

Emerald Ash Borer

What is it?

The emerald ash borer is a bright green beetle from Asia. It was first detected in this country in Michigan in 2002. The adult is 1/3 of an inch long. It is the larva stage of the beetle that does all of the damage. It only feeds on ash trees. The emerald ash borer has killed millions of ash trees in 25 states.



Life Cycle

After mating the female lays her eggs on the bark of the tree. The eggs hatch into worm like larvae in 7-10 days. After the eggs hatch the larvae bore through the trunk of the tree and feed on the ash tree's vascular tissue. The larvae grow to about 1 inch in length and spend the winter feeding on the tree. The larvae emerge as an adult in the spring through a "D" shaped hole in the trunk. Their adult life is short lived living only 20 days. But that is enough time to mate and lay eggs that will infest more ash trees.

What does it do to your ash tree?

The larvae feeding underneath the bark of the tree disrupt the trees ability to move water and nutrients. This is the life blood of the tree ultimately starving the tree to death. Trees infested with the emerald ash borer will lose 30 to 50% of their leaves in the first two years and die within 4 years.

How do you know if your ash tree is infested?

Most of the time the infested tree goes unnoticed until it is too late. One of the first signs is the upper leaves of the tree begin to die back. This process will continue and work its way down the tree. "D" shaped holes 1/8 inch wide may be found on the trunk of the tree. Highly active woodpecker activity may be a sign infestation. Underneath the bark are feeding channels created by the larvae. Trees that are heavily infested may re-sprout from the trunk base.

What do you do with an infested ash tree?

Determine if the tree is worth saving. Trees showing outward signs of damage may not be worth saving. Chemical treatment is required to kill the emerald ash borer. Most of the insecticides used to control emerald ash borer are systemic. The tree has to absorb the chemical and then move the insecticide throughout the tree by way of its vascular system. Trees with an already damaged vascular system, due to the feeding of emerald ash borer larvae, may not respond to the treatment. It may take 2 years of treatment before positive signs of the canopy coming back are viewed. Other treatments include foliage spraying to kill the adult female beetle that feeds on ash leaves prior to laying eggs.

What kind of treatments is available?

There are a number of treatments and chemicals available to combat the emerald ash borer. Foliar spraying, soil treatment, chemical injection, trunk spraying all use different chemicals and all have different rates of uptake by the tree. Homeowners can hire a tree care professional or treat the ash tree themselves. To protect ground water, non-target organisms and environmental damage read and follow the instructions printed on the chemical label. Understand that many of the chemicals used in the treatment are non-select. For example after a foliar spraying the treated leaves are toxic to many species of insects that consume leaves.

Biological Control

There is no known native organism that feeds exclusively on the emerald ash borer. However, Department of Agriculture scientists have discovered a stingless wasp's native to Asia that feeds exclusively on the eggs and larvae of the emerald ash borer. Currently releases of the wasps have occurred in most infested states.

Additional information on the emerald ash borer can be found at the following web sites:

Purdue University: <http://extension.entm.purdue.edu/EAB/>

Missouri University Extension Service: <http://extension.missouri.edu/treepests/emeraldashborer.aspx>

Missouri Department of Conservation: <http://mdc.mo.gov/your-property/your-trees-and-woods/tree-diseases-and-pests/emerald-ash-borer-management>