

BRANCHING OUT

Maryland's Woodland Stewardship Educator



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UNIVERSITY OF
MARYLAND
EXTENSION



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Connecting Trees and Forests with...

Bill Hubbard, Assistant Director - Environmental, Natural Resources & Sea Grant Programs

Greetings. It is a real pleasure to write for our "Branching Out" audience. Andrew Kling and Jonathan Kays do a superb job of writing and editing this publication and I know from hearing from several sources that this newsletter is immensely useful. I imagined contributing in some form or fashion to this effort, and with Jonathan's retirement earlier this year it seems that Andrew has finally given me the chance! I figured I deserved an opportunity since I've been involved in the profession of forestry and Extension in some form or fashion for four decades. That number is heart-stopping to me by the way, as it represents over two-thirds of my life! As a state Program Leader for environmental, natural resources and Sea Grant programs, I work with over 40 professionals who have a wide variety of responsibilities from watersheds and climate, to home horticulture and aquaculture. I work alongside three fellow Program Leaders who work with faculty in Agriculture and Food Systems, 4H and Youth Development, and Family and Consumer Sciences. Together we work with over one hundred Extension educators throughout the state. We do that with the tremendous support of many staffers as well.

What never ceases to amaze me is the connections and importance of trees and forests in what many of these educators do, even in areas you would not initially imagine. Today, more than ever, my "non-forester" colleagues are beginning to see that "trees indeed are the answer." It is because of this that I am truly excited about the future of Maryland's forests and the people who live, work and play there, as well as those who own, manage or otherwise care for Maryland's trees and woods.

One example of this is our work to restore, manage and protect Maryland's waters and watersheds. Maryland Extension, with the support of Maryland Sea Grant (MDSG), employs six regional watershed specialists in the Chesapeake Bay region who provide educational and technical support to communities. The concept of "green infrastructure," long understood by many in the forestry community, is being discussed more than ever now in the urban, suburban and rural areas of Maryland and around the globe. The fact that trees, native plants and other natural solutions can contribute to reduced stormwater

runoff, cleaner water in our watersheds and the Bay, reduced carbon footprint, as well as cool our cities is now hitting home with those in leadership positions. Maryland has a recently-enacted tree planting initiative that aims to support the planting and growing of 5 million trees (500,000 in urban areas) by 2031 with an annual public investment of \$10 million per year. And, as the result of the Inflation Reduction Act of 2022, the USDA Forest Service will be managing a \$1.5 billion urban forestry/green infrastructure program over the next ten years.

Another example involves efforts with our oyster and aquaculture industry and the importance of trees and forests to the health of our marine ecosystems and economy. Trees and forests act as natural filters that keep our tributaries and Bay free of the undesirable effects of flooded waters, nutrients, pollution and sediments.

Being indoctrinated into the forestry world at an early stage in my career, I see examples everywhere in our work with Extension. Our 4-H programs have forestry activities and plan to send kids to the National Forestry 4-H invitational in West Virginia next year. Our Family and Consumer Science specialists work with our forestry specialists on alternative forest products such as growing Shiitake mushrooms and other foods in our forests. Our Agriculture and Food Systems colleagues have joint programs such as silvopasture (combining



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A New Way to Fight Lyme Disease: Prescribed Fire

Warren Cornwall, [Anthropocene](#)

People hiking through tick-infested forests probably know the drill for [avoiding tick bites](#), and the diseases that can come with them: Wear insect repellent and long pants. Don't wander off trails and into dense vegetation. Check yourself afterwards for pesky hitchhikers.

Here's another one that doesn't find its way onto most lists: Set fire to the forest.

While not advisable for the average civilian, this strategy could make forests in the eastern U.S. less tick-friendly, according to new research.

"We believe there's an opportunity to reduce the number of ticks by using prescribed fire to restore the health of forest ecosystems," said Michael Gallagher, an ecologist with a U.S. Forest Service research lab in New Jersey.

