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Pocono Environmental Education Center

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Is Winter Un-Bear-able?

By Kate Hausman

Do you hate the cold? Struggle to get motivated when the temperature drops? Lament the sun setting at 4pm? If you find winter unbearable, you are certainly not alone. There are others, however, that appreciate the frigid conditions precisely because they are "un-bear-able"—rather, that bears are not out and about during the colder months of the year.

For those living in Northeast Pennsylvania, spotting a black bear is likely a fairly common occurrence. If you're an avid hiker, maybe you've even had a face to face encounter. In most cases, these types of meetings end with the bear fleeing the area as quickly as possible. However, as we encroach further into their native habitat, sometimes there are conflicts between bears and humans. It is these stories that instill a deep fear of bears in many people.

One of the most pervasive myths about the black bear is that they are "true" hibernators. This may seem like semantics to the average citizen, but the distinction is important. All hibernation is classified as torpor—a state of physical or mental inactivity—but not all torpor is classified as hibernation. In species that truly hibernate (chipmunks, field mice, groundhogs) animals enter a state of suspended animation that slows all body process to a near stop. Hibernating animals' body temperature will drop significantly, metabolic rates slow to as low as 5% of their normal function, and heart rates slow to as little as 4-5 beats per minute.

For black bears, these changes in function are not so drastic. Their body temperature may drop about ten degrees, and heart and metabolic function slow enough so that they do not need to eat, drink, or eliminate waste. The fall hyperphagia period, in which bears drastically increase their

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Spring Equinox 2020

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Message from the Executive Director



Spring 2022

I was wandering through the forest on an unusually warm winter day (thank you climate change), on my way to grandmother's house—wait, wait, different story. Actually, I was heading down to my sugar bush to check on my sugar maple trees before maple syrup season. Anyway, as I was walking I noticed a tree where the bark had been scraped away. This was not just near the bottom of the tree trunk, which could have been from a buck rubbing its antlers or even ten feet up—think a black bear scratching with its claws. The scraped away bark went all the way to the top of the tree and left channels of lighter colored wood. As I looked more closely, I notice one tree after another had the same strange markings, almost like a repeating tattoo pattern. The trees

were all ash trees of 10-14 inches in diameter, so I figured it had something to do with the emerald ash borer. On closer examination, I did see small holes in the trunks, so I knew I was onto something. The emerald ash borer is an invasive species from Asia that was first discover in the US in 2002 and has been responsible for decimating millions of North American ash trees. It turns out the bark damage was not from the emerald ash borer itself, but the marks were made by woodpeckers working their way through the bark to get at the emerald ash borer larvae. Evidently, woodpeckers can eat up to 85% of the emerald ash borer larvae, which is good news for slowing the infestation. This is probably not enough to save my ash trees—but possibly someone else's.

Although I lament the loss of my ash trees, I am inspired by the dietary flexibility of the woodpeckers, and other native bark foraging birds, to eat the invasive newcomer. I feel like adaptation, whenever we see it, or hopefully are a part of it, gives us hope. In the meantime, I am planning on cutting down my dying ash trees and burning the wood to boil my maple syrup. I can adapt too.



PEEC Seasons





I. Butterfly Milkweed in bloom. An important source of food and egg laying location for Monarch Butterflies.

II. Bleeding Heart in bloom. Native bumblebees frequently use this plant as a source of nectar.

Spring into Native Landscaping!

By Justin Murray

As spring rolls around, slowly but surely with these frigid temperatures, it brings along a variety of things to experience. For myself, spring means trying something new now that the weather is warmer and sunnier. This year, I intend on picking up a skateboard and learning how to skate, as well as learning American Sign Language in my spare time. For others, spring means it is time to once again tackle the dread of spring cleaning, and figuring out a new and fun way to make the yard look nice again after all the snow. While some buy exotic plants and new shrubs to pot around the house, there are those that know the easier, and cheaper way of bringing the lovely spring colors to life throughout the house and yard, and that's with native plants! There are plenty of benefits with sticking to native plants, such as less maintenance, conservation of water, and how they support wildlife.

