

NORTH COAST YARD & GARDEN

HORTICULTURAL NEWS AND INFORMATION FOR THE OHIO GARDENER

BY ROGER S. BOLGER
Roger@RogerBolger.com



15 OCTOBER 2006
VOLUME 1, NUMBER 5

EMERALD ASH BORER ARRIVES

The emerald ash borer (EAB) is an exotic beetle that has been killing native ash trees around the Great Lakes in recent years. It has finally made its appearance in the Cleveland area. On October 3rd, Ohio Dept. of Agriculture officials found EAB near the intersection of I-71 and I-480 in Cuyahoga County. On October 11th, EAB was found in Lorain County at the Turnpike near the Cuyahoga border, and in Medina County on I-71 south of US Route 224.

Cuyahoga, Lorain and Medina counties have been added to the EAB quarantine zone. It is illegal to move firewood, ash trees, or ash wood products out of the quarantine zone, with fines up to \$4000.

EAB will have a huge economic impact. The timber value of forest ash trees in Ohio is estimated at \$1 billion, with nursery crops at \$20 million. Dead ash trees can cost \$1000 each to remove, straining budgets of homeowners and local governments. Sawmills, tool handle manufacturers, and firewood dealers are likely to lose business due to quarantines and loss of ash material.

This issue of North Coast Yard & Gardener explains what EAB is, how they affect ash trees, and what you can do to prevent their spread and protect your trees. For more information, visit one of these websites: <http://www.ohioagriculture.gov/eab/> or <http://ashalert.osu.edu/>. If you believe you have EAB infested trees, call 1-888-OHIO-EAB (1-888-644-6322).

IN MY GARDEN

The cold weather has brought an end to the official growing season, but there is still a lot to do. The vegetable garden still has Brussels sprouts, radishes, and lettuce. The lawn is still growing well, as are weeds. I have an ornamental grass I would like to divide and replant. I also hope to get some more paving stones down this year, and if weather permits I will build a small pergola and fence for the New Dawn climbing roses.

Trees are turning color and are looking quite nice as they approach the peak of their autumn hues. The chemistry of fall coloration requires specific weather conditions to produce the greatest amount of pigments. Ideally, we should have warm sunny days so plenty of sugars are produced in the leaves, followed by cool clear nights that reduce the flow of those sugars into the branches, trunk and roots. Our weather early last week was just about perfect. Freezing temperatures break down all pigments except brown, and excessive cold will cause the leaves to drop straight off the tree. All in all we should have a good to above-average season of fall color.

Evergreen trees and shrubs are now beginning to lose their oldest needles. This is particularly noticeable on pines, which shed two-year old needles, and arborvitae, which are often thin enough to reveal browning foliage. Despite its alarming appearance, this is a normal annual event.

FEATURED INSECT

AGRILUS PLANIPENNIS

Emerald ash borer (EAB) is a beetle native to East Asia, where it attacks and infests only those Asian ash trees that are already stressed or dying. It was not found in North America until June 2002 in the Detroit, Michigan and Windsor, Ontario area. For some reason, EAB in North America attacks and infests healthy native ash trees, killing them in around five years. EAB is a serious threat that can wipe out all native ash trees from the continent, just as Dutch elm disease and chestnut blight did to our elms and chestnuts.

