

# BRANCHING OUT

Maryland's Woodland Stewardship Educator



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



Volume 27, No. 1

Winter, 2019

## White Oaks For the Future

White oak is the most common oak species in Maryland and produces mast for wildlife and quality lumber. But it is also the base material for barrels to age bourbon, a major industry in Kentucky that is expanding to many other states. A white oak barrel can only be used once to age bourbon, so used barrels are sold to make other spirits and wine. Only large, high-quality white oak logs called staves that are free from knots and imperfections can be used for bourbon barrels. This wood comes from the bottom log of the tree where the high-quality wood is found. Once harvested, it goes to stave mills and is made into planks, which are sent to barrel-making factories called cooperages. Through the process of steaming and bending, they are shaped into barrels held together by metal bands. The inside of the barrels are charred, checked for leaks and accessed by a hand-whittled cedar plug.

The increase in demand for high-quality white oak has caused a growing concern over the future of the species in the central hardwood region, which includes Maryland. Presently, the white oak timber base consists of larger trees, and these are highly sought after for export and domestic use. White oak is a slow-growing tree and the white oak timber that will be available in the next 40 to 80 years is already growing. However, it is not present in the proportions it had been in the 1950s through the 1990s. The pole timber trees (trees 5" to 12" in diameter at breast height) already present in the forest probably have a better chance of becoming larger trees because it is very tolerant to shade and long-lived. It is also out of the reach of deer.

But what about regeneration of white oak for the future? When harvested, white oak tends to not produce many stump sprouts after it reaches a diameter of 12 inches, so the growth of seedlings from acorns or small saplings in the understory are crucial to the future forest. Unfortunately, overabundant deer populations results in browsing of seed-

lings of all species, causing the lack of regeneration for the future. This is a consistent problem in most Maryland forests that can only be addressed by reducing deer populations.



[Barrel-making at a cooperage.](#)

White oak seedlings grow slowly so they can be quickly overtaken by both native and exotic understory species. Two strategies to improve white oak regeneration is to use the shelterwood system and the shelterwood-burn technique. The shelterwood system involves removing much of the understory and harvesting some of the overstory to provide

a moderate amount of sunlight to reach the seedlings and stimulate the growth of new seedlings. The shelterwood-burn technique involves selectively harvesting some of the overstory and then burning the understory to clear out the undergrowth. This is difficult to implement on smaller parcels.

The White Oak Initiative grew out of the second White Oak Sustainability Conference (April 2017) and is a partnered effort in Kentucky consisting of universities, industry, nonprofits and others. It brings together research, technical assistance, conservation and policy solutions. For woodland owners in Maryland interested in growing quality white oak, develop a forest stewardship plan for your woods and express your interest in white oak. For more information on the initiative contact [https://forestry.ca.uky.edu/white\\_oak](https://forestry.ca.uky.edu/white_oak) and go to [page 31 in the fall 2018 issue of Woodland magazine.](#)

### Inside this issue:

<a href="#">Registration Open for Online Course</a>	2
<a href="#">New Wood Drying Fact Sheet</a>	2
<a href="#">Woodland Wildlife Spotlight: Belted Kingfisher</a>	3
<a href="#">News and Notes</a>	4
<a href="#">Invasives in Your Woodland: Japanese Honey-suckle</a>	5
<a href="#">Invasives Gallery</a>	6
<a href="#">What the New Farm Bill Offers for Woodland Owners</a>	7
<a href="#">Can a Fungus Control Tree-of-Heaven?</a>	7
<a href="#">Events Calendar</a>	8
<a href="#">The Brain Tickler</a>	8

## Registration is Now Open For “The Woods in Your Backyard” Online Spring Session

# The Woods in Your Backyard Online Course

Registration is now open for the Spring 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-paced, non-credit online course runs for ten weeks, from March 13 to May 28. It is offered through the University of Maryland’s Electronic Learning Management System, and is accessible from any Internet connection and Web browser. It 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 short videos, created and produced by Woodland Stewardship Education staff. These 2- to 5-minute videos demonstrate essential skills and techniques (such as tree identification or crop tree release) and share the experiences of other woodland owners.

