Conservation Currents

Northern Virginia Soil & Water Conservation District

Volume 37, Issue 3 The Tree Issue

Watch Your Ashes!

Protecting Ash Trees from the Emerald Ash Borer Threat

The green ash stretches majestically up to the sun, the leaves reaching over the stream bank. Virginia bluebells and asters grow happily on the ground below. Pollinators perform their aerial acrobatics as they move from one plant to the next, and the cool stream water rushes along, hopping over the rocks and pebbles in its path. Native ash trees (*Fraxinus* species) like this one are providers of food and habitat for countless creatures, including the grey ash sphinx moth, which depends on ash trees for its survival.

Ash trees have also been planted widely, lining streets and dotting yards, providing shade and a connection with the natural world, and livening up our neighborhoods with bright yellow colors in the fall. As if all that were not enough, this hardwood tree also happens to provide the preferred wood for the manufacturing of that quintessentially American object, the baseball bat. They are certainly trees worth saving.

Ash trees are facing a potentially devastating threat from the Emerald Ash Borer (EAB). The borer was first identified in 2002 in southeast Michigan, as ash trees throughout forests in that region were dying off precipitously. Its point of entry is thought to have been wooden shipping packing material. Native to eastern Russia, northern China, Japan, and Korea, it rarely causes problems in its home environment.

In American ash trees, however, an infestation can be fatal within two years. Tens of millions of ash trees have died nationwide, and the EAB has been found in two Canadian provinces and counties in twelve U.S. states – in the Midwest, the East Coast and the Mid-Atlantic region – including Fairfax County.

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Act Now! May to June Treatment Season

1. Identify your ash trees.
2. Look for signs of an emerald ash borer (EAB) infestation. Know that there are also other borers that often attack immature ash trees.
3. Not EAB infested? Consider preventive insecticide treatment in May or June.
4. EAB infested? First, report it. Then, determine how advanced the case is, and decide whether the tree is worth trying to save. Treat the tree or get it professionally removed.
5. Don't move firewood. Uphold the quarantine.
6. Monitor your ash trees closely, and be on the lookout for purple glue traps in your area.

Consequences of a Record Snowfall

Woody Plant Recovery

It was a brutal winter for our woody friends. Record snow left our trees and shrubs bent, broken, twisted and uprooted. Here are a few of the best tips for woody plant recovery:

- When dealing with large trees or problems that require climbing, hire a certified arborist. Tree work is dangerous, and improperly restored trees can also be hazardous.
- When pruning, always protect the branch collar, the "shoulder" or bulge formed at the base of a branch. Plant defenses essential to recovery are concentrated there.
- Broken branches generally should be pruned. A clean wound is easier for the plant to heal.
- When branches split at a fork, there is usually a large wound. For small splits near the branch tip, prune below the split. Larger splits can be bolted back together.
- Broken trunks: Fortunately, most landscape evergreens, including magnolias and hollies (but not pines), can take heavy pruning. Make a reduction cut at a large branch.
- Fallen, uprooted trees can be stood up again and staked with cotton cloth guys until roots reestablish.
- Do not dress wounds! Trees and shrubs have evolved defenses to deal with wounds.

For more information, download "How to Prune Trees" from the US Forest Service website at www.na.fs.fed.us/pubs/. For questions or a copy of a 2-page handout on woody plant recovery, contact Jim McGlone of the VA Department of Forestry at (703) 324-1489 or Jim.McGlone@dof.virginia.gov.

Sand and Salt

The sand and salt we use to keep our roads safe in snowy and icy conditions can also be very dangerous for stream ecosystems. Sand can cover stream habitat, and rapid changes in salinity can be fatal to microorganisms.

Residents are encouraged to sweep up and store sand, salt, and debris from storm drains to use again in the future.

If you are organizing a community-wide volunteer sweeping event or if you have questions or concerns, contact Lily Whitesell at (703) 324-1423 or lily.whitesell@fairfaxcounty.gov ♦

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Is There a Celebrity Living in Your Neighborhood?

Nicholas Kokales, Springfield Representative
Fairfax County Tree Commission

What would you call someone who simultaneously provides habitat for wildlife, reduces and filters stormwater runoff, traps carbon dioxide and produces oxygen, reduces noise pollution, reduces energy costs, and enhances human health by merely living twenty four hours a day, seven days a week? Gifted? Genius? Superhuman? How about a tree!

