

BRANCHING OUT

Maryland's Woodland Stewardship Educator



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AI and your Woodlands: Not There (Not Yet)

Andrew A. Kling, *Branching Out* editor

Recently, a number of UME employees received access to a service called [PlayPlay](#), which enables us to create short animated videos either from scratch or from one of many templates. It's similar to working with PowerPoint in that you create a video from a storyboard of slides, and I found it quite effective. I've developed a number of videos for content within our two online courses and for promoting them on our website. You can see the one for "The Woods in Your Backyard" [here](#) and for "The General Forestry Course" [here](#).



Crafting the latter involved a new PlayPlay feature: their "AI Assistant." Curious to see what it would create for me, I entered a short description of the course, and its first slide showed a conference room with three

doctors in the front row. And it added slow-motion video of a chainsaw in action to a slide that used my text "Manage your forest." Clearly, there was room for improvement. I tried again with more detail and an expanded description of the course's goals. This time, AI Assistant's storyboard formed the nucleus of the video mentioned above.

Artificial Intelligence, or AI, has been in the news a great deal lately, but like a lot of technology, bits and pieces of it have been part of our lives for years. Do you send text messages, choosing the words suggested on the screen based on the first two or three letters you typed? That "predictive text" is AI. Do you have a TV remote control with a voice-activated function? Do you have an Amazon Alexa or similar device? Those are AI-based as well. It's just that now, AI interfaces such as ChatGPT have become widely known, and many people have tried them for a variety of purposes. (I read that one user asked it to design a model railroad to fit a particular space; the AI created tracks with right angles. Autos can navigate that; railroads cannot.) While some individuals believe [AI can help protect the world's land, water, and air](#), its presence and development seems to have reached the point that others feel it may threaten their livelihoods and that it should be legislated.

What does this have to do with your woodlands? Apps that help assess your woodland's health already exist. But can AI provide you with personalized management options? At this time, the answer is no. Remember, AI scours the sources it has been programmed to scour, and experts note that it struggles to notice the difference between

what's real and what's wishful thinking. [A recent blog post from the National Woodland Owners Association](#) noted that AI has the amazing potential for stewardship education—but it's not there yet.

Will a time come when someone develops a forest stewardship plan simply by typing an address into an app? A lot of the required information is already online. But I am not yet convinced that AI has reached the point that it can generate the next great American novel, much less complex management documents. There remains no substitute for hands-on, in-person, boots-on-the-ground work by human experts when it comes to managing your natural areas. [And there remains no substitute for face-to-face interactions between experts and owners](#) or managers to understand exactly what's happening and what needs to be done in those woodlands.

A lot of it comes down to education and interpretation. I spoke with a landowner the other day who lives in Pennsylvania but who has property in southern Maryland, and who wanted to know who to talk to about harvesting some of the trees. Had AI taken the call, it might have noted the Pennsylvania phone number and replied with names of the nearest store selling chainsaws. Instead, I interpreted their request and asked: How large is the property? How many acres are in woodlands? And, in which county is it located? I learned that the property is large enough to qualify for a forest stewardship plan from the DNR Forest Service. I shared that the price of that service has not changed in many years. And I provided the contact information for the particular county involved. Yes, for the latter, I *did* have to go to the internet, but I knew exactly where to look on our website.

Any AI-based system at this point would not have asked these questions unless programmed to do so. Answering a question by asking other questions to provide worthwhile information is something AI can't do. At least, not yet.

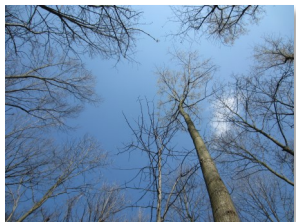
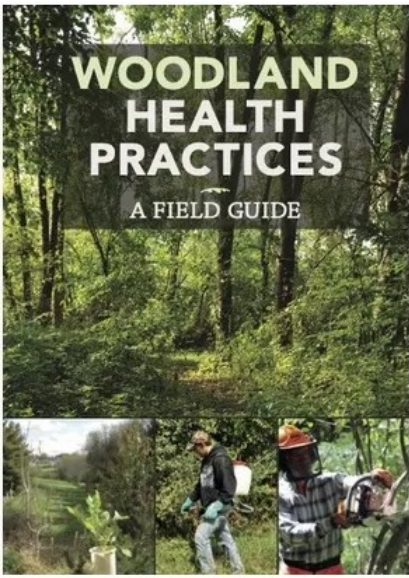
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Two New Publications to Help You Manage your Woodlands

Woodland Health Practices: A Field Guide (The Woods in Your Backyard Partnership)

Following the successful publication of *Woodland Health Practices Handbook*, the authors set out to digest the natural area management techniques and practices into a handy pocket guide. The result is *Woodland Health Practices: A Field Guide*, which is designed for green services practitioners to use as a quick reference in the field.



