

BRANCHING OUT

Maryland's Woodland Stewardship Educator



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

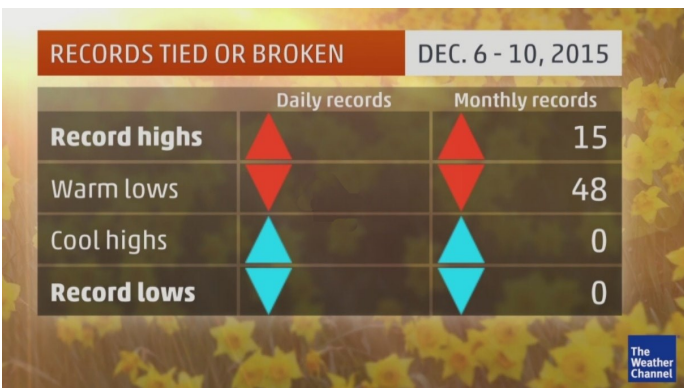


Volume 23, No. 4

Winter, 2015

Spring in December

Warm temperature in December are not that unusual, but the past few weeks have been exceptionally warm. At BWI airport there were 16 days with temperatures above 60 degrees and four above 70 degrees. Last month, the average temperature at DC airports was 53.7 degrees, the sixth-warmest on record. It looks like this weather pattern will exist until at least Christmas. After that, all bets are off!



From December 6 to 10, 2015, the Washington DC area had 15 daily and monthly record highs and 48 record warm lows (minimum daily temperatures). Graphic from The Weather Channel.

The positive side of this weather pattern is that it allows woodland owners and others an extra window of time to complete those outdoor projects before the snow and cold weather drives many indoors or seeking winter recreational pursuits. With the leaves off the tree there is time for comfortable walks through the woods to look for damaged trees, invasive species, and other conditions you may want to address over the winter or next growing season. With the

rapid spread of emerald ash borer through Maryland, it is a good time to walk in the woods and identify your ash trees. Is the bark coming loose? Is the trunk full of woodpecker holes indicating borer activity? Are the branches starting to die and fall to the ground? Is the tree in a place that would make it a safety hazard if it fell? Unlike other tree species that die, such as oaks, ash wood degrades quickly (within months) after death from emerald ash borer and trees are susceptible to windthrow or breakage over the winter once the snow, wind, and ice build-up. You may want to consider cutting them down for firewood while the wood is still useful or contacting a professional forester if you have many acres that need to be treated. If a tree is a potential safety hazard near your home you may want to contact a tree service professional.

More information on emerald ash borer management and options is available at: <http://extension.umd.edu/woodland/your-woodland/publications-library-invasive-species>.

Above all, enjoy the warm weather and your woods, no matter how big or small. Winter will be here soon. Merry Christmas and Happy New Year from the University of Maryland Extension Woodland Stewardship Education Program.

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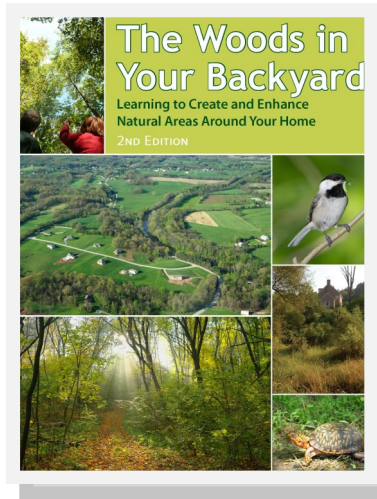
We're on Facebook!

The Woodland Stewardship Education program is on Facebook. We invite you to read about news and notes related to woodland management from across the region and the nation. We'll also share information about upcoming events and articles we think you'd find interesting.

Find our new page at <https://www.facebook.com/UMDWSE>, or search for "Woodland Stewardship Education program" on Facebook.

Hot off the Press!

The Woods in Your Backyard, 2nd Edition



The first edition of *The Woods in Your Backyard: Learning to Create and Enhance Natural Areas Around Your Home* was published in 2006. The guide helped thousands of landowners of 1 to 10 acres in the mid-Atlantic area enhance the stewardship of their land. They learned valuable techniques about caring for their natural areas, including how to convert lawn to woodland, how to enhance existing wooded areas, and how to cooperate with neighbors to enhance wildlife habitat.

Now the guide has been revised and updated. Highlights of the new edition include:

- ◆ A new Foreword by Doug Tallamy, author of [Bringing Nature Home](#)
- ◆ Methods for documenting your natural area projects through a "stewardship journal"
- ◆ Tips for identifying your natural area's natural and wildlife habitats
- ◆ Expanded and up-to-date information related to non-invasive plant species
- ◆ Expanded information about water resources, including tips for creating and maintaining riparian buffers, and identifying and preserving wetlands
- ◆ A new section on best management practices for soil resources and conservation
- ◆ A fully revised and expanded Glossary

The 108-page guide contains more than 100 photos and illustrations, and includes information tables, case studies, appendices, and an index.

Contributors include natural resources specialists at the University of Maryland, Penn State University, Virginia Tech and Forests for the Bay.

