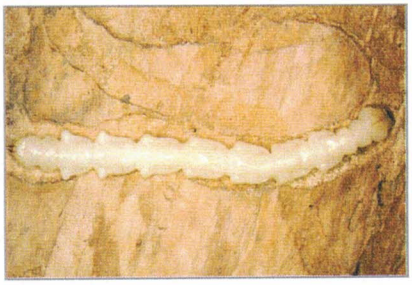
EMERALD ASH BORER

WHAT IS THE THREAT:

The Emerald Ash Borer (*Agrilus planipennis*), or EAB, is an invasive wood boring beetle that was first introduced from Asia to Detroit, Michigan in 2002 and is known to have spread to 32 states and four provinces. This small, metallic green wood-boring beetle attacks multiple ash species and can go unnoticed for several years. The larvae live under the bark of the tree and feed on the vascular cambium through the fall and winter. The feeding produce long serpintine galleries that can girdle branches and the main stem and lead to tree mortality.



EAB larvae

WHERE IS THE THREAT:

EAB infests all ash species, but most commonly attack green, white and black ash. Initial infestations were documented in Michigan and Ohio. Populations continued to spread throughout the Midwest over the next 10 years. In 2012, EAB eventually found its way to New England and the southeastern United States. By 2018, infestations have been confirmed from Colorado, to Canada, Maine, and Louisiana.

EAB caused crown dieback of ash tree

SYMPTOMS:

EAB larvae live under the bark and create meandering galleries through the phloem, cambium and the xylem layers, effectively girdling the tree. In response to upper canopy dieback, trees will sprout new (epicormic) branches in the lower crown. Adults create D-shaped exit holes when they emerge in June. Bark cracks that reveal larval galleries and woodpecker activity are also signs of EAB infestation. Since EAB often goes unnoticed for several years, trees may die within two years of the onset of symptoms.

WHAT TO DO ABOUT IT:

For best outcomes, Arborjet recommends treatment of trees that still appear healthy (dieback symptoms <40%) when EAB is detected in your area. Our most effective solutions include two emamectin benzoate products, TREE-äge® and TREE-äge G4. Both products can be applied anytime there is good soil moisture, usually June through September. In dry conditions, a follow up application of NutriRoot® could improve tree health. For more information about additional solutions, including IMA-jet® and AzaSol®, please see our website.

EAB larval galleries

Header Image taken by: Dave Cappaert, **EAB larvae taken by:** Pennsylvania Department of Conservation and Natural Resources - Forestry Archive, Bugwood.org
EAB infested ash taken by: Joseph O'Brien, USDA Forest Service, Bugwood.org, **EAB galleries taken by:** Arborjet, Inc.