Village of Howard
1336 Cornell Road • Green Bay WI 54313-8923

HOW DOES EMERALD ASH BORER (EAB) AFFECT VILLAGE OF HOWARD RESIDENTS – FAQ?

1. What is EAB?
   EAB is a small metallic green colored insect that affects and kills only ash tree species. This stage of the insect is the adult and can easily fit on a penny. Like most beetle insects the larvae stage does the most damage to the tree. They wind back and forth as they feed, creating characteristic S-shaped patterns called galleries under the bark. This will eventually girdle and kill the tree.

2. What trees does EAB affect?
   EAB will only affect true ash (Fraxinus) species. This includes all white, green, and black ash. European and Korean mountainash are not true ashes and will not be affected.

3. Who do I call if I think my ash tree has EAB?
   You can contact the Village Forester if you suspect that your ash tree may be harboring Emerald Ash Borer. Please see attached information with signs and symptoms prior to calling.

4. Can I treat my tree with insecticide?
   There currently is no insecticide that is 100% effective in preventing or killing the Emerald Ash Borer. Please be cautious of individuals and companies that claim that they have the "cure all". Please see http://www.emeraldashborer.info/files/E2955.pdf for a homeowner publication on insecticide treatments.

5. What can I do with my tree branches and wood if I remove my ash tree?
   You can contact the Public Works Department to have curbside pickup of branches or haul the material to the compost site at the Public Works facility. Wood can be used for firewood however state and federal quarantines need to be followed.

6. How does the quarantine affect me?
   The quarantine limits the movement of all ash products and hardwood firewood out of the quarantined area. In general do not move any firewood outside of Brown County. Check http://emeraldashborer.wi.gov/article.jsp?topicid=20 for additional information on EAB quarantines.

DEPARTMENT OF PUBLIC WORKS • FORESTRY DIVISION
920-434-4060 • FAX 920-434-4072 • email: cclark@villageofhoward.com • www.villageofhoward.com

7. What trees are recommended for replanting?
   The Howard Forestry Division does not recommend planting of any ash species at this time. For a list of trees that are alternative trees for planting please see http://www.entomology.wisc.edu/emeraldashborer/Alternatives%20to%20Ash%20for%20Homeowners.pdf.

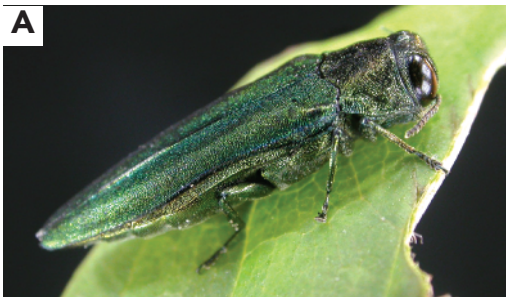
8. Where can I get more information on EAB?
   You can check the following web sites, call the Village Forestry Division, or contact the WDNR.
   http://emeraldashborer.wi.gov/
   http://www.emeraldashborer.info/
   http://www.entomology.wisc.edu/emeraldashborer/
   http://www.datcp.state.wi.us/arm/environment/insects/emerald-ash-borer/index.jsp

Extension Bulletin E-2938 Reprinted December 2005

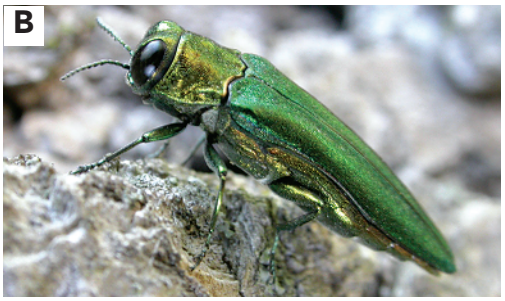
Signs and Symptoms of the Emerald Ash Borer

Mary Wilson, MSU Extension. Eric Rebek, Michigan State University Dept. of Entomology

Adult



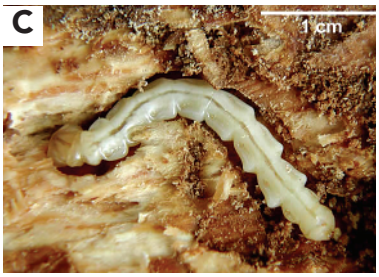
Michigan State University



Michigan State University

- Bright, metallic green (Figs. A, B).
- 1/2 inch long, flattened back (Figs. A, B).
- Purple abdominal segments beneath wing covers.

