

## PHOTO ESSAY: THE EMERALD ASH BORER

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The Emerald Ash Borer is an exotic Asian beetle that is killing most of the ash trees in Southeast Michigan. First identified in 2002 by David Roberts, Ph.D. Michigan State University ([http://web1.msue.msu.edu/reg\\_se/roberts/ash/](http://web1.msue.msu.edu/reg_se/roberts/ash/)) the infestation is spreading to other parts of Michigan and adjacent states despite mitigation efforts and quarantines by state and federal environmental agencies ([http://www.emeraldashborer.info/files/TriState\\_EABpos.pdf](http://www.emeraldashborer.info/files/TriState_EABpos.pdf)). The beetle was probably introduced to North America by infested solid wood packing material for cargo imported from Asia through the Port of Detroit. There are millions of ash trees in Michigan alone and many more millions across North America. As of 2005 eight to ten million ash trees in Southeast Michigan have died.

The Emerald Ash Borer is an environmental disaster, especially in urban areas where the ash tree was widely planted on city streets as replacement for the elm trees lost to the Dutch elm disease four decades ago. Cities are struggling to remove dead trees from city right-of-ways and parks. To give a sense of the magnitude of the problem officials of the City of Ann Arbor proposed a two year millage to raise four million dollars to pay for removal of over 10,000 city ash trees. The voters turned the tax proposal down in a recent election. The City will have to find other funds to pay for the removal and more time will be needed to complete the job.

Dead ash trees on private property are problems for the individual homeowner. This photo essay is a record of one homeowner's approach to the problem. His seventy foot tall white ash tree with a three foot diameter trunk seemed perfectly healthy in 2004 but was clearly dead by spring of 2005 and had to be removed. Estimates for the cost of removal were \$2500 and \$2000. Instead he took the matter into his own hands. He rented a cherry picker for one day (\$500) and a wood chipper for a few hours (\$150). He and his brother-in-law cut the tree down. He hauled the felled wood and chips to the Ann Arbor Recycling Center for disposal. This site was an official disposal site for Washtenaw County in which Ann Arbor is located. Washtenaw is one of the quarantined counties in southeast Michigan where ash tree wood and waste can be left free of charge. Unfortunately despite being an excellent hardwood (baseball bats are made of ash wood) the infested wood cannot be salvaged for any purpose. The quarantine particularly prohibits shipping fire wood out of the quarantined counties.



**Photo Collage 1.**  
The larvae of the beetle create serpentine tunnels in the living wood just under the tree bark and in doing so girdle the tree fatally cutting off the tree's supply of water and nutrients (shown on the photo on the left). The tree characteristically sends up shoots around the base of the trunk in an attempt to survive (photo at right).

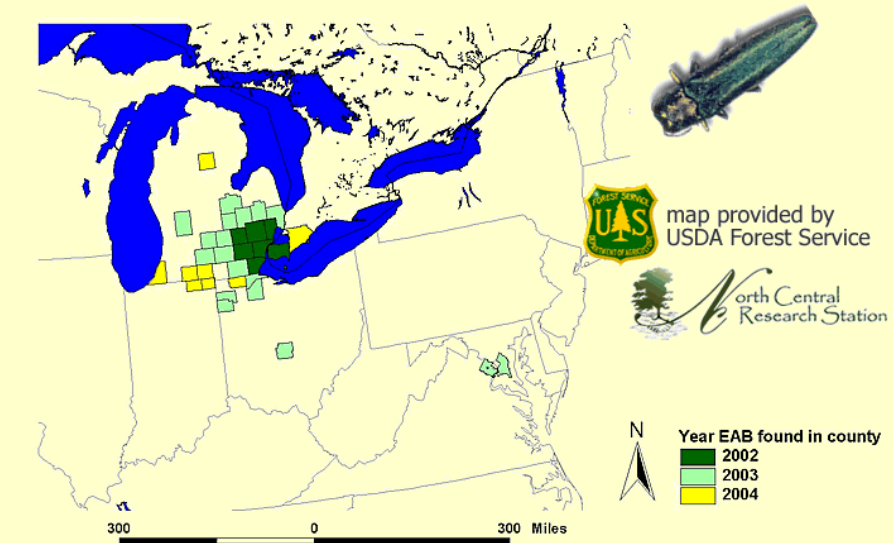




The larvae winter over and in the late spring the adult beetle emerges through characteristic 'D' shaped exit holes (center photo).

