



A Quarterly Publication to Advance Environmental Literacy

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# Pocono Environmental Education Center

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## Muskrat Ramblings

By Andrea Ace

I saw a muskrat come out of a hole in the ice ... While I am looking at him, I am thinking what he is thinking of me. He is a different sort of man, that's all. –Henry David Thoreau

Let's talk about a cute mammal whose aquatic tendencies make them adorably quirky. No, I am not talking about beavers, I'm talking about muskrats!

# Similarities between muskrats and beavers:

- Both are rodents
- Both have scaly tails that are partially flattened
- Both have partially webbed hind feet
- Both slap their tail on the surface of water as a warning signal
- Both are known to build dens
- Both can hold their breath underwater for long periods of time
- Both have been trapped for their fur

So why do we say beavers are adorable while muskrats are ugly? My guess would be in the name "muskrat" and difference in tail shape. Most people view rats and rodents as undesirable pests and that connotation may subconsciously be passed along to muskrats. While muskrats are rodents, they are not "true rats" – rats are members of the genus *rattus*, while muskrats are in the genus *ondatra*; a muskrat family reunion would mostly have voles and lemmings in attendance.

Samuel Hearne, an expeditionist in the late 18th century, kept journals of the wildlife he encountered in his explorations. During this time he mentioned that muskrats are also called



Photo Courtesy: Wikibedia

"musquash" or "musk beavers" because of their similar lifestyle to the beaver. However, as time went on, the term "musk rat" became more and more commonly used until the words were compounded into its current name.

The word "musk" in modern times has a bit of an off-putting factor as we think about the smelly scent glands that this creature uses to mark its territory. Fun fact: the root word for musk is *musculus*, which is also the root word for muscles. Stay strong, little muskrat.

Speaking of muscles, mammals that dive and swim for extended periods of time have a protein called myoglobin, which is similar to the hemoglobin that humans have — both contain iron and store oxygen. Myoglobin is stored in muscles (hemoglobin is stored in blood) that releases over time, allowing muskrats to stay underwater for longer periods without getting muscle cramps. Muskrats can swim underwater for up to 15 minutes or about 300 feet before needing to come up for air!

Muskrats make their homes by burrowing into the bank of a pond or stream, or by building a den from reeds, cattails, or other grasses. Their lodges look similar to a beaver lodge but are much smaller, as muskrats are one tenth the size of a beaver. Their habitats fit in well with creatures in the local ecosystem. Otters may use

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Spring Equinox 2016



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PEEC Seasons is a Quarterly Publication of the Pocono Environmental Education Center Marketing and Development Office.

Design & Layout Niki Jones Agency, Inc. Editor Janine Morley

Contributing Writers Andrea Ace, Sheri Bone, Lea Della Vecchia, Mariann Oswald, Allison Owczarczak, Jeff Rosalsky, Derek Scott

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### Message from the Executive Director



I am often asked to give the 30 second elevator pitch to explain what PEEC is and does. The challenge is that as PEEC has added more and more programs over the past 5 years, it gets harder to convey the breadth of our work and its evolution.

PEEC began by bringing urban school students from New York City, New Jersey, and Philadelphia to a national park for a hands-on residential environmental education experience, focused on science and appreciation for nature. While we have maintained this as the core of what we do, we have expanded tremendously beyond that. Year-round, we offer countless weekend programs and day programs for the local community and visitors to the region, that are both educational and recreational. We have kayaking and canoeing programs, teambuilding and ropes courses, cross country skiing and

snowshoeing and six amazing hiking trails. We also run numerous scouting programs, a summer day camp, a summer residential adventure camp, a special needs resident camp, a gifted student STEM camp, and we have numerous colleges and other groups that use PEEC's resources for teambuilding, nature based programs, and retreats. Our curriculum offerings have also expanded beyond traditional forest ecology, stream and pond ecology, air and water quality, and geology, to include the EcoZone exploration and discovery room and Sustainable Design classes. In 2016 we are embarking on new community based programs to promote land and water stewardship as well as wellness and connection to nature through hiking, yoga, Tai Chi and nutrition programs.

I'm still working on distilling my pitch down to 30 seconds, and I realize by adding programs we make this even more difficult, but the demand is there...maybe I just need to talk faster.