You may not see a Red Cedar singing on American Idol or a Sycamore kicking a 55-yard field goal at FedEx field, but trees provide a multitude of must-have ecological services each and every day. Now in Fairfax County they can receive "celebrity" status.

The Fairfax County Tree Commission officially launched the Celebrated Trees of Fairfax County program on Saturday, April 25 of this year in conjunction with Arbor Day and Earth Day. The program is on-going throughout the year and encourages citizens to nominate a tree in one of four categories:

- Big – A tree that is large for its species
- Historic – A tree associated with an historic event, person, landmark or institution
- Commemorative – a tree or group of trees planted as a memorial of an event or person
- Favorite – a tree with special significance to a person or group.

Nomination criteria and forms are available at http://www.fairfaxcounty.gov/dpwes/trees/celebratedtrees.htm. Nomination forms can be filled out and submitted electronically to treemail@fairfaxcounty.gov, or printed and mailed with additional documents to the address listed on the Celebrated Trees page.

Eligible trees receive an honorary designation as a Celebrated Tree of Fairfax County and will be included (with photos) in a database on the County's website. As a future project, the Tree Commission plans to produce a book that will include pictures and narratives of each Celebrated Tree.

Trees help humans in so many ways, and indeed help to make our lives possible. The Celebrated Trees program is a way to recognize and raise awareness of all they do for us. Do you have a celebrity living in your neighborhood? ♦

Ashes continued from page 1

Know Your Friends: Identifying Ash Trees

Left: Opposite Branching

Right: Compound Leaf, Seven Leaflets (White Ash)

Because an unidentified infestation can turn fatal so quickly, it's important to keep a close eye on the ash trees on your property and in your neighborhood. The first step in monitoring is to take an inventory of the *Fraxinus* species trees you have around. There are a number of ash tree lookalikes, so even if you're familiar with ash trees, you may want to brush up on the details. The branches are opposite, not alternate. They have compound leaves, with five to nine leaflets per leaf. The leaves can have fine teeth or smooth edges, and twigs are gray to brown and do not have a waxy coating.

The white ash, *Fraxinus americana*, and green ash, *Fraxinus pennsylvanica*, are the two most commonly planted, but all *Fraxinus* species are at risk from the Emerald Ash Borer. They can be difficult to tell apart, but often white ash is found in more moist upland sites and green ash in wet forests or floodplains. There are also the rarer black ash, *F. nigra*, which has seven to eleven leaflets per leaf, and *Fraxinus caroliniana*, which has many common names, including Swamp Ash and Water Ash.

The closest lookalike is the box elder, which also has opposite twigs and buds and compound leaves. However, the twigs are green to purplish brown and often have a waxy coating, the leaflets have coarse or no teeth, and there are only three to five leaflets per leaf. Other trees that can throw you off track include the mountain ash (not in the *Fraxinus* genus, and thus not affected by the Emerald Ash Borer), black walnut, elm and hickory.

There are a few online guides available, including one which will not only help you identify ash trees, but also the lookalikes. It is available at www.emeraldashborer.info/files/E2892Ash1.pdf.

Know Your Enemy:
Identifying an Emerald Ash Borer Infestation

The Emerald Ash Borer adult, *Agrilus planipennis*, is a half inch long, bright metallic green, with an elongated, flattened back. Its abdominal segments, beneath the wing covers, are purple. The larva is creamy white and legless with bell-shaped body segments.

The adult Emerald Ash Borer is present from late May to August, feeding on the leaves of ash trees but causing very little damage to the tree itself. During that time, it will fly between one half and two miles at a time, find a mate, and lay its reddish-brown eggs on the surface, in crevices, or just under the surface of the bark of an ash tree. In two to three weeks, the eggs hatch, and the larvae come out. It is the Emerald Ash Borer larvae that cause the bulk of the damage to ash trees. They burrow into and feed on the inner bark from August to October, preventing water and nutrients from circulating to the higher branches. The larvae overwinter in the tree until spring, when they undergo pupation and emerge as adults.

Can You Spot the Emeral

. A . B .

(Answers o

Infestations of the Emerald Ash Borer can be difficult to spot, particularly early on, but there are signs to look for. The larvae leave distinct D-shaped exit holes (3 mm or 1/8th inch diameter) and S-shaped larvae channels packed with sawdust under the bark. Bark splitting and increased woodpecker activity on an ash tree also could be indicators of the larvae beneath the bark. A very visible

sign is canopy die back – when the upper leaves start to wither and die because they aren't getting nourishment. A resulting sign can be a burst of new branches and leaf growth along major branches, the trunk or at the tree base, also known as epicormic shoots, as the tree tries to recover lost leaf growth.

