

# FOREST HEALTH BULLETIN

BY JODY M. THOMPSON, FOREST HEALTH SPECIALIST



Figure 1. Exit holes and egg-laying sites.



Figure 2. ALB feeding results in large galleries.

## ASIAN LONGHORNED BEETLE (ALB)

### INTRODUCTION

In June, ALB was confirmed in Clermont County, Ohio on the outskirts of the town of Bethel (approximately 30 miles east of Cincinnati). The infestation is well established, and due to the large number of infested trees in the area, we can estimate that it has been there for a while. This places a known ALB location within 10 miles of the state line as the crow flies.

ALB is a large beetle that can do a lot of damage to numerous species of trees. Prior to its recent find in Ohio, ALB was known from parts of New York, New Jersey and Massachusetts. ALB does its damage while living inside of a tree where it can destroy a large portion of the wood leading to death and sometimes structural failure (see Sep. 2009 FH bulletin - "Hardwood Tree Borers"). ALB attacks numerous tree species but maple, willow, elm and birch top its list of preferred hosts which are very popular in urban areas. The damage caused by ALB has cost municipalities millions of dollars in removal, replacement and cleanup.

### SIGNS

The most easily noticeable signs of ALB are the large exit holes that it produces (fig. 1). These holes are produced after larvae turn into adults and chew their way out of a tree. Near the exit holes, there may also be notches chewed into the bark in which a beetle will lay a single egg. Damage typically can't be seen because it is happening on the inside of a tree (fig. 2), but another sign is the sawdust-like material (called frass) that is sometimes seen on branches and at the base of trees. This is material that is pushed out from the insects' activity.

The adult beetles are 1 to 1.5 inches long and very robust (fig. 3). It has a shiny, black body with white spots on its back. The larva (fig. 4) of ALB (the damaging stage) is approximately the same length as the adult.



Figure 3. Adult ALB. The longhorn distinction comes from the very long antennae. Note the shiny, predominantly black body with small white spots.



Figure 4. ALB larva. This is the damaging stage of the beetle's life cycle. In this stage, it is actively consuming wood. This beetle is very large in this stage; larger than many other longhorn beetle larvae.

## MANAGEMENT

As with many exotic pests, ALB hitch-hiked to the U.S. in wood that was used to build crates or pallets. It has been in the U.S. since the late 1990s but luckily hasn't spread as rapidly as other pests. It moves only short distances on its own but will move long distances with human activity such as firewood movement.

Trees have to be destroyed during the management process of this pest. One ray of hope is that Chicago, Ill, Hudson County, NJ and Islip, NY have reported eradicating ALB from their areas. Even though it can take years to accomplish this, it's still good news compared to pests such as the emerald ash borer for which we do not currently have any hope of eradicating.

Imidacloprid is used in the fight against ALB in addition to tree removal. It can help control larvae as they feed just under the bark. However, because insecticides are not completely reliable for ALB control, the destruction of infested trees becomes even more important.

## DON'T GET CONFUSED

Approximately 400 species of longhorned beetles (Cerambycidae) can be found in the U.S. east of the Rockies. This is just one group of insects to add to the thousands of other species that live in our region. With this in mind, you can see how it would be easy to mistake one insect for another. ALB is often confused with numerous species of native insects that can look similar (fig. 5, 6, 7).



Figure 5. Cottonwood borer — native. Notice how the body is NOT predominantly black. Found in cottonwoods and willows.



Figure 6. Eyed-click beetle/eyed elater — native. Notice the lack of long antennae which show that this is NOT a longhorned beetle. Predatory on other borers.



Figure 7. Whitespotted sawyer — native. Half the size of ALB, a mottled appearance and no shiny black body. Develops in dead and dying conifers.

## PUBLIC INVOLVEMENT

I regularly talk to people who notice something that they haven't seen before and assume that it is the new bug that everyone is looking for. Most of the time it won't be the new bug, but if it pops up in Kentucky, it will probably be found by a private homeowner/landowner first. Because of the damage that pests such as ALB can do, each report needs to be taken seriously.

### Contact information to report a sighting::

The Kentucky Division of Forestry (502) 564-4496

UK Department of Entomology (859) 257-5838

KY APHIS office (859) 689-2626

Local Cooperative Extension Service office

Information can also be found at <http://www.beetlebusters.info/>.

## PHOTO CREDITS

Figure 1 — Dennis Haugen, USDA Forest Service, Bugwood.org

Figure 2, 4 — Kenneth R. Law, USDA APHIS PPQ, Bugwood.org

Figure 3 — Art Wagner, USDA APHIS PPQ, Bugwood.org

Figure 5 — Charles T. Bryson, USDA Agricultural Research Service, Bugwood.org

Figure 6 — Gerald J. Lenhard, Louisiana State Univ, Bugwood.org

Figure 7 — Joseph Berger, Bugwood.org