

## Websites for Resources & Additional Information:

### General EAB Information

- <http://www.emeraldashborer.info>

### Wisconsin EAB Information Source

- <http://datcpservices.wisconsin.gov/eab/index.jsp>

### Wisconsin DNR Website

- <http://dnr.wi.gov/topic/foresthealth/emeraldashborer.html>

### City of Onalaska EAB Information

- <http://www.cityofonalaska.com>  
⇒ Select the following tabs:  
“Department Services” then  
“Planning / Zoning” then  
“Urban Forestry”

## Tree Company / Arborist Selection Criteria

If you have an ash tree on your property and choose to treat it, please consider the following:

- Get multiple bids in writing as well as dates for work start and completion.
- Provide proof of insurance and references.
- Consider requiring certifications from professional arborist associations and current pesticide applicators.
- Determine if multiple treatments are needed and how often.
- Get detailed and signed contracts for work.

\*A word to the wise, homeowners should avoid companies with high-pressure sales or a promise of cure. Information by the international Association of Arborists.

## City of Onalaska

City Hall  
Planning/Zoning Department  
415 Main Street  
Onalaska, WI 54650  
Contact: Katie Meyer, Planner | Zoning Inspector

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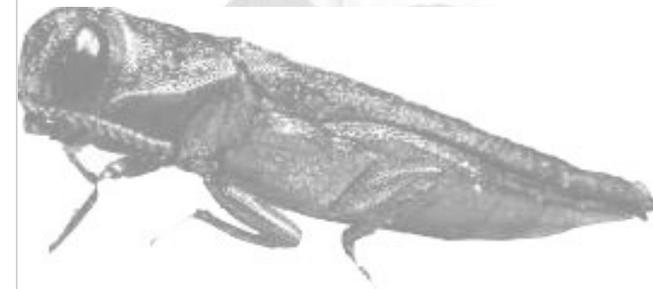
Photos obtained from the following sources:  
Michigan State University  
Morton Arboretum  
Canadian Food Inspection Agency  
<http://www.emeraldashborer.info/photos>  
PA-DCNR - Forestry Archives, Bugwood.org  
[Chambersvilletreefarm.com](http://Chambersvilletreefarm.com)



# Emerald Ash Borer (EAB)



Adult borer



# Emerald Ash Borer (EAB)

The emerald ash borer, (*Agrilus planipennis* Fairmaire) is a very 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 up to 12 years prior. It probably arrived in America on solid wood packing material carried on ships and planes. Tens of millions of ash trees have been killed by the emerald ash borer since its arrival in North America.

## Biology

The adult emerald ash borer emerges May-July and the female lays eggs in trees between layers of bark. The eggs hatch in 7-10 days and larvae bore into the tree where they chew the outer sapwood and phloem creating S-shaped patterns as they feed. This activity cuts off the flow of water and nutrients in the tree, causing dieback and death typically within 1-3 years. Emerald ash borers attack all true ash species (green, white, black, & blue).



Larval stages



S - shaped galleries

## Ash Trees

Ash trees are very common in forests as well as urban landscapes. Ash trees can be identified by their leaf structure, bark, buds, or seeds.



Compound leaf structure

Ash species have a compound leaf structure meaning that there are many small "leaflets" on one leaf stalk. A leaf stalk typically consists of 5-11 individual leaflets.



Opposite

Alternate

The branches are opposite each other on the stem.

Opposite leaflets



Diamond- shaped bark ridges

On mature ash trees, the bark has a distinctive pattern of diamond-shaped deep ridges. On young trees, the bark is relatively smooth.

## EAB Impacts

Wisconsin stands to lose over 700 million ash trees to EAB. The effects of EAB will directly impact the City of Onalaska. An estimated 28% of our publicly-owned trees in parks and on boulevards are ash species (roughly 1,700), with an estimated 1,100 ash trees on private property.

## Signs and Symptoms

Common signs and symptoms of an EAB infestation usually includes:

- 1) Thinning crown;
- 2) New sprouts that grow from the roots and trunk;
- 3) Damaged bark chipped off by woodpeckers eating larvae;
- 4) Bark splits that reveal the S-shaped galleries; and
- 5) When adult borers emerge they leave a D-shaped exit hole in the bark.



Crown dieback



Epicormic shoots



D-shaped exit holes