



Frequently Asked Questions about Emerald Ash Borer

What is Emerald Ash Borer?

Emerald ash borer (EAB) is a highly invasive, non-native insect that attacks and kills all species of North American ash trees, including white, green and black ash. EAB 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 15, 2017, EAB has NOT been detected in North Dakota. The closest known locations of EAB are Minneapolis and Duluth MN.**

What does EAB look like?

Adult EABs are emerald green beetles that are approximately 1/2 –inch long with slender, elongate bodies.

EAB larvae can grow up to 1 ¼ inch long and 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.



Above images by (left to right): Virginia.gov, D. Cappaert MI State (adult beetle and larvae), USDA Forest Service.

What does EAB do?

EAB larvae are the most destructive life stage of the insect. Larvae feed on the tissues just below the bark (in the phloem). As they feed, larvae create serpentine tunnels, also called galleries, that disrupt the tree's ability to transport water and nutrients and eventually kill the tree.

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

What are symptoms of EAB?

Symptoms of EAB 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.



Crown dieback



Sprouting from base



Serpentine galleries

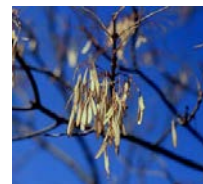
What species of trees does EAB attack?

EAB 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 EAB.

How do I identify an ash tree?



Ash trees have an opposite leaf pattern, meaning that leaves and buds are located directly across from each other. Ash leaves are compound and typically consist of 5-11 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.



Where is EAB from originally?

EAB is native to Asia. It most likely arrived in the US in infested, untreated wood packing material.

When did EAB get to the U.S.?

EAB was first detected in the U.S. in summer 2002, feeding on ash trees in the Detroit area.

How is EAB spread?

EAB is spread primarily through the transport of infested firewood, ash wood products and nursery stock. Moving firewood and other ash wood products within areas infested by EAB and out of infested areas is regulated by state and federal agencies. To help prevent the spread of EAB, and other wood-dwelling invasive pests, collect or purchase local firewood at your destination. For more information, visit www.dontmovefirewood.org.

What can I do to prevent spreading EAB?

EAB is most commonly transported into new areas on infested firewood. To help prevent spreading EAB, as well as other wood-dwelling invasive pests, collect or purchase local firewood at your destination. To learn more, visit www.emeraldashborer.info.

Where has EAB been detected?

As of May 2, 2013, EAB has been detected in Illinois, Indiana, Iowa, Kentucky, Maryland, Michigan (both the upper and lower peninsulas), Minnesota, Missouri, New York, Ohio, Pennsylvania, Virginia, West Virginia, Wisconsin, Tennessee, Massachusetts, Connecticut, Kansas, New Hampshire, Georgia, North Carolina and Colorado. In Canada, EAB has been detected in Ontario and Quebec. For up-to-date maps showing infested states, as well as quarantines, please visit <http://www.emeraldashborer.info>.

