

Birdwatcher's Short Field Guide to Holes in Trees

During the 2014 Great Backyard Bird Count, you can look for and report any potential signs of new infestations of invasive forest insects. Take a look at the photos below and on the reverse side to learn more about the three general types of holes in trees:

- Typical sapsucker and woodpecker foraging (*not usually a sign of invasive insects*)
- Damage caused by woodpeckers foraging on invasive insect larvae
- Damage from the invasive insects themselves

Typical Foraging: examples of holes made by sapsuckers and woodpeckers



photo credit: Robert Anderson, US Forest Service

Yellow bellied sapsucker

- Round and semi-round shallow holes
- Nearly always in a horizontal line

Many sapsuckers found around North America will cause similar damage, making both horizontal lines of holes (like this photo) and other times "grids" of holes. These foraging patterns are not likely indicative of invasive species infestations.



photo credit: Robert Anderson, US Forest Service

Pileated woodpecker

- Deep irregular or oval holes with ragged edges
- Holes vary between 1" deep to sometimes leading all the way through to a rotted out interior of trunk

Damage by large (Pileated) and smaller (Downy, Hairy, and many others) woodpeckers can vary greatly. Most will have a hole that narrows or flattens out as the damage goes deeper into the tree. These foraging patterns are not likely indicative of invasive species infestations, with the exception of extensive foraging on ash trees- which can be a sign of emerald ash borer infestation.

Foraging on invasive species: holes and damage caused by woodpeckers



photo credit: David Cappaert, Michigan State University

Emerald ash borer (EAB) exit hole on left, and **woodpecker** foraging hole on right - likely seeking adjacent EAB larvae

- Emerald ash borer exit holes are D shaped, about 1/8" across, and always in **ash trees**.
- Heavy woodpecker foraging activity on any ash tree should be considered a strong sign of emerald ash borer presence.

For information on reporting this pest and others, see reverse.



photo credit: Jennifer Forman Orth, MDAR

Emerald ash borer "blonding" of ash bark by woodpeckers

- Shallow stripping off of surface of ash tree bark by woodpeckers seeking emerald ash borer larvae
- May be combined with intermittent larger woodpecker foraging holes

These two foraging patterns may be indicative of emerald ash borer. For information on reporting this pest and others, see reverse. For a detailed guide to EAB and woodpecker damage, visit www.vtinvasives.org/group/woodpecker-watch

Holes and damage caused directly by invasive species



photo credit: Pennsylvania DCNR

Emerald ash borer (EAB) exit hole

- Emerald ash borer exit holes are D shaped, about 1/8" across, and always in **ash trees**.
- Goldspotted oak borer, an insect native to Arizona but considered invasive in S. California, may cause similar looking damage in **oak trees** throughout the Southwest.
- *Two lined chestnut borers* are a native insect in the Eastern half of the US and Canada. They may cause similar looking damage in **weakened oak trees** but will not infest ash trees.

Suspected emerald ash borer damage should be reported at www.emeraldashborer.info/call.cfm, as should suspected goldspotted oak borer at www.GSOB.org. *Two lined chestnut borer* does not need to be reported. When in doubt, please take photos of any suspicious small D shaped holes in trees, and report them to a state agricultural or forestry official.



photo credit: Jennifer Forman Orth, MDAR

Asian longhorned beetle exit holes and egg laying sites

- Asian longhorned beetle exit holes are perfectly round, have a clean edge, and are about the size of a dime (between 1/4" and 1/2" across)
- Asian longhorned beetle exit holes go very straight and fairly deep into the tree- they neither turn nor taper as they enter the wood
- Asian longhorned beetle egg laying sites are shallow pits or divots chewed into trees by the egg laying female beetles. They can be orange or reddish when newly chewed, or they can blend into the undamaged bark (as in the two pits pit pictured at bottom- old to the left, new to the right)



photo credit: Michael Bohne, USFS

Perfectly round holes in deciduous trees are a potential sign of Asian longhorned beetle infestation, and should be reported at asianlonghornedbeetle.com/report-your-findings/. Take photos of any suspicious round holes in trees- especially holes in maples, elms, birch and willows- and include them in the report.

Websites for reporting and learning more about invasive forest insects and diseases

- **Asian longhorned beetle**, <http://asianlonghornedbeetle.com/report-your-findings/>
- **Emerald ash borer**, <http://www.emeraldashborer.info/call.cfm>
- Thousand Cankers Disease of Walnut, <http://thousandcankers.com>
- Gypsy Moth, <http://www.hungrypests.com/YourMoveGypsyMothFree/>
- Goldspotted Oak Borer, <http://www.gsob.org>
- Sudden Oak Death, <http://www.suddenoakdeath.org/>
- Laurel Wilt, <http://www.fs.fed.us/r8/foresthealth/laurelwilt/>
- **You may have an app for reporting pests** in your region or state! Visit <http://apps.bugwood.org/>

