



LEARNING TO RECOGNIZE THE ASIAN LONGHORNED BEETLE

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WHAT IS THE ASIAN LONGHORNED BEETLE?

- An introduced pest, native to Asia
- Longhorned beetle, Cerambycidae family
 - Scientific Name:
Anoplophora glabripennis
- Attacks hardwood trees by boring through wood
- Over 30,000 trees lost in Mass alone

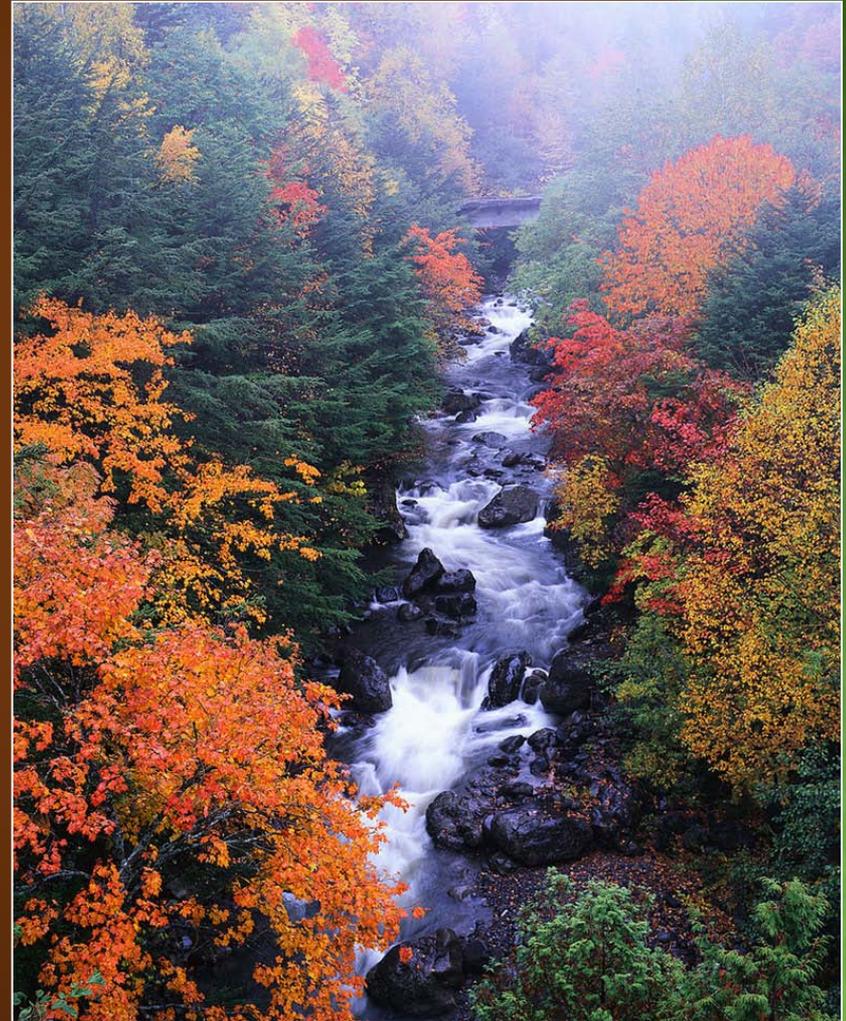


HOW DOES ALB AFFECT YOU?

- Local Impacts
 - Loss of shade
 - Noise barriers
 - Wildlife habitat
- Regional Impacts
 - Tourism
 - Maple syrup industry
 - Historical/Cultural Areas
 - Timber industry
 - Nursery industry

Loss of trees,

Loss of quality of life



BEFORE AND AFTER



Source: Kenneth R. Law, USDA APHIS-PPQ

HOW DID THE ASIAN LONGHORNED BEETLE GET HERE?

ALB originates in Asia

Infested wood in Asia may be used to manufacture solid wood packing material (spools, crates, pallets). ALB larvae may be present in this material when it is shipped to businesses across the US.



