

# Emerald Ash Borer

## Factsheet



### Background

Emerald Ash Borer (EAB), a beetle native to Asia, was found in southwestern Ontario in 2002. In 2013, EAB was confirmed in Northumberland County on the south shore of Rice Lake and in the north end of Port Hope. EAB kills ash trees by feeding on the inner bark (cambium layer) and disrupting the flow of nutrients and water throughout the tree. EAB has killed millions of ash trees across North America with an economic impact estimated to be in the billions of dollars.

### What trees are affected by EAB?

Aside from some horticultural varieties of ash tree, Northumberland County has 3 species of ash tree: White Ash, Green Ash and Black Ash. Black Ash is found in wet areas, while the other species can be found in almost any urban and rural location.

### How to Identify?



**Bark:** Diamond shaped pattern in mature bark (Black Ash has corky ridges but is not likely found on most properties).



**Seeds:** Paddle shaped seeds that hang in clusters.



**Leaves:** Compound leaves with 5-9 leaflets, always with one leaflet at end.



**Opposite Branches:** Branches and buds are directly across from each other rather than staggered; however, due to the death and grooming of individual branches, it is possible that not every branch will be opposite.

### My ash tree is dying, how do I know if it has EAB?

Some ash trees are dying as a result of previous droughts as well as other environmental changes (e.g., pollution, local changes in hydrology). Early detection of EAB can be difficult because the infestation usually begins in the crown (top) the tree. The main signs of infestation are loss of leaves, woodpecker damage, D-shaped exit holes, S-shaped feeding galleries and shoot sprouting from the base of the tree.



**Defoliation:**

Branches throughout the top of the tree will start dying and the damage will extend downward through the canopy over time.



**Woodpecker**

**Damage:** One of the earliest signs of Emerald Ash Borer will be extensive woodpecker damage as they feed on the larva beneath the bark.



**D-shaped exit holes:**

The Emerald Ash Borer lays eggs under tree bark throughout the summer. When the larva become beetles, they eat their way out of the tree, leaving a D-shaped exit hole. The flat side of the exit hole can be oriented in any direction.



**S-shaped galleries (notches) under the bark:**

As the larva feed on the tree under the bark, they leave behind a large amount of S-shaped tunnels that they have been moving through. These will be especially obvious in areas where the bark is peeling off of the tree and where woodpeckers have been feeding.



**Shoot sprouting (epicormic branching) at the base of the tree and heavy seed crop:**

The tree dies it will send out new branches from the base of the tree where there is still living tissue in attempt to continue to survive. As well, the tree will have large amounts of seeds in late summer in attempt to reproduce before dying.

**The best way to identify the presence of Emerald Ash Borer is to contact a professional in the arboriculture industry.**



**How does Emerald Ash Borer spread?**

The Emerald Ash Borer can fly up to 10km, but they are more likely to fly short distances. The main way that Emerald Ash Borer is spread is through the movement of firewood, nursery stock, harvested timber and mulch. The best protection for ash throughout Northumberland County and Ontario is to not move firewood, mulch and branches off site.

**Should I just cut my ash trees down?**

Deciding what to do about an ash tree can be a difficult decision. A landowner must decide what values are associated with the tree (shade, aesthetics, buffer) and how much money they are willing to spend to save the tree. There are solutions for saving trees which have less than 30% dieback such as injections of systemic insecticides. Costs can vary between products and applicators but a good rule of thumb is \$4-\$8 per centimeter diameter of tree. Treatments are generally required every second year once started. Although this may initially seem costly, there are many costs associated with removing a tree such as cutting the tree, removing the stump and planting a new tree and waiting for it to grow.

**Contact Info:**

Northumberland County Forest

555 Courthouse Rd.  
Cobourg, ON  
K9A 5J6

Phone: 905-372-3329 ext.2303  
1-800-354-7050

forest@northumberlandcounty.ca

www.northumberlandcounty.ca