

UPCOMING EVENTS

- DEC 10** **Eagle Watch Volunteer Training**
Boyd's Mills, PA • 10am-12pm
- DEC 14** **Biology of the Eagle Presentation**
Van Scott Nature Reserve, Beach Lake, PA • 5pm-6pm
- JAN 7, 21, 28** **Guided Eagle Watch Bus Tour**
Lackawaxen, PA • 11am-3pm
- FEB 4, 18, 25** **Guided Eagle Watch Bus Tour**
Lackawaxen, PA • 11am-3pm
- APR 29** **Foods of the Delaware Highlands Dinner**
The Inn at Woodloch • Hawley, PA

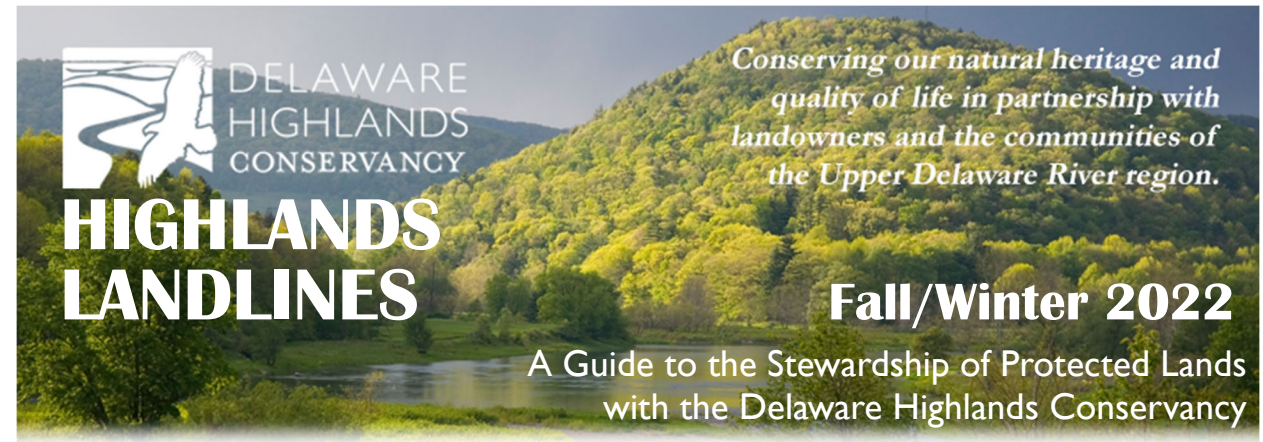
Events require advance registration. Visit www.DelawareHighlands.org/events or call 570-226-3164/845-583-1010 to learn more or register.
The bus tours sell out annually, so register early!
Our Events Calendar is updated regularly throughout the year.

- INSIDE
- Foraging Staghorn Sumac
- Spotlight on Wood Turtles
- Native & Invasive Species Corner
- Environmental Quality Incentives Program
- Stewardship of Your Property



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DELAWARE HIGHLANDS CONSERVANCY



Foraging Staghorn Sumac

Sumac is a spice - commonly found in many Middle Eastern dishes - that has been acclaimed worldwide for its bold, acidic flavor and health benefits. Although there are 150 varieties of sumac plants, and 14 species native to the United States, the most familiar edible sumac found in our region is the Staghorn Sumac (*Rhus typhina*).

Staghorn Sumac is a member of the *Anacardiaceae* or Cashew family. The plant can be found in areas that contain drier soils, such as fields, roadsides, and mixed woodlands-grasslands. Staghorn Sumac can sometimes be confused with its invasive lookalike, Tree-of-Heaven (*Ailanthus altissima*), due to their similar alternate, pinnately compound leaves, and rhizome. However, Staghorn Sumac's red, fuzzy fruits are what distinguishes the plant from other lookalike species and what makes up sumac spice. Poison Sumac (*Toxicodendron vernix*) is also prevalent in our region and is identifiable by its drooping leaves and white berries.

Staghorn Sumac's berries mature in mid-to-late summer and can be foraged into winter if the drupes appear fresh and red. It is best to harvest sumac during a dry spell since rain dilutes its flavor. It is also advisable to not forage Staghorn Sumacs that are located off roadsides due to the high potential of pollution to the plants.

Upon finding fresh sumac berries, the berries can be harvested by simply cutting the clusters away from the trees. The fruits may be infested with worms in the pods' center, so be wary while



Continued on page 6...

The Delaware Highlands Conservancy is a land trust dedicated to conserving our natural heritage and quality of life in partnership with landowners and the communities of the Upper Delaware River region.

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What is Highlands LandLines?

You already receive the Delaware Highlands Conservancy’s regular newsletter, *Highlands Journal*. Our newsletter is distributed to all of our landowners, members, and other like-minded folks who are interested in the Conservancy’s activities, accomplishments, and conservation goals.

This publication, *Highlands LandLines*, comes to you twice a year and is dedicated to landowners who have a conservation easement with the Conservancy. *LandLines* provides you, the landowner, with useful information and tips for the stewardship of your land and conservation easement. This publication is also available electronically.