The guide is divided into four parts and covers converting lawn to natural areas; modifying or improving existing wildlife habitat; controlling undesirable plants and/or insects; and improving privacy, beauty, and recreational opportunities. Full-color photos and graphics illustrate the practices described in the text. In addition, a glossary defines a wide variety of terms used in the publication.

The spiral binding and compact size make it easy to use in both the office and the field.

The publication is available from Penn State Extension for \$7.50 plus shipping. Visit <https://extension.psu.edu/woodland-health-practices-field-guide> to learn more and to order your copy today.

Losing your trees to the sea? Options for Maryland's Coastal Woodland Owners (Dr. Kate McClure & Agnes Kedmenecz)

Woodlands in low-lying areas along Maryland's Lower Eastern Shore face risks not only from flooding and salt water intrusion but from sea level rise as well. In this new factsheet from the University of Maryland Extension, Dr. Kate McClure, Coastal Climate Specialist with UME's Sea Grant Extension Program, and former UME Forest Stewardship Educator Agnes Kedmenecz outline many of the challenges faced by woodland owners and managers in the Lower Eastern Shore area.

The authors provide an overview of how certain tree species succumb to salt water intrusion, creating "ghost forests" that eventually transition to saltmarshes. They also share a series of indicators that property owners can use to determine if coastal flooding and saltwater intrusion may be affecting their woodlands. Additionally, they provide several options available to landowners faced with these conditions, including talking and working with neighbors to assess the area's situations and planning a cooperative tree harvest before the trees become unmarketable or the ground becomes too wet for standard harvesting equipment.

The factsheet also includes an appendix that summarizes state and federal conservation easement programs that coastal woodland owners should consider as conditions change.

Read this factsheet at:

<https://extension.umd.edu/resource/losing-your-trees-sea-fs-2022-0645>

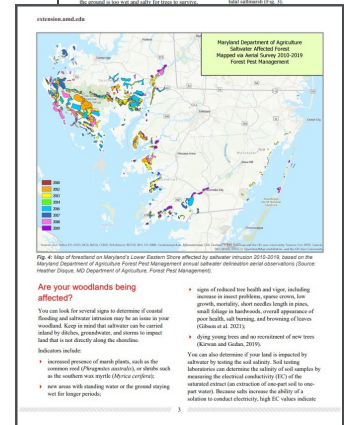
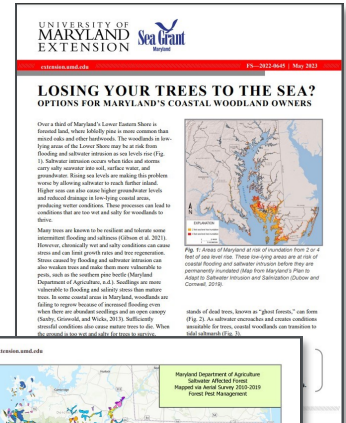


Fig. 4. Map of forested on Maryland's Lower Eastern Shore affected by saltwater intrusion 2010-2019. Based on the Maryland Department of Agriculture Forest Stewardship Program saltwater intrusion forest observations (Source: Heather O'Leary, MD Department of Agriculture, Forest Stewardship).

Are your woodlands being affected?

You can look for several signs to determine if coastal flooding and saltwater intrusion may be an issue in your woodland. Keep in mind that saltwater can be carried inland by ditches, groundwater, and storm surge that flow in and directly along the shoreline. Indicators include:

- increased presence of beach plants, such as the common reed (*Phragmites australis*), or shrubs such as the saltmarsh rose myrtle (*Rhus copallina*).
- new areas with standing water or the ground staying wet for longer periods.
- signs of reduced tree health and vigor, including increased dieback, increased crown dieback, loss of growth, mortality, short canopies (up to 50% canopy loss), and crown dieback, overall appearance of poor health, soil heaving, and breaching of fence lines (O'Leary et al. 2021).
- along young trees and an accumulation of new trees (O'Leary and Kedmenecz 2019).

