

BRANCHING OUT

Maryland's Woodland Stewardship Educator



University of Maryland Extension – Woodland Stewardship Education
<http://extension.umd.edu/woodland>



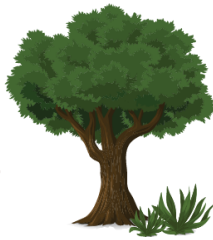
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Spring 2020

Woodland Stewardship Resources Available While We're Out

Jonathan Kays, University of Maryland Extension Specialist

WOODLAND STEWARDSHIP EDUCATION



Last March, University of Maryland Extension employees were required to leave our offices per the Governor's order and to work from home. The University of Maryland has stated the work from home order will continue until at least June 26. This has required many changes with how we deliver our Woodland Stewardship Program; perhaps the biggest change being the cancellation of all face-to-face programs for the near future.

Fortunately, we have been able to adapt. We offer a wide range of resource online and we want to clarify what they are below and how to access them.

- **Woodland Wildlife Webinar series** – on the last Wednesday of the month, we will be offering a woodland wildlife-oriented webinar targeted to Maryland woodland owners and managers.
 - Wednesday, May 27, 12 noon - Biology, Management & Behavior of Black Bears in MD: Current populations, nuisance problems and mortality. Speaker: Harry Spiker, MD DNR Black Bear Biologist. [See page 2 for more details.](#)
 - List of upcoming webinars coming soon
- **Online forestry and wildlife courses**
 - [General Forestry Course](#) – offered in the fall. [See page 2 for more information.](#)
 - [The Woods In Your Backyard Online Course](#) – offered spring and fall
- **Branching Out Newsletter**
 - Produced quarterly and sent by email. Notice of upcoming events & programs. Back issues available [here](#); click [here](#) to subscribe.
- [YouTube Channel](#)

- Recorded workshop lectures and many other resources
- [Facebook](#)
 - Our Woodland Stewardship Facebook page has new content provided a few times each week with interesting articles and resources. Please come and “like” us!
- [Maryland Woodland Stewards](#)
 - Volunteer training program for a select groups of woodland owners and managers to share sustainable forestry practices to enhance wildlife habitat and other woodland benefits. This program is offered every two to three years but more information on the program is available on the website.
- [Maryland/Delaware Master Logger Program](#)
 - Voluntary training and education program for loggers helping loggers meet the ever-increasing demands of the logging profession.
- [Publications Library](#): Fact Sheets, Bulletins, and Videos on a range of topics
 - Wood Energy, Managing Your Property, Wildlife and Insect Damage, Wildlife and Plants, Invasive Species, Riparian Buffers, Enterprise Ventures, Tax Information, Biosolids Research & Poultry Litter Research, Ecosystem Services, and GPS Resources

The Woodland Stewardship Program team members are available by email. See homepage of the [website](#) for contact information.

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New Woodland Wildlife Webinars to Liven Up your Wednesdays

Looking for something new to do for a mid-week lunch hour? Then join us for the Woodland Stewardship Education program's new series of "Woodland Wildlife Wednesday" webinars, to be held at 12 noon on the last Wednesday of the month through the end of the year. Each program is free and will be conducted via WebEx.

Our first webinar is on March 27th. Guest speaker Harry Spiker, Black Bear Biologist for the Maryland Department of Natural Resources - Wildlife & Heritage Service, presents "Biology, Management & Behavior of Black Bears in Maryland." He will discuss the state of the species in Maryland, including current populations, nuisance problems and mortality.

To register for this webinar, please visit <https://woodlandwildlifewed.eventbrite.com>. Participants can log in up to 15 minutes before the webinar begins.

Upcoming webinars will include conservation efforts for Maryland's amphibians, reptiles and golden winged warblers; the state of Maryland's turkeys and white-tailed deer; landowner liability and recreation access; and much more. Each will be held on the last Wednesday of the month. Details for upcoming webinars can be found on the [Woodland Stewardship Education program's website](#). Select the Event Calendar for more information.



This Issue's Brain Tickler ...



Last issue, we asked you to identify this tool. It's a Swedish brush axe, also sometimes known by its brand name Sandvik. Congratulations to Joel Gagliardi for his correct answer.

For this issue, let's consider the over 214,000 acres of state forests in Maryland. Which of the eleven state forests is the oldest (in other words, was the first area designated as a state forest)? Email Andrew Kling at akling1@umd.edu with your answer.



