

Environment

Bugged Again ... Invasive Emerald Ash Borer Discovered in New Hampshire

Joining the Asian Longhorned Beetle and the Hemlock Woolly Adelgid, which are destructive invasive insects already monitored to protect New Hampshire's environment and economy, the Emerald Ash Borer (EAB) was found on ash trees in Concord in March 2013. Its arrival was not unexpected, given that the insect had been moving eastward since it was first detected in North America near Detroit, Michigan, in 2002. It has now been detected in 19 states and two Canadian provinces. The EAB is native to Southeast Asia, is metallic green, and about ½-inch long.

The EAB attacks and kills all species of true ash (*Fraxinus* spp.), which includes white ash, green ash, and black/brown ash. It does not affect Mountain ash.¹ It's not the adult beetles that cause the real damage but the larvae that feed on the inner bark, disrupting the movement of water and nutrients. Trees die three to five years after infestation. According to the USDA Forest Service, since its discovery, the EAB has:

- ◆ Killed tens of millions of ash trees in southeastern Michigan alone, with tens of millions more lost in Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Massachusetts, Minnesota, Missouri, Ohio, New Hampshire, New York, Ontario, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin.
- ◆ Caused regulatory agencies and the USDA to enforce quarantines (Michigan, Connecticut, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Minnesota, Missouri, Ohio, New Hampshire, New York, Ontario, Pennsylvania, Tennessee, Virginia, West Virginia, Wisconsin) and fines to prevent potentially infested ash trees, logs, or hardwood firewood from moving out of areas where EAB occurs.
- ◆ Cost municipalities, property owners, nursery operators and forest products industries tens of millions of dollars.²



Image Source: Howard Russell, Michigan State University, Bugwood.org



Image Source: David Cappaert, Michigan State University, Bugwood.org



Image Source: Leah Bauer, USDA Forest Service Northern Research Station, Bugwood.org

1. "Frequently Asked Questions About Emerald Ash Borer in New Hampshire". Accessed 14 Jun. 2013. <www.nhbugs.org>

2. "Emerald Ash Borer". USDA Forest Service. Accessed 14 Jun. 2013. <www.emeraldashborer.info>

New Hampshire has now implemented the action plan developed after the EAB was first discovered in the U.S., in anticipation of its arrival in the state. The plan includes determining how widespread the infestation is and establishing a quarantine affecting the movement of ash materials out of Merrimack County, in order to minimize the spread of the EAB. Public meetings were held to publicize the issues and receive feedback from affected parties. The emergency quarantine issued in early April became permanent in May. This supplements the broader quarantine issued in 2011, restricting the movement of uncertified firewood into the state to protect against the EAB and other dangerous invasive forest pests from being transported into the state.³

With the first confirmation of the presence of EAB in New Hampshire in April, the Commissioner of the Department of Agriculture, Markets and Food held a press conference and pointed out that six percent of New Hampshire's northern hardwood forests are ash (25 million ash trees over 5 inches in diameter and another 750 million seedlings and saplings), and that these trees are an important part of the state's ecosystem, and are used frequently in landscape plantings. The EAB presence in the state will affect the firewood, timber, wood products, nursery, and landscape industries.⁴

A study published in the journal *Ecological Economics* estimates it would cost \$251 million by 2019 to treat or remove and replace the ash trees in New Hampshire's residential areas.⁵ In addition, the loss of ash trees would affect industries that produce ash firewood, lumber, and wood products, and currently contribute over \$1 million dollars annually to the New Hampshire economy.⁶

In order to increase public awareness of the EAB, New Hampshire's Governor declared the week of May 19-25, 2013, Emerald Ash Borer Awareness Week, and urged citizens "to learn more about emerald ash borer, to make a commitment to using either certified heat-treated or locally produced firewood—buy it where you burn it, to identify ash trees on your property and inspect them for signs of emerald ash borer, and to report suspicious ash trees and insects to state and federal plant regulatory officials at www.nhbugs.org or 800-444-8978."⁷

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3. "State Issues Emergency Quarantine on Ash Materials Following Emerald Ash Borer Detection." Accessed 14 Jun 2013. <www.extension.unh.edu/articles>.

4. Lorraine Merrill, Commissioner, Department of Agriculture, Markets and Food, Press Conference "Prepared Remarks, April 8, 2013." <www.nhbugs.org>.

5. Kovacs, K.F., et al., Cost of potential emerald ash borer damage in U.S. communities, 2009-2019, *Ecological Economics* (2009), doi:10.1016/j.ecolecon.2009.09.04.

6. "Frequently Asked Questions About Emerald Ash Borer in New Hampshire." April 8, 2013. Accessed 17 Jul 2013. <nhbugs.org/articles/frequently-asked-questions-about-emerald-ash-borer-new-hampshire>.

7. "Emerald Ash Borer Awareness Week, May 19-25, 2013," A Proclamation Signed by Governor Hassan. April 23, 2013. Accessed 28 Jun 2013. <nhbugs.org/emerald-ash-borer-awareness-week-may-19-25-2013>.

Sources for additional information and articles:

1. University of New Hampshire Cooperative Extension: www.nhbugs.org
Or, call the NHCE Forestry Information Center hotline at 800-444-8978.
2. United States Department of Agriculture Forest Service: www.emeraldashborer.info
3. NHPR: New Hampshire News: www.nhpr.org/term/emerald-ash-borer

Vital Signs Readings discuss topics relevant to one of the 18 sections of *Vital Signs*, a compilation of social and economic indicators for New Hampshire. *Vital Signs* may be accessed at www.nhes.nh.gov/elmi/products/vs.htm.