First off, the native plants of Pennsylvania, whether it is flowers, shrubs, or trees, are all adjusted to living in Pennsylvania. This means they are used to the climate and rainfall of the area. So instead of purchasing a pretty, exotic plant that gets upset with the cold, stick to something native. The plant will thrive and grow mostly on its own, so you'll spend less time encouraging it to grow and more time watching it bloom all by itself.

Secondly, as mentioned above, the native plants are used to the rainfall of the area. So while Pennsylvania can have a rainy spring, or a very warm and dry one, that's okay. The plants are used to whatever they can get, and don't need someone to water them once or more a week like other plants do. Also, these plants aren't just your typical greens; throughout spring the native plants cover the entire rainbow of colors as they bloom. This provides easy to care for, bright and colorful plants through the entire season for you and your family to enjoy.

Lastly, and most importantly, native plants support the wildlife. The wildlife of the area, such as birds and pollinators, depend on these plants for things like seeds and pollen, and have adapted to relying on the native plants as a dependable source of food. So not only will you have a bright and colorful back yard, but you'll even get to watch the wildlife enjoy your investment as well. You can turn your yard from a wintery grey and brown to a bright and elaborate mini ecosystem that supports both local flora and fauna. Most importantly in my opinion, most of the native plants bloom early and are a huge support to pollinators such as bees, wasps, flies, some birds, and even male mosquitoes.

So this spring, try something new, or learn something new. Whether it's a new hobby, or learning how to maintain native plants, whatever it is, make some time to enjoy the local wildlife either way!

To learn more on native plants of Pennsylvania, and what each kind can contribute to your yard, as well as what they need to thrive, I used the following: https://www.skh.com/thedirt/pennsylvania-native-plants/.

There is also a list of native flowers with their pictures and needs found here: https://www.keystonewildflowers.com/plants/wildflowers/.





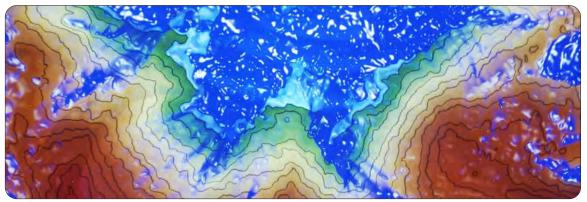
Brand New Exhibit!

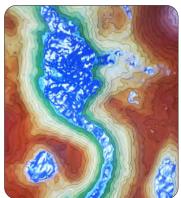
By Derek Scott

PEEC has a brand new exhibit you have to check out – the Augmented Reality Sandbox! This hands-on exhibit allows users to shape real sand to form topographic models which are then augmented by elevation color maps, contour lines, and simulated water. The result is an incredible teaching tool that provides 3D visual representations of geographic, geologic, and hydrologic concepts that update in real time.

We would like to thank the Pennsylvania Department of Environmental Protection for funding the creation of the augmented reality sandbox. It is our hope that the exhibit will prove invaluable in our watershed related programming due to its engaging nature.

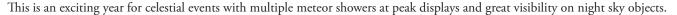






Eyes to the Night Skies Spring Celestial Events in the Northern Hemisphere

By Sara Neral



March 2022: Galactic Center comes into view. Viewing the Milky Way is best from March to November.

March 20, 2022: March Equinox. The sun will shine directly on the equator with equal amounts of day and night. First day of spring for the northern hemisphere.

March 20, 2022: Venus enters Eastern Elongation. Venus is the brightest thing in the sky next to the sun and moon.

April 16-25, 2022: Lyrids Meteor Shower. Comet G1-Thatcher peaking the night of April 22 producing 20 meteors per hour. Look southeast towards the summer triangle for the brightest dust trails.

April 20, 2022: Venus enters Western Elongation. Great time of year to view the planet Venus. Look to western skies during dawn for the best views.

April 29, 2022: Mercury enters Eastern Elongation. Best time of year to view the planet Mercury. It can be found low in western skies shortly after sunset.

May 6-7, 2022: Eta Aquarids Meteor Shower. Halley Comet passes by producing a shower with about 30 meteors per hour at peak times. Most meteors can be seen around the constellation Aquarius, but can be found anywhere in the night sky.

May 16, 2022: Total Lunar Eclipse. The moon will pass through Earth's dark shadow and will take on a rusty/ blood red color.