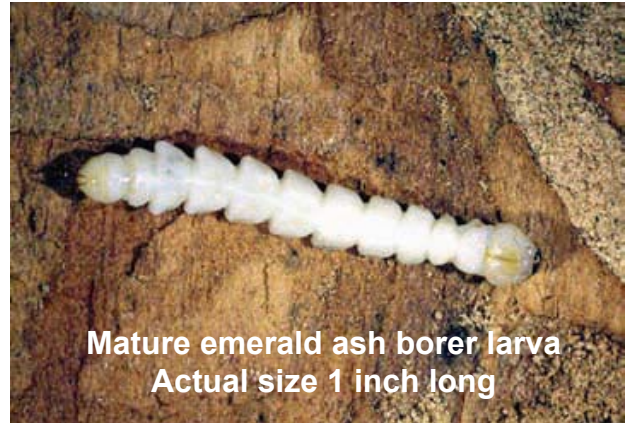


Adult emerald ash borer
Actual size ½ inch long

EAB adults are shiny metallic-green beetles about a half-inch long. Larvae are white, legless, flat-headed, segmented worm-like creatures that feed on the inner bark of ash trees. They leave serpentine galleries under the bark as they feed. Mature larvae enter the pupa stage in mid-to late-spring, and emerge as adults from late May through early August. The emerging adult leaves behind a D-shaped exit hole in the bark about 1/8 inch in diameter. Adults feed on leaves for a week or two before mating. The female then lays up to one hundred eggs, one at a time, in the crevices of the bark on ash trees. Initial infestations generally begin near the top of the tree, on branches at least 1 inch thick.

EAB probably arrived in the 1980s or 1990s in crating materials shipped from

Asia to Detroit. EABs are weak fliers, capable of moving only a quarter-mile per year. Human transport of ash trees, ash wood and firewood has spread EAB much faster, and it is now established in Michigan, Ontario, Ohio and Indiana.



Mature emerald ash borer larva
Actual size 1 inch long

Some states, including Illinois and Maryland, have had small, localized infestations that were hopefully completely destroyed. Where EAB was found, the affected trees and all ashes within a quarter-mile radius were cut down, ground up and burned. The area of the infestation was then quarantined by forbidding the transport of ash products out of the vicinity, until inspectors could be reasonably sure that all EABs were destroyed.

Until 2006, Ohio used this eradication method to fight EAB. Unfortunately, budget cuts at the state and federal level have forced a switch to a containment approach in the northwest section of the state. Only distant infestations such as those that have appeared in central Ohio are currently being actively attacked.

Ten thousand ash trees have had a ring of bark removed from their trunks to serve as EAB detection trees. These stressed trees attract EAB which can then be discovered when the trees are inspected this autumn. Officials now expect that many more counties will be added to the quarantine, and by spring, the entire state of Ohio may be quarantined as Michigan is today.

FEATURED TREE

FRAXINUS

Ash trees are an important part of Ohio's forests and landscapes. There are an estimated 3.8 billion ash trees growing naturally in woodlands, about one out of every ten forest trees. At least 3 million more are in planted areas.

Ash wood is hard, but elastic. Formerly used for bows and spears, ash wood today is most often used for tool handles and baseball bats. It also makes excellent firewood. Ash trees are inexpensive, adaptable, and grow quickly, easily reaching eighty feet in height and spread. These characteristics made ash the replacement tree of choice after Dutch elm disease left vacant city streets that were once lined with stately elms. Unfortunately these street tree plantings face a repeat situation due to EAB.

Ashes are easy to recognize because they are one of the few kinds of trees that have an opposite branching pattern. Branches and leaves come off the parent stem in pairs directly across from each other. Ash leaves are "pinnately compound," meaning that each leaf consists of seven or more leaflets arranged like barbs on a feather. Bark is vertically furrowed and gray ("ash" gray"). Ash seeds are technically called samaras, but are commonly referred to as "keys". Leaves turn butter-yellow in fall, with some turning a dark maroon. Ash leaves are among the first to change color and drop in the fall.

There are five ashes native to Ohio: white ash (*Fraxinus americana*), green ash (*F. pennsylvanica*), black ash (*F. nigra*), blue ash (*F. quadrangulata*) and pumpkin ash (*F. tomentosa*). Green ash, black ash and pumpkin ash will grow in wet forests,

marshes, riverbanks and poorly-drained soils, making them good candidates for our wet clay soil. White ash and blue ash prefer well-drained soils in upland areas. The pumpkin ash is no longer commonly found in Ohio.

