

## Emerald Ash Borer- Signs and Symptoms



The emerald ash borer belongs to a group of insects known as metallic wood-boring beetles (Buprestidae). The beetle's immature or larval form spends its life feeding beneath the bark of ash trees. As a result, the ash tree host suffers extensive damage to its vascular system, depriving the tree's crown of water and nutrients. Research conducted by Michigan State University and the USDA Forest Service has shown the emerald ash borer attacks both stressed and healthy ash trees, typically killing its host in three to five years. All ash species in Wisconsin are attacked, including white, green black and blue ash.

### Symptoms:

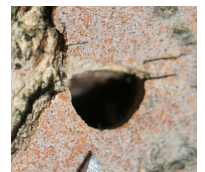
- » Trees begin to show dead branches throughout the canopy, beginning at the top. Foliage in the top of the tree is thin and discolored.
- » Sprouting at the base and/or on the main stem of the tree, often just below where the larvae are feeding.
- » Woodpeckers feed on emerald ash borer larvae located under the bark. Feeding is typically evident higher in the tree where the emerald ash borer prefers to initially infest.
- » Vertical splits in the bark are caused due to callus tissue that develops around larval galleries. Larval galleries can often be seen beneath splits.



WDNR Photo by  
Shane Lishawa

### Signs:

- » S-shaped larval galleries: As larvae feed under the bark they wind back and forth, thus creating galleries that are packed with frass and sawdust and follow a serpentine pattern.
- » Larvae: Larvae are cream-colored, dorso-ventrally flattened and have pincher-like appendages (urogomphi) at the end of their abdomen. Mature larvae reach 1 1/2 inches in length and all larvae are found feeding beneath the bark.
- » D-shaped emergence holes: As adults emerge from under the bark they create an emergence hole ~ 1/8 inch in diameter and D-shaped.



Source: Wisconsin DNR. For more information, visit their website at <http://dnr.wi.gov/forestry/>