# Farm Bill Accomplishment Report Template

## Farm Bill Final Accomplishment Report

| | |
|---|---|
| **Year:** | FY2014 |
| **State:** | Maine |
| **Cooperative Agreement Name:** | Forest Pest Outreach and Survey Project |
| **Cooperative Agreement Number:** | 14-8223-0662-CA |
| **Project Funding Period:** | 9/20/2014 – 9/19/2015 |
| **Project Report:** | **Farm Bill FPOSP Final Report** |
| **Project Document Date:** | 12/15/2015 |
| **Cooperators Project Coordinator:** | State Survey Coordinator |
| **Name:** | Karen Coluzzi |
| **Agency:** | Maine Department of Agriculture, Conservation and Forestry |
| **Address:** | 28 State House Station |
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| **Telephone:** | 207-287-7551 |
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| | |
|---|---|
| Quarterly Report | ☐ |
| Semi-Annual Accomplishment Report | ☐ |
| Annual Accomplishment Report | ☒ |

## 1. Approach

### a. Describe specific activities and accomplishments...

The cooperator will accomplish the following goals by the end of the agreement period:

1. Identify two communities within the state that are high risk for forest pest introduction and work with these communities to ensure that they are better prepared for the possible arrival of Asian longhorned beetle, emerald ash borer, and other invasive forest pests and pathogens. An effort will be made to select communities that are deemed high risk due to characteristics suitable for easy introduction. Maine will also focus on select geographic areas that have not previously received a significant amount of outreach.

We have met and communicated with active members in two communities (Camden and Belfast) who are planning to develop emerald ash borer management plans and facilitate municipality involvement. After meeting with Belfast, organizers and area high school students developed a plan to replace the ash trees in public areas of the city, a plan that was entered into the High School Envirothon Competition. They came in 4$^{th}$ place for the state (**poster attached**). Although three presentations were made to the Camden Conservation Board and public members of the community, no management plan has been developed as far as we know. We continue to work with the town's nature center (Merryspring) to provide programs and presentations to the public concerning tree health and invasive forest pests. On a positive note, we heard from a participant from our Lewiston training who presented to the Winslow Agricultural Commission the idea of developing an "Invasive Pest Plan" for their community. Developing a Community Action Plan (**template attached**) was an agenda item for our trainings this grant period.

2. Collaborate with the national Don't Move Firewood campaign to create a clear and consistent regionally specific message to be distributed at the state level. Cooperation with DMF will allow states to:
   - Work with DMF to design state-specific electronic printable versions of DMF posters, brochures, and postcards
   - Receive bulk quantities of DMF pre-printed educational materials (e.g. brochures, stickers, DVDs)
   - Utilize the DMF resource library to find campaign materials to build upon (i.e. prevent "reinventing the wheel")
   - Guest post local information and press releases to DMF's blog and facebook account
   - Access the FPOSP website, now hosted via TNC's contractors' non-profit Google account

We developed state-specific rack cards and large-size stand-alone posters through the Don't Move Firewood resource page, but we did not get them printed. We collaborated on hashtag titles so that all Facebook and Twitter posts can be organized by topic. We continue to share posts and cross-post on each other's Facebook pages. We have disseminated Don't Move Firewood materials to our trained volunteers for distribution amongst their constituents.

3. Design and implement outreach targeting employees of industries handling potentially regulated materials that are considered to be high risk pathways for the spread of forest pests and pathogens. This could include people who work in and around warehouses and storage facilities, nursery and garden centers, saw mills and other vulnerable points of pest introduction.

We have chosen to communicate with industry and the public through the Invasive Pest Outreach newsletter that we developed through our Department (**example attached**), and that we promote at our trainings. The number of subscribers has more than doubled since its inception (June 2014), and combined with the Maine Bug Watch Facebook and Twitter pages, interested parties are continuously updated on invasive forest pest information. Many of the participants at our trainings (see #4 below) represent the target audiences we had intended to reach.

| **Invasive Pest Outreach Newsletter Metrics for FY14** | | | |
|---|---|---|---|
| **Title** | **date sent** | **# subscribers** | **% that opened** |
| Fall | 10/17/2014 | 777 | **32%** |
| Winter | 1/29/2015 | 1019 | **28%** |
| Spring I | 3/25/2015 | 1138 | **29%** |
| Spring II | 5/15/2015 | 1201 | **28%** |
| IFP Trainings | 7/14/2015 | 1207 | **28%** |
| IFP Training-Saco | 9/8/2015 | 1218 | **26%** |

In addition to industry outreach, we continued working with the K-12 community. We developed education kits that have been requested by a number of different schools (**photo in midyear report**), and we worked with a 4th grade class to write, illustrate and publish a book on the emerald ash borer (available on Amazon). We also designed ash tree and maple tree tags and held numerous events where trees were tagged for awareness (**tags and event photos attached**)

4. Design and administer a training program for volunteer first detectors that targets environmental organizations, the tree care industry, utility companies, educators and concerned community members. First detectors will learn about forest pests of concern, how to respond to potential detections, and who to contact in the event of detection.

We have a well-developed training program for first detectors in the "green"-industry sector. We have partnered with Soil and Water Conservation Districts around the state to host the trainings and provide logistical support (e.g. registrations). We originally planned to do five trainings but demand resulted in an additional two, for a total of seven trainings with 152 people trained this grant period. This year we included a presentation on developing a Community Action Plan, and examples of community-oriented outreach that folks with all different skill levels and experiences can conduct. An **agenda** of one of our trainings is attached, as well as examples of **training binder materials**. Below is a table of the trainings we conducted.

