



PEEC
Pocono Environmental
Education Center



Summer Solstice 2017

Seasons

A Quarterly Publication to Advance Environmental Literacy

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**Pocono Environmental
Education Center**

538 Emery Road
Dingmans Ferry, PA
570 • 828 • 2319

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www.peec.org



Getting Closer to Nature: Toad Gardens

By Stephanie Sherman

Many people would agree the earthworm could be a gardener's best friend, but there is another little garden friend who can be equally as beneficial: the American toad (*Bufo americanus*). Now before we start worrying about warts and slime, backyard amphibian friends provide a great number of benefits just from their presence in a home garden. Toads and frogs show the health of the garden by keeping pesky insects at bay and indicating if toxic chemicals are lurking in the soil. These creatures also provide a rewarding lesson for nature lovers of all ages. As someone who has grown up watching toads, I have found that providing spaces in my own garden has become a wonderful way to connect people to the outdoors by inspiring others to think about their backyards.

If you ever sat outside on a warm spring evening and listened to the high pitch trills of an American toad, you have already enjoyed the pleasures of our native amphibians. However, if those times included a few bug bites, you might need a few friendly toads to help gobble up some mosquitos. Despite their boisterous singing, American toads often are misunderstood or even forgotten about in our outdoor excursions. Brown and usually no more than the size of a golf ball, toads can go unnoticed in our gardens because they blend so well with the leaves and mulch. They are voracious diggers and can make a home under brick pathways or pavers, hiding under our very feet during daylight hours. Once established, these nighttime hoppers can take care of up to 10,000 bugs in a summer, including mosquitos, slugs, and other insects that may plague your garden.

Toads and frogs are called biotic indicator species because they are living animals that can show the health of an environment. Amphibians are tied to the water. They do not drink through their mouths like we do but absorb moisture directly through their skin, which allows any chemicals in the soil or water to be taken in as well. I always ask my students, "Would you drink your bug spray?" Would you do the same with your fertilizer or weed-killer? Those chemicals are taken in by both the plants and animals in your garden, which means going barefoot on the lawn could be riskier than you think. If a toad is happy enough to be in my front yard, I know my feet are walking on safe earth and my vegetables are clean eating.

The most endearing lesson about these amphibians is that they are not as common as we believe. Amphibian numbers are on the decline due to pollution, habitat destruction, and diseases like chytrid fungus that are easily spread with human progress. In our area, vernal pools are essential

Continued on page 6

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Message from the Executive Director



By Jeff Rosalsky

It's hard to believe, but PEEC's EcoZone Exploration and Discovery Room has been open for over 6 years. It started with a closed down indoor swimming pool and a dream of creating an environmental and sustainability narrative around hands-on exhibits using the old pool space. The EcoZone has become one of the most popular introductory classes at PEEC, as well as a destination for weekend visitors. Thousands of students now experience the EcoZone every year.

One of the magical aspects to the enormous volume of space in the room is that we can continue to add exhibits and amenities. Recently, Allison created a bat related exhibit that demonstrates the similarities

between human arm bones and the bones in the wings of bats. We also suspended a Gravity Light from the ceiling, which allows students to lift a weight using geared pulleys; this drives a small generator, which then provides power for a light as the weight slowly descends over the course of 20 minutes. Finally, through the generosity of the Christopher and Dana Reeve Foundation, we were able to install a wheelchair lift in the EcoZone to allow students in wheelchairs to fully and independently experience the beaver lodge and bat cave.

PEEC still focuses on the hands-on experiences in the national park which surrounds us, but the EcoZone reinforces the inter-relationship of natural and man-made systems. The EcoZone beaver lodge provides a fascinating, and otherwise inaccessible, area for exploration. It connects the recently fallen trees around the beginning of Two Ponds Trail with the growing beaver lodge near the bird blind with the branches blocking the Front Pond spillway.

PEEC's goal is to foster this sense of connection with nature for all our visitors. We want them to explore, to enjoy and to learn. Our hope is that they will depart PEEC with a passion to sustain and to improve the quality of our forests and our waters.



PEEC
Pocono Environmental
Education Center

NATURE AT NIGHT

SATURDAY, AUGUST 5 – 7:30PM - 9:00PM



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PEEC is close to home,
where learning comes naturally!