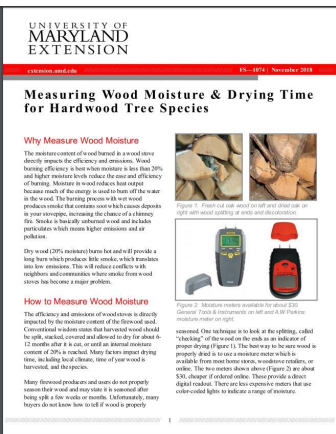
The course costs \$95.00 and each session is limited to 25 participants. Each paid enrollment includes printed copies of “The Woods in Your Backyard” guide and workbook, plus a copy of *Common Native Trees of Virginia*. Visit our website page about the course at [this link](#) for more information, including 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.



Black locust wood drying on a pallet.



## Measuring Wood Moisture & Drying Time Fact Sheet

The University of Maryland Extension’s Woodland Stewardship Education program has developed a new fact sheet for individuals who currently burn wood for heat or who are interested in doing so in the future. The publication, [“Measuring Wood Moisture & Drying Time for Hardwood Tree Species”](#) (Fact Sheet 1074), outlines the importance of using properly-dried wood in wood stoves. The fact sheet includes the environmental, social, and technical impacts of burning improperly-seasoned wood, techniques for measuring wood moisture content, and tips for ensuring that wood from retailers is seasoned as advertised.

The publication also documents a series of wood-storage and wood-drying experiments on four different hardwood species (black cherry, locust, hickory and hackberry) in order to reach the optimum wood moisture content over a one-year period.

The fact sheet is available in the program website’s [Publications Library](#) as a PDF. [Click this link](#) to read the publication.

### No, It’s Not Your Imagination

If it seems as if you just read an issue of *Branching Out*, you are correct. Starting with this issue, we are changing our publication schedule to better serve our readers.

Our plan is still produce four issues a year, but now they will be distributed in February, May, August and November. Thanks for reading!

## Woodland Wildlife Spotlight: Belted Kingfisher

Maryland's geography features a wide variety of water resources. Where the topography varies enough so that gentle or steep banks rise above the rivers, streams, ponds, lakes, and estuaries, and where trees are found along the water's edge, you may find one of the state's most fascinating birds: the belted kingfisher. A year-round resident, this colorful hunter lives throughout Maryland.

The belted kingfisher is aptly named. Both male and female have a band of slate-blue feathers on a white chest to go with similarly-colored heads and backs. Unlike many bird species, the females are more brightly colored, with an additional chestnut-colored band on the chest.

Water enthusiasts, such as boaters and anglers, often [hear the belted kingfisher](#) before seeing one. They may see the birds perching above the water, or flying along the water, with two or three wing strokes followed by a glide. If they are lucky, they will catch one diving after their prey. One patient photographer in Great Britain spent a year getting to know a population of green kingfishers, resulting in [a series of amazing high-speed photographs](#) that reveal the species' special skills.

When it comes to the "fishing" part, the belted kingfisher is aptly named. Unlike other birds that hunt aquatic prey with their talons, such as bald eagles or osprey, or that hunt by wading and stealth, such as egrets or herons, belted kingfishers will dive beak-first from a perch above the water. Their diet in Maryland consists of a variety of small fish species, including sticklebacks, mummichogs, stonerollers and juvenile trout. They will also eat crayfish, mollusks, aquatic insects, and small amphibians.

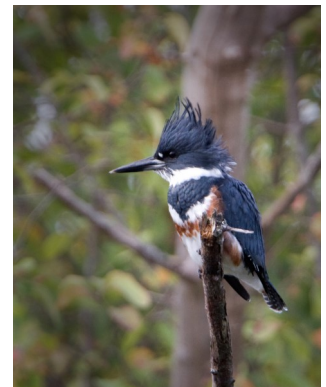
The belted kingfisher lives in Maryland year round, taking advantage of bodies of water that remain open during the winter months. During that time — in fact, during the majority of the year — the kingfisher is a solitary bird. They only pair up during the breeding season, which is between April and July, depending on the location. During courtship, the male will defend a territory along a stream from other males, and will court a single female by bringing fish to and feeding her. The pair will select a steep or vertical bank alongside the water for a nest, and both will excavate a long (3-6 feet) tunnel with a nesting chamber at the end. The tunnel usually slopes upwards from the entrance to allow water to drain.