June 14, 2022: First 2022 super moon. The full moon takes place during the time of the month when it is closest to earth, leading it to look larger in the night sky.

June 21, 2022: June Solstice. First day of summer. The longest day of the year.

Celestial glossary:

Elongation: refers to the angle between the sun and a planet using earth as a reference point. The maximum elongation of a planet means it is at its furthest distance from the sun.

Galactic Center: Rotational center of the Milky Way, and the brightest area.

Summer Triangle: Composed of the stars Vega of Lyra, Deneb of Cygnus, and Altair of Aquila. Seen in the eastern night sky after the March Equinox.

AllTrails

By George Johnson

Technology is amazing. It gets better and better with each passing day. With the technology advancement comes access to information and also methods of sharing experiences from others. The spread of knowledge has been tremendous, and one can find information about almost anything now. It's been wonderful at times because I can easily find new and exciting places to explore. One of the best sources I've been using of late is the app All'Trails. It certainly has its ups and downs, but I figured that I would take the time to review it for those who are interested.

AllTrails is free to download and create an account with, but there is an upgraded version of it that does require a paid subscription. I've only used the free version, so I can't speak about any of the upgrades and how that changes the app/experience. There are a couple of ways to find trails in your area. There's an option to search by zip code and there is also an option to see an overview map. This makes it great to not only find local trails, but also trails at places you plan on visiting. The app is fairly user friendly and makes trip planning a little bit more fun.

When you do find a trail that looks enticing, you can click on the trail to bring up its page for more information. It'll list all of the basic information (location, length, difficulty), elevation change, directions to the trail head, pictures, and reviews from other hikers (more on that in a bit). It has tons to look at and each trail has its very own page; feel free to check out PEEC's! Once you arrive at a trail, you can use the app to track your progress. It'll run in the background and will keep track of your pace, distance, and relative location. At the very end you can review the trail, letting others know of your experiences with the trail.

As amazing and useful as this app is, it does also have its pitfalls. For starters, take reviews with a grain of salt. Not every review has accurate information and some are blown way out of proportion. (I came across one review in which the writer was rambling on about the local hunters and how terrible they were...). Some current reviews are even for trails that are still closed to the public, which you will get a ticket for if you are caught hiking there. The app will also include social trails and not just official ones, meaning that not all of the trails on the AllTrails app will be on the park/center/organization's maps. Always make sure to still look at the official websites or contact the organization directly for current trail conditions and questions; AllTrails will include the link to any websites.

All in all, All Trails is a great app and has a fairly simple design for folks. I use it all the time and my wife uses it with me to plan longer trips. It's a good place to start looking for new trails to check out. However, it is not a substitute for individual centers and, please, still do your research beforehand, and do not blindly trust reviews. Make sure to still call centers and stop by their offices if you have any questions or concerns about particular trails. If you do that, then you'll be in good shape.







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Go Green to Spring Clean

By Stephanie Sherman

At New Year's, we always start with some resolution to do a little better than the previous year. It may be eating better, exercise more, be a little less attached to the phone, and the list goes on. This year, my resolution is swapping to more environmentally friendly cleaning products and reducing single-use waste. For years, I resigned myself to simply using dollar store quality chemicals to clean my house, mopping them up with single-use paper towels and throwing them into the garbage. My conscious isn't having it this year and so I'm taking steps to reduce my impact by paying just a little more upfront to save the Earth from my waste. So how to get started?

