

## **HUMBER NURSERIES - NEWS BULLETIN**

# **EMERALD ASH BORER**

The emerald ash borer (EAB) is a highly destructive insect that attacks and kills ash trees. Native to eastern Asia, EAB was first discovered in Windsor, Ontario and Detroit, Michigan in 2002. The EAB has killed millions of ash trees in Southwestern Ontario, Michigan and surrounding states, and poses a major economic and environmental threat to urban and forested areas in both countries. The EAB attacks and kills all species of ash, except Mountain ash, which is not a true ash. With artificial spread, where people move infested ash materials and firewood to new areas, EAB can quickly spread to other areas of Canada.

### **IDENTIFICATION**

Adult beetles are metallic blue-green, narrow, hairless, elongated, 8.5 to 14.0 mm long, and 3.1 to 3.4 mm wide. The head is flat and the vertex is shield-shaped. The eyes are bronze or black and kidney shaped. Mature larvae are 26 to 32 mm long and creamy white. The body is flat and broad shaped. The posterior ends of some segments are bell-shaped. The abdomen is 10-segmented; the 1<sup>st</sup> 8 segments each have one pair of spiracles, and the last segment has one pair of brownish, pincer-like appendages.



### **HOST TREES**

*Fraxinus*, *Juglans*, *Pterocarya* and *Ulmus*. In North America, only *Fraxinus* has been found infested to date.

### **LOCATION OF INFESTATION WITHIN THE TREE**

Larvae feed on the inner bark and sapwood along the entire trunk and larger branches (greater than 2.5 cm diameter) in the crown. Immature beetles may also feed on leaves.

### **DISTRIBUTION**

China, Japan, Korea, Mongolia, Russia and Taiwan.

Introduced to Canada: Essex County and the Municipality of Chatham-Kent; Lambton, Elgin, Middlesex and Norfolk Counties; and the city of Toronto. EAB has also been confirmed in the city of Ottawa, the town of Oakville, the city of Brampton, the city of Mississauga, Ontario and the Montérégie region in Quebec.

### **SIGNS AND SYMPTOMS**

Immature beetles feed on host tree foliage, creating irregular notches in the leaves. Eggs are laid singly on the trunk or branches. Young larvae bore through the bark and feed on the inner bark and the outer sapwood, eventually forming flat and wide (6 mm), S-shaped galleries that are filled with a fine brownish sawdust like material. Galleries are 9 to 16 cm long (up to 20 to 30 cm) and increase in width from the beginning to the end. Galleries can occur along the entire trunk and in branches that are at least 2.5 cm in diameter. Scar tissue may be produced by the tree in response to larval feeding and may cause vertical bark cracks to occur over a gallery.

Pupation takes place at the end of a gallery just beneath the bark, or near the surface of the sapwood, and even in the corky tissue of thick-barked trees. Beetles emerge through D-shaped exit holes, 3.5 by 4.1 mm in size. These holes are very difficult to find, so careful inspection is required. Woodpecker activity may also indicate the presence of this beetle. Dying or dead trees, (particularly with bark sloughing off and crown die-back) can also be used as indicators of attack. Other signs of attack include a thinning crown, water sprouts, and vertical cracks on the trunk.

**April 28, 2009**

The Canadian Food Inspection Agency (CFIA) is taking decisive action to stop the unintentional spread of the invasive emerald ash borer (EAB). New regulations prohibit the movement of ash tree materials and firewood of all species from specific areas of Ontario and Quebec, as this is a key way the beetle is spread. The movement of potentially infested material is restricted in four new areas that are regulated under **Ministerial Orders**. In Ontario, these areas include Toronto and surrounding areas, Sault Ste. Marie, and Ottawa and its neighbouring city, Gatineau, Quebec. A new Ministerial Order is also in place for Carignan, Quebec, and its surrounding municipalities.

### **Ministerial Order**

#### *Interpretation*

1. The following definitions apply in this Order.

"Movement Certificate" has the same meaning as in the *Plant Protection Regulations*.

"inspector" means a person designated as an inspector pursuant to section 21 of the *Plant Protection Act*.

"pest" means the Emerald Ash Borer (*Agrilus planipennis*) in all its life stages.

"regulated article" means firewood of all species, as well as trees, nursery stock, logs, lumber, wood packaging or seeds.

"infested place" means the Cities of Hamilton and Toronto and the Regional Municipalities of Durham, York, Peel and Halton, in the Province of Ontario.

#### *Declaration*

2. It is hereby declared that the Cities of Hamilton and Toronto and the Regional Municipalities of Durham, York, Peel and Halton, in the Province of Ontario are infested with the pest.

#### *Prohibitions or Restrictions on Movement*

3. No person, except an inspector, shall move or cause the movement of the pest into or out of the infested place unless the person is authorized beforehand to do so in writing by an inspector under a Movement Certificate and the person complies with the certificate.

4. (1) Subject to subsection (2), no person, except an inspector, shall move or cause the movement of a regulated article out of the infested place unless:

(a) in the case of a regulated article produced by a facility registered under the Canadian Heat Treated Wood Products Certification Program (CHTWPCP) or the Canadian Wood Packaging Certification Program (CWPCP), the article was produced in accordance with the requirements of that program and it shows the applicable marks, bears the applicable tags or is accompanied with the applicable certificate, as the case may be;

(b) in the case of nursery stock harvested or produced outside the infested place, the stock is transported without undue delay through the infested place in an enclosed vehicle that is equipped to preclude the loss of materials and the infestation of the shipment by EAB while in transit;

(c) in any other case, an inspector

(i) is satisfied that the regulated article has been processed or treated to eliminate the pest or the habitat for the pest and authorizes the movement of the article for that reason, and the person complies with the authorization; or

(ii) authorizes the movement of the regulated article by issuing a written notice to the person directing the movement of the regulated article to a place for processing or treatment to eliminate the pest or the habitat for the pest, and the person complies with the notice.

(2) Subsection (1) does not apply to the movement of regulated articles, other than nursery stock, that are harvested or produced outside the infested place and that only transit through the infested place.

For more information, visit [www.inspection.gc.ca/english/plaveq/pestrava/agrpla/agrplae.shtml](http://www.inspection.gc.ca/english/plaveq/pestrava/agrpla/agrplae.shtml).

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