The female lays a clutch of six to seven eggs on average, which both the male and female will incubate. The female usually sits on the clutch during the night and the male during the day. The eggs hatch after roughly three weeks, and both parents will take turns hunting, feeding the young first partially digested fish and finally whole fish. The young

### Belted Kingfisher Statistics



Male belted kingfisher, Harford County, MD. Photo by [Mark Johnson](#)



Female belted kingfisher. Photo by [Rick Leche](#).

**Appearance:** Short, stocky body with long, straight beak and crested head. Long, rounded wings; short legs; medium square-tipped tail that fans out when hovering or landing. Black eyes; patch of white feathers between eyes and forehead.

**Size:** 5-6 ounces average weight. Length 11-14 inches. Wingspan 19-33 inches.

**Lifespan:** Unknown.

leave the nest a month after hatching and are fed for another three weeks before striking out on their own.

Once they are independent, belted kingfishers are subject to a variety of prey, such as hawks, mammals and snakes. Additional population pressures come from human development along bodies of water. On the other hand, some kingfishers have adapted to human activities by adopting sand and gravel pits as nesting grounds, if the exposed slopes are soft enough for excavation. Others will take advantage of telephone wires across streams or near water, or poles in or alongside the water for perching and observation.

For more information on the belted kingfisher:

[Maryland Biodiversity Project: Belted Kingfisher](#)

[Chesapeake Bay Program: Belted Kingfisher](#)

[Belted Kingfisher \(Audubon Guide to North American Birds\)](#)

[Belted Kingfisher \(Cornell Lab of Ornithology\)](#)



## News and Notes

### New MFA Executive Director

The [Maryland Forests Association, Inc.](#) (MFA) announced in January that Elizabeth Hill has been selected as their new executive director. MFA is a non-profit organization devoted to increasing awareness and advocacy for Maryland's forest industry. MFA's members include forest landowners, natural resource professionals, forest product businesses, conservation-minded individuals, and more.



Hill is a lifelong resident of Maryland's Eastern Shore and has more than 20 years of experience in the sawmill, piling, and timber industry. In her previous role as general manager of Dorchester Lumber Company, Inc., she oversaw a company that provided products in a healthy and safe work environment while promoting sustainable forestry practices.

One of Hill's goals is to be a stronger voice in the state legislature and in state agencies for Maryland's forest industry and MFA's members.

"Forestry is important to each and every person in Maryland, whether they realize it or not. My job now is to help people understand the role forests and forest product business play in the health of our environment and economy," Hill said.

### Retired forester shares why he works to restore the American Chestnut



Rex Mann, a retired forester and a member of the Kentucky chapter of The American Chestnut Foundation, shares his personal connection with and stories about the American chestnut at a TEDx Talk in Youngs-

town, OH. In this 12-minute talk, Mann recounts the loss and the hope for restoration of the species.

Hear his story on The American Chestnut Foundation's website [here](#).

### There's an App for That

The Southern Regional Extension Forestry Office has adapted the US Forest Service's Forester's Handbook into a mobile phone application. The handbook is a highly sought-after tool for foresters and natural resource professionals working in the field. The mobile app puts the guide's information at your fingertips, with basic forest and land measurements, tree measurements, site index charts and more. It's available for Apple and Android devices. [Go here to learn more.](#)

The Southern Regional Extension Forestry Office also has apps for other purposes, such as GIS, invasive plants, timber tracking, burn tracking, tree identification, and much more. View the complete list on their website at [this link](#).



### "Residential Wood Heat" Webinar

The Woodland Stewardship Education program's Woodland & Wildlife Webinar series continued with a presentation in January. University of Maryland Extension Forester Jonathan Kays shared his observations on "[Increasing Adoption of Residential Wood Energy: Past, Present & Future.](#)" The one-hour presentation covered trends in home and commercial uses of wood



energy, the different types of heating devices available, and regulations to improve efficiency and reduce atmospheric particulates. Kays also shared a number of best practices for buying, storing, and seasoning wood for heating.