- **Prioritize what you need.** Do I really need the "convenience" wipes, or even paper towels? Can I replace them with alternatives that are more sustainable? Most of the time, a kitchen towel can suffice to mop up extra water or mess and be washed. If it's cleaning the house of serious grime, I opt for a clean rag made from an old shirt or sock. There are also reusable paper towel alternatives made of fabric or compostable materials that are growing in popularity and one Google search away. (It may be a little extreme to convince my husband on reusable toilet cloths, plus the extra laundry, so do what you feel is a little step forward.)
- **Do I need the plastic bottle?** There are a number of cleaning supplies that still come in single use plastic. While the contents may be friendlier down the drain, I'm still left with the plastic bottle that needs recycling. There are a number of green-friendly websites that are offering starter kits of glass reusable bottles and refillable options. The biggest thing is deciding what you are ok with for refillables and if they still come in plastic packaging. Do you want the one-size fits all package or do you need only specific cleaners? For example, do I want to opt for my refillables in a paper carton or do I want something in tablet form to which I add water. Water is easily accessible for me, so I opt for tablets instead of extra packaging.
- *Can I make an at-home cleaning solution?* There are plenty of recipes for various cleaning solutions involving vinegar, lemons, baking soda, etc. The point is are you going to put in the effort to make them when needed? Also, are they as effective as purchased products? For small clean-ups, making my own countertop spray with vinegar and lemon is probably the best and most cost-effective solution. I need to weigh the time and resources that it will take for me to make the solution as opposed to purchasing a cleaner.
- Where else can I reduce my single use plastics? Cleaning bottles are really just the low-hanging fruit toward cutting chemicals and going green. Shampoo and conditioner bars, while upfront are expensive, can last longer than multiple bottles of your favorite brand while being healthier. How about that plastic toothpaste tube and toothbrush? Replacing with toothpaste bites or a bamboo brush can help reduce the plastic waste going into the garbage as well. A huge green move in my home was switching to reusable food storage bags that take the place of those plastic sandwich bags for leftovers and my husband's lunch.

The choice to go-green may appear to be overwhelming and expensive. The biggest take-away is that you're now thinking about how there are little things you can change from single-use and disposable to reusable or recyclable. Saving the Earth is not about one of us doing everything, but all of us taking small steps to make a larger impact. The same can be said about opting for just one green alternative at a time. In the past two years, I definitely feel that my investment in the silicone food bags alone has paid for themselves in reducing my need to buy disposables. Now I'm going to turn to investing in some glass cleaning bottles that may one-day hold my home-made concoctions. Until then, I'm fine with the convenience of a pre-made little tablet that saves my sanity.





Is Winter Un-Bear-able?

Continued from Page 1

daily calorie consumption to gain weight rapidly, provides their bodies with enough fat reserves to sustain themselves through the winter. Entering torpor allows bears to conserve their energy when resources are less plentiful, but does not prevent them from waking and wandering around if necessary.

In an increasingly warming climate, this need to enter deep rest to conserve energy during times of scarcity is likely to be affected. Warmer days during the peak of winter may stimulate bears, particularly males and younger bears without cubs, to wake in search of food. Seeing a bear in the middle of winter does not mean the bear is sick or in trouble, rather that the bear's instincts are signaling that they may be able to find food. If you do see a bear while hiking in the winter, you should take the same precautions as any other time of year—give them plenty of space, don't try to entice them with food, and back away from the area slowly. And remember that we share our trails with the residents of the forest, no matter the time of year.





Photo: George Johnson PEEC Tumbling Waters Trail, February 2022





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SPRING PROGRAMS AND AND GETAWAYS

PRE-REGISTRATION REQUIRED Unless otherwise indicated.

TO REGISTER:

Call PEEC at 570-828-2319

APRIL

Girl Scout Badge Festival Saturday, April 2nd \$25 * Full Day 9:30am-4pm

Brownies will work on their Senses & Outdoor Art Creator badges. Juniors will fulfill the Outdoor Art Explorer & Gardener badge. Cadettes will complete their Trailblazing badge. Seniors will be focusing on their Eco Explorer badge. Overnight options are available for all age levels, ask for more information! Payment is required at registration. Space is limited - call early! Don't forget to bring a lunch.

Waterfall Tour Sunday, April 3rd \$10 * 9:00am-12:00pm

The Delaware Water Gap has quite a few waterfalls within the park that all flow into the Delaware River. Join us for the morning as we check out some of the larger and well known falls in the park. Spaces are limited so call early!

Ecozone Discovery Room! Saturday, April 9th \$2 * 1:00pm-4:00pm

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. No registration required.

Bridge the Gap: Spring Peeper Search Saturday, April 9th Free * 7:30pm-9pm

These tiny tree frogs have thawed out and are active again in our forested wetlands. Listen to the impressive choir made by these vocal amphibians as we carefully catch, study, and release them. Bring a flashlight for better searching! *Lead support is provided by the William Penn Foundation.*



Salamanders, Frogs, and More! Sunday, April 10th \$5 * 1pm-3pm

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 muddy or wet.