Participate in LandLines!

We are interested in your ideas for future articles and features, or your comments on the publication in general.



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Stewardship of Your Property

Stewardship staff encourage you to reach out any time you have questions or concerns about your conservation easement. There are several activities and uses that may require the Conservancy’s feedback or approval, so it is always a good idea to contact us before making any significant changes, including the following:



BEFORE YOU BUILD

A conservation easement may allow for residential or agricultural structures to be built on the property. However, it is important to confirm with the Conservancy that your easement permits new structures or the expansion of existing structures, and to follow the proper process before beginning any construction.



BEFORE YOU CUT

Your conservation easement may require the forest on your property to be cared for and managed in accordance with a forest management/ stewardship plan. Please contact the Conservancy before starting any forest management activities, as they must be reviewed and approved prior to any timber harvesting activities per the easement terms. We can also provide a list of natural resource professionals to help you achieve your land management goals.



BEFORE YOU SELL

Conservation easements run with the land even if you sell or transfer the conserved property, which means subsequent landowners are also bound by the terms of the easements. Informing and connecting the Conservancy with the realtor and ultimately the new landowner(s) before selling or transferring your property helps with reducing the risk of easement challenges or violations after the transition is complete.

STEWARDSHIP STAFF



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Continued from page 1...

harvesting clusters. Although it is possible to still use sumac that is infested with worms, the cleaning process becomes more time-consuming, and the yield may not be as plentiful.

Sumac berries can be used fresh or dried. If chosen to dry the berries, it is recommended to dry the entire cluster with a dehydrator (125F-150F) or under heat lamps overnight to 12 hours, as traditional ovens cannot heat low enough to gently dry the sumac. Once the clusters are dry, use a blender to separate the dried berries from the seeds and sticks - the seeds are hard enough to stay whole in a high-powered blender. Then use a fine-mesh strainer and bowl to sift the sumac powder from the seeds and sticks. After sifting, the seeds and sticks can be discarded, and what is left is the fragrant sumac spice. It is best to use homemade sumac spice for up to six months. The spice will stay fresh for one to two years but will lose its potency as time progresses.

Sumac spice can be used as part of a meat rub or marinade, can be a substitute for lemon juice or vinegar, can be dusted over dishes as a garnish, and can be used in spice blends, like za'atar.



Sources:

<https://anisetzaatar.com/2019/08/26/foraging-and-preparing-staghorn-sumac-as-a-spice/>
<https://practicalselfreliance.com/staghorn-sumac/>

<https://www.masterclass.com/articles/what-is-sumac-learn-how-to-use-sumac-with-tips-and-8-sumac-recipes#what-are-the-different-types-of-sumac>
https://www.fs.fed.us/wildflowers/plant-of-the-week/rhus_typhina.shtml
<https://www.farmersalmanac.com/wild-edibles-sumac-berries-22386>

Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP) – a voluntary program administered by USDA’s Natural Resources Conservation Service (NRCS), offers technical and financial assistance for working lands to address natural resource concerns and provide environmental benefits. EQIP has no minimum acreage requirements and supports landowners with goals to improve and sustain natural resources on their land by implementing structural, vegetative, and management practices. These implemented practices may result in enhanced water and air quality, improved soil health, expanded or created wildlife habitat, and mitigation against drought and flooding.

Interested landowners will receive a consultation from a local NRCS conservation planner to assess the current management plan and natural resources. The findings of the visit are then developed into a free conservation plan. Landowners with approved EQIP applications will receive payments for implementing practices on their land with the expectation they will maintain them for the expected timeline of the contract.

For more information, visit the NRCS Environmental Quality Incentives Program website at <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/>.

Invasive Species Corner

Jimsonweed (*Datura stramonium*)

Jimsonweed (*Datura stramonium*), or Jamestown weed, has uncertain origins since it is widespread in warm temperate regions around the earth. The annual, pungently smelling plant can be found sporadically throughout the growing season in cultivated fields along roadsides and disturbed ground.

The plant ranges from one to five feet tall and branches in two equal forks. Stems are smooth, green to purplish, with coarsely toothed leaves three to eight inches long. Jimsonweed has white or pinkish trumpet-shaped flowers that bloom from August to October, and fruits short thorny capsules, about one inch in diameter, with seeds that can remain viable in the soil for decades. All parts of the plant are poisonous if ingested. Most animals avoid the plant due to its odor, but livestock poisonings do occur due to contaminated hay or feed.

Management methods consist of manually/mechanically removing the species and chemical application. Remember to clean equipment and wear protective gear when handling the plant. It is also a violation of the Noxious Weed Control Law to sell, transport, plant, or propagate Jimsonweed in Kentucky, Massachusetts, Pennsylvania, and Virginia.



Sources: www.nrcs.usda.gov/Jamesonweed – NRCS – USDA (ILGM-SPECIES-NI_Jimsonweed.pdf)
<http://elibrary.dcnr.pa.gov/GetDocument?docId=1738716&DocName=Jimsonweed.pdf>

Native Species Spotlight

Ground pine (*Lycopodium obscurum*)

Ground pine (*Lycopodium obscurum*), also known as Princess Pine, is a species of clubmoss. The namesake derives from the plant’s tree-like form and its formal consideration of being a species of moss.