Becoming a Steward of the Land: UME Forestry Program Offers Certification Course

Learn to be a steward of the land this fall with the University of Maryland Extension General Forestry Course. Both paper and online versions of the course will be offered, beginning Sept. 1 through Dec. 15, 2020. Registration opens June 1, and interested participants can register online at extension.umd.edu/forestry-course.

This is a non-credit course with no formal classes – work from the comfort of your home using your own woodlot, a friend's or a public forest. The course covers how to protect your trees from insects, diseases, and fire; step-by-step procedures walk you through a forest inventory and stand analysis; and the details of the forestry business are presented, including tax nuances and the sale and harvest of forest products. Ultimately, the course exercises help you develop the framework for a stewardship plan for your forest.

The cost for this forestry course is \$150. Included in the cost are copies of the supplemental readings ("A Sand County Almanac, The Woodland Steward, American Forests: A History of Resiliency and Recovery," a small pamphlet entitled "What Tree Is That?" and "Common Native Trees of Virginia Tree Identification Guide"). The paper version text and appendices for the course are in binder form. Online users receive a flash drive of the paper version of the text and appendices. A certificate of completion is awarded when all assignments are completed.

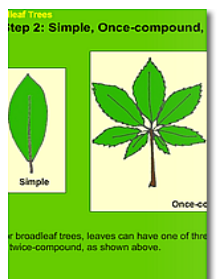
To learn more about the course and what it entails, go to extension.umd.edu/forestry-course. There you can read a lesson from the text, view an interactive exercise, read through detailed course information and FAQs.

For more information, contact Nancy Stewart at the University of Maryland Extension, Wye Research and Education Center, P.O. Box 169, Queenstown, Md., 21658, 410-827-8056, ext. 107, or nstewart1@umd.edu. Check for details on our website and mark June 1 for open enrollment on your calendar!

and the angiosperms, or broadleaf trees. These are divided down into order, family, genus, and species.

Individuals with similar characteristics are considered a species. A family is a group of closely related species that share common characteristics. Sometimes a species is found. These individuals exhibit minor differences in size, shape, or color, but they will cross-pollinate and form a hybrid offspring of the Beech Family.

Table 3-1: Classification of the Beech	
Kingdom: Plantae	
Genus: ... Fagus (Beeches)	
Species: ... grandifolia (American beech)	
Genus: ... Castanea (Chestnuts and Chinkapins)	
Species: ... dentata (American chestnut)	
Species: ... pumila (Allegheny chinkapin)	
Genus: ... Quercus (Oaks)	
Species: ... alba (White oak)	
Species: ... rubra (Southern red oak)	
Variety: ... falcata variety Pogonosticta (Swamp oak)	
Species: ... prinus (Redburn oak)	



For broadleaf trees, leaves can have one of the two-compound, as shown above.

Sample course pages

Woodland Wildlife Spotlight: Black Bear

North America is home to three separate families of bears. The polar bear is the most distinctive, based on its habitat and its coloration. The other two families, the brown bear and the black bear, are often the source of confusion. The brown bear, also known as the grizzly, is found mostly in the western states of the United States and the western provinces of Canada. Grizzlies have a variety of coat colors, ranging from almost pale blonde to black. To add to the identification dilemma, the black bear may also have a variety of coat colors: black, brown, cinnamon, blonde, or a combination. Telling a brown bear from a black bear may be a challenge if you live where their territories overlap, but [there are a number of distinguishing features for both](#).

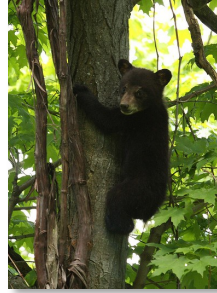
However, Maryland is home only to the black bear (*Ursus americanus*). The mammal was once widespread throughout the state, but habitat loss and unregulated hunting reduced the population to its current range. The black bear today is found primarily in the woodlands of Allegany, Garrett, Washington, and Frederick counties. Allegany and Garrett counties have the largest populations, and their numbers are growing to the east. In the spring, black bears are often sighted in other parts of the state; for example, [one was sighted in Montgomery County](#) in May, 2020.

Spring is an important time for the state's black bears. They have spent the previous months in a denning behavior often mislabeled as hibernation. Unlike true hibernators, bears will decrease their heart rate and breathing, but can awaken and become active if necessary. During this time, they live off the fat reserves they have built up during the previous seasons. Additionally, females will give birth, generally in January, to one to four cubs that will stay with her for the next 18 months. At birth, the cubs weigh less than one pound and have closed eyes; they will suckle from the female throughout the rest of the winter and by spring are able to join her beyond the den.

