



Status Report – Emerald Ash Borer: A New Threat to North American Forests

North Central Research Station entomologists working in East Lansing, Michigan provide basic information on the biology and ecology of exotic forest insects so managers can formulate proper management strategies. Our work over the years has influenced development of policy and regulations to control various pests on regional, national, and international scales. This summer, we are helping combat an outbreak of the emerald ash borer, a new exotic pest to North America.

Issue

The emerald ash borer, *Agrilus planipennis*, was discovered infesting and killing thousands of ash trees (*Fraxinus* spp.) in a 5-county region of southeastern Michigan in July 2002. Evidence now found suggests that *A. planipennis* first entered Michigan at least five years ago. Surveys to determine the full extent of the infested area are underway.

On July 16, 2002, the State of Michigan imposed a quarantine on movement of ash trees and ash wood products to limit human-assisted spread of this pest. The USDA Animal and Plant Health Inspection Service has not yet issued a federal quarantine. The five currently infested counties include the cities of Ann Arbor and Detroit.



Photo: MI Dept. of Agriculture

Potential Impact



Photo: MI Dept. of Agriculture

In Michigan, this borer has been observed only on ash trees but has killed green ash (*F. pennsylvanica*), white ash (*F. americana*) and black ash (*F. nigra*). The trees die when burrowing larvae girdle the conducting tissues along the main trunk. Many trees seem to lose about 30 to 50% of the canopy after the first year of attack and the entire tree is often killed after 2-3 years of infestation. Stress likely contributes to vulnerability. However, relatively vigorous trees have also been killed by this exotic species.

Ash occurs extensively in the natural and urban forests of the eastern United States. In 2001, it accounted for more than 149 million cubic feet of timber products nationwide. Ash has been planted extensively in cities and towns as a hardy urban shade tree. The quarantine, which has already affected more than 60 landscape tree nurseries, could significantly affect many businesses.

Forest Service Contribution

North Central Research Station researchers and Northeastern Area State and Private Forestry insect specialists have moved rapidly to assist the Michigan Departments of Agriculture and Natural Resources and the USDA Animal and Plant Health Inspection Service (APHIS) with the outbreak of emerald ash borer.

Within two weeks of the beetle's identification, Forest Service researchers began several critical studies: (1) evaluating various systemic insecticides and injection techniques to kill the trunk-feeding larvae, (2) determining the proper disposal methods for infested trees, e.g., chipping, drying, and tarping, and (3) studying the insect's seasonal development to identify when it is most susceptible to various control measures.

Researchers will begin the search for natural enemies of this invasive pest as soon as removal of infested trees begins.

By the end of July, a State and Private Forestry (S&PF) Pest Alert, which summarizes the best available knowledge about the insect and helps with field identification, will be available in printed form. Forest Service researchers contributed to its development by translating important Chinese scientific literature on the pest. S&PF also plans to start an EAB web site by the end of July.

The Forest Service also participates in the Michigan Invasive Species Action Task Force, which is developing strategies for managing this pest, and APHIS's New Pest Advisory Group for the emerald ash borer.

Information Sources

The Michigan Dept. of Agriculture has placed information regarding *Agrilus planipennis* and the state quarantine on its website.

http://www.michigan.gov/mda/0,1607,7-125-1568_2390_18298-44151—,00.html

The State and Private Forestry website on the emerald ash borer is

<http://www.na.fs.fed.us/spfo/eab/>

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