

## **DREADED TREE KILLER AT WISCONSIN'S DOORSTEP**

Wisconsin's ash trees don't know what's coming, but state scientists, researchers and foresters do, and they're preparing for the arrival of a dreaded tree killer.

That killer is the emerald ash borer (EAB), a small, emerald green beetle that hitchhiked from Asia to the Midwest inside cargo packing materials. EAB larvae tunnel beneath the bark of ash trees, cutting off the tree's food and water supply and killing it within two to five years. Even healthy North American ash trees seem to have no resistance to the borer.

Wisconsin's communities are facing a hard hit from this insect. Cities throughout the upper Midwest planted ash trees to replace the elms lost to Dutch elm disease. An estimated 20 percent of Wisconsin's street trees are ash. Emerald ash borer could destroy 5.2 million ash trees within Wisconsin's urban forest. According to state and federal officials, tree replanting because of EAB could cost Wisconsin municipalities as much as \$1.5 billion. Include the expense of removal and disposal, and costs could be two to three times that number! In addition to the cost of tree removal and replacement, homeowners may pay higher electric and water bills because without the shade of ash trees, air conditioners will run more and lawn watering will increase. Storm water peak flows may increase in some areas and pavement degradation may accelerate from the loss of the tree canopy. Property values may also decline.

It is believed that this pest was accidentally introduced to the Detroit area in the early 1990s. Because no one knew that EAB was here, it silently hitchhiked into several other states and Ontario, Canada before it was discovered in 2002. In 2005, EAB was found in the eastern part of Michigan's Upper Peninsula, then in two other locations near the Mackinac Bridge two years later. In the summer of 2006 the pest was found at a number of sites in northern Illinois, putting it only about 30 miles from Wisconsin. EAB has not been found in Wisconsin as of December 2007.

The emerald ash borer can fit on a penny, but the damage it causes is huge. Able to infest trees as small as one inch in diameter, nearly every ash tree in the path of this insect has been killed. Infested states and areas have lost more than 25 million ash trees and millions of dollars have been spent trying to control it. Symptoms of EAB infestation include a declining leaf canopy; sprouting along the trunk of a live ash tree, bark cracks covering S-shaped larval galleries, and 1/8-inch D-shaped holes made by emerging adults. Adult beetles are dark green and approximately 1/2 inch long and present from May to August.

The beetle is also elusive, spending nearly all of its life hidden under the bark. Signs of infestation are very difficult to detect until a tree has been infested for two or three years. Currently, the best way to locate EAB is to cut down ash trees and look for the larvae feeding underneath the bark. Using another technique, foresters remove a strip of bark around a live ash tree to weaken it. Since the ash borer prefers to breed in weakened trees, it should infest this wounded tree rather than healthy trees if it is present. The wounded tree is cut down in the fall and the bark is peeled to look for EAB larvae.

Campgrounds and urban areas are thought to be at highest risk of EAB introduction due to accidental transport in firewood. Industries that use ash have taken steps to minimize the risk of additional EAB spread, but many people are unaware of the risks of long-distance firewood movement. Thus, public awareness is a major key to preventing the spread of EAB and other threats such as the gypsy moth and beech bark disease.

So far, EAB detection efforts in Wisconsin have included visual surveys in campgrounds and in urban areas, peeling declining ash that may harbor EAB, and the preparation of detection trees in state parks and forests, and in the National Forests. Researchers are looking for symptoms of EAB infestation as they walk through forestlands, and city foresters and arborists are on alert in Wisconsin's urban areas. As of December 2007 the beetle has not been found in the state.

Wisconsin's strategic plan to fight the emerald ash borer stresses prevention and early detection. Federal officials have quarantined more than 21,000 square miles in Illinois, Indiana, Michigan, and Ohio to prevent new areas from becoming infested with the pest. In 2006, Wisconsin's National Forests banned firewood from outside the state, and the DNR has implemented a rule that prevents campers from bringing firewood that was cut more than 50 miles away into a state campground, unless the wood is certified by the Wisconsin Department of Agriculture. These rules may help keep the beetle from doing extensive damage to popular recreational areas.

The public is urged to be on the lookout for EAB and declining ash trees. For more information on emerald ash borer, visit <http://emeraldashborer.wi.gov>. The public can report suspected emerald ash borer adults or infestations by contacting the Department of Agriculture, Trade and Consumer Protection's toll-free EAB Hotline at 1-800-462-2803.