The 2nd edition of *The Woods in Your Backyard* is now available to order through Cornell University's Plant and Life Sciences Publishing (PALS, formerly NRAES). Each copy is \$23.00, with quantity discounts available. For more information, click on the cover image or go to

http://palspublishing.cals.cornell.edu/nra_order.taf?function=detail&pr_id=202&UserReference=D51DA11CD8097DDB5665B52C

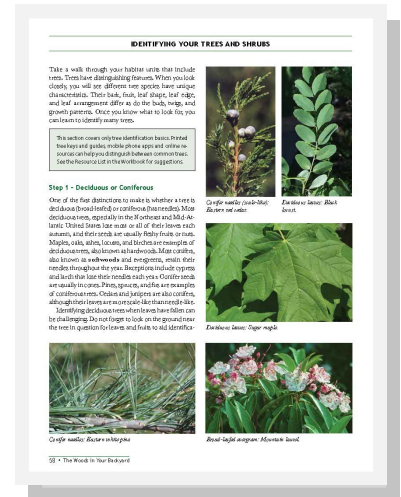


Table 2
Suggested Plantings for the Eastern United States

Low diversity	Full diversity	Small trees	Large hardwood trees	Large coniferous trees
Low-bush hollyhock	Shovelnut	Flowering dogwood	Shagbark hickory	Lemon white pine
Japanese	Baldcypress	Black walnut	Baldcypress	White pine
Black hollyhock	Red maple	Red maple	Red maple	Red pine
American hollyhock	White oak	White oak	White oak	White pine
American red	White oak	White oak	White oak	White pine
Lemon white pine	White oak	White oak	White oak	White pine
Black hollyhock	White oak	White oak	White oak	White pine
Black hollyhock	White oak	White oak	White oak	White pine
Black hollyhock	White oak	White oak	White oak	White pine
Black hollyhock	White oak	White oak	White oak	White pine
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Black hollyhock	White oak	White oak	White oak	White pine
Black hollyhock	White oak	White oak	White oak	White pine
Black hollyhock	White oak	White oak	White oak	White pine

Small tree native to the top of the tree (upper left) and not native to the top of the tree (upper right). Photo credit: Cornell University.

Upcoming Webinar: “Learning How to Heat with Wood & Pellets .. Save Money and Be Warm!”

The University of Maryland Extension is offering a two-hour evening webinar program on Tuesday, January 12 from 7 to 9 p.m. on **Learning How to Heat with Wood and Pellets**. The webinar will be downlinked to four locations in Allegany, Cecil, Charles, and Somerset counties so you can view it with others, get a packet of resource materials, learn about the Maryland Wood Grant program, and learn and share information with others. It can also be



viewed online in your home over the internet with no special software to load.

The workshop will start with an overview of the advancement in wood and pellet technology and the nuts and bolts of what you need to know. Advances made in wood

burning technology have dramatically improved efficiency and reduced emissions of residential stoves. Firewood is one of the most economical forms of renewable energy available today and the use of wood pellets is increasing because they are readily available and pellet stoves are easily installed without the need of an expensive chimney.

You will learn about the wood grant program offered by the MD Energy Administration that will pay \$500 toward the cost of a clean-burning wood stove and \$700 toward pellet stove. An experienced wood stove retailer will then address the common questions asked by customers in his stores followed by the opportunity for you to ask your questions and get them answered. Finally, a brief presentation on best practices for outdoor wood boilers will get you up to date on current regulations and issues.

To register go to:

<https://umeheatwithwoodandpellets.eventbrite.com>.

Register by Friday, January 8, 2016.

For further information about the workshop content, contact Jonathan Kays at jkays@umd.edu or call 301-432-2767 x323.

Maryland Woodland Stewards Training Returns in Spring, 2016: Apply Now!



The Maryland Woodland Stewards Training Program Workshop is coming to the Shepherd's Spring Retreat Center in Sharpsburg, MD on **April 28 – May 1, 2016**.

This forest stewardship volunteer training program teaches a select group of 25 woodland owners, managers, and other woodland enthusiasts how to improve wildlife habitat and other forest benefits using sound woodland management practices, while being good advocates for forest and wildlife stewardship in their community. In return, participants apply these principles to property they own or manage, and actively encourage others to practice good forest stewardship.

The three-and-a-half-day program costs just \$95 (a \$400 value!), which includes meals, lodging, and all program materials. This subsidized fee is possible with the support of the Ruffed Grouse Society, Maryland DNR Forest Service, and USDA's Renewable Resources Extension Act.



Maryland Woodland Stewards
class of 2014

**The application deadline for this year's program is
March 4, 2016!**

Apply online at <http://bit.ly/1LxxsBT>.

Visit

<http://extension.umd.edu/woodland/maryland-woodland-stewards>

to view an Invitation Letter, Application, and many other resources.

For more information, contact:

Lyle Almond

Forest Stewardship Educator

Wye Research and Education Center

124 Wye Narrows Drive, Queenstown, MD 21658

lalmond@umd.edu

2016 Appalachia Grows Small Farms Conference

Please join us for our 2016 small farms conference for Ag-Entrepreneurs! The **Appalachia Grows: Small Farms Conference** will be held on January 22 - 23, 2016 at the Allegany County Fairgrounds.