## **Spring Amphibian Migrations**

By Derek Scott

Most people have heard the expression, "April showers bring May flowers," and often associate the coming of spring with warmer weather and the emergence of plants and animals. But even before it feels like spring has truly arrived, the real harbingers of the season are already at work.

As temperatures begin to approach the upper 40's, warm, rainy weather will draw many amphibians out from winter dwellings to begin migrating to their annual breeding pools. These breeding grounds, also known as vernal pools, are woodland areas where snowmelt from rising temperatures collects. It's important that these amphibians begin their migration as soon as possible, as once summer weather rolls around, these inundated areas will completely dry up. The sooner eggs can be laid in the spring, the better the chance the offspring will have in terms of survival. In our area, Spring peepers (*Pseudacris crucifer*) and Spotted salamanders (*Ambystoma maculatum*) are among the most common finds during the early spring.

For some amphibians, the annual trek to vernal pools may only be a few hundred feet, while others may travel as far as a quarter mile. Their journey takes them across all kinds of terrain, the most perilous being roads. Run-ins with vehicles account for a substantial number of amphibian mortalities every spring, even on back roads. In areas with high traffic volume, amphibian populations can become almost nonexistent over just a few years.

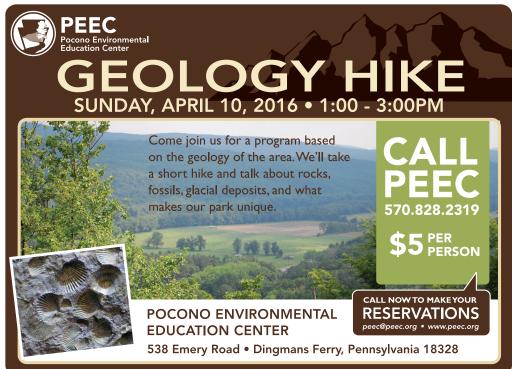
The good news is, with a little help from you, we can greatly decrease the number of vehicle fatalities. On average, there are usually 3 to 5 "big nights" each year when the largest numbers of amphibians are on the move. Generally, the first few warm, rainy evenings when air temperatures are in the 40s are when the mass movements take place. If you have wetland areas near your home, you can venture out on these nights and assist the amphibians across the road. There's no need to carry them far, they just need a helping hand to avoid traffic, otherwise, they know exactly where they're going. If you plan to aid the amphibians in their migration, please make sure that you don't put yourself in harm's way. Wear reflective clothes and carry a flashlight or wear a headlamp so that oncoming traffic can see you through the rain. Many communities organize volunteers to assist during these "big nights," so if you're interested, ask around about what you can do to help!



Spotted Salamander



Spring Peeper







## 2016's Great Grant Programs!

By Lea Della Vecchia

This year, we are continuing several popular grant-funded programs in addition to adding a few new ones to the schedule. What do we have in store?

#### **Active Adventures: Find your Path to Wellness**

This is a new program for 2016. Through this program, we intend to bring a host of professionals to PEEC to lead health and wellness programs. We have scheduled a Tai Chi and Qigong workshop, a meditation and mindfulness workshop, and a yoga workshop with plans for several more programs. The purpose of our Active Adventures program is to connect our local constituents with the National Park and all the health and wellness related activities that can be found in nature. We hope that by providing initial programming, participants will become comfortable using PEEC and the National Park to become and stay active. We also plan to add nutrition and healthy snacking programs to the itinerary for 2016. Stay tuned for an updated calendar of events! Funding for this program is provided by the National Park Foundation.



#### **Bridge the Gap**

Through this program, we provide different opportunities for participants to join us in programming along the Delaware River. Through the Bridge the Gap program, we will offer 20 hikes, bikes and paddles free of charge in 2016. Our intent is to provide local residents with access to recreation on the Delaware River, with hopes that the more time they spend on or near it, the more connected with their watershed they will be. In addition to programming, we are hoping to install a sign on the Dingmans Ferry Bridge with information about the watershed to be viewed by boaters under the bridge. This program is funded by the William Penn Foundation.

