

BRANCHING OUT

Maryland's Forest Stewardship Educator



University of Maryland Extension - Forest Stewardship Education
www.naturalresources.umd.edu

Vol. 20 No. 2; 2012

Is it Time to Think About Wood Heat?

The heat of the summer will soon give rise to the cold of winter and the promise of high heating bills. If you currently using wood for heat, now is the time to stock up with firewood, and more importantly, split any wood you have so it can dry—wood does not really dry until it is split. Wood should be 20% moisture, which can take 6-12 months after it is split. Consider buying a simple moisture meter at a home improvement store and then split some pieces of wood and test the moisture in the middle. If you use pellets, ordering in the summer will usually get you a better price. Also, clean your chimney and make sure your stove is in good repair.

If you are new to burning wood as firewood or pellets, now is the time check out some online resources and visit a reputable wood stove dealer to educate yourself about what you would need to meet your needs. In the discussion about renewable energy, many people think of solar, wind, and geothermal energy, forgetting about the oldest and largest source of renewable energy—wood.

Wood heat is the fastest growing residential heat fuel in Maryland, with an increase of 34% from 2000 to 2010. About 18% of Maryland homes have at least one wood combustion appliance. The increasing price of fossil fuel and the poor quality of heat from electric heat pumps is a likely contributor. Whether you are considering the use of firewood or wood pellets, wood heat is

the one renewable natural resource that can help middle and lower income families save a significant portion on their heat bill.

The technology of burning wood has increased dramatically in the last few decades, leading to lower emissions and higher efficiency, which means that your wood lasts longer and you have to buy or cut less of it. The EPA requires all wood stoves produced after 1988 to emit less than 7.5 grams of particulate per hour, and most stoves now are more in the 4 gram area, and improving. Pellet stoves are not rated by the EPA, but their emissions are very low because of the fuel, usually less than 2 grams per hour.

Some people wonder if cutting wood to produce heat is sustainable – Will we run out of trees? A valid question, but not to worry! In Maryland, data from 2008 shows we grow 2.6 times more wood than is removed by tree mortality or harvesting, a ratio that has doubled since 1999. If you just include hardwood trees, tree growth is even higher at 3.6.

Should I Start Burning Wood?

If you are new to burning wood or an existing user seeking more information, consider the following resources.

- The Alliance for Green Heat is a nonprofit organization that promotes high efficiency wood heat for the residential

applications.

(www.forgreenheat.org)

- The University of Maryland Extension (UME) has fact sheets and webinars: Heating with Wood fact sheet provides a good background on what you need to know. (www.naturalresources.umd.edu/Publications/PDFs/FS926WoodFuel.pdf). In the next few months UME will be releasing a new fact sheet series. Also, check the website, www.naturalresources.umd.edu for upcoming workshops and other events focused on heating with wood.
- Heating with Wood - Opportunities and Challenges for Homeowners: This one hour session can be viewed online at no cost. No special software is needed but high speed connection is recommended. www.naturalresources.umd.edu/ResourcesWebinars.html
- Visit a reputable wood stove store in your area. Buying a wood stove is one thing, but having a good dealer in the area is important. Store showrooms can be invaluable to the new buyer to demonstrate how the stoves work, their pros and cons, prices for the stove, and any chimney work that is needed. You can search the internet for “wood stove dealer” in your area or go to the Hearth, Patio, & Barbecue Association website (www.hpba.org) and use their dealer location function.
- The Maryland Energy Administration (www.energy.state.md.us) may have specific programs that apply to residential users. Always worth a check.

Remember – Wood is Good!

More Heat – Less Firewood Workshops

Are you someone who heats with wood or pellets or is considering heating with wood or pellets? Perhaps you are interested in an inside stove or an outdoor wood boiler. If so, consider attending one of the *More Heat - Less Firewood* sessions in Garrett or Washington County. Firewood is one of the most economical forms of renewable energy available today and the advances made in wood burning technology have greatly improved efficiency and reduced emissions. The goal of the workshop is to educate people who use wood (firewood or pellets) to save money, time, and lessen the environmental impact of wood use through the use of best practices.

Workshop dates will be in September and details will soon be available at the University of Maryland Forest Stewardship Education website at www.naturalresources.umd.edu.

