

# Emerald Ash Borer

## Frequently Asked Questions

### What is emerald ash borer?

Emerald ash borer is an invasive, nonnative insect that attacks and kills all species of North American ash trees, including white, green and black ash. Emerald ash borer is native to Asia and was first detected in the United States in summer 2002 feeding on ash trees in the Detroit area. As of May 1, 2009, emerald ash borer has not been confirmed in any northern Plains states -- Kansas, Nebraska, North Dakota or South Dakota.

### How do I recognize emerald ash borer?



Adults have one-half inch long, slender, emerald green bodies.

Emerald ash borer larvae can grow up to one and one-quarter inch long. They are white or cream colored. They have brown heads and a 10-segmented body with a pair of brown, pincer-like appendages on the last segment.

### Why should I be concerned about emerald ash borer?

Emerald ash borer larvae feed on tree tissues just below the bark. As they feed, larvae create serpentine tunnels called galleries that disrupt the tree's ability to transport water and nutrients, which eventually kills the tree.

Emerald ash borer adults typically emerge during June and July, leaving D-shaped exit holes in the bark. After emerging, the adults feed on ash foliage and can live for approximately three weeks.

### What are symptoms of emerald ash borer?



Symptoms of emerald ash borer include canopy dieback, beginning in the top one-third of the canopy, sprouting from the base of the tree and trunk, bark splitting, serpentine galleries below the bark, D-shaped exit holes and increased woodpecker activity.

### **What species of trees does emerald ash borer attack?**

Emerald ash borer attacks and kills all species of North American ash, including white, green and black ash. Mountain-ash is not a true ash, so it is not threatened by emerald ash borer.

### **How do I identify an ash tree?**



Ash trees exhibit an opposite leaf pattern, meaning that leaves and buds are located directly across from each other. Ash leaves are compound and typically consist of five to 11 leaflets. The edges of the leaflets may be smooth or toothed. On mature ash trees, the bark has a distinct pattern of diamond-shaped ridges. Younger trees have smoother bark. When seeds are present, they appear in paddle-shaped clusters that stay on the tree until late fall or early winter. (Include photos with this.)

### **Where is the emerald ash borer from originally?**

Emerald ash borer is native to Asia.

### **When did emerald ash borer get to the United States?**

Emerald ash borer was first detected in the United States in summer 2002, feeding on ash trees in the Detroit area.

### **How does emerald ash borer spread?**

Emerald ash borer is spread primarily by moving infested firewood, ash wood products and nursery stock. Moving firewood and other ash wood products within areas infested by emerald ash borer and out of infested areas is regulated by state and federal agencies. You can help prevent the spread of emerald ash borer and other wood-dwelling invasive pests by collecting or purchasing local firewood at your destination. For more information, visit [www.dontmovefirewood.org](http://www.dontmovefirewood.org).

### **Where is the emerald ash borer?**

As of May 1, 2009, emerald ash borer has been detected in Michigan (both the upper and lower peninsulas), Illinois, Indiana, Maryland, Missouri, Ohio, Pennsylvania, Virginia, West Virginia and Wisconsin. In Canada, emerald ash borer has been detected in Ontario and Quebec.

### **Can anything be done to prevent emerald ash borer from killing ash trees?**

Unfortunately, nothing can be done to stop emerald ash borer from spreading into new areas and killing ash trees. In the next several years we may have new methods for slowing the emerald ash borer's spread, but they will only *slow* its spread, not *stop* it. In areas where emerald ash borer is present, insecticide treatments can be used to protect high-value trees, such as large shade trees, historic trees and trees highly

valued by homeowners. Researchers are currently working to develop new treatments for emerald ash borer.

### **Is there a treatment for emerald ash borer?<sup>1</sup>**

Insecticide treatments can be effective in protecting trees from emerald ash borer. The treatment available for homeowner use is a soil application of imidacloprid (such as Bayer Advanced Garden™ Tree and Shrub Insect Control). The application should be made in May and is most effective on small trees. Tree care professionals are able to use additional products like trunk injections and trunk and foliage sprays. More information about available treatment methods can be found online at [www.emeraldashborer.info/files/E2955.pdf](http://www.emeraldashborer.info/files/E2955.pdf) and [www.emeraldashborer.info/files/eabcontrol.pdf](http://www.emeraldashborer.info/files/eabcontrol.pdf).

### **Should I treat my ash tree before it gets emerald ash borer?**

No treatment is needed until emerald ash borer has been found within 30 miles of your tree. If your tree has symptoms like those of an emerald ash borer infestation, such as canopy dieback or borer exit holes, you may want to have a tree care professional examine the tree. To locate a certified arborist in your area visit [www.kansasarborist.com](http://www.kansasarborist.com).

### **Should I remove my ash tree before it gets emerald ash borer?**

If your tree is healthy, there is no reason to cut it down. If it is dying or diseased, it may be best to hire a certified arborist to look at your tree and determine whether it has emerald ash borer or another insect or disease problem. There are a number of native insects that attack ash trees, so if your tree is displaying symptoms, it may be you have one of these other pests. With highly destructive invasive insects like the emerald ash borer, it is best to err on the side of caution by seeking professional guidance if you suspect your tree is infested.