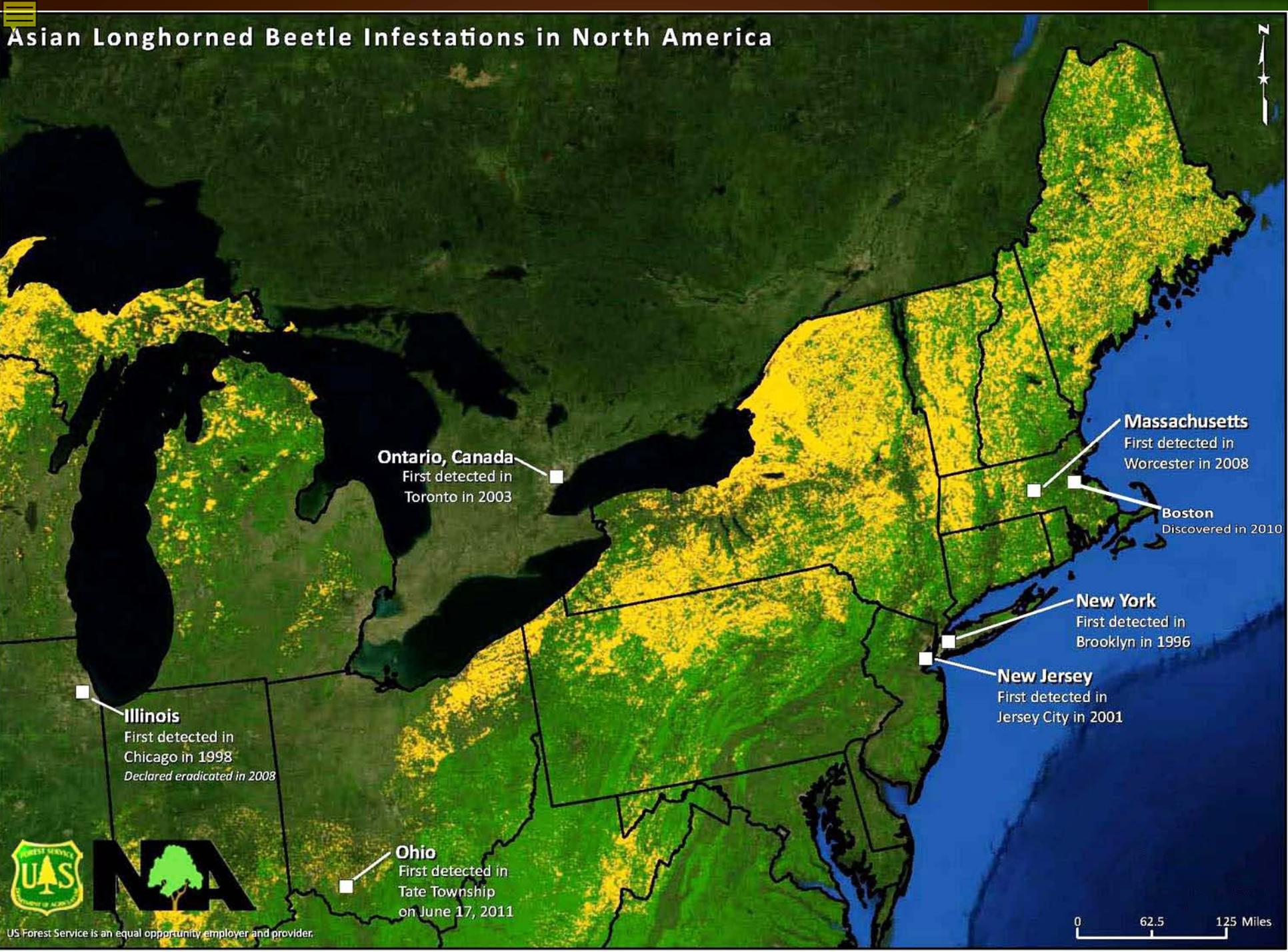
SOLID WOOD PACKING MATERIAL (SWPM)

December 1998: USDA amended regulations to require treatment or fumigation of all SWPM from China to prevent further introduction of exotic wood boring pests



International Plant Protection Convention stamps from China (DBMB stands for Fumigation with methyl bromide; HT stands for "Heat Treated")

Asian Longhorned Beetle Infestations in North America



US Forest Service is an equal opportunity employer and provider.

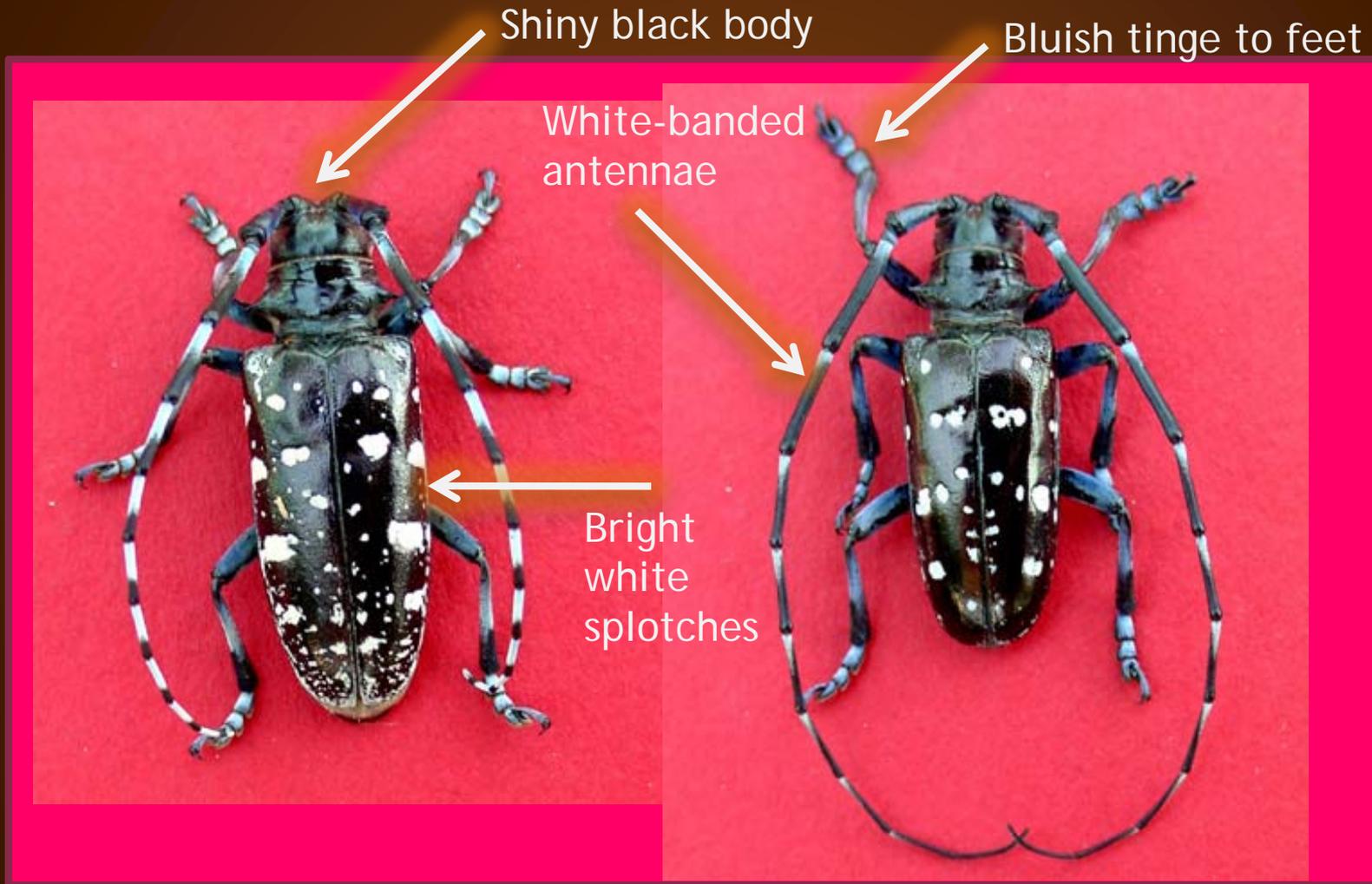
NOW THAT ALB IS HERE, HOW CAN IT SPREAD?

