

## Asian Long-Horned Beetle: Profile of a New Pest<sup>®</sup>

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The Asian long-horned beetle (*Anoplophora glabripennis*) (ALB) is one of the latest in the long history of exotic pests that have found their way into the continental U.S.A. First discovered on maple trees in a Brooklyn, New York, neighborhood in 1996, this native of Japan, Korea, and southern China has since been found in trees in Amityville, New York, other boroughs of New York City (including Manhattan), and in suburbs of Chicago, Illinois. Efforts to intercept new introductions of this pest have increased significantly since the original find. It has now been intercepted nearly 30 times at shipping ports in 17 other states in raw-wood packing material emanating from Asia. The repeated interceptions of this pest at U.S.A. ports has prompted the federal government to impose trade restrictions on China. Now, all cargo entering the United States from China that is in any way packaged in raw wood material must carry a certificate of being insect-free.

Unlike most wood boring insects that infest stressed trees or ones in decline, the ALB is known to attack healthy trees. As such, it has the potential to become one of the most serious insect pests of trees in landscapes and forests. Among its preferred hosts in the U.S.A. are: all maples (*Acer*), ash (*Fraxinus*), black locust (*Robinia*), elm (*Ulmus*), horse chestnut (*Aesculus*), poplars (*Populus*), weeping willow (*Salix*), pear (*Pyrus*), and plum (*Prunus*). Oaks (*Quercus*) and ginkgo (*Ginkgo*) currently appear to be much less susceptible to attack; conifers are not attacked by this pest.

Infestation of a tree begins with the adult female chewing into bark to create an area for depositing one egg, a process that individual females will repeat many times. After egg hatch, larvae bore into the trunk or branch to feed at the inner bark/outer wood interface. These large cream-colored larvae are capable of disrupting the vascular system of the tree, which may lead to its death. Later in the year, larvae migrate deep into the wood where they overwinter. Pupation begins by early June and first adults are usually seen by mid-June. The large, showy adults emerge by chewing almost perfectly round exit holes that are about  $\frac{3}{8}$  to  $\frac{1}{2}$  inch in diameter (dime size). There is one generation per year.

The adult form of the beetle is from 1 to 1¼ inch in body length with very smooth, shiny black wing covers that are dotted with crisp white spots. Antennae are about twice the body length and have alternating black and white segments. Adult beetles are active from June to October. Asian long-horned beetle is often confused with the whitespotted pine Sawyer beetle (*Monochamus scutellatus*) but the latter is slightly smaller with a rough-textured and grayish body.

Signs of infestation include relatively large exit holes on the main trunk and on

branches that are at least 3 inches in diameter, as well as piles of coarse sawdust resulting from adult emergence from the tree.

To date, millions of dollars in federal, state, and local money have been spent in surveying for this pest, educating the public, removing infested trees, and for replanting with apparently resistant species such as oaks, ginkgo, and conifers.

The primary strategy for managing this pest is eradication. Trees found to be infested are immediately removed and destroyed, usually by incineration. To date, about 5000 trees have been destroyed in New York and another 1300 have been cut down in the Chicago area as a result of ALB infestation.

Anyone suspecting an ALB infestation is urged to notify appropriate agencies including the nearest office of USDA-APHIS, US Forest Service, State Department of Environmental Management, or an Extension Entomologist.