#### Women on the Water

This is the sixth year of PEEC's Women on the Water program. Through this program, we will bring 45 high school girls in three sessions from the Philadelphia area to PEEC for a five day program. The girls practice paddling on our ponds before heading out to the Delaware River for a



two-night, three-day paddle through the Delaware Water Gap National Recreation Area. The girls will test the water quality along the river and learn about biodiversity, while boosting their self-confidence and comfort level in nature. The participants in Women on the Water will return home and present some of their findings to community members to raise awareness and stewardship of the Delaware River Watershed. This program is funded by the William Penn Foundation.

#### **Boys in Boats**

Our Boys in Boats program is new for 2016. Similar to our Women on the Water program, this summer we will bring approximately 30 high-school aged boys from urban Philadelphia to PEEC for a five day trip. For three days of the trip, the boys will paddle on the Delaware River and camp at river campsites at night. Participants in the Boys in Boats program will challenge their personal limits and work together, all while taking water quality samples and learning about biodiversity along the way. The purpose of this program is to connect Philadelphia youth with where their drinking water comes from, with hopes that when they return to Philadelphia, they will feel encouraged to be good stewards and preserve the river's health. This program is funded by the William Penn Foundation.





#### **Summer Science in the Poconos**

This year, our Summer Science program is entering its 3rd year. Through this program, we will bring 50 middle-school aged students and their chaperones from Newark, New Jersey to PEEC for a five day field trip. This program is designed to bring kids who have a limited exposure to the natural world to a national park. We target middle-school aged students as this is a time when they are developing and discovering their interests. We hope to get students interested and involved in science and the environment and continue exploring this interest throughout their lives. All programming, transportation, lodging and meals are paid through grant funds. This program is funded by the Victoria Foundation and the PSEG Foundation.

#### Sci-Q Project

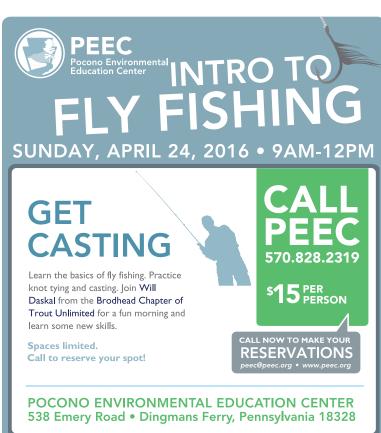
The Sci-Q Project is entering its fourth year as a grant-funded program at PEEC. Sci-Q is a competitive, overnight STEM camp for one week this summer at PEEC. Sci-Q campers participate in a variety of science and nature activities both at PEEC and in conjunction with local professors. The majority of tuition for the Sci-Q Project is covered through grant money; campers are asked to pay only a nominal fee for participation. Deadline for application to the Sci-Q program is March 31, 2016. This program is funded by the Sanofi Pasteur Foundation.

# Educational Improvement Tax Credit

Through Waste Management and Dime Bank, PEEC has received funding to bring local elementary school students to our center for day programs focused on ecology and the environment. Students will visit our Ecozone, a hands-on discovery room that brings elements of nature inside to be examined by students. Students will then take a hike and learn about the environment in which they live.







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# Plant SALE!

MAY 7 & MAY 8, 2016 • 9AM-4PM



Choose from a variety of native and deer resistant flowers, shrubs and grasses to beautify your yard. Perennials include coneflowers, bee balm, asters, yarrow, lungwort, and much more. Sun loving and shade loving plants will be available. Call in advance with your requests. Remaining plants will be sold throughout the week – come check them out!



PEEC MEMBERS

FRIDAY, MAY 6TH | 6-8PM peec@peec.org • www.peec.org

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



#### Ode to the Shagbark Hickory

by Sheri Bone

Oh, Great Shagbark Hickory!
You are the best tree:
You give so much to others
and even to me!
From your wood to your bark,
your leaves and your nuts,
You're a wonderful tree,
no if's, and's or but's!

Your botanical name is

Carya ovata.

You're a common tree, but a ten's what I'd rate ya!

Your bark looks quite shaggy as it hangs off of you,

Providing shelter for insects and even bats, too!



And then there's your wood – so strong and so hard.
Folks use it in barbecues in their backyard.
When you are standing, alive, strong, well made,
Birds build nests in your branches.
Your leaves provide shade.

Your leaves are made of leaflets – I count them to five-Growing large to make food that keeps you strong and alive!