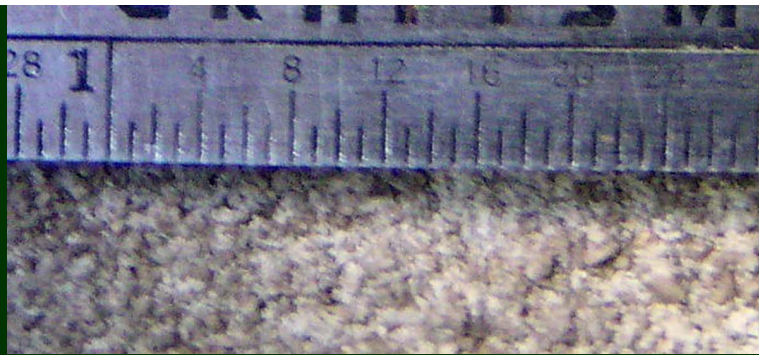
On the left, Ann Arbor parks now have many dead ash trees which have opened the canopy of the forest with possible detrimental effects on the ponds and pond life.

## Emerald Ash Borer in North America, 2004.



Data sources (as of 7/7/2004):  
[http://www.michigan.gov/images/MDA\\_EAB\\_outlier\\_map\\_temp\\_84565\\_7.jpg](http://www.michigan.gov/images/MDA_EAB_outlier_map_temp_84565_7.jpg)  
<http://www.ohioagriculture.gov/pubs/divs/plnt/curr/eab/images/eabfindings.pdf>  
<http://www.ceris.purdue.edu/napis/pests/barkb/imap/eabmd.html>  
<http://www.inspection.gc.ca/english/plaveg/for/pestrava/agrpla/infest2e.jpg>  
[Link to a map showing area in greater detail.](#)





Emerald Ash Borer



Dorsal View

The adult beetle is slender and from 5/8 to 1 inch long.





Rent a cherry picker for the day



The homeowner gets checked out on how to operate the machine.





**Photo Collage 2.**

**Start at the top, work your way down.  
This approach is not recommended for the  
average homeowner!**

**Experience and initiative pay off. The homeowner was experienced in running a cherry picker and his brother-in-law had experience cutting trees. The two man crew felled the tree in one day. Sawing of big limbs and the trunk took several days and cost extra to rent big chain saws.**





Base cut.







Chipper makes quick work of felled ash tree.



Animation of the cleanup.





It was a splendid effort but at the same time a tragedy. A beautiful ash tree is gone, one of many thousands in the city and millions across the region, victims of our global society.



