

BRANCHING OUT

Maryland's Woodland Stewardship Educator



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



Volume 24, No. 4

Winter, 2016

Winter is Calling

As autumn yields to winter, the long days of summer seem a distant memory. While it is impossible to forecast what sort of summer we will have next year, now is a good time to think about the upcoming growing seasons. If you have woodland property, take some time to wander through it, as this is a good time of year to assess your trees and the habitat around them.

For example, after the deciduous trees have lost their leaves, you can get a good look at the canopy and assess its condition. You may find that some less-desirable trees are crowding out ones you would like to encourage. Tie some flagging tape around the trees that might benefit from less competition with an eye towards removing surrounding trees in the future.

Winter is also a good time to assess the threat of invasive species in your woodlands. In this issue of *Branching Out*, you can read about the continuing and expanding threat of Emerald Ash Borer in Maryland, about the Southern Pine

Beetle, and about a pair of diseases that are affecting Gypsy Moths. This month's "Invasives in your Woodland" highlights Golden bamboo; although it is often sold as a way to quickly grow a privacy screen on your property, it can easily escape to the surrounding environment if not properly maintained.

And while you're wandering through your woods, or your favorite forest, take some time to observe the habitat around you. If you're lucky, you may get to hear, or even see, one of the iconic residents of the Eastern forests. Read more about the barred owl on page 7.

If you find yourself re-invigorated with inspiration about your woodland property, consider joining us for the next offering of "The Woods in Your Backyard" online course. Read about it on page 6.

Enjoy your winter!



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Update on Emerald Ash Borer in Maryland

Emerald ash borer (EAB) is an invasive insect that kills all species of ash. First found in Michigan in 2002, it was found in Charles County the same year. Since then it has spread to over 24 states. Usually there is number of years between detection in pheromone traps and actual tree mortality, but that time seems to be getting shorter. In the past 2-3 years it has killed the ash trees in the western Maryland counties of Garrett, Allegany, Washington, Frederick, and parts of Carroll. Now it is heading toward the northern counties.



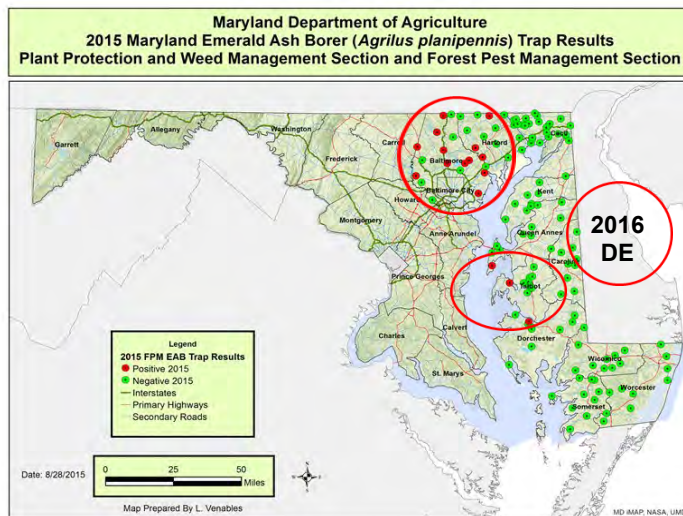
whole trees can snap within a year in some cases. The tree care industry has had workers injured seriously by failing branches while climbing trees with ropes during the removal of ash trees that recently died. Arborists are now using bucket trucks and cranes to remove dead ash trees, which is safer, but means higher removal costs for homeowners.

Biological Controls

Biological control of EAB involves using natural parasitoid predator wasps that inject their eggs through the tree bark into EAB larvae or eggs that lie under the bark. This is an area of intense study and it is hoped that once the large-scale mortality of ash trees subside, parasitoids released into the woods will be well-established and keep the EAB populations in check, allowing the ash trees to grow and survive.

EAB was found in pheromone traps on the Eastern Shore of Maryland and Delaware in 2016, making the Eastern Shore and Delaware part of the other 24 states with the EAB quarantine. In 2016 dead ash trees were found in Easton, MD on the Eastern Shore, which indicates the impacts of EAB will come sooner than might have been expected.