August Is the Time to Start Control of Invasive Vegetation

Timing is an important factor when controlling invasive species or other forest vegetation through the judicious use of herbicides applied to foliage (foliar spray), a cut stump (cut stump treatment), or a stem (hack ‘n squirt or basal application). Regardless of application, the purpose is the same, to translocate the herbicide to the roots of the plant where it disrupts growth and kills the plant. Not only is the above ground portion of the plant killed, but so is the root, which stops re-sprouting from the stump or the roots. The challenge is getting the herbicide from where it is applied (leaves, stump, or stem) to the root. This is where timing is so important.

In the spring most plants transport stored carbohydrates in the root system to the growth above ground, which fuels the “spring growth”

that we see. During this time, the young leaves grow and mature and the process of photosynthesis takes sunlight, carbon dioxide, and water, and produces carbohydrates (plant food) and oxygen. Starting around July the transport of carbohydrates changes direction and some are used to fuel diameter growth, but many are sent directly to the roots and stored to support growth the next spring. It is during this time frame that the opportunity for movement of herbicides from crown or stem to the roots is maximized.

When you read the label of herbicides that are applied on foliage or stems, they recommend application starting in late summer and continuing into the fall to get the best control. Herbicides applied to cut stumps or to the bole of the tree can usually be applied throughout the winter with good control as well. It is the summer and fall when the plant carbohydrates are moving to the roots, and this best explains why maximum effectiveness is during this window of opportunity. If you spray foliage in the spring you may kill the above ground portion of the plant, but the upward movement of carbohydrates from the roots stops transport to the roots.

What Herbicides Should I Use?

There are many herbicides that can be applied to foliage or on cut stumps, but one of the most widely used, safest, and easily available is glyphosate, commonly known by the Monsanto trade name, "Roundup," but there are many other generic brands now that the patent has expired. Make sure you are buying the concentrated form (usually 41% glyphosate or more) and not a watered down product. Another herbicide well suited to invasive species control is triclopyr (trade name Garlon), but is not available in consumer outlets and is only sold in 2.5 gallon plastic jugs. Triclopyr is one of the

best materials for controlling tree-of-heaven since it does a better job of stopping root sprouting compared to glyphosate. More on controlling tree-of-heaven is available at: www.naturalresources.umd.edu/Publications/ai/residential.pdf

One thing you will need to apply foliar herbicides is a 3-4 gallon backpack sprayer, which is available at most home improvement stores and online. Learn how to safely use herbicides and the best way to start is to carefully read the label; most everything you need to know is there. You can also contact your local UME office and see about getting a private pesticide applicators license. Some other resources include:

- Herbicides and Forest Vegetation Management: Controlling unwanted trees, brush, and other competing forest vegetation. Penn State Extension. <http://pubs.cas.psu.edu/freepubs/pdfs/uh174.pdf>
- Calibrating and Using Backpack Sprayer. Oregon State University. http://extension.oregonstate.edu/linn/sites/default/files/pnw_320_calibrating_and_using_backpack_sprayers.pdf

New Emerald Ash Borer Quarantine Requires More Vigilance

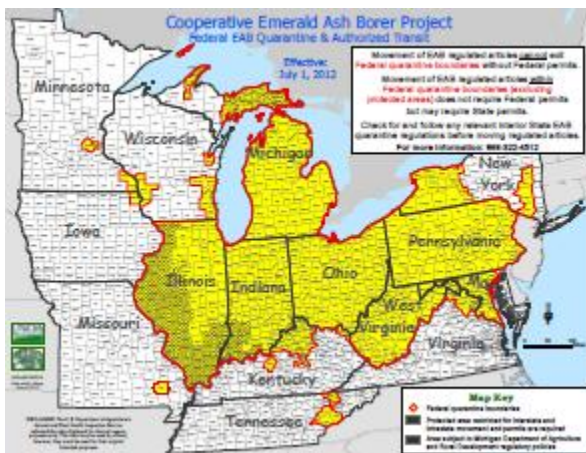
The emerald ash borer (EAB) is an invasive wood-boring beetle that has been killing ash trees wherever it goes, and has now been confirmed in fifteen states. The seven counties in Maryland where it has been confirmed are Allegany, Anne Arundel, Charles, Howard, Montgomery, Prince George's, and Washington Counties.