Once the adult bears emerge from their denning, they need to replenish their body weight. They are omnivorous and take advantage of much of what the state's woodlands have to offer. They will feed on ripe berries and other fruit, nuts, acorns, and hickory nuts. Acorns provide the greatest part of the diet for Maryland's bears. They will also occasionally eat grasses, amphibians, and carrion, and, as opportunistic eaters, will take advantage of food or food waste left out by humans.

The black bear is generally a solitary animal, as males and females have separate ranges for the majority of the year. Once the young bears are about 18 months old, they will

Black Bear Basics



Black bear cub, Garrett County MD, 2009.
Photo by Mikey Lutmerding, Maryland Biodiversity Project

Appearance: Stocky build, with glossy coat that ranges from deep black to cinnamon brown. Some patches of white possible. Up to 3.5 ft. tall at shoulder. Short tail (3-5 inches).

Size: Females 110-250 lbs. Males 150-450 lbs.

Lifespan: About 20 years in the wild; individual bears have been documented to live more than 30 years.



Black bear, Howard County MD, 2016. Photo by Jason Hoffert, Maryland Biodiversity Project

strike out on their own in search of new territory, and will reach sexual maturity at three years old. When summer approaches, males will travel long distances to find females for mating, which takes place in June and July. Fertilized eggs generally do not implant until November, when the female will begin denning.

But before that occurs, both males and females need to prepare for the inactive winter months. Although they are generally nocturnal, during the fall, bears may forage for as much as 20 hours a day, consuming up to 20,000 calories a day and increasing their body mass by up to 35%.

As the days shorten, bears seek out locations suitable for denning. They may find space beneath a large boulder or in a tree cavity, or in more exposed locations such as a simple depression in the landscape. They have also been known to create denning space under a house's elevated deck, or inside unoccupied buildings.

Today, according to the state's Department of Natural Resources' Wildlife and Heritage Service, the bear population is growing from its historical lows. Learn more about the state's black bears during the Woodland Wildlife Wednesday webinar on March 27th at 12 noon. Go to <https://woodlandwildlifewed.eventbrite.com> to register.

Invasives in Your Woodland: European Buckthorn

European buckthorn, as the name suggests, is a native of Europe. And as is the case with many non-native species that are now considered invasive, it was introduced here as an ornamental plant, perhaps as early as the late 1700s. In the 1900s, it was planted widely to form living fence rows and for wildlife habitat. Since then, it has spread aggressively into a variety of environments. The plant's current infestation is concentrated throughout the northeast and the upper Midwest states.

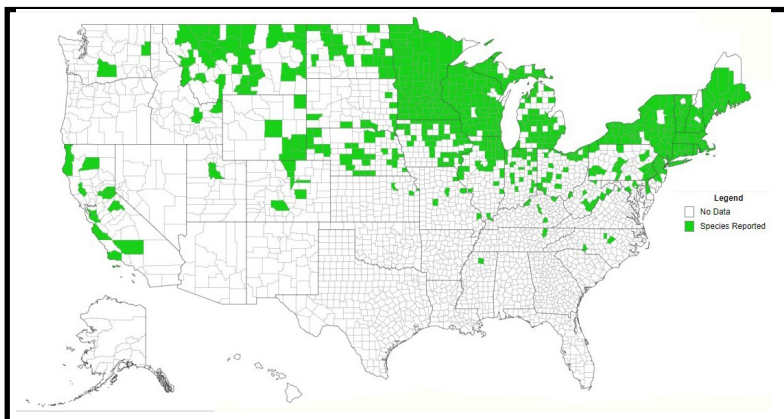
It is less well known in Maryland than some of the other invasive plants species that we've highlighted in this feature. Currently, it is only found in Montgomery and Baltimore counties. However, neighboring states have more widespread instances. It's reported in two of Delaware's three counties, in several West Virginia counties along the Appalachian Mountains, and throughout southeastern Pennsylvania.

What is it?

European buckthorn (*Rhamnus cathartica*) is also called Common buckthorn, Hart's thorn, or European waythorn. It is a multi-stemmed shrub or occasionally a single stemmed tree that can grow up to 25 feet tall. The name "buckthorn" comes from terminal spines found at the end of its twigs. This perennial plant can tolerate a wide variety of soil types, from well-drained sand to clay. It is found in lightly-shaded areas, but can tolerate full shade. It often invades upland areas, such as wooded margins, areas where trees have fallen, and open oak woodlands. In some states, it has invaded grasslands, lake and stream edges, as well as disturbed sites such as urban landscapes and roadsides.

