

EAB 101

Emerald Ash Borer (EAB) is an exotic, invasive wood-boring insect that infests and kills native North American ash trees, both in forests and landscape plantings. Just like chestnut blight and Dutch elm disease before it, EAB is capable of eliminating an entire tree species from forests and cities. This makes it one of the most serious environmental threats now facing North American forests.

EAB was unknown in North America until June 2002, when it was discovered killing ash trees in southeast Michigan and neighboring Windsor, Ontario. It has since spread to Ohio and other midwestern and eastern U.S. states. This beetle is native to eastern Russia and northeastern Asia, where it feeds on several species of ash. It was probably imported into Michigan via infested ash crating or pallets at least 15-20 years ago.

All major North American ash species — green, white, black and blue ash, as well as horticultural cultivars of these species — have been killed by EAB, which infests trees ranging in size from saplings to fully mature trees in forests. While most native borers kill only severely weakened trees, emerald ash borer kills healthy trees as well, making it especially devastating.

Adult EABs are elongate, half inch-long beetles with striking, metallic green coloration. EAB larvae are white with a long (about one inch when mature,) narrow, segmented abdomen that is also flattened, which gives them the appearance of small tapeworms. Typically, there is one generation each year, although development can take two years in newly infested trees that are still healthy.

Adults emerge from late May through early August, with emergence peaking in early July. As adults emerge, they leave small (one-eighth of an inch), distinctly D-shaped exit holes in the trunk and main branches, which is a sure sign of infestation. Adults feed on foliage for one to two weeks prior to mating. Females produce about 50 to 100 eggs, which are laid individually on the bark surface or within bark cracks and crevices.

As larvae hatch, they tunnel into the tree, where they feed through the summer and early fall on the phloem and outer sapwood, excavating S-shaped, serpentine galleries just under the bark. This feeding disrupts the flow of carbohydrates and water between the canopy and roots of the tree, which results in canopy thinning, branch dieback and finally tree death, typically within two to four years of initial infestation.

Spread the Word, Not the Bug.

