

PEST ALERT

WEST VIRGINIA DEPARTMENT OF AGRICULTURE

Gus R. Douglass, Commissioner

Emerald Ash Borer

Agrilus planipennis (Fairmaire)



Emerald ash borer adult (actual size approx. 3/8 inch). (J. Smith)

In the summer of 2002, scientists detected a new exotic insect in southeastern Michigan. This pest, the emerald ash borer, *Agrilus planipennis* (Fairmaire) (EAB for short), is an invasive species that attacks ash trees. Originally from Asia, it was previously unknown in North America. Since its initial discovery, it has also been detected in Ontario and parts of Ohio, Maryland, Indiana and Virginia.



Emerald ash borer larva. (H. Russell)

Life Cycle

The life cycle of EAB usually spans one year, with the insect overwintering as a larva. Adults emerge between mid-May and late June and feed on the leaves of host trees which become irregularly notched.

Mating occurs 7 to 10 days after adult emergence from the tree. Eggs are laid singly on the sunny side of the tree trunk in bark crevasses or on thick branches. Eggs hatch in 7 to 9 days. After hatching, the larvae initially bore through the bark to feed on the phloem and eventually feed on the outer surface of the sapwood as they grow, forming tunnels. These tunnels may be up to 40 in. long and are usually filled with brownish sawdust and frass. Most of the tunnels tend to occur in the basal portion of the tree trunk up to a height of about 5 ½ feet. Larvae then overwinter one or two seasons, depending on environmental conditions. Pupation takes place in the spring (late April or early May) in a chamber at the end of each larval tunnel. Newly hatched adults stay in the pupal chamber about 8 to 15 days after emergence to properly harden and then bore a D-shaped exit hole (about 3/16 in. wide) from the tree trunk.



Galleries and sprouts from a damaged ash tree. (J. Smith)

Damage

D-shaped exit holes along the lower bole surface are clear signs of metallic boring beetle activity, as are sawdust filled, zigzagging tunnels about 1/4 in. wide. Attacked trees may show bark sloughing and crown dieback. Also, basal sprouting is not uncommon. Presence of downy and hairy woodpeckers may indicate wood boring beetle activity.

Host Plants

In North America, this pest has killed red, green, white, and black ash. It has also been shown to feed on several horticultural varieties of ash as well.



Adult exit hole. Note the typical "D" shape. (D. McCullough)

For more information or to report suspected infestations, contact:

CAPS Survey Coordinator
West Virginia Department of Agriculture
Plant Industries
1900 Kanawha Blvd., E.
Charleston, WV 25305-0191
(304)-558-2212