How does it spread?

This invasive plant spreads widely through seed dispersal. Its flowers appear during late spring (May-June), and its berries ripen during August and September. The berries may stay attached to the plant throughout the winter. These berries are consumed by birds and small mammals and have an laxative effect, leading to the rapid excretion of the



European buckthorn US county distribution.

Courtesy eddmaps.org.

seeds inside the berries. Berries that remain fall directly beneath the plant, contributing to a dense concentration of seedlings beneath the parent. The seeds can stay viable in the soil for up to five years. European buckthorn also spreads through stump sprouting.

How can I identify it?

European buckthorn has small, oval-shaped leaves with small, serrated teeth. They may be opposite or alternating on the same stem. The leaves are dull or dark green with a lighter underside. The flowers are small and yellowish, appear in clusters along the stem or in the spaces between the stem and the leaf. Berries are small (5-6 mm) and range from dark purple to black. The plant also has a distinctive yellow sapwood. See the photo gallery on the next page.

How can I control it?

European buckthorn seedlings that are less than three feet tall can usually be pulled by hand. Larger plants can be removed with a tool called a weed wrench, as long as care is taken to minimize soil disturbance to reduce the chance of re-sprouting or of additional infestation from other invasive plants. It can also be controlled with foliar, stem injection, basal bark, and cut-stem applications of herbicides.

For more information:

Learn more about European buckthorn:

[Invasive Plants in Pennsylvania: Common Buckthorn](#) - PA Dept. of Conservation & Natural Resources

[Common or European Buckthorn](#)—Minnesota Dept. of Agriculture

[Common Buckthorn](#)—New York Invasive Species Information

[Forests 'can take cover to resist alien invaders'](#) - Yahoo News



European buckthorn infestation in a field. Photo by John M. Randall, The Nature Conservancy, Bugwood.org

Image Gallery: European Buckthorn

European buckthorn foliage (left) and flowers (right). Photos by Rob Routledge, Sault College, Bugwood.org



European buckthorn berries. Photo by
Chris Evans, University of Illinois,
Bugwood.org



Distinctive yellow sapwood of European buckthorn. Photo by
John M. Randall, The Nature Conservancy, Bugwood.org

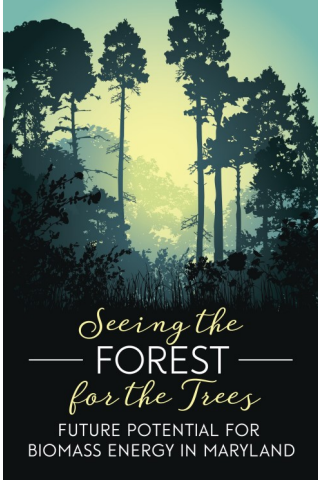
European buckthorn foliage. Photo by Leslie J. Mehrhoff,
University of Connecticut, Bugwood.org



News and Notes

“Seeing the Forests for the Trees” Webinar Series

The Maryland Forests Association and its partners are presenting a series of free webinars entitled, “Seeing the Forest for the Trees: Future Potential for Biomass Energy in Maryland.” The webinars will examine the impacts and advantages of utilizing wood resources for thermal biomass energy in Maryland.



The webinars will be held on consecutive Tuesdays in June and July, and will feature a variety of speakers from industry, conservation and environmental groups, business, and state and federal agencies.

Registration is free. For more information, go to: <https://bit.ly/MDBiomass20>.

What’s the Buzz? Urban Trees are Good for Bees

Trees and woody vines are among the top food sources for honey bees in urban environments, according to an international team of researchers. [An article in Science Daily](#) recounts the team’s study of honey bees housed in rooftop apiaries installed in Philadelphia. They identified the plant species from which the honey bees collected most of their food and noted how these food resources changed with the seasons.

The team found that flowering trees in the landscape, such as maples, oaks, and willows, provided important spring pollen sources. In the summer and fall, the bees collected pollen from such vines as the native Virginia creeper and the non-native and often invasive English ivy.



Honey bees feed on the pollen from willow trees in May.
Photo by Douglas Sponsler,
Penn State University

Wildlife & the Pandemic

The COVID-19 pandemic has resulted in a wide variety of stay-at-home orders designed to lessen the spread of the novel coronavirus. As a result, fewer people have been conducting business as usual, such as commuting to work or driving to shop, traveling, or simply being outside. In many areas, wildlife has benefited, as people have observed animals in [unexpected places](#) and in [unanticipated numbers](#).