| Date | Location | Trainer | Host | Other organizations represented | # trained |
|---|---|---|---|---|---|
| 2/11/15 | Greenville, Piscataquis Co. | ME DACF | Piscataquis Co. SWCD | Licensed private foresters, District forester, hardwood dealers, SWCD directors, forest rangers, master gardeners, Student Envirothon competitors… | 26 |
| 3/18/15 | Waldoboro, Knox Co. | ME DACF | Knox-Lincoln SWCD | Licensed private foresters, District forester, Bureau of Parks and Lands, Coastal Mountains Land Trust, SWCD staff, Merryspring Nature Center, woodlot owners, tree farm managers… | 25 |
| 4/1/15 | Lewiston, Androscoggin Co. | ME DACF | Androscoggin Valley SWCD | Licensed private foresters, The Nature Conservancy, Winthrop Town Forest, SWCD staff, science teacher, Winslow Agricultural Commission… | 15 |
| 5/5/15 | Baxter State Park, Millinockett, Penobscot Co. | ME DACF | Baxter State Park and Penobscot Co. SWCD | Department of Transportation, Licensed foresters, Wildlife consultant, Baxter State Park staff, MSAD 70 Envirothon students… | 25 |
| 7/22/15 | Whitneyville, Washington, Co. | ME DACF | Washington Co. SWCD | DPW, Lucas Tree Experts, private and public foresters, Machias Land Trust, woodlot owners… | 16 |
| 8/25/15 | Farmington, Franklin Co. | ME DACF | University of Maine, Farmington | Private and public licensed foresters, Envirothon students, Sebasticook River Land Trust, Maine State Museum, AFM forester, University staff… | 30 |
| 9/15/15 | Saco, York Co. | ME DACF | York Co. SWCD | Saco Parks & Rec, District Forester, private licensed foresters, Lucas Tree Experts, USFS WMNF, York Water District, private landscape architect… | 15 |

5. Maintain statistics about the numbers of events, estimated numbers of attendees at events, types of materials generated and distributed numbers of volunteers recruited and community preparedness plans or activities. This information will be included in reports based on the suggestion's reporting requirements.

A database of all trained volunteers from 2009 to the present was created in 2009 and is updated frequently. Currently, there are approximately 580 names in the database. The FPOSP volunteer coordinator, Lorraine Taft, sends monthly to quarterly emails of program updates, upcoming events, solicitation of feedback, words of encouragement, etc. to all the contacts in the database. Most of the outreach events we participate in include volunteers from this database. We also maintain Facebook and Twitter pages that not only inform followers of pest updates, but help to solicit volunteers and set up new outreach events. We have continued to solicit feedback from the FPOSP volunteers, but only a select few respond. Included below are *some* events we were involved in or have been informed of.

**Tabling - Maine Bug Watch/Invasive Forest Pests:**

Late September 2014 - Common Ground Fair – tens of thousands of people
October 2015 – Fryeburg Fair – thousands of people
November 2014 – Invasive Species Forum; Massabesic Middle School
January 2015 – Maine Agricultural Trades Show – hundreds of people
March 2015 – Eastern Maine Sportsmen's Show – hundreds of people
May 2015 – Knox County Conservation District Shrub Sale - ~100
May 2015 – NE Livestock Expo – thousands, mostly kids
August 2015 – Natural Resources Day, Union Fair - ~100, mostly kids

**Presentations/Outreach:**

October 2014 – Utility Arborist Workshop Day
November 2014 – Belgrade Lakes Association
November 2014 – Blue Hill/Ellsworth
March 2015 – Hidden Valley Nature Center
April 2015 – EAB Presentation and Ash Tree Tagging Event at Merryspring, Camden
May 2015 – Ash Tree Tagging Event, Farmington

**Volunteer Efforts:**

Oxford Co. SWCD – monthly outreach to community via fairs, schools, workshops, community planning
City of South Portland Parks Department – community outreach, esp. K-12
Tree-Tagging Events:
- Acadia National Park, RSU19 (ash for EAB and maple for ALB), Canton Town Forest, Belfast City Park, Thomaston Town Mall

Fair Tabling:
- Mic Mac Health Fair, Union Fair, Ossippee Valley Fair, Belfast Street Fair (ALB and EAB costumes), Farmington Fair, Fryeburg Fair…

Articles/Displays:
- Downeast Lakes Land Trust – newsletters, displays
- Quoddy Tides (Washington Co.) article on EAB
- Lewiston Sun Journal – article on EAB and Oxford Co.'s efforts to be vigilant

Material Distribution:
- Damariscotta Chamber of Commerce
- Topsham/Brunswick Farmer's Market
- Jefferson Town Office (public meetings and voting)
- Washington Co. – public libraries, guest cottages, campgrounds, granges, etc.

**Other:**

ALB/EAB Education Kits – loaned to 5 middle and high schools
Children's Book on EAB – Cascade Brooks Elementary School (worked with a 4th grade class to research, write, and illustrate a book on emerald ash borer, 54pp); article in Franklin Co. news

6. Other

After five years of being the FPOSP Volunteer and Outreach Coordinator, Lorraine Taft decided to re-retire. Her dedication and passion to protecting Maine's trees and forests from invasive insects has no rival in the state. Therefore, we decided to announce a Request for Proposals in hopes that some of the groups we have trained over the years would be interested in spreading invasive forest pest awareness in new and interesting ways. For FY15, the FPOSP has contracted with two groups, the Saco River Recreational Council and the Maine Association of Conservation Districts. Both groups have been dedicated to invasive forest pest outreach for years and we are confident awareness will continue to spread throughout the state.

**Approved and signed by**

E. Ann Gilpin _____ **Date:** 12/16/2015

**Cooperator**

_____ **Date:** _____

**ADODR**

**Belfast EAB Community Preparedness/Action Poster**

**Maine FPOSP EAB Community Action Plan Template**

# Community Action Plan
# Preparing for Emerald Ash Borer

**Purpose:** Participants in the Forest Pest Outreach and Survey Project's Train-the-Trainers Program will learn the benefits of a Community Action Plan; initiate conversations within their own communities; and assist in developing a community centered plan to manage the emerald ash borer (EAB).

**Background:** The likelihood that emerald ash borer will be found in Maine is continually increasing. Federal funds are diminishing and Maine's EAB management strategy will include monitoring and regulatory activities rather than state-wide eradication efforts. Communities will need to understand and be prepared to manage an EAB infestation, which will likely result in the mortality of thousands of its ash trees.

