LEARNING TO RECOGNIZE THE ASIAN LONGHORNED BEETLE

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An introduced pest, native to Asia

Longhorned beetle, Cerambycidae family

- Scientific Name: *Anoplophora glabripennis*

Attacks hardwood trees by boring through wood

Over 36,000 trees lost in Mass alone
HOW DOES ALB AFFECT YOU?

- Local Impacts
  - Loss of shade
  - Noise barriers
  - Wind 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
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.
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”)

SOLID WOOD PACKING MATERIAL (SWPM)
Discovered in Boston in 2010
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

- Shiny black body
- Bluish tinge to feet
- White-banded antennae
- Bright white splotches

Female

Male

.75 - 1.5 inch body length
Asian Longhorned Beetle Lifecycle

- Adults and oviposition scars
- Egg
- Early Stage Larva
- Mid Stage Larva
- Larva in tree
- Late Stage Larva
- Adult Beetle
- Pupa
- Pupal chamber in tree

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Female chews into bark, lays one egg per site
Male guards female during this process
ALB OVIPOSITION SITES - WHAT TO LOOK FOR

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

Old egg site (2+ yrs)

Fresh egg site with sap

Recent egg site
**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
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
- Ash
- Poplar/Cottonwood
- Mimosa
- Katsura
- Golden Raintree

**, * preferred
ALB attacks Hardwoods, not Softwoods
- Not in pine, fir, spruce, etc.

ALB is not known to attack:
- Oak
- Cherry
- Crabapple

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 about 8-10 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 LOOK-ALIKE?
ALB holes would not be clustered or in rows
LOOK-ALIKE!

- ALB does not attack dead wood
- ALB is not the only thing that makes holes in trees
ALB OR LOOK-ALIKE?
- Perfectly round holes
- Bark splitting from larvae tunneling
ALB OR LOOK-ALIKE?
- 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?
- 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
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.
- Over 2,646,810 trees surveyed as of 11/4/17

Regulated area, last updated 10/17/2011
Tree Removals

- 36,000+ trees removed so far
  - 10,000 trees removed in 1st month, January 2009
ALB IN WORCESTER
TREE REPLANTINGS

Photos by Eric Seaborn, DCR
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.

Declared eradicated in Boston as of 5/12/14.
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](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:

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

Massachusetts
Introduced Pests Outreach Project

Massachusetts
Asian Longhorned Beetle
Cooperative Eradication Program

"Report Potential Asian Longhorned Beetle Sightings Here!" or call 1-866-702-9930

LATEST NEWS:
- Dodge Park tree removals began this week – walkthrough was 4/27/09. Read more here. (04/37/2009)
- 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. (02/18/2009)
- 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. (02/08/2009)
- 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 63.2 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
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!
Contact:

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http://massnrc.org/pests/alb