

BE CONCERNED, BUT DON'T PANIC

Emerald Ash Borer is spreading but many woodlot owners still have years before the killing front reaches their bush

By Keith Roulston



Ash trees in southern Ontario may be living on borrowed time as the Emerald Ash Borer munches its way across the province. The insect's larvae tunnel under the bark cutting off the tree's circulation (below).



Emerald Ash Borer is a creepy horror story for Ontario woodlot owners but it's not yet a roaring monster, dramatic enough to form the plot for a Hollywood movie.

The Asian beetle, accidentally introduced into the U.S. and first discovered in Ontario in 2002, is slowly spreading its reach across the province, but in the northern parts of southwestern Ontario, there are still vast swaths of woodlots that are unaffected.

Richard Keeso runs J. H. Keeso and Sons Ltd. in Listowel, one of the sawmills authorized to handle wood infested with the pest because he takes special precautions to prevent spread of the insect. He says he had expected to see more tunnels from Emerald Ash Borer (EAB) larvae in wood sawn this summer but was surprised how little damage was present.

Marvin Smith, farm woodland specialist from Listowel, said he hasn't encountered much evidence of the destructive insect in Perth County while in Huron, it has been expanding its territory slowly from early infestations on the Bayfield area where it was first discovered in 2008.

"It definitely will be spreading," Smith says, "but there haven't been major repercussions."

But Jim Eccles, a forester with J. H. Keeso and Sons Ltd. says the killing front – the area where the concentration of EAB is high enough to kill trees – has moved to just south of Clinton from that Bayfield infestation, and to the Kirkton area in southern Perth. And recently, he had an adult EAB beetle land on the mirror of his truck as he sat in the yard of a landowner south of Listowel where he had been doing business.

Emerald Ash Borer (EAB) attacks both healthy and stressed ash trees



The first Huron County outbreak of Emerald Ash Borer was found in campgrounds at Bayfield in 2008. Canadian Food Inspection Agency inspector Bill Lammers showed an infested tree to woodlot owners on a tour late that year.

when its larvae tunnel through the tree's vascular system which delivers water, nutrients and sugars throughout the tree. But EAB will only travel a few kilometers per year on its own so without the assistance of humans to give it a ride, such as through the transportation of firewood, the insect won't spread rapidly.

For that reason the Canadian Food Inspection Agency (CFIA) has quarantined counties where the insect has been found, but the number of counties with infestations has expanded, usually in areas where people imported the pest in firewood. Earlier this year new outbreaks were found at Southampton and south of Meaford in Grey County.

This summer, CFIA threw in the towel and announced that all of Ontario south of a line roughly from Sudbury to North Bay, but not including Manitoulin Island, will now be treated as one regulated area, meaning there will be no restrictions against moving infested wood anywhere within that area.

Brent Forbes, a forester with Lands and Forests Consulting, who does a lot of work in Grey and Bruce

Counties said when his company's foresters do their work in woodlot management and tree marking, they are seeing some signs of ash being affected, particularly in areas closer to the infected counties to the south. The difficulty, Forbes says, is that EAB has taken hold in trees long before they show the first signs of damage.

Eccles explains that when the beetles arrive at a new tree they lay their eggs in the top branches. As long as the tree is alive, the insect will stay there, recolonizing the tree further and further down its trunk. It takes four or five years for the number of larvae to increase to the point they kill the tree.

But once that population threshold is reached, change comes fast. Eccles told of one landowner he'd worked with near Bayfield who didn't see any evidence of the infestation in the spring. By November, woodpeckers has arrived and stripped most of the bark from the trees, looking for the larvae. The woodpecker population often increases in infested areas and their eating larvae is good, but it's too little, too late for infested trees, Eccles said.

Generally the first sign of damage is die-back at the top of trees but just because the tree is dying doesn't mean it's necessarily caused by EAB, Eccles said. There have been many ash trees suffering die-back or even dying this year from weather-related stress. Last year trees had to endure a yo-yo of weather conditions, he explains with the worst part being three weeks of mid-summer heat in February and March followed by cold. The drought of the summer of 2012 added to that stress. Ash doesn't take stress well, Eccles said.

Many of the areas where there has been the most weather-related stress are also near enough to areas where there are inroads of EAB to cause confusion, Eccles says, with many people assuming the problem is from the pest.

Unfortunately, experience in other areas of Ontario such as Kent and Essex Counties where EAB infestation has been heavy, shows the fate of ash trees is not promising. Forbes advises woodlot owners to watch for signs that EAB has arrived

in their bush and get professional advice.