Mountain ash (*Sorbus*), wafer ash (*Ptelea*) and prickly ash (*Zanthoxylum*) have the word "ash" in their common names, but they are not members of the genus *Fraxinus* and are therefore not true ashes. Only *Fraxinus* species are susceptible to emerald ash borer.



**Green Ash (*F. pennsylvanica*)
showing pinnately compound
leaf arrangement**

Signs of EAB infestations include dead branches at the tree top, new growth sprouting from the lower trunk, 1/8 inch D-shaped exit holes, serpentine galleries under the bark, and increased attention from woodpeckers. If you suspect an ash tree on your property is infested, call 1-888-OHIO-EAB. Now that Ohio is practicing containment only in the northwest quarantine zone, the state will

not remove trees with EAB. The tree must be removed at the property owner's expense.

There is no way to rescue a tree once it is infested. Valued ash trees should be protected with a systemic insecticide that is absorbed into the tree. Bayer Advanced Tree & Shrub Systemic Insecticide uses imidacloprid and protects trees for twelve months. It is applied with a watering can to the soil at the base of the trunk. Bonide Bullets contain acephate and also protect trees for twelve months. These must be drilled into the trunk, and can only be used on trees at least three inches in diameter.

I can not recommend planting ashes in Ohio due to the threat posed by emerald ash borer. Ohio State University offers an excellent guide called "Ash Replacements for Urban and Woodland Settings", Bulletin 924. It lists 35 native, hardy trees that occupy the role of ashes in the woodlands and landscapes, with detailed descriptions and photos of each species. It can be purchased for \$7 through the local county extension office, and it is available as a free download at <http://ashalert.osu.edu/>, in the Fact Sheet section.

GARDEN CALENDAR

- Many areas experienced the first frost / freeze of the season on October 13th. Continue to protect tender plants whenever the predicted overnight low is below 38°F.
- Dig out tender bulbs like cannas, calla lilies, dahlias, begonias, caladiums and gladiolus as soon as the leaves turn yellow or brown.
- Trees and shrubs are on sale all over. They can still be planted as their roots will grow until the soil temperature goes below 40°F.
- Don't forget to fertilize trees and shrubs this fall. It helps them get started in the spring.
- This is the ideal time to plant spring-blooming bulbs. Daffodils are wildlife resistant. Try snowdrops (*Galanthus*) for really early blooms.
- Keep your gardens looking neat by cutting back perennials when the leaves turn brown.
- Leave a few perennials with interesting seed heads standing over winter. They look beautiful with a coating of snow.
- Houseplants receive less light this time of year. Water them sparingly and do not fertilize until April. If the lower leaves are turning yellow and dropping, you are watering too much.
- Autumn leaf color is near its peak now. Take time to enjoy the show before the leaves are on the ground.
- Prepare new beds by turning over the soil or layering newspapers and mulch. Add organic material (up to 1/3 by volume) and any other soil amendments as needed.
- Daylight Savings Time ends at 2am on Sunday, October 29th. Set clocks back one hour, and replace the batteries in smoke alarms.
- Have a safe and happy Halloween!



ROGER S. BOLGER HAS OVER TEN YEARS OF PROFESSIONAL HORTICULTURAL EXPERIENCE AND HAS GARDENED ALL HIS LIFE IN NORTHEAST OHIO. HE HAS GIVEN DOZENS OF GARDENING TALKS AND SPECIALIZES IN WOODY PLANTS, PERENNIALS, TURF, ENTOMOLOGY, INTEGRATED PEST MANAGEMENT, ORGANIC GARDENING, PONDS AND BACKYARD WILDLIFE.

© 2006 ROGER S. BOLGER. NORTH COAST YARD AND GARDEN IS PUBLISHED TWICE A MONTH. ANNUAL SUBSCRIPTION (24 ISSUES) IS \$20 VIA EMAIL, \$45 FOR US MAIL. SEND CHECK OR MONEY ORDER (PAYABLE TO **ROGER S. BOLGER**) TO: 4200 WEST 229TH ST, FAIRVIEW PARK, OH, 44126