PEEC is located off of Route 209 inside the Delaware Water Gap National Recreation Area in Dingmans Ferry, PA.

Delaware River's Fish – The American Shad

By Sheri Bone

If you paddled down the river recently, or plan to in the next couple of weeks, you may see dead fish floating on the river. Maybe the question, “Is there is a problem with the river to have so many dead fish on it?” crossed your mind. Fear not. What you are seeing is part of the life cycle of one of the Delaware River's important fish: The American Shad.

The largest member of the herring family, the American Shad (shad) has quite a story about its survival in the Delaware River. While it lives a majority of its life in the Atlantic Ocean eating plankton, in the spring, it swims upstream in freshwater rivers and creeks to spawn. Once in the river, (going to where they were spawned) the females lay eggs and the males immediately release sperm so fertilization can occur. After spawning, many of the adults die, having completed their life's mission. These are the dead fish you may see on the river, but their life cycle is really not done because they provide food for eagles and other animals. Some adults, however, do not die, and either return to the ocean immediately or live in the freshwater rivers up until early fall, when they travel back to the ocean with the tiny ‘fry’ (baby) and ‘fingerlings’ (young fish) that have since hatched (and not become another animal's dinner.)

Before Europeans arrived on American soil, there were an estimated three hundred different kinds of fish living in the clean Delaware River, one of which was the shad. The Native Americans easily caught the fish, cooked them, smoked them, and dried them. Drying and smoking the fish were important tasks because it was necessary to have food stored for the winter. Once Europeans were here, they too found the fish an abundant food source. Although a very bony fish, the settlers found them tasty and learned from the Native Americans the best ways to dry and smoke them. It has been reported that the reason the early American soldiers survived during the Battle of Valley Forge (a winter battle) was because there was an early run of shad in the spring of 1778, and the fresh fish sustained the men!

The story of the shad goes downhill, as does the health of the river, during the early to mid-1800's. Overfishing, damming, and pollution in the river affected the numbers of shad that were able to spawn upstream. Harvests of 130,000+ fish yearly before 1825 decreased dramatically by the 1870's to less than 25,000.

As time went on, however, and people became more aware of how their actions with river use/misuse/abuse affected all parts of their lives, changes were started and continue today.

In 1871, the United States Fish Commission was created and began studying causes of the decline in local fish populations. During the studies, it was determined that shad was a major food fish for the nation. More money became available to conduct more studies. People created hatcheries that helped the shad reproduce and get back to the ocean. These efforts, along with removing dams all along the Delaware and its tributaries, and shutting down illegal fish traps in the Upper Delaware, helped the shad numbers begin to rebound. In the mid-1900's, more focus was placed on river clean-up as industrial sites began being cited for polluting the river. These changes helped to increase the shad numbers even further.

Since the pollution, overfishing and damming problems were not just in the Delaware River, people living along other rivers along the Atlantic coastline had to deal with those problems, too. In addition to monitoring pollution, some schools along the Potomac River teach their students to become mini hatcheries for the fry. Hatching takes about 4-5 days, so if eggs are collected on a Monday, the students can study them and release the fry on Friday. A similar program has also recently been started in some schools along the Delaware River.

Where did I learn so much about the shad? Recently, I attended a conference with other environmental educators whose centers are located in the Delaware River Watershed. One of the topics that we learned about was the American Shad! Speakers came to tell about their efforts to bring the shad back. A woman cooked the fish for us. She used a time honored tradition of cooking the shad slowly near a wood fire. (The shad were planked and set around the fire for 5 hours to allow it to be cooked thoroughly and be easily removed from the bones.) We printed shad on T-Shirts (see photo). The conference was held in Lambertville, NJ – home of the annual Shad Festival held in late April.

I also read an in-depth article titled “Fish or Foul: A History of the Delaware River Basin Through the Perspective of the American Shad,



Sheri wearing her American Shad printed t-shirt.

1682 to the Present” by Charles Hardy III, West Chester University.

The American Shad – a species to help us identify clean water and still a food source for many. Shad, American Shad! Our Founders found you weren't bad. They ate lots of you, their hard times they got through, thanks to you, oh American Shad!





