



A Quarterly Publication to Advance Environmental Literacy

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Pocono Environmental Education Center

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BAD BUG: Spotted Lanternfly Poses Threat to PA

By Stephanie Sherman



Adult Laternfly

Insect invasions are nothing new to the environmental world. Gypsy moths, emerald ash borer, Asian longhorn beetle, the list goes on. The spotted lanternfly may have them all beat as the bad-est bug on the block. What's so scary you may ask? These little pests are hoppers that can travel very easily by car, truck and van, feeding on invasive plants as well as our native trees. What's even worse? Pennsylvania is ground zero for their spread and they can impact our agricultural industries by preying on grapes, hops and hardwood trees.

Originally from eastern Asia, the Spotted Lanternfly (*Lycorma delicatula*) looks disconcerting enough with black speckled gray wings, but when it takes flight you can see the red and white underwings which make it striking. This coloring is especially vivid when spotted lanternfly take flights in swarms large enough to cover whole trees. Their feeding habits include piercing the trunks of trees to drink the sap, leaving thick honeydew behind that can attract other insects like wasps and ants. These wounds also put the tree at risk to harmful mold. Their preferred tree is the Tree of Heaven, an invasive species which is wide-spread and extremely difficult to remove, but they also target pine, poplars, willows, nut and fruit-bearing trees.

Once fed, these bugs lay egg masses that look like dried patches of mud on any smooth surface. Egg masses could be on a tree, stone or even man-made items like lawn furniture, cars, campers and trailers. When the eggs hatch, the nymphs go through several immature instar phases where they look like polka dotted leaf hoppers from another world and usually black or red with white spots.

Deemed an "epidemic" by State Rep. Eddie Pashinski, Berks County has been the epicenter of the spotted lanternfly outbreak which is slowly creeping north causing quarantines in Lehigh, Monroe, Carbon and Northampton Counties. Pike and Wayne Counties are not quarantined but at risk for the future. Spotted lanternfly poses a risk for both small and large businesses alike as other states may not want to continue risky



Laternfly Nymph Stages

trade that could imperil their own agriculture. Even now in troubled areas, major inspections and preventative measures are being taken to stop the spread and kill these bugs.

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Summer Solstice 2018



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Message from the Executive Director

By Jeff Rosalsky



It is a beautiful sunny day with blue skies at PEEC as I write this, but the early spring of 2018 was a challenging one. We have spent months recovering from the damage wrought by the

March storms. The heavy snow and the fury of the 70 mph winds severely damaged our campus, with over 1000 trees across the trails and roads, and several buildings damaged by falling trees—not to mention 9 days without power and limited road access to PEEC.

The good news is that PEEC is mostly recovered! I am extremely grateful to the amazing PEEC staff and our private and foundation donors, who provided financial assistance and allowed us to recover as quickly as we did. The buildings have been repaired or stabilized. Five of our six trails have been cleared and are open for hiking. The balance of the repairs will be completed over the summer and Two Ponds Trail, which remains closed, will be re-routed on the eastern side of Pickerel Pond.

The planned new route provides better views of the pond and will bypass the storm-devastated old logging roads that cut through the pine plantation. Unfortunately, the blow down in the pine plantation resulted in 90% of the trees either snapped like matchsticks or uprooted. Likewise, on Scenic Gorge Trail, we lost many of the hemlocks, which were also battling with the wooley adelgid. The landscape on our trails has definitely been altered by the severe weather events we have seen and predictions are that this trend will persist.

Life and spring rebirth continues all around us. The forests will recover, new white pines will emerge as the pioneer species, the deer have already begun creating new trails around the impassible parts of the forest and other animals will use the fallen trees as new habitats. The sunlight pours into pockets of forest ground that have been shaded for decades and the uprooted trees have exposed layers of fossils and glacial boulders not seen for centuries. All provide valuable teaching opportunities for PEEC staff to interact with visitors and will provide lasting reminders of the effects of climate change.



