

Emerald Ash Borer: What Do You Know About It?

Imagine an insect pest arriving in an area where there is an unlimited food supply, without being seen or bothered. This is the kind of dream life the emerald ash borer is leading in North America. This insect attacks healthy ash trees, causing damage that can lead to tree mortality within a few years. The emerald ash borer has already killed several millions of ash trees since it was first discovered on this continent in 2002.

You can play a role in detecting the presence of the emerald ash borer and halting its spread by learning about the risks associated with the movement of firewood. By educating ourselves about this exotic insect, we can all do our part to protect Canada's ash trees.

The emerald ash borer was first detected in Michigan and Ontario, in 2002, and in Quebec, in 2008. This insect native to Asia probably arrived in wood packaging material or dunnage on merchant ships and it then took refuge in urban forests and wooded areas. Its spread was facilitated by the movement of infested firewood and nursery stock. Since it has few natural enemies in Canada, this exotic pest poses a major threat to our economy and environment in urban and forest areas.



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English common name	Emerald ash borer
Scientific name	<i>Agilus planipennis</i> Fairmaire
French common name	Agriole du frêne
Order	Coleoptera
Family	Buprestidae
Colour of adult beetle	Metallic green
Length	Between 7.5 and 15 mm

Diet

The larvae feed on the inner bark, and the adults feed on the leaves.

Hosts

All species of ash trees.

Parts of tree attacked

Trunks, branches and leaves.

Modes of dispersal

The adult insect can fly over a distance of several kilometres, but human activity remains the most important factor contributing to the pest's spread (movement of firewood, nursery stock, trees, logs, lumber, wood with bark still attached and wood or bark chips).

Branching Out

from the Canadian Forest Service - Laurentian Forestry Centre



Institut Armand-Frappier

Signs of infestation

- Presence of woodpeckers in winter and woodpecker holes.
- Reduction in foliage density.
- Increased presence of shoots growing from the trunk or branches.
- Bark deformation.
- Vertical cracks on the trunk.
- Small D-shaped emergence holes.
- S-shaped tunnels under the bark filled with fine sawdust.
- Evidence of adult feeding on leaves.

Life cycle

- June to August: eggs are laid on the bark and in bark crevices. The larvae hatch about 10 days later.
- June to October: the larvae excavate meandering galleries under the bark.
- The larvae overwinter under the bark.
- April to May: pupation occurs.
- June to August: emergence of adults.

NOTE: The climate and health status of the tree may affect the duration of the life cycle, which may extend over 1 or 2 years.

Regulatory context

This insect is one of the pests regulated by the Canadian Food Inspection Agency (CFIA). **In regulated areas, it is forbidden to move the following material:** nursery stock, trees, logs, rough lumber (including pallets and other wood packaging materials), bark, wood or bark chips from ash trees, and firewood of all species.

For information on the regulated areas:

<http://www.inspection.gc.ca/plants/plant-protection/insects/emerald-ash-borer/areas-regulated/eng/1347625322705/1367860339942>

Control methods

Mechanical and silvicultural, chemical, biological, genetic resistance and integrated pest management.

For more information:

<http://www.exoticpests.gc.ca/control-details/insect/1>

<http://cfs.nrcan.gc.ca/entrepotpubl/pdfs/34082.pdf>

Using the female pheromone to detect the emerald ash borer!

Using the female pheromone makes it possible to increase trapping and detection rates when working with traps. CFS researchers are currently testing a synthetic version of this pheromone, which would result in a more cost-effective method. They are also exploring the possibility of baiting traps with the pheromone to create confusion and disorient males, and thus reduce mating probabilities.

⚠ Important!

If you think you have seen an emerald ash borer, please contact the CFIA at 1-800-442-2342

Useful links

CFIA: inspection.gc.ca

Trees, insects and diseases of Canada's forests: tidcf.nrcan.gc.ca

Forest Invasive Alien Species of Canada: exoticpests.gc.ca

Canadian Forest Service of Natural Resources Canada: nrcan.gc.ca/forests

Controlling the emerald ash borer: the secret is in the fungi: <http://cfs.nrcan.gc.ca/entrepotpubl/pdfs/35845.pdf>