The evergreen perennial can be found in dry to moist conditions among forests, groves, bogs, and clearings. Ground pines are vascular plants that reproduce by yellow spores. They have horizontal stems, which contributes to their slow yearly growth. The plant produces one to three cones, which mature between July-September.

Did you know that ground pine spores were used as a flash powder for the first photographic cameras due to the high oil content? The plant and other clubmosses were also collected historically to create Christmas decorations, such as wreaths. However, this practice is now highly discouraged, given that the plant is increasingly rare due to its slow growth.



Sources: <https://www.centralcoastbiodiversity.org/ground-pine-bull-lycopodium-dendroideum.html>
<http://www.muskegoncc.edu/Include/Life%20Science/Kasey%20Hartz%20Nature%20Trail/Reference%20Sheets%20KHNA/Lycopodium.pdf>

Spotlight on Wood Turtles

By Rachel Morrow

Meet the Wood Turtle (*Glyptemys insculpta*), an endangered member of the *Emydidae* family, which is the family of pond, marsh, and box turtles! This turtle is considered a terrestrial turtle, meaning that it spends most of its days on land rather than in water. However, the wood turtle will hibernate in water in the winter unlike its terrestrial counterpart, the box turtle, which you will never find fully submerged in water.

While in hibernation, the wood turtle will reduce its metabolic rate to the point where it will be able to survive long periods without eating, drinking, or even breathing while completely submerged in water! They do depend on having constant access to oxygen—and the cleaner the water, the more oxygen will be available for wood turtles. Turtles that submerge themselves for hibernation can absorb the oxygen through capillary beds on the roof of their mouth and the linings of their cloaca (aka “butt breathing”).



The distinctive characteristics of a wood turtle include multiple protrusions all over the shell, giving it a more pronounced and textured shell than other turtles. These protrusions look as though someone carved out a piece of wood to create all the textured areas, which is where the wood turtle gets its name. The wood turtle will lay one clutch of eggs each year and each clutch will contain four to twelve eggs. The eggs are usually laid by the female in May or June, and they will hatch sometime in September or October. At times, the young wood turtles will remain in their nest throughout the winter.

Wood turtles are considered omnivorous, yet they favor fruit, feasting on strawberries and

blueberries. They eat other plants such as dandelions and sorrel. The wood turtle also likes to feast on slugs, insects, and tadpoles and can be found searching for worms when the ground is moist. The wood turtle can be found in nearly all of Pennsylvania other than just shy of the western border. We are lucky enough to have them at the Van Scott Nature Reserve!

Continued on page 5...

Beware of Deer Keds!

Deer ked (*Lipoptena cervi*), or deer fly, is an introduced species of biting fly from Europe and Asia. These flies are parasites on whitetail deer, elk, horses, cattle, and humans and are becoming more widespread in North America.



Adult deer keds are active from early autumn through December. The winged flies are rarely seen because they shed their wings soon after finding a host. Luckily for us humans, deer keds will not reproduce on any host other than deer. Female flies produce one egg at a time, which hatches inside of the mother and is fed with a milk-like substance. Once the larva is close to fully developed, it drops into the soil and forms a pupa, which eventually emerges into a winged adult.

The flies are often misidentified as ticks due to the hard exoskeleton that protects them from being crushed by the host, but the flies can be identified by their six legs and three body regions (head, thorax, and abdomen). Deer keds are also larger than most lice and move faster than ticks and lice.

On humans, deer keds will engorge on blood in 15 to 25 minutes. The bite can be painful, but the marking leaves little trace at first. However, within three days, the site develops into a hard, reddened welt that has an accompanying, intense itch that may last 14 to 20 days - it is believed this reaction is a result of the fly's saliva.

Although several tick-borne pathogens — including bacteria that cause Lyme disease, cat scratch fever, and anaplasmosis — have been detected in deer keds, it is unknown whether they can be transmitted through bites. However, other bacterial pathogens can be transmitted from mother flies to offspring, which can then be passed to hosts and other animals in close contact. Given the continued research, caution is heavily advised around this species. Please keep a record if you find deer keds on your property!

Sources:

<https://extension.psu.edu/deer-keds>

https://entnemdept.ufl.edu/creatures/livestock/deer_ked.htm

<https://www.psu.edu/news/research/story/new-records-show-spread-parasitic-deer-flies-across-us/>

Wood Turtles, continued...

To protect habitat and clean water for wood turtles and other wildlife at the Van Scott Nature Reserve, dogs are not permitted on the property. Whenever you come to visit us at the Reserve, keep an open eye out for our turtle friends, but always remember to leave no trace! Take photographs and admire, but ultimately leave them be and stay on trails—creating new footpaths could damage their habitat and muddy the water as well.

Don't forget, wood turtles are illegal to possess in Pennsylvania and New York because their populations are vulnerable to poaching, and the removal of adults can severely impact their potential to reproduce.

Thank you for thinking of the wood turtle and being a good steward of the land!