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You Ain't From Around Here! Exotic Invasive of the Quarter: Emerald ash borer. An unwelcome pest may be lurking...your woodlands could be at risk.

By: Jeannette Hoffman, Virginia Tech Department of Forestry



The 2007 summer edition of the *Virginia Forest Landowner Update* highlighted an important invasive forest pest that is significant enough to warrant another look. The emerald ash borer (EAB; *Agrilus planipennis* Fairmaire), the Asian guest thought to have made its way to the US in packing crates, won't be going home anytime soon. Not only is it threatening our natural forested areas, urban areas that utilize ash for shade trees are in jeopardy as well. Several communities throughout the U.S. have had significant tree mortality from EAB, and Virginia's ash trees are not immune from experiencing the same.

EAB is most readily recognized in its adult form - a small (about 1/2 inch long, 1/8 inch wide), beautiful metallic green beetle. Though adults feed on foliage, this insect's real destructive phase occurs earlier in its life as larvae. The S-shaped galleries larvae make under the bark of ash trees (the only host) sever the flow of water and nutrients, resulting in tree death within one to four years. You may be familiar with this type of "dendroicide" from EAB's close relatives, the bronze birch borer and two-lined chestnut borer. What makes EAB the most ornery of the bunch is that it does not need a stressed tree to initiate infestation.

Any kind of ash material, such as nursery stock, logs, wood chips, green lumber and firewood, can be infested. Transportation of firewood seems to be one of the most prevalent modes of establishing new infestations. You've heard it before - PLEASE DON'T MOVE FIREWOOD! The practice of buying or harvesting from local sources is an important one to adopt. It's additionally important to keep up to date with local regulations and on the progress of this insect. It's never too early to consult with a professional forester about possible management options in preparation for or in the event of an outbreak in your area. The health of your woodlands, your management objectives and the status of EAB in your area may influence how your property could be affected.

So, how do you know if you've got the "bug"? A D-shaped exit hole is a tell-tale sign of infestation. Additionally, an EAB infested tree may exhibit various other stress signs (i.e. die-back from the top of the tree, reduction in leaf density, excessive sprouting from the trunk, bark splitting, increased woodpecker activity, etc). Since the signs can be readily mistaken for numerous other ash problems, EAB infestation can easily go undetected for several years. The bottom line is that this little insect is very difficult to detect.



A tell-tale D-shaped EAB exit hole on the side of an ash.
Photo by: David Cappaert, Michigan State University.



EAB larvae in various stages of development. Photo by: David Cappaert, Michigan State University.

Though no current large-scale level controls are known, there is some promise for valuable individual yard trees or small-scale control. Injections of the insecticide, imidacloprid, into the soil or directly into the tree, as well as emamectin benzoate injections, have shown to kill the larvae as they feed. But don't get your hopes up if you're thinking about treating your forest with the latter chemical - it's expensive. According to the Chicago Tribune, treating a single 16 inch diameter tree with emamectin benzoate can cost around \$200 and treatments need to be repeated every two years. You should also be aware that these are not considered fool proof methods as more research and testing are still needed. At this time, some biological controls are being tested under quarantine as well.

EAB was first found in Fairfax County in 2003 and subsequently eradicated. On July 14, 2008, the same day EAB was again confirmed in Fairfax County, quarantine was established there to help reduce the spread to non-infested areas. This means that uncertified articles including ash trees, green (non-heat treated) ash lumber and ash wood products, as well as firewood, are not allowed out of the county.

As of summer 2008, EAB has been positively identified in Michigan, Indiana, Ohio, Pennsylvania, Illinois, Maryland, Missouri, West Virginia, Canada, Wisconsin and Virginia. Please don't hesitate to report a suspected infestation - it's better to be wrong than to take a wait and see approach with this one.

Virginia Contacts:

- * Virginia EAB hotline: 1/866-325-0023
- * Forest Pest Branch of Fairfax County: 703-324-5304
- * Virginia Department of Ag and Consumer Services: 804-786-3515
- * Arlington Office of Virginia Cooperative Extension:
703-228-6423 or 703-228-6400

Web sites:

- * www.emeraldashborer.info
- * www.michigan.gov
- * www.na.fs.fed.us/spfo/eab

Please contact your local Extension Office or State Department of Agriculture for up to date information on regulations, control options and other EAB information.

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