Pinhead-sized parasites might seem to have a remote connection to landscape-changing forest fires. But tick-borne diseases such as Lyme Disease add up to a major and growing health problem. As many as 60,000 cases are reported in a year in the U.S. Such planet-changing forces as global warming are thought to be contributing to the problem, as rising temperatures make more places hospitable for ticks.

But less attention has been paid to the role changing forests might be playing, argue Gallagher and five other scientists hailing from the Forest Service, Pennsylvania State University, and New Jersey's Department of Environmental Protection. So they scoured the scientific literature to understand the links between ticks and fires.

When Europeans arrived in North America, eastern forests tended to be spacious, airy landscapes filled with widely spaced pine, oak and chestnut trees. Frequent low-intensity fires set by lightning and indigenous peoples burned off fallen leaves, debris and underbrush.

Such a landscape could pose problems for ticks, who thrive in moist environments with moderate temperatures and lots of underbrush, which they can climb to latch onto passing victims. These forests of old were drier and less overgrown and would have been hotter in the summer and colder in the winter when there was less vegetation to act as insulation, the scientists reported in a recent edition of [Ecological Applications](#).

Tick numbers might have fallen at first as Europeans pushed indigenous inhabitants out of eastern forests. That's because many of the forests were felled for timber and fuel. But starting in the 20th century, two things happened that would reverse this trend. Eastern forests began to regrow as people left their farms for cities and



Wildland firefighter during a prescribed burn at Sideling Hill Creek Preserve, Allegany Co., Maryland. Photo © The Nature Conservancy.

switched from wood to other fuels such as coal. And land management agencies such as the U.S. Forest Service adopted a policy of extinguishing all wildfires.

Those changes helped create forests that have more built-up detritus, more bushes, and more dense tree canopies. Scientists have a fancy word for this: [mesophication](#). For the purposes of the new research, a better term might be "tick heaven."

Fire could help reverse this phenomenon, Gallagher and his colleagues argue. They point to past studies, such as an experiment in Georgia and Florida that showed [tick numbers fell in parts of a forest that were burned](#).

At the same time, prescribed fires bring other benefits, including creating more habitat for some species, [promoting more wildflowers and grasses](#), removing fuel for catastrophic wildfires and making forests more resistant to insect outbreaks.

Today, land managers intentionally set ablaze just a tiny fraction of the more than 700,000 square kilometers of eastern forests. In the southeast, they burn around 28,000 square kilometers per year. The northeast, by comparison, is a slacker, at just 1,300 square kilometers.

So don't switch your pants for shorts quite yet.

What about wildfires today?

Active Fire Exclusion	Passive fire exclusion

Want to learn more about fire in Maryland? Watch our June 2022 Woodland & Wildlife Wednesday webinar, ["Fire History & Ecology in MD" on YouTube](#).

Woodland Wildlife Spotlight: Downy Woodpecker

Maryland is home to seven species of woodpeckers. They are sometimes easier to hear than to see; you may hear them as you walk through a woodland on a calm late fall or winter day without actually seeing them among the bare trees, or you may get a glimpse of one flying past without being able to identify it. Unlike soaring or roosting birds like hawks or owls, woodpeckers tend to be more elusive, and you may have them in your woods and not even know it. That is certainly the case for the downy woodpecker, which is the smallest of the species that calls Maryland home.

The downy woodpecker's size is between that of a sparrow and a robin, and has been compared to that of a chipmunk, but it is well-adapted to a wide variety of habitats across the state and the continent, only avoiding the arid Southwest. The species can be found in Maryland year-round, inhabiting both wilderness areas and regenerated woodlands, and generally prefers open woodlands of deciduous trees. They are often found in suburban yards as well, visiting backyard bird feeders during the winter, especially if the feeders offer suet.