The webinar is now available on the program's YouTube channel in the Woodland & Wildlife Webinars playlist. Visit the playlist at [this link](#), and all our videos [here](#).

## Invasives in Your Woodland: Japanese Honeysuckle

Japanese honeysuckle is one of many species that was introduced to new ecosystems with the best of intentions. It is found throughout most of the states east of the Mississippi River and in scattered areas of the west. In the mid-Atlantic, it is reported in all but two counties in Maryland (Garrett and Wicomico); all of West Virginia and Delaware; all of Virginia except for the cities of Danville and Lynchburg; and much of Pennsylvania. It was also introduced to Argentina, Australia, Brazil, New Zealand as well as other Pacific islands, including Hawaii.

### *What is it?*

The Japanese honeysuckle vine (*Lonicera japonica*) is native to eastern Asia. It arrived in the United States in 1806, when it was introduced on Long Island, New York as a means of erosion control and as an ornamental planting. It was also planted to enhance wildlife habitat, particularly as browsing for deer, and along roadsides. The first report that it had escaped from cultivation did not appear until 1898; by the early 1900s, it was widely established throughout the eastern states. It grows in a variety of habitats, including woodlands, wetlands, and disturbed areas, such as fence rows, roadways and rights-of-way. It is shade-tolerant and often smothers and kills native ground-level vegetation. It can also kill shrubs and saplings by girdling.

### *How does it spread?*

Like other species of honeysuckles, Japanese honeysuckle is a trailing or climbing vine. Unlike native honeysuckles that grow and spread using tendrils, adhesive disks or aerial roots, the Japanese honeysuckle climbs by twining around objects. In this way, this invasive plant forms arbors in forest canopies and dense, sprawling mats on the ground. Vines grow typically six to ten feet long on the ground and occasionally up to 50 feet vertically, and can grow more than 30 feet per year. It can also spread via its berries, the seeds of which are spread by bird and other animal droppings.

### *How can I identify it?*

Young Japanese honeysuckle stems are green and finely-haired, while older stems are woody, hollow, and have brown bark that peels off in sheds. Its leaves are opposite, with two per node. They are three inches long, egg-shaped, hairy, and smooth-edged. The leaves



Japanese honeysuckle. Photo by Chuck Bargeron, University of Georgia, bugwood.org

will persist year-round in mild, southern environments. Flowers appear from April to July and are white, tinged with purple or pink before coming yellowish with age. The fruit is a black, shiny berry that ripens in September to November. See the photo gallery on the next page.

### *How can I control it?*

Small infestations of Japanese honeysuckle can be controlled by removing the vines by hand, ensuring that any berries are removed as well. Mowing or grazing by goats is not recommended, as these methods stimulate growth and leads to denser mats of vegetation. Prescribed burning in the spring has been found to reduce Japanese honeysuckle coverage and crown infestation. Repeated burning reduced the population by over 50% compared to a single burn. However, previously-burned areas may see a rebounding population if fire is discontinued.

Chemical treatments have also been effective, either alone or in conjunction with prescribed burning. Herbicides such as glyphosate and triclopyr can be applied from the spring through the fall, although fall applications are best. A two-percent solution can be applied to the vine's leaves; a 25% solution can be used to the vine's cut stumps.

Regardless of the chosen control method, continued monitoring of the area is necessary to observe and remove any potential re-sprouting.

### *For more information:*

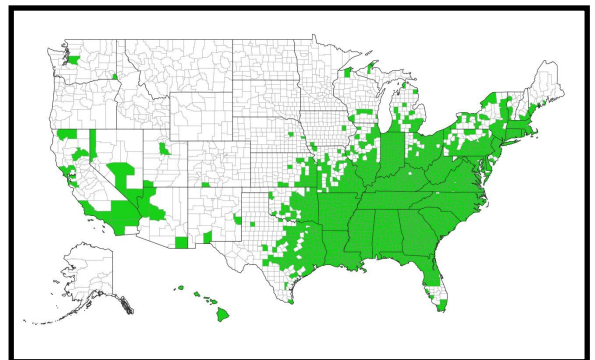
Learn more about Japanese honeysuckle:

[Japanese Honeysuckle \(Invasive Plants in Pennsylvania\)](#)

[Japanese Honeysuckle \(Forest Invasive Plants Resources Center\)](#)

[Japanese Honeysuckle \(Invasive Plant Atlas of New England\)](#)

[Japanese honeysuckle \(New Jersey Non-Native Plants\)](#)



Japanese honeysuckle US county distribution. Courtesy eddmaps.org.



