend on pollinators to survive. “If we think about plants only as decorations that equals ecological destruction,” said Tallamy. We need to think about plants as supporting nature and protecting our watershed so they contribute to ecological restoration. Dr. Tallamy has published a book-- [Bringing Nature Home](#)-- on native gardening and biodiversity outlining similar points made in his presentation only in more detail. Sen. Elder Vogel (R-Beaver) serves as Majority Chair of the [Senate Agriculture Committee](#), and can be contacted by sending email to: evogel@pasen.gov. Sen. Judy Schwank (D-Berks) serves as Minority Chair and can be contacted by sending email to: SenatorSchwank@pasenate.com.

The Disappearance of Fireflies

By: Jordan Miller

Fireflies are one of nature’s most beautiful creatures. It is a tradition to catch them on warm summer nights. Why does it seem like there are less and less as the years go by? Most likely because there truly are less and less of them.

Fireflies, or lightning bugs as they are also known, are small insects that glow at night in order to find a prospective partner with whom to mate. However, these creatures are slowly losing their habitat due to urbanization. The way urbanization is affecting them is through light pollution and insecticides.

Light pollution effects firefly populations by interfering with the flashing lights of the insects which is how they find potential mates. Streetlights and lights from cars, homes and stores are all possible sources of light pollution that keep these insects from mating, which decreases the population of the next season’s fireflies and leads to decreases year after year. Even if light pollution did not affect these creatures, they would have no suitable habitat to live in due to the increase in insecticides. Insecticides use limits percent of the landscape where fireflies can take shelter, live and lay their eggs. Limitations on habitat concentrates their populations and makes them an easier target for predators and bad weather.

These two factors might have a deadly impact on the survival of local firefly populations. Those twinkling lights that are a happy reminder of summer could be replaced by solid black darkness.



Neonicotinoid Insecticides

By Kate Doms

Neonicotinoid insecticides were developed and registered in the 1990s due to resistance that was developing in many crop pests and also due to the documented effects of insecticides on human health including neural development in children. The neonicotinoid group of insecticides are used on 140 different crops in 120 countries.

The advantages of these insecticides is that they can be applied to seed or into furrows. They are very toxic to insects that either chew on or pierce plant tissues. The acute toxicity to mammals of these compounds is lower than that of other insecticides. In addition, they hold fast to plants in rain storms better than other insecticides. These compounds are long lived and water soluble. They have been measured in surface waters in the United States and Canada. The levels worldwide appear to be capable of both long and short term effects on aquatic organisms (Morrissey et al. 2015).

The disadvantages of these insecticides are an interesting and complex array of effects. One major issue is that despite the fact that they do cling to plants, they are inevitably washed into waterways. Insects that have aquatic larval or nymph stages can be exposed to neonicotinoids in rivers and streams. These compounds are not acutely toxic, so it is possible for an insect to accumulate the compounds in their bodies before being eaten. This is a particular problem with aquatic insects whose larval stages can be weeks or even years in length. Water penny beetle larvae, for example, can live as larvae for as many as five years. The young of mayflies, caddisflies, chironomids and other diptera, amphipods (sideswimmers, scuds) and Daphnia (waterfleas) have been shown to suffer altered behavior or death at various concentrations of neonicotinoids in laboratory experiments (Morrissey et al., 2015). It is also suspected that neonicotinoids may be one of the many factors that contribute to colony collapse in bees. Bees may be exposed through collecting pollen, nectar, honeydew released by aphids or by drinking water droplets released from plants at night. They may also be exposed by neonicotinoids in the air when clouds of the compounds blow from seed hoppers where seeds are being treated on farms (<https://www.mnn.com/your-home/organic-farming-gardening/stories/neonicotinoids-what-home-gardeners-need-to-know>).

Fish, tadpoles, and turtles are obvious potential victims who might dine on contaminated aquatic insects. As pointed out in the article in this issue of *The Valley* by Carl Dupoldt, many songbirds must feed insects to their young. Hallman et al. (2014) has shown decline in songbirds in areas of the Netherlands where neonicotinoids are used on crops and tulip fields. They suggest that the decline is due to direct consumption of contaminated seeds and insects but also due to decline in available insects for songbirds to feed their young due to the death of the insects in aquatic systems due to neonicotinoids washing from fields into streams and rivers.