Its natural diet consists mostly of insects, especially beetles and ants, along with native pests such as fall webworms, bark beetles, and tent caterpillars. It has apparently also developed a taste for the invasive emerald ash borer. Like many woodpeckers, they climb up and down trees, but given their light weight, they can also climb out onto branches and have been known to acrobatically revolve around them and hang upside down. During the spring and summer, they will mostly glean their food from the exteriors of trees, doing more tapping and excavating in the winter. They will also consume berries and grains, sometimes perching on tall grasses to pick at seedheads.

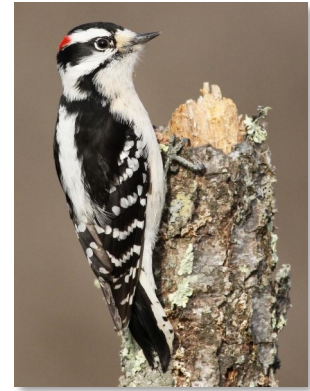
During the fall and early winter, males and females will forage in separate areas before pairing up to mate in late winter. [Both use drumming to attract a mate](#), with the male gradually approaching the female. The drumming can involve up to 17 impacts per second. After pairing up, they will excavate a nest, which may take up to two weeks to complete. They may choose a dead tree, a dead portion of a tree, or human-made structures such as a wooden fence post. They drop woodchips inside and the female will lay 3-8 white eggs measuring less than an inch across each. Information about incubation varies, with the [Audubon Society saying that both male and female do so](#), while the [Maryland DNR contends it is performed mostly by the male](#). In either case, incubation lasts about twelve days, and both male and female will feed the young with billfuls of insects.

Downy Woodpecker Basics

Appearance: Black and white striped head. Males have red stripe on back of head. White chest. Black wings with white spots.

Size: 5.5-6.7 inches long. *Wingspan:* 10-12 inches.
Weight: 0.7—1.0 ounce

Lifespan: The oldest recorded downy woodpecker was at least 11 years old; a banded bird was captured 11 years after first banding and released.



(Left) Female adult downy woodpecker. Photo by Photo: Michele Black/Great Backyard Bird Count

(Right) Male adult downy woodpecker in Rhode Island. Photo © Evan Lipton | Macaulay Library

The young leave the nest after about three weeks and may follow the parents for a few weeks after that before striking out on their own. In winter, they may join other like-sized birds such as nuthatches and chickadees for protection from predators.

The downy woodpecker may be easily mistaken for the hairy woodpecker, which is also native to Maryland. They have very similar markings, and while the hairy woodpecker is larger, this is only an effective means of identifying if the two birds are in proximity. One of the more useful methods is to observe the bill. On the downy woodpecker, the bill is short and relatively stubby; on the hairy woodpecker, it is longer and more slender.

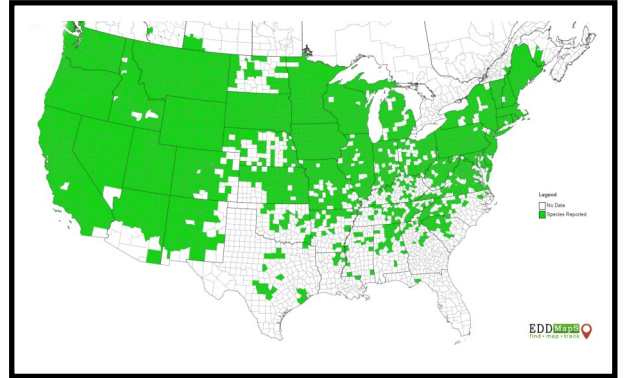
Downy woodpecker populations seem to be stable across the continent, as they have adapted well to the human-built environment. The shift from wooden fence posts to metal ones may have affected their populations. However, thinning forests benefits them as they do well in younger woodlands.