You can also determine if you are being impacted by saltwater intrusion by testing the salinity of well samples by measuring the electrical conductivity (EC) of the water. Salinity can also be determined by measuring the salinity of soil samples by measuring the electrical conductivity of the soil (EC) of the soil. Because salt increases the ability of a solution to conduct electricity, high EC values indicate saltwater intrusion (O'Leary et al. 2021).

Fig. 5. Areas of Maryland at risk of recession from 2 or a half meter sea level rise. These low-lying areas are at risk of coastal flooding and saltwater intrusion before they are permanently inundated (Data from Maryland Department of Agriculture, Coastal Resilience and Saltmarsh Creation and Conservation, 2019).

Fig. 6. Areas of Maryland at risk of recession from 2 or a half meter sea level rise. These low-lying areas are at risk of coastal flooding and saltwater intrusion before they are permanently inundated (Data from Maryland Department of Agriculture, Coastal Resilience and Saltmarsh Creation and Conservation, 2019).

Fig. 7. Areas of Maryland at risk of recession from 2 or a half meter sea level rise. These low-lying areas are at risk of coastal flooding and saltwater intrusion before they are permanently inundated (Data from Maryland Department of Agriculture, Coastal Resilience and Saltmarsh Creation and Conservation, 2019).

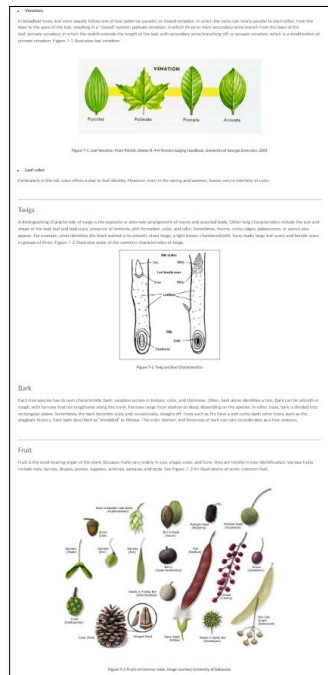
Fig. 8. Areas of Maryland at risk of recession from 2 or a half meter sea level rise. These low-lying areas are at risk of coastal flooding and saltwater intrusion before they are permanently inundated (Data from Maryland Department of Agriculture, Coastal Resilience and Saltmarsh Creation and Conservation, 2019).

Fig. 9. Areas of Maryland at risk of recession from 2 or a half meter sea level rise. These low-lying areas are at risk of coastal flooding and saltwater intrusion before they are permanently inundated (Data from Maryland Department of Agriculture, Coastal Resilience and Saltmarsh Creation and Conservation, 2019).

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's General Forestry Course. The online course features full-color photos and graphics, and will run from August 28 through December 11, 2023. Registration is now open, 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 ways to protect your trees from insects, diseases, and fire; how to, step by step, create a forest inventory and a stand analysis; and covers the details of the forestry business, 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.



Sample course page

The cost for this forestry course is \$150.00. 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*. 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 lessons from the text, preview an exercise, read through detailed course information, and more.

For more information, contact Andrew Kling at the University of Maryland Extension Western Maryland Research & Education Center at 301-432-2767, ext. 307, or via email at akling1@umd.edu.

Registration is Now Open for the Fall Session of “The Woods in Your Backyard” Online Course

Registration is now open for the Fall 2023 session of “The Woods in Your Backyard” online course. Our course is designed primarily for small-acreage property owners who want to learn how to care for or expand existing woodlands, or to convert lawn space to woodlands.

The self-directed, non-credit online course runs for ten weeks, September 5 - November 14. It is offered through the University of Maryland's Electronic Learning Management System, and is accessible from any Internet connection and Web browser.

The course closely follows the published guide of the same name, but includes some important extras. Quizzes



reinforce the important concepts of the text. Optional activities give participants the opportunity to share one or more of their stewardship journal entries, or photos or narratives of their woodland stewardship accomplishments. In addition, many of the

course's units are accompanied by 2- to 5-minute videos that demonstrate essential skills and techniques (such as tree identification or chosen tree release) and share the experiences of other woodland owners.

The course costs \$95.00 and each session is limited to 25 participants. Each paid enrollment includes printed copies of “The Woods in Your Backyard” guide and workbook, plus a copy of *Common Native Trees of Virginia*. [Visit our website page about the course at this link for more information, including frequently asked questions, updated registration information, and a way to preview the course at no charge.](#)

Go to this Eventbrite link for participant comments, more information, and how to register.

