

ASIAN LONGHORNED BEETLE

A significant threat to deciduous forests.



What is it?	Trees at risk	Impacts
<p>The Asian longhorned beetle (<i>Anoplophora glabripennis</i>) or ALHB is an invasive wood-boring beetle native to China and Korea. It infests and kills numerous hardwood species, including maple trees.</p>	<p>ALHB prefers maples (<i>Acer spp.</i>) over all other genera. It also attacks birch (<i>Betula spp.</i>), poplar (<i>Populus spp.</i>), willow (<i>Salix spp.</i>), and other hardwoods to a lesser extent. It is a threat to Canada's maple syrup industry urban and natural forests.</p>	<ul style="list-style-type: none">• Larvae bore large-diameter (9-14 mm) feeding galleries in trunks and branches, causing breakage and eventual death of affected trees.• Has the potential to cause catastrophic damage to the maple syrup industry, and to disrupt and degrade natural and urban forest ecosystems.• Early detection is key. If uncontrolled, ALHB can have catastrophic financial, cultural and ecological consequences.

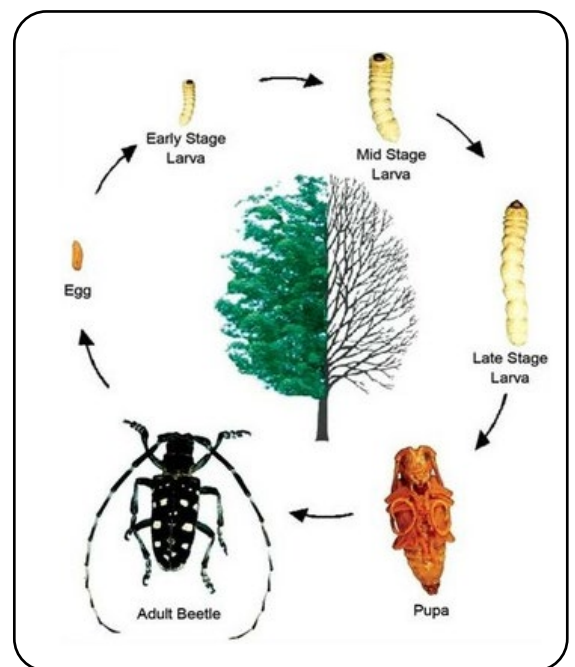
Life cycle

Adults: Adults are active from early summer to early fall. They feed on the bark of twigs periodically throughout the mating and egg-laying period. On sunny days, the adult beetles are most active from mid-morning to early afternoon. They usually rest in the canopy on cloudy days.

Eggs: In preparation for egg-laying, females chew oval pits in the bark in which they lay one egg about 5-7 mm in length. Sap stains are often associated with fresh egg-laying wounds. On average, each female will live approximately 40 days and during that period will lay about 25-40 eggs. The wounds may occur anywhere on the tree, including branches, trunk, and exposed roots. Eggs will hatch in one to two weeks.

Larvae: Young larvae begin feeding in the phloem tissue. As they mature, they migrate into the wood creating tunnels as they feed. These galleries cause tree stress and dieback, and in high densities lead to tree death.

Pupae: Larvae mature into pupae in the galleries before turning into adults in summer. The new adults exit the tree by creating large round exit holes about 10-15 mm in diameter.



Header: Melody Keena, USDA Forest Service, Bugwood.org
Life cycle: ALHB Life Cycle, North Dakota State University,
Michael Bohne USDA, https://www.ndinvasives.org/copy_of_asian-longhorn-beetle/asian-longhorn-beetle-life-cycle

What to look for:



ALHB adults are distinctive. Watch for large (28-35 mm long), noticeably glossy black beetles with scattered white spots and long, black-and-white banded antennae. The ALHB can be confused with the native white spotted sawyer beetle, but the sawyer beetle can be differentiated by the characteristic white spot below the neck.

Top: Invasive Asian longhorned beetle
Bottom: Native white spotted sawyer beetle



Look for shallow pits or depressions chewed in the bark. Females deposit singly in these pits, laying about 90 eggs over the course of a season.



Be alert for large, round exit holes (15-20 mm in diameter) made by emerging adult ALHB.

Larvae go through 13 instar phases as they tunnel through wood, maturing at 50 mm long. Larvae and pupae will only be seen when cutting into a tree.

Look for unusually coarse frass (wood shavings mixed with feces) produced by larvae. Frass may be found in branch and truck unions, on the trunk, or at the base of a tree.



ALHB emerge throughout the season, and adults can be active from May through November. Homeowners should be aware that adult beetles can be caught in swimming pool filters, which can serve as a means of monitoring for ALHB.

Buy and burn your firewood locally, ALHB can be introduced to new areas through the movement of infested firewood. It is your duty to report sightings of ALHB under the Authority of the Plant Protection Act.

Report sightings of ALHB to:

- Canadian Food Inspection Agency
www.inspection.gc.ca/pests
- Invading Species Awareness Hotline
at 1-800-563-7711
- Early Detection and Distribution Mapping System, eddmaps.org

For more information visit www.invasivespeciescentre.ca.



IMG1: Asian longhorned beetle, Kenneth R. Law, USDA APHIS PPQ, Bugwood.org
IMG2: White spotted sawyer beetle, Kenneth R. Law, USDA APHIS PPQ, Bugwood.org,
IMG3: B.D. Gill, CFIA, aphis.usda.gov,
IMG 5: Kenneth R. Law, USDA APHIS PPQ, Bugwood.org