- On its own, a beetle may fly up to a mile
(1/2 a mile is more likely)
- The real risk: Movement of wood
 - Storm debris
 - Removal of wood after tree maintenance
 - Firewood

www.dontmovefirewood.org



ASIAN LONGHORNED BEETLE



Female

Male

.75 - 1.5 inch body length

Asian Longhorned Beetle Lifecycle



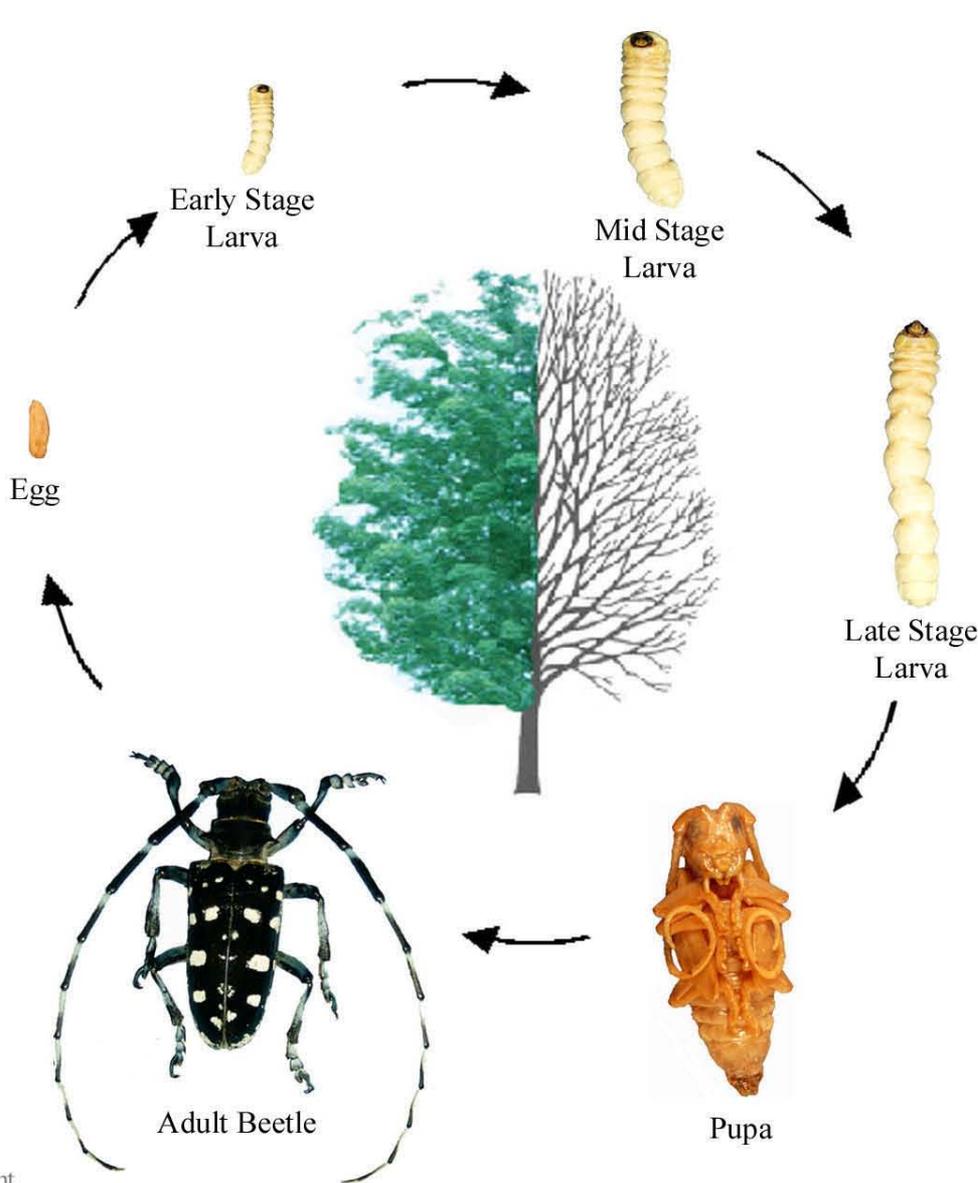
Adults and oviposition scars



Emergence holes



Adult emerging from tree



Larva in tree



Pupal chamber in tree

EGG LAYING



- Female chews into bark, lays one egg per site
- Male guards female during this process

ALB OVIPOSITION SITES - WHAT TO LOOK FOR



Old egg site (2+ yrs)