# Image Gallery: Japanese Honeysuckle



Japanese honeysuckle foliage. Photo by Richard Gardner, UMES, Bugwood.org



Japanese honeysuckle foliage. Photo by Richard Gardner, UMES, Bugwood.org



Japanese honeysuckle fruit. Photo by Leslie Mehrhoff, University of Connecticut, Bugwood.org



Japanese honeysuckle stem. Photo by Chris Evans, University of Illinois, Bugwood.org

## The New Farm Bill Contains Important Funding for Woodland Landowners

President Trump recently signed the new Farm Bill ([full text here](#)), which is expected to cost \$867 billion over 10 years. Funding by the bill lasts through 2023, and contains several components that are relevant to woodland owners.

The bill includes the establishment of a National Reforestation Initiative that addresses threats to retaining privately-owned woodlands. The program will use the “Keeping Forests as Forests” methods developed by the National Association of Conservation Districts and will provide incentives for reforestation in state-prioritized areas.

Property owners looking to increase green space or pollinator habitat, or to improve stormwater management, will be able to apply for funding through the Conservation Innovation Grant program, which received continued funding at \$25 million per year through 2023. Property owners with riparian buffers will be able to enroll their buffers in the Conservation Reserve Enhancement Program (CREP), which encourages native planting within 35 feet of the waterway.

Woodland owners who are interested in harvesting timber for commercial uses may be able to work with the US Forest Service, as the bill includes authorization for the USFS to expand markets for wood products, including those from privately-owned woodlands.

Additional language in the bill streamlines several programs, including the Environmental Quality Improvement Program (EQIP), which was merged with the Wildlife Habitat Incentive Program (WHIP). This means that property owners will no longer apply for WHIP, but can instead apply for dedicated wildlife resources within EQIP. The bill provides strong funding for other conservation programs, including the Conservation Stewardship Program (CSP), the Regional Conservation Partnership Program (RCPP), and the Healthy Forests Reserve Program (HFRP). Additionally, CSP contracts no longer automatically renew, in order to allow new applicants to enter the program.

The Farm Bill received support from several conservation organizations, including the Audubon Society and the American Forest Foundation. Tom Martin, President and CEO of AFF, commented that previous Farm Bills assisted family landowners in their efforts to become active stewards of their woodlands, and he was pleased that “many programs and provisions that support rural landowners and markets for their forest products have been included [in the new Bill]. With the passage of this bill, Congress has taken an important step towards supporting healthier forests and stronger rural economies.”

---

## Can A Native Fungus Control Tree-of-Heaven?

Robby Korth, The Roanoke Times

The kudzu of the tree world could one day be controlled by a fungus.

Virginia Tech graduate student Rachel Brooks is testing how the fungus verticillium attacks tree-of-heaven, an invasive species for which Brooks used the kudzu reference. The hope: that the fungus will help kill the tree, which grows just about everywhere.

Tree-of-heaven spreads and grows rapidly, growing as much as five to ten feet a year. It often chokes out native plants and grows in agricultural or urban areas. There is also some evidence that the tree is a preferred breeding spot for the invasive spotted lanternfly.

The plant is prevalent at the Shenandoah Valley Agricultural Research and Extension Center, where Brooks is studying it along with several other sites across the state. She's inoculated a few of the trees with verticillium fungus. In a little more than a year, the fungus has killed the trees that were exposed. It's also spread the fungus through the interwoven tree-of-heaven root systems to kill off many of the trees in the area.

Brooks keeps coming back to measure the fungal effects. “The end goal is a product that you can buy in the store,” Brooks said.