**Introduction**: Take steps on planning to manage EAB response within your community by: assessing the severity of impact prior to infestation; planning to address the impact; identifying and locating resources to manage the plan…

**Steps:**

- Inventory the community ash trees
- Removal and replacement cost estimate
- Disposal plan and cost estimate
- Removal criteria
- Planting criteria
- Public education strategies
- Review town policies that impact ability to implement this plan
- Determine the scope of the plan, i.e. public tree or include privately owned trees also
- Plan for implementation
- Review Local/County/State resources, including but not limited to:
  - Local and Community resources
  - Department of Agriculture, Conservation and Forestry resources:
    Urban Forester, <Jan.Santerre@maine.gov>
    District Forester <www.maine.gov/dacf/mfs/index.shtml>
    Forest Pest Outreach Project <www.maine.gov/eab>
    MFS Forest Health and Monitoring <www.maineforestservice.gov>
    List of licensed arborists <www.maine.gov/dacf/php/arborist/ArboristList.shtml>
    List of licensed foresters <pfr.informe.org/almsonline/almsquery/SearchIndividual.aspx>
  - Soil & Water Conservation Districts
  - U Maine Cooperative Extension Offices

You can find a Draft of the Maine Municipal Emerald Ash Borer Management Plan on the EAB Resource Page at: <www.maine.gov/dacf/php/caps/EAB/EABashtag.shtml>

(FPOSP 2/2015)

**Invasive Pest Outreach newsletter example:**

MAINE DEPARTMENT OF
AGRICULTURE, CONSERVATION & FORESTRY

**PLANT HEALTH**

## Invasive Pest Outreach Information

- News on Emerald Ash Borer
- New Tree Pest Discovery
- Learning Opportunities - Workshops & Webinars
- Maine's Forest & Tree Pest Emergency Action Plan

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## News on Emerald Ash Borer

New Host Species for Emerald Ash Borer
A researcher at Wright State University in Ohio recently discovered that the emerald ash borer does not colonize only ash trees (*Fraxinus spp.*). The white fringetree (*Chionanthus retusus*), a close relative of ash, apparently makes a nice host also. This discovery was confirmed by the USDA this week.

The natural range of white fringetree is from New Jersey south to Florida, but there are some plantings of this tree in warmer zones of Maine.

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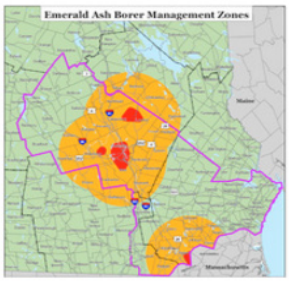


Emerald ash borer (EAB) has been found in Rockingham County, New Hampshire. This county borders Maine.

EAB has not been detected in Maine to this date. A number of survey methods are being used to try to detect this insect early. Recognizing the signs of an infested tree is key to early detection. This website has good information on what EAB looks like and the signs of infestation on its host trees.

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## New Tree Pest Discovery

Red pine scale was discovered for the first time in Maine this fall in Mount Desert (Hancock County) on dying red pine trees.

National Park Service (NPS) biologists are working with the Maine Forest Service and US Forest Service entomologists and other conservation partners on response planning, including gathering more information about the extent of the infestation.

Please report any suspect infestation of red pine scale to the Maine Forest Service.

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## Learning Opportunities - Workshops & Webinars

**Webinar - Today, October 17, 2014, 2:00 PM ET**
"What Works? Evaluating Forest Pest Outreach Efforts"
http://stateofmaine.adobeconnect.com/r1qs7cen94v/

**FPOSP Training Agenda**

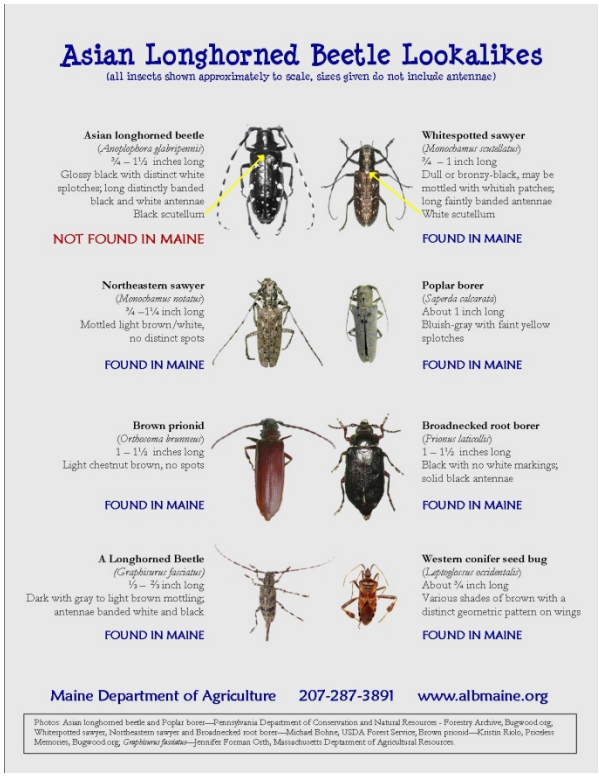
**Forest Pest Outreach and Survey Project,**
Maine Department of Agriculture, Conservation and Forestry (DACF)
York County Soil & Water Conservation District

September 15, 2015
Saco City Hall, 300 Main St., Saco, Maine 04072

| | |
|---|---|
| 11:00 - 11:15 | Introductions, Goals |
| 11:15 – 12:15 | What are invasive species; how do they get here<br>Invasive wood boring tree pests<br>History in US, Canada<br>Pathways of spread<br>Identification & life cycle<br>Symptoms and signs of infestation<br>Current management activities<br>How, when & where to look |
| 12:30 - 1:30 | Hemlock woolly adelgid and others of concern<br>History in US<br>Pathways of spread<br>Current management activities<br>Identification & life cycle<br>Symptoms and signs of infestations<br>How, when & where to look |
| 1:45 - 2:30 | Advanced Community Planning<br>Surveys<br>Reporting<br>Community Outreach<br>Materials and samples available<br>Plans, partnerships |
| 2:30 - 3:30 | What Happens When Invasive Pest is Found:<br>Personal Experience of Responding Forester:<br>Working the ALB infestation in Worcester, MA<br>Discovery, Survey, Eradication Efforts, Rules & Regulations<br>Discussion/ Questions |

Workshop presenters:
Karen Coluzzi, MS, Entomologist, DACF, Animal & Plant Health
Lorraine R. Taft, M.Ed, FPOSP Outreach and Volunteer Coordinator
Oliver Markewicz, District Forester-York Co., DACF, Maine Forest Service

**FPOSP Training Binder Materials (examples):**



## Asian Longhorned Beetle Lookalikes

(all insects shown approximately to scale, sizes given do not include antennae)

**Asian longhorned beetle**
(*Anoplophora glabripennis*)
¾ – 1½ inches long
Glossy black with distinct white splotches; long distinctly banded black and white antennae
Black scutellum
NOT FOUND IN MAINE

