

Title: Survey for Emerald Ash Borer

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Abstract: The emerald ash borer, *Agrilus planipennis*, is an eastern Asian beetle that is established in Michigan, Ohio, Indiana, and Ontario. In the central United States, it has killed green, white, and black ashes in forested and landscaped settings and is spreading to new areas. This species poses a significant threat to ash trees, which are an important component of many Connecticut forests (a recent study estimated that Connecticut forests have nearly 25 million ash trees). Ash trees in Connecticut may be predisposed to attack because many already are stressed by infections of one or more plant pathogens. Ashes are valued highly for shade trees, furniture, and firewood. With interstate movement of wood and nursery stock and with international shipment of solid-wood packing material, an intensive survey of for the emerald ash borer is critical for protecting forests and ornamental shade trees in Connecticut.

Multistate Proposal _____Yes X No

I. Objectives and Need for Assistance

The main objective is to survey ash trees near businesses and warehouses, in forests, and in nurseries of Connecticut to discover infestations of the emerald ash borer. Primary targets will be ash trees near the Connecticut coastline, especially near import businesses, warehouses with eastern Asian imports, and garden centers. In particular, ash trees with sparse foliage and/or dead limbs will be scrutinized for infestations of the emerald ash borer. A secondary objective is to raise public awareness of the emerald ash borer by distributing educational materials and by speaking at meetings. Extensive regulatory duties and the current budget normally would not allow personnel of the Connecticut Agricultural Experiment Station (hereafter, CAES) to examine ash trees at risk. Station personnel would like to conduct a survey for the emerald ash borer in Connecticut to determine if high-risk trees have infestations of this pest.

II. Results or Benefits Expected

Previous inspections conducted by the regulatory staff at CAES, by the principal investigator, or by PPQ have confirmed that exotic insects have reached Connecticut through international trade. Regulatory personnel have found live small Japanese cedar longhorned beetles, dead Asian longhorned beetles, and other cerambycid or bostrichid beetles. Insects from eastern Asia, such as the small Japanese cedar longhorned beetle and the giant resin bee, have become established in Connecticut. Wood-boring beetles, such as the emerald ash borer, could economically impact businesses and harm forests and their ecosystems. Ash trees are abundant in Connecticut where forests dominate the landscape. The death of ashes would have a negative economic impact on the furniture trade, the landscaping industry, and possibly tourism. Attempts to eradicate or control the emerald ash borer could be costly. Connecticut has a history of established exotic insects that have injured its forests and ecosystems. This proposed survey for the emerald ash borer will assist the State of Connecticut in detecting early infestations and in establishing eradication or control programs.

III. Approach

Cooperator Roles and Responsibilities. With the cooperation of the regulatory staff of CAES, the Connecticut Tree Protective Association, town tree wardens, foresters, and others, mainly high-risk ash trees will be chosen for survey. The personnel at CAES will conduct the survey, collect and compile survey results, forward data to the NAPIS database, and submit summary reports when required. In addition, educational materials will be distributed to professional arborists and to the public at open houses at CAES.

A. Plan of Action

Station personnel will inspect ash trees for emergence holes and trapped adults of the emerald ash borer between May and September 2005. Ash trees will be inspected visually with binoculars to detect D-shaped emergence holes of the emerald ash borer. If necessary, bark will be peeled to reveal larval infestations. In April and May, ash trees that show possible signs of an infestation (e.g., sparse foliage, dying foliage, branch breakage, or dead limbs, and emergence holes) will be selected in 6-8 counties for trapping adult beetles; two long-term sampling sites have already been chosen. At each sampling site, trap-trees (>15 centimeters diameter) will be prepared by girdling them with two parallel cuts (2-centimeters deep) 15 centimeters apart at a height of about 1.5 meters, and the bark between cuts will be removed with a hatchet. Afterward, a 30-centimeter wide band of plastic wrap will be stapled around the trunk above the girdle and coated with insect tangle-trap. Girdled trees likely will be in state forests and on water company properties where permission can easily be obtained to girdle trees. Sticky bands at two sites (Orange and Barkhamsted) will be checked weekly, and the remainder will be inspected every 1-2 weeks from May to September. In a pilot project in 2004, sticky bands on girdled ash trees proved to be a highly effective method to trap wood-boring insects (this method is recommended by the USDA Forest Service).

Any potential emerald ash borers will be submitted immediately to certified identifiers to confirm their identity. Any positive finds will be reported to NAPIS as soon as the identification is confirmed. By the end of the calendar year of 2005, positive and negative occurrence data will be compiled and sent to the State Survey Coordinator for entry into the NAPIS database. All reports will be submitted by the requested deadlines.

B. Resources Required

APHIS will provide financial assistance to hire two Survey Assistants and to pay for vehicles, gas, and trapping supplies.

IV. Geographic Location

Connecticut