FROG FROLIC:

SUNDAY, JUNE 24 • 1PM – 3PM
SATURDAY JULY 7 • 1PM – 3PM

SUNDAY, JULY 15 • **10AM – 12PM**

SUNDAY, JULY 29 • **10AM – 12PM**

SUNDAY, AUGUST 12 • 1PM - 3PM

\$5 PER PERSON

Summertime Snacks

By Derek Scott

If you're ever been interested in learning about wild edibles, the summer season is a great time to start. In the Northeast, many of the most common and easiest to identify wild fruits begin to ripen during the months of July and August. In the paragraphs below, I'll outline how to forage for some of these tasty treats the next time you're on an outing.



Black Raspberry Bush

One of the best wild edible plants for new foragers is raspberry. Raspberry bushes are easy to identify and generally characterized by their round, prickly stems (which look more like vines) and green leaflets in clusters of 3 and 5 with a single terminal leaflet that have whitish undersides. The familiar looking berries come off the stems with ease and leave behind their receptacles, causing the fruit to have a hollow core. The two most common raspberry varieties in our area are black raspberry (Rubus occidentalis) and red raspberry (Rubus strigosus). As the name suggests, black raspberries have a very dark fruit although the color can certainly vary. If the color of the black raspberry fruit isn't enough to differentiate it from the red variety, its stems are often a maroon or purple hue covered with a whitish powder, or, bloom. This makes identifying black raspberry bushes at a distance quite easy. Red raspberries on the other hand, have green stems that are densely covered with red, glandtipped hairs around their bright red fruits. Both varieties are commonly found in well-drained soil in areas with adequate sunlight such as the edge of fields and trails.

Different varieties of blueberries are one of the other common summertime fruits you can find around PEEC. Blueberries generally fall into one of two classifications: lowbush (*Vaccinium augustifolium*) or highbush (*Vaccinium corymbosum*).



Blueberry Bush

Lowbush blueberry shrubs on average grow no taller than a foot, and are generally found in large stands in forested areas with well-drained, acidic soil. The leaves of the shrub are narrow and appear to be glossy and blue-green in color. In contrast, Highbush blueberry can grow to heights of between 6 and 12 feet, and prefer wet areas giving it the nickname "Swamp blueberry." This variety shares the glossy leaves of its shorter relative but lacks the blueish tint. Both lowbush and highbush blueberries have bell-shaped flowers that are often white but can also vary between pale hues of pink, red, and green. Once pollinated, the flowers become small green berries that transition to the dark blue familiar looking fruits. Be sure to double check that the berries have a flared crown opposite where they attach to the shrub. While other fruits can certainly be found in abundance during the summer months, raspberries and blueberries are some of the most sought after by humans and animals alike. Though these fruits can be eaten immediately after picking, it is encouraged to wash them before consumption. Although easy to identify with a bit of practice, if you're ever unsure about what you may be picking, it's best to avoid that trailside snack.



Saturdays

July 7 • 10:00pm – 12:00pm

August 4 • 10:00am - 12:00pm



Sundays

July 15 • 1:00am - 3:00pm

July 22 • 10:00am – 12:00pm

August 12 • 10:00am – 12:00pm

August 19 • 10:00am – 12:00pm







Why I Love Insects! By George Johnson

Over the years as an environmental educator, I've noticed that insects always seem to get a bad rap. I've worked with a diverse range of populations and there's usually one thing they all share in common - that they hate insects. Even some of my fellow environmental educators can't stand the sight of a bug crawling around on the ground. I, however, react quite differently when I see a tiny little insect. Instead of fear, I feel excitement and curiosity. I really love insects and finding a new or uncommon species is the highlight of my day. For this article, I was hoping to write about why I love them and why I think they're so cool.