**Whitespotted sawyer**
(*Monochamus scutellatus*)
¾ – 1 inch long
Dull or bronzy-black, may be mottled with whitish patches; long faintly banded antennae
White scutellum
FOUND IN MAINE

**Northeastern sawyer**
(*Monochamus notatus*)
¾ –1¼ inch long
Mottled light brown/white, no distinct spots
FOUND IN MAINE

**Poplar borer**
(*Saperda calcarata*)
About 1 inch long
Bluish-gray with faint yellow splotches
FOUND IN MAINE

**Brown prionid**
(*Orthosoma brunneus*)
1 – 1½ inches long
Light chestnut brown, no spots
FOUND IN MAINE

**Broadnecked root borer**
(*Prionus laticollis*)
1 – 1½ inches long
Black with no white markings; solid black antennae
FOUND IN MAINE

**A Longhorned Beetle**
(*Graphisurus fasciatus*)
½ – ¾ inch long
Dark with gray to light brown mottling; antennae banded white and black
FOUND IN MAINE

**Western conifer seed bug**
(*Leptoglossus occidentalis*)
About ¾ inch long
Various shades of brown with a distinct geometric pattern on wings
FOUND IN MAINE

Maine Department of Agriculture 207-287-3891 www.albmaine.org

Photos: Asian longhorned beetle and Poplar borer—Pennsylvania Department of Conservation and Natural Resources - Forestry Archive, Bugwood.org, Whitespotted sawyer, Northeastern sawyer and Broadnecked root borer—Michael Bohne, USDA Forest Service, Brown prionid—Kristin Kiolo, Priceless Memories, Bugwood.org, *Graphisurus fasciatus*—Jennifer Forman Orth, Massachusetts Department of Agricultural Resources.

Extension Bulletin E-2944 • New • March 2005

## Don't be Fooled by Look-Alikes!

### Watch Out for the Exotic Emerald Ash Borer

**Emerald ash borer (EAB)**, *Agrilus planipennis* Fairmaire

This Asian beetle, discovered in 2002 in southeastern Michigan and Windsor, Ont., infests and kills North American ash species (*Fraxinus* sp.) including green, white, black and blue ash. Damage is caused by the larvae, which feed in tunnels (called galleries) in the phloem just below the bark. The serpentine galleries disrupt water and nutrient transport, causing branches, and eventually the entire tree, to die. Adult beetles leave distinctive D-shaped exit holes in the outer bark of branches and the trunk. Adults are roughly 3/8 to 5/8 inch long with metallic green wing covers and a coppery red or purple abdomen. They may be present from late May through early September but are most common in June and July.



Emerald ash borer adult

### Don't be fooled by these beetles....



*Agrilus anxius* Gory

**Bronze birch borer**

This native beetle attacks stressed birch trees. Adults are similar to EAB adults but are dark-colored. Like EAB larvae, bronze birch borer larvae feed in the phloem just below the bark. Heavily attacked trees typically die from the top down. Emerging beetles leave D-shaped exit holes in the bark. Swollen ridges under the bark result from callus tissue that trees sometimes form over larval galleries. Adults may be present throughout the summer.



*Popillia japonica* Newman

**Japanese beetle**

This exotic beetle has been established in the northeastern region for several years. Adults feed on the foliage of more than 300 plant species, including many common hardwood trees. Trees may be defoliated by late summer but are rarely killed. Larvae are common pests in turf, where they feed on the roots of grasses. Adults are slightly less than 1/2 inch long and are present from late June through late summer.



*Cicindela sexguttata* Fabricius

**Six-spotted tiger beetle**

This native beetle is a common predator of insects in woodlands in the eastern U.S. Tiger beetles are ground-dwelling and prefer open habitats along trails and roads. Adults are 1/2 inch long and usually iridescent green or blue. They can be found from April through August.



*Agrilus bilineatus* (Weber)

**Two-lined chestnut borer**

This native borer attacks stressed and declining oak trees. Adults are dark-colored with two lines on the dorsal (back) side. Larval feeding beneath the bark disrupts the transport of water and nutrients and can kill infested branches and entire trees. Adults can be present from April through August.



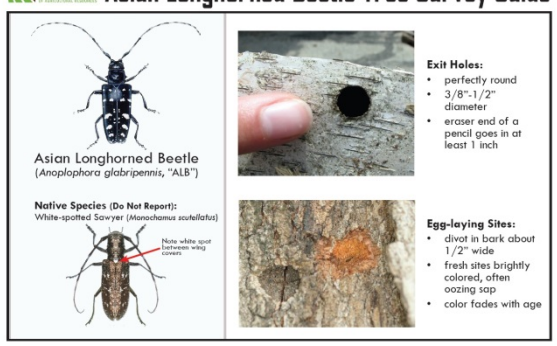
*Calosoma scrutator* Fabricius

**Caterpillar hunter**

This large ground beetle is a predator of other insects. It is often found under rocks, leaves, and other debris, but it will climb trees to find prey. These native beetles prey on foliage feeding caterpillars in the forest, including gypsy moth caterpillars. The caterpillar hunter generally feeds at night and hides during the day. Adults are roughly 1 inch long and are present from May through November.

Authors:
Kimberly A. Rebek[1], Eric J. Rebek[1] and Deborah G. McCullough[1,2]
[1]Dept. of Entomology and [2]Dept. of Forestry, Michigan State University

MICHIGAN STATE UNIVERSITY EXTENSION



## MDAR Asian Longhorned Beetle Tree Survey Guide

Asian Longhorned Beetle
(*Anoplophora glabripennis*, "ALB")

**Native Species (Do Not Report):**
White-spotted Sawyer (*Monochamus scutellatus*)

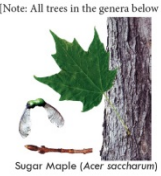
Note white spot between wing covers.

**Exit Holes:**
- perfectly round
- 3/8"-1/2" diameter
- eraser end of a pencil goes in at least 1 inch

**Egg-laying Sites:**
- divot in bark about 1/2" wide
- fresh sites brightly colored, often oozing sap
- color fades with age

### Host Trees of Asian Longhorned Beetle

[Note: All trees in the genera below are potential hosts, species displayed are examples. See flip side for more.]