Friday's program will focus exclusively on small farm marketing topics. A winter farmer's market and Farm Food Dine-Around dinner will be featured on Friday evening. Saturday's program will include sessions on fruit and vegetables, livestock, hay and pasture, specialty crops, and much more!

Vendors will be available to talk about their latest products and services. Please visit our website www.appgrows.com for more information. You may also call the Garrett-UME office at 301-334-6960 or the Allegheny-UME office at 301-724-3320 if you have any questions.

Maryland State Tree Farmers of the Year

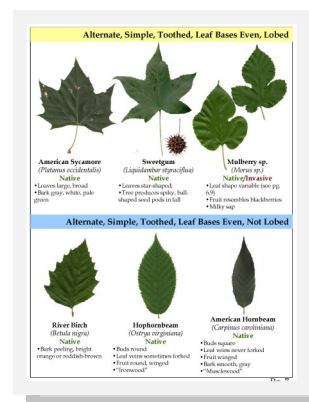
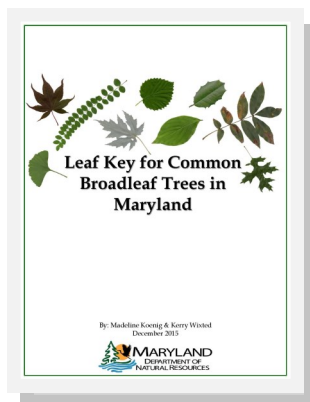
The 2015 Tree Farmers of the year, John and Karen Colton, manage 125 acres in southern Maryland that juts into St. Clements Bay. With the assistance of a certified forester, the Coltons manage the land for long-term sustainable forestry, hoping to keep as much wildlife in the area as possible. In John's words, "When we cut, we encourage new growth. We don't clear cut but leave six to eight large trees to seed the area. That's the easier way, and the seed is from natural species for that area."



John is a graduate of Maryland Woodland Stewards (in the days when it was still called the Coverts Project) and served on the board of the Maryland Forests Association for 15 years. To learn more about the Coltons, their property and their management philosophy, read about them in the Maryland Forests Association newsletter [here](#).

New Guide to Maryland Broadleaf Trees

Madeline Koenig, an intern with the Maryland Dept. of Natural Resources at the Bear Branch Nature Center, has developed a new resource for students and others new to the state's trees. Her "Leaf Key for Common Broadleaf Trees in Maryland" provides the user with a background in leaf identification terms (alternate, opposite, toothed, entire, etc.) and provides full-color examples of the most common leaves. A handy feature marks each species as native, exotic, or invasive.



The guide is available as a PDF for download at http://dnr2.maryland.gov/wildlife/Documents/TreeGuide_Common-Broadleaf.pdf.

After Decades of Acid Rain Damage, Northeastern Forests Are Finally Making a Comeback

Maddie Stone, gizmodo.com

Good news on the environment front: the effects of acid rain on forests in the northeastern US and eastern Canada are finally starting to reverse, nearly forty years after the United States began passing environmental legislation to control the problem.

A new, USGS-led study, which examined soil acidity and toxin levels at 27 sites in the northeastern US and eastern Canada, found that all have experienced declining levels of acid rain over the past 8 to 24 years. The study, published in *Environmental Science and Technology*, finds that aluminum concentrations (a telltale sign of acid rain damage) have declined while pH has increased in the upper soil layers across nearly all sites.



In other words, forests are finally starting to recover from an environmental problem we identified decades ago and took legislative action to fix.

Acid rain is caused by sulfur dioxide and nitrogen oxide, two compounds produced in large quantities by coal power plants, and to a lesser extent when we burn gasoline. In the atmosphere, these chemicals dissolve in water and undergo a series of reactions leading to the formation of sulfuric and nitric acid. During rainstorms, acid water percolates into the soil, setting off a cascade of chemical reactions that disrupt terrestrial and aquatic ecosystems.

“Essentially, all the ecological problems manifested by acid rain start in the soil,” lead study author Gregory Lawrence said in an interview.

First, acid rain strips clay minerals of calcium, an important nutrient for plants, and one that helps neutralize soil acidity. Next, as soils become more acidic and calcium is depleted, aluminum starts to become liberated from its mineral bonds. “That causes problems for trees, forests, and surface waters” said Lawrence. Aluminum is a big problem for many key tree species in the northeast, most notably red maple and sugar maple. “It impacts their overall health, in terms of seedling survival, and how they deal with climate and insect stress,” Lawrence said.

Additionally, aluminum becomes mobile in soils, leaching into nearby surface waters. Over the years, this has led to widespread fish kills, with cascading impacts on aquatic communities.

Public awareness of the link between human pollution, acid rain, and ecological damage in the U.S. became widespread in the 1970s. At that time, the Hubbard Brook Experimental Forest in New Hampshire was publishing seminal studies demonstrating the harmful effects of acid rain on forest ecosystems. Growing public concern prompted Congress to pass a series of amendments to the Clean Air Act designed to dramatically reduce the emissions of sulfur and nitrogen oxides from power plants. These efforts have been widely seen as successful, with acid rain levels in the U.S. dropping dramatically since the mid-1970s.