- Divots in bark, about ½ in wide
- Easiest to spot the season that they are made, then they fade

Recent egg site



Fresh egg site with sap

LARVAL STAGE

- Larvae survive winters inside wood
- Bore deep into the heartwood of the tree
- Matchstick-like "FRASS" is characteristic of this wood-boring insect



Frass

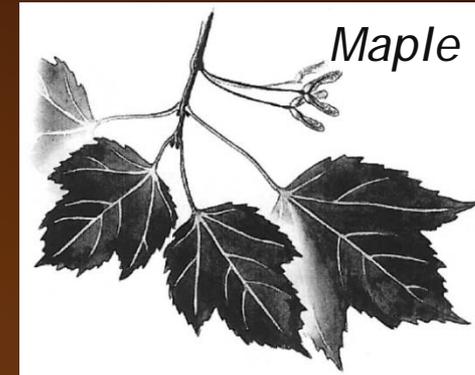
ALB EXIT HOLES - WHAT TO LOOK FOR:

- Perfectly round (like a drill hole) exit holes 3/8" to 1/2" diameter.
- Pencil test - Possible exit hole if you can place a regular pencil inside the hole at least 1 inch.



ALB HOST TREES

- Maple**
- Horsechestnut*
- Elm*
- Willow*
- Birch*
- Sycamore/Plane tree
- Mountain Ash
- Hackberry
- Ash
- Poplar/Cottonwood
- Mimosa
- Katsura
- Golden Raintree



** , * preferred

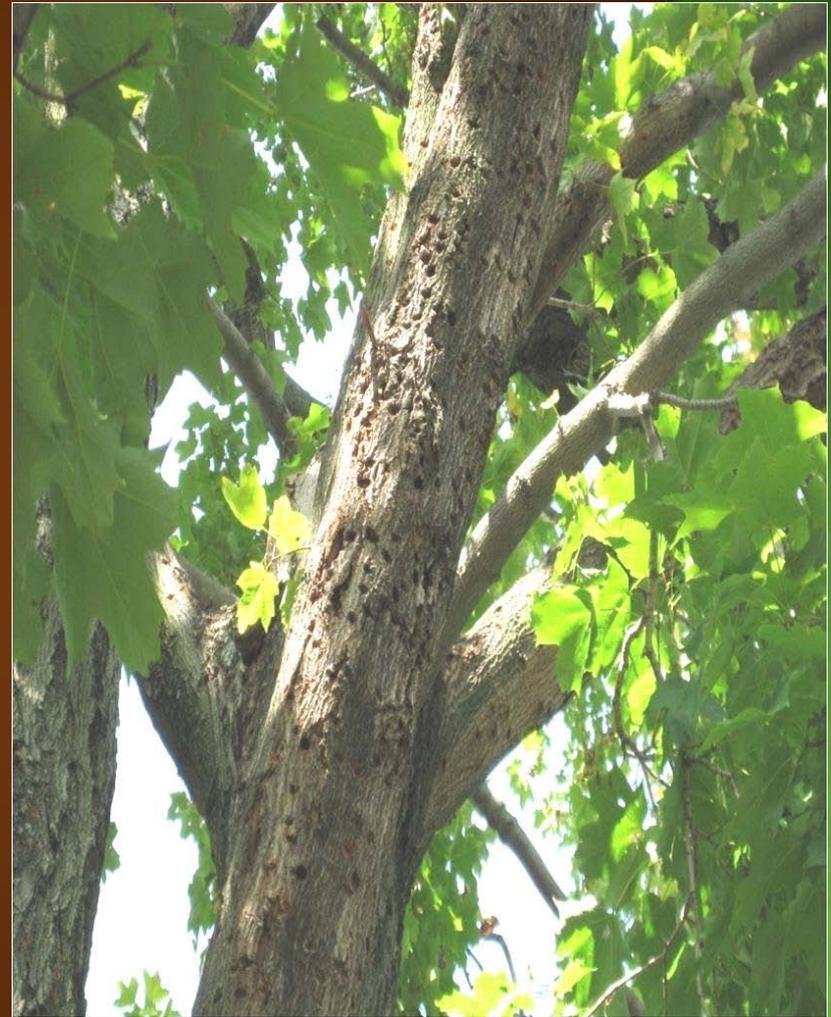


NOT ALB HOST TREES

- ALB attacks Hardwoods, not Softwoods
 - Not in pine, fir, spruce, etc.
- ALB is not known to attack:
 - Oak
 - Cherry
 - Crabapple
- TIP: ALB may attack “non-host” hardwoods in a heavily infested area, but...
 - Holes in a single oak tree surrounded by healthy maples are not caused by ALB

ALB OR NOT - FACTORS TO CONSIDER:

- ALB is not the only thing that makes holes in trees; holes do NOT follow any pattern
- ALB takes several years to kill a tree
- ALB only feeds on live trees, not dead wood
- Poor tree health alone is not a good indicator of ALB
- Larvae of ALB are very similar looking to the larvae of many of the over 200 native longhorned beetle species in Massachusetts



ALB..... OR NOT?