Larva



D. Cappaert, MSU

- Creamy white, legless (Fig. C).
- Flattened, bell-shaped body segments (Fig. C).
- Terminal segment bears a pair of small appendages.

Canopy Dieback

E. Rebek, MSU

E. Rebek, MSU

- Begins in top one-third of canopy (Fig. D).
- Progresses until tree is bare (Fig. E).

Epicormic Shoots

J. Smith, USDA APHIS PPQ

J. Smith, USDA APHIS PPQ

- Sprouts grow from roots and trunk (Figs. F, G).
- Leaves often larger than normal.

Emerald Ash Borer

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Bark Splitting

H

J. Smith, USDA APHIS PPQ

I

A. Storer, Mich. Tech. Univ.

- Vertical fissures on bark (Fig. H) due to callous tissue formation (Fig. I).
- Galleries exposed under bark split.

Serpentine Galleries and D-shaped Exit Holes

J

D. Cappaert, MSU

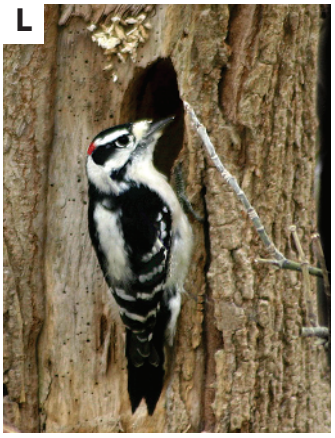
K

D. Cappaert, MSU

- Larval feeding galleries typically serpentine (Fig. J).
- Galleries weave back and forth across the woodgrain.
- Packed with frass (mix of sawdust and excrement).
- Adults form D-shaped holes upon emergence (Fig. K).

Increased Woodpecker Activity/Damage

L



D. Cappaert, MSU

M

Karen D'Angelo, MSUE

- Several woodpecker species (Fig. L) feed on EAB larvae/pupae.
- Peck outer bark while foraging (Fig. M).
- Create large holes when extracting insects (Fig. M).

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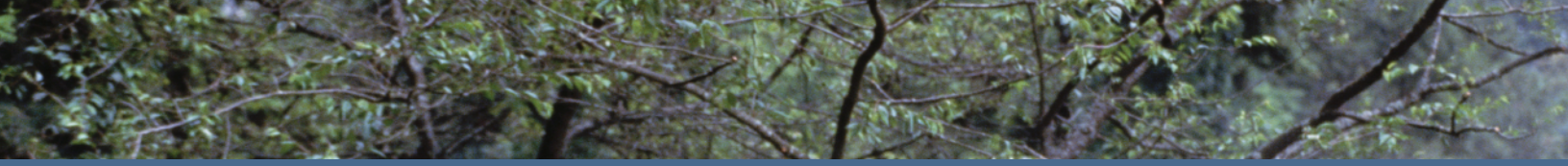
Revised - 12:05 - 5M - KMF/LB



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Ash Tree Identification

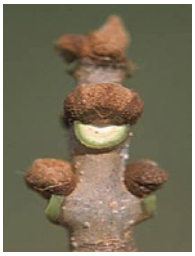
Ash species attacked by emerald ash borer include green (*Fraxinus pennsylvanica*), white (*F. americana*), black (*F. nigra*), and blue (*F. quadrangulata*), as well as horticultural cultivars of these species. Green and white ash are the most commonly found ash species in the Midwest with blue ash being rare.