A number of promising parasitoids have been released around the state and then recaptured to see if they have become established, no longer exist, or have spread to areas beyond the release site. An expanding range would indicate success. Of all the parasitoids so far, the *Tetrastichus planipennis* (known as Tets) has been the most promising. However, a major shortcoming is that the ovipositor that penetrates the bark to lay eggs in the EAB larvae will only be effective on trees less than 4 inches in diameter. A parasitoid release of *Spathius galinae*, native to Russia, will hopefully do better in our colder climates, and it has the capability to control EAB on larger diameter trees. Research will continue to find parasitoids that show promise.



Homeowner Options

EAB can be controlled on healthy trees using injections of insecticide, but the cost is significant (about \$10 per inch of diameter, measured at 4.5 ft. from the ground), and needs to be done every 2-3 years. This is an option for specimen trees on homesites, municipal areas and urban areas, but is not practical in areas of extensive forest. For homeowners with ash trees that are still alive and who do not want to protect the trees with injections, it is much cheaper to remove the trees before they die or shortly after mortality occurs. Unlike some other tree species that die, the wood in ash trees tends to decompose quickly and branches and



Parasitic wasps that lay its eggs in EAB larvae may help to control EAB once large-scale mortality of ash trees is over. Wasp shown is one of the more successful releases, *Tetrastichus planipennis*, known as Tets.

What Do I Do Now?

So what action should you take? Well that depends on where the trees are located. If you have ash trees around your home or community, you need to decide if you want protect it. Assuming the tree has about 2/3 of its crown and is in decent shape, you can pay an arborist to inject it every

few years. If not, you are probably well-advised to have it taken down before it dies if it presents a hazard.

If you are woodland owner with dead ash trees it may be too late since the wood does decompose quickly and it may not be useful for forest products. However, if you are in an area where ash trees are still alive, it would be a good idea to assess your options. The fact sheet *Emerald Ash Borer and the Private Woodland Owner* provides good information and can be found at [this link](#).

Given how quickly EAB is moving through the state, if you have ash trees of commercial size then you may want to contact private consulting and industrial foresters quickly to see a timber harvest is possible. You can find important information about Maryland professional foresters on the Woodland Stewardship Education "[Find a Forester](#)" page.

EAB is removing a major woodland species from the landscape but research will continue.

Entomophaga maimaiga: A Fungal Disease of Gypsy Moth

Heather Disque, Maryland Department of Agriculture,
Forest Pest Management,
Eastern Shore Regional Entomologist

Entomophaga maimaiga is a fungal pathogen that attacks Gypsy Moth in its native range in Japan. It was first brought to the United States through infected caterpillars. The first release of *E. maimaiga* was near Boston in 1910 and 1911. These first releases were deemed unsuccessful as scientists could not find the fungus in subsequent years.

However, in 1989 several northeastern states observed the fungus unexpectedly when it caused large amounts of Gypsy Moth mortality. Fungus-killed caterpillars were first observed in MD in 1991 and helped to end one of the state's largest outbreaks from 1987 to 1991. Fungal infections have either helped to end outbreaks or prevented outbreaks from starting.

The spores of the fungus overwinter in the soil and on tree bark. These "resting" spores are thick walled and begin to germinate in the spring. As caterpillars travel in search of food, they come in contact with the spores. Once a caterpillar becomes infected it will usually die within the week. The fungus develops inside of the caterpillar body after digesting through the exoskeleton. When *Entomophaga* attacks young, early instar caterpillars it will produce spores that travel by wind to infect new caterpillar hosts. When older, later instar caterpillars are infected, overwintering spores are produced.

The weather in the spring helps to dictate how well the fungus will reproduce. A spring that has mild temperatures between 50-80 degrees Fahrenheit combined with rainfall will improve fungal growth. A hot and dry spring will not provide the needed moisture and high humidity for optimal fungus growth. During the spring of 2016, the frequent almost consistent rain helped *Entomophaga* to grow and spread. Areas on the Eastern Shore known to have Gypsy Moth caterpillars were found to have no evidence of caterpillar feeding or if caterpillars were found they had been killed. Many of these caterpillars were killed by the fungus, but individuals had also succumbed to the NPV (NucleoPolyhedrosis Virus).