Despite the success in reducing acid rain, scientists have had trouble telling whether forest ecosystems in the northeast are, in fact, recovering. Lawrence noted, “Prior to this study, published research on soils indicated that soil acidification was worsening in most areas despite several decades of declining acid rain. However, those studies relied on data that only extended up to 2004, whereas the data in this study extended up to 2014.”

The new research offers some of the most promising evidence to date that a rebound to pre-acid rain conditions may be underway. Across all 27 sites in the study, the uppermost soil layers are showing a strong recovery response, with aluminum levels dropping and soil pH increasing. In certain sites, Lawrence and his co-authors found that deeper soil layers are becoming more acidic, but he says this could be a natural part of the recovery process.

“I was involved with research in the mid-’90s, showing that one of the effects of acid rain was moving aluminum from deep in soils to surface organic layers, where roots do their nutrient uptake,” Lawrence said. “In this study, we’re seeing that process reverse quite strongly, with aluminum levels decreasing down into the soil. It’s sorta coming back where it came from.”

Next, Lawrence and his team hope to look at surface water chemistry in northeastern rivers and lakes to see if similar signs of recovery are evident.

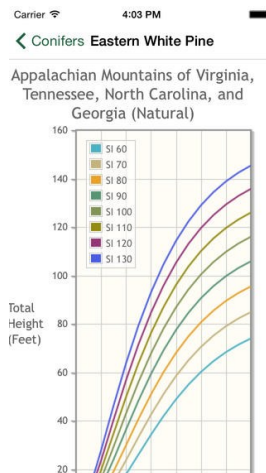
“Recovery is happening,” he said. “We’re still trying to figure out how much capacity these ecosystems have to recover, but there’s no question that decreases in acidic deposition are having a positive effect.”

News and Notes

New Forestry App Updates an Essential Publication

Professional foresters have long relied on the “Service Forester’s Handbook,” a 135-page publication that helps them convert figures, calculate volumes and perform other essential calculations. It remains in use today although the handbook was last updated in 1986. Understanding that the content needed to be brought into the 21st century, William Hubbard, a Southern Region Extension forester with the Association of Southern Region Extension Directors, spearheaded the development of an app to complement the paper handbook.

Hubbard worked with University of Georgia Extension and technology specialists to develop the app for both Android and Apple platforms. In addition to the facts and figures found in the original guide, the app includes calculators to help foresters determine soil texture, tree stand density, and much more. Download it from the Apple Store [here](#) and from Google Play [here](#).



MFA & Maryland Tree Farm Committee Regional Meetings

Throughout 2015, the Maryland Forests Association (MFA) and Maryland Tree Farm Committee



have been holding joint information meetings across Maryland. These evenings were designed to provide new and potential tree farmers with information about tree farming, and to share new national guidelines for current tree farmers.

The September 15th meeting at the Western Maryland Research & Education Center was recorded and is now available on the WSE YouTube channel at <https://youtu.be/AxCkXunHEA>. For a schedule of additional regional meetings, see the Events calendar at the end of this issue.

2015 Timber Tax Publication Now Available

Dr. Linda Wang, National Timber Tax Specialist for the USDA Forest Service, has compiled her annual update to federal income tax regulations related to woodland owners who are involved in timber sales. The publication outlines special favorable tax provisions on timber designed to encourage private forest management and stewardship.



The two-page publication includes information and examples related to sales of timber and timber-related products, installment sales, cost-share payments, and much more. While it is important to remember that the document does not constitute legal or accounting advice, it does provide worthwhile information that woodland owners can use when consulting tax professionals.

The publication is available in the Woodland Stewardship Education’s Publications Library [here](#).

New WSE Webinar Available



Nature-based Forestry

The European Pro Silva movement

Lyle Almond
Woodland Stewardship Educator
University of Maryland Extension

UNIVERSITY OF
MARYLAND
EXTENSION
Solutions in your community

The latest webinar from the Woodland Stewardship Education program was held on September 17th at 12 noon. The webinar featured University of Maryland Extension Forest Stewardship Educator Lyle Almond. His presentation, “Nature-based Forestry: The Pro Silva Movement in Europe,” provided an overview of a forestry practice that is sweeping across the continent. The Pro Silva movement promotes continuous cover forestry, which mimics natural forest stand development for optimizing social, ecological, and economic benefits. The webinar will include Almond’s first-hand experience through his work in the nation of Slovenia.

The webinar is now available on our YouTube channel at <https://youtu.be/zP9XEF6ULjg>.