Some of the symptoms that may indicate the presence of EAB include ash trees with a sparse canopy or unexplained dieback, tree trunks with epicormic growth (trunk sprouts), vertical bark splits, excessive woodpecker activity and D-shaped insect exit holes.

"If you can do a commercial harvest of ash logs, you can do it," Forbes says. If there is a smaller ash population, you might look at a harvest for firewood.

Eccles says his goal in helping people manage their woodlots is to try to build diversity into their tree population because once EAB does infest a woodlot, 99 per cent of trees of all ash varieties will be killed off.

"We're trying to open up woodlots and get other species growing in there – soft maple, hard maple, cherry, hickory," he says of his management strategy. "The sooner you can get non-ash



*Marvin Smith
We need
to buy time*

regeneration started, the healthier your woodlot will be in the future."

But Smith warns against overly-aggressive harvesting of ash that might open up the canopy too much. Valuable

hardwoods like hard maple are shade tolerant and thrive under dense canopies in relation to species like ash. But ash does better than maple and other woods if there's more light. Ironically, harvesting ash trees if they make up too large a proportion of the canopy, could encourage young ash to regenerate, exactly what's not best under current conditions.

If he was a woodlot owner in an area that's still some distance from a point of infestation, he'd let his ash trees keep on growing until there was more value in them when they are harvested, Smith says.

At this point, there's little preventative action woodlot owners

can do to save the trees in their woodlots but some people are taking extraordinary measures to save ash trees that are special to them. It's been a busy summer for the staff at Lands and Forests Consulting providing a new service for those who want to save a special ash tree in their yard.

Forbes said they have treated about 250 trees to protect them from being killed by the EAB. The treatment involves injecting a systemic pesticide into the tree which is dispersed, via the tree's sap, to the crown, leaves and twigs of the tree. If the beetles land on the tree and lays eggs, their larvae will ingest the pesticide when they begin to feed.

It's not inexpensive protection, Forbes admits, and is probably reserved for those high-value trees, such as those around the deck or lane or that provide shade to the back yard.

If they get a call, the foresters visit the home and look at the health of the tree and if it's healthy, they measure the tree. The amount of pesticide required varies with the size of the tree, as does the expense. The treatment costs \$5.75 for each centimetre of diameter. The average tree treated this summer was 40-45 centimetres in diameter bringing the average cost per treatment to about \$225.

Customers' interest in preserving trees was spurred by those EAB discoveries in Southampton and Meaford, Forbes said.

The treatment isn't financially viable, of course, for woodlots and that's where the most damage will be done.

The good news for farmers with large quantities of ash in their woodlots is that so far prices have held up well, but Keeso recently read a worrying market report which suggested price for kiln-dried ash will rise, while prices for green ash will decline. He's been talking to his own customers about their needs and he's exploring all the ways ash can be utilized. Luckily its a very useful wood.

In Grey-Bruce the firewood market is a bit complicated at the moment, Forbes said, because Bruce County is under a CFIA quarantine against export of firewood and next

door Grey has not been quarantined. That won't matter next spring when CFIA erases the border for all of southern Ontario allowing the transport of firewood across the border.

That unrestricted movement is a concern for people like Eccles and Smith. Left alone EAB moves slowly, reinfesting the same tree until it dies. The adult beetle then flies to the next ash tree it can find. It doesn't need to fly 10 miles to find another tree, Eccles says. But people keep cutting ash trees up in blocks and giving the bugs a free ride to new territory.



*Jim Eccles
Chronicling
the spread*

"The ideal of not moving firewood still applies," says Smith, saying it's important to slow the spread of the insect as much as possible.

"It's a relatively new insect that we've only known about for 10 or 11 years," Smith says. "In that short period of time (researchers) have already made good strides in screening potential control insects."

Officials in the U.S. have already approved release of insects that feed on EAB, Smith said and testing continues in Ontario. "I guess I'm still optimistic that the longer we can buy time the greater the chance we can find some solution."

He uses the invasion of gypsy moths as an example where there was concern they would devastate Ontario forests but the fear was worse than actually occurred. Now, he says, the amount of damage from gypsy moths has been far less than expected.

So the message from these experts is that EAB is spreading and will get worse before it gets better but for many woodlot owners, the danger isn't immediate. As Richard Keeso said when asked what advice he'd give landowners: "Don't panic."◇