In the field it is very easy to distinguish between a caterpillar killed by the fungus and a caterpillar killed by the virus. Fungus killed individuals remain attached to the tree in a straight line with their head pointing downward. Their legs will be extended from a stiff body. (See Figure 1 below.) This is in contrast to a NPV killed individual who will remain attached to the tree for a shorter amount of time and in an inverted V shape (shown in Figure 2 below). NPV killed bodies are soft, often filled with brown fluid, and decay rapidly. When Gypsy moth populations are high NPV will be found more often, while the fungus will be present in both low and high level populations.



Figure 1: This photo of Gypsy moth mortality in Queen Anne's County shows the caterpillars killed by the fungus. Note the vertical pattern. Photo credit: Heather Disque.



Figure 2: This photo from in Talbot County shows caterpillars killed by both the fungus and the virus. Photo credit: Heather Disque.

Southern Pine Beetle in Maryland

Scott Daniels

Project Manager/Forester, Maryland Department of Natural Resources

Southern Pine Beetle (SPB) is the most destructive forest pest in the southern US and damages and kills hundreds of acres of southern yellow pines every year.

While SPB is indigenous to the pine forests on Maryland's eastern shore and southern Maryland, populations have remained relatively low and outbreaks are generally small in scope and size.



With SPB being always present in the forest, some type of trigger mechanism needs to occur to stress and weaken the pine trees in order for the beetle to attack a tree. This trigger can take many forms such as a lightning strike, soil or site disturbance and actual physical injury to the tree.

In Dorchester County, Maryland along with much of Maryland's lower eastern shore, salt water intrusion and rising water tables are the driving force behind the stress factors affecting loblolly pine that has led to several severe SPB infestations in recent years. Close to 350 acres of pine forest in the Crapo and Andrews areas of Dorchester County have been killed by SPB and areas are adversely affected by salt water intrusion. Once the trees are weakened and stressed by these conditions, they are attacked by SPB which actually bore into the trees and girdles the tree by disrupting the flow of water and nutrients that tree needs to survive. When populations are high enough, the beetle will fly to other trees and the infestation takes hold and can progress rapidly through the woods. Trees are killed in less than a month and because the beetle is inside the tree, spraying an insecticide is not effective in controlling this critter.

The only practical control for SPB is the cutting of timber, not only in areas that are being attacked but in the healthy trees that are directly in the path of the spread of the infestation. By getting the infested trees out of the woods, it is hoped that this will eliminate an available food source for the beetle and the populations of SPB will crash.

Control of the SPB has proven to be difficult in southern Dorchester County for a myriad of reasons:

- Many areas are wet and poorly drained and will not support logging equipment and limits access
- Multiple private land ownerships are involved in these areas and most acreage for any one landowner is small.
- Loggers are not eager to move into these areas because of the reasons already listed along with much of the timber being small, stunted and less desirable.

The best advice I can offer landowners is keep their forests healthy and vigorous and growing well. Healthy trees are much more capable of withstanding a beetle attack than are trees that are old and declining or stressed. Another key is for landowners to stay vigilant and monitor what's going on in their woods. If they notice a lightning strike tree or if they suspect that they have SPB, let a forester know and hopefully they can deal with the problem before SPB populations become too large.

Unfortunately, with the reality of rising water tables and salt water intrusion being the growing trend on much of Maryland's eastern shore, SPB may be here to stay for a while.



Southern Pine Beetle damage in Dorchester County, MD.

EAB Impact Tidal Hardwood Swamps

The impact of emerald ash borer (EAB) on rural woodlands and residential/municipal/urban trees is of great concern and was discussed in the previous article. However, the recent defoliation of a tidal wetland of green ash in Anne Arundel County has raised great concern about the ecological impact of EAB on tidal hardwood wetlands around the Chesapeake Bay. Dr. Andy Baldwin, a wetland ecologist with the University of Maryland College of Agriculture and Natural Resources, established research plots a few years ago in a green ash tidal swamp in Patuxent Wetland Park, near Lothian, Maryland, to look at carbon cycling and other ecological questions. The swamp is typical of tidal hardwood wetlands around the bay composed of green ash and pumpkin ash, and a landscape marked by hummocks and hollows. Access to these wet areas requires the use of a boardwalk in most cases.