Woodland Owners and the Northern Long-eared Bat

Jeff Stringer, University of Kentucky



Photo courtesy AI Hicks, NYDEC

Northern long-eared bats, once common to a large geographical area of the eastern U.S., are decreasing significantly in number from a fungus that causes a disease called white nose syndrome. This debilitating and often fatal fungus, contracted during winter hibernation in caves, has led to the species being listed as threatened under the Endangered Species Act (ESA). This fungus is particularly devastating not only to the

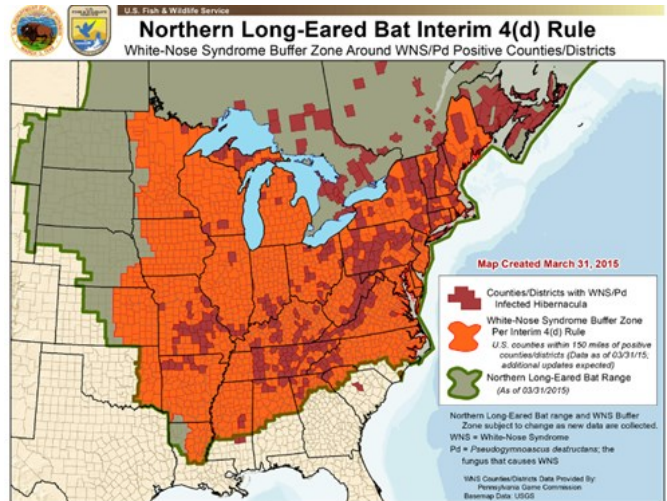
northern long-eared bat but

to other species that hibernate for long periods (weeks or months) without waking. These species generally hibernate in caves where moist, cool-air conditions are ideal for the development of the fungus. The fungus can be seen as a white, cotton like growth on their nose but it also attacks their skin including their wings. The fungus can cause them to rouse from hibernation, which causes them to use their stored fat reserves thus physically and physiologically weakening them leading to their death.

There is strong evidence that the fungus is an invasive species originally from Europe. It has spread rapidly from New England where it was thought to be introduced and is now found in many states in the eastern U.S., including MD. The rapid advance and detrimental effects of this disease, significantly reducing northern long-eared bat populations, led to the threatened designation being established in 2015.

This designation means that you cannot harass, harm, or kill a northern long-eared bat. Violations can involve substantial fines. Harm can be viewed as eliminating or degrading habitat, for example cutting trees down that the bats roost in, or disturbing hibernation. Timber harvesting can degrade habitat and it can also harass, harm or kill bats. The latter can occur when trees are cut that are harboring females that are rearing flightless young. As a part of the listing as a threatened species the U.S. Fish and Wildlife Service also issued a set of rules required for for-

est management operations (primarily timber harvesting) in and around areas where bats are found. If these rules are followed woodland owners are not held liable for what is called “take,” the harm, harassment, or killing of a bat, in this case during forest management operations. The rules require that specific conservation measures (harvest restrictions) are adhered to in buffer areas around “known” locations of the species – particularly hibernacula and known roost trees. Hibernacula are caves where the bats hibernate during the winter. Sometimes the northern long-eared is the sole occupant of a cave. But it is also common for them to share caves with other species like the Indiana bat that has been a federally listed species for a number of years. The rule also requires that a similar buffer is estab-



The dark red in the above figure shows the extent of white nose syndrome. From US Fish & Wildlife Service.

lished around any “known” roost trees (see below) from June 1 to July 31. If these measures are not adhered to and bats are harmed, harassed, or killed it is viewed as a take and those involved would be in violation of the ESA. If these measures are adhered to and bats are killed during timber harvesting then it is viewed as incidental take and there are no repercussions. The following is an explanation of the rule, background information on the biology of the bat, a reasoned approach to conducting timber harvests, and potentially acquiring an exemption if necessary.

Protecting Areas around Bat Caves

The rule requires that a 0.25 mile (1,320 ft) buffer is established around “known” hibernacula from June 1 to July 31. These buffers are important so as not to disturb hiberna-

Excerpted from “Woodland Owners and the Northern Long-eared Bat,” *Kentucky Woodlands Magazine*, vol. 10, no. 1. Reprinted with permission. Additional information by Jonathan Kays, University of Maryland Extension.

tion. They also provide undisturbed habitat for bats to feed and mate when they stage to begin hibernation in the fall and again to feed when they emerge from hibernation and begin to spread out on the landscape.

Many states have mapped their known hibernacula, so no-harvest or modified harvest buffers must generally be provided around these locations. However, the rule makes it clear that occupied hibernacula receive protections and unoccupied hibernacula do not. All of the known hibernacula in Maryland are now extirpated, which means there are no longer any bats in the caves. Until very recently, there were eight hibernacula in Garrett and Allegany Counties, but white-nosed disease has eliminated the bats. The caves and tunnels still exist.

Many hibernacula have not been discovered, and many may never be. Since these are not in a database or mapped they are not classified as “known” and thus the rule requiring a buffer around them is not required. However, voluntary sustainable forest management guidelines, and common sense, would indicate that if one was discovered it would be appropriate to protect it.

Maternity Roost Trees

The roost tree buffering is only in effect from June 1 to July 31. During this time pregnant females typically congregate (forming what is termed a maternity colony) in trees to give birth and rear their young (called pups) which are flightless at this time. Both live trees and dead snags that are used as roosts usually have cavities or crevices for the bats to roost underneath. A tree where females congregate, some-

times up to several dozen, is termed a maternity roost and a colony can use several of these trees in a single summer.