If you are a Maryland Master Naturalist or a Maryland Master Gardener, participating in this course can contribute to your annual hours commitment. See [this link](#) for more details.

Your program deepened my knowledge of the principles of woodland and meadow stewardship, including the properties of succession and wildlife habitat.... Your program with the structure of the materials and activities has been very helpful. Thank you!
- Marilyn A., Maryland

Woodland Wildlife Spotlight: Cooper's Hawk

Like many of my generation, I spent a lot of time as a youngster watching television, especially Looney Tunes cartoons. One of the minor characters that showed up from time to time in the Foghorn Leghorn shorts was a little bird named "[Henery Hawk](#)," who, as a chicken hawk, kept going after Foghorn with varying amount of success. I mention this because this issue's spotlight species, Cooper's hawk, has several aliases, including the quail hawk, the swift hawk, and... the chicken hawk. Who knew?

While these cartoons had a definite southern states feel to them, you can find Cooper's hawks in Maryland. Named for naturalist William Cooper, one of the founders of the New York Academy of Sciences, its range stretches from southern Canada to northern Mexico. Most of the birds are non-migratory, staying in their home territory year round.

Cooper's hawks share many of the same attributes of other raptors profiled in this spotlight, such as the [American kestrel](#), [sharp-shinned hawk](#), and [red-tailed hawk](#), in that females are larger than males. They also demonstrate some of the same flying attributes, flapping their wings a few times and then gliding.

These similarities often make it a challenge for observers. But Cooper's hawks do have a number of distinguishing characteristics, including a long neck during flight that some have called a flying cross as they glide above open areas or along wooded margins.

However, it's in the closer quarters of woodlands that Cooper's hawks truly distinguish themselves from other birds of prey. They will fly at high speeds through cluttered treetops in pursuit of other birds. They will also fly fast to ground level and then swoop over an obstruction to surprise its prey on the other side. It's a dangerous occupation, as a study of more than 300 Cooper's hawk skeletons, more than 20% showed old, healed-over fractures in chest bones.

Their diet consists mostly of medium-sized birds such as European starlings, mourning doves, robins, jays, pheasants, grouse, and yes, chickens. In fact, while Cooper's hawks are woodland birds, some have discovered that human suburbs are prime hunting territory, especially if humans put out bird feeders. [According to Cornell University's All About Birds species profile](#), "If a Cooper's Hawk takes up residence in your yard, you can take your feeders down for a few days and the hawk will move on."

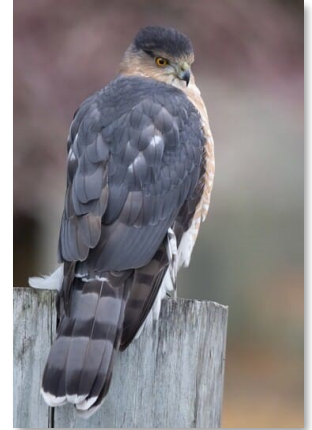
Cooper's hawks capture and kill their prey with their feet,

Cooper's Hawk Basics

Appearance: Upright posture with a long tail. Adult has bluish-grey upper parts. Black cap, red eyes. Pale underparts with dense reddish bars.

Size: Adult male about 15 inches in length & 8 oz. in weight. Wingspan up to 29". Females up to 30% larger.

Lifespan: 2-12 years in the wild; oldest recorded banded bird was over 20 years old.



Adult Cooper's Hawks.
Above: © [Brendan Click](#),
[Macaulay Library](#).
Right: © [Alex Lamoreaux](#),
[Macaulay Library](#).

literally squeezing the life from the victim, rather than killing it by biting as other raptors do. They have also been observed drowning their prey, holding the bird underwater while floating on top.

During this time of year, Cooper's hawks live solitary lives. Males and females generally do not interact until breeding season in early spring. Many pairs are monogamous and mate for life. The male selects the nesting spot in a dense woodland, 25-50 feet above ground, in a crotch or on a horizontal branch. The male also does most of the nest building, from sticks and twigs, lined with bark and evergreen needles. The female lays a clutch of 3 to 6 bluish to greenish-white eggs; the eggs hatch after about a month. The female provides most of the incubation while the male hunts and provides her food. Both will care for the hatchlings, which leave the nest after another month or so. The parents continue to provide food until the young become independent at about 8 weeks of age.

