#### **EMERALD ASH BORER: A NEW THREAT TO TREES**

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Over the past century, foreign diseases have decimated two species of American forest trees: early in the twentieth century ago, chestnut blight killed American chestnut trees, until that time the dominant trees in eastern forests; several decades later, Dutch elm disease laid low the stately American elm tree. Neither species has fully recovered, although for Dutch elm disease both treatments and resistant trees are available.

Today we are faced with a third scourge that has come from abroad: the emerald ash borer, a small Asian insect that was first identified in the Midwest 20 years ago (see illustration). It most probably arrived in this country in wooden shipping containers made from infested trees. It quickly spread throughout the Midwest and has now reached New Jersey. In 2015 it was found in Bergen County, although it has not so far been seen in Glen Rock. However, without treatment, all American ash trees—by some estimates, as many as 8 billion trees--will eventually die.

The trees at risk include backyard trees, street trees, and forest trees. In some parts of the country, particularly in the Midwest, American ash is the dominant urban street tree. Here in Glen Rock, we have planted very few ash as street trees, but those on people's properties and in forests are at great risk. However, effective treatments are available for both unaffected trees and those with mild infestations.

## **Identifying Ash Trees**

Effective treatments are available for emerald ash borers infestations, but the first step is to identify your trees. All American ash trees have compound leaves that contain from 9 to 15 leaflets, arranged opposite to each other on the stem. Walnuts and hickories, which have similar compound leaves, have an alternate leaf arrangement—a key different in identifying trees. Ash trees, especially mature ones, also have distinctive deeply ridged bark (see illustration).

# **Treatment and Management**

If you have ash trees on your property, or if you are unable to identify your trees, call a certified arborist. He or she can determine the species and help you decide, if you have ash trees, whether they should be treated or removed.

The emerald ash borer kills trees by attacking their circulatory system. The first sign of infestation is crown thinning: sparse foliage at the top of the tree. Later signs include curved twig tips (best viewed before the tree leafs out), D-shaped holes in the bark, bleaching (lightening) of bark, and new growth emerging from the base of the tree (suckering). Most trees die within two growing seasons. An arborist is best qualified to help you determine if your tree should be treated or removed. All American ash trees are susceptible to the borers.

Several different treatments are available, both organic and inorganic. If the tree needs to be removed, you must take out the stump as well, and the wood must be disposed of according to state regulations to prevent further spread of the infestation. In many cases homeowners will have to balance the cost of annual or biannual treatment against the cost of tree removal and replacement. Again, the best way to decide what to do in an individual case is to consult a certified arborist. If you do nothing, all ash trees will die when the insect reaches this area in large numbers.

The best time to act is early spring, just as the tree is leafing out. Bottom line: identify your trees, consult an arborist, and determine the best option for you.



The emerald ash borer is a tiny insect that can kill a large tree within two growing seasons.

https://commons.wikimedia.org/wiki/File:Emerald ash borer 05.jpg



 Leaves are compound and composed of 5 to 11 leaflets.



2. Seeds on female trees are paddle shaped.



Branches and buds are in pairs directly across from each other (opposite branching).



 Mature bark has diamond-shaped ridges. towa State University - University Extension, SUL21, Jan 2011

American ash trees have opposite, compound leaves and deeply ridged bark.

http://www.nj.gov/agriculture/divisions/pi/prog/identifyingashtrees.html