Since 2007, the USDA's Animal and Plant Health Inspection Service (APHIS) has instituted a federal quarantine in Maryland and other states

that restrict the movement of ash trees and products from infested areas. In 2011, APHIS expanded the Maryland quarantine zone from several small areas to one large area that includes all of western, central, and southern Maryland west of the Chesapeake Bay and Susquehanna River.

Due to the ever-expanding range of the infestation, on July 1, 2012 APHIS updated its federal quarantine policy to allow “unrestricted interstate movement of regulated articles within contiguous federal quarantine boundaries.” In other words, it is now legal to move hardwood firewood, ash trees, and ash logs from within the quarantine zone across the state line when both sides of that line are in quarantine. In Maryland this applies to every state line along the quarantine zone except between Charles and St. Mary’s Counties and Virginia. Download a full-size Project Map from:

<http://www.naturalresources.umd.edu/Images/BranchingOut/2012Vol20No2/EABQuarMap.pdf>
(or click thumbnail below):



This is good news for firewood operators and mills in the quarantine area that were formerly not able to ship their supplies or products across state lines, but the new rules also mean that firewood users need to be even more vigilant about the source of their wood.

There are many areas within this large quarantine zone that do not yet host EAB. All it takes to infest a new area is a single stick of ash firewood carrying EAB larvae. Once they emerge in a new location and call it home, it’s almost impossible to stop the spread. With these relaxed regulations, it is now mainly the responsibility of citizens to “buy it where they burn it” and avoid moving firewood long distances.

While EAB can fly about a half mile in a year on its own, its range while riding inside a stick of firewood is only limited by the travel plans of the firewood’s buyer. Although it may seem wasteful to pay for a bundle of firewood at a campsite when you have stacks of it at home, the expense is small when compared to the value of the hundreds or thousands of ash trees that could die as a result.

EAB probably arrived in North America hidden in wood packing materials and was first detected in the US in 2002. The larvae of the beetle feed on the phloem of any species of ash tree, creating S-shaped galleries that cut off the tree’s circulation of nutrients. Common signs and symptoms are wilting and/or yellowing foliage, branch dieback, 1/8” D-shaped exit holes, woodpecker feeding, and trunk sprouts.

The adult beetles are iridescent green and about 1/2” long with a slender tapering body.

Control measures are available if EAB is already in your neighborhood. Several effective insecticides are available both for prevention and treatment in ash trees, although the cost usually limits them to street and yard trees. Landowners of forest with a strong ash component should consider managing for the removal of ash, or preparing to eventually lose them to EAB.

For more information on EAB ID and control, or to report a suspected EAB infestation, contact the University of Maryland Home and Garden Information Center at <http://hgic.umd.edu/content/emeraldAshBorer.cfm> or 1-800-342-2507.

When it's NOT Emerald Ash Borer: Clearwing Borers

The emerald ash borer (EAB) is making its way through Maryland, killing valuable ash trees wherever it goes. EAB was introduced to the US from Asia and was first detected in 2002. It is a deadly beetle that can infest any species of ash tree, which, without treatment, leads to the tree's death in almost every case. It's currently confirmed in Allegany, Washington, Howard, Anne Arundel, Prince George's, and Charles counties, but has not yet been spotted anywhere on the Delmarva Peninsula.

EAB is not the only reason that an ash tree might be struggling, and while you should stay on high alert for an ash with dead branches and leaves, there are a few other possibilities to consider before sounding the alarm. Knowing which insect is which can help you make good decisions about when to let nature takes its course, when to jump in and do your own control measures, and when to call for help. This is the first in a two-part series, and will focus on clearwing borers.

There are a few insects that attack ash trees and produce symptoms similar to those of EAB, but that are native to the U.S., and are usually not fatal. The two most common species, and the ones most likely to do serious damage, are the banded ash clearwing borer and the lilac/ash clearwing borer. These are actually moths, but they look more like wasps at a glance.

The larvae of these moths are flesh-colored caterpillars that feed inside the tree. They bore deeper into the wood than EAB and push out frass onto the bark and ground, which looks like a sprinkling of sawdust. EAB packs its frass inside the tree and doesn't push any out.

