

## Birdwatcher's Field Guide to Holes in Trees (VTv12020)

During the Christmas Bird Count and Great Backyard Bird Count, you can help scientists track new or expanding infestations of invasive forest insects by looking for, and reporting, certain types of holes in trees. Bring this photo field guide with you for **quick reference on three types of holes in trees** you may encounter:

1. Typical sapsucker and woodpecker foraging (not usually a sign of invasive insects)
2. Damage caused by woodpeckers foraging on invasive insect larvae
3. Damage from two high priority invasive insects themselves

### 1. Typical Foraging: 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

Several species of sapsuckers found in North America will cause similar damage, making horizontal lines of holes (like this photo) and at other times “grids” of holes. These foraging patterns are not likely indicative of invasive species infestations and are considered typical foraging.



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.

### 2. Foraging on Emerald Ash Borer: holes and damage caused by woodpeckers



photo credit: David Cappaert, Michigan State University

#### Emerald ash borer

- Emerald ash borer exit holes are D shaped, about 1/8” across, and always in **ash trees**.
- (EAB) exit hole on left, **woodpecker** foraging hole on right - likely seeking adjacent EAB larvae
- Heavy woodpecker foraging activity on any ash tree should be considered a strong sign of potential emerald ash borer presence.



photo credit: Jennifer Forman Orth, MDAR

- “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

The “bark flecking” foraging pattern seen in this photo 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](http://www.vtinvasives.org)

### 3. Holes and damage caused directly by invasive species



photo credit: Pennsylvania DCNR

**Emerald ash borer (EAB)** exit hole on an ash sapling

- **Emerald ash borer exit holes** are D shaped, about 1/8" across, and can be found in white, green and black ash trees
- If you see a tree with suspected emerald ash borer damage, such as small, D-shaped holes in ash trees, or flecking of bark by woodpeckers, please take photos and submit them using the ReportIT Link at [www.vtinvases.org](http://www.vtinvases.org)



photo credit: Jennifer Forman Orth, MDAR

**Asian longhorned beetle** exit hole

#### **Asian longhorned beetle (ALB)** 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 pictured at bottom- old grey pit to the left, new red-orange pit to the right)



photo credit: Michael Bohne, USFS

**Asian longhorned beetle** egg laying sites

**Perfectly round holes in deciduous trees are a potential sign of Asian longhorned beetle** infestation- Report them at [VTInvasives.org](http://VTInvasives.org). Take close up photos of any suspicious round holes in trees- **especially holes in maples, elms, birch and willows**- and include them in the report.

#### **How to report potential findings of forest pests:**



**Before you go, visit [VTInvasives.org](http://VTInvasives.org) to learn more about emerald ash borer and Asian longhorned beetle**



**Take a photo with your smart phone or digital camera** of any insects, holes, or signs you may find. If what you can see with your binoculars is too far up in a tree to be visible with your camera, **take a photo of the tree itself**. Upload these photo(s) when you submit your report to [VTInvasives.org](http://VTInvasives.org)