

Anoplophora glabripennis (Motschulsky) - Asian longhorned beetle - Fact sheet

Identification

Adults are large shiny black beetles measuring 20 to 35 mm in length and 7 to 12 mm wide. There are up to 20 irregular white spots on each elytron. There is one prominent spine on each side of the black thorax. The antennae are longer than the body and consist of 11 black segments with a white or whitish blue base. The legs are black and have a bluish tinge. [Footnote 1](#) [Footnote 2](#) [Footnote 3](#) [Footnote 4](#) [Footnote 5](#)

[Plant pest card - Asian longhorned beetle](#)

Host trees

Acer (Maple) *Salix* (Willow), *Populus* (Poplar), *Betula* (Birch), *Aesculus* (Horsechestnut), *Albizia* (White Silk), *Celtis* (Hackberry), *Cercidiphyllum* (Katsura), *Koelreuteria* (Goldenrain Tree), *Platanus* (Plane or Sycamore), *Sorbus* (Mountain Ash), and *Ulmus* (Elm) are host trees in North America. [Footnote 1](#) [Footnote 2](#) [Footnote 3](#) [Footnote 5](#)

Location of infestation within the tree

Female beetles oviposit on exposed roots, along the entire bole and on branches with a diameter of 2.5 cm or more. [Footnote 2](#) Infestations in large trees attacked for the first time are predominantly in the upper canopy. In small trees, oviposition pits are found lower on the trunk. Immature larvae feed on the inner bark and sapwood while mature larvae feed on the heartwood. [Footnote 2](#) [Footnote 3](#) Adult beetles feed on leaves, petioles, or twigs. [Footnote 1](#) [Footnote 2](#) [Footnote 4](#)

Host condition

Healthy and stressed trees. Females do not oviposit on dead, debarked wood. [Footnote 1](#)

Distribution

China, North Korea, South Korea and Russian Far East. Introduced and under eradication in the United States (New York, Massachusetts, and Ohio) Canada (Mississauga/Toronto) and Europe (Germany, Austria, France, Italy, Netherlands and UK). [Footnote 1](#) [Footnote 2](#) [Footnote 3](#)

Signs and symptoms

Beetles feed on the leaves and twigs of host trees. [Footnote 1](#) [Footnote 2](#) [Footnote 3](#) [Footnote 4](#) Feeding damage on young shoots causes them to wither and die. [Footnote 4](#)

Adult females chew oval oviposition pits (about 10 mm wide) into the bark and lay a single egg in this cavity.

Depending upon the tree species, the oviposition pits are initially reddish-brown but fade over time. Oviposition pits can occur from ground level up into the crown. Frothy, white sap may exude from recently created oviposition pits, attracting other insects to the egg laying sites.[Footnote 1](#) [Footnote 2](#) [Footnote 3](#) Over time, the sap ferments and stains the bark.

Young larvae feed within the inner bark and sapwood and can cause the bark to become concave.[Footnote 3](#) [Footnote 4](#) Mature larvae bore into the heartwood. Late instar galleries are initially perpendicular to the stem axis but gradually turn upwards and can reach lengths of 3.5 to 15 cm.[Footnote 2](#) These winding larval galleries can eventually lead to tree mortality in heavily infested trees. Coarse, sawdust-like frass is expelled from the larval galleries and will occur in piles around the base of the tree or in branch forks.[Footnote 2](#) [Footnote 3](#) Adults emerge through the wood by chewing round exit holes 6 to 12 mm in diameter, expelling large, coarse wood fibres.[Footnote 1](#) [Footnote 2](#) [Footnote 4](#) Exit holes may be present anywhere on the larger above ground parts of the host, including branches, trunk, and exposed roots.[Footnote 1](#) [Footnote 2](#) [Footnote 3](#) [Footnote 4](#)

Leaf yellowing and wilting, pre-mature leaf drop, branch die-back and tree death are symptoms of advanced infestation.[Footnote 1](#) [Footnote 2](#) [Footnote 4](#)



A - Adult *A. glabripennis* (20 to 35 mm long). Bruce Gill, Canadian Food Inspection Agency



B - *A. glabripennis* oviposition pit on Manitoba maple, *Acer negundo*. Erin Appleton, Canadian Food Inspection Agency



C - Frothy, white sap exuding from recent *A. glabripennis* oviposition pit. Bruce Gill, Canadian Food Inspection Agency



D - Circular *A. glabripennis* exit hole (6 to 12 mm wide). Bruce Gill, Canadian Food Inspection Agency



E - Coarse frass expelled by larva of *A. glabripennis*. Bruce Gill, Canadian Food Inspection Agency



F - *A. glabripennis* larval galleries under the bark. Kenneth R. Law, USDA APHIS



G - *A. glabripennis* adult maturation feeding on twig. Dean Morewood, Pennsylvania State University



H - New (reddish-brown) and old (darker) oviposition pits of *A. glabripennis*. Thierry Poiré, Canadian Food Inspection Agency

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