Does My Tree Have EAB?

by Julia Dugan & Caroline Kirby


Adult Emerald Ash Borer

Photo courtesy The Nature Conservancy


Emerald Ash Borer Larva

Photo courtesy NY State Dept of Environmental Conservation


Trunk Damage

Photo courtesy Charles Flower for phys.org


Emergence Holes

Photo courtesy USDA

Issue

Worked in collaboration with University of Minnesota course OLPD 5204: Designing the Adult Education Program, the city of North St. Paul, and Resilient Communities Project (RCP) to design a training program that would enable residents to identify ash trees and signs of emerald ash borer, and would inform them of the various management steps they may take to treat or remove trees.

What is Emerald Ash Borer (EAB)?

- Exotic, invasive wood-boring insect. Bright green, 1/16th of an inch wide and 1/3rd of an inch long.
- Infests and kills native North American ash trees both in forests and in landscape plantings.
- Native to Asia, believed to have made its way to the States via solid wood packing material used in cargo shipments.
- Originally found in southern Michigan in 2002, since spread to more than 22 states.
- Life cycle:
  - Begins Mid-May to Mid-August: adults lay eggs in ash bark. Eggs hatch and larvae tunnel their way into tree.
  - August to October: larvae feed under bark, creating S-shaped grooves which destroy the tree's ability to transport nutrients to its branches.
  - Immature EABs winter under the bark until May-June when they re-emerge as adults, leaving D-shaped exit holes.

Why Should We Care?

- Ash trees offer beauty and shade.
- Homes can be protected and cooled by healthy ash trees surrounding the property.
- According to the MDA, potential economic and environmental impacts of losing these ash trees are substantial-- $20 to $60 billion dollars.

How Can I Help?

Several easy things to do:

- Don't move firewood. While the beetle cannot fly more than a 1/2 mile, it can be easily moved around in firewood. Burn it where you buy it!
- Walk around your property and take an inventory of the ash trees there.
  - Trees can be saved by treating with an imidacloprid-containing insecticide if they are:
    - » Healthy and vigorously growing, with more than half their leaves
    - » Enhancing the landscape
    - » Valuable to the owner
    - » Showing only a few outward signs of EAB infestation
  - Trees should not be saved and should be removed by a professional if they are:
    - » Unhealthy, with more than half their leaves missing
    - » Planted in poor sites or are not important to the landscape
    - » Showing many outward signs of EAB infestation, such as woodpecker damage, bark splits, and water sprouts at the tree base
- Wood from removed trees does not have to go to waste. You may:
  - Keep the wood to use in your own home or for landscaping
  - Sell your ash wood to a reputable industry
  - Dispose of your tree at a local wood disposal site
  - Provide materials to local woodworkers
  - Donate the wood within your community

Methods

Met with Mike Greco, Program Manager of RCP; Jon Fure, Community Development Intern for the City of North St. Paul; and Dr. Catherine Twohig, professor at the University of Minnesota.

Mr. Fure requested a multi-faceted, educational training program that could be presented anywhere by anyone at any time to the residents of North St. Paul.

- Defined project goals and learning objectives.
  - Goal: "To educate residents about emerald ash borer and its effects and lead affected residents to either treat or remove affected ash trees on their property".
  - Objectives:
    1. Training will inform North St. Paul residents about the potential hazards of EAB to ash trees in the area and the steps they can take to treat or remove trees.
    2. After training, participants will examine their private property to identify ash trees and potential signs or threats of EAB.
    3. If infestations are found, participants will contact local tree treatment and removal services within the quarantine area to treat or remove infected ash trees from their private property.
- To reach all residents of North St. Paul, three different methods were chosen*:
  1. Utilize the city's utility bill/newsletter as an information sharing tool.
  2. Send mass e-mail to reach those who are more computer literate.
  3. In-person training event at two local community events: Silver Lake Splash (July, 2014) and the Fall Round-up Parade (September, 2014).

  *These are defined as tentative because the event contacts have not been successfully reached. Calls and e-mails have been made, but plans have not been solidified.