When they fall off in autumn no longer green but of gold, It's just nature's way to keep you strong in the cold.

Also in autumn is when your green husked nuts fall. Not large like black walnuts, they're rather quite small. Deer, bear, squirrels and even turkeys, too,

Are among those who like them (and what about you?)

Oh, Great Shagbark
Hickory! You are the
best tree:
You give so much to
others and
even to me!
From your wood to your
bark, your leaves and
your nuts,
You're a wonderful tree,
no if's, and's

or but's!

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

Call now to make your

RESERVATIONS

sight, sound and habitat. Includes

from Friday dinner to Sunday lunch.

two nights of lodging and meals





# Ready, Set... OPEN!

By Mariann Oswald

In January, the PEEC Bookstore was closed for business as we set about a complete overhaul. WOW, what difference! It looks like a totally NEW space, really! Come by and see.

We have a plethora of new products, books, jewelry, notecards, scarves, hats, birdhouses, solar lanterns... too much to remember.
Come by and see.

We have plenty of old favorites like stuffed animals, puppets, t-shirts, sweatshirts, pocket guides and games. Come by and see.

We have lots of things made in the USA, made from recycled materials, recyclable materials and natural materials. Come by and see.

So, what do you say? Come see and buy!





## Coltsfoot - A Sign of Spring

By Allison Owczarczak

One of the first wildflowers in spring to emerge is coltsfoot, known by its scientific name, *Tussilago farfara*. At first glance it can be easily mistaken for a dandelion, but there are many differences. The flower emerges first as early as late February, then its namesake, heart shaped, coarsely toothed leaf margin follows much later, after the flower withers. The flower is also flat in appearance, compared to the dome of the dandelion, and can stand as tall as 12 inches. Its red hued, scale-like stem resembles asparagus while the dandelion stem is smooth.

Once widely used as a medicinal plant for throat and lung ailments for about 2,000 years, it has been discovered to cause liver damage and liver cancer due to containing pyrrolizidine alkaloids. The medicinal use of the plant is most likely why it was introduced to North America from Europe. It now grows from Quebec to Minnesota and south to Pennsylvania and Ohio.

To find coltsfoot in bloom, I recommend walking along roadsides, shale cliffs, or rocky banks of streams starting in late February or early March. Continue your visits to witness the flower turn into a white seed globe similar to the dandelion and then watch for a single leaf developing from the withered flower stem.



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# Muskrat Ramblings

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unoccupied muskrat dens for their home. Also, turtles will use muskrat tunnels to travel and often will hibernate in the underwater entrances.

One notable difference muskrats have from beavers is that while beavers are herbivores, muskrats are omnivores. Muskrats will nosh on cattails, sedges, or other vegetation, but are also known to consume mussels, fish, and amphibians.

Muskrats have a life range of about one to four years, depending on availability of food and resources. They have been one of the most hunted and trapped animals in North America. Due to their prolific

nature as well as specific guidelines regarding hunting and trapping in specific seasons, muskrat populations have remained mostly steady.

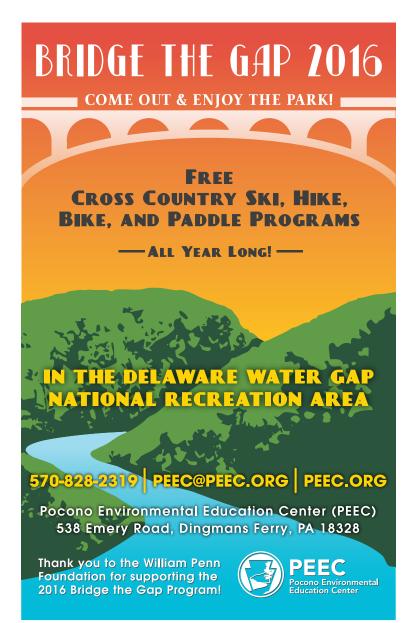
So the next time you're out hiking, stop by a pond, lake or stream and look for a small swimming rodent – it just might be a muskrat!

