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Worcester more prepared than most to fight latest tree pest

BOYLSTON - Only months after locals marked the 30,000th tree planted to replace those lost to the Asian longhorned beetle, there's a new tree-killing bug in town that experts at a forum Wednesday said requires a different response.

"With emerald ash borer we're not trying to eradicate it like we are with Asian longhorned beetle, we're trying to mitigate it," Nathan Siegert, a forest entomologist with the U.S. Department of Agriculture Forest Service in Durham, N.H., said Wednesday during a presentation at Tower Hill Botanic Garden.

Emerald ash borer, *Agrilus planipennis*, is a beetle native to East Asia and first detected in the United States in 2002 in southeastern Michigan near Detroit, according to the USDA. Adults measure about 1/2 inch long and are identified by metallic emerald green wing covers over a golden green body. The adults cause little damage nibbling on foliage of trees in the ash (*Fraxinus*) genus.

Their larvae, however, eat the inner bark of ash trees, disrupting the tree's ability to circulate water and nutrients, according to the USDA. Infested trees will steadily lose leaves, show D-shaped holes where the larvae emerge as adults to fly and lay eggs on another tree, and often have shoots of leaves growing from their base. The tree dies in three to five years.

Since discovered in Michigan, the ash borer has spread to 24 states and several Canadian provinces and killed millions of ash trees. Mr. Siegert said the ash borer has caused an estimated \$10.7 billion in damage in the roughly 10 years it has been established in the United States.

The beetle reached Massachusetts in August 2012, detected in Berkshire County. The beetle reached Essex County in November 2013, Suffolk County in July 2014, and was found in Worcester on Nov. 23, Mr. Siegert said.

Unfortunately, once an area is infested, the beetles are impossible to eradicate, according to the USDA. So representatives of the USDA, the state Department of Conservation and Recreation, which is heading the state's ash borer response, area municipalities, land trusts, businesses, nonprofit organizations, and environmental groups gathered Wednesday at Tower Hill for a forum on how to deal with the infestation.

Ken Gooch, director of the Forest Health program at DCR, said his organization is using several methods to detect and monitor the infestation, including a statewide quarantine on firewood and ash products, traps to attract the beetles, introduced wasps that target the beetles, and insecticides to protect valuable trees.

Mr. Gooch said that DCR and other organizations are trying to implement as many of these tools as possible in what he called the "Slowing Ash Mortality," or "SLAM Strategy," he described as helping deal with the infestation "on your own terms."

"The objective is to slow the population growth and the spread," Mr. Gooch told attendees. "It buys time for planning and can mitigate a catastrophic loss."

But those "own terms" vary significantly among municipalities, large landowners and other groups across the state, according to Felicia Bakaj, a Forest Pest outreach coordinator for the Massachusetts Department of Agricultural Resources.

In response to a survey on emerald ash borer preparation, the city of Cambridge reported it has inventoried 775 ash trees, proposed 39 for removal, and has proactively treated trees with a round of pesticides over two summers, Ms. Bakaj reported.

The survey was sent to 92 municipalities, nonprofits, and major landowners. Other respondents said they were choosing to essentially "let nature take its course," Ms. Bakaj said.

John Hill, a spokesman for the city of Worcester, noted that any city response to the ash borer would have to be coordinated among different departments and groups that care for and monitor parks, streets and other forested areas. Representatives from the Worcester parks and forestry departments, Massachusetts Audubon Society, Greater Worcester Land Trust and other area conservation and environmental groups attended the forum.

But although the response to the ash borer will most certainly be different than the response to the Asian longhorned beetle, Worcester's experience with the latter may help mitigate damage the ash borer can cause.



Primarily, the ash borer should have much less of an impact.

Mr. Siegert noted that while ash trees may form stands in specific locations, ash trees make up just 4 to 8 percent of the overall New England hardwood forest. Ms. Bakaj estimated that ash species make up less than 5 percent of the trees in Worcester County.

Moreover, the Asian longhorned beetle eradication effort has mobilized the community, informing residents about the importance of the urban forest, and has coalesced many partners in the effort to preserve and replant. The latest pest may be different, but the people and organizations that have been focused on eradicating the Asian longhorned beetle know what to do to get their message out and protect the forest.

For instance, several forum presenters recommended creating a tree inventory as a first step in determining the ash borer response. Much of this work has already been, and will continue to be, done in Worcester and surrounding areas as the USDA and the city identify and remove trees infested by Asian longhorned beetle (which also targets ash trees) and the DCR and Worcester Tree Initiative replace those trees.

The Worcester Tree Initiative, for example, hopes to compile records of trees infested, removed and planted into a central database for the city, said Mary Knittle, co-chairman of the group's steering committee.

"We're still going to remain intact as is and have been prior to emerald ash borer being found; it doesn't impact our efforts to fight Asian longhorned beetle," said Rhonda J. Santos, spokeswoman for the Asian Longhorned Beetle Eradication Program with the USDA Animal and Plant Health Inspection Service. "The good news is that the number of infested trees we're finding has dramatically reduced. But we still have a long ways to go because we're still finding infested trees and the effort will continue."

Though the newest pest may not denude entire neighborhoods like its Asian longhorned brethren, it could have a noticeable effect.

Worcester Tree Initiative Executive Director Ruth Seward said in an email that some ash trees in the city immediately come to mind as notable, including a ring of trees near the memorial at Newton Hill, and a large tree in Tatnuck Square.

"The urban forest is at risk all the time. If it's not Asian longhorned beetle or emerald ash borer, there's another threat," said Ms. Knittle. "It's great they had a conference and that people are staying focused on it ... because it's important."

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