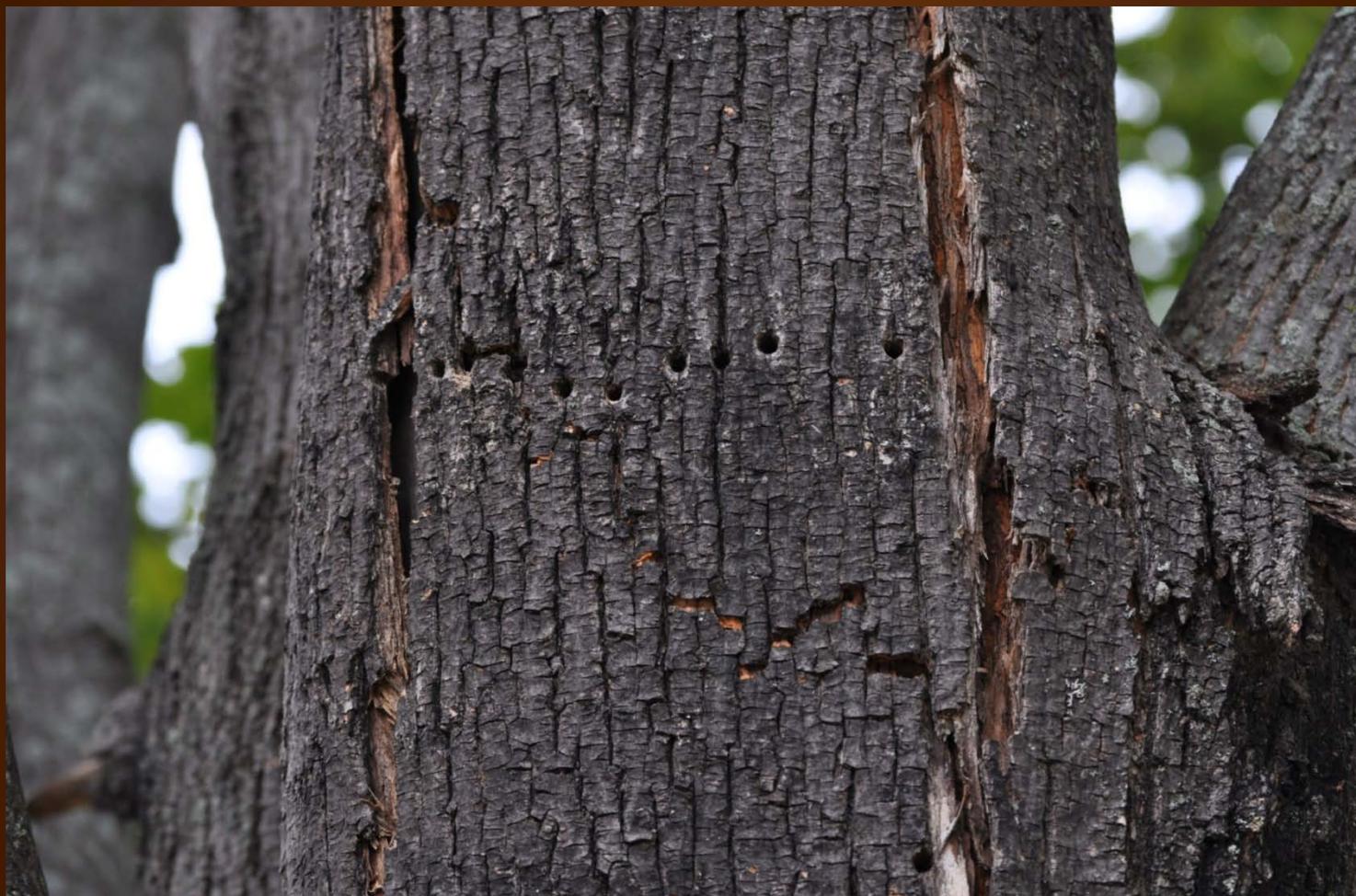


ALB OR LOOK-ALIKE?





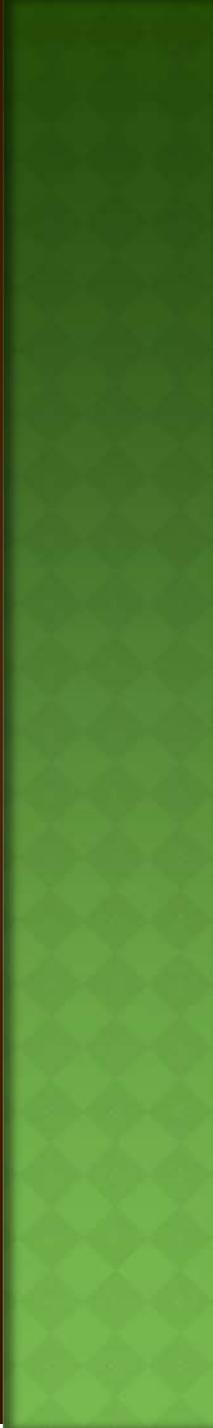
LOOK-ALIKE! Woodpecker Damage



- ALB holes would not be clustered or in rows



ALB OR LOOK-ALIKE?



LOOK-ALIKE!



- ALB does not attack dead wood
- ALB is not the only thing that makes holes in trees

ALB OR LOOK-ALIKE?



ALB!



- Perfectly round holes
- Bark splitting from larvae tunneling

ALB OR LOOK-ALIKE?



ALB!



- Oval shaped, about 1/2" wide.
 - Mandible marks on edges.

ALB OR LOOK-ALIKE?



LOOK-ALIKE!

Broadnecked Root Borer

(*Prionus laticollis*)



- No white spots on wing covers
- Solid black antennae

ALB OR LOOK-ALIKE?



ALB!



- Shiny black, bright white spots
 - Blue tinged feet

ALB OR LOOK-ALIKE?



LOOK-ALIKE! Western Conifer Seed Bug

(*Leptoglossus occidentalis*)



- Legs flare out at the bottom.
- Brown body, geometric pattern on wings.