When the larvae of any of these species pupate and become an adult, they tunnel out of the tree and fly away, leaving their pupal case behind. EAB's pupal case is left inside the tree, out of sight, but a clearwing case can often be seen sticking halfway out of the hole they cut in the bark.

The banded ash borer, redheaded ash borer, and ash privet borer are beetles that will also attack ash trees, but are less likely to cause noticeable damage and usually only go for trees that are already dying or dead. Like EAB they do not push out frass, but the larvae are round and chubby, unlike the flat and angular EAB larvae. The tunnels they dig start out right under the bark, but get deeper as the larvae mature.

Ash bark beetles may also infest dead or dying ash trees, and create lots of tiny exit holes, each one just 1/25" across.

In general, the size and shape of the exit hole is the easiest way to tell which of these insects the culprit is. EAB leaves a D-shaped hole about 1/8" across. The D can be facing in any direction. All of the other possible borers in ash create round or oval holes that are either much bigger or smaller.

So now that you should have some clues about what's eating your ash tree, what's the next step?

First, if you still think that you may be hosting EAB, contact the University of Maryland Home and Garden Information Center at 800-342-2507 or www.hgic.umd.edu as soon as possible. Quick action in areas of new infestations can help to save many ash trees.

If you've identified one of the clearwing moths, there are some control measures you can take yourself. If there are only a few, you may be able to kill them manually with a stick or wire.

Introducing nematodes has proven to effectively control larvae populations. There are also broad spectrum insecticides that can be applied to the bark and kill the adults on contact when they attempt to lay eggs. This method requires careful monitoring, ideally with pheromone traps, in order to get the timing right. Calling a licensed tree expert to do this sort of work is advisable.

It's important to remember that the clearwing moths are not very aggressive pests, and are usually taking advantage of other stressors on the tree, like drought or injury. Fertilizing and deep watering can help trees recover.

The second article in this two-part series will cover some of the other pests and pathogens that can cause damage and dieback in Delmarva ash trees.

Steps to a Timber Sale

Many landowners view their woods and the timber in them as a rainy day fund—a source of emergency cash if the truck dies unexpectedly or if Susie gets into Harvard. Timber often is a solid investment, but just like a savings bond, drawing on it before its mature will not allow you to realize its full dollar value.

The decision to harvest your timber should be made years in advance after careful consideration of your long-term goals for your property, the condition of the woods, and close consultation with a consultant forester. A consultant, or private, forester can ensure that you maximize your profit while promoting high quality timber in the next generation of trees, all with consideration for your long-term goals

whether they be maximum profit, high quality wildlife habitat, or anything else.

Imagine that you're building a house. Would you allow your builder to just design your house as he went along without using any blueprints? Probably not. We contract architects to be the middleman—to come up with a plan for the big picture that meets the needs of both the homeowner and the builder. Consultant foresters take on a similar role in a timber sale. They help you create a long-term stewardship plan that will help you achieve your own goals step by step. A timber sale should only be one of those steps, not the final result.

Consultant foresters do charge for their services, but they know the forestry business so much better than the average landowner that an owner's net profits from a sale after paying the forester are almost always higher with the use of a forester than without one. Even if you were to net the same profit either way, it's always better to have someone on your side who knows the business and is looking out for your long-term interests, rather than just moving on to the next sale.

One of the ways a forester ensures top dollar for your timber is to invite bids from local loggers, with whom they generally already have a working relationship. This method allows the landowner to set the terms and maintain control of the process. With the poor economy the timber market has suffered as well. If none of the bids are satisfactory, it's up to you to decide whether to try to get a better price by working directly with a logger, or put off the sale until the market improves. The forest can provide some guidance to help you make a decision.

The benefits of using a consultant extend beyond the financial. A good forester will ensure either that there will be enough seeds, seedlings, or sprouts on site for high-quality natural

regeneration, and will arrange for any planting, spraying, or other site preparation for the next stand. Your forester will also monitor the logging job site, help you with tax preparation, and set up a performance bond in case the logger damages the site or breaks the contract.