PEEC
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PEEC & HARMONY PRESENTS
ON SALE NOW!
MARY CHAPIN CARPENTER
TUESDAY • OCTOBER 24, 2017



Photo Credit: Aaron Farrington

Five-time Grammy Award-winning singer-songwriter and Nashville Songwriters Hall of Fame inductee **Mary Chapin Carpenter** hits the road in 2017, performing songs from her expansive 14-album catalog and new songs from her latest record *The Things That We Are Made Of*, released May 6, 2016.

Produced by 2016 Producer of the Year Grammy-nominee **Dave Cobb** (Jason Isbell, Chris Stapleton), the album features eleven new songs written by Carpenter, and has received critical acclaim from NPR and Rolling Stone, among others. The Associated Press calls it, "...an evocative collection of songs," while The Huffington Post declares, "...Carpenter is now at the height of her musical career, painting a compelling, relevant piece of art tinged with mixed feelings of grief and joy, all without preaching or darkening our minds with sadness."

Beloved by fans and critics alike, Carpenter has recorded 14 albums and sold over 14 million records. Previously, in 2014, Carpenter released her debut orchestral album, *Songs From The Movie*, which was arranged and co-produced by six-time Grammy winner Vince Mendoza. Since its release, Carpenter has performed alongside the New York Philharmonic, the BBC Scottish Symphony Orchestra, the London Concert Orchestra, the L.A. Philharmonic and the National Symphony Orchestra among many others.

A BENEFIT CONCERT FOR PEEC
(POCONO ENVIRONMENTAL EDUCATION CENTER)

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TICKETS
ARE
AVAILABLE AT
www.peec.org/concert

LOCATION:
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501 Vine St., Scranton PA, 18510

TICKET PRICES:
\$50 • \$60 • \$70

Doors - 7:00pm
Support - 7:30pm
Headline - 8:30pm

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Sheila Hodges
(1960 – 2017)

Sheila Hodges truly belongs to the national park. Due to a slight miscalculation, she was born at her parents' home on Wilson Hill in Dingmans Ferry in what is now part of the National Park. She was born in 1960, the seventh child of Virginia and Harold Hodges. The current two-room Ranger Station on School House Road was Sheila's elementary school.

Sheila earned her BS in biology at Penn State University and her Masters in Environmental Science at SUNY, New Paltz. A lover of nature and outdoors activities, she enjoyed swimming, rafting down the Delaware, fishing, boating, hiking, bird watching, scuba diving, and new adventures. Sheila was an incredible planner and would orchestrate group adventures for family, friends, and students. She worked at an archeological dig in lower Manhattan, at the Park Service Pinchot Institute, and often performed as 'Woodsy the Owl'. She worked as an environmental specialist for a private engineering firm, was a master gardener, and one of five educators across the nation published in a book *Community Connections for Science Education*. She was voted 1997 Conservation Educator of the Year and was a biology teacher at Delaware Valley High School for over 22 years. She and her longtime partner, Jason Van Patten, were planning to retire to Florida.

Sheila loved teaching biology and environmental science and ran the Environmental Club for many years, taking her students to statewide Envirothons where they earned many honors. She formed a special connection with her students and had many who remarked that she changed their lives. With her own time and money, she created a unique environmental habitat in an unused area of DVHS, including a pond, waterfall, and multiple plant and bird habitats. Sheila and her students maintained the habitat year round. The space was featured in local and national news and was part of the Pike County 'Secret Garden Tour'. Sheila is survived by her father, Harold Hodges and four siblings, as well as cousins, nieces, and nephews. They will remember her as 'their passionate environmentally-conscious aunt' who always had snacks for them on their outdoor adventures.

Donations in memory of Sheila Hodges can be made to PEEC.

Beaver Bites

By Allison Owczarczak

We've had quite a bit of beaver activity at Front Pond in the past five or six months. Their bank lodge has been expanded since the last occupation and numerous maples have been felled for food. Here are some quick facts about beavers:



Beavers are North America's largest rodent (rodents are characterized by their ever-growing incisors), averaging about 40lbs, but they can reach 70lbs.