Sugar Maple (*Acer saccharum*)

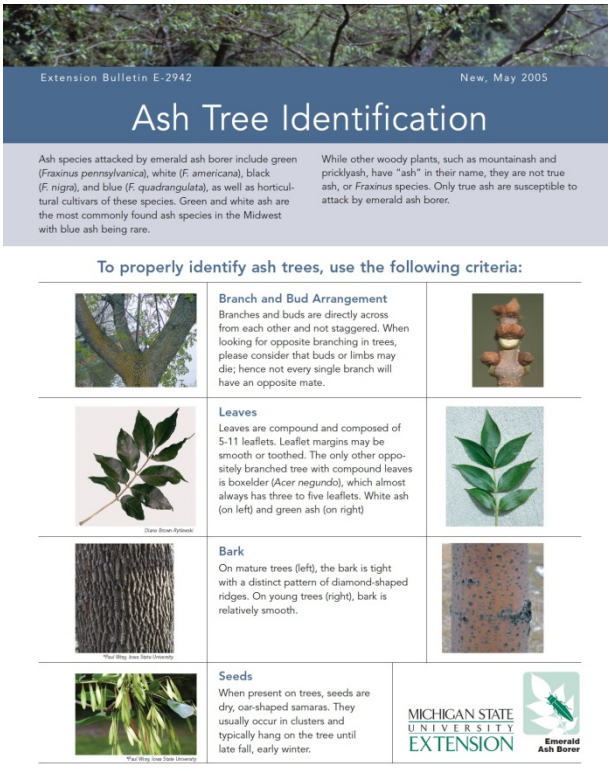
Silver Maple (*Acer saccharinum*)

Red Maple (*Acer rubrum*)

Norway Maple (*Acer platanoides*)

Box Elder (*Acer negundo*)

Sycamore Maple
(*Acer pseudoplatanus*)



Extension Bulletin E-2942 New, May 2005

## Ash Tree Identification

Ash species attacked by emerald ash borer include green (*Fraxinus pennsylvanica*), white (*F. americana*), black (*F. nigra*), and blue (*F. quadrangulata*), as well as horticultural cultivars of these species. Green and white ash are the most commonly found ash species in the Midwest with blue ash being rare.

While other woody plants, such as mountainash and pricklyash, have "ash" in their name, they are not true ash, or *Fraxinus* species. Only true ash are susceptible to attack by emerald ash borer.

### To properly identify ash trees, use the following criteria:



**Branch and Bud Arrangement**

Branches and buds are directly across from each other and not staggered. When looking for opposite branching in trees, please consider that buds or limbs may die; hence not every single branch will have an opposite mate.





Diane Brown-Rytlewski

**Leaves**

Leaves are compound and composed of 5-11 leaflets. Leaflet margins may be smooth or toothed. The only other opposite branched tree with compound leaves is boxelder (*Acer negundo*), which almost always has three to five leaflets. White ash (on left) and green ash (on right)





*Paul Wray, Iowa State University

**Bark**

On mature trees (left), the bark is tight with a distinct pattern of diamond-shaped ridges. On young trees (right), bark is relatively smooth.





*Paul Wray, Iowa State University

**Seeds**

When present on trees, seeds are dry, oar-shaped samaras. They usually occur in clusters and typically hang on the tree until late fall, early winter.

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Emerald Ash Borer

**FPOSP Training Binder Materials (examples):**

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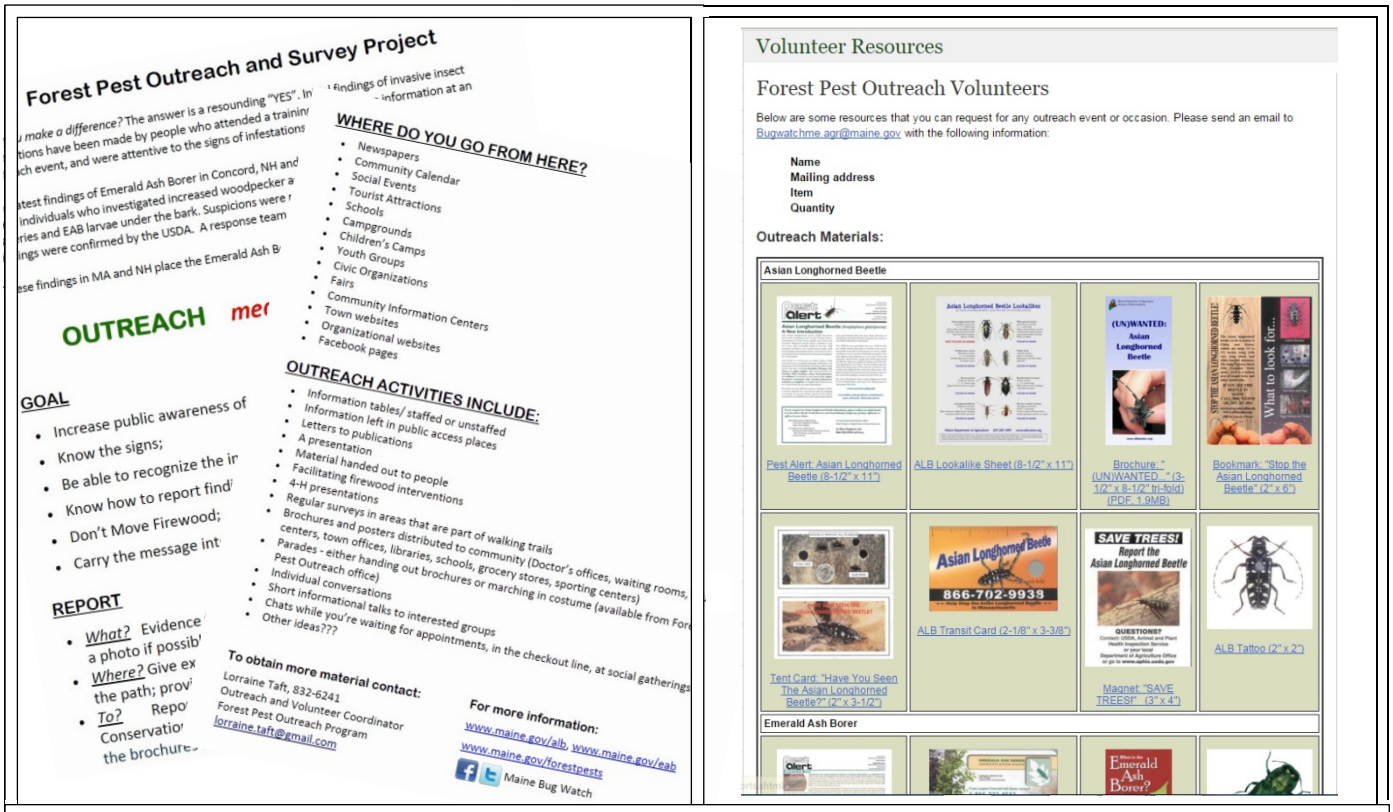


