

THE HISTORY OF EMERALD ASH BORER DISCOVERIES IN THE UPPER PENINSULA OF MICHIGAN FROM 2005 TO 2007

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ABSTRACT

Extensive emerald ash borer (EAB) (*Agrilus planipennis* Fairmaire) detection surveys using girdled trap trees have been performed throughout the Upper Peninsula of Michigan by Michigan Technological University (MTU) and the Michigan Department of Agriculture (MDA) since 2004. In 2005, the first find of EAB in the Upper Peninsula of Michigan occurred at Brimley State Park in Chippewa County. EAB exit holes were discovered on a single ash tree in July 2005. This tree was removed, peeled, and burned, but no life stages were found. In October 2005, more than 50 trees were felled and peeled. Eleven of these trees had EAB exit holes and/or larvae. EAB had likely been introduced to the campground at Brimley State Park through the movement of firewood, with the first adults emerging in 2003. Eradication efforts at Brimley State Park are thought to have been effective.

In 2006, there were no new detections of EAB in the Upper Peninsula. In 2007, trees infested by EAB were identified near Moran and in Straits State Park, both in Mackinac County, approximately 15 km apart.

During September 2007, EAB was initially detected in a single trap tree in Brevort Township near Moran. Through a grid survey of the surrounding forest areas in November 2007, 14 other positive trees were located and EAB larvae, galleries, and exit holes were identified. While no exit holes were found on the original detection tree, several individuals in different larval stages were found. One positive tree that was fully peeled did have exit holes and these were dated to 2005. A girdled trap tree established in 2005 at Straits State Park was identified as having exit holes, larvae, and pre-pupae in October 2007. Peeling of 21 other trap trees within the park did not result in any additional infested trees. This included trap trees set in 2005-2007 in both the lower and upper campgrounds within the park. A small firewood pile (1-10 pieces, 50% ash) was recorded in close proximity to the infested tree in June 2006 and may have provided a source of EAB for this infested tree. It is likely that eggs were laid in 2006, with a few individuals completing a 1-year life cycle and most individuals completing a 2-year life cycle, first as pre-pupae during 2007 and then emerging in 2008.