Believe it or not, I did not grow up with this love of invertebrates. Instead, I was more into the scaly things, such as snakes, lizards, and turtles. It wasn't until I took a class in college about Entomology (the study of insects) that I started to enjoy them. Every class we focused on a different type of insect and what made them so unique/different from all the others. That class blew my mind and opened my eyes to a whole new world. What I knew before the class just barely scratched the surface. Even now, some 6 years later, I still feel as though my knowledge base is a small puddle compared to the vast ocean of knowledge about bugs. There are thousands of insect species in the state of PA alone. I could spend my whole life studying insects across the world and I'd never be able to learn them all. By studying insects, I can almost guarantee that there will always be something new for me to learn.

For me, though, what's really fun is learning about all the countless cool and amazing adaptions that insects have developed over time. There is a collection of weird and gross insect facts swirling around in my head – which also happen to be great time-fillers for when I'm leading a hike with children. For example, did you know that dragonfly nymphs (dragonfly teenagers) are aquatic and have the ability to take in water throughout their body and shoot it out of their butt in order to jet forward? That's pretty insane if you ask me, but it's theorized that it developed to help them escape from would be predators. One of my weirdest facts, though, involves an insect that we've all heard of before - termites. These little ones have special bacteria in their stomachs that help to break down the plant material/wood that they eat. Mammals have similar bacteria in their stomachs as well, and they are passed down from mother to offspring via milk. Termites, however, don't produce milk for their young. Instead, they pass down bacteria through their poop. It sounds incredibility gross and icky, but it's a pretty effective strategy that works for them. I could keep going with countless more facts, but I don't want anyone to lose their lunch.

When summer finally does arrive, you'll more than likely find me out on the trails while I hunt for new insects to see. They can show up in the most unexpected places and at the most unexpected times. I'm very excited to learn and discover what is around in PEEC and the Delaware Water Gap as a whole. Feel free to come explore with me!





Pennsylvania Owls #2 - B is for Barn and Barred

By Sheri Bone

This article will focus on two more owl species that can be found in Pennsylvania: The Barn Owl and the Barred Owl. Don't let the fact that their names sound alike fool you. They are two very different birds even though there are a few similarities.

The Barn Owl, Tyto alba, has a white, heart shaped face. (I will remember this characteristic because I 🎔 barns, and the barn owl has a heart shaped face!) This owl is about the size of a house cat, but weighs only about one pound! Its chest is white, too, and can be spotted. Its wings and back are golden, buff, and/or gray that can appear to be white at night. While many owls have yellow eyes, the Barn Owl has dark ones. Also, if you think you should listen for a "hoot" to find this bird, you are sadly mistaken. Barn Owls screech with a long drawn out hissing scream.

Listen here: http://www.allaboutbirds.org/guide/Barn_Owl/sounds.

While their vision is excellent, it is their superb hearing that allows them to be great night hunters. They can be found in grasslands, marshes, brushy fields, forest areas, and even in suburbs and cities, and they hunt and eat rodents, rabbits, bats and shrews.



Barn Owl

As their name implies, Barn Owls make nests in barns, but not just in those buildings. They like to use tree cavities, caves, and other buildings, too. They live not only in Pennsylvania, but have been found in every continent except Antarctica! A Barn Owl nest has even been found in Yankee Stadium! The female makes nests using her own regurgitated pellets (the parts of their prey that they can't digest) along with grasses. She can lay up to 18 eggs, but the usual size of her clutch is 5.

As we humans use farmland and woods to make new homes and businesses, we are contributing to the loss of their habitat so the Barn Owl numbers are declining. We can help remedy this problem by making houses for them, as we have done for the bluebirds. You can find nest box plans on the Cornell Lab of Ornithology website: https://nestwatch.org/learn/all-about-birdhouses/

birds/barn-owl/.

In comparison to Barn owls, Barred owls, Strix varia, are much larger than Barn Owls. They are between the size of a crow and goose! They are 'stockier' than barn owls, have round heads, and their faces are a mix of brown and white blended together into thin stripes. A small yellow beak stands out in the middle of their faces like a golden hook.