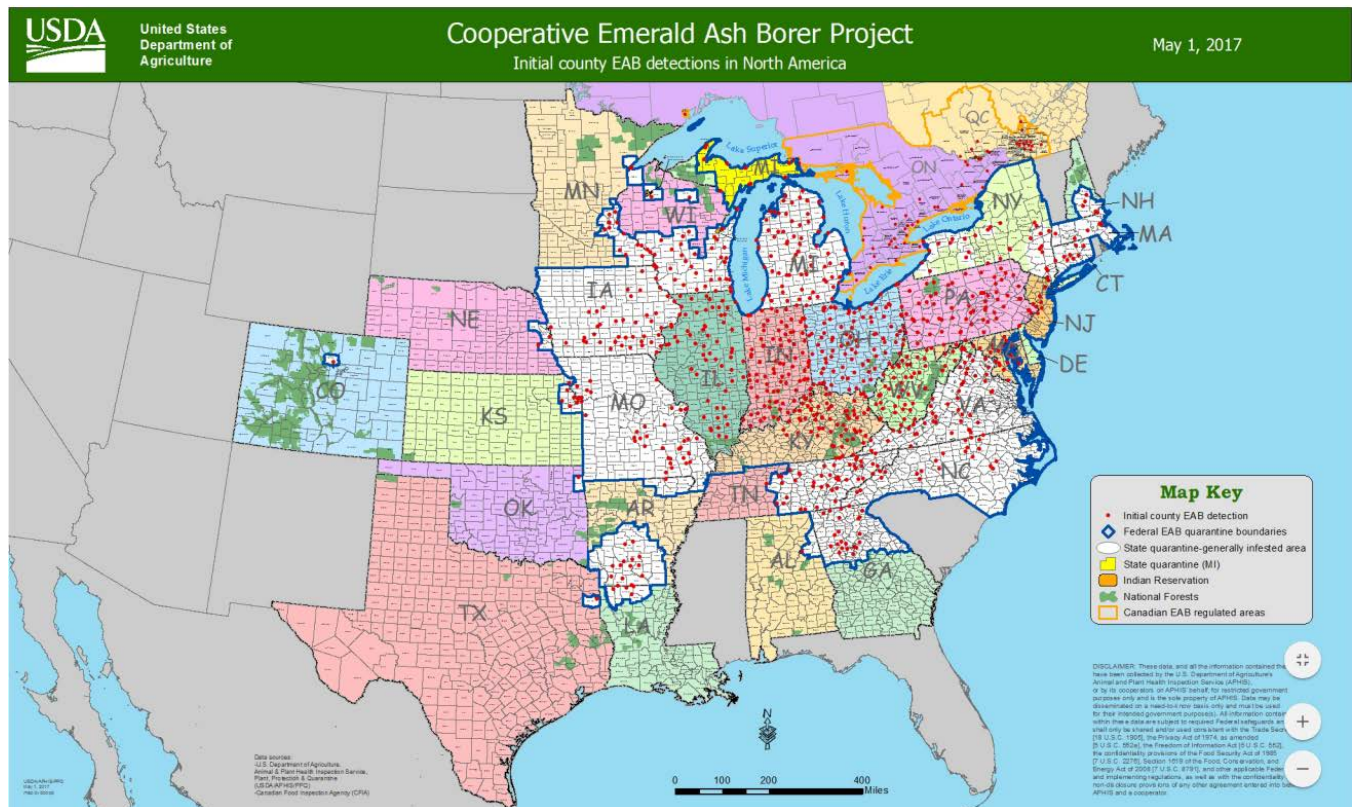


Figure 1. Please visit <http://emeraldashborer.info/#sthash.C5TmSPqg.MnQ1y72v.dpbs> for current distribution maps.

Can anything be done to prevent EAB from killing ash trees?

Unfortunately, nothing can be done to stop EAB from spreading into new areas and killing ash trees there. In the next several years we may have new methods for slowing EAB's spread, but these will only **slow** its spread, not **stop** it. In areas where EAB 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 EAB.

Is there a treatment for EAB?

Even though EAB has not been found in North Dakota, many people want to learn more about insecticide treatments. The current recommendation is to not begin treatments until EAB has been found within 15 miles of your location – once treatments begin, they must be repeated every 1-2 years in order to remain effective. The nearest known infestation of EAB is in the Twin Cities area of Minnesota, so treatments at this time are not needed. Nevertheless, there is a lot of information available about potential treatments for EAB; please visit the NDSU Extension horticulture page at: <http://www.ag.ndsu.edu/horticulture>.

Should I treat my ash tree before it gets EAB?

No treatment is needed until EAB has been confirmed within 15 miles of your tree. If your tree has symptoms like those of an EAB 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 please contact your local city forester.

Should I remove my ash tree before it gets EAB?

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 EAB or another insect or disease problem. There are a number of native insects that attack ash trees and may cause symptoms similar to EAB. Just because your ash tree shows symptoms like those caused by EAB does not mean it has EAB. However, with highly destructive invasive insects, such as EAB, it is best to err on the side of caution by seeking professional guidance if you suspect your tree is infested. If EAB becomes established in your area, management steps may need to be taken.

Should I continue planting ash trees?

Given the threat of EAB and the over-abundance of ash, the further planting of ash is not recommended. Ash has been popular in landscape, agroforestry and conservation plantings for decades. However, this popularity has resulted in a tremendous number of ash trees in communities throughout North Dakota and the northern Plains. Because species diversity is an important measure of a community forest's overall health, it is important to plant a variety of tree species. There are a number of trees that grow well in North Dakota, but are frequently under planted. For recommendations about what trees you can plant in your landscape, contact your local North Dakota Forest Service office.

Are there any ash varieties or cultivars that are resistant to EAB?

Preliminary research does not indicate that there are any resistant ash varieties or cultivars native to the U.S., but research is ongoing.

What are alternatives to ash?

Many species of tall deciduous trees are available for conservation plantings as well as in urban areas. (Some, such as cottonwood or boxelder are probably better suited to conservation plantings.) The ND Tree Selector (<http://www.ag.ndsu.edu/tree-selector/>) is an online tool that helps users choose tree and shrub species based on a variety of characteristics. Are you looking for something that is fast growing?

Or a tree that is long-lived? Perhaps a species with pretty flowers? The ND Tree Selector can help you find species to consider for your next planting.

What other insects attack ash trees?

There are several species of native ash borers that attack ash trees. In North Dakota the ash lilac borer and carpenterworm are known to be able to attack healthy ash trees. Stressed ash trees are most commonly attacked by the redheaded ash borer and ash bark beetle.

What other insects look like EAB?

There are multiple species of insects that are frequently mistaken for EAB. The bronze birch borer looks very similar to EAB 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 EAB. For more information about these insects, see North Dakota State University Extension Bulletin *E-1604, Insects Frequently Confused with the Emerald Ash Borer in North Dakota*.

Where can I learn more about EAB?

More information is available from your state forestry agency or state department of agriculture and the latest information can be found on the Web at www.emeraldashborer.info.

Who should I call if I think I have EAB on my tree?

If you suspect you have EAB the first step is to make sure you are dealing with an ash tree. Then you need to contact your local city forester if you are in an urban area, in rural areas contact the Soil Conservation District, NDSU Extension office, ND Forest Service or the ND Department of Agriculture. If you can provide samples from the tree, suspect insect specimens or photos of parts of the tree and/or insects they can be a great help in identification.

What is being done in North Dakota to prepare for EAB?

North Dakota is involved with the Great Plains Tree and Forest Invasives Initiative (GPI), a collaborative initiative of state forestry agencies in Kansas, Nebraska, North Dakota and South Dakota and the US Forest Service. States are inventorying tree and forest resources to determine which areas may be most impacted by EAB and other invasive species, developing public education programs, and exploring opportunities for utilizing wood generated by EAB. There are numerous entities involved in strategizing the state response plan for EAB. The plan includes outreach and education activities, detection processes, and responses if the insect is found within the state. This is a high priority issue for USDA APHIS, ND Department of Agriculture and the ND Forest Service.



Help Stop the Spread of Exotic Pests: Don't Move Firewood!