

Regional Pest Alert



Asian Longhorned Beetle

Anoplophora glabripennis

Origin and Distribution

The Asian longhorned beetle (ALB), native to China and Korea, was first discovered in the United States in 1996 on Long Island, New York. A second infestation was encountered in Chicago, Illinois in 1998. Infestations in New York, Illinois, and New Jersey have resulted in the removal of thousands of trees and cost state and federal governments in excess of \$168 million since the pest was first discovered in the United States. Frequently transported from Asia or elsewhere in wood packing materials, the insect poses a serious threat to healthy trees. In the past decade, Asian longhorned beetles have been intercepted in the western region of the United States inside or near warehouses in Hawthorne, Los Angeles, South Gate, and Sacramento, California, and in Bellingham and Seattle, Washington.

Description

The shiny black, bullet-shaped adult is about 1 to 1.5 inches long with irregular sized and shaped white spots. Its black-and-white banded antennae are usually longer than its body. The elongated feet are black with a whitish-blue upper surface. Adults can be seen from late spring through fall depending on climate and geographical location. Although its size and large mandibles may cause it



Dennis Haugen, USDA, Forest Service

Adult Asian longhorned beetle.

to appear threatening, the beetle is harmless to humans and pets. Adult females use their mandibles to chew a pit and then deposit an egg into it. Each female lives several weeks and will lay up to 90 eggs. The larva tunnels under the bark, eventually tunneling deep into the tree. Larval tunneling produces frass that consists of feces and wood fibers resembling sawdust. The large, light cream-colored larva that lives entirely within the wood of trees is the most damaging stage of the beetle. Typically, the life cycle of the ALB is completed in one year.

Damage

The Asian longhorned beetle larvae bore deep into healthy deciduous hardwood trees such as maple, boxelder, birch, horse chestnut, poplar, willow, elm, hackberry, sycamore, mimosa, and ash, eventually killing them. The impact on many of California's native hardwood species is currently unknown. Round exit holes, approximately 3/8 of an inch in diameter, located on trunks and branches, egg laying sites, frass at the base of



Asian longhorned beetle pupa.

Kenneth R. Law, USDA, APHIS, Plant Protection and Quarantine



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infested trees or in branch crotches, and sap leaking from wounds on the tree may be the first clues to an infestation. An infested tree may have sudden die back of larger branches. Leaf symptoms show up when the larva damages tissues that transport water and nutrients to the leafy canopy.

Economic and Environmental Impacts

Establishment of the Asian longhorned beetle in California or the western United States could cause more damage than Dutch elm disease, chestnut blight, and gypsy moths combined by destroying millions of acres of treasured hardwoods, including forest, park, and backyard trees. According to the United States Department of Agriculture, the beetle is a threat to lumber, nursery, and tourism industries, with the potential economic impact of more than \$41 billion in damages.

In the western United States, many host trees are important components of landscapes, watersheds, and ecosystems. Establishment of this pest could have significant negative impacts on urban landscapes and natural diversity. Reduction of shade trees can have significant energy costs in urban areas and reduce property values. Dead and dying trees may significantly increase fire hazards.

Management

Asian longhorned beetle is not currently established in the western region of the United States, and the only acceptable approach to control is eradication. Early detection and reporting will help agencies to eradicate the pest and prevent its establishment.



Young Norway maple tree damaged by larvae of the Asian longhorned beetle.



Robert A. Haack, USDA, Forest Service



J.E. Appleby, University of Illinois

Asian longhorned beetle exit holes, 3/8 inch in diameter.

Reporting a Suspected Asian Longhorned Beetle

If you find a beetle that you suspect is an Asian longhorned beetle, you should collect it and immediately report it to appropriate authorities. Place the pest in a glass jar, as the ALB adult is capable of chewing through plastic bags, and put it in the freezer overnight.

It is very important to note where you found the beetle. Record the following information for each sample collected: date; host plant; collector's name; phone number; collection location including state, county, and address or nearest intersection. Global positioning system (GPS) location information is useful, if available.

To report the finding, in California, call the California Department of Food and Agriculture hotline at 1-800-491-1899. If you discover the pest outside of California, call your state department of agriculture, USDA APHIS Plant Protection and Quarantine, or National Plant Diagnostic Network (NPDN) Laboratory. Find your nearest NPDN lab at www.npdn.org, or www.wpdn.org.

Do not try to manage ALB on your own. Because the Asian longhorned beetle is not established in the western United States, authorities will be working to eradicate any identified infestations.

For more information on the Asian longhorned beetle, visit our Web site at

<http://www.wripmc.org/alerts/>

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