Invasives in Your Woodland: Bull Thistle

We wrap up our year-long series about invasive thistles in Maryland with a look at the bull thistle. It is native to Europe, northern Africa, and western Asia, and was introduced to the eastern United States during the 18th century and the western states in the 19th. This species is widespread across the U.S., especially in the far west and Rocky Mountain states, the upper Great Lakes states, and the northeast. It is also found throughout the mid-Atlantic states, becoming less frequent south of Virginia. As with



Bull Thistle. Photo by Bruce Ackley, The Ohio State University, Bugwood.org



Distribution of Bull Thistle.
Courtesy EDDMapS.com.

other species in this series, there is some disagreement over its distribution in Maryland. EDDMapsS.com shows no reports in Allegany, Queen Anne's, Somerset, St. Mary's, and Charles Counties, as well as Baltimore City, while the [Maryland Biodiversity Project documents it across the state](#). See the map at far right. Regardless of its actual presence, it has been declared as [a noxious weed in Maryland](#), along with Pennsylvania and four other states.

What is it?

Bull thistle (*Cirsium vulgare*) is a biennial invasive plant that in its first year grows a single rosette up to three feet in diameter with a tap root of up to two feet in length. In the second year, a stem with spiny wings emerges. It can invade almost any type of disturbed area, such as forest clearcuts, riparian areas and pastures. It prefers areas of full sun in which to grow. They form dense thickets, displacing other vegetation. Wildlife and livestock find the spiny stems not just unpalatable but potentially injurious, due to the length of the spines.

How does it spread?

This invasive spreads primarily via seed production. Each flower produces up to 250 fluffy seeds; each plant can produce up to 4,000 in a season. The seeds are easily borne dozens of feet by the wind. Additionally, the seeds can be transported to new areas by human and animal traffic, where they can colonize disturbed areas. The seeds can be viable in the soil for over ten years.

How can I identify it?

Bull thistle is similar in appearance to Canada thistle; both have spiked leaves and display large purple flowers from July to September. One difference between the two is that bull thistle has a tap root and is a biennial plant. Another is the stalks, which has spiny wings the length of its needle-shaped stem. [Scientists at Acadia National Park write](#) that "Bull thistles have also been described to be larger and 'meaner-looking' than the

Canada thistle." Its leaves are lance-shaped, 3-12 inches long, with stout spines on the lobes. The leaves have prickly hair on the top and are very hairy underneath. It grows to maturity over the course of two years, reaching 7 feet in height, with seed production and dissemination following. Individual plants die at the end of the second year. See the photo gallery on the next page.

How can I control it?

It is important to properly identify bull thistle before attempting control methods, as several native species of thistles have similar characteristics. Once confirmed, there are a few options available to control the existing plants and to prevent the spread of new ones. Hand-pulling young plants, or any method that severs the taproot below ground level, will kill the plant. However, existing seeds in the soil may lead to additional growth, so re-seeding with native species is recommended. Similarly, mowing needs to be followed by re-seeding. Applying a herbicide in the fall of the rosette stage can be effective to prevent sprouting in the following year.

For more information:

Learn more about bull thistle:

[Invasive Plant Profiles: Canada and Bull Thistles](#) (National Park Service)

[Cirsium vulgare](#) (US Forest Service)

[Weed of the Week: Bull Thistle](#) (US Forest Service)

[Invasive Plants in Pennsylvania: Bull Thistle](#) (PA Dept. of Conservation and Natural Resources)

Image Gallery: Bull Thistle

Bull thistle rosette leaves. Photo by Bonnie Million, Bureau of Land Management, Bugwood.org



Bull thistle bloom in Garrett Co., Maryland. Photo by Jim Brighton, Maryland Biodiversity Project



Bull thistle stalk. Photo by John Cardina, The Ohio State University, Bugwood.org



Bull thistle flowers in seed. Photo by John M. Randall, The Nature Conservancy, Bugwood.org



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UME Seeks a Forest Management Specialist

The University of Maryland is now advertising for an Extension Specialist in Forest Management to serve stakeholders across the state in a variety of forestry and natural resources topics. This includes woodland owners, policymakers, conservation groups, and others. Topics include but aren't limited to sustainable forest and timber management, small acreage forest management, forest finance, invasive species, forest water issues, and biomass and bioenergy.