## Forest Pest Outreach and Survey Project

findings of invasive insect
information at an

*make a difference?* The answer is a resounding "YES". In
tions have been made by people who attended a trainin
ch event, and were attentive to the signs of infestations

test findings of Emerald Ash Borer in Concord, NH and
individuals who investigated increased woodpecker a
ries and EAB larvae under the bark. Suspicions were r
ings were confirmed by the USDA. A response team

ese findings in MA and NH place the Emerald Ash B

**OUTREACH** mer

**GOAL**

- Increase public awareness of
- Know the signs;
- Be able to recognize the ir
- Know how to report find
- Don't Move Firewood;
- Carry the message int

**REPORT**

- *What?* Evidence
  a photo if possib
- *Where?* Give ex
  the path; prov
- *To?* Repo
  Conservatio
  the brochure

**WHERE DO YOU GO FROM HERE?**

- Newspapers
- Community Calendar
- Social Events
- Tourist Attractions
- Schools
- Campgrounds
- Children's Camps
- Youth Groups
- Civic Organizations
- Fairs
- Community Information Centers
- Town websites
- Organizational websites
- Facebook pages

**OUTREACH ACTIVITIES INCLUDE:**

- Information tables/ staffed or unstaffed
- Information left in public access places
- Letters to publications
- A presentation
- Material handed out to people
- Facilitating firewood interventions
- 4-H presentations
- Regular surveys in areas that are part of walking trails
- Brochures and posters distributed to community (Doctor's offices, waiting rooms, centers, town offices, libraries, schools, grocery stores, sporting centers)
- Parades - either handing out brochures or marching in costume (available from For Pest Outreach office)
- Individual conversations
- Short informational talks to interested groups
- Chats while you're waiting for appointments, in the checkout line, at social gatherings
- Other ideas???

**To obtain more material contact:**
Lorraine Taft, 832-6241
Outreach and Volunteer Coordinator
Forest Pest Outreach Program
lorraine.taft@gmail.com

**For more information:**
www.maine.gov/alb, www.maine.gov/eab
www.maine.gov/forestpests
Maine Bug Watch



## Volunteer Resources

### Forest Pest Outreach Volunteers

Below are some resources that you can request for any outreach event or occasion. Please send an email to Bugwatchme.agr@maine.gov with the following information:

**Name**
**Mailing address**
**Item**
**Quantity**

**Outreach Materials:**

**Asian Longhorned Beetle**


Pest Alert: Asian Longhorned Beetle (8-1/2" x 11")


ALB Lookalike Sheet (8-1/2" x 11")



Brochure: " (UN)WANTED :" (3-1/2" x 8-1/2" tri-fold) (PDF, 1.9MB)



Bookmark: "Stop the Asian Longhorned Beetle" (2" x 6")


Tent Card: "Have You Seen The Asian Longhorned Beetle?" (2" x 3-1/2")



ALB Transit Card (2-1/8" x 3-3/8")



Magnet: "SAVE TREES!" (3" x 4")


ALB Tattoo (2" x 2")