PEEC Tough as Trails April 23rd -24th \$30 per participant

Earth Day Festival

Support PEEC by hitting the trails and racking up as many miles as possible with our fundraiser event. You'll be able to join in from anywhere in the world! Participants will also be able to receive a t-shirt.

Saturday, April 30th \$5 per car * 1 am-4pm Help us celebrate the Earth and PEEC's 50th anniversary! There will be hands-on learning stations, interpretive hikes, conservation exhibits, crafts, food, music, and much more! Preregistration is NOT required.

MAY

Birds and Brews May 6th – 8th





Free admission * 9am-4pm

Choose from a variety of native and deer resistant flowers and grasses to beautify your yard at our annual plant sale! Sun loving and shade loving plants will be available. Sold out in 2021! PEEC Members will be able to join us for a pre-sale on May 6th from 5-7pm.



Edible & Medicinal Plant Walk Saturday, May 7th \$5 * 10am-12pm

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 or consumption will be done during the program.

Create your own Walking Stick
Sunday May 15th
\$30/walking stick * 12pm-3pm
Spend the afternoon with us as we create
handcrafted walking sticks. Wood, tools, gloves,
and aprons will be provided, as well as suggestions
and pointers on how to personalize your work.
Pre-registration required. Minimum of 3 to run.

Memorial Day Family Camp Weekend Memorial Day Weekend: May 27th-30th Adults \$240 / 10% off ages 11-13 / 25% off ages 7-10 / 50% off ages 4-6 / Free ages 3 & under Bring your family and friends to experience the best of what PEEC has to offer. Interpretive hikes, animal presentations, canoeing, campfire and more! Includes three nights of lodging and meals from Friday dinner through Monday lunch.

JUNE

Edible & Medicinal Plant Walk Saturday, June 4th \$5 * 10am-12pm

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 or consumption will be done during the program.



SPRING PROGRAMS AND GETAWAYS

Bridge the Gap: National Trails Day Saturday, June 4th Free * 1 pm-3pm

Take part in a national effort to introduce more people to the great outdoors. One of our knowledgeable staff will guide and teach about our forests. We never know what exactly we'll find out there, so don't be afraid to ask plenty of questions along the way. *Lead support is provided by the William Penn Foundation.*

Bridge the Gap: Pond Paddle Sunday, June 5th Free * 10am-12pm

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. *Lead support is provided by the William Penn Foundation.*

Frog Frolic Sunday, June 5th \$5 * 1 pm-3pm

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.

Bridge the Gap: River Paddle Saturday, June 11th \$10 * 9am-3pm

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. Preregistration is required and begins at 8:30am on May 11th. *Lead support is provided by the William Penn Foundation.*

Ecozone Discovery Room! Sunday, June 12th \$2 per person * 1pm-4pm

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. No registration required.



Geology Hike Saturday, June 18th Free for PEEC Members / \$5 for Non-PEEC members * 1pm-3pm

Take a hike on the Fossil Trail with Paul Kovalski, aka Dr. Dinosaur, as we discuss the geology of our area and what makes our park unique.

Nature at Night Saturday, June 18th \$5 * 8pm-9:30pm

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 bringing a flashlight!

Bridge the Gap: Pond Paddle Sunday, June 19th Free * 10am-12pm

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. *Lead support is provided by the William Penn Foundation.*

Bridge the Gap: Fishing for Beginners Sunday, June 19th Free * 1 pm-4 pm

There are plenty of fish waiting to be caught in our ponds! Spend the morning learning some of the basics for fishing with a rod and reel and see how many you can get. All equipment will be provided. Strictly catch and release! Call ahead to reserve your spot. Participants over 16 must have a valid fishing license. *Lead support is provided by the William Penn Foundation.*

Frog Frolic Saturday, June 25th \$5 * 10am-12pm

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.

Nature Walk Saturday, June 25th Free * 1 pm-3pm

Take a hike with one of our knowledgeable staff and learn about our forests. We never know what exactly we'll find out there, so don't be afraid to ask plenty of questions along the way.

Bug Exploration Sunday, June 26th \$5 * 1pm-3pm

Bugs are everywhere! Come join us as we go discover some insects on our trails and learn about what makes them so unique. Don't worry; they're not as scary as they look!



