

## Emerald Ash Borer

The emerald ash borer, (*Agrilus planipennis* Fairmaire) is a small (1/2 inch long, 1/8 inch wide) metallic green beetle native to Asia. Though it was first found in Michigan in 2002, it was likely that a beetle population had been established in the Detroit area for many years prior. More than 20 million ash trees have been killed. It has been detected also in Ohio, Indiana, Virginia, Maryland, Illinois, and Ontario, Canada.



Actual size

## Life Cycle

The adult emerald ash borer emerges in May – July and the female lays numerous eggs in bark crevices and between layers of bark.

The eggs hatch in 7 – 10 days and larvae bore into the tree where they chew the inner bark and phloem creating winding galleries as they feed. This cuts off the flow of water and nutrients in the tree, causing dieback and death.



Larva

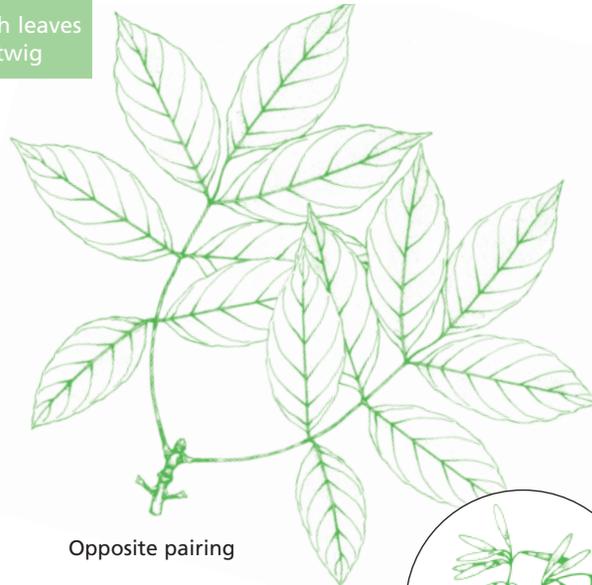


S-shaped galleries

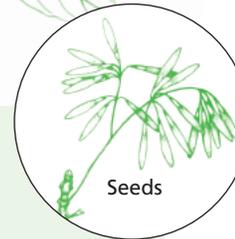
## Ash Trees

Ash trees are very common in landscapes and most species, namely white ash (*Fraxinus americana*) and green ash (*F. pennsylvanica*) are native to Illinois forests. It is estimated that as much as 20% of street trees in the Chicago area are ash.

Ash leaves & twig



Opposite pairing



Seeds

## Characteristics of ash:

- Compound leaves made up of small, glossy green leaflets.
- Leaves, twigs and branches grow in opposite pairs.
- Bark of mature trees is gray and furrowed, often appearing in a diamond pattern.
- Some ash trees will produce small canoe paddle-shaped seeds.
- Seedless ash trees may develop ash flower galls that turn from green to brown and may persist in the crown throughout the year.



Dieback



Suckers on trunk or base of tree



Bark slits



Emergence hole - Shown actual size of 1/8" and D-shaped

## Signs and Symptoms

The most visible sign of infestation is crown dieback. Branches at the top of the crown will die and more branches will die in subsequent years. As the tree dies, suckers will sprout from the base of the tree and on the trunk. The bark may also split vertically and woodpeckers may feed on the beetle leaving visible damage on the bark. Treatments with insecticides are being studied. However, all ash trees near to any new infestation will be lost.

Adult beetles emerging from trees will leave a very small, 1/8 inch diameter distinctly "D" shaped exit hole that may appear anywhere on the trunk or upper branches.

## Other Stressors:

Ash trees may suffer from a large number of pest and disease problems that cause similar symptoms. Native borers also attack ash trees, though they leave larger exit holes up to a 1/4 inch in diameter that are usually circular or oval in shape.

*You Can Help...*

# Do Not Move Firewood!



Photo: Canadian Food Inspection Agency

- Emerald ash borer can easily be transported in ash logs.
- Purchase firewood locally from a known source.
- Be sure to use all of the firewood in the cold months so that no hidden emerald ash borer larvae or adults can survive on logs left through the spring.
- There may be state or federal quarantines in place that will restrict the movement of ash logs, branches or other material in your area. Check with your municipal government or the Illinois Department of Agriculture for information.
- Monitor the health of ash trees. Look for dead and dying branches at the top of the tree's crown.

## If You Think You Have Emerald Ash Borer:

- Visit <http://www.emeraldashborer.info/> or <http://na.fs.fed.us/fhp/eab/> for assistance in identifying suspect insects and symptoms.
- Contact your city or village forester or arborist for assistance.
- In the city of Chicago contact 312-74BEETL (312-742-3385)
- Contact the University of Illinois Extension office in your county. Find a nearby office at <http://web.extension.uiuc.edu/state/> or by calling 217-333-5900
- Contact The Morton Arboretum Plant Clinic at 630-719-2424 or <http://www.mortonarb.org/>
- Contact Illinois Department of Agriculture's Pesticide Hotline at 800-641-3934
- Contact a certified arborist. You may find one nearby at <http://www.illinoisarborist.org/>
- Call the national EAB hotline 866-EAB-4512



The Morton Arboretum

For more information about The Morton Arboretum visit [www.mortonarb.org](http://www.mortonarb.org)

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The Morton Arboretum

Stop the Borer,  
Save Ash Trees

Emerald Ash Borer