ALB OR LOOK-ALIKE?



LOOK-ALIKE! White-Spotted Pine Sawyer

(*Monochamus scutellatus*)



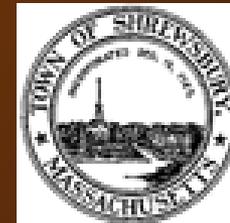
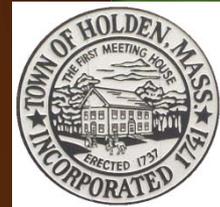
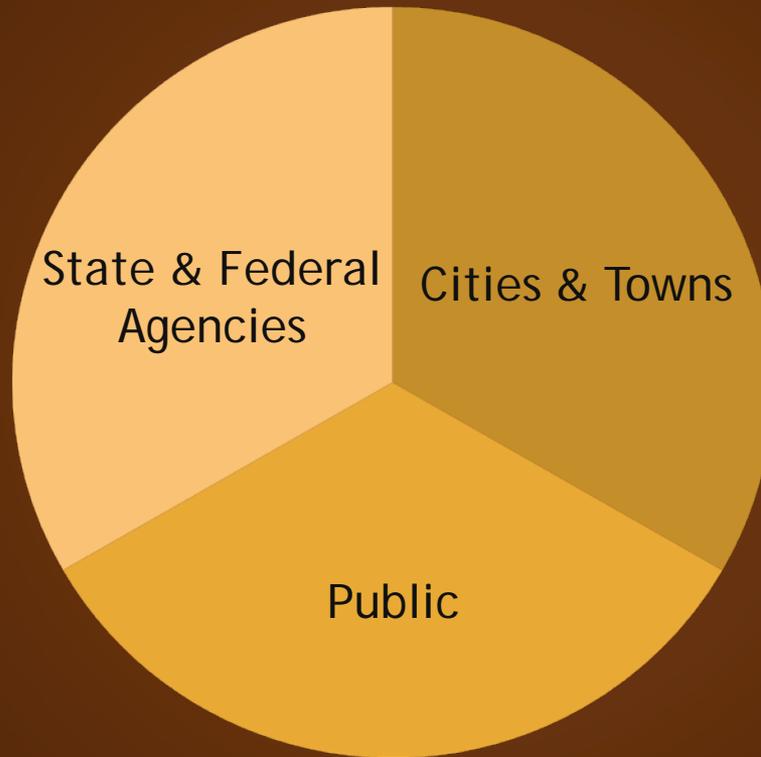
- Mottled coloring, not shiny black
- Distinct white spot behind the head

ERADICATION PROCESS



- ◉ Delimitation of infestation
- ◉ Prompt response to reports
- ◉ Removal and stump grinding of infested trees
- ◉ Disposal within the regulated area
- ◉ Annual compliance training for industry
- ◉ Further survey required after removal before eradication can be declared

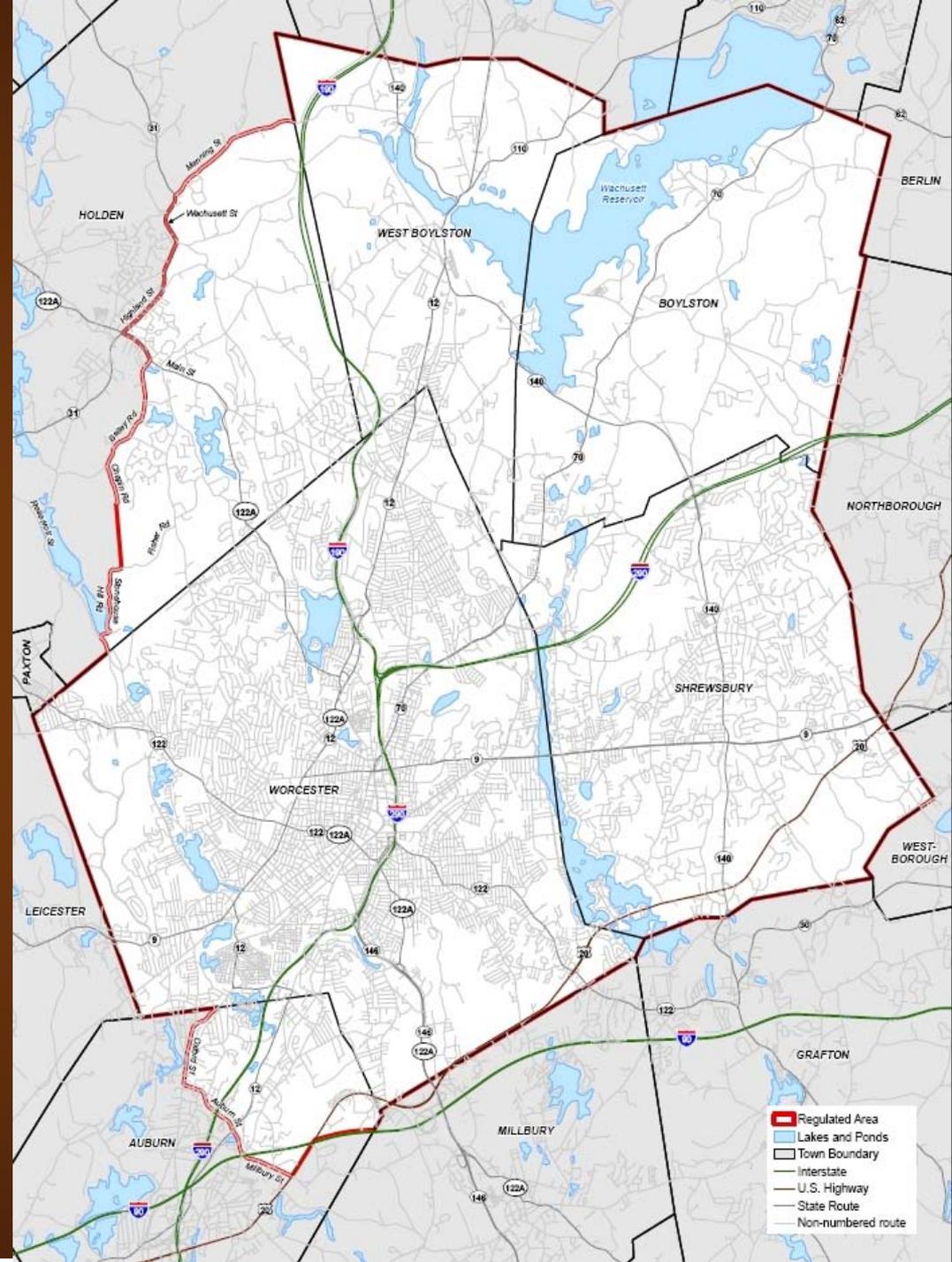
Massachusetts Asian Longhorned Beetle COOPERATIVE ERADICATION PROGRAM