While other woody plants, such as mountainash and pricklyash, have "ash" in their name, they are not true ash, or *Fraxinus* species. Only true ash are susceptible to attack by emerald ash borer.

To properly identify ash trees, use the following criteria:

Branch and Bud Arrangement

Branches and buds are directly across from each other and not staggered. When looking for opposite branching in trees, please consider that buds or limbs may die; hence not every single branch will have an opposite mate.



Diane Brown-Rytlewski

Leaves

Leaves are compound and composed of 5-11 leaflets. Leaflet margins may be smooth or toothed. The only other oppositely branched tree with compound leaves is boxelder (*Acer negundo*), which almost always has three to five leaflets. White ash (on left) and green ash (on right)

*Paul Wray, Iowa State University

Bark

On mature trees (left), the bark is tight with a distinct pattern of diamond-shaped ridges. On young trees (right), bark is relatively smooth.

*Paul Wray, Iowa State University

Seeds

When present on trees, seeds are dry, oar-shaped samaras. They usually occur in clusters and typically hang on the tree until late fall, early winter.

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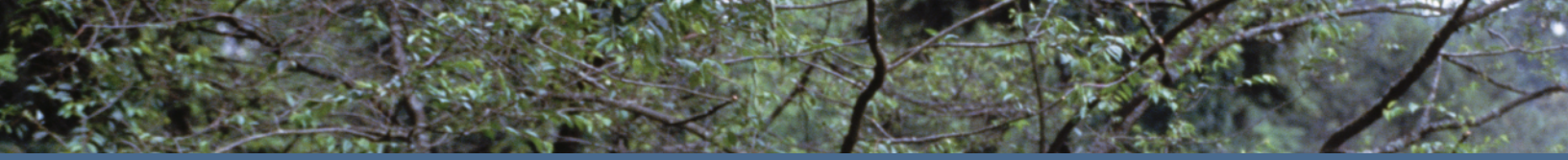
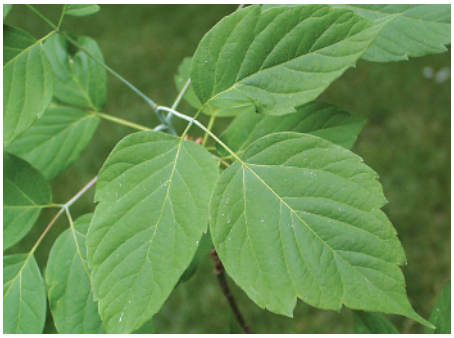
Emerald Ash Borer



Tree Species Resembling Ash

Boxelder *(Acer negundo)*

Exhibits opposite branching and compound leaves. However, has 3 to 5 leaflets (instead of 5 to 11) and the samaras are always in pairs instead of single like the ash.



*Paul Wray, Iowa State University

*Bill Cook, Michigan State University

European Mountainash *(Sorbus aucuparia)*

Leaves are compound with alternate (staggered) branching. Tree bears clusters of creamy white flowers in May. Fruits are fleshy, red-orange berries.

Diane Brown-Rytlewski

*Boris Hrasovec, University of Zagreb

Shagbark Hickory *(Carya ovata)*

Leaves are compound with 5 to 7 leaflets, but the plant has an alternate branching habit. Fruit are hard-shelled nuts in a green husk.

*Paul Wray, Iowa State University

*Paul Wray, Iowa State University

Elm *(Ulmus species)*

Branching is alternate and the leaves are simple with an unequal leaf base.

*Paul Wray, Iowa State University

*Paul Wray, Iowa State University

*Paul Wray, Iowa State University

Black Walnut *(Juglans nigra)*

Leaves are compound with 9 to 15 leaflets, but the plant has an alternate branching habit. Fruit is a large dark brown nut inside a green husk.

*Paul Wray, Iowa State University

Authors: Kimberly Rebek and Mary Wilson

*www.forestryimages.org

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