They get their name from the bar pattern that forms on their wings and backs. It looks like they have brown and white stripes (or bars) across them. The bars on their chest are vertical while the ones on their wings and back are horizontal.

Like the Barn Owl, Barred Owls have dark eyes. And like the Barn Owls, they eat small mammals and rodents. They also eat fish, salamanders, other birds, and snakes. Usually a nocturnal bird, Barred Owls have been known to be awake during the day and hunt then.

(My daughter took great photos of a family of Barred Owls in one of her backyard trees in the middle of the day a couple of years ago.)

Its call is very different from the Barn Owl, and sounds like "Who cooks for you?" At least that is what the bird experts say. You can determine if it sounds like that to you. Listen here: https:// www.allaboutbirds.org/guide/Barred_Owl/sounds. Apparently the 'song' gets rowdy during courtship.

Barred Owls live in forests that are a combination of evergreens and deciduous trees. They like to be near water. They, like the Barn Owls, like to build nests in tree cavities. The female will lay a small clutch of eggs, usually two or three, but occasionally four. Mama does all of the incubating, but papa will bring her food. Both parents share in the feeding of the babies.

While their numbers are not in jeopardy, some people have made nesting boxes for them. (Plans for Barred Owl nest boxes can also be found on the Cornell Lab of Ornithology website.)

I am finding that learning about owls is fascinating! I hope you, too, are enjoying this journey as I discover more about these fantastic feathered friends.



Barred Owl

References:

https://www.allaboutbirds.org/guide/Barred_Owl/id http://www.audubon.org/field-guide/bird/barred-owl http://naturemappingfoundation.org/natmap/facts/ barn_owl_k6.html

https://www.barnowltrust.org.uk/barn-owl-facts/ https://www.allaboutbirds.org/guide/Barn_Owl

BAD BUG: Spotted Lanternfly Poses Threat to PA

Continued from Page 1

What can we do? The most important thing you can do is be aware of how to identify these dangerous insects and report if they are found. Photographs can be sent to BadBug@pa.gov with the GPS location. If you can't take a photograph or grab a specimen to send in to the PA Entomology Lab, you can call the Automated Invasive Specie Report Line at 1-888-253-7189 with a detailed message and contact information. If you do happen to scrape off egg masses, make sure to lather them in hand sanitizer or double bag before tossing them in the garbage. More information can be found in the sources below.



Egg Mass

Sources:

http://www.agriculture.pa.gov/Plants_Land_Water/ PlantIndustry/Entomology/spotted_lanternfly/Pages default.aspx

https://extension.psu.edu/what-to-do-if-you-find-spottedlanternfly

http://www.wfmz.com/news/berks/pa-lawmakers-on-spotted-lanternfly-we-have-an-epidemic/640386357

Photo Credits:

Adult Lanternfly credit: https://entomologytoday. org/2018/02/26/spotted-lanternfly-states-urge-citizens report-sightings-invasive-insect-hitchhiker/

Nymph Stages: https://bugguide.net/node/view/1172305 Egg mass: https://extension.psu.edu/what-to-do-if-youfind-spotted-lanternfly

Nature's Fury on the Pocono Plateau

By Dennis Miranda

On March 2, 2018, a nor'easter descended upon the Mid-Atlantic States that defied meteorological forecasts for its intensity and fierceness and, as a result, caused subsequent catastrophic damage to homes, roads, bridges and other man-made structures. Sustained hurricane force winds, over 70 miles per hour, buffeted the eastern facing Pocono Plateau. Over 20 inches of wet snow fell upon the landscape sometimes at a rate of 2-3 inches per hour.

For many Pike County residents and businesses, the loss of power was not restored for a week. The cost in damages is still being assessed, but no doubt it will be in the tens of millions. Pike County was literally paralyzed and closed off. Major roads were closed for days. Secondary roads were blocked and closed for weeks.



PEEC was not immune; four cabins, two yurts and the dining hall all sustained damage. The mature pine trees that encircle the campus and provide our bucolic setting proved to be no match for the storm's fury. Dozens of trees fell; others snapped like twigs with the combined weight of the wet snow and the gale force winds.