ALB IN WORCESTER

- Infestation discovered 2008
 - At least 15 years old
- Surveys of the infested area have led to designation of a 110 square mile regulated area
- Regulated area includes Worcester, West Boylston, Boylston, Shrewsbury, part of Holden and a small section of Auburn.
- 3,031,940 trees surveyed as of 1/12/13

Regulated area, last updated 10/17/2011



ALB IN WORCESTER

Tree Removals

- 30,000+ trees removed so far
 - 10,000 trees removed in 1st month, January 2009



ALB IN WORCESTER



ALB IN WORCESTER TREE REPLANTINGS

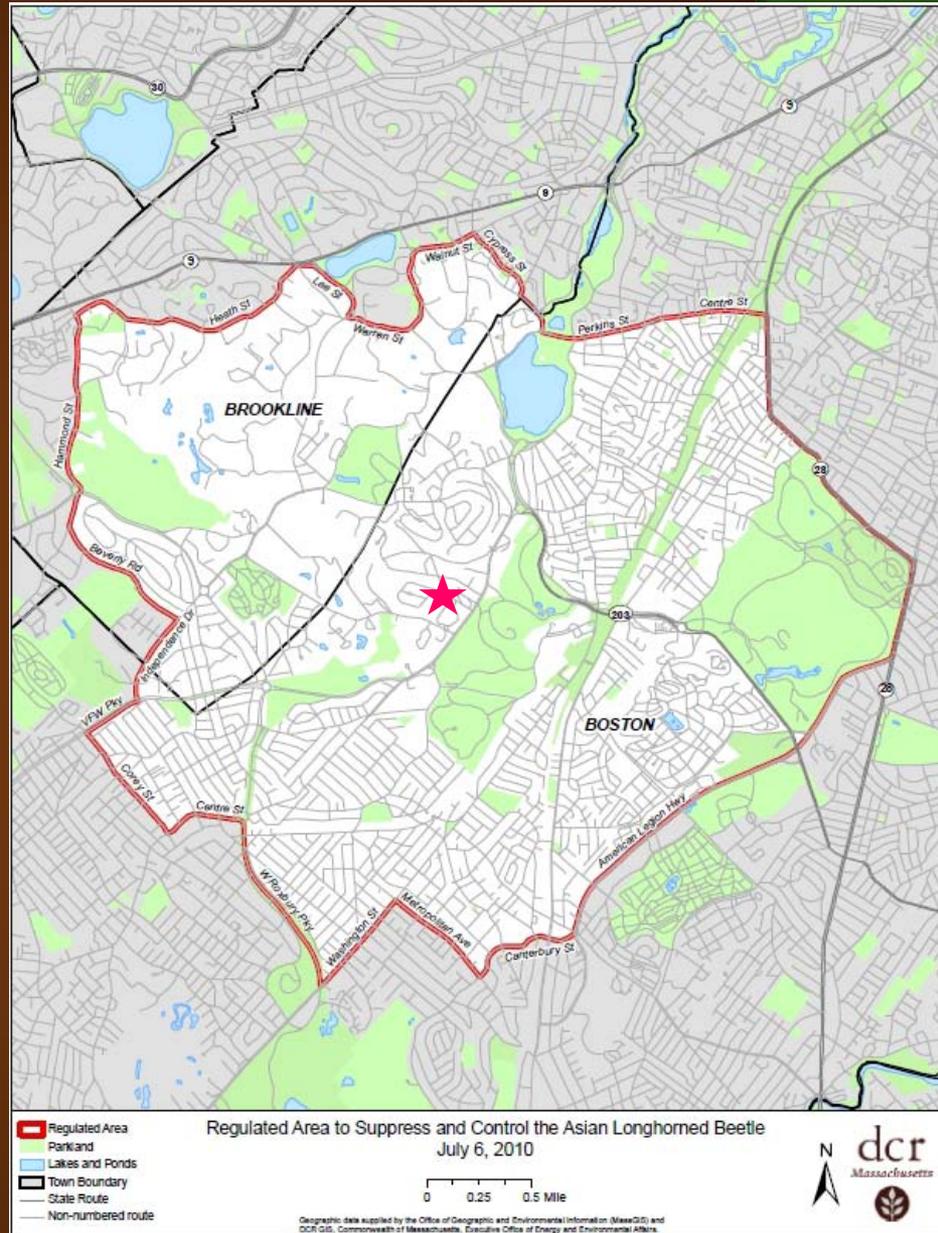


Photos by Eric Seaborn, DCR

ALB IN BOSTON

- Officials have designated a 10 square mile regulated area in a 1.5 mile radius around the infestation
- Regulated area includes Boston and part of Brookline
- 88,755 trees checked as of 1/12/13