The beaver scientific name is *Castor canadensis*. Beavers have an oil gland at the base of their tails that produces castor. This musk is used in leather-based colognes and perfumes, as well as a vanilla substitute in some ice creams. *Canadensis* is a new Latin term meaning 'of Canada'; it is used to denote species indigenous to, or strongly associated with Canada.

The largest beaver dam is located in Wood Buffalo National Park of Canada in Alberta. It spans 2,800 feet and most likely has been under construction since the mid-1970's. It was first discovered in 2007 and is visible in NASA satellite imagery.

Beavers are herbivores and their preferred trees are aspen, cottonwood, poplar and willow. They will also eat the bark of alder, apple, birch, cherry and maple.

Beavers engineer their own habitat when they dam waterways. This creation of wetland habitat is beneficial to numerous animals. Examples include:

Deer forage on shrubby plants that grow where beavers cut down trees for food or to use to make their dams and lodges. This food source is especially important in the winter months.

Weasels, raccoons, and herons hunt their prey along the swampy edges along beaver ponds.

Migratory waterfowl and aquatic birds use beaver ponds as nesting areas and resting stops during migration. Waterfowl such as ducks and geese often nest on top of beaver lodges since they offer warmth and protection, especially when located in the middle of the pond; although we have seen them use the bank lodges at both Pickerel and Front ponds at PEEC.

The trees that die as a result of rising water levels or girdling attract insects, which in turn feed woodpeckers, whose holes later provide homes for other wildlife. In addition, large stands of mature dead trees often encourage heron rookeries, a place where numerous heron will congregate in a colony of nests.

While beavers are often considered a nuisance to people as they flood roads, yards and take down trees, they are beneficial in water management. Beaver ponds can hold back flood water, as well as maintain a constant source of water in areas prone to drought since the dams keep water on the land for longer. Beaver ponds also lessen erosion, raise the water table, and act as "Earth's kidneys" as they help to purify water. The purification of water occurs as the silt collects upstream of beaver dams and toxics such as pesticides are broken down by microbes in the wetlands.



Getting Closer to Nature: Toad Gardens

Continued from Page 1

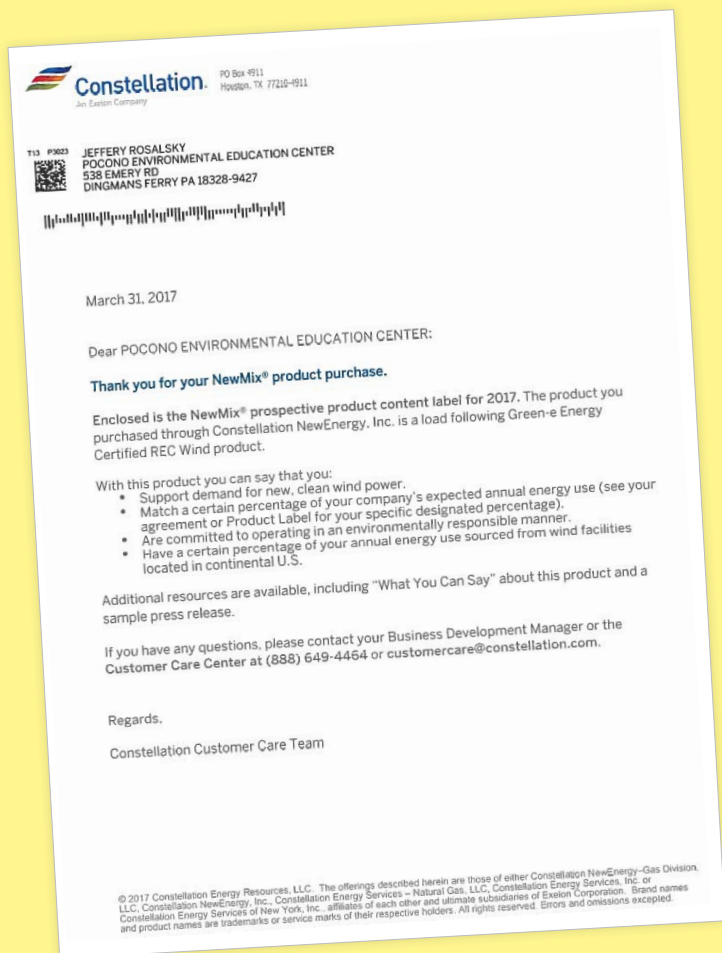
for amphibians. These are temporary ponds created by snowmelt and spring rains. They contain no predatory fish that would gobble up tiny eggs and tadpoles. However, a hot and dry day can result in those delicate young drying up with their homes. Likewise, as people develop more of our land, vernal pools become filled in or polluted. Even a hard winter can destroy a pond if too much road salt reaches the water source. Only those healthy, untouched vernal pools will result in tiny toads that will disperse to find their next home.


