



## Emerald Ash Borer (EAB) FAQs for Kentuckians

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**Call the EAB hotline (866) 322-4512 for more information**

### Is the emerald ash borer an immediate threat to Kentucky?

Yes, especially in northern Kentucky. The closest confirmed finding is about 5 miles north of the Ohio River in the Cincinnati area (Hamilton Co. Ohio). The area is under quarantine and a survey will determine the extent of the infestation. Also, infested trees have been found around Indianapolis, IN (Hamilton and Marion counties) and those areas are quarantined. Unfortunately, this easily transportable insect could pop up anywhere in the Commonwealth.

### How do infestations spread?

An EAB adult can fly at least 1/2 mile from the tree in which it developed so there is natural spread each year. Unfortunately, infestations expand further and more rapidly when people move infested ash nursery stock, logs, or firewood long distances into uninfested areas. Firewood has been a major means of transporting EAB, especially by hunters and campers.

### What does a quarantine accomplish?

A quarantine is a legal action taken to prevent movement of any living stage of a pest (egg, larva, pupa, or adult). It includes entire ash trees, limbs, branches, stumps, and importantly, firewood. Movement of ash logs and lumber with bark is prohibited, along with hardwood wood chips and bark chips larger than 1 inch in two dimensions. Because it is difficult to identify cut and split wood, all hardwood firewood with bark is included along with other specified objects or means of moving the insect.

### What trees does the EAB attack?

All species of ash (*Fraxinus*) in landscapes, forests, and woodlots in eastern North America are susceptible. EAB may prefer to lay eggs on stressed trees but healthy ones also can be infested. Size does not appear to be a constraint either, larval galleries have been found in trees or branches as small as 1 inch in diameter.

### What does the EAB do to ash trees?



As they feed under the bark, EAB larvae destroy the tree's water and nutrient conducting tissue reducing water and nutrient flow to the canopy and causing thinning of the canopy of trees above infested portions of the trunk and major branches. Dieback in heavily infested trees usually starts at

the top with one-third to one-half of the branches dying in one year; most of the canopy will die within 2 years of the first appearance of symptoms.



### What are signs of an EAB infestation?

The following general characteristics may be caused by EAB, other borers, stress, or physical injury:

- D-shaped 1/8" exit holes are unique to this family
- Serpentine-shaped tunnels under bark
- Young sprout growth at base of tree
- Woodpecker activity
- Thinning of canopy
- Vertical splits in bark

### Is the EAB easy to recognize?



The adult is a distinctive dark metallic green about 1/2 long and about 1/8 inch wide but the insect may not be seen unless it is very abundant in an area. However, it emerges from ash trees in

June through a distinct D-shaped hole in the bark. The larval stage is most likely to be found tunneling under bark and fortunately, it can be distinguished from native ash borers.

### What makes an EAB infestation "official"?

An exit hole or larval gallery in wood is not enough to make a positive identification so the first identification of an EAB in a county must be based on a life stage of the insect— usually a larva or an adult. Larvae collected from ash wood should be preserved in alcohol so that they are in good shape for examination. The specimen is sent to an APHIS entomologist for confirmation before the insect is considered to be officially present.

### What will happen if an identification is confirmed?

The county will be placed under a quarantine to prevent movement of infested articles and a survey will begin to determine the extent of the infestation. A management plan will be developed after the extent of the infestation and the density of ash in the area has been determined.

### **What steps are being taken in Kentucky to deal with the EAB?**

Surveying and monitoring programs have been implemented in Kentucky for early detection of EAB. Trap trees have been established in high risk urban areas and along corridors. Movement of firewood from infested areas has been banned. A vigorous educational program has been implemented to inform the media and to raise public awareness.

### **Do insects other than the EAB live in ash?**

Yes, the larvae of several beetles and moths can be found in forest and landscape ash throughout the state. The red-headed ash borer (a round-headed wood borer) and the ash borer (a caterpillar) are most common. Do not hesitate to bring any specimens from ash to your county extension office for identification. Private individuals are often the first to notice a new organism in an area and the EAB is too important to overlook.

### **Should I begin to use insecticides to protect my ash trees from the EAB?**

Treatment is an individual decision based on specific conditions. However, insecticide applications generally are not recommended if your county is not under an EAB quarantine. If there is no quarantine for your county, identify ash trees on your property and keep them as healthy as possible through proper fertilization and watering. Watch trees closely for signs of EAB infestations. Stay informed about the situation in your area.

### **Are insecticide applications worthwhile if your area becomes quarantined?**

Treatments for EAB are expensive and products currently available must be applied every year. In addition, no products are 100% effective and trees in poor health are not likely to benefit from treatments. Treatments may be worthwhile to protect very valuable trees or to keep individual trees alive until non-susceptible replacement trees are large enough to provide satisfactory shade. If many nearby trees become heavily infested, control probably will be much less effective.

### **What is the life cycle of this borer?**

The EAB can have a one- or two-year life cycle, development time decreases and the number of borer larvae per tree increases. In Michigan adults begin emerging in mid to late May with peak emergence in late June. Females usually begin laying eggs about 2 weeks after emergence.

Eggs hatch in 1-2 weeks, and the tiny larvae bore through the bark and into the cambium - the area between the bark and wood where nutrient levels are high.

The larvae feed under the bark for several weeks, usually from late July or early August through October. The larvae typically pass through four stages, eventually reaching a size of roughly 1 to 1.25 inches long. Most EAB larvae spend the winter in small chambers in the outer bark or in



the outer inch of wood. Pupation occurs in spring and the new generation of adults emerges in May or early June, to begin the cycle again.

### **Who do I call to get more information on the EAB or to report an infested tree?**

An Emerald Ash Borer Hotline **866-322-4512** has been established by the Animal and Plant Health Inspection Service (APHIS), US Department of Agriculture. Collected information will be passed to the appropriate office for follow-up. You also can contact your local UK Cooperative Extension office or the Office of the State Entomologist (859) 257-5838.

### **Web Sites**

#### **Information for Kentuckians**

<http://pest.ca.uky.edu/EXT/EAB/welcome.html>

#### **General EAB information and national status**

<http://www.emeraldashborer.info/>

#### **Ash tree identification**

<http://www.emeraldashborer.info/files/E2942.pdf>

Adapted from a fact sheet developed by Dr. Deborah McCullough and Robin Osborne, Michigan State University Extension, May 2007.

<http://www.emeraldashborer.info/faq.cfm#6>