

## About the Initiative

The Healthy Trees, Healthy Boston Initiative is a program to improve the health of Boston's city trees by engaging people in tree-planting and stewardship, early pest detection, and tree health monitoring.

## Spotting & Reporting Pests

When you identify tree damage or a worrisome pest:

- Take pictures and write down the location and pest/damage information
- Report online: <http://massnrc.org/pests>
- Contact the Massachusetts Introduced Pests Outreach Project: Call (617) 626-1735
- Download the Outsmart Invasive Species phone application for iPhone or Android and report your findings.



Protecting nature. Preserving life.®

[nature.org/mass](http://nature.org/mass)

## ASIAN LONGHORNED BEETLE (ALB)



### How to Identify

- Large 1 – 1 ½ inch long body
- Shiny black with approximately 20 white spots
- Very long white and black striped antennae
- Six legs
- Can have blue-ish feet
- Beetles most often seen in late summer (July and August)
- Larvae are white, about 2 inches long, and found deep in the tree's wood

### Threatened Trees

(ordered by threat level)

- Maples (most common)
- Horse Chestnut
- Box Elder
- Buckeye
- Willows (most common)
- Elm
- Aspen
- Ash
- Birch
- Katsura
- London Planetree
- European Mountain Ash
- Poplar (Cottonwood)
- Mimosa



### How to Spot Symptoms

- Dime-sized exit holes chewed into trees
- Eggs are found in small oval depressions chewed in trunks
- Exit holes are easier to find than egg-laying sites
- Damage is easiest to spot in the sun
- Trees usually die back first along the center & top branches
- The rest of the canopy dies as the infestation moves into the outer branches
- Can cause patches of trunk to appear black and covered in sap
- Sawdust may accumulate at the holes, the base of tree or in the branch crotches



## EMERALD ASH BORER (EAB)



### How to Identify

- Small ½ inch long beetle
- Bright metallic green color
- Coppery-red underside
- Larvae are flat, white, and approximately 1 in. long
- Adults usually emerge during late spring and summer

### Threatened Trees

(ordered by threat level)

- North American Ash (all)\*
- \*Mt. Ash isn't a true ash and cannot be infested with EAB

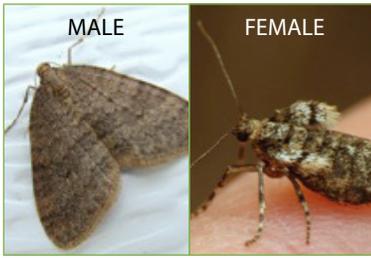


### How to Spot Symptoms

- D-shaped exit holes
- Splits or cracks in bark and larval tunnels under bark (caused by larvae feeding on inner bark)
- Thinning and dead patches in upper third of tree
- Leafy, misplaced sprouts at base of the tree or roots
- Abundant woodpecker activity
- Wilting and yellowing leaves



## WINTER MOTH



### How to Identify

- Females are active in Nov. and Dec. and die after laying eggs
- Females have very small wings and climb trees
- Males are grayish-brown and have 1 in. wingspan
- Larvae are green caterpillars with white stripes on the sides
- Larvae move in an inchworm-like fashion
- Eggs are tiny ovals that start out green and turn red-orange



### How to Spot Symptoms

- Tree defoliation in early spring
- Flower petal and bud devastation
- Inchworm-type caterpillars in early spring
- Damaged buds and dropping petals
- During the day, look inside leaf clusters and on/inside leaf buds
- At night, use a flashlight to look for larvae feeding at leaf edges
- In early winter, look for adult females on tree trunks and adult males swarming to mate

### Threatened Trees (ordered by threat level)

Variety of Hardwood trees, especially:

- Apple
- Red Oak
- Elm
- Red Maple
- American Basswood
- Hop Hornbeam
- Ash
- Fringetree
- Crabapple
- Cherry
- Blueberry



## HEMLOCK WOOLLY ADELGID (HWA)



### How to Identify

- Eggs are cottony mass
- Adults sometimes produce white wool-like covering
- After hatching, nymphs feed on twigs near base of needles



### How to Spot Symptoms

- White woolly mass at base of tree's needles (or underside of needles)
- "Wool" is easier to spot in low light, shady or overcast days
- Look for "wool" or nymphs on trees with graying and dying branches
- Reddish-brown nymphs can be found on twigs at the base of needles during hot months

### Threatened Trees (ordered by threat level)

- Eastern and Carolina Hemlock



## GYPSY MOTH



### How to Identify

- Eggs are buff-colored velvety masses
- Caterpillars are 1 ½-2 ½ inches long with dark tufts of hair on each segment and blue and red dots on backs
- Male moths have 1 ½ inch wingspread with light tan to brown wings with dark wavy bands
- Female moths have a 2 ½ inch wingspan and are off white (they are flightless despite their wings)



### How to Spot Symptoms

- Eggs can be found stuck to outdoor objects such as rocks, trees, cars, etc.
- Up to 1,000 eggs can hatch in April or May
- Small holes in leaves chewed by young larvae
- Older larvae consume entire leaves except for larger veins and midribs
- Whole tree may be defoliated

### Threatened Trees (ordered by threat level)

- Oak
- Apple
- Alder
- Basswood
- Birch
- Poplar
- Sweet Gum
- Willow
- Hawthorn
- (Less favored – hickory, maple, cherry, cottonwood, elm, black gum, larch, sassafras, hornbeam, white pine)

