Emerald Ash Borer

The Emerald Ash Borer is a destructive, non-native pest that feasts on ash trees. It is a small, metallic-green beetle native to Asia. Its larvae burrow into the bark of ash trees, causing the trees to starve and eventually die. White the beetle does not pose any direct risk to public health; it does threaten the tree population. Since the Emerald Ash Borer was first confirmed in the Midwest in the summer of 2002, more than 20 million ash trees have died.

Where did the Emerald Ash Borer come from?

The Emerald Ash Borer is an exotic insect pest from Asia. It was first discovered in the U.S. in 2002 in southeast Michigan. Since that time, this tree destroyer has also been detected in Indiana, Ohio, Maryland and Ontario, Canada. Prior to its discovery in the U.S., the Emerald Ash Borer was found primarily in Korea, China, Japan and other East Asian countries. In the U.S. thus far, this pest has been known to attack all native ash trees, specifically White, Green and Blue ash; it does not attack Mountain ash and likely not European ash.

How do I know if my tree is an Ash?

Ash trees have several green leaflets per leaf stem, usually 7. The leaflets are located directly across from each other with one leaflet on the end. The leaf shape is "lanceolate," which means they are much longer than wide, broader below the middle and tapering to the top. If the tree in question is on public right-of-way (parkway) in Wheeling, its species may be verified by a call to Public Works at (847) 279-6900.

What is the Emerald Ash Borer's lifecycle?

The Emerald Ash Borer adult is a dark metallic green beetle only about 1/2" in length and 1/8" in width. Adults are only present from mid-May to late June, when they feed on the leaves of ash trees. Soon after they emerge, the adults lay eggs on the trunk and branches of ash trees. After about a week the eggs hatch into larvae which then bore into the tree, feasting on the tree's cambium layer. <u>It is this larval stage that does the major damage</u>. Larvae are creamy white in color, can grow up to an inch long and are found under the bark of the trees. These larvae tunnel and feed, creating S-shaped galleries. This tunneling cuts off the food and water supply to the tree, causing it to die. Later in the year, the larvae pupate and overwinter under the bark. New adults emerge the following May. Their emergence holes are very small (only 1/8") D-shaped holes and can occur just about anywhere throughout the tree.

What are the Symptoms?

Infestation of EAB can be difficult to detect until the branches of the tree start to die. Usually the leaves on the upper third of a tree will start to thin, and the branches will begin to die back. This is usually followed by a large number of shoots or branches arising below the dead portions of the trunk. Additional evidence of infestation includes increased woodpecker activity and tiny D-shaped exit holes on the branches and the trunk. Distinct S-shaped larval feeding tunnels may also be apparent under the bark.

How does Emerald Ash Borer Spread?

It is thought that the beetle arrived in the U.S. from Asia in the early 90s, but it was not positively identified until 2002. It is believed that the larvae hitched a ride across the borders traveling in wooden pallets. Once arriving in the United States the insects emerged as adult beetles and the cycle of devastation began. The EAB is an excellent flier and can travel fairly far distances in search of food and egg-laying sites in ash trees. Additionally, pockets of EAB outbreaks have been linked to the movement of firewood and ash tree nursery stock out of infested areas.

Who is fighting the beetle?

Because this insect has such great potential to decimate both forests and urban tree populations, national and state agencies are working together to stop the spread of EAB. These agencies include the USDA Forest Service, APHIS (Animal and Plant Health Inspection Service), and the various state Departments of Agriculture. In Illinois the lead agency is the Illinois Department of Agriculture (1-800-641-3934). Unfortunately, very little information on the beetle is available from its native region, and limited control management recommendations exist to date. Research on various insecticides is being conducted, and some are quite promising. However in new infestations, the goal must be complete eradication of every single Emerald Ash Borer. Thus in these areas, infested trees as well as surrounding healthy trees are declared a "Public Nuisance" and removal of these trees is required by law.

Fortunately in Illinois, a wide variety of organizations and agencies concerned about our urban and forest trees have had an "Illinois Emerald Ash Borer Readiness Plan" in place since 2004. This plan was compiled by the Morton Arboretum's Community Trees Advocate and it outlines a plan for a coordinated and prompt response by all involved parties.

Steps residents can take

- ***REFUSE TO MOVE FIREWOOD OR PURCHASE ASH WOOD*** **-** Use only local firewood (even when traveling), and burn the wood on site or leave it when you move on. Especially, **don't** bring firewood or logs from other states, or any areas that may become quarantined. Do not purchase any firewood containing ash wood until further notice. People unknowingly contribute to the spread of Emerald Ash Borer when they move firewood. The larvae can survive hidden under the bark of firewood.
- ***MONITOR AND REPORT*** – Learn about Emerald Ash Borer, check your ash trees for the pest. Visual signs to watch for are a drastic increase in woodpecker activity, crown dieback, shoots or suckers at the base of a tree and 1/8 inch D-shaped holes in the bark.
- ***CARE FOR ASH TREES***- Call the Forestry Division if a public ash tree seems sick or needs maintenance. Residents concerned about an ash tree on their property are encouraged to call an International Society of Arboriculture – certified arborist who has signed the "Emerald Ash Borer Compliance Agreement" with the Illinois Department of Agriculture. The compliance agreement states that ash debris be handled properly. This means that the wood must either be processed to a degree where it can no longer harbor the insect, or it must be taken to a certified processing center that will process it.
- ***PLANT FOR DIVERSITY***- Do not plant ash trees. Plant underutilized tree species instead. Diversity of tree species is aimed to minimize the effects of any insect infestation.

- ***STAY INFORMED*** – There are a number of websites designated with information specific to Illinois fight against Emerald Ash Borer. For the most current and up-to date information on Emerald Ash Borer visit the following websites: http://www.agr.state.il.us/eab and http://www.emeraldashborer.info