

Massachusetts Regulated Area: The Asian Longhorned Beetle

The Asian longhorned beetle (*Anoplophora glabripennis*) (Motschulsky) (ALB) is an invasive pest that arrived in the United States from Asia concealed in solid wood packing material—the pallets and crates used to transport goods. The ALB was first discovered in the United States in Brooklyn, NY, in 1996.

The ALB kills many species of hardwood trees. Potentially, the ALB is one of the most destructive and costly invasive species ever to enter the United States. It threatens urban and suburban shade trees and recreational and forest resources valued at hundreds of billions of dollars. It might also impact such industries as maple syrup production, hardwood lumber processing, nurseries, and tourism. If it became widely established, its impact would be felt in urban, suburban, and forested parts of the country.

Given the ALB's destructive potential, the goal of the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) is to eradicate the insect from the United States.

ALB infestations now exist in parts of New York City and Nassau and Suffolk counties in New York. An infestation is being eradicated in Middlesex and Union counties in New Jersey.

ALB infestations found in Chicago, IL, and Hudson County, NJ, were declared eradicated in early 2008.

APHIS confirmed the beetle's presence in Worcester, MA, in August 2008. APHIS and the State of Massachusetts initially set the regulated area on August 8. Additional detections of the ALB mean that this area will need to be expanded the week of August 18. APHIS and the State of Massachusetts will continue to adjust the regulated area as needed as the extent of the infestation is determined.

The ALB Kills Trees

In late summer or fall, when the beetle is in its larval (immature) stage, it bores deep into the heartwood of its host tree. There, the larvae feed and develop.

The following summer they emerge as adults and then mate, starting the cycle again.

The larval tunneling weakens and eventually kills infested host trees making the ALB a destructive and costly invasive species.

ALB Host Trees

Collectively, the tree species the insect favors are called ALB host trees. ALB host tree species include 11 genera. Among them are all species of: maple (including boxelder), elm, willow, birch, horsechestnut, London planetree, poplar, ash, mimosa (silktree), hackberry, and mountain ash.

Three targeted, science-based ALB eradication activities take place in and around regulated areas: (1) surveys to inspect ALB host trees for signs of infestation, (2) preventative treatments to host trees using the insecticide imidacloprid to kill adult beetles and larvae tunneling just below the bark, and (3) removal of infested trees. The removal of high-risk host trees, those host trees within a certain distance of infested trees, also support ALB eradication.

Only USDA should remove any tree with signs of ALB infestation to ensure proper disposal.

Working in Massachusetts' ALB Regulated Areas

APHIS has partnered with the U.S. Forest Service, the Massachusetts Department of Conservation and Recreation, the Massachusetts Department of Agricultural Resources, and the City of Worcester. Together, these organizations form the ALB Cooperative Eradication Program in Massachusetts.

Both Federal and State law establish regulated areas around ALB infestations. The regulated areas assist in beetle eradication by curtailing the movement of materials that could host populations of the ALB. This keeps infestations from spreading.

Federal and State laws outline the conditions and requirements for moving regulated articles out of or within the infested area. The Federal regulation can be found at 7 CFR 301.51

Training sessions, workshops, and other outreach tools designed to assist businesses with compliance will soon be offered in the Worcester area to explain the ALB and laws enacted to eradicate it.

If a company finds infested host material or infested trees, they should not move the materials at all. Instead, report it to the Massachusetts ALB Cooperative Eradication Program at (508) 799-8330.

Host trees trimmed or cut in the regulated area must be chipped to less than one inch in two dimensions before being removed from the regulated area. Materials may also be brought to a staging area, which is currently being determined, for chipping.

Materials, such as nursery stock, moving out of a regulated area must be accompanied by a certificate issued by Federal or State regulating authorities, after it is inspected to ensure it's free of infestation.

Individuals, businesses and municipalities working with trees, nursery stock, cut wood, timber, woody debris, downed tree limbs, or firewood can help save trees by following the rules when living and working in areas regulated to control and eradicate ALB.

Regulated articles include firewood (all hardwood species) and green lumber and other wood materials living, dead, cut, or fallen (including nursery stock, logs, stumps, roots, and branches and debris half an inch or more in diameter) of the host trees listed previously.

Living in Regulated Areas

In regulated areas, ALB program representatives seek access to private property to perform surveys (i.e., locate ALB host trees and inspect them for signs of infestation) or to treat the trees. ALB program representatives perform these inspections on residential, park, and business properties. Inspections are done from the ground and in tree canopies by workers in bucket trucks and by certified tree climbers.

Residents should not move infested trees and regulated articles from regulated areas. Only ALB eradication program representatives can dispose of infested tree material. Any resident disposing of host material should work with a USDA certified company or use designated drop off locations within the regulated area. There is no cost to homeowners for removal of ALB-infested trees.

Regulated host tree materials that are not infested cannot be moved outside of regulated areas, either, unless they have been chipped to one inch or less in two dimensions.

A location for residents to deliver woody debris, brush and wood cut has been arranged for Worcester, MA, residents. That location is the Clark Street Yard Waste Drop-Off Center located at the intersection of Clark Street and east Mountain Street. Hours of operation for residential drop-off are Wednesdays from 8:30 a.m. until 3 p.m. and Saturdays from 9 a.m. until 5 p.m.

Firewood

Uninfested host tree material can remain inside a regulated area and be used as firewood within that area without State or Federal inspection. Firewood cannot move out of a regulated area.

Don't Plant ALB Host Trees in a Regulated Area

Help limit the trees that supply ALB with food and shelter. Refrain from planting ALB host trees within a regulated area. A list of nonhost tree species that can be safely planted in regulated areas can be found at www.aphis.usda.gov click on Asian longhorned beetle under "Hot Issues" for the latest "tree planting list."

Infested trees removed by the ALB eradication program may be eligible for replacement with trees that are not hosts for the beetle at no cost to property owners. Program personnel will provide information about tree replacement after infested trees have been removed.

Watch for Signs of ALB Infestation

The adult ALB is a distinctive-looking insect measuring 1 to 1 1/2 inches long, not including its antennae. In females, the antennae are as long as the body itself; in males, they are almost twice the length of the body. The insect's body is shiny and black with irregular white spots; the long antennae are banded in black and white.

When ALB adults emerge from the trunks and limbs of host trees, the insects leave behind exit holes. These are perfectly round and about 3/8 inch in diameter. As the larvae tunnel, they often push a material called frass out onto the ground or onto tree branches. Frass looks like pencil shavings. ALB-attacked trees also display small, roundish pockmarks in the bark on trunks or branches where an adult female has chewed a depression to lay an egg. Tree branches and trunks may display running sap from wounds to the tree inflicted by tunneling larvae or females laying eggs.

For more information on the ALB, please visit www.aphis.usda.gov. The Massachusetts ALB Cooperative Eradication Program can be reached at (508) 799-8330.

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