Cooper's hawks populations have rebounded since DDT was banned in 1972. While raccoons may raid their nests for the eggs and both juveniles and adults can be prey for other birds, currently the greatest threat to their numbers is habitat degradation and loss due to human activity.

News and Notes

“The Untapped Potential of Family Forests”

Freelance writer and researcher Christina Leiter and her family were looking for, in her words, “an affordable place with lots of trees.” She realized that while they owned less than an acre, her neighborhood was what the US Forest Service calls “family forests”: as little as one acre with at least 10% tree coverage owned by an individual, family, or unincorporated group.

In her view, the key to understanding how to best manage these woodlands is to listen to expert advice, including from community and extension foresters and government agencies.

This isn't news for *Branching Out* readers, but it's an interesting voyage of discovery. Find it at: <https://beside.media/village/family-forests/>



“What motivates family forest landowners to manage invasive species?”

A new study gave family forest landowners in Maine and New Hampshire a series of scenarios in order to make hypothetical choices about different invasive plant species management. Researchers gave the respondents a random combination of choices, and the results suggest that both financial incentives and community practices influenced their views.

Learn more about this research from the University of Illinois Urbana-Champaign [at this link](#).

Another Potential Maryland Plant Invader

A recent article from the University of Cincinnati's news site documents the efforts of researchers in Ohio to combat another species from Japan that has been widely used by landscapers. Siebold's viburnum, which is sold and planted in all 50 states, is now identified as invasive in ten, including New York. UC botanist Denis Conover says that the plant's native range grows in a similar climate to that found in the mid-Atlantic. Read more about the new findings [here](#).

New Maryland Law Will Aid Wildlife and Early Successional Habitat

As communities across Maryland have grown, so has the presence of power transmission lines which utility companies kept mowed on a regular basis because of county weed ordinances. Now, thanks to the efforts and persistence of natural area advocates, HB 62 passed the Maryland legislature and was signed into law in May by Governor Moore. The law exempts power companies from land-use restrictions, such as weed ordinances, on property being managed as pollinator habitat. It allows the companies to reduce mowing to allow native plant species to return, and the wildlife with them. The legislation does not require that companies turn all of these easements into meadow—it just makes it easier for them to do so.



Power lines across MD could soon resemble this native grassland at Antietam National Battlefield.

[NPS photo](#).

Read more about how this idea came to fruition and the benefits to native plants and wildlife [here](#).

Hope for Ash Trees?

Ash trees in Central Europe have experienced more than a 90% dieback, but not due to the emerald ash borer that has wreaked such havoc in the U.S. While researchers are tracking the movement of EAB into their areas from Russia, where it was introduced in 2003, the current invasive in Europe is a fungal disease. Now, foresters are discovering healthy-looking ash trees that are apparently resistant to the fungus. Graftings from these trees onto new stock were then exposed to EAB and the fungus in a high-security greenhouse. Researchers found that on trees more resistant to the fungus, the beetles grew poorly. One researcher theorized that “fungus-resistant ash trees could be planted to make it more difficult for both the fungus and the beetle to advance.”

[Read more about the research and results here](#).

Invasives in Your Woodland: Winter Creeper

The name “Winter Creeper” suggests that the focus of this issue’s spotlight might grow slowly during the season between autumn and spring. That may have been true in its native habitat in Asia. A general search turns up no particular origin story connected to its name aside from its Latin name (*euonymus Fortunei*), which is in recognition of the Scottish botanist and explorer Robert Fortune. It is known, however, that the plant was imported to the United States in 1907 as an ornamental ground cover.

In that role, it performs well, and grows vigorously to fill open spaces. But this quality, along with its tolerance of harsh conditions, allowed it to escape from cultivation and to spread throughout much of the eastern states. In Maryland, it is reported in all but three counties (Garrett, Charles, and St. Mary’s). See the map below. Consequently, it has been banned for sale by the state Department of Agriculture as a Tier 1 invasive plant.



Reported distribution of winter creeper in Maryland, from [Maryland Biodiversity Project](#).

Winter Creeper in Baltimore Co., MD. Photo by Matthew Beziat, Maryland Biodiversity Project



What is it?

