

# ASIAN LONGHORNED BEETLE

## IN SOUTH CAROLINA

A vigilant homeowner near Charleston found a dead beetle they thought might be an Asian longhorned beetle, *Anoplophora glabripennis*, and contacted Clemson's Department of Plant Industry (DPI). The specimen was quickly confirmed by DPI and USDA Animal Plant Health Inspection Service (APHIS) to be the Asian longhorned beetle.

The infestation is currently thought to be limited to the community of Hollywood, near Charleston, but ongoing surveys will determine the extent of the infestation. Infested trees must be destroyed to limit the spread of this pest. The good news is that this pest has been successfully eradicated from several locations in North America, so there is hope!

### Overview

The Asian longhorned beetle is native to China and Korea and has a relatively broad host range, feeding on a number of hardwood trees, such as maples, elms, and willows, among many others. However, maple is the most commonly infested tree in North America.

The beetles are distinct and hard to mistake for other longhorned beetles in the region, except the cottonwood borer (<https://bugguide.net/node/view/7956>). The adults are large (0.6-1.6 inches long), have shiny black elytra (the hard wing covering) with white spots, and their antennae are conspicuously banded with white and black.

### Signs/symptoms

Females chew dime-sized football-shaped notches in the bark of host trees to lay their eggs, very similar in appearance to the oviposition notches of the southern pine sawyer, a native longhorned beetle. Sawdust-like frass (insect excrement) from feeding larvae may extrude from these notches. Adults emerge from their host trees through almost perfectly round holes approximately a quarter inch in diameter. Heavily infested trees will have dying limbs, or the whole tree could



An adult Asian longhorned beetle. Note the alternating bands of black and white on the antennae. (Photo by Melody Keena, USDA Forest Service, Bugwood.org)



An emergence hole in the bark of an infested tree. (Photo by Dennis Haugen, USDA Forest Service, Bugwood.org)

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be dead. Limbs that have been infested will have galleries in the wood.

### Life cycle

Female adults chew an oviposition notch in the bark of the host and deposit a single egg under the bark. The egg hatches in two weeks or in two months, depending on the temperature. Larvae feed under the bark, moving into the heartwood as they mature. Larvae go through five instars (stages) before pupating and becoming adults. This can take a year or two, depending on temperature and the quality of the host. Emerging females need to feed on leaf petioles or bark to mature their eggs. Emerging adults tend to remain on the tree they emerged from unless it is already heavily infested. Adults can fly up to a mile-and-a-half but most individuals do not move farther than half a mile from their origin.

### Timeline

Adults can be found during the warmer months. Brood that are initiated late in summer will stay in the tree until the following year.

### Management

To prevent spreading this beetle, infested trees should be destroyed by chipping on site, and the stump should be



Bark chewed by an adult Asian longhorned beetle. (Photo by Dean Morewood, Health Canada, Bugwood.org)

ground to soil level. Systemic insecticides, insecticides that are taken up by the host plant, can be effective against adults feeding on the foliage or bark, but are not totally effective against larvae that are feeding in the heartwood. It was probably introduced to North America in infested wood, so long-distance movement of firewood is a no-no. Quarantine actions and eradication programs have worked well with this beast, and it has spread very slowly since its first detection in New York in 1996.

### More information

<https://newsstand.clemson.edu/mediarelations/inspectors-survey-low-country-trees-after-invasive-beetle-discovered/>

[https://www.aphis.usda.gov/aphis/newsroom/stakeholder-info/sa\\_by\\_date/sa-2020/sa-06/alb-sc](https://www.aphis.usda.gov/aphis/newsroom/stakeholder-info/sa_by_date/sa-2020/sa-06/alb-sc)

<https://www.aphis.usda.gov/aphis/resources/pests-diseases/asian-longhorned-beetle>

<https://www.aphis.usda.gov/aphis/resources/pests-diseases/hungry-pests/the-threat/asian-longhorned-beetle/asian-longhorned-beetle>

### Contact information

If you think you have seen Asian longhorned beetle or its damage, please contact the South Carolina Forestry Commission at (803) 667-1002 or [djenkins@scfc.gov](mailto:djenkins@scfc.gov).



A notch chewed in the host bark where the female has laid an egg. (Photo by Kenneth R. Law, USDA APHIS PPG, Bugwood.org)