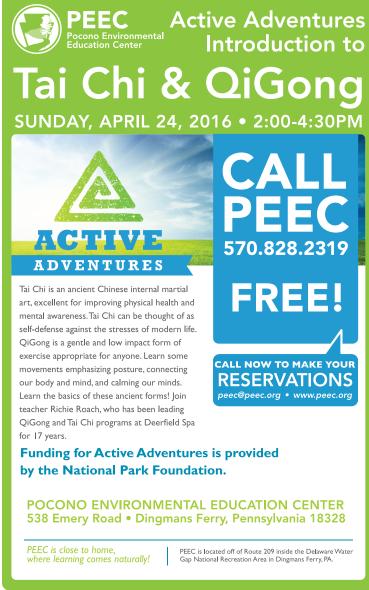
#### For more information:

http://blogs.scientificamerican.com/tetrapod-zoology/a-brief-history-of-muskrats/ http://www.havahart.com/muskrat-facts

http://www.onezoom.org/

http://my.net-link.net/~vaneselk/muskrat/home.htm







# PRE-REGISTRATION REQUIRED Unless otherwise indicated.

#### TO REGISTER:

Call PEEC at 570-828-2319

#### **APRIL**

Boy Scout Badge Fest Saturday, April 02, 2016, 9am-4pm Cost: \$25 full day Attention all Bears, Webelos and Boy Scouts! Join us for a fun day of badge work! Scouts must be

supervised at all times by a parent or troop leader. Payment is required at registration.

Space is limited - call early!

Bears will work on Fun, Feathers, and Ferns.

Webelos will work towards the

Castaway badge (pre-req 2b). Boy Scouts will work towards the Nature merit badge (pre-req 4a).



Spring Waterfalls Sunday, April 03, 2016, 9am-12pm Cost: \$10

This is a great time of year to enjoy the waterfalls. With rising temperatures and early spring snowmelts the waterfalls in the park are quite impressive. Dress warm, wear sturdy boots, and bring a camera! Call to reserve a seat in the van.



Ecozone Discovery Room! Sunday, April 03, 2016, 1pm-4pm Cost: \$2

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

No registration required.

Girl Scout Badge Fest Saturday, April 09, 2016, 9am-4pm Cost: \$25 full day for Brownies, Juniors, & Cadettes / \$5 Seniors

Attention all Girl Scouts! Come to PEEC for a fun day of hands-on badge work. Scouts must be supervised at all times by a parent or troop leader. Payment is required at registration.

Space is limited - call early!
Brownies will work on the
Outdoor Adventurer badge.
Juniors will focus on the Gardener badge.
Cadettes will work towards the
Trailblazing badge.

Bridge the Gap: Edible & Medicinal Plant Walk Sunday, April 10, 2016, 10am-12pm Cost: Free

Nature provides food & natural remedies for us in the form of many plants. Join us on a hike focused on wild edible & medicinal plants. Funding for this program provided by the William Penn Foundation.

No collecting will be done within the Park.

Geology Hike Sunday, April 10, 2016, 1pm-3pm Cost: \$5

Come join us for a program based on the geology of the area. We'll take a short hike and talk about rocks, fossils, glacial deposits, and what makes our park unique.

Earth Day Festival Saturday, April 16, 2016, 10am-4pm Cost: \$5 per car

Help us celebrate the Earth! There will be hands-on learning stations, interpretive hikes, conservation exhibits, crafts, food, music, and much more! Pre-registration is NOT required.

Pond Explorers Sunday, April 17, 2016, 1pm-3pm 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 some buckets, for upclose study. Wear boots and plan on getting a little wet and muddy! Register early!

Knitting Workshop From Thursday, April 21, 2016 To Sunday, April 24, 2016 April 21-24

Cost: \$70 a day / Call for commuter rates Join Patti Shreiner for a relaxing weekend in the Poconos. Knit a Twisted Hug Moebius Wrap or a warm Thrummed Hat. Fiber enthusiasts of all stripes (knitting, crochet, quilting, spinning, rug hooking, etc.) are also welcome to work on their own projects. Supply list will be provided. Includes lodging and meals.



Salamanders, Frogs and More! Saturday, April 23, 2016, 10am-12pm Cost: \$5 per person

Amphibians are stirring in the woods! Join us as we explore nearby breeding pools for salamanders, frogs, and egg masses. We'll provide nets and collection jars for gentle, up-close study. Wear boots and clothes that can get a little muddy or wet.

