



Anticipating and Managing Emerald Ash Borer

Dan Gilrein, Extension Entomologist, Cornell Cooperative Extension of Suffolk County

One of hot topics in our region this winter has been preparing for (or in a few cases, dealing with) emerald ash borer (EAB). I hope you've been able to attend some of the presentations by Mark Whitmore, Forest Entomologist, Cornell University Dept of Natural Resources, and Rebecca Hargrave, Horticulture and Natural Resources Educator, Cornell Cooperative Extension of Chenango County, but if you've missed those there are a number of 'webinars' available on line (www.emeraldashborer.info/eab_university.cfm) including my and Mark Whitmore's February 28 presentations at <http://vimeo.com/gbl/videos>. As many know, the pest has been found in several areas around NY State and almost inevitably kills ash trees if left uncontrolled. While work continues on a long-term solution through biological control, communities, businesses and homeowners will need to consider how to address this new situation in areas in or near where EAB is found. Even if you don't have EAB confirmed nearby it would still be important to watch for early signs of infestation, particularly if ash is an important landscape or forest tree in your area. Following are some suggestions summarized from a recent presentation to the New York State Arborists on the topic.



Adult emerald ash borer © Kent Loeffler, Cornell University

Inventory

Do you know where your ash trees are? Do you know your ash from your shadblow? There should be a good idea of where and how much ash is growing in landscapes, along roadsides, and in forest areas; their species, age and condition; and perhaps other factors such as whether a tree is especially important due to size, location or history, ordinances, issues of public vs private property, and replanting costs.

Costs

When EAB moves into an area there will be associated removal and treatment costs. Dead trees can become hazardous; governments and communities will need to make some difficult choices, but work up some calculations now so that estimates can be realistic and work appropriately scheduled. A cost estimator can be found at the nyis.info EAB page below; local prices for labor and materials vary considerably around the State.

Detection

EAB is not easy to detect during the early stages of infestation—even infested trees may appear healthy. By the time dieback is noticed the infestation can be severe, especially on larger trees. There are several other borers that attack ash, though the actual symptoms vary from those caused by EAB. One of the most noticeable early symptoms of possible

EAB infestation is woodpecker damage to bark, as they try to access larvae feeding in cambium beneath. Other symptoms include small (1/8") D-shaped exit holes, dieback, epicormic shoots from below areas of attack, bark splitting, and winding galleries on the outer surface of the wood beneath bark. A color factsheet online (http://www.oardc.ohio-state.edu/neweab/userfiles/native_borers.pdf) helps in distinguishing EAB from other native



Green ash with vertical tracks made by foraging woodpeckers. Holes at the bottom of the photo are attacks on emerald ash borer larvae. © David Cappaert, Michigan State University, Bugwood.org

borers in ash. Purple baited panel traps are being used to trap adults, to detect infestations that may not be apparent—prepared traps are not commercially available, but if you believe a particular location is worthy for monitoring contact your local NYS Dept. of Agriculture and Markets office—they may be involved in placing traps out or know who will be doing so.

Treatment options and timing

For arborists and other commercial landscape applicators choices are fairly limited. They include foliar sprays for adults that feed on foliage (various Tempo and Tempo Ultra formulations), bark sprays to control adults and prevent attack (Astro, Onyx, OnyxPro), soil applications of systemic insecticide (various imidacloprid formulations: Merit, Xytect, etc.), and trunk injections with imidacloprid products (Imicide, Xytect Infusible, etc.) or Tree-äge (emamectin benzoate). Safari, a systemic used as a bark spray (penetrates bark) is not registered for this use in NY State though can be used elsewhere. Bark sprays and/or possibly foliar applications may have a role

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where adult EAB populations are heavy and active on selected trees. Systemic products are most used to control early-stage EAB infestations; expect about one year of control with imidacloprid materials and two or possibly three years of control with Tree-äge. Xytext (for soil application) labels allow use at a 2X higher rate than other imidacloprid soil-applied systemics, which may be helpful on larger (>15" DBH) trees, but note per-acre limits on use of imidacloprid. At this higher (e.g. 0.4 fl oz/1" dia. for Xytext 2F) rate there was no difference between fall vs spring application timing on 20" DBH specimens; for smaller (15–20") trees applications at the normal use rate performed better when applied in spring rather than in fall. Expect a time delay of several weeks for uptake; where Safari is permitted as a bark spray the material will be effective much sooner. When applying imidacloprid products to the soil, use about 1 pt of water per 1" DBH and inject (not on Long Island) or drench within 18" of the base of the tree. When drenching, move mulch aside, then cover after application – imidacloprid breaks down quickly in sunlight. Several other systemic products are in trial now or have been tested.

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Look for more information on effectiveness of these materials in the next year or so. Choosing the best response may depend upon the status of the infestation in a particular tree, amount of dieback

and whether many host trees are present, particularly if they are suspected to be heavily infested. Trees with more than 40–50% dieback (4–10" DBH) may not survive; those with less (30–40%)

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canopy loss may survive but appear to worsen after treatment before they start to improve.

If you see or suspect EAB, bring samples or notify your local Extension Diagnostic Lab, NYS Dept of Environmental Conservation Forester, or NY State Dept. of Agriculture and Markets office.

There are some very helpful publications on-line for identifying EAB infestations and selecting management strategies and controls.

Check the New York State Invasive Species EAB page at
 • http://nyis.info/Insects/EAB_EducationalResources.aspx.

Some of the most helpful guides include:

- Insecticide Options for Protecting Ash Trees from Emerald Ash Borer
www.emeraldashborer.info/files/Multistate_EAB_Insecticide_Fact_Sheet.pdf
- The emerald ash borer Field Guide
<http://pest.ca.uky.edu/EXT/EAB/eab%20field%20guide.pdf>
- Emerald Ash Borer Diagnostic Check-Off List
<http://ohioline.osu.edu/hyg-fact/2000/pdf/2049.pdf>

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Miscellany

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I have had a number of calls about blacklegged (deer) ticks, which have been active for at least a month here on Long Island; arborists and others working in wooded areas should watch for the adults now, which can carry the pathogens causing Lyme disease, babesiosis and anaplasmosis; the nymph stage, which is much harder to detect and more easily missed, will be out later in spring into early summer.

Phenology

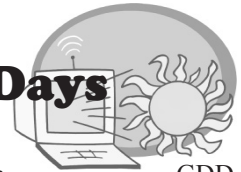
Rockland County: Flowering—European White Birch, Flowering Cherry, Forsythia, *Lonicera fragrantissima*, Norway Maple, PJM Rhododendron, Saucer Magnolia, Spicebush, Star Magnolia, White Ash, White Poplar

Tompkins County: Flowering—*Cornus mas*, Fragrant Viburnum, Red Maple, Silver Maple

Westchester County: Flowering—Flowering Cherry, Forsythia, Norway Maple, Saucer Magnolia

Growing Degree Days

As of April 19, 2011



Station	GDD ₅₀	Station	GDD ₅₀
Albany.....	30	Ithaca.....	15
Binghamton.....	16	New Brunswick, NJ.....	79
Boston, MA.....	46	Riverhead (4/17).....	30
Bridgeport, CT.....	34	Rochester.....	25
Buffalo.....	21	Syracuse.....	29
Farmingdale(4/18).....	29	Watertown.....	15
Glens Falls.....	18	Westchester.....	42
Hartford, CT.....	29	Worcester, MA.....	20

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