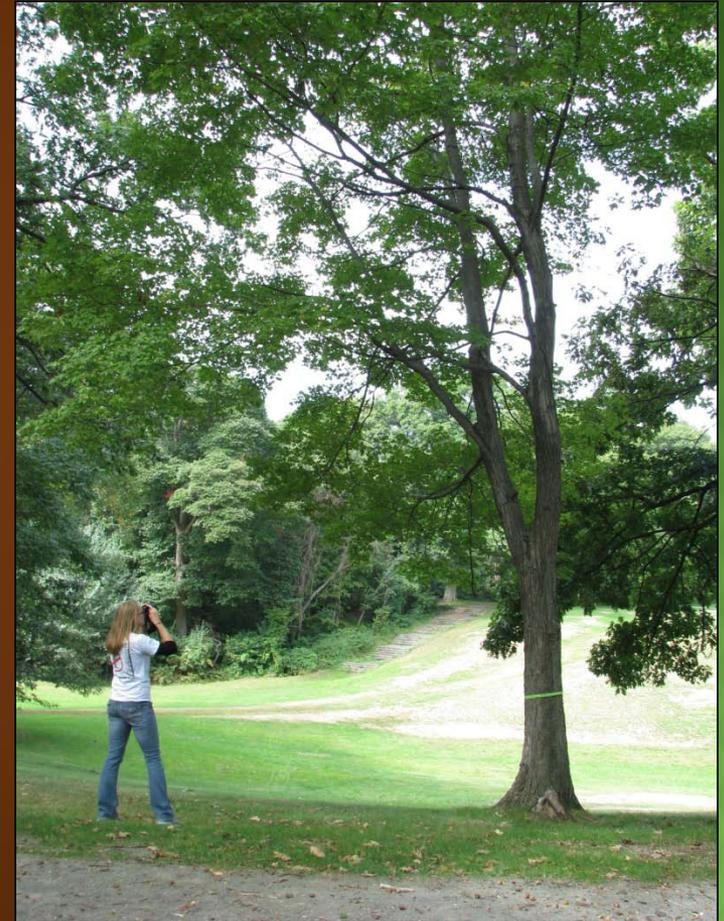
Regulated area, last updated 7/6/2010



CHECKING TREES FOR ALB

Recommended Tools:

- Binoculars
- Flagging tape: to mark trees.
 - GPS if you have one; draw a map or use Google Maps if you don't!
- Camera: to photograph beetles, damaged trees, sites.
- Pencil: to test "exit holes"
- Specimen jar in summer/fall.





REPORT ALB AND OTHER SUSPICIOUS PESTS!

Found something odd?

1. Get a specimen or a photo!

Save specimens in a container in the freezer, or in a jar with rubbing alcohol

2. Report online:

<http://massnrc.org/pests>

3. ALB? Call 1-866-702-9938

4. Or, call the MDAR pest hotline: 617-626-1779

GET THE LATEST ALB INFO:



Massachusetts ALB Eradication Program - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Most Visited Getting Started Latest Headlines

Massachusetts

Introduced Pests Outreach Project

Home Fact Sheets **Report ALB** Report Giant Hogweed Report A Pest Resources About Us Pest Alert Sign-Up Admin

Massachusetts



Asian Longhorned Beetle

Cooperative Eradication Program

Report Potential Asian Longhorned Beetle Sightings Here! or call 1-866-702-9938

LATEST NEWS:

- Dodge Park tree removals began this week - walkthrough was 4/27/09. [Read more here.](#) (04/27/2009)
- Compliance training sessions for business owners are currently being held once a week at 50 Skyline Drive, Worcester. Call 508-799-8328 for exact dates and times. Contractors should bring their vehicle registrations with them so that stickers can be issued. (03/19/2009)
- An updated list of all companies and agencies who have completed compliance training and are certified to perform work that would result in the movement or transport of wood materials in the regulated area can be found [here](#). (03/18/2009)
- A map of outlying infestations (known infested trees outside the areas where removals are currently occurring) is now available. Download it [here](#). Note that a full survey of the regulated area is still underway, so the map is likely to change. (03/05/2009)
- The tree removal process in Worcester has now entered Phase 3. Download an updated map [here](#). (02/11/2009)
- [Subscribe to the ALB Newsletter](#), a weekly update of ALB-related news and events in Massachusetts. Read back issues [here](#). (12/30/2008)
- The regulated area has been updated to include an increased portion of West Boylston, for a total of 63.5 square miles. View the [most recent map](#) or the [Amended Order](#). (12/23/2008)
- **Storm Emergency Update:** Disposal of ALB host material in the regulated area has been made

massnrc.org/pests/alb
twitter.com/albtweets
Facebook.com/asianlonghornedbeetle



SPREAD THE WORD, NOT THE BEETLE!

- Everyone can help stop ALB!
 - Keep an ALB ID card with you
 - Inform your colleagues about ALB
 - Survey your municipality's trees and your yard, neighborhood or favorite park
 - Report it!



Source: Peter P. Grima



*We can help with
talks, surveys
and outreach
material!*



FOR MORE INFORMATION

Contact:

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617-626-1764

<http://massnrc.org/pests/alb>