It will probably take two or more years of testing and navigating a series of regulations before that will happen, she said. A company would also have to find a way to commercialize the biocontrol.

Currently, if landowners or government agencies want to control the tree, they use herbicides. That's only a short term solution that often only kills one tree.

At a plot at the extension center in Raphine, located in northern Rockbridge County, Brooks recently infected a few trees and the fungal infection spread to surrounding trees-of-heaven. A control stand of trees-of-heaven is unharmed less than a mile away. Other vegetation didn't appear to be affected, which backs up a study conducted by a team of Pennsylvania researchers, she said.

That makes sense. Verticillium fungus has been discovered around North America and has even naturally killed off trees-of-heaven in the New River Valley, Brooks said.

The fungus is not expected to eradicate the tree from the continent. But it will help landowners and other people keep the rapidly growing, invasive tree in check. That can pave the way for plants to grow a little more naturally, Brooks said. “We want our native trees to have a place to grow.”



## Events Calendar

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

February 23, 2019, 8:30 AM-4:30 PM

### Landowners' Woods & Wildlife Conference

Germanna Community College, Culpeper VA  
This all-day conference is for owners of small or large tracts of land and will explore a range of forest issues relevant to woodland owners, including wildlife and aquatic habitats and management. For more information and to register, [go here](#).

March 13– May 28, 2019

### “The Woods in Your Backyard” Online Course

[See page 2 for more information and how to register.](#)

March 23, 2019, 8:00 AM-3:00 PM

### Spring Thaw Workshop: Watershed Moments

Wesley Freedom United Methodist Church, Sykesville MD  
Presented by the Carroll County Forestry Board. Experts from state, local, private and federal agencies will present information related to flood management, including riparian forest buffer restoration, tree care for storm resilience, choosing the best trees for pollinators, and other homeowner-scale stormwater management techniques. For more information, [go here](#).

## This Issue's Brain Tickler ...

Last issue, we featured this photo and asked readers to identify the iconic tree that produces this burr. It's the American Chestnut. Congratulations to Mimi Wright for being the first to submit the correct answer.



-----  
For this issue, please identify the new invasive species depicted in the photo at left.

Email Andrew Kling at [akling1@umd.edu](mailto:akling1@umd.edu) with your answer.

Photo by Lawrence Barringer, PA Dept. of Agriculture,  
[Bugwood.org](http://Bugwood.org)

July 21-27, 2019

### Natural Resources Careers Camp

Hickory Environmental Education Center, Accident MD  
Application deadline is March 30, 2019.

This week-long camp in Garrett County partners high school students with professionals in natural resources to explore careers and college studies in forestry, wildlife, ecology, and much more. For more information, visit <http://www.marylandforestryboards.org/nrcc.cfm>.



## UNIVERSITY OF MARYLAND EXTENSION

*University of Maryland Extension programs are open to all citizens without regard to race, color, gender, disability, religion, age, sexual orientation, marital or parental status, or national origin.*

### Branching Out

#### University of Maryland Extension

18330 Keedysville Road  
Keedysville, MD 21756-1104  
301-432-2767

Editors: Jonathan Kays and Andrew A. Kling

Published four times per year and distributed to forest landowners, resource professionals, and others interested in woodland stewardship.

### To Subscribe:

**Via Web Site:** Go to [www.extension.umd.edu/woodland/subscribe-branching-out](http://www.extension.umd.edu/woodland/subscribe-branching-out) and submit the requested information.

**Via Email:** Email [listserv@listserv.umd.edu](mailto:listserv@listserv.umd.edu). In the body of the message, type SUB branchingout your name (example: SUB branchingout John Doe).

**You will be notified by email when a new issue is available, with a link to the website.**

**Hardcopy subscription:** Mail check or money order for \$10 per year, payable to University of Maryland to the address above.

This and back issues can be downloaded for free at [www.extension.umd.edu/news/newsletters/branching-out](http://www.extension.umd.edu/news/newsletters/branching-out).

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](mailto:akling1@umd.edu).

Send news items to Andrew A. Kling at  
[akling1@umd.edu](mailto:akling1@umd.edu) or 301-432-2767 ext. 307.