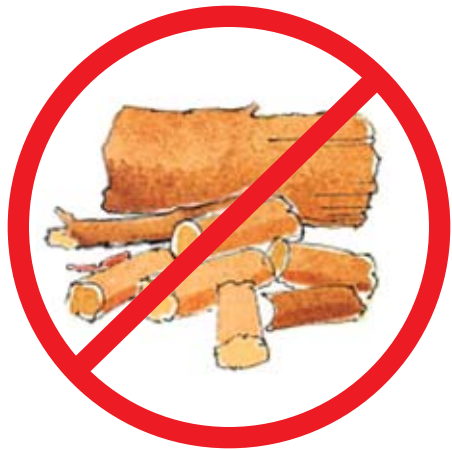


ALERT!

*Protect our
Forests and Trees.*

*Help Stop the Movement
of Exotic Pests.*



DO NOT MOVE FIREFWOOD!

Exotic pests like the emerald ash borer can be spread when infested firewood is transported to new areas.

- Use LOCAL firewood
- Do not bring firewood into PA. This is banned under order of quarantine.
- If you have already transported firewood, do not take it home, do not leave it - BURN IT!

REPORT!

If you think you have
found emerald ash borer,
report it by contacting:

PA Department of Agriculture:
1-866-253-7189

PA Department of Conservation and
Natural Resources (DCNR)

Penn State Cooperative Extension
or
United States
Department of Agriculture

or

Report your sighting by e-mail at:
Badbug@state.pa.us

Consult

www.paemeraldashborer.psu.edu/

or

www.emeraldashborer.info/



Pennsylvania Department of
AGRICULTURE



PA Department of Conservation and Natural Resources



PENN STATE Cooperative Extension



United States Department of Agriculture

The USDA is an equal opportunity provider and employer. FS-808c

What is the Emerald Ash Borer?



USDA Forest Service
Northeastern Area
State and Private Forestry
NA-PR-05-04
Revised January 2008
(PA)

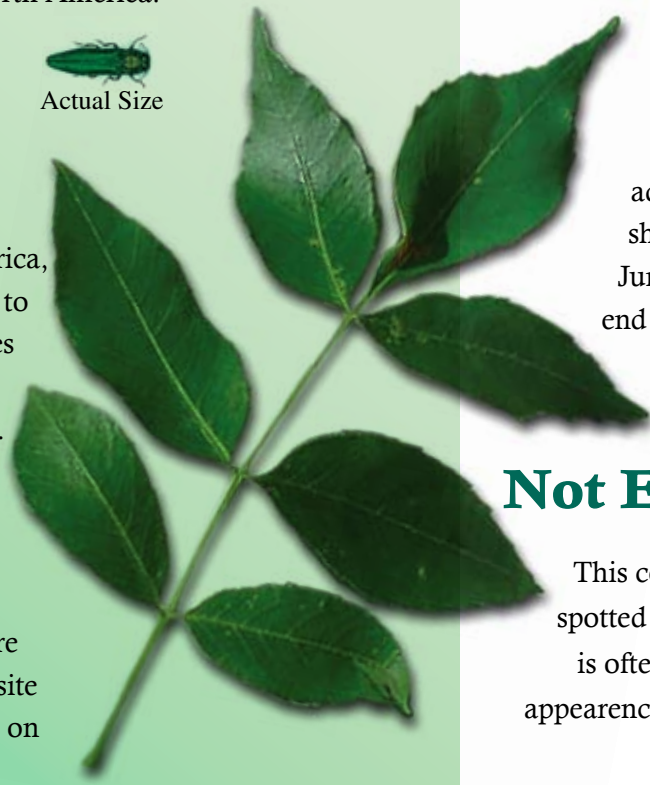
The emerald ash borer,

Agrilus planipennis Fairmaire, a beetle native to Asia, was first detected in Michigan in 2002. Evidence suggests that the beetle was established in Michigan for years prior to its discovery. Emerald ash borer (EAB) has since been detected in several states including Pennsylvania, and Ontario, Canada. In addition to spreading by natural means, EAB can be transported to new areas in infested firewood, timber, and nursery stock. This beetle has been responsible for the loss of millions of ash trees in North America.



Host:

In North America, EAB is known to infest all species of ash (*Fraxinus* spp.). Ash can be recognized by the presence of compound leaves which are arranged opposite of one another on the branches.



Larva



S-Shaped Galleries

D-Shaped
Emergence
Hole



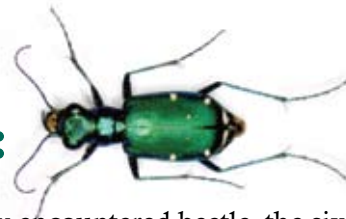
Biology:

Eggs are laid between layers of bark and in bark crevices. Larvae hatch in about one week and bore into the tree where they feed on the inner bark and phloem, creating “S”-shaped galleries. Larvae go through three feeding stages, and then excavate a pupal chamber in the fall, where they will overwinter as prepupae.

Pupation occurs in late spring, and adults begin to emerge through “D”-shaped exit holes in May and early June. Adults will remain active until the end of summer.

Not EAB:

This commonly encountered beetle, the six-spotted green tiger beetle, *Cicindela sexguttata*, is often mistaken for EAB due to its similar appearance. It is a predator of small insects and is frequently found on hiking trails.



Photographs: James W. Smith, David Cappaert, www.invasive.org and PA DCNR.

Symptoms and Signs:

New infestations are difficult to detect, as damage to the tree may not be apparent for up to three years. Symptoms of an infestation can include branch dieback in the upper crown, excessive epicormic branching on the tree trunk, and vertical bark slits. Woodpecker damage is sometimes apparent.



Dieback



Epicormic Branching



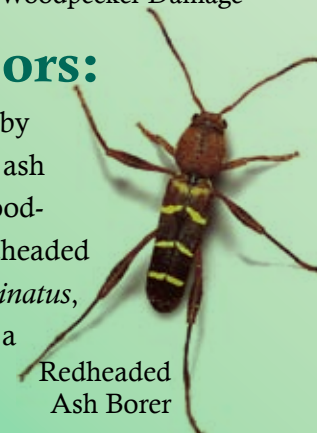
Bark Slits



Woodpecker Damage

Other Stressors:

Ash may also be stressed by drought, diseases such as ash yellows, and by native wood-boring insects like the redheaded ash borer, *Neoclytus acuminatus*, (Fabricius) which creates a round emergence hole.



Redheaded
Ash Borer