Deliverables

- An informal training presentation complete with activity manual and hands-on activities.
  - Can be presented by anyone in North St. Paul and may be used for future trainings, if needed.
  - Proposed training will last about 10-15 minutes based on audience questions.
    1. Includes a short, informative talk (about 4-5 minutes) followed by a set of interactive activities (i.e., EAB trivia game and specimen demonstrations) (about 4-5 minutes).
    2. Informative talk is an interactive dialogue with participants that includes references to text/brochures, EAB samples (larvae and adult), samples of ash tree bark, and samples of similar tree species.
    3. After training, participants will be given a checklist of next steps to evaluate and identify the trees on their own property. They will also be given contact information for local tree services.

Learning Activities

Learning Activity 1: Examine and compare samples of EAB, the larva of EAB, ash trees, and other similar tree species

Objective: Participants will identify EAB and ash trees and tell the difference between the ash trees and other similar tree species.

Procedure (Facilitator):

1. Point out the EAB characteristics/properties while showing participants EAB insect and larva samples.
2. Talk about the properties of ash trees
   - Show ash tree sample that has been infected by EAB
   - Have participants physically pick up and compare ash trees to similar tree species
   - Point out the differences between tree species

Learning Activity 2: EAB trivia game

Objective: Participants will recall what they learned via an EAB trivia game

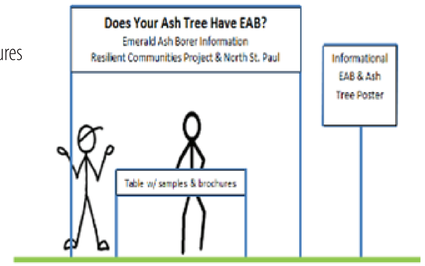
Procedure (Participants):

1. The participant will click on any category number to view a question then click on the arrow at the bottom of the screen to view the answer.
2. Facilitator(s) will be available to answer questions and clarify information from the trivia game.

Training will be presented at a booth. Booth will include a banner stating the training topic as well as our association with North St. Paul and RCP.

Booth will include:

- Table with informational brochures
- EAB samples
- Ash tree samples
- Informational poster



Evaluation

- There will be no individual follow-up after training, but facilitators can infer learning transfer and participant impact based on discussions with participants, learner attitudes, and expressed motivation.
- Two official evaluation tools:
  1. EAB trivia game will serve as a measuring tool to evaluate how much information was learned and retained from the training.
  2. Local tree services can be contacted for evidence of an influx of business after the training. Since ash trees must stay within a quarantined area, tree removal will be easy to track. An influx will signify training success.

Next Steps

- Prior to presenting this program to the city, it was practiced in front of an audience at two separate occasions.
  - First took place during an OLPD 5615: Training and Development course
  - Second took place during an OLPD 5204: Designing the Adult Education Program course.
  - Although both settings were more formal that the intended setting, the presentation was very well received and audience members provided excelled feedback.
- From these experiences, it is presumed that the actual training will be just as well received and the city of North St. Paul will benefit greatly from the proposed program.

Resilient Communities Project

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ACKNOWLEDGEMENTS

This project was completed as part of the University of Minnesota course, OLPD 5204: Designing the Adult Education Program course, with support from the resilient Communities Project (RCP). RCP is an initiative of the Sustainability Faculty Network at the University of Minnesota, with funding and administrative support provided by the Center for Urban and Regional Affairs (CURA) and the Institute on the environment (IonE). To learn more, visit rcp.umn.edu.

Project was created by Caroline Kirby and Julia Dugan with the help of Mike Greco, Program Manager of RCP; Jon Fure, Community Development Intern for the City of North St. Paul; and Dr. Catherine Twohig, professor at the University of Minnesota. EAB supplies were provided by the University of Minnesota Forestry Department with special thanks to Gary Johnson, Sean Peterson and Antoine Tireau. Poster was created by Caroline Kirby and Julia Dugan, with special thanks to MaryLou Wick, Plunkett's Pest Control.

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