

Two Highly Destructive Exotic Beetles

Unfortunately, many exotic wood-boring beetles are not attracted to traps baited with volatiles and can only be surveyed for visually. This requires trained spotters using binoculars from ground level, or professional tree climbers knowledgeable in insect signs and symptoms. The **Asian longhorned beetle (ALB)** (*Anoplophora glabripennis*) is a highly destructive invasive beetle that can only be surveyed for in this manner. There is ongoing research to identify more effective survey methods for this devastating pest.

Larvae of the Asian longhorned beetle tunnel into the heartwood of live healthy trees, eventually killing their hosts. Favored species are maples, birches, Ohio buckeye, elms, horse chestnut, and willows. ALB, and efforts to eradicate it, have resulted in the loss of thousands of street trees in several states. ALB was detected in Worcester, Massachusetts, in August, 2008, and its potential spread is of great concern in New England. Volunteers will be educated to survey for ALB throughout Massachusetts this year. Visual surveys and education outreach for ALB will be conducted in all New England states during 2009. For more information about ALB, please visit: <http://www.aphis.usda.gov/oa/alb/alb.html> or <http://massnrc.org/pests/alb/>



Emerald ash borer (EAB) (*Agrilus planipennis*) is another highly destructive beetle that has spread in regions of the United States and Canada. EAB attacks ash trees (*Fraxinus* spp.) and has been moved from its introduction point in Michigan to other states primarily through movement of nursery stock and firewood. We have not detected EAB in Massachusetts yet, but a survey for it

is planned for this year. The Massachusetts Department of Conservation and Recreation, Division of Forestry, will place purple panel sticky traps baited with lures at twenty high-risk locations such as campgrounds, nurseries, and wood processors. Currently, there are no plans to trap inside the Arnold Arboretum for EAB because it is not a high-risk location for the introduction of this pest. For more information about EAB, please visit: www.emeraldashborer.info



***Ips typographus*
(European Spruce Bark Beetle)**

NATIVE: Europe and Asia

ENTERED U.S.: Has been intercepted in traps in Indiana (1995) and Maryland (2002). It is not known to be established in the U.S.

HOST: *Picea* spp. (spruces) preferred. Also, *Abies* spp. (firs); *Larix* spp. (larches); *Pinus* spp. (pines); *Pseudotsuga* spp. (Douglas-firs)

DAMAGE: Affects bark, crown, foliage, leaf, stem, and whole plant. Considered one of the most serious pests of spruce in Europe.

It vectors a blue stain fungus (*Ceratocystis polonica*) which can also kill the host. It causes major economic losses when it is in outbreak numbers and can cause severe decline in spruce populations within its native range. Males aggregate and colonize a stressed tree by boring into the bark and preparing nuptial chambers. The females are then attracted to the chambers to mate. The females lay eggs in maternal galleries where the larva will develop. They can have multiple generations in a year depending on temperature.

Dead spruce trees in Slovakia,
killed by European spruce bark beetles.



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***Xyleborus seriatus* (No common name; very little is known about this beetle.)**

NATIVE: China, Russia, Japan, Korea, Taiwan

ENTERED U.S.: Intercepted in Lindgren trap in Massachusetts in 2005, the first North American record. This beetle was also trapped in Maine in 2008.

HOST: *Acer* spp. (maples), *Aesculus* spp. (buckeyes), *Alnus* spp. (alders), *Betula* spp. (birches), *Cryptomeria* spp., *Fagus* spp. (beeches), *Larix* spp. (larches), *Pinus* spp. (pines), *Prunus* spp. (cherries), *Quercus* spp. (oaks), *Thuja* spp. (arborvitae), *Tsuga* spp. (hemlocks), etc. Large possible host range.

DAMAGE: Very little data. Is known to be associated with *Ambrosiella* fungi. Spores of a symbiotic fungi are carried on their bodies to new galleries. Larvae and adults feed on this fungi growing between the bark and sapwood. Thought to be a secondary pest and will not kill healthy trees. Several *Xyleborus* species are potential survey targets.

***Xylotrechus hircus* (No common name; very little is known about this beetle.)**

NATIVE: Native to Eastern Russia, China, Korea

ENTERED U.S.: Intercepted in Lindgren trap in Oregon in 1999; not known to be established.

HOST: *Betula* spp. (birches)

DAMAGE: No information available. Species damage unknown. Several *Xylotrechus* species are potential survey targets.

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