Much to the surprise of the researchers, the trees never leafed out in 2016, killed by EAB, opening the understory to direct sunlight and stimulating profuse vegetation growth. The eastern shore has many acres of tidal hardwood swamps around the Nanticoke, Choptank and other rivers and tributaries that are composed of green ash and pumpkin ash. The loss of the forest canopy provides opportunity for invasive species to become established and can compromise the ecological functions of these critical wetland systems for flooding, wildlife, etc. Landowners need to be aware that wetlands containing ash species will likely soon be impacted by EAB. When and where is a big question

However, their inaccessible nature may help to delay any impact.

What can you do as a woodland owner with wetlands? It is recommended that woodland owners contact a professional forester to get a *forest stewardship plan* developed so they better understand their resource and possible management options. Research efforts will continue, but look to this

newsletter or your local University of Maryland Extension office for education workshops. A workshop on “Forest Health and the Woodland Owner” is being planned on the Eastern Shore of Maryland for early March of 2017. EAB along with other forest health concerns such as gypsy moth, and southern pine beetle will be discussed. We encourage you to talk to your neighbors and encourage them to subscribe to the *Branching Out* newsletter at <http://extension.umd.edu/woodland/subscribe-branching-out>.



Dr. Andy Baldwin in front of dead green ash trees at Patuxent Wetland Park.

“The Woods in Your Backyard” Online Course

This fall, the Woodland Stewardship Education program debuted an online course built upon the popular “The Woods in Your Backyard” guide and workbook. The self-paced, non-credit course was offered through the University of Maryland’s Electronic Learning Management System (ELMS), and attracted participants from all regions of Maryland, as well as from Virginia, upstate New York, and Arkansas.

The participants learned a variety of new techniques that allow them to assess their properties and develop strategies for managing invasive species, wildlife habitat, and much more. Many mentioned struggling with deer populations and non-native plants such as Mile-A-Minute and Japanese stiltgrass, and

learned new strategies to help them reach their land stewardship goals.

The Woods in Your Backyard Online Course

One participant noted that the course served as “a great foundation as we prepare to plan for long-term projects,” and another noted the joy of “getting ‘back to the woods’” with his family.

The next offering of the course is tentatively scheduled for March -June, 2017 and will cost \$85.00. Take a look at the [course preview](#), which contains a timetable, sample readings, quizzes and activities. If you are interested, please contact course coordinator Andrew Kling via email at akling1@umd.edu or by phone at (301) 432-2767, extension 307. If there is enough interest, we will offer the course in the Spring of 2017.

Updated Forest Landowners' Tax Tips

Dr. Linda Wang, National Timber Tax Specialist for the USDA Forest Service, has issued her annual "Tax Tips for Forest Landowners." This two-page document may assist woodland owners, logging professionals, foresters and their tax advisors during the 2016 tax season. Definitions and examples highlight many of the challenges associated with calculating taxes related to conservation easements, timber sales, cost-share programs and more. The PDF is available at <http://www.fs.fed.us/cooperativeforestry/library/taxtips2016.pdf>.



Alliance for Green Heat Launches Online Stove Change-out Resource Center

The Alliance for Green Heat recently launched the Online Stove Change-out Resource Center. The site summarizes "change-out" programs across the United States that encourage homeowners to replace old, inefficient, and polluting wood stoves for cleaner-burning alternatives. The site also provides tips for change-out program managers and regulators, tips for homeowners, and much more.



Photo from Alliance for Green Heat

Find the Resource Center at <http://www.forgreenheat.org/changeout/resources.html>.

Maryland residents interested in updating their wood heat systems should investigate the state's [Clean Burning Wood Stove Grant Program](#), offered by the Maryland Energy Administration.

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Partners: Forests For the Bay, MD Association of Forest Conservancy District Boards, MD Association of Soil Conservation Districts, MD/DE Master Logger, MD/DE Society of American Foresters, MD DNR Forest Service, MD Farm Bureau, MD Forestry Foundation, MD Forests Association, MD Tree Farm Committee, The Nature Conservancy, Western MD Resource, Conservation and Development.

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Seedlings Now Available for the 2017 Planting Season

The John S. Ayton State Forest Tree Nursery, located in Preston MD, is now taking orders for those planning to plant trees next spring. The Nursery has a wide variety of deciduous and conifer species available. Each species has an illustrative photo and a short description of typical mature size and ideal planting site requirements. Species that are Maryland natives are noted.

It is important to note that the seedlings from the nursery must be planted for conservation, lumber, and/or Christmas tree purposes only. In other words, they cannot be used for landscaping.