The position is located at the Western Maryland Research & Education Center in Keedysville. Responsibilities will include managing such existing forestry extension programs as this newsletter, The Woods in Your Backyard, Maryland Woodland Stewards, and more.

This is a tenure track position with potential to be promoted to a higher rank in accordance with University policy. **Please apply by December 4, 2022.**

[For more information, read the entire announcement at https://ejobs.umd.edu/postings/101451](https://ejobs.umd.edu/postings/101451)

Could the Marten Return to Pennsylvania?

The Pennsylvania Game Commission has given staff the green light to prepare a reintroduction and management plan as the first step to repopulating the big woods in the northern part of the state with the American marten, a member of the weasel family.



Photo by Alison Gregor, courtesy *Bay Journal*

The American marten (also called the pine marten) was originally found across the mid-Atlantic region before being extirpated through hunting and trapping.

[Read more about the marten's potential reintroduction in this article from *Bay Journal*.](#)

Maryland State Nursery Now Accepting Orders

Each fall, the John S. Ayton State Tree Nursery accepts orders from Marylanders working on reforestation projects. If you have a project for creating a windbreak or enhancing wildlife habitat, consider purchasing your native seedlings from the nursery now for spring 2023 planting. Visit <https://dnr.maryland.gov/forests/Pages/nursery.aspx> to learn more.

This year's catalog features more than 50 species, with a few different choices from last year. There are more than 2.5 million seedlings available for sale.

If you are sure species for your please local office. answer



are not which are right needs, call your forestry They can questions

about site conditions, species selection, and financial incentives for which you may qualify.

The Virginia State Nursery Is Open, Too



Photo courtesy VDOF

Virginia readers of *Branching Out* can also order native Virginia trees from their state nursery. Bred specifically for Virginia's soils and climate, seedlings are grown and sold directly from the agency's self-supporting nurseries. To browse the

seedling catalog, visit BuyVaTrees.com.

Packaged as bare-root seedlings, trees can be picked up from their Augusta Nursery or delivered between Feb. 22 and April 26, 2023. Seedlings can be ordered in quantities ranging from five to 25,000. Supplies are limited and some species sell out quickly.

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grazing pasture and trees) or other agroforestry alternatives, and last but not least, our home horticulture agents work with programs such as the award winning "The Woods in Your Backyard," which aims at natural area management on small tracts of land.

In the end, you can see, the connections are everywhere. I am proud to be a forester in today's world and I look forward to making many more connections. I hope you see them too in your everyday life.

Thank you and may the *forest* be with you.

For more information on Maryland's tree initiative:

https://mde.maryland.gov/programs/air/ClimateChange/Documents/FINAL_Plan-for-Growing-5-Million-Trees-in-Maryland_10.28.22%20%281%29.pdf

For more information about the USDA Forest Service's programs that will benefit from the Inflation Reduction Act of 2022 visit:

<https://www.fs.usda.gov/managing-land/infrastructure>

and

<https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/17/fact-sheet-inflation-reduction-act-advances-environmental-justice/>

This Issue's Brain Tickler...



Photo by Steven Katovich, USFS, Bugwood.org

Last issue we shared this photo. Congratulations to our reader Anita who correctly identified this woodland invasive as garlic mustard.

For this issue, we go to Pennsylvania. Recently, visitors to forested state parks came across signs with the state's Dept. of Conservation and Natural Resources logo that warned about sightings of a particular species in the area. The DCNR has denied that this species is found in Pennsylvania and says the signs are a hoax. Name the species that the signs said had been spotted in the area.

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

Book Review: 10,000 Days in the Woods by Russ Richardson

Jonathan Kays, Retired University of Maryland Extension Forester

10,000 Days in Woods is an enjoyable and easy to read series of fifty-eight short stories of one man's journey from childhood to that of professional forester.