There are very few documented maternity roosts in Maryland. The few that exist are found in the extreme northern part of Garrett County. The USFWS has mapped maternity roosts on the



A tree with loose bark ideal for roosting habitat. Photo courtesy US Fish & Wildlife Service

"Avilton" and "Grantsville" topographic quadrangles. Maternity roost areas are described by their Quad name and Breeding Bird Atlas Grid. This is basically taking the topo map and dividing it into sixths. Imagine folding a topo map in half lengthwise; and then folding it into thirds - you would end up with six rectangles that refer to the northwest (NW) and northeast (NE) sections, central west (CW) and central east (CE) sections, and southwest (SW) and southeast (SE) sections. The “known” maternity roosts and their buffers occur on: 1) Avilton Quad area – NW, NE, CW, and CE, and 2) Grantsville Quad area - NE and CE.

The vast majority of maternity roost trees are not mapped and are unknown. The bats may or may not use the same trees each year, so keeping track of this would be nearly impossible. There is no provision in the rule indicating that the woodland owner, timber buyer or logger must have a trained wildlife biologist scout for and try to find roost trees on private lands. However, if a roost tree is found it would then be considered “known” and buffering would be required June 1 to July 31 while the pups are flightless.

Bat Behavior and Buffers

The rule indicates that buffers preclude most forest harvest practices because all of them result in the removal (in whole or part) of overstory trees (see below). The rule has a provision to allow for deviations or exemptions in the conservation measures (harvest restrictions) in these buffers. However, these exemptions must be approved by the state USFWS office. Overall the current rule is workable for most woodland owners. At this time the following apply:

- ◆ There are no known hibernacula in Maryland, but as more focus is put on this issue, some more may be found. The same goes for maternity roosts. Usually state US Fish and Wildlife Services state office and state fish and wildlife agencies will make this information known.
- ◆ Woodland owners and those working in the woods do not have to scout for or determine the presence of maternity roost trees, though they can voluntarily do this if interested.
- ◆ Some of the provisions for retention associated with sustainable forest management like Streamside Management Zones or overstory retention in the harvest unit may help to provide maternity root opportunities.

There will be more information coming on the bat situation. Woodland owners, foresters, loggers, and forest industry should stay abreast of this issue.

MD-DE Master Logger Program Continues to Ensure Sustainable Logging Practices

Lyle Almond, UME Stewardship Forestry Educator



Forest management is an important driver of our state's economy. Private forest landowners own 80% of this vast treasure of over 2.6 million forested acres. As the eighth largest industry in the state, forest products generate over \$2.6 Billion to Maryland's economy and employs roughly 15,600 people.

As a truly "green" industry, forestry perpetually renews its raw material on a sustainable basis, while providing environmental, recreational, and aesthetic benefits to Maryland.

Master Loggers certified under the MD-DE Master Logger Program play a vital role in this industry. They understand the many functions of our forests. A Maryland Master Logger understands his role as caretaker of this important renewable resource. A Master Logger can help you get what you want today without sacrificing the benefits of tomorrow. Becoming a Master Logger publicly demonstrates an understanding of safe, environmentally and economically sound timber harvesting practices. The Master Logger Program also works to raise public awareness of the professionals who harvest our forests.

The program is a voluntary training and education program for loggers who work in Maryland and Delaware. It helps loggers meet the ever-increasing demands of their profession. The courses provide information about current environmental regulations, forestry principles, and safe work practices.

The program is a cooperative effort of University of Maryland Extension (UME), Maryland Forests Association, Maryland Forest Service, Delaware Forest Service, and the



Matt Rowley, NRCS Soil Conservation District forester, explains the harvesting guidelines for creating early-successional habitat beneficial for threatened golden-winged warbler populations to a Master Logger continuing education workshop in western Maryland (2015). (Photo: Lyle Almond)

forest products industry in Maryland to train and certify professional logging contractors in the sustainable forestry practices endorsed by the Sustainable Forestry Initiative (SFI) through its regional partner, the Maryland State Implementation Committee (MD SIC). The program's oversight is carried out by the MD-DE Master Logger Program Steering Committee, comprising public agencies and private industry representatives, which meets monthly to develop the training program's effectiveness. Lyle Almond, University of Maryland Forest Stewardship Educator, serving as the MD-DE Master Logger Program Coordinator, administers the program under the direction of the MD-DE Master Logger Steering Committee.

Certification as a Master Logger in our Program is based on passing an initial core certification course consisting of two modules, Sustainable Forestry and OSHA Logging Safety, comprising 16 contact hours. In addition to completing the core education modules, participants must provide proof of current First Aid and CPR certification and sign a code of ethics in order to receive their Master Logger certificate. All core courses are offered in a distance learning correspondence format outlined in the training modules below.

Once certified as Master Loggers, participants must complete 8 hours of continuing education courses every two years in order to maintain their active status in the Program. Several of these continuing education workshops offered by the Master Logger Program at various locations around Maryland have included MD "Green Card" Erosion and Sediment Control Certification, BMP Regulations, Principles and Practices, Hazardous Chemical Spill Prevention and Control, and Managing for Rare Threatened and Endangered Species.

In addition, the MD-DE Master Logger Program has reciprocal training agreements with Pennsylvania, West Virginia, and Virginia, allowing the transfer of credits for portions of each State's programs. Program participants can receive CE credit for participating in local forestry boards, taking community college classes, or organizing a tour of their operation. Eligible program participants (those who have not taken the core program in the last two years) can also retake the OSHA Logging Safety, Sustainable Forestry I, and Sustainable Forestry III classes for CE credit.