So how can you bring a toad to your backyard? If you live close to the forest you may already have some hiding out there. In more developed areas, luring in some toads might be a bit more challenging. It all starts with a place to live. The simplest of toad homes begin with an overturned pot that is propped up just enough for the toad to fit underneath. The other side should be buried to create a nice dark and damp space. Be sure to place your toad home in a location that is shady with good ground cover, giving the toad a safe area to hunt for insects. Amphibians also need a source of water. A shallow dish works perfectly and allows them to climb out easily. Many people take great pleasure in decorating their toad abodes with custom built houses or landscaped water dishes, but your toad will appreciate the location far more than the exterior. One recommendation is the addition of a small solar light to draw flying insects to your toad house, but once a toad has moved in they may faithfully stay for many years.

With that in mind, a frightened toad can protect itself if you have a curious dog or cat. When threatened, toads may urinate and/or secrete a sticky white poison from the glands behind their eye, which can make your pet sick if ingested. This poison does not pose a problem for humans, but you should always wash your hands before and after handling a toad. This is for your safety as well as the toad! Toads are fragile so always cup a toad in your hands rather than squeeze. Some toads have even become accustomed to handling if routinely fed a wriggling insect. Always return toads to where they were found and never take one away from its home. I teach my campers that a toad has its own home just like we do and to remove it would be like taking us to another country.

Toads can be a great lesson for kids and adults. Their life cycle shows how closely they live with the water while providing a friendly reminder that other animals share our space too. These hoppers provide endless wonderment for both my summer campers and me. I hope that you too will find these amphibians as a source of joy, especially when they may be disappearing faster than we think. Do you have a spot in mind for your garden? Get hopping!

Stephanie Sherman is the Summer Camp Director and Special Events Coordinator for Pocono Environmental Education Center. Growing up near the Lehigh Valley, Stephanie has spent most of her life chasing toads and other outdoor critters. She has spent the last ten years working for and studying various environmental education centers in Northeast Pennsylvania. Her passion is bringing people closer to nature through hands-on experiences.



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Top 5 Reasons To Visit PEEC This Summer

By Derek Scott

Free Paddle Programs

Whether you're new to paddling, or no stranger to being on the water, our summer paddle programs are a great way to enjoy the outdoors. We have several free paddles on our ponds throughout the summer, as well as a day paddle down the Delaware River on July 29th. Sign up early to guarantee a space and take your pick of either a canoe or a kayak!

July 4th Family Nature Getaway Weekend

Just as the name suggests, get away from it all with a wonderful weekend in the woods. Enjoy the best of what we have to offer, including interpretive hikes, animal presentations, paddle programs, campfires, tie-dye and swimming! Stay for the whole weekend, one day, or even just a single class. Preregistration is required to participate – give us a call for details!

Gardening Programs

Come learn from the experts as the Pike County Master Gardeners will be leading 2 workshops about how you can improve your garden. On June 24th, we'll be discussing how to make use of native species in the planning and

planting process. July 16th's program will focus on gardening with rain barrels and how best to incorporate them into your garden.

Wildlife Programs

Interested in learning about the wildlife found in our area? We have a variety of different programs focused on everything from amphibians and other aquatic creatures, to butterflies, dragonflies and more! These programs are great for children and adults of any knowledge level.