Closer to our region, reporter Laurie Mason Schroeder of the Allentown Morning Call recently took a look at these experiences in [this article](#).

Experts around the world note that many of these interactions take place partly because there is reduced human outdoor activity, and partly because people are staying at home—and viewing wildlife behavior that they otherwise might have missed.



Arbor Day Poster Contest Winner

The Maryland Department of Natural Resources announced the winners of their fifth annual Arbor Day poster contest. Lola Lugard of Sykesville in Carroll County received first place for her interpretation of the contest’s theme, “Trees are Terrific ... In All Four Seasons!”

Learn more about the contest and the other winners at <https://news.maryland.gov/dnr/2020/02/21/2020-maryland-arbor-day-poster-contest-winners-announced/>.

You can also visit a Flickr gallery to see all the entrants and photos of the competition judging at [this link](#).



Shinrin-yoku: Forest Bathing

Agnes Kedmenecz, Forest Stewardship Educator

When you hear “Forest Bathing,” what comes to mind? Going in the forest with soap, a bucket and sponge to bathe the trees? Or going in to the forest to bathe yourself?

Forest bathing is soaking in the forest atmosphere, taking in the forest through our senses, and is known as *Shinrin-yoku*.

Shinrin-yoku was developed in Japan, meaning *Shinrin* (forest), and *yoku* (bath). In 1982, the Agency of Agriculture, Forestry and Fisheries was looking for a campaign to protect the forest. They felt that if people visit forests for their health, they will want to look after them. Through this, *Shinrin-yoku* was born. Over many years, the health benefits of being in the forest have been studied. Some of these findings include:

- Lowering stress hormone
- Suppressing sympathetic nervous system
- Enhancing parasympathetic nervous system
- Lowering blood pressure
- Boosting immune system with an increase in body’s natural killer cells
- Increasing in anti- cancer protein production
- Assisting in weight loss

These findings have led to the creation of 48 forest therapy bases throughout Japan. These bases can have a health practitioner there to guide one in a forest bathing experience, blood pressure monitoring areas, and forest foraging cafes.

The US also realizes these benefits, and in 2009 the Park RX program was developed to encourage citizens to use the forest parks and trails to improve health. There are more than 150 park-prescription programs, from Alabama to Wisconsin.

Shinrin-yoku is the deliberate action of taking in the forest through our senses: Feeling, Hearing, Smelling, Tasting and Seeing the forest.

Smell the fragrance of the forest and breathe in the natural aromatherapy of the phytoncides. Phytoncides are the trees’ natural oils - the trees’ defense system, protecting them from bacteria, insects and fungi. The main component of phytoncides are terpenes. Terpenes are what you smell in the forest. They are a large and diverse class of organic compounds produced by plants, particularly conifers. Terpenes often have a strong, protective odor that may deter herbivores and attract predators and parasites of herbivores.

Some familiar smelling terpenes include D-limonene (lemony smell), Alpha pinene (fresh piney smell), Beta pinene (herb-like, such as basil or dill), and Camphene (turpentine-y, resinous smell).

Appearing 300 million years ago, conifer trees were the first

aromatic plants on earth, Cedar has a resinous, earthy, sweet & spicy aroma that relaxes nerves and calms the spirit. Red pine has an herby, piney smell, strong and dry - sometimes a bit like turpentine. This helps ease mental and physical fatigue, and sharpens focus. *Shinrin-yoku* invites you to slow down, breathe and take it all in.

Look more intentionally. Notice the different greens of the trees and the sunlight filtering through the branches. Take time to go up close to the tree, looking at the distinctive features of the bark, looking at the veins of a leaf, looking up to see what flowers are in bloom or see who’s making a nest in the trees.

Listen to the breeze rustling in the leaves of the trees, taking note of the bugs and bunny sounds. Listen in all directions. One of my favorite forest sounds is after a rain, hearing the water moving along the forest floor.

Feel the warm breeze on your skin, the freshness of the air as you take a deep breath, the sun warming you. Dip your toes in the stream, or lay down on a mossy patch.

Taste tea brewed from twigs, young leaves, flowers, or the bark of the trees in the forest. Forage for mushrooms, wild ginger, sassafras root, berries, and nuts. Make some maple syrup. In Japan, knotweed is eaten! But please be confident that what you are eating is safe.