### **Should I continue planting ash trees?**

Given the threat of emerald ash borer and abundance of ash, we do not recommend planting more ash. Ash has been popular in landscape, agroforestry and conservation plantings for decades. This popularity led to many ash trees being planted in communities throughout Kansas and the northern Great Plains. Because diversity is an important measure of a community forest's overall health, it is important to plant a variety of trees. There are a number of trees that grow well in Kansas that are underplanted. To learn which trees are best for your landscape, we recommend you contact:

Kansas Forest Service  
2610 Claflin Road  
Manhattan, KS 66502  
(785) 532-3300

or visit their website at [www.kansasforests.org/pubs/community/index.shtml](http://www.kansasforests.org/pubs/community/index.shtml).

### **Are there any ash varieties that are resistant to emerald ash borer?**

Early research has not revealed a variety native to the United States that is not susceptible to the emerald ash borer, but research is continuing.

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<sup>1</sup> Specific product information does not constitute an endorsement for that product.

### What are alternatives to ash?

Maple, box elder, birch, hornbeam, catalpa, locust, Kentucky coffeetree, oak, sweet gum, buckeye and hickory are all good alternatives.

### What other insects attack ash trees?



Banded Ash Borer



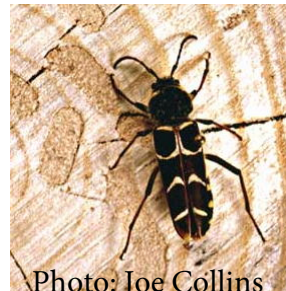
Eastern Ash Bark Beetle



Red Headed Ash Borer



Ash/Lilac Borer



Banded Ash Clearwing



Carpenterworm Moth

There are several species of native ash borers that attack ash trees. The banded ash clearwing, carpenterworm and ash/lilac borer both attack healthy ash trees. The redheaded ash borer, banded ash borer and eastern ash bark beetle all attack stressed or dying ash trees. For more information about these insects, see Michigan State University Extension Bulletin E-2939, *Native Borers and Emerald Ash Borer Look-alikes*.

### What other insects look like emerald ash borer?



Bronze Birch Borer



Six-spotted Tiger Beetle



Caterpillar Hunter

There are many species of insects that are frequently mistaken for emerald ash borer. The bronze birch borer looks very similar to emerald ash borer and even presents similar symptoms. However, this borer attacks stressed birch trees. The six-spotted tiger beetle, two-lined chestnut borer and caterpillar hunter are all similar in color to emerald ash borer. The Japanese beetle is also frequently mistaken for emerald ash

borer. For more information about these insects, see Michigan State University Extension Bulletin E-2944, *Don't be Fooled by Look-Alikes*.

### **Who should I call if I think I have emerald ash borer?**

Kansas Department of Agriculture  
Plant Protection and Weed Control  
(785) 862-2180

Kansas Forest Service  
(785) 532-3300

### **What can be done with wood from trees killed by emerald ash borer?**

If emerald ash borer is discovered in Kansas, it will trigger specific regulatory actions. At that point we will provide instructions on how to dispose of infested wood. Research has shown that infested wood chipped to a size of 1 inch or less in two dimensions contained no pupal larvae. Emerald ash borer larvae is successfully killed when heated to 140° F for two hours. Infested firewood can also be double-bagged to prevent escape of emerging emerald ash borer.

### **What is Kansas doing to prepare for emerald ash borer?**

Kansas is involved with the Great Plains Tree and Forest Invasives Initiative, a collaborative initiative of state forestry agencies in Kansas, Nebraska, North Dakota and South Dakota and the U.S. Forest Service. The goal is to prepare for the arrival of invasive insects, such as emerald ash borer, in the northern Great Plains. The initial focus is on emerald ash borer, and states are taking an inventory of regional tree and forest resources to determine which areas may be most impacted by emerald ash borer and other invasive species. The groups also is developing public education programs, establishing citizen-based monitoring and detecting networks, and exploring opportunities for using wood generated by emerald ash borer.

Kansas has an emerald ash borer readiness and response plan that involves many agencies and organizations. The most current response plan will always be posted at [www.kda.state.ks.us/plants/pestmanagement/eab.htm](http://www.kda.state.ks.us/plants/pestmanagement/eab.htm).

Check out these websites for more information:

[www.emeraldashborer.info](http://www.emeraldashborer.info)  
[www.dontmovefirewood.org](http://www.dontmovefirewood.org)  
[www.stopthebeetle.info](http://www.stopthebeetle.info)  
[www.kda.state.ks.us/plants/pestmanagement/eab.htm](http://www.kda.state.ks.us/plants/pestmanagement/eab.htm)  
[www.kansasforests.org/pubs/community/index.shtml](http://www.kansasforests.org/pubs/community/index.shtml)  
[www.kansasarborist.com](http://www.kansasarborist.com)