In May 2019, the EPA removed the registration of twelve neonicotinoid products. Seven of the products were used by farmers for coating seeds. The existing stocks of the banned products can continue to be sold until 2020 (<https://www.the-scientist.com/news-opinion/epa-cancels-registrations-for-12-neonicotinoid-pesticides-65956>). However, it is possible to purchase the neonicotinoid called imidacloprid and other neonicotinoids in the United States. Imidacloprid is found insecticides for the home and garden, particularly in products for treating roses. The phrase “Silence Spring” has been used in relationship to the possible outcome of neonicotinoid use due to the multiple effects it appears to have on song birds.

Hallman, C.A. et al. 2014. Nature 511: 341–343

Morrissey, C.A., et al. 2015. Environment international 74: 291-303.

<https://www.mnn.com/your-home/organic-farming-gardening/stories/neonicotinoids-what-home-gardeners-need-to-know>

<https://www.the-scientist.com/news-opinion/epa-cancels-registrations-for-12-neonicotinoid-pesticides-65956>

OF MILLTOWNERS AND CRICKERS

By Tom Roy Smith

In middle Darby Creek Valley in the 1800s, resided two related groups of people. The older of the two were the ‘Crickers’. These people lived in houses hugging the creek. They were employees of the textile mills. The houses were owned by the mill owners. Almost the entire group were immigrants. The other group called themselves ‘Milltowners’. They resided in Clifton Heights. This cricker knew both mill owners and mill working families. I was told the same story by both groups.

Newly arrived immigrants to America in Philadelphia were greeted by agents of the mill owners. The new arrivals were offered jobs at the textile mills along Darby Creek. They were also offered houses to rent with one week’s wage held for the payment each month. The crickers were proud of their nickname which emphasized their love for the Darby Creek Valley. Clifton Heights was founded around 1870. Independent owner housing was the norm. A large share of the people were children and grandchildren of ‘crickers’.

In the 1980’s there was a taproom on the south side of Baltimore Pike in Clifton called ‘The Milltowners’. A patron might ask a nearby patron if he was a “Kent Blue”. The nickname referred to the workers of the Kent Mills of Clifton, but as you will see below there was a second way to earn this nickname. The Kent Mills ceased production in Clifton in the mid 1960’s.

Crickers and Milltowners joined together for recreation on the Indian Basin Tract, up around and above the Swedish Cabin. They picnicked and swam there. An attraction were the large boulders upon which swimmers and picnickers could sit in the creek. In the era before air conditioning, relaxing along Darby Creek was a means to keep cool. A local prank by the older youngsters was to have the younger kids swim in the creek below the Kent mills. When they emerged, they would have a faint blue tint to their skin from the blue dye used at the mill. They would then be nicknamed “Kent Blue”. Both the crickers and milltowners loved their nicknames.

JOIN THE DARBY CREEK VALLEY ASSOCIATION TODAY!

The Darby Creek Valley Association (DCVA) is dedicated to the protection and enhancement of all of the watershed’s resources, including water, wildlife, historical sites, and the floodplains. The organizations immediate goals are to prevent all forms of pollution in the Darby Creek and its tributaries, to prohibit dumping and construction on the floodplain and to expand our educational programs for all residents within the watershed. It Also seeks to improve water quality and maintain a debris-free stream through clean-ups and public education. DCVA works to preserve historic properties, such as the Swedish Cabin and the Blue Bell Inn. The Association would like to set aside the more than 30 miles of valley for use as a greenway for all residents to enjoy. We need your support. Help us continue to protect the environment for ourselves and our children.

We invite you to fill in the form below, check member category, and mail form with your check to:

Darby Creek Valley Association, PO Box 732, Drexel Hill, PA 19026

Name: _____ Date: _____

Address: _____ City: _____ State: _____

Phone Number: _____ Email Address: _____

Individual member.....\$25	Family member.....\$40	Corporate or Municipality.....\$100
Senior Citizen or Student.....\$15	Non-Profit Group..... \$40	Life Member\$275

DCVA is a 501(c)(3) Non-Profit Organization– All Donations are tax deductible to the fullest extent of the law.

CALENDAR

DCVA Board Meeting.....Third Saturday of each month, Delaware County Peace Center
On the Water Cleanup.....September 14, 2019
Young Naturalist Program.....Third Saturday of each month, Haverford Comm. Rec. and Environ Center

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