



## Asian Longhorned Beetle

*Anoplophora glabripennis* Motschulsky (Coleoptera: Cerambycidae)

The Asian Longhorned Beetle (ALB) is an exotic wood boring beetle from East Asia that entered the U.S. in 1996 and attacks both healthy and stressed specimens of many species of hardwood trees found in North America. ALB is a USDA regulated and quarantined pest. ALB adults are very strong flyers. ALB larvae live deep inside trees, undetectable for up to one year, and are spread by people moving infested materials such as firewood, timber or nursery stock.

### IDENTIFICATION:

- Adult beetles are large,  $\frac{3}{4}$ -1 $\frac{1}{2}$ " (20-40 mm) long, shiny black, with irregular white spots.
- Antennae are very long (1 $\frac{1}{2}$ -2 $\frac{1}{2}$  times the body length) with black and white alternating bands.



ALB adult: actual size

- Eggs are the size/shape of a grain of rice: 1/5-1/3" (5-7 mm) long (see below).



- Larvae are cylindrical, segmented, roundheaded, and legless, with a white body and brown head, and breathing pores (spiracles) along the sides.
- Mature larvae are robust and reach 2" (5 cm) long.



Mature larva in frass filled gallery.

- Pupae are 1 $\frac{1}{4}$ " (~ 32 mm) long (see below).



### What to Look For:

ALB adults feed on twigs and foliage of 23 species of hardwood trees, preferring maples, boxelder, elms, willows, birch, London Plane-tree, Mountain ash, horsechestnut and buckeye. ALB attack trees that are healthy or stressed, young or old, living or felled, and from nursery stock size to trees large in diameter. Adult beetles are active May-late fall. ALB larvae are the most destructive stage, feeding on and damaging cambial tissues, nutrient transport vessels, and water transport vessels deep in the tree. Larvae overwinter deep in the heartwood of trees, and feed there throughout the winter.

## Symptoms of ALB infestation include:

- Adult feeding damage on small twigs, leaves and leaf stems.



Twig feeding damage (above): stripped bark.

Leaf feeding damage (below): holes, often clustered along a vein.



- Shallow oval/round depressions (oviposition notches) up to 1/2" (13 mm) diameter, in the bark of infested trees.
- Round, nearly dime-sized (3/8-1/2" diameter, or 9.5-13 mm) adult exit holes in bark.



Oviposition notch, upper left. Adult exit hole, lower right.

- Bark staining and oozing sap from oviposition notches or exit holes may be present on tree trunk.
- Frass may be brown to cream-colored; stringy and wet or coarse and dry; extruding from vent or oviposition holes, clinging to the bark, lodged within the crotches of branches, or piled at the base of the tree.



Frass lodged within the crotch of tree trunk and branch.

- Galleries are individual, 4-12" (10-30 cm) long, initially horizontal deep into the sapwood, then turn upwards.



Larva in a frass-packed gallery.

- Broken branches/stems in heavily mined trees, especially after strong winds.
- Adult beetles may be found anywhere, not just on trees.

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