To choose a forester, talk to friends, family, and neighbors about their experiences, or ask your county Extension agent for some recommendations. Talk to a few foresters and ask for references from other customers. Base your choice on the quality of their work and how well you seem to get along. Also ask about their degrees and qualifications, such as the Society of American Foresters Certified Forester program or membership in the Association of Consulting Foresters. Maryland requires that all foresters meet certain licensing standards in order to practice, but Delaware, Pennsylvania, and Virginia do not.

There are also two other types of foresters. State Forest Services employ service foresters to help landowners manage their land by giving advice and writing stewardship plans at a subsidized rate, although these foresters cannot manage timber sales in some states. You can find your county forester in the State Government blue pages of the phone book under Natural Resources.

Industrial, or procurement, foresters are employed by a mill. Many are excellent foresters who want to build long-term working relationships with landowners, but the best interests of their mill will be their priority.

When strapped for cash, it can be tempting to sell your timber at the first offer for what probably sounds like an excessive amount of money. All too often, though, the first offer is nowhere near the actual market value, and the quality of the logger's work is not ensured. More importantly, it's unlikely that your need for

money coincides with the biological peak of your forest's timber production. Working closely with a consultant forester and creating a long-term stewardship plan will leave you confident that you are getting the most out of your forest land.

The extension bulletin, Marketing Forest Products: Understanding the Sales Process (EB-367) provides more information. It is available at:

<http://extension.umd.edu/publications/PDFs/E367.pdf>

General Forestry Course

The University of Maryland Extension has opened registration for the General Forestry Course. The course will run during the Fall 2012 semester. Both the paper and online versions are available. The course begins September 1 and runs until December 15, 2012. To register, go to our website at <http://www.mdforest.umd.edu>.

As there are no formal classes, you work from the comfort of your home using your own woodlot, a friend's, or a public forest. You will learn how to protect your trees from insects, diseases and fire; step-by-step procedures will walk you through a forest inventory and stand analysis; and the details of the forestry business are presented, including tax nuances and the sale and harvest of forest products. Ultimately, the course exercises help you develop the framework for a management plan for your forest.

The cost for this forestry course is \$300. Late registration (September 2-14) is \$400. Included in the cost are copies of the supplemental readings (A Sand County Almanac, The Woodland Steward, American Forests: A History of Resiliency and Recovery, and a small pamphlet entitled *What Tree Is That?*). The paper version text and appendices are in binder form. Online

users receive a flash drive of the paper version of the text and appendices. A certificate of completion is awarded when all assignments are completed.

See a sample of the course on our website at <http://www.mdforest.umd.edu>. There you can read a lesson from the text, view an interactive exercise, read through detailed course information and FAQs.

For more information, contact Nancy Stewart, Faculty Extension Assistant, Forestry, University of Maryland Extension, Wye Research and Education Center, P.O. Box 169, Queenstown, MD, 21658; phone 410/827-8056, ext. 107; or email nstewar1@umd.edu.

Check for details on our website today and mark the date for open enrollment on your calendar!

Save the Date - Thousand Cankers Disease Educational Bus Tour

The Maryland Chapter of the Walnut Council is sponsoring a chartered bus tour to the recently discovered outbreak sites of Thousand Cankers Disease near Richmond, Virginia. The trip will take place on Saturday, September 8th, and be an all-day event, including lunch and a visit to a local arboretum.

Thousand Cankers Disease (TCD) is a new insect-fungus complex that was discovered in Colorado in 2001. In the western United States, where it is most prevalent, this disease leads to a near 100% mortality of infected trees. By 2011, TCD was discovered near Richmond, Virginia, and in Bucks County, Pennsylvania. With infestations this close, it is likely that TCD will be appearing in Maryland in the near future. Given the potential of this disease to decimate the Black Walnut population, America's most valuable hardwood tree, it is important that professionals who manage trees or timber be on the lookout

for TCD in Maryland. The intention of this workshop is to educate the participants on how to identify Thousand Cankers Disease, using hands-on experience, as the first step in an Early Detection Rapid Response management strategy.

If you want to learn more about this tour, please e-mail drobbins@dnr.state.md.us, or call Dave Robbins at 301-791-4010. Some of the details of the program are still tentative, but you will be notified as information becomes available. For more information on Thousand Cankers Disease, visit www.thousandcankers.com.

