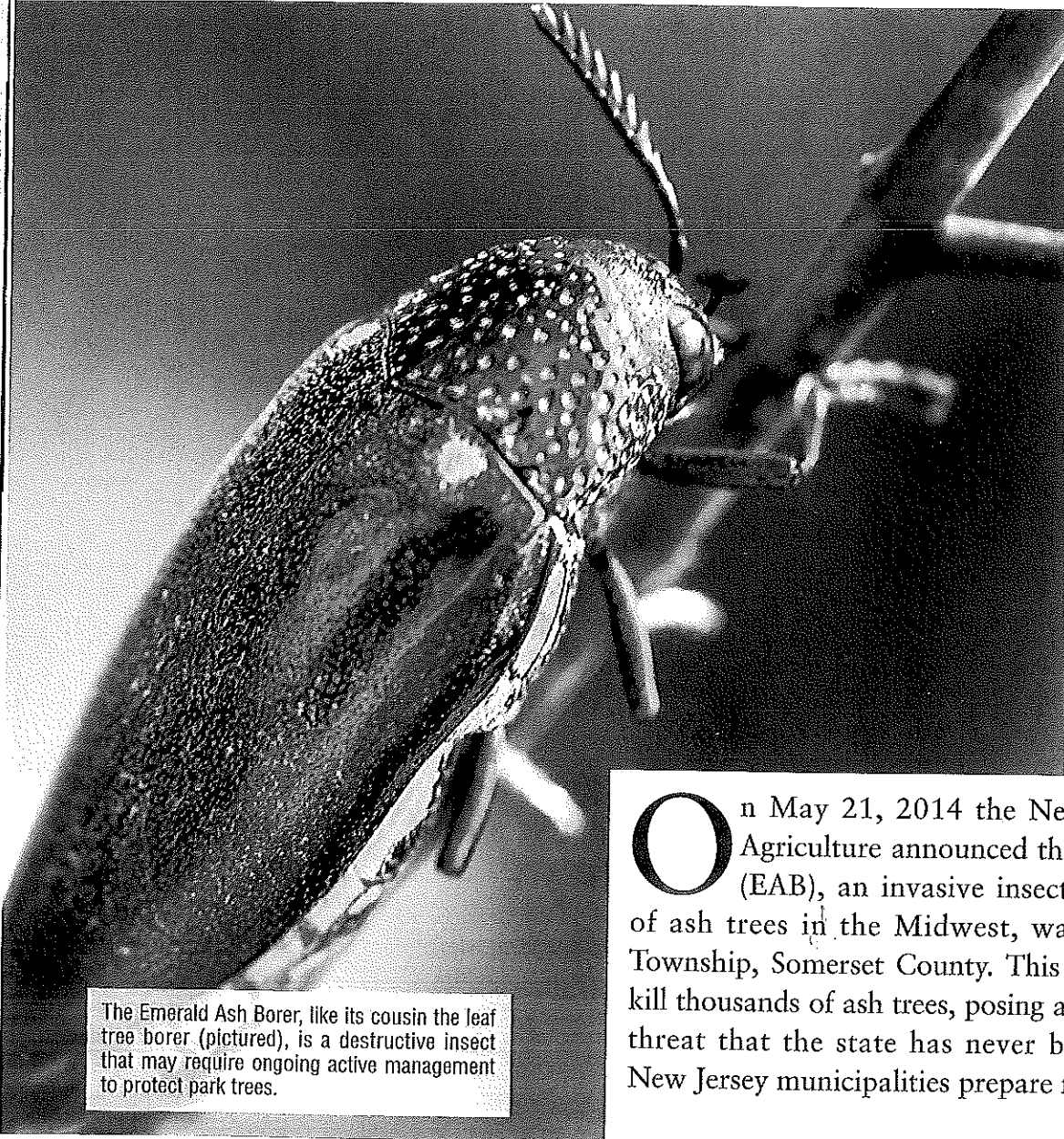


Battling the Emerald Ash Borer

Bridgewater makes plans to eradicate an insect that could decimate its trees

By Daniel Hayes, Mayor,
Bridgewater Township
& David Johnson, Asplundh
Tree Expert Company



The Emerald Ash Borer, like its cousin the leaf tree borer (pictured), is a destructive insect that may require ongoing active management to protect park trees.

On May 21, 2014 the New Jersey Department of Agriculture announced that the Emerald Ash Borer (EAB), an invasive insect that has killed millions of ash trees in the Midwest, was found in Bridgewater Township, Somerset County. This pest has the potential to kill thousands of ash trees, posing a safety and environmental threat that the state has never before seen. How should New Jersey municipalities prepare for this infestation?

The Pest The adult emerald ash borer is a small, dark metallic green beetle that emerges in late spring and begins to lay eggs in June. The eggs hatch and the larvae bore through the bark of the tree and into the layer underneath. Here they feed by tunneling through woody tissue and grow in size until autumn. The larvae pupate in spring and adults emerge soon after to begin the life cycle again. Most of the damage done to ash trees is by the larval stage.

Even though the Michigan Department of Agriculture imposed a state quarantine to regulate the movement of ash wood, between 5 and 7 million ash trees were dead or dying within 12 months. A federal quarantine was adopted in 2003 and federal monies were allocated in an effort to eradicate the pest. However, these efforts failed to slow the pest and they were terminated that same year when it became clear the funding and technology was insufficient. Female beetles can fly

several miles per day and the pest has already spread to 23 states and two Canadian provinces.