Be aware that ash trees in their teens will often decline after being attacked by many types of borer and will have similar patterns of die back. If you have an ash tree of this size, try to identify the D-shaped holes indicative of the Emerald Ash Borer before reporting it.

Treating Your Trees

If you find that you have ash trees on your property that have signs of an emerald ash borer infestation, the first thing to do is pick up the phone. In Fairfax County, you can report the suspected borer sighting to the Forest Pest Branch of the Fairfax County government at 703-324-5304. (Note: In Arlington, call the Virginia Cooperative Extension at 703-228-6423 or -6400. Elsewhere in VA, call the Virginia Department of Agriculture and Consumer Services at 804-786-3515.)

d Ash Borer In A Lineup?

C . D . E .

on page 6)

Once you've reported what you've found, you have more investigating to do and there are decisions to be made. If it is a relatively new infestation, you can try to save the tree. Because a recent infestation is hard to spot, many trees are not found until it is too late, and the best option in those cases is to have a certified arborist take down the tree and dispose of it safely. Forestry experts counsel that if an ash tree has lost more than 50 percent of its leaves in an EAB infestation, the tree does not have a good chance of surviving. Don't let indecision paralyze you – if you have found evidence of Emerald Ash Borer, the worst possible outcome is if you do nothing.

An Emerald Ash Borer infestation can also be prevented with proper treatment of trees. For smaller trees with a diameter at breast height, or DBH, of 15 inches or less, there are specialized insecticides designed for homeowners at your local garden stores. The systemic insecticide ingredient to look for is imidacloprid. The product is combined with water and the mix is used to drench the soil around the tree. Be sure to follow the instructions carefully. Be aware too that imidacloprid treatments can result in mite infestations and you may have to treat your trees with a miteicide a few weeks later.

For larger trees, you will need to contact certified arborists, who have more options available to them to protect your ash tree. They can use a systemic insecticide, applied as a soil injection or drench, a trunk injection, a bark spray on the

Ashes continued on page 6

Quarantine Alert!
DON'T MOVE ANY FIREWOOD!

In 2008, the USDA and state of Virginia placed a quarantine on all hardwood firewood, ash nursery stock, wood chips and roundwood in Northern Virginia. No ash trees or wood can be moved out, but there is free movement of plants and wood within the area.

For those who scoff at regulation, be forewarned that the quarantine has some serious teeth: up to a $2,500 fine from Virginia, and up to a $250,000 fine from the federal government. The original infestation in Fairfax County was due to a Michigan nursery violating a similar quarantine order.

If you're anticipating going somewhere, buy your firewood once you reach your destination. Not only will you prevent spreading the borer, save ash trees, and stay out of trouble with the law, you will also support the local economy of the place you are visiting!

There is no sustainable firewood certification process, but try asking the seller directly about their sustainability practices. For guidelines on buying firewood, see www.dof.virginia.gov/mgt/firewood.htm, and for insiders' tips on identifying sustainable firewood, see www.woodheat.org/environment/environment.html.

Ashes continued from page 5

lower trunk, or a protective cover spray on the trunk, main branches, and sometimes even the foliage. When making decisions about the appropriate course of action for your ash trees, keep in mind that most of the insecticide treatments will need to be reapplied each year and can become costly.

Preserving the Ash Tree for the Future

A coalition of researchers, extension agents, educators, and state and federal governments are taking steps to prevent further contamination. Strict quarantine orders have been put in place in all of Northern Virginia and in other affected areas, particularly targeting firewood (see box on p. 5). The Emerald Ash Borer, its life cycle, its place in its native ecosystem, and how future areas could be infested are also all being studied in search of biological solutions to the problem.

Here in Fairfax County, you will find that we, too, are doing our part. In a collaboration between the VA Department of Forestry, the Forest Service, and Fairfax County Forest Pest Section, purple sticky traps have been distributed in areas near where infestations have been found. (Emerald Ash Borers have been shown to prefer the color purple.) If you see one, know that these devices are coated in natural plant oils and are non-toxic. Furthermore, they do not attract the EAB to areas previously free of the insect. The insect counts will be used to track the incidence and spread of the borer. If you find that a purple sticky box has fallen down, do not attempt to touch or move it, as the glue is very strong. Instead, please report the information to the Fairfax County Forest Pest Branch at 703-324-5304, TTY 711.