Nature, too, bore a brunt of immense proportions. Everywhere on the Pocono Plateau, whole stretches of forest have fallen. Steep hillsides of mature hemlocks, weakened by the woolly adelgid blight, were uprooted from their base, and collapsed onto streams taking with them neighboring trees as well. Loosened soil and debris have clogged streams, causing them to jump their banks and flow elsewhere. Pine plantations of Scotch, White and Red Pine suffered greatly. Some groves were annihilated completely with not a single tree left standing, creating expansive clearings stretching over many acres.

At the corner where Brisco Mountain Road meets Emery Road stood some of the heathiest and oldest Norway Spruces in the region. Today, perhaps half, if not more, of the stately trees are piled on the ground on the edge of the road as if they were being logged. Their gnarly confusing riot of branches, exposed root base, leafy needles and exposed earth will be left to nature to heal.

And the healing has begun. My drive up Brisco Mountain Road one early spring morning was startling. The first bird to take advantage of a blowdown is the Winter Wren. Sure enough, I heard a Winter Wren singing amid some fallen Spruces. I got out of the car to catch a glimpse of the often skulking Winter Wren. Instead, as I was about to stand up, a Ruffed Grouse 'exploded' in flight from the edge of the road into the interior of the forest, scaring the heck out of me. And a Pileated Woodpecker followed the Ruffed Grouse flying from a previously unseen perch on a fallen tree near the road as well.

The Winter Wren, Ruffed Grouse and Pileated Woodpecker are all typical birds you would find in a healthy forest in the Poconos. While we have suffered the result of the winter storms and the forests have been ravaged, for these birds its business as usual. It will be exciting in the months and years to come, to see how nature will return. I can't wait.



PEEC Seasons

PEEC Boy Scout Badge Fest Spring 2018

By Emma Roth

On April, 7 2018, Cub Scouts and Boy Scouts were invited to PEEC to participate in a Badge Festival. While Boy Scouts completed the requirements to earn their Nature Merit Badges, Bear Cub Scouts worked on completing the Bear Necessities Adventure.

The day started off strong when a porcupine made an appearance and the Boy Scouts had the opportunity to view the mammal up close as it wandered around the field behind PEEC's dining hall. After this excitement, they headed indoors to learn about some native endangered animals and hear success stories about how some endangered animals, such as the bald eagle, have made a terrific comeback. They also learned how to identify animal tracks and signs, a skill that came in useful during the afternoon activities. The scouts learned how to identify mammal tracks and created phonetic spellings for frog calls that would allow them to be easily recognized and identified in the field. After a break for lunch, the Boy Scouts headed outside to hike Fossil Trail.

Along the way, they stopped to find animal tracks and signs, identify both coniferous and deciduous trees, look for and identify birds, and listen to and identify frog calls at the vernal pool. After the hike, the Boy Scouts headed to Front Pond, where they caught and identified dragonfly nymphs, mayfly larvae, water boatmen, tadpoles, and a few baby bluegill fish.



Pileated Woodpecker Hole

The Bear Cub Scouts started the day by going over what was necessary to bring on a camping trip, both personal gear and gear that would be useful for this group as well.

The Cub Scouts learned how to tie useful knots for setting up camp, including the square knot and the half-hitch. In the afternoon, this knowledge was put to the test when the Cub Scouts created a mock campsite. They found the best place to put a tent, set up a kitchen area, and hang a bear bag. After the site was planned, the Cub Scouts used the knots they learned that morning to set up a tarp shelter, and learned about different ways to position the tarp in order to protect them from various types of weather. After cleaning up the campsite, the Cub Scouts headed out for a hike of Fossil Trail.

During the hike, they learned about invasive insects like the gypsy moth, saw how bats can use a shagbark hickory for shelter, saw the patterns made by engraver beetles on the surface of a log, and identified woodpecker and wasp holes in a dead tree.



