



Emerald Ash Borer



Top: Adult emerald ash borer
(emeraldashborer.info)

Middle: Emerald ash borer larvae
(dec.ny.gov)

Bottom: Ash tree damaged by
emerald ash borer larvae
(dec.ny.gov)

Emerald ash borers are mean green, ash-tree killing machines. Since their discovery in the United States in 2002, the emerald ash borer has spread to fourteen states and has killed over twenty million ash trees.

Origin and Dispersal.

Native to Asia, the emerald ash borer is an invasive species to the U.S. and Canada. The emerald ash borer most likely made its way to Canada and the United States in the wood used to hold cargo on ships and airplanes. Now that this unwelcome beetle has become well established in its new home, there seems to be nothing that can stop it from spreading.

Ash-Tree-Killing Machines.

The adult emerald ash borer is metallic, dark green in color and about one-half an inch long and one-eighth an inch wide. Emerald ash borer larvae are white with a brownish-reddish head and can grow to be one to 2.75 inches long.

The adult beetles lay their eggs on ash trees between May and June. One to two weeks after the eggs are laid, the larvae emerge and start to bore into the bark of the ash trees to get to the area between the bark and wood where the tree stores its nutrients. For almost a year, the larvae feast on this layer of the ash trees which cuts off the transfer of water and nutrients to any part of the tree above where the larvae are. An ash tree heavily infested with emerald ash borer larvae will most likely die within two years of the initial infestation.

One year after the eggs are laid, the larvae enter the pupa stage and soon turn into adult emerald ash borer beetles. The adults lay eggs on an ash tree and the vicious cycle starts again.

How Can You Tell If an Ash Tree Has Been Infested?

One of the ways to tell if ash trees have been infested with emerald ash borer larvae is to look at the top of the trees. If they appear to be losing branches and do not exhibit many leaves, the ash trees are most likely dying from the infestation.

Another way to tell if an ash tree has been infested by the larvae of the emerald ash borer are little holes that are in the shape of a “D”



"D" shaped hole from adult emerald ash borers emerging from pupa stage (entimology.wisc.edu)

that are made when the pupa emerges to complete its life cycle by transforming into an adult. These holes are only about one-eighth of an inch in diameter so they may be hard to see. But they are a very good indicator that the ash tree you are looking at has been infested.

What is Being Done to Control the Emerald Ash Borer?

In an effort to prevent further infestations, the United States Department of Agriculture is enforcing quarantines and fines to the fourteen states that have been affected by the emerald ash borer. The overall goal is to make sure that infested wood does not make it to an area that has not been affected by the borer.

Another method being used to control the emerald ash borer, is biological control. Scientists have carefully studied natural predators of the emerald ash borer found in Asia and, with government permission, have released the *Spathius agrili*, *Tetrastichus planipennisi* and the *Oobius agrili*. These three insects are all parasitoids, which means the adults lay their eggs in the emerald ash borer larvae. When the eggs hatch, the emerald ash borer larvae are preyed upon by the parasitoid larvae eventually killing the emerald ash borer.

States Affected by Emerald Ash Borer Infestations:

- Michigan
- Illinois
- New York
- Indiana
- Maryland
- Minnesota
- Missouri
- Ohio
- Pennsylvania
- Virginia
- West Virginia
- Wisconsin
- Kentucky

Here's What You Can Do to Prevent and Control the Spread of the Emerald Ash Borer.

- Do not bring your own fire wood when camping. Buy wood from the area in which you are camping.
- Spread your knowledge of the emerald ash borer with friends, family, and coworkers.
- If you find an infested ash tree on your property report it to the closest United States Department of Agriculture office or call the USDA Emerald Ash Borer Hotline toll-free at 1-866-322-4512

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