

LIVING WITH EMERALD ASH BORER: THREE YEARS OF A RISK BASED SURVEY IN MICHIGAN AND WISCONSIN

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ABSTRACT

A risk based detection survey was initiated in Michigan in 2004 to detect outlier populations of the exotic emerald ash borer (*Agrilus planipennis*) (Coleoptera: Buprestidae). This survey was expanded to include northern Wisconsin in 2005 and all of Wisconsin in 2006. The number of sites used in this survey increased from 116 in 2004 to approximately 190 in 2006. Survey sites are concentrated in campgrounds due to the risk of the inadvertent movement of this insect in firewood. This survey uses girdled ash trap trees (*Fraxinus* spp.) to detect adults and larvae of emerald ash borer, firewood inspections to detect potential introductions of emerald ash borer, and observations of declining trees to detect existing emerald ash borer populations. A subset of trap trees established each year are left in place for reuse the following year as opposed to being cut and peeled at the end of the field season to look for larvae. In 2005, the first life stages of emerald ash borer from the Upper Peninsula of Michigan were collected as early instar

larvae from a trap tree that had been established in 2004 at Brimley State Park in Chippewa County.

In 2004, emerald ash borer was found in firewood at three locations in Lower Michigan and not found on trap trees. In 2005, emerald ash borer was detected on trap trees established in 2004 and 2005 at six sites in Lower Michigan and one site (Brimley State Park) in Upper Michigan. Two additional detections in 2005 came from firewood and from inspections of declining trees. In 2006, emerald ash borer was detected on trap trees established in 2004, 2005, and 2006 at over 14 sites that had not been known to be infested.

Detection of emerald ash borer in this and other surveys is essential for management activities including those that aim to eradicate localized outlier populations and those that implement silvicultural treatments such as ash reduction to reduce damage from emerald ash borer.