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# PEEC Seasons

# SPRING PROGRAMS S GETAWAYS

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#### **APRIL**

Introduction to Fly Fishing Sunday, April 24, 2016, 9am-12pm Cost: \$15

Learn the basics of fly fishing. Practice knot tying and casting. Join Will Daskal from the Brodhead Chapter of Trout Unlimited for a fun morning and learn some new skills.

Ecozone Discovery Room! Sunday, April 24, 2016, 1pm-4pm Cost: \$2

Climb into a bald eagle's nest, crawl into a bat cave, and dig in a fossil pit! Explore this indoor discovery room and enjoy hands-on exhibits on natural history, sustainability and the local environment. No registration required.

#### **MAY**

Tweets and Treats Sunday, May 01, 2016, 9am-11am Cost: \$5

Interested in learning more about birds? Join us for a hike that focuses on bird ID and their unique natural history. We'll be having breakfast snacks & beverages before we head out. We provide binoculars and field guides. Ages 10+ please.



Bridge the Gap: Wildflower Walk Sunday, May 01, 2016, 1pm-4pm Cost: Free

Celebrate the blossoming of spring with a walk in the woods. Join local flower expert Josie D'Alessandro as she shares identification tips and natural history of local flowers. Funding for this program provided by the William Penn Foundation.

Plant Sale Preview! Friday, May 06, 2016, 6pm-8pm Pre-Sale for PEEC Members! Cost: Free admission

Choose from a variety of native and deer resistant flowers, shrubs and grasses to beautify your yard. Perennials include coneflowers, bee balm, asters, yarrow, lungwort, and much more. Sun loving and shade loving plants will be available. Call in advance with your requests. Remaining plants will be sold throughout the week – come check them out!



Plant Sale! Saturday, May 07, 2016, & Sunday, May 08, 2016, 9am-4pm Cost: Free admission

There is a pre-sale for PEEC members on Friday, May 6, from 6-8pm. Choose from a variety of native and deer resistant flowers, shrubs and grasses to beautify your yard. Perennials include coneflowers, bee balm, asters, yarrow, lungwort, and much more. Sun loving and shade loving plants will be available.

Call in advance with your requests.

Remaining plants will be sold throughout the week – come check them out!

Tweets and Treats Saturday, May 14, 2016, 9am-11am Cost: \$5

Interested in learning more about birds? Join us for a hike that focuses on bird ID and their unique natural history. We'll be having breakfast snacks & beverages before we head out. We provide binoculars and field guides. Ages 10+ please.

Introduction to Blacksmithing Sunday, May 15, 2016, 10am-12pm Cost: \$5

Interested in learning about the trade of blacksmithing? Join William Barrett, of the New Jersey Blacksmiths Association, for a look at the history and basics of blacksmithing. Program will include live demos over a forge.



Warbler Weekend From Friday, May 20, 2016 To Sunday, May 22, 2016 Cost: \$205 / \$155 commuter rate Spring migration has begun! Join us for

Spring migration has begun! Join us for a wonderful weekend with the birds. Enjoy guided hikes that teach how to identify birds by sight, sound and habitat – this program is great for beginners and experts alike! Includes two nights of lodging and meals from Friday dinner to Sunday lunch.

Wild Edibles Walk Saturday, May 21, 2016, 10am-12pm Cost: \$5

Join local wild edible & medicinal plant expert, Nathaniel Whitmore, as we explore the area in search of the many wild vegetables of spring. Don't miss the opportunity to learn from an amazing teacher. No collecting will be done within the Park.

Spring Fling Family Nature Getaway Weekend From Friday, May 27, 2016 To Monday, May 30, 2016 Memorial Day Weekend: May 27-30 Cost: Adults \$225 / Child, Commuter, Day Rates — call for details

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

#### JUNE

Volunteer Day — National Trails Day Saturday, June 04, 2016, 9am-12pm Join us for a fun morning of trail work. Everyone is welcome and appreciated! Snacks provided.

Summer Pond Paddle Saturday, June 04, 2016, 1pm-3pm Cost: \$5 per person

Start summer off the right way! Paddle a canoe or a kayak on one of our ponds. Beginners are welcome – we teach you everything you need to know. Dress appropriately – you may get wet. Call to reserve a boat.