Hiking Trails

Open from dawn to dusk each day, PEEC has 6 trails of various lengths and difficulties, each with a unique feel. Looking for something ADA accessible? Check out our Trail for Everyone. Interested in a leisurely stroll to get a feel for our property? Walk the Two Ponds trail. Want to see some fossils of the organisms that used to live here? Explore the Fossil Trail. Enjoy the soothing sounds of a creek? Hike the Scenic Gorge trail. Looking for waterfalls and a view? Trek the Tumbling Waters trail. Want to get away from it all for a while? Ramble along the Ridgeline Trail.



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WILD EDIBLES WALK

SUNDAY, JULY 23, 2017 • 1PM–3PM



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**\$5 PER
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No collecting will be done in the Park.

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LEARN ABOUT THE
WONDERFUL WORLD OF
DRAGONFLIES & BUTTERFLIES!

DRAGONFLY WALK

SATURDAY JULY 22, 2017 • 1PM - 3PM

BUTTERFLY WALK

SUNDAY AUGUST 27, 2017 • 10AM - 12PM



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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.

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Hang Me Out To Dry

By Mariann B. Oswald

It's laundry day again. Laundry has never been one of my favorite chores, but, who knew my laundry habits could change the world?! Certainly, not me. And yet, it's true.

Although there has not been much measurable research on the subject, more and more information is coming to light regarding the link between water pollution and microfibers. In particular, acrylic clothing was proven the greatest offender, releasing five times more microfibers than polyester-cotton blends in each wash cycle, and nearly 1.5 times more than polyester.¹ Research is ongoing as to why some fabrics pollute more than others. But, the fact remains, every time I do my laundry I am harming the environment.

Just what are the long term effects of my laundry? Studies suggest microfibers create a "potential to poison the food chain, build up in animals' digestive tracts, reduce the ability

of some organisms to absorb energy from food and even change the behavior of crabs".² Crabs? I'll admit I don't put much thought into the behavior of crabs.

But, that's just the beginning. Virtual tons, yes tons, of plastic are surreptitiously dumped into our waterways every year. An estimated 85% of the human-made material found on shorelines is microfibers from nylon, acrylic and other materials used in clothing.³

Solutions are not bountiful. And, when you consider that "20% of the industrial wastewater in China" (according to the World Bank) is generated by textile manufacturing, it seems logical that it would be in their best interest to be proactive in finding a solution. However, although many clothing manufacturers are proactive regarding environmental programs and sustainability, few companies support research regarding the effects of microfibers.

Then, to complicate my laundry even more, groundwater pollution also needs to be taken into consideration. Antibacterial soaps, detergents, softeners... even toothpaste and cosmetics all contain pollution causing antibacterial ingredients.⁴ Bacteria evolution causes a decrease in diversity bacteria and a shift in composition of bacterial communities. First crabs, then bacteria. What will I destroy next on laundry day?

I don't know the solution yet. Maybe I never will. But, even though I will continue to do my laundry on a regular basis, I am more aware of the side effects it causes.

• I am going to take an active stance in reducing my purchase of acrylics and polyester.



• I will look into natural antibiotic ingredients in detergents and cosmetics, such as grapefruit seed extract.

• I will NOT use enzyme pre-soaks (which are 2/3 phosphate).⁵

• I will clean my dryer and water filters more often.

• And last, but not least, I will care more about crabs!

1 <https://www.theguardian.com/science/2016/sep/27/washing-clothes-releases-water-polluting-fibres-study-finds>

2 <https://www.theguardian.com/science/2016/sep/27/washing-clothes-releases-water-polluting-fibres-study-finds>

3 <http://nationswell.com/microfibers-washing-clothes-releases-plastic-pollution-into-the-ocean/>

4 http://www.naturalnews.com/042308_antibacterial_soap_bacterial_resistance_river_pollution.html

5 <http://www.motherearthnews.com/Nature-and-Environment/effect-of-pollution-zmaz70ndzgoe?pa geid=3#PageContent3>

PEEC
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BRIDGE THE GAP
Come Out & Enjoy The Park!

**DELAWARE WATER GAP
NATIONAL RECREATION AREA**

DAY PADDLE

SATURDAY
JULY 29
9:00 pm - 3:00 pm

SUNDAY
SEPTEMBER 10
9:00 am - 3:00 pm

Join us for this free paddle down the Delaware! Bring a lunch and a water bottle and dress for the weather. We will provide extra water and snacks. Choose between a canoe or kayak. **Maximum of 25 spaces.**

Funding for this program provided by the William Penn Foundation.