For more information, and to view the species available for order, visit the Nursery's website at <http://nursery.dnr.maryland.gov/>.

Woodland Wildlife Spotlight: Barred Owl

The barred owl (*Strix varia*) is one of North America's most typical species. Originally an exclusively eastern bird, it is also known colloquially as the hoot owl, the laughing owl, and the swamp owl. It inhabits old growth woodlands, wooded river bottoms, and wooded swamps. Visitors to the outdoors enjoy the bird's distinctive call that has been imitated by generations of youngsters at camp. The hooting "[Who cooks for you? Who cooks for you-all?](#)" carries well through the woods as a pair call back and forth to each other. In addition, the barred owl has a variety of calls that include cackles caws, and hoots. Unlike other owls, they may be heard calling during the daytime.



Barred owl showing diagnostic breast and tail barred feathers (left); photo courtesy Garth McElroy/VIREO

Barred owl in flight (below); photo courtesy Arthur Morris/VIREO



This species is a large, stocky bird, with a rounded head, no ear tufts, and medium length, rounded tails. They range from 17 to 20 inches (43-50 cm) in length, with a wingspan of 39 to 43 inches (99-110 cm). Birds weigh from 17 to 37 ounces (470-1050 grams). Their feathers are mottled brown and white, with dark brown eyes that appear almost black. The feathers on the upper breast are crossed with horizontal brown bars; the tail feathers have equally distinctive three to five bars. Females are generally larger than males with similar plumage.

Barred owls perch in forest trees during the day and hunt generally near dawn or dusk. They fly through the woods with slow, methodical wingbeats, with occasional long, direct glides. They sweep down on their prey, capturing small animals, such as squirrels, rabbits, opossums, shrews and various rodents. The birds may also hunt frogs, salamanders, snakes and some insects as well.

Unlike some other birds of prey, barred owls are not migratory. In fact, most barred owls rarely move far from their home range. One study noted that of 158 birds that were banded and found later, none had moved farther than six miles away from where it had been originally banded. These owls need large, dead trees for nesting sites, usually choosing a natural cavity in a tree or taking over one excavated by pileated woodpeckers. When snags are not available, they may also take over a nesting area abandoned by other birds, such as hawks or ravens. It is unknown whether the male or the female picks the site, but scientists have speculated that they may study a particular spot for perhaps a year before choosing to use it.

Because barred owls are year-round residents, mating and breeding schedules vary across its range. During mating rituals, the woods come alive as both males and females [screech](#), [hoot and caterwaul](#). Pairs probably mate for life, raising one brood each year. If the first clutch of eggs is lost due to predation or other mishaps, the female may lay a second. Eggs are laid as early as mid-January in Florida or as late as mid-April in northern Maine. Clutches are usually 2-4 eggs and are incubated by the female. The eggs hatch approximately four weeks later, and the chicks fledge about a month after that. During this time, the

male hunts and brings food for the female and the young. In the wild, barred owls can live about ten years; in captivity, they can live past twenty.

While some of the barred owl's original habitat in eastern North America has decreased over the last one hundred years, the bird has used wooded river corridors to expand its range into the forests of the upper Midwest, the Rocky Mountains, and the Pacific Northwest, as well as the forests of southern Canada. Today it can be found from British Columbia to Florida, and from southern Quebec to east Texas.

Consequently, the species' overall population is stable and actually increased during the last half of the 20th century. However, their preference for large, dead trees for nesting can put them at risk in heavily-logged areas. For that reason, the barred owl is often used as an indicator species for the management of older-growth woodlands.

Invasives in Your Woodland: Golden Bamboo

This issue's spotlight falls on Golden bamboo. Also known as fishpole bamboo or running bamboo, this invasive plant was introduced to North America over a century ago and is still offered for sale as a fast-growing ornamental plant.

What is it?

Golden bamboo (*Phyllostachys aurea*) is native to southeast China, and has been cultivated in Japan for centuries. It was first introduced to the United States in 1882 at a site in Alabama. It became a popular choice for property owners wishing to develop a screening and/or noise barrier. Others planted it with the intention of harvesting them for fishing poles.