By immersing ourselves in the forest, we are surrounded by negative ions. These negative ions are charged particles in the air that are abundant in places like forests, and near rushing water. These negative ions offer us an energizing & refreshing effect that can increase mental clarity and sense of wellbeing.

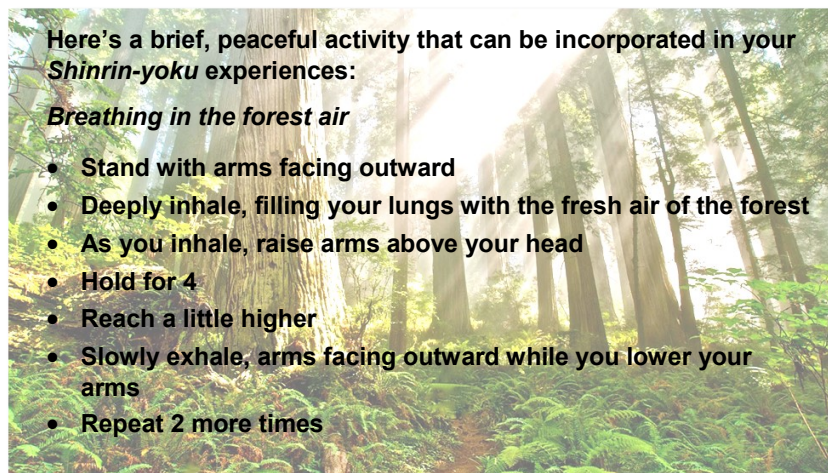
Some people say that humans have more than the five senses – that there is an indefinable 6th sense that connects us with the natural world. What we feel in nature is hard to describe - a feeling of wonder, excitement,

and transcendence. The more trees there are the more we feel it, flooding us with feeling of joy in the moment. When we connect with nature with all our senses, the magic happens.

During your next walk in the woods, taking some time to tune into your five senses, taking in the forest atmosphere, slowing down, breathing deep – your own *Shinrin-yoku*. When you feel that joy in nature, then you are truly forest bathing.

Reference:

Li, Qing, 2018, *The Japanese Art and Science of Shinrin-yoku, Forest Bathing, How Trees Can Help You Find Health and Happiness*. Penguin Random House.



Events Calendar

For more events and information, go to <http://extension.umd.edu/woodland/events>

May 27, 2020, 12:00 pm—1:00 pm

Woodland Wildlife Wednesday webinar Online

Join us and guest speaker Harry Spiker for a look at Maryland's black bears. [See page 2](#) for more information.

June 1, 2020

General Forestry Course

Registration opens for the Fall 2020 session of the Woodland Stewardship Education's General Forestry Course. [See page 2](#) for more details.

June 2, 2020, 12:00 pm—1 :00 pm

Extension at Home: Backyard Woods Online

Join us for a discussion on how forests provide landowners and communities with many benefits in this free webinar from Penn State Extension. For more information and to register, visit <https://extension.psu.edu/extension-at-home-outdoors-backyard-woods>

June 2—July 7, 2020 (every Tuesday), 10:30 am—12:00 pm

Seeing the Forest for the Trees webinar series Online

The first in this series of webinars will be held on June 2, entitled "Economic & Environmental Opportunities for Woody Biomass Energy in Maryland." For more information on this webinar, go [here](#). Additional webinars will be offered on consecutive Tuesdays through July 7. For more information on the series, visit [this link](#).

June 24, 2020, 12:00 pm—1:00 pm

Woodland Wildlife Wednesday webinar Online

Scott Smith, Wildlife Diversity Ecologist, MD DNR Wildlife & Heritage Service, will present a webinar entitled "Conservation Efforts for Reptiles & Amphibians in Maryland." Registration details are pending and will be posted at <http://extension.umd.edu/woodland/events>.

July 29, 2020, 12:00 pm—1:00 pm

Woodland Wildlife Wednesday webinar Online

Jonathan Kays, Forestry Specialist, University of Maryland Extension, will get landowners and hunters alike ready for

fall hunting season with a presentation entitled, "Landowner Liability & Recreational Access in Maryland." Registration details are pending and will be posted at <http://extension.umd.edu/woodland/events>

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All information, including links to external sources, was accurate and current at the time of publication. Please send any corrections, including updated links to Andrew A. Kling at akling1@umd.edu.

Send news items to Andrew A. Kling at akling1@umd.edu or 301-432-2767 ext. 307.