A project has also begun to collect native ash tree seeds to preserve biodiversity. Most of the efforts are focused on areas that are being hit hard by the Emerald Ash Borer, including Michigan and other Great Lakes states. The seeds will be stored at the National Seed Laboratory in Dry Branch, Georgia. For more information, visit www.nsl.fs.fed.us/ or http://nrs.fs.fed.us/disturbance/invasive_species/eab/control_management/seed_collection/.

It seems ironic that such a tiny insect can kill a mighty tree, but this is not the first time something like this has happened. The American Chestnut was once one of the most important forest trees in its range, but was destroyed by a fungal blight in the first decades of the twentieth century, and even today has been unable to make a comeback. As Northern Virginia residents, we have a unique opportunity to help control the spread of this vicious bug, by careful monitoring, observation, and action. The very fate of our ash trees may be at stake. ♦

Additional Resources

http://www.emeraldashborer.info/
http://nrs.fs.fed.us/disturbance/invasive_species/eab/
http://www.fairfaxcounty.gov/news/2010/homeowners-should-treat-ash-borer-now.htm

Photo credits:

Howard Russell, Michigan State University, Bugwood.org - EAB with penny, page 1

David Cappaert, Michigan State University, Bugwood.org - EAB large photo, page 1

Ivan Chew, myrightbrain.wordpress.com - Tree, p. 3

Steven Brown, Michigan State University IPM Program - Tree ID Box, page 4

Arkansas University - Can you spot the emerald ash borer in a lineup, pp. 4-5, A

J. Zablotny, USDA APHIS PPQ - Can you spot the emerald ash borer in a lineup, pp. 4-5, B, D, E

Pennsylvania Department of Conservation and Natural Resources - Forestry Archive, Bugwood.org - Can you spot the EAB, pp. 4-5, C; EAB crawling, p. 6

Fairfax County - Emerald ash borer trap, page 6

Answers from pp. 4-5

A) Six-spotted Tiger Beetle, *Cicindela sexguttata Fabricus*

B) Two-Lined Chestnut Borer, *Agrilus bilineatus (Weber)*

C) Caterpillar Hunter, *Calosoma scrutator Fabricus*

D) Emerald Ash Borer, *Agrilus planipennus*

E) Bronze Birch Borer, *Agrilus anxius Gory*

Don't Miss Out!

FCRP Offers 50% Off Coupons for Native Trees

Dan Schwartz, Soil Scientist

The Fairfax County Restoration Project (FCRP), a brand new public-private partnership between local government agencies, non-profits, businesses, and individual community members, is already making waves – or rather, trees!

In order to encourage responsible tree planting, FCRP has teamed with Craven Nurseries in Fairfax to create a coupon for 50% off the purchase of one native tree and $20 off each additional tree. The tree species available for the rebate include Eastern Redbud, American Beech, River Birch, American Holly, Sweetgum, Black Gum, a number of oaks, magnolias, maples, and many more!

These trees were selected with the environment in mind; all are native to the area and all provide food and habitat for wildlife. Planting with natives is preferable to planting with non-native ornamentals for several reasons: natives often provide more nutritious food or better habitat for local wildlife; many non-natives turn out to be invasive (think English Ivy or Wisteria) and can overtake the landscape; and non-natives that are not accustomed to the local climate will need more fertilizer and care than native species.

The coupons and a list of the trees available can be found on the FCRP's website (scroll to the bottom): www.fcrpp3.org/ While you're there, you can check out what the FCRP is all about and consider becoming a member.

The Fairfax County Restoration Project seeks to restore the environment and improve the quality of life in Fairfax County through the sharing of ideas and information and the creation of partnerships to address environmental problems. The members include the Northern Virginia Soil & Water Conservation District, Lands and Waters, Clean Fairfax, Virginia Native Plant Society, Friends of Accotink Creek, Audubon Society of Northern Virginia, the Fairfax County Office of Public Private Partnerships and Eze Solutions Inc. ♦

Good News From the Chesapeake Bay

As we follow the decisions being made and actions being taken for the Chesapeake Bay, we also welcome two pieces of good news about the state of the bay this spring.

On April 15, the governors of Virginia and Maryland announced that after a decade of declining numbers, the Chesapeake Bay blue crab is making a comeback. The annual winter dredging survey reported that the Chesapeake Bay blue crab population is now estimated at 658 million crabs, more than doubling last year's numbers!