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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 30-July 3

Adults \$225 / 25% off ages 7-10 / 50% off
ages 4-6 / free under 3 / commuter and 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 Monday lunch.

Little Eco Explorers: Fish

Saturday, July 8 – 1:00-2:30pm

Cost: \$5 per child

A fun hands-on program for young children! Join
us for a story, craft, and activity focusing on fish.
Call for details.



Moonlit Drumming

Saturday, July 8 – 6:30-9:30pm

Cost: \$30 adult / \$20 child

Master drummer, Maxwell Kofi Donkor, is back
for another unforgettable experience. Enjoy
an introductory lesson and a drumming circle
under the moonlit sky around a campfire.
Don't miss this great event! No experience
necessary. Program requires a minimum of 15
preregistrations to run.

Bridge the Gap: Pond Paddle

Sunday, July 9 – 10:00am-12:00pm

Cost: Free

Come join us for a free paddle on our ponds!
Beginners are welcome—we will teach
you everything you need to know! Dress
appropriately—you may get wet. Spaces are
limited; call to reserve a canoe or kayak! Funding
for this program provided by the William Penn
Foundation.



Frog Frolic

Sunday, July 9 – 1:00-3:00pm

Cost: \$5 per person

Join us for a fun afternoon at the 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 a
little wet and muddy!

Bridge the Gap: Pond Paddle

Saturday, July 15 – 1:00-3:00pm

Cost: Free

Come join us for a free paddle on our ponds!
Beginners are welcome—we will teach
you everything you need to know! Dress
appropriately—you may get wet. Spaces are
limited; call to reserve a canoe or kayak! Funding
for this program provided by the William Penn
Foundation.

Ecozone Discovery Room!

Saturday, July 15 – 1:00-4:00pm

Cost: \$2 per person

Climb into a bald eagle's nest, crawl into a bat
cave, explore a beaver lodge, and dig in a fossil
pit! Explore this indoor discovery room and enjoy
hands-on exhibits on natural history, sustainability
and the local environment.

Gardening with Rain Barrels

Sunday, July 16 – 1:00-3:00pm

Cost: Free

Come out and learn all about rain gardens and how
to incorporate the use of rain barrels into your own
garden with the Pike County Master Gardeners!

Dragonfly Walk

Saturday, July 22 – 1:00-3:00pm

Cost: \$5

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

Edible & Medicinal Plant Walk

Sunday, July 23 – 1:00-3:00pm

Cost: \$5

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 within the Park.

Bridge the Gap: Day Paddle

Saturday, July 29 – 9:00am-3:00pm

Cost: Free

Join us for this free paddle down the Delaware! Bring
a lunch and a water bottle and dress for the weather.
We will provide extra water and snacks. Choose
between a canoe or kayak. Registration begins June
29th – Maximum of 25 spaces. Funding for this
program provided by the William Penn Foundation.

Frog Frolic

Sunday, July 30 – 10:00am-12:00pm

Cost: \$5 per person

Join us for a fun afternoon at the 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 a little wet and muddy!



Ecozone Discovery Room!

Sunday, July 30 – 1:00-4:00pm

Cost: \$2 per person

Climb into a bald eagle's nest, crawl into a bat
cave, explore a beaver lodge, and dig in a fossil
pit! Explore this indoor discovery room and enjoy
hands-on exhibits on natural history, sustainability
and the local environment.

Continued on Page 10

SUMMER PROGRAMS AND GETAWAYS

Continued from Page 9

AUGUST

Bridge the Gap: Pond Paddle Saturday, August 5 – 1:00-3:00pm Cost: Free

Come join us for a free paddle on our ponds! Beginners are welcome—we will teach you everything you need to know! Dress appropriately—you may get wet. Spaces are limited; call to reserve a canoe or kayak! Funding for this program provided by the William Penn Foundation.

Nature at Night Saturday, August 5 – 7:30-9:00pm Cost: \$5

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.