Options for Woodland Owners to Manage Deer on their Property

Woodland owners enjoy seeing deer on their property, but the overabundance of deer in many parts of the state has a negative impact on the biodiversity of your woods and forest health. Deer are selective browsers and tend to eat the native species and make it easier for invasive vegetation to flourish. The lack of natural species in the understory of the forest makes it more difficult for the native species to replace those invasive species that now exist.

Besides the impact on forest ecosystems, overabundant deer cause safety concerns due to Lyme disease and deer-vehicle collisions. Then there is the economic impact of browsing on gardens and landscapes. Wildlife biologists recommend that about 20-30% of the female deer must be harvested each year to maintain the population from one year to the next. It is no wonder that deer populations increase so quickly in areas with no hunting.

Many woodland owners may not hunt themselves but recognize the need to keep the deer population in check. There are many responsible and ethical hunters in most locales willing to keep the deer in check. Check with

local and state hunt club or other hunters in your area.

Many landowners are concerned about liability for those hunting on their property. As long as no fee is charged, landowners have minimal liability for others hunting on their property or for other recreational activities, including cutting firewood. Known as the Maryland Recreational Statute, it provides good protection for woodland owners on small and large properties. A full explanation of the statute and how it applies is available in the Extension Bulletin, Recreational Access and Landowner Liability in Maryland (EB-357). This bulletin is free and can be downloaded at:

<http://extension.umd.edu/publications/PDFs/EB357.pdf>

The Maryland Department of Natural Resources Wildlife and Heritage Service provide deer damage permits for Maryland landowners experiencing severe crop damage. In 2002, changes in the Deer Management Permit system enabled Maryland woodland owners to obtain deer damage permits to harvest deer throughout the year to reduce the damage to existing forests and plantations. The woodland owner must have a written forest management plan or tree planting plan written by a licensed professional forester. A DNR wildlife professional reviews the request for a permit, which can be filled by the landowners or others the landowners designates. For more information call the DNR wildlife person who serves your county.

http://dnr.maryland.gov/wildlife/Hunt_Trap/deer/deer_damage/ddpermit.asp

As woodland acreages have declined, hunting on small properties can be a problem, since hunters must be 150 yards (450 feet) from an occupied dwelling. This makes it difficult for landowners in large lot subdivisions and other locations. However, the distance requirement is waived if

the landowner has written permission from adjunct landowners to allow hunting within the 150 yard distance. Many landowners are utilizing bow hunters (and sometimes firearms) on small acreage properties to keep deer populations in check.

As the heat of summer sizzles, consider how you can manage the deer on your property to be in balance with woodland you own. That is good forest stewardship!

Federal Income Tax on Timber: A Key to Your Most Frequently Asked Questions

The 2011 edition of this publication provides a quick reference on timber tax laws that are important to woodland owners. It presents a concise and easy-to-understand explanation of the most commonly asked tax questions. Since the first income tax Form 1040 appeared in 1913, many timber tax provisions have been added to encourage management and stewardship of private woodland that are commonly unknown by tax professionals. This publication is prepared to help woodland taxpayers and their professional advisors to learn and utilize these tax laws.

<http://www.fs.fed.us/spf/coop/library/taxpubfaq.pdf>

Events

September

More Heat – Less Firewood Workshops
(dates and details to be announced soon)

September 1

General Forestry Course begins (see details in this newsletter)

September 8

Thousand Cankers Disease Bus Tour (see details in this newsletter)

September 27 – Sunday, September 30, 2012

Women and their Woods
2012 Educational Training Retreat

Application
<http://www.naturalresources.umd.edu/Documents/Events/201209WATWApp.pdf>

Retreat Story
<http://www.naturalresources.umd.edu/Documents/Events/201209WATWRetStry.pdf>

Brochure
<http://www.naturalresources.umd.edu/Documents/Events/201209WATWBroch.pdf>

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, Nevin Dawson, Ellen Green

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

To Subscribe:

Email Notification: To be notified by email when new issues become available, email listserv@listserv.umd.edu. In the body of the

message, type SUB branchingout your name (ex: SUB branchingout John Doe).

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

Online: Issues can be downloaded for free at <http://www.naturalresources.umd.edu>.

Send news items to Nevin Dawson at ndawson@umd.edu or 410-827-8056 x125