Entertaining and informative stories of the author's childhood experiences on a family farm in Massachusetts mold a boy enchanted with nature and lead him to see and experience things many people will never know.

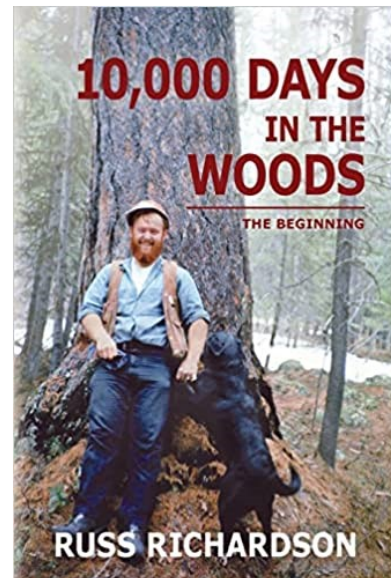
Experiences with wood heating, observing changes in the landscape, hiking a mountain, investigating a beaver pond, making maple syrup, and observing timberdoodles are but a few of the well told stories that make up the collection of his early years. A high school guidance counselor drove him to go to college to become a forester and helped him overcome his academic challenges to prove himself, first in a small two-year college in North Dakota, and then the University of Montana where he earned his degree in forestry.

These are followed by forty humorous and reflective accounts of experiences working in the woods with fellow workers as a seasonal forester with the US Forest Service out west, as a logger, and with many related occupations. The stories have a lack of pretense that engages the reader to want more. After many years in the west, Richardson misses the mountains and culture of New England and decides to move east.

That is where this part of his story ends. This book is only first in a series of the author's 10,000 days in the woods, covering only through 1975. If you are a forester, you will relate to many of Richardson's life situations and early experiences as he takes most any job opportunity to gain experience. But for anyone else that loves nature and the environment, the book provides perspective and experiences that are worth the read, regardless of where you live or your upbringing.

Learn more about Russ Richardson on his website:

www.10000daysinthewoods.com



Events Calendar

November 16, 2022, 12 pm-1 pm

Woodland 7 Wildlife Wednesday Webinar: “Forest Health - Pests and Diseases” Online

Join us for our next Woodland & Wildlife Wednesday webinar. Heather Disque of the Maryland Department of Agriculture-Forest Pest Management, will provide her annual look at the health of Maryland's forests. The webinar is free but registration is required. For more information, go to go.umd.edu/woodlandwildlife.

November 19, 2022, 1 pm

Walk in the Woods: Antietam along the Potomac Antietam, MD

Join a guided hike along the C&O Canal near Antietam Creek to learn the local flora, fauna and natural and human history of the Potomac River Basin. The hike leader, Jim Cummins, retired Aquatic Biologist of Interstate Commission on the Potomac River Basin (ICPRB) and current President of Potomac Valley Audubon Society (PVAS), will share the fascinating human and biological history of the area. This event is free; [learn more and register on Eventbrite here](#).

November 30, 2022, 10 am - 2 pm

Succession Planning Workshop: Passing the Baton Crownsville, MD

Succession planning is a very important topic in Maryland's land trust community – leadership for both staff and board are aging out and land trusts are looking ahead as they prepare for the next 50 years. This workshop, presented by Forever Maryland and the Maryland Environmental Trust, will focus on succession planning and transitions for land trust staff in leadership positions. [Learn more about this free event here](#).

January 11-March 8, 2023

The Woods in Your Backyard webinar series Online

The popular version of “The Woods in Your Backyard” from Penn State Extension is back for 2023. This series of weekly webinars helps you to explore planning and implementing simple stewardship practices on your lot by creating and enhancing natural areas and making a positive impact on the environment. Over the course of nine weeks, participants will hear from experts from Penn State Extension, Alliance for the Chesapeake Bay, and Pennsylvania state agencies who will share information about the value of small-acreage woodlands and how to

put your knowledge to work. The series is \$50.00. [Go to this link to learn more and to register](#).

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