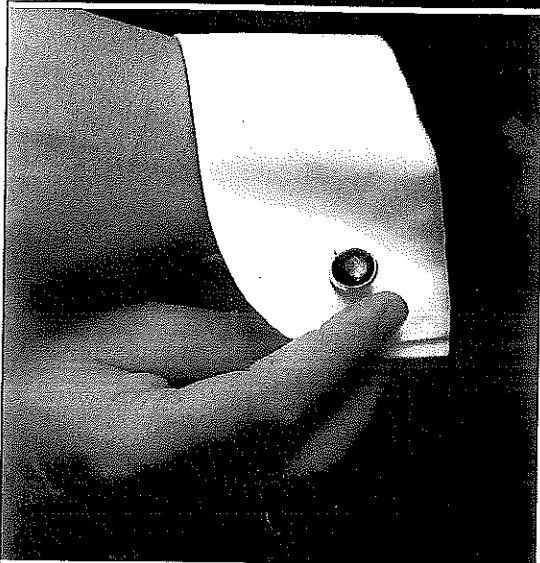
Impacts on Municipalities Many municipalities are feeling the fiscal effects of having to deal with EAB. The impact to municipal budgets and tree canopy can be overwhelming in areas where ash comprises a large percentage of public trees.

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Ash trees at Prince Rogers field in Bridgewater show the effects of the Emerald Ash Borer.

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Pest Management

Syracuse, New York, with 2,000 ash trees on public property, is planning to remove half of the trees and replace them with other species, at an estimated cost of \$900,000. Treating the remaining trees with insecticide will cost \$90,000 initially, with re-injections costing the same amount

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Removing mature Ash trees, like this one in a Bridgewater park, may be necessary if the infestation spreads.

every three years. The plan will allow them to spread out their removal and replacement costs over a number of years.

Milwaukee, Wisconsin has approximately 33,000 public ash trees and 28,000 of them are being injected by city tree workers. The cost of the insecticide every two to three years is \$1.6 million. Milwaukee is also removing 5,000 trees measuring 8" in diameter or smaller.

Bridgewater Originally a farming community, Bridgewater Township is a mix of rural and suburban development, with 45,000 people within 33 square miles. We are home to Bridgewater Commons, a well-known shopping mall and TD Bank Ballpark, home of the Somerset Patriots. There are 3,600 acres of public and private parks and recreation opportunities in our township, including four historic sites.

The township is also home to Middlebrook Trail, a historic trail used by George Washington's colonial army that's a mixture of natural areas, developed locations and interpretive sites. Bridgewater citizens value their tree

canopy and the township has the honor of being designated a Tree City USA for 18 straight years.

Battling the Beetle EAB was found in a commercial area of our town. Many of the ash tree's canopies were dying back and something was obviously affecting their health. The insect had probably been at that location for several years. If no measures are taken, we anticipate that insect populations will build up rapidly, similar to what other communities and states are experiencing. If this happens, there will be an enormous burden on our local budget and staff. The township plans to take proactive measures to slow the infestation in order to minimize the impact, reduce liability, spread out costs and lessen the overall cost of the infestation.

Because we are the first municipality to have an identified EAB infestation, we are researching the best steps to take to slow the progression of this pest and spread out the mitigation costs.

Our 215 miles of tree-lined township roads are one of our biggest concerns,

because of the number of ash trees that flank them. We must also place a high priority on trees in our most popular recreational areas and in public places. All our ash trees will need to be identified and evaluated in order to minimize possible damage should a dead tree or one of its branches fall.

The Bridgewater Shade Tree Board will act as the EAB readiness team with assistance from other township departments. It has begun the process of determining the best way to survey ash trees on public lands and identify those that are most valuable. The team is working with several community volunteer groups, including the scout troops. The survey results will help the board make recommendations on whether to remove a particular tree or invest in insecticide applications. The survey results will also help us develop a Community Forestry Management Plan. The township has also reached out to the New Jersey

Department of Agriculture and New Jersey Forestry Services for resources and partnerships to support its plan.

Bridgewater has initiated discussions with the Somerset County Park Commission in order to coordinate efforts to help control the pest. The park commission has already formed a task force and contacted Rutgers Cooperative Extension for technical assistance. They are developing an EAB management plan and intend to survey their tree population and prioritize their trees. The county is also looking at locations where ash wood could be stored or processed (chipped) after trees are removed.

Environmental Impacts The environmental impacts of the tree loss in our natural areas may be even more alarming than the monetary impacts. The effect of large quantities of ash trees being killed will undoubtedly alter the understory of ash forested areas, possibly increasing the spread of invasive

plants and negatively affecting insect, bird and mammal populations.

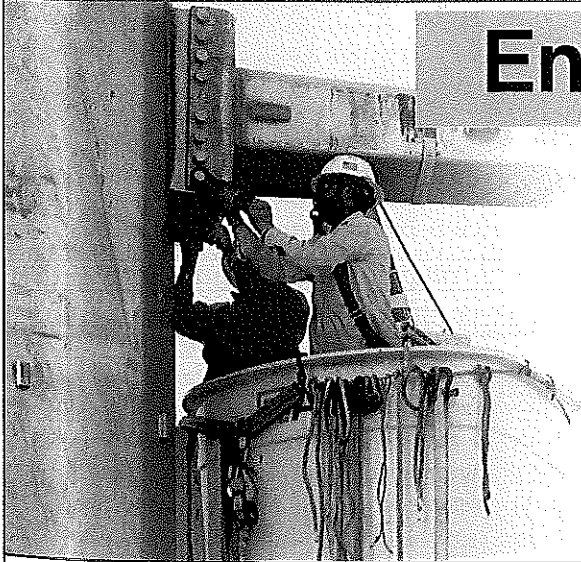
We expect that many of the state's municipalities will be watching us over the next several years. We hope to pass on any lessons learned in dealing with EAB and be a resource to other municipalities as it spreads. \$

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