The comeback can be traced to strong regulations put in place in 2008 in both Virginia and Maryland to limit the number of female crabs that could be caught and kept. The coordinated action was taken as blue crab populations were declining to dangerously low levels.

The total bay-wide crab harvest last year also was up, totaling 53 million pounds. Good news for blue crabs, for those who catch them, and for those who like crabcakes!

On April 27, the Virginia Institute for Marine Science reported that underwater bay grasses increased by 12% last year. However, they are still only at 46% of a 2010 restoration target.

Underwater bay grasses provide habitat, food and oxygen, prevent erosion, and absorb nutrients. Because bay grasses are sensitive to water quality and are not under harvest pressure, they are also a very good measure of the bay's overall health. ♦

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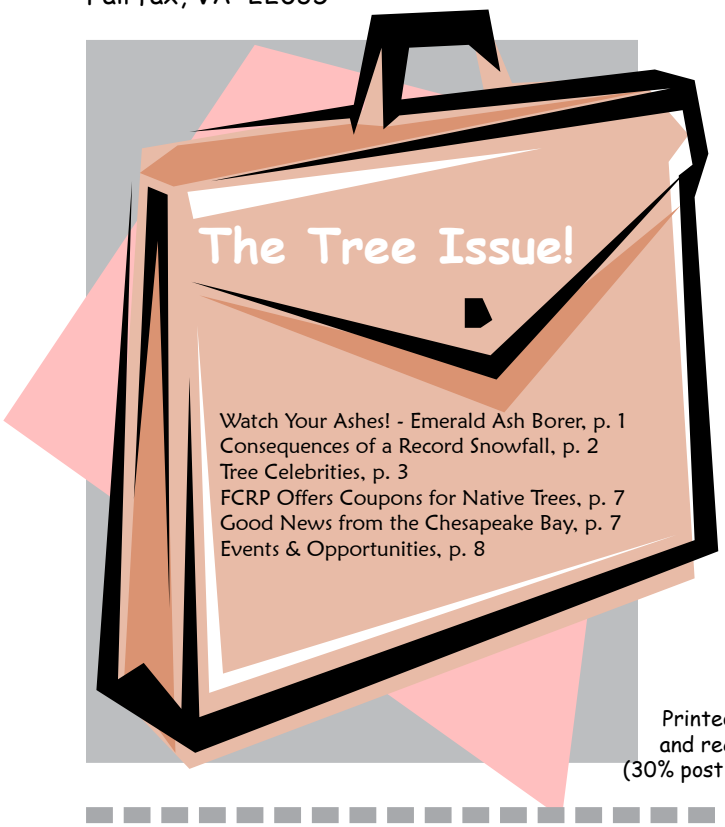

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Events, Opportunities, and Resources

Sustainable Landscaping Design Workshop Series
Looking for a place to learn practical sustainable landscaping? Attend this series of classes covering best management practices for rain garden design and construction, controlling invasive plants, rainwater harvesting and water efficient landscaping. See www.fairfaxcounty.gov/nvswcd for more.

Don't Wait! Register to Get Your Rain Barrel Today!
Adding a rain barrel to your yard is good for your plants, good for your wallet, and good for the Chesapeake Bay. Rain barrels are placed under your gutter downspouts to catch and collect roof runoff. The Northern Virginia Rain Barrel Program has workshops and distribution events this spring and summer. You must pre-register to reserve your barrel. See www.arlingtonenvironment.org/rainbarrel.php.

Got a Problem? Master Gardeners Can Help!
The Master Gardeners are well-equipped to answer your "What plant is this?" questions and can give advice on a wide range of horticulture issues. The Master Gardener Help Desk is staffed from Monday through Friday, 9:30 AM - 12:30 PM. Call (703-324-8556), e-mail (mgfairfax@vt.edu) or stop by only from 9:30 - 12:30 PM, at 12011 Government Center Pkwy, Pennino Building, Suite 1050, Fairfax, VA 22035). You can also find them at local farmers markets! See www.fairfaxmastergardeners.org/.

Volunteer Guest Writers
We welcome volunteer guest writers for Conservation Currents! If interested, please contact Lily Whitesell at lily.whitesell@fairfaxcounty.gov or 703-324-1423. Include your name, contact information, any relevant qualifications, and what conservation topics you are interested in covering.