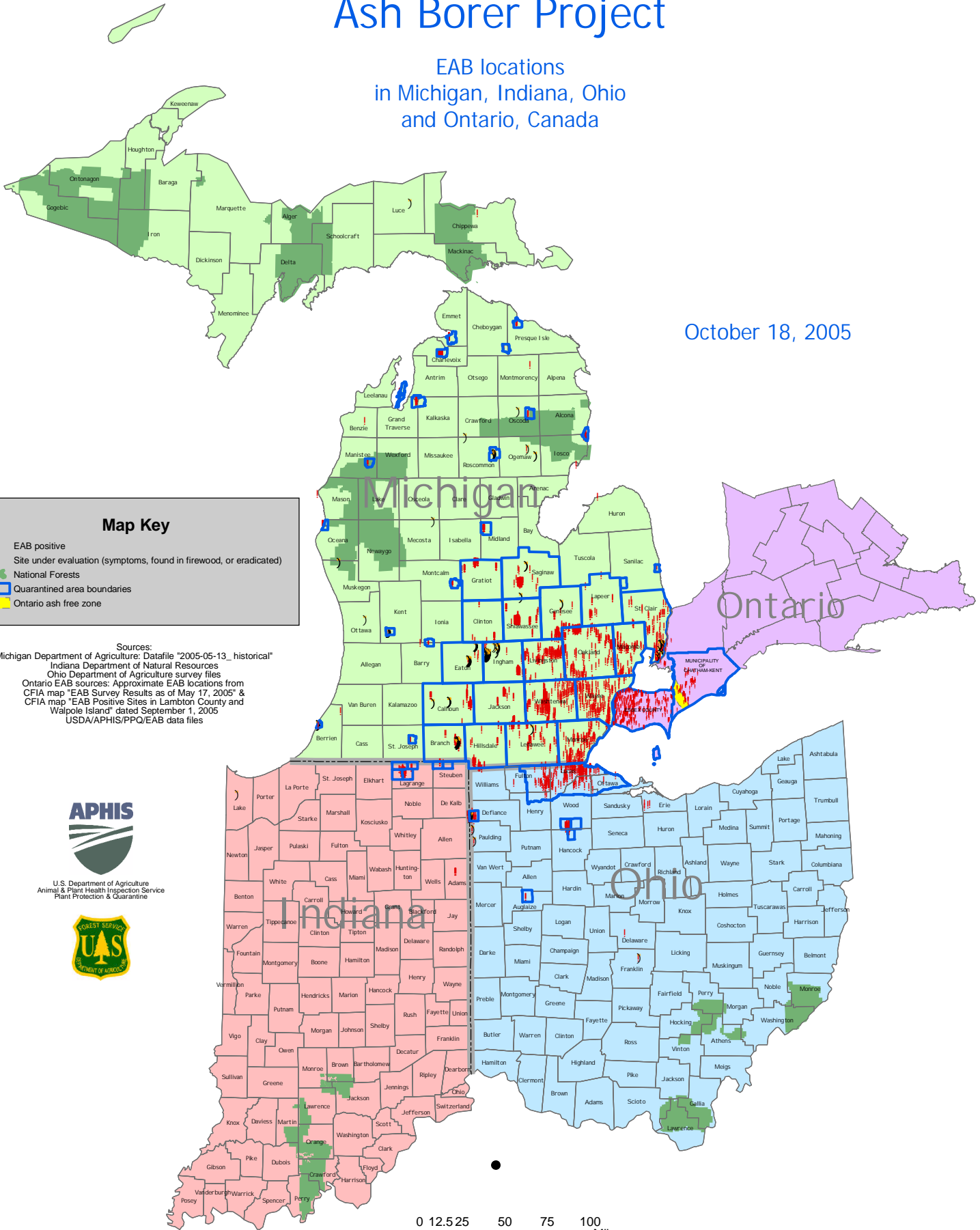
Ewen Nicol (left) is the homeowner who had to remove his big ash tree due to the emerald ash borer infestation. Ewen's brother-in-law, Chai Montgomery, is on the right. Ewen lives with his family in the Burns Park Neighborhood of Ann Arbor, Michigan. The tree was downed June 21, 2005 (summer solstice, 2005, in Ann Arbor). Photographs by J. Nystuen

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<http://www.imagenet.org>

# Cooperative Emerald Ash Borer Project

EAB locations  
in Michigan, Indiana, Ohio  
and Ontario, Canada

October 18, 2005



**Map Key**

- ! EAB positive
- Site under evaluation (symptoms, found in firewood, or eradicated)
- National Forests
- Quarantined area boundaries
- Ontario ash free zone

Sources:  
Michigan Department of Agriculture: Datafile "2005-05-13\_historical"  
Indiana Department of Natural Resources  
Ohio Department of Agriculture survey files  
Ontario EAB sources: Approximate EAB locations from  
CFIA map "EAB Survey Results as of May 17, 2005" &  
CFIA map "EAB Positive Sites in Lambton County and  
Walpole Island" dated September 1, 2005  
USDA/APHIS/PPQ/EAB data files