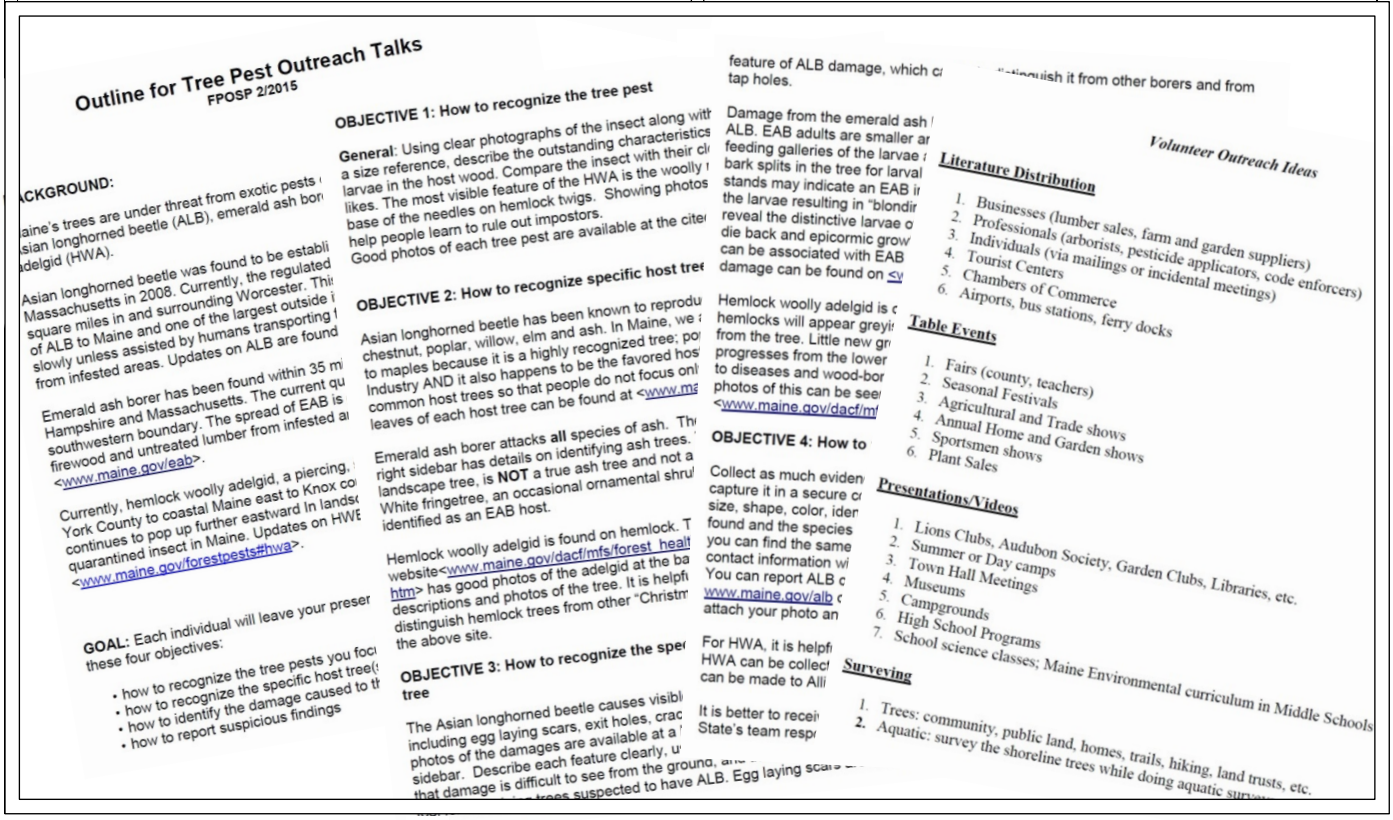
**Emerald Ash Borer**









## Outline for Tree Pest Outreach Talks

**FPOSP 2/2015**

**CKGROUND:**

aine's trees are under threat from exotic pests
sian longhorned beetle (ALB), emerald ash bor
delgid (HWA).

Asian longhorned beetle was found to be establi
Massachusetts in 2008. Currently, the regulated
square miles in and surrounding Worcester. This
of ALB to Maine and one of the largest outside i
slowly unless assisted by humans transporting
from infested areas. Updates on ALB are found

Emerald ash borer has been found within 35 mi
Hampshire and Massachusetts. The current qu
southwestern boundary. The spread of EAB is
firewood and untreated lumber from infested a
<www.maine.gov/eab>.

Currently, hemlock woolly adelgid, a piercing,
York County to coastal Maine east to Knox co
continues to pop up further eastward in lands
quarantined insect in Maine. Updates on HWA
<www.maine.gov/forestpests#hwa>.

**GOAL:** Each individual will leave your preser
these four objectives:

- how to recognize the tree pests you foc
- how to recognize the specific host tree(
- how to identify the damage caused to th
- how to report suspicious findings

**OBJECTIVE 1: How to recognize the tree pest**

**General**: Using clear photographs of the insect along with
a size reference, describe the outstanding characteristics
larvae in the host wood. Compare the insect with their cl
likes. The most visible feature of the HWA is the woolly
base of the needles on hemlock twigs. Showing photos
help people learn to rule out impostors.
Good photos of each tree pest are available at the cite

**OBJECTIVE 2: How to recognize specific host tree**

Asian longhorned beetle has been known to reprodu
chestnut, poplar, willow, elm and ash. In Maine, we
to maples because it is a highly recognized tree; po
Industry AND it also happens to be the favored hos
common host trees so that people do not focus onl
leaves of each host tree can be found at <www.ma

Emerald ash borer attacks **all** species of ash. Th
right sidebar has details on identifying ash trees.
landscape tree, is **NOT** a true ash tree and not a
White fringetree, an occasional ornamental shru
identified as an EAB host.

Hemlock woolly adelgid is found on hemlock. T
website<www.maine.gov/dacf/mfs/forest_healt
htm> has good photos of the adelgid at the ba
descriptions and photos of the tree. It is helpfu
distinguish hemlock trees from other "Christm
the above site.

**OBJECTIVE 3: How to recognize the spe**
**tree**

The Asian longhorned beetle causes visibl
including egg laying scars, exit holes, crac
photos of the damages are available at a
sidebar. Describe each feature clearly, u
that damage is difficult to see from the ground,
trees suspected to have ALB. Egg laying scars

feature of ALB damage, which c
tap holes.

Damage from the emerald ash
ALB. EAB adults are smaller ar
feeding galleries of the larvae
bark splits in the tree for larval
stands may indicate an EAB i
the larvae resulting in "blondir
reveal the distinctive larvae o
die back and epicormic grow
can be associated with EAB
damage can be found on <w

Hemlock woolly adelgid is
hemlocks will appear greyi
from the tree. Little new gr
progresses from the lower
to diseases and wood-bor
photos of this can be see
<www.maine.gov/dacf/m

**OBJECTIVE 4: How to**

Collect as much eviden
capture it in a secure c
size, shape, color, ider
found and the species
you can find the same
contact information wi
You can report ALB c
www.maine.gov/alb c
attach your photo an

For HWA, it is helpf
HWA can be collec
can be made to Alli

It is better to recei
State's team respr

*Volunteer Outreach Ideas*

**Literature Distribution**

1. Businesses (lumber sales, farm and garden suppliers)
2. Professionals (arborists, pesticide applicators, code enforcers)
3. Individuals (via mailings or incidental meetings)
4. Tourist Centers
5. Chambers of Commerce
6. Airports, bus stations, ferry docks

**Table Events**

1. Fairs (county, teachers)
2. Seasonal Festivals
3. Agricultural and Trade shows
4. Annual Home and Garden shows
5. Sportsmen shows
6. Plant Sales

**Presentations/Videos**

1. Lions Clubs, Audubon Society, Garden Clubs, Libraries, etc.
2. Summer or Day camps
3. Town Hall Meetings
4. Museums
5. Campgrounds
6. High School Programs
7. School science classes; Maine Environmental curriculum in Middle Schools