Since its first arrival, it has escaped from its original planting sites in the southeast, spreading from Texas to North Carolina, but it is also cultivated as far north as Buffalo, NY. Scattered escaped populations exist as far west as California and Hawaii; on the island of Oahu, researchers found a one-acre patch on a hillside that has crowded out native species. The patch had grown from a single roadside ornamental planting.

What makes Golden bamboo popular as a planting choice for property owners (in particular, its fast growth in a variety of light and soil conditions) also makes it a challenge for managers if it is not properly contained. It can grow in both open and wooded environments as well as on forest edges. It is now considered an invasive species in Maryland, Pennsylvania, Virginia, West Virginia and Georgia.

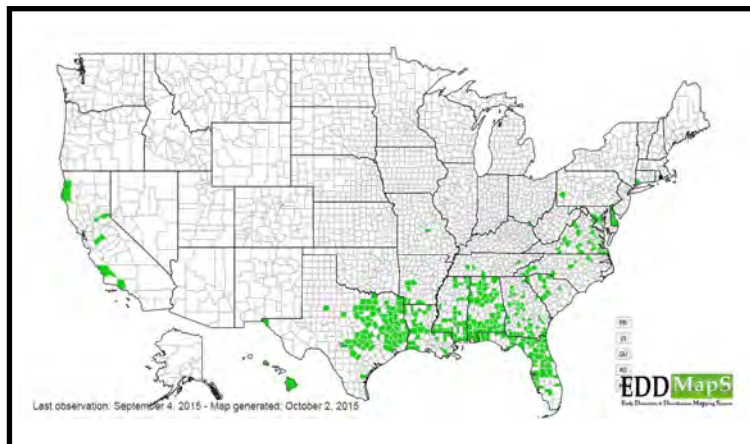
How does it spread?

As with other species of bamboo, Golden bamboo plants rarely flower or produce seeds; it may be anywhere from 5 to 30 years between events for a stand of Golden bamboo.

Instead, Golden bamboo spreads through underground rhizomes which grow quickly, spreading out horizontally from the parent plant. Stems generally emerge in early Spring.



Roadside growth of Golden bamboo
Photo by Karan Rawlins/University of Georgia—Bugwood.org



Distribution of golden bamboo (2015).
Courtesy eddmaps.org.

How can I identify it?

Golden bamboo grows as solid jointed canes from one to six inches in diameter. The canes are hollow between the joints and range in color from golden green to deep green to black. They can grow up to 40 feet in height.

The leaves often grow in fan clusters, with long, "lanceolate" blades (elongated ovals that resemble lance blades) that range from 3 to 10 inches in length. See photos on the following page.

How can I control it?

The easiest way to keep Golden bamboo out of an environment is to not plant it in the first place. If control on an existing stand is desired, a combination of cutting, burning and herbicide applications may be required. It is essential that all rhizomes are removed through excavation, as they can continue to grow despite the loss of the above-ground plants. Repeated treatment of the area will likely be necessary to ensure complete eradication.

For more information:

For more information:

A wide variety of resources exist about Golden bamboo:
[Bugwood.org wiki page](http://Bugwood.org/wiki/page)
[National Park Service](http://NationalParkService)
[Center for Aquatic and Invasive Plants—University of Florida](http://CenterforAquaticandInvasivePlants—UniversityofFlorida),
[Institute of Food and Agricultural Services](http://InstituteofFoodandAgriculturalServices)

See the gallery on the next page.

Image Gallery: Golden Bamboo



Base stems and leaf litter of a cluster of Golden bamboo. Photo courtesy James R. Allison, Georgia Department of Natural Resources, www.forestryimages.org



New sprout of Golden bamboo in September. Photo courtesy Chuck Bargeron, The University of Georgia, www.forestryimages.org



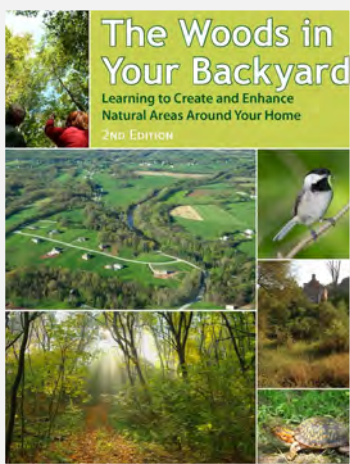
Stems of Golden bamboo. Photo courtesy Chuck Bargeron, The University of Georgia, www.forestryimages.org



New Jersey homeowner Josh Velez displays Golden bamboo rhizome that was excavated from his property. The roots are creeping onto his land from a neighboring plot. Photo courtesy Kevin Hagen, *The Wall Street Journal*

Now Available!