For more information about the Maryland-Delaware Master Logger Program, visit <https://extension.umd.edu/masterlogger> or contact Lyle Almond at lalmond@umd.edu or 410-827-8056 x125 .

Invasives in Your Woodland: Mile-a-Minute

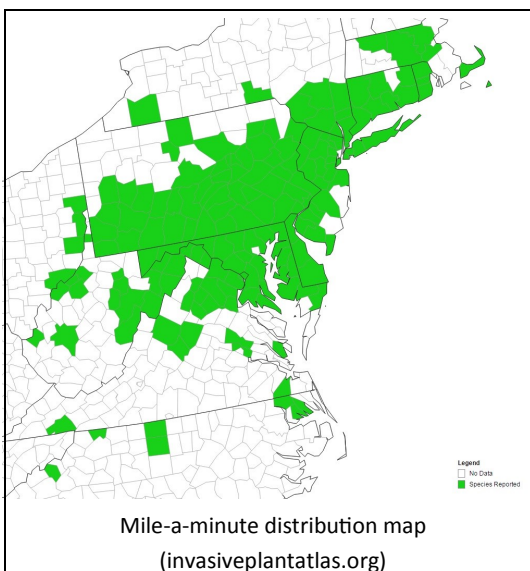
Call it Chinese tearthumb, Asiatic tearthumb, or devil's tearthumb, mile-a-minute vine is one of many invasive plants that infest woodlands in the eastern United States. It gets its name from its ability to grow up to six inches a day.

What is it?

The plant is native to Asia, growing naturally from India to China, Japan, the Philippines, Korea and Taiwan. The chance introduction of mile-a-minute in the late 1930s led to a permanent population in North America.

A nursery owner in York County, Pennsylvania had ordered holly seeds from Japan. When the seeds arrived and were planted, mile-a-minute grew up along with the holly. The nursery owner was intrigued by the plant and allowed it to reproduce.

From that one site, the plant spread. Unfortunately, according to the Plant Conservation Alliance's Alien Plant Working Group, "subsequent efforts to eradicate it were unsuccessful. The distribution of mile-a-minute has radiated from the York County site into neighboring states. In the past 70 years, the range for this plant in the United States has expanded more than 300 miles".



Experts believe that the current area of mile-a-minute comprises a mere 20 percent of its likely potential range.

How does it spread?

Mile-a-minute easily colonizes disturbed areas along forest edges, stream banks, roadsides and wetlands. It needs full sunlight to thrive and prefers high soil moisture.



Mile-a-Minute.

Photo by Edwin Remsberg,
University of Maryland

It reproduces via seeds within berries that are distributed by birds and other wildlife. Additionally, the seeds can be spread by streams and other waterways, because they can stay buoyant for up to nine days. The seeds can survive in the soil for up to six years, although most germinate after one or two years. Once established, the plant can quickly cover native vegetation and climb into the tree canopy. The combined weight of the vine and its smothering behavior can kill the native populations.

How can I identify it?

Mile-a-minute is an herbaceous, annual vine with delicate, highly-branched stems that are covered with small, curved spines. The leaves are equilateral triangles, one to three inches on a side and light green in color. Round leaf-like structures called ocreae surround the stem from which the plant's flowers and fruit emerge. The flowers are small, white and inconspicuous, appearing in early June or July. The fruit are produced from early August to the first frost as green berries that eventually turn an iridescent blue as the season progresses.

How can I control it?

The key to controlling mile-a-minute is early action. The sooner you can identify it, the better. The vine's roots are very shallow and the weed can be pulled from the ground easily; be sure to wear gloves to protect your hands from the stems' barbs. If the infestation of the weed is extensive, use a foliar herbicide treatment with glyphosate—like Accord® or Roundup®—or triclopyr—like Garlon® 4 or Element® 4. Apply the herbicide after mid-July so the herbicide is transported into the roots and kills them.

Use caution if fruit is already present. Collect the berries as you remove the vines to ensure that they do not find their way into the soil or become food for wildlife. Continue to monitor the site for re-infestation for several years.

For more information:

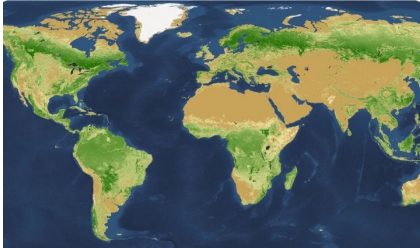
University of Maryland Extension Home and Garden Center video, "The Invaders: Mile-a-Minute": <https://youtu.be/ux5TPpRlCjk>

USDA National Invasive Species Information Center, "Mile-A-Minute Weed": <http://www.invasivespeciesinfo.gov/plants/mileminute.shtml>

Pennsylvania Dept. of Conservation and Natural Resources, "Invasive Plants in Pennsylvania: Mile-a-Minute": http://www.dcnr.state.pa.us/cs/groups/public/documents/document/dcnr_010249.pdf

This Issue's Brain Tickler ...