Pocono Quilt Camp August 11-18

Cost: \$70 per day / Call for commuter rates
Quilters of all skill levels welcome to a week of fabric fun. Activities include: fabric covered umbrella, how to use selected sewing machine feet, Jelly Roll bed runner, Quilt Block Challenge, and Fabric-Strip Poker game. Includes lodging and meals!

Bridge the Gap: Pond Paddle Saturday, August 12 – 10:00am-12:00pm Cost: Free

Come join us for a free paddle on our ponds! Beginners are welcome—we will teach you everything you need to know! Dress appropriately—you may get wet. Spaces are limited; call to reserve a canoe or kayak! Funding for this program provided by the William Penn Foundation.

Pond Explorers Saturday, August 12 – 1:00-3:00pm Cost: \$5 per person

Join us as we explore the ponds with nets! We'll collect fish, macro-invertebrates, amphibians, and anything else we find in collection bins for up-close study. Wear boots and plan on getting a little wet and muddy! Register early!

Naturally Beautiful Beading Sunday, August 13 – 10:00am-12:00pm Cost: \$20

Learn to identify different stones such as jasper, geodes, agate, or turquoise and the process used to color enhance the stones. Instructions will also be given on how to create a bracelet & earrings, or a necklace to take home!

Tie-Dye Day! Saturday, August 19 – 10:00am-12:00pm Cost: \$5

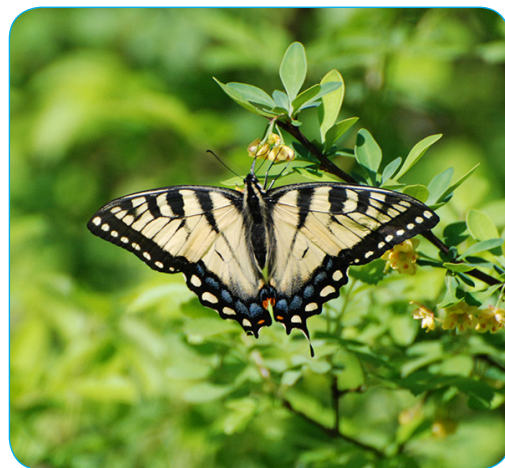
Join us for a fun morning of tie-dyeing! We'll have a variety of colors available and help you come up with some creative designs! Bring whatever you'd like to dye or purchase a shirt in our bookstore beforehand.

Ecozone Discovery Room! Saturday, August 19 – 1:00-4:00pm Cost: \$2 per person

Climb into a bald eagle's nest, crawl into a bat cave, explore a beaver lodge, and dig in a fossil pit! Explore this indoor discovery room and enjoy hands-on exhibits on natural history, sustainability and the local environment.

Frog Frolic Sunday, August 20 – 1:00-3:00pm Cost: \$5 per person

Join us for a fun afternoon at the 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 a little wet and muddy!



Bridge the Gap: Pond Paddle Saturday, August 26 – 1:00-3:00pm Cost: Free

Come join us for a free paddle on our ponds! Beginners are welcome—we will teach you everything you need to know! Dress appropriately—you may get wet. Spaces are limited; call to reserve a canoe or kayak! Funding for this program provided by the William Penn Foundation.

Butterfly Walk Sunday, August 27 – 10:00am-12:00pm Cost: \$5

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



PEEC
Pocono Environmental
Education Center

**MOONLIT
DRUMMING**

SATURDAY JULY 8 • 6:30-9:30PM
SATURDAY SEPTEMBER 16 • 6:30-9:30PM



**CALL
PEEC**
570.828.2319

\$30 FOR ADULTS
\$20 FOR CHILDREN

Master drummer, **Maxwell Kofi Donkor**, is back for another unforgettable experience. Enjoy an introductory lesson and a drumming circle under the moonlit sky around a campfire. Don't miss this great event!
No experience necessary.
Program requires a minimum of 15 pre-registrations to run.

**Call now to make your
RESERVATIONS**
peec@peec.org • www.peec.org

POCONO ENVIRONMENTAL EDUCATION CENTER
538 Emery Road • Dingmans Ferry, Pennsylvania 18328

PEEC is close to home,
where learning comes naturally!

PEEC is located off of Route 209 inside the Delaware Water Gap National Recreation Area in Dingmans Ferry, PA.