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 color 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://go.umd.edu/WIYB-2nd-edition> to order.



Sample pages from the second edition.

In Memoriam: Steve Bittner

Steve Bittner, who retired in 2011 after 31 years as a wildlife biologist with the Maryland Department of Natural Resources, passed away on November 8, 2016 after a battle with prostate cancer. He was 62.

Steve, a native of Pittsburgh, came to the DNR after receiving his bachelor's degree from the University of West Virginia and his master's from Frostburg State, and a short stint in Washington DC. He was based out of the DNR's district wildlife office in Hagerstown, MD. He met his future wife, Joni, when he had to travel to the DNR's regional office in Cumberland to deliver his office's timecards. They were married in 1979.

Jonathan Kays, natural resources specialist for the University of Maryland Extension, recalled Steve's generosity in helping the Maryland Coverts Cooperators (now called Maryland Woodland Stewards) program get off the ground. Steve volunteered his time for several years to help present wildlife programs during the annual training workshops. He also provided information about interesting



Steve Bittner with a bear cub, March 17, 1999. Photo courtesy the Bittner family.

sites to visit and helped network with other professionals to join the workshops.

In a remembrance published in the *Hagerstown Herald-Mail*, Steve's friend Todd Baer recalled a day that he and his wife joined Steve in Garrett County. Steve invited them to help the DNR with some bear cubs while their mothers were tranquilized for medical and dental checkups.

Baer recounted that Steve handed them a jar of Vicks VapoRub,

which they rubbed on the cubs. The DNR staff rubbed it on the bear mothers' noses, so that when the mothers awoke, the smell on their cubs wasn't of the humans who had been handling them. Baer said, "I couldn't think of a day spent that was better than that."

Events Calendar

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

January 10 –13, 2017

28th USDA Interagency Research Forum on Invasive Species

Loews Annapolis Hotel, Annapolis MD

Join state, local, university and federal researchers as they discuss a variety of topics related to non-native invasive species. Topics will include updates and challenges related to Emerald Ash Borer and gypsy moth. Learn more about the forum [here](#) and get meeting and registration information [here](#).

January 21, 2017, 8:00 AM—3:30 PM

Past, Present, and Future Challenges for Our Forests

FWV Post 467, Westminster MD

Feeling stressed? Unfortunately, it is not only people that suffer from stress. Drought, non-native insect pests, imported pathogens, and climate change are stressing our forests and our landscape trees. Join the Carroll County Forest Conservancy District Board and the Maryland Extension Service for an all-day workshop on January 21, 2017 to hear about some of the major challenges to our eastern woodlands and steps to help our trees recover from these stressors.

Registration is \$50.00 per person, \$75.00 per couple, or \$15.00 per student (with ID).

For more information about the workshop and how to register, visit <http://www.carrollcountyforestryboard.org/index.cfm?objectid=819CD780-8AB9-11E4-AACF0050560F037A>. You may also call the Maryland Forest Service at 410-848-9290 to request a paper registration form.

February 15-17, 2017

Allegheny SAF Winter Training 2017

Wyomissing PA

Sponsored by the USDA Forest Service, Northern Research Station. This year's theme is "Rural and Urban Ecosystem Health in the Mid-Atlantic Region." Download a workshop flyer [here](#). For more information, contact Randall Morin at rsmorin@fs.fed.us.

April 27, 2017

National Firewood Workshop

Iredell County Cooperative Extension Office, Statesville NC

This year's National Firewood Workshop will be held in Statesville, NC, near Charlotte. The one-day workshop will include demonstrations by firewood processors, classroom discussions by leading firewood industry professionals, and much more.

Topics include selling and marketing of firewood, sourcing affordable logs, dry kiln equipment and methods, and much more.

The workshop is \$25.00 per participant. For more information and a registration brochure, go to <http://extension.umd.edu/events/thu-2017-04-27-0800-national-firewood-workshop>

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

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This Issue's Brain Tickler ...

Take a look at the two maple leaves below. One comes from the native sugar maple, and the other comes from the invasive Norway maple. Which is the native and which is the invasive?