Practicing knots learned that morning



Scouts Hiking



Learning to use the Coniferous Tree Guide



Woodpecker & Wasp Holes in a Dead Tree



Engraver Beetle Tracks



Singing Makes Me Feel Free

By: Ricky Bennett

As a young child, I seldom spoke to anyone other than my family and teachers. However, music class brought out a side of me previously unknown to my fellow students. Music allowed my voice to be heard in a way that felt comfortable. With the help of my music teacher, I performed my first solo during second grade. I remember being on stage and shaking more than a willow tree in the wind, but everyone could hear me and that feeling alone made me feel free. I continued to sing in elementary school classes, but fifth grade began middle school and that meant that I would not have a choir class option for two years. Not having choir in school significantly impacted the amount I spoke to anyone; it felt like the light burning inside me was extinguished.

Not many kids enjoy entering seventh grade, but I did as I knew choir would return. My first choir class of seventh grade re-kindled my light and I knew that I never wanted that light to be extinguished again. I continued my choral pursuits all through college and now in community choirs as an adult. Along the way, choir continued to help me find my voice and has helped shape me into who I am today.

MUSICAL INSTRUMENTS ARE MADE OF THESE TREE SPECIES:

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POPLAR, MAHOGANY, & OAK

VIOLIN:

MAPLE, SPRUCE, WILLOW, & SOMETIMES POPLAR

XYLOPHONE:

ROSEWOOD

PIANO:

SPRUCE, BASSWOOD, & OCCASIONALLY SUGAR PINE

BY: RICKY BENNETT





A pleasant summer evening is the perfect time to head outside.

Take a walk in the woods

to listen for owls, look at stars, and enjoy the music of the night. Enjoy fun activities that test your night vision.

We recommend you bring a flashlight!

For more information:

Call PEEC: 570-828-2319 Email: peec@peec.org Visit: www.peec.org



LEARN ABOUT THE WONDERFUL WORLD OF DRAGONFLIES & BUTTERFLIES!

DRAGONFLY WALK

SUNDAY JULY 29, 2018 • 1PM - 3PM

BUTTERFLY WALK

SATURDAY AUGUST 25, 2018 • 10AM - 12PM



CALL

PER

Learn about the wonderful world of dragonflies and butterflies! Join **David Trently** on a search through the fields and around the ponds for dragonflies and butterflies.

Call early - spaces fill up fast!

SUMMER **GETAWAYS**

PRE-REGISTRATION REQUIRED Unless otherwise indicated.

TO REGISTER:

Call PEEC at 570-828-2319

JULY

"Celebration with a Bang" Family Nature Getaway Weekend July 4th Weekend: June 29 - July 1 Adults \$195 / Child and commuter day rates available - call for details

Bring your friends and family to experience the best of what PEEC has to offer. Nature hikes, animal presentations, swimming, canoeing, fireworks, campfire and more! Price includes three nights lodging and meals from Friday dinner to Sunday lunch.



Bridge the Gap: Pond Paddle Saturday, July 7 – 10:00 - 12:00pm Sunday, July 15 – 1:00 - 3:00pm Sunday, July 22 - 10:00 - 12:00pm Cost: FREE

Join us for a paddle around our ponds! Beginners are welcome - we teach you everything you need to know! Dress appropriately - you may get wet! Call in advance to reserve a boat. Funding for this program is provided by the William Penn Foundation.

Frog Frolic

Sunday, July 7 - 1:00 - 3:00pm Sunday, July 15 - 10:00 - 12:00pm Sunday, July 29 - 10:00 - 12:00pm Cost: \$5 per person

Spend the afternoon with us at our ponds and

streams! Learn about some of our frog friends as we gently catch and release these hopping amphibians. Wear boots and plan on getting wet and muddy.



Wilderness Walkabout Saturday, July 14 – 1:00 - 3:00pm Cost: FREE for members / \$5 for non-members Get out and explore PEEC! Join Paul Kovalski, aka Dr. Dinosaur, as we hike one of our trails and discuss the natural history of our park.

