

EMERALD ASH BORER

AGRILUS PLANIPENNIS

The emerald ash borer, *Agrilus planipennis*, is a flat-headed borer native to eastern Asia. Adults emerge from infested ash trees in the spring and lay eggs in the bark. The eggs hatch and spend between one and two years feeding on the phloem layer below the bark. Over the course of several generations (two to five years) the larvae completely girdle the tree all the way to the roots, killing the tree. Unlike native beetles in the genus *Agrilus* (we have 50 species in South Carolina), they attack healthy trees, in this case, specifically ash trees. They have been found in the related fringe tree on occasion. This insect is a serious threat to ash trees of all species and has had a dramatic impact on populations of ash trees where it has been found.



An adult emerald ash borer feeds on an ash leaf. (Photo by Debbie Miller, USDA Forest Service, Bugwood.org)

Identification

There are many insects that could be mistaken for the emerald ash borer, so it is best to keep the specimen in alcohol and bring it to an expert to confirm the identity. Adults are metallic green, about 8.5 mm (0.33 inches) long and 1.6 mm (0.063 inches) wide. If the elytra, the hard outer wing, is lifted the emerald ash borer has a bright red upper abdomen that can be used to distinguish emerald ash borer from native *Agrilus* species. The larvae, found under the bark of infested trees, are difficult to distinguish from native flathead borers.

Infested trees have a progressively reduced crown as the borer larvae cut off the transport of water and sugars between the roots and the foliage. Infested trees will respond by producing epicormic sprouts, foliage and stems growing from the base of the tree. Woodpeckers feeding on larvae in infested trees will leave characteristic damage.

How it spreads

The adult emerald ash borer can fly, but it is not thought to move very far from its host tree. The most important means of spread is through the movement of infested logs. If you have an ash tree die on your property it is best to have it chipped on the spot.

Managing emerald ash borer

Currently there are no successful biological controls available for emerald ash borer. There are systemic pesticides that can be applied as soil drenches, bark sprays or trunk injections that can protect healthy trees.

Contact information

If think you know of an emerald ash borer infestation , contact David Jenkins at the SC Forestry Commission at djenkins@scfc.gov or contact the Clemson Invasive Species Program at <https://www.clemson.edu/public/regulatory/plant-protection/invasive/>.