

Emerald Ash Borer Biology and Identification

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For the Evansville Courier and Press, January 17, 2016

As I mentioned last week, Emerald ash borer was recently identified in Posey County. Over the next couple of years, tristate residents are going to have to make some serious decisions about protecting their ash trees.

Emerald ash borers (EAB) gets their name from the appearance of the adult beetles, which are bright metallic green in color. Adults are one-third inch long and one-sixteenth inch wide. They have rounded abdomens and flat backs and would be visible in our area from early-May through July.

Adult females mate and lay eggs soon after they emerge in May. Adult emergence continues through mid-summer so eggs are deposited over an extended period. Eggs hatch within 7 to 10 days into worm-like larvae. Larvae are creamy-white and have flattened, segmented bodies. I've always thought the segments look like small church bells stacked on top of each other. Older larvae grow up to an inch long.

The larvae feed on the vascular tissue under the bark from mid-summer through spring. They zigzag through this delicate tree tissue as they feed, forming S-shaped tunnels that are flat and wide. They overwinter as larvae. When warmer weather arrives (usually in April), larvae enter the pupal stage. During this stage they will transform from larvae into sexually mature adults.

Adults emerge from the tree as soon as their development is complete, starting in May and continuing through July. Because of their peculiar shape (mentioned above), the exit holes have a distinctive D-shape (flat on one side, and rounded on the other). The holes are tiny...about one-quarter inch wide. The native borers that attack ash trees in the US leave much larger holes: some are as large as a pencil eraser. These holes are usually round or oval, but definitely not D-shaped.

There are many green insects found in our area, which has caused some folks to think they've found EAB. Over the last 14 years, I've had people bring me native tiger beetles, click beetles, green June beetles, and once someone brought a 2-inch long katydid. I don't bother with identifying adult beetles anymore, because according to my colleagues in heavily infested areas, you're not going to see the tiny adult beetles unless a) you are examining one of the purple traps put out by the DNR, or b) your community is already hip-deep in dead ash trees.

However, it would definitely be prudent to examine what lies beneath the bark of dead ash trees or firewood. If the larvae or the S-shaped feeding galleries are seen, that would be something I'd want to examine.

For pictures and more information on EAB, visit Purdue's website: <http://extension.entm.purdue.edu/EAB/index>. For help on identifying EAB or other invasive pests, contact the Purdue Extension Service at (812) 435-5287.



D-shaped exit hole of EAB.



Emerald Ash Borer adult.



Emerald ash borer larva.