Nature at Night Saturday, July 21 - 8:30 - 10:00pm Cost: \$5 per person

A pleasant summer evening is the perfect time to head outside. Take a walk in the woods to listen for owls, look at stars, and enjoy the music of the night. Enjoy fun activities that test your night

We recommend you bring a flashlight!

Introduction to Orienteering Sunday, July 22 – 1:00 - 3:00pm Cost: \$5 per person

Come learn how to use a map & compass on our orienteering course. We'll show you the basics before you try and find all the points. Space is limited – call early!



Edible & Medicinal Plant Walk Saturday, July 28 – 10:00 - 12:00pm Cost: \$5 per person

Nature provides food & natural remedies for us in the form of many plants. Join us on a hike focused on wild edible & medicinal plants. NO COLLECTING WILL BE DONE IN THE PARK.

Bridge the Gap: River Paddle Saturday, July 28 – 9:00 - 3:00pm Cost: \$10 per person

Join us for a paddle down the Delaware! Bring a lunch, a water bottle, and don't forget to dress for the weather. We will provide extra water and snacks. Choose between a canoe or kayak.

Pre-registration is required and begins at 8:30am on June 28.

Dragonfly Walk Sunday, July 29 - 1:00 - 3:00pm Cost: \$5 per person

Learn about the wonderful world of dragonflies and butterflies! Join David Trently on a search through the fields and around the ponds for dragonflies and butterflies. Call early - spaces fill up fast!



AUGUST

Bridge the Gap: Pond Paddle Saturday, August 4 — 10:00 - 12:00pm Sunday, August 12 – 10:00 - 12:00pm Sunday, August 19 – 10:00 - 12:00pm Cost: FREE

Join us for a paddle around our ponds! Beginners are welcome – we teach you everything you need to know! Dress appropriately - you may get wet! Call in advance to reserve a boat. Funding for this program is provided by the William Penn Foundation.

Bridge the Gap: River Paddle Saturday, August 11 – 9:00 - 3:00pm Cost: \$10 per person

Join us for a paddle down the Delaware! Bring a lunch, a water bottle, and don't forget to dress for the weather. We will provide extra water and snacks. Choose between a canoe or kayak.

Pre-registration is required and begins at 8:30am on July 11.

Continued on Page 10



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AUGUST

Nature at Night Saturday, August 18 – 8:00 - 9:30pm Cost: \$5 per person

A pleasant summer evening is the perfect time to head outside. Take a walk in the woods to listen for owls, look at stars, and enjoy the music of the night. Enjoy fun activities that test your night vision.

We recommend you bring a flashlight!

Edible & Medicinal Plant Walk Sunday, August 19 – 1:00 - 3:00pm Cost: \$5 per person

Nature provides food & natural remedies for us in the form of many plants. Join us on a hike focused on wild edible & medicinal plants.

NO COLLECTING WILL BE DONE IN THE PARK.

Butterfly Walk Saturday, August 25 – 10:00 - 12:00pm Cost: \$5 per person

Learn about the wonderful world of dragonflies and butterflies! Join David Trently on a search through the fields and around the ponds for dragonflies and butterflies. Call early – spaces fill up fast!



Plant & Sip - **ADULTS ONLY!!**Saturday, August 25 — 6:00 - 8:00pm Cost: \$15 per person

Learn the basics of planting and caring for your very own succulent fairy garden arrangement. Program includes supplies you'll need with plenty of succulents and planters from which to choose. Additional supplies are available for purchase. Join us with tea & cookies or BYOW!

Family Camp Weekend: Migrate to the Poconos August 31 - September 3 Cost:Adults \$225 / Child, Commuter, Day rates available

Bring your friends & family to experience the best of what PEEC has to offer. Interpretive hikes, animal presentations, canoeing, campfire and more! Includes three nights lodging & meals from Friday dinner - Monday lunch.





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