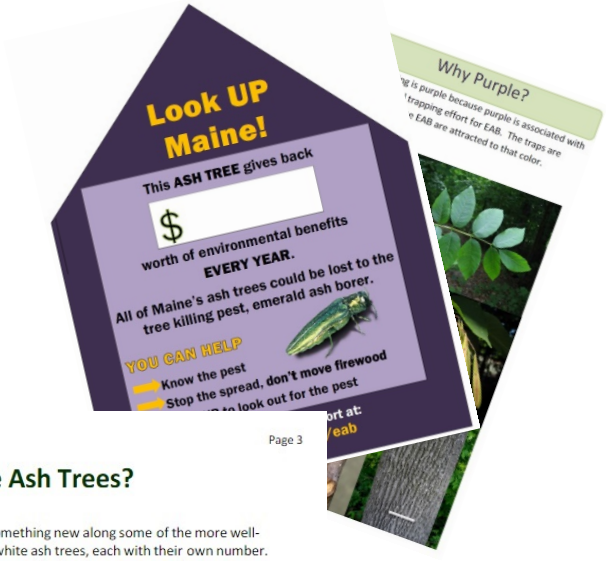
**Surveying**

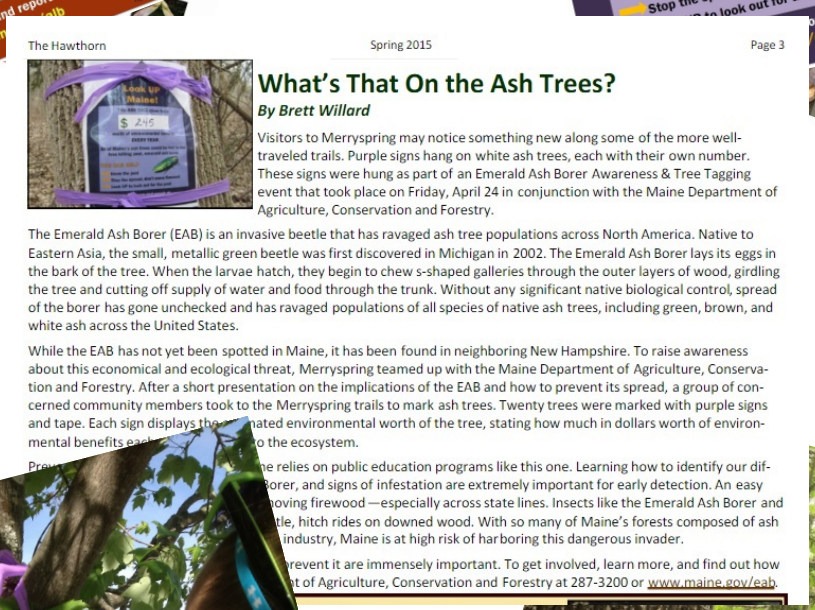
1. Trees: community, public land, homes, trails, hiking, land trusts, etc.
2. Aquatic: survey the shoreline trees while doing aquatic sur

**Tree Tags and Tagging Events:**

Maple Tree Tag for ALB Awareness


Ash Tree Tag for EAB Awareness



The Hawthorn Spring 2015 Page 3



## What's That On the Ash Trees?

***By Brett Willard***

Visitors to Merryspring may notice something new along some of the more well-traveled trails. Purple signs hang on white ash trees, each with their own number. These signs were hung as part of an Emerald Ash Borer Awareness & Tree Tagging event that took place on Friday, April 24 in conjunction with the Maine Department of Agriculture, Conservation and Forestry.

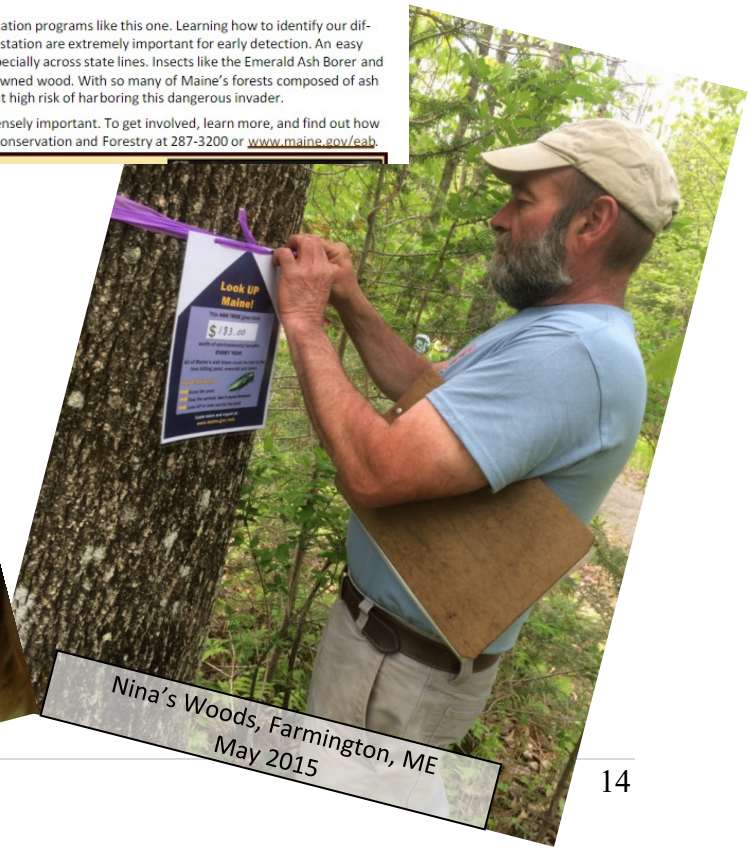
The Emerald Ash Borer (EAB) is an invasive beetle that has ravaged ash tree populations across North America. Native to Eastern Asia, the small, metallic green beetle was first discovered in Michigan in 2002. The Emerald Ash Borer lays its eggs in the bark of the tree. When the larvae hatch, they begin to chew s-shaped galleries through the outer layers of wood, girdling the tree and cutting off supply of water and food through the trunk. Without any significant native biological control, spread of the borer has gone unchecked and has ravaged populations of all species of native ash trees, including green, brown, and white ash across the United States.

While the EAB has not yet been spotted in Maine, it has been found in neighboring New Hampshire. To raise awareness about this economical and ecological threat, Merryspring teamed up with the Maine Department of Agriculture, Conservation and Forestry. After a short presentation on the implications of the EAB and how to prevent its spread, a group of concerned community members took to the Merryspring trails to mark ash trees. Twenty trees were marked with purple signs and tape. Each sign displays the [illegible]mated environmental worth of the tree, stating how much in dollars worth of environmental benefits each [illegible]o the ecosystem.

[illegible]e relies on public education programs like this one. Learning how to identify our dif-[illegible]Borer, and signs of infestation are extremely important for early detection. An easy [illegible]oving firewood —especially across state lines. Insects like the Emerald Ash Borer and [illegible]tle, hitch rides on downed wood. With so many of Maine's forests composed of ash [illegible] industry, Maine is at high risk of harboring this dangerous invader.

[illegible]revent it are immensely important. To get involved, learn more, and find out how [illegible]t of Agriculture, Conservation and Forestry at 287-3200 or www.maine.gov/eab.


Somerset Valley Middle School (RSU19), Hartland, ME – June 2015




Nina's Woods, Farmington, ME May 2015