According to a study developed by the Yale University School of Forestry and Environmental Studies, there are many more trees on Earth than previously thought — about seven and a half times as many than some earlier estimates. How many trees did the study estimate are growing on Earth? (Hint: the answer is in the last issue of *Branching Out*.)



Last issue's Brain Tickler was a photo Chuck Leavell. He is the co-founder of the popular environmental news and information website, the [Mother Nature Network](#) and the keyboardist for the Rolling Stones.

Events Calendar

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

January 6, 2016
10:00 AM—11:30 AM

Weed Warriors at Capital Crescent Trail
Brookeway Drive, Bethesda MD

Help the Montgomery County Parks Weed Warriors tackle the non-native invasive plants along the Capital Crescent Trail. The trail is home to natural populations of spice bush, Virginia bluebells, horsetails and much more that need help to survive against the pressures of invasive species. Tools are provided; you may bring hand pruners or loppers (no power tools or machetes, please). For more information and to register, go to <http://www.montgomeryparks.org/calendar/index.php?eID=5566>.

January 12, 2016
12:00 PM - 1:00 PM

Why Are Invasives Successful?
Webinar—online

With invasive species posing more problems on woodland than can be solved all at once, how can landowners decide when and how to act? Join Juniata College Associate Professor of Biology Norris Muth for a discussion of ways

to prioritize management decisions to reduce impacts of invasive species. The webinar is free but pre-registration is required. For more information, go [here](#).

January 12, 2016
7:00 PM - 9:00 PM

Learning How to Heat with Wood & Pellets .. Save Money and Be Warm!

Webinar—online and select University of Maryland Extension locations

Advances made in wood burning technology have dramatically improved efficiency and reduced emissions of residential stoves. This isn't Grandpa's smoky old wood stove! Firewood is one of the most economical forms of renewable energy available today and the use of wood pellets is increasing because they are readily available and pellet stoves are easily installed without the need of an expensive chimney. Better yet, the Maryland Energy Administration has a wood grant program that will pay \$500 toward the cost of a clean-burning wood stove and \$700 toward pellet stove. This workshop will provide you the resources to help the beginner or the experienced wood user.

For more information and to register, go to Eventbrite's registration page [here](#).

January 16, 2016
8:00 AM—4:30 PM

"Reforestation Your Neighborhood" Winter Workshop
VFW Post 467, Westminster MD

Learn how to create healthy residential woodland ecosystems using the sustainable landscaping principles of woodland gardening. Speakers from University of Maryland Extension, Carroll County Forestry Board and Maryland Forest Service will show you how to improve wildlife habitat and pollinator diversity, protect water quality, develop usable woodland crops such as medicinal plants and edibles, select native plant species appropriate for your area, and identify and combat non-native invasive plants.

Registration is \$50.00 per person or \$75.00 per couple, and includes morning refreshments, lunch and course materials.

The brochure and registration form can also be viewed on the Carroll County Forestry Board webpage [here](#).

January 22-23, 2016
4:00 PM—7:00 PM (Friday)
8:00 AM—3:30 PM (Saturday)

Appalachia Grows: Small Farms Conference
Allegany County Fairgrounds, Cumberland MD

The Appalachia Grows: Small Farms Conference for Ag-Entrepreneurs will provide the opportunity for farmers from western Maryland, West Virginia, and southwestern Pennsylvania to gain valuable information and network with other farms and agriculture entrepreneurs.

Visit appgrows.com for more information about sponsors, vendors, agenda, and a gallery of photos from the 2015 event.

February 4, 2016
5:30 PM—8:30 PM

Walnut Council—Maryland Chapter Workshop
Holly Hills Country Club, Ijamsville MD

Join the Walnut Council for an evening with University of Maryland entomologist Dr. Michael Raupp, who will give a presentation on the latest invasive insect species, including Thousand Cankers Disease on black walnut. For more information and to register, contact David Robbins at 301-791-4010 or email at david.robbins1@maryland.gov.

April 22-23, 2016

American Paulownia Association Annual Conference
Wye Research & Education Center, Queenstown MD]

This year's conference focuses on Mid-Atlantic Paulownia timber and production. Presentations will include a review of various Paulownia species of the region; harvest and production updates; and updates on Paulownia and renewable energy and carbon credit programs. Tentative field trips include locations in Maryland and Pennsylvania.

For more information, visit the American Paulownia Association website at www.paulowniatrees.org.

April 28—May 1, 2016

Maryland Woodland Stewards Workshop
Shepherd's Spring Retreat & Conference Center, Sharpsburg MD

The Woodland Stewardship Education program will offer the next Maryland Woodland Stewards workshop this coming Spring, from April 28 to May 1, 2016.

Since 1990, the Maryland Woodland Stewards program (and its predecessor, the Coverts Program) has trained over 400 Marylanders the value of sound forest management and the benefits of helping their neighbors to preserve the valuable ecosystems of Maryland's woodlands.

For more information about the Maryland Woodland Stewards program, visit the program's web page at <http://extension.umd.edu/woodland/maryland-woodland-stewards>. To apply, go to <http://bit.ly/1LxxsBT>.

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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.

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