Winter creeper, also known as wintercreeper, creeping euonymus, or Fortune’s spindle, is an evergreen perennial vine. As noted above, it is a vigorous plant, and it tolerates a wide range of soil types. It grows well in conditions from full sun to deep shade and in soils that are acidic or low in nutrients. It does poorly, however, in heavy wet soils. It can create dense mats and thickets that shade out native plant species, or grow as shrubs up to 3 feet tall.

This vine invades both forest margins and disturbed areas, such as where construction has taken place or where new landscaping has occurred, as well as forest openings that have been created by windstorms, fire, or mechanical thinning.

How does it spread?

Winter creeper can grow along the ground as well as climb into trees. The ground-based vines spread vegetatively, sending out new roots laterally along the main branches to create new plants. Vines that encounter trees may climb to over 60 feet above the ground in search of sunlight. Researchers note that these lead to different behaviors, as apparently only juvenile vines will spread onto trees, and only those that climb produce flowers and fruit when they mature. The fruit can be consumed by birds and wildlife, which then excrete the seeds that colonize new areas.

How can I identify it?

The vines’ two growth environments mean winter creeper has two different forms of leaves. While both are dark green, glossy ovals with silvery veins and toothed margins, growing opposite on the stem, the type of oval varies. Leaves of vines growing into the trees are more elongated.

Mature climbing vines can produce flowers in June and July and fruit in the fall. The flowers are small and greenish with five petals. The fruit are small pink-red capsules that split to expose the seeds. See the photo gallery on the next page.

How can I control it?

If possible, remove young plants as soon as they are found. Hand-pulling or grubbing with a Pulaski or other tool is effective if the soil is moist and if all roots can be removed. Herbicide applications can be effective when used properly. Cut-stem treatments can kill the vines in trees, and foliar treatments are effective in low-lying infestations.

For more information:

Learn more about winter creeper:
[Climbing Euonymus](#) (Plant Conservation Alliance)
[Look out for wintercreeper](#) (Maryland Grows Blog)
[Evergreen and Creepy: It’s Winter Creeper!](#) (Virginia Native Plant Society)

Image Gallery: Winter Creeper

Winter Creeper growing in Kent Co., MD. Photos by Nancy Martin, Maryland Biodiversity Project.



(Left) Winter Creeper flowers.
Photo by Ansel Oommen, Bugwood.org.

(Below) Winter Creeper infestation. Photo by Ryan Armbrust, Kansas Forest Service, Bugwood.org



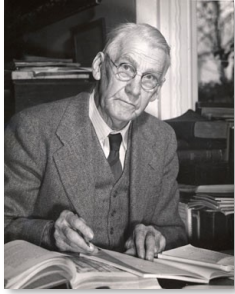
Winter Creeper (with fruit) in Anne Arundel Co., MD. Photo by Bill Hubick, Maryland Biodiversity Project.

This Issue's Brain Tickler...

Last issue we asked for the species of tree where the Internet-famous bald eagle nest is found. The tree, on the grounds of the US Fish & Wildlife



Service's National Conservation Training Center, is a sycamore. Congratulations to Bill Schockner for the correct answer.



For this issue, we return to Maryland's first state forester, Fred W. Besley (left). Among his many achievements was creating a scoring system that remains in use today, not just for Maryland's trees, but for trees across the U.S. Name the system **and** its three components.

Email Andrew Kling at akling1@umd.edu with your answer.

Events Calendar

August 16, 2023, 12:00—1:00 PM

Advice from the Woods: Ask the Experts Online

Join a panel of forestry and wildlife extension experts from Penn State Extension for this free webinar as they tackle commonly-asked and participant-submitted questions about woodland management. [Visit this link to learn more and to register.](#)

August 31, 2023, 7:30—9:00 PM

2023 Forest Farming Webinar Series: Ginseng Online

Join Penn State Extension educators for this free webinar that examines the agroforestry practices of forest farming and the uses and benefits of American ginseng. [Learn more and register at this link.](#)

September 1, 2023, 12:15 –12:30 PM

Fifteen Minutes in the Forest: Forest Myths

Join Virginia Tech's Jennifer Gagnon for an exploration of common forestry myths and misconceptions. Visit the [Facebook](#) or [YouTube](#) page at 12:15 on September 1 to watch the video and participate in a live chat.

October 16-20, 2023

World Forum on Urban Forests Washington, DC

The theme for the 2nd World Forum on Urban Forests is "Greener, Healthier and Happier Cities for All." The Forum is intended for a wide variety of participants, including foresters, urban planners, and policymakers. [Go to this link to learn more.](#)

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