

### Asian Longhorned Beetle: Annotated Host List

Updated By Baode Wang on February 1, 2012

USDA-APHIS-PPQ, Center for Plant Health Science and Technology, Otis Laboratory

Genus <sup>1</sup>	Common Name	Host Abundance and Other Notes <sup>2</sup>	Treated, Surveyed <sup>3</sup>
<b>Preferred host in US<sup>4</sup></b>			
<i>Acer</i>	Maple, boxelder	Very common trees. Many US records, all species: Norway, red, silver, sugar, sycamore maple and boxelder especially favored; Amur maple less favored; Japanese maple seldom attacked.	<b>yes</b>
<i>Aesculus</i>	Horsechestnut, buckeye	Fairly common trees. Several US records, some heavily infested.	<b>yes</b>
<i>Betula</i>	Birch	Fairly common trees. Several US records: gray, European white and river birches. Some gray birches with many exits. Birches are apparently less preferred than maple.	<b>yes</b>
<i>Salix</i>	Willow	Fairly common trees. Several US records: weeping, pussy and white willows highly favored; black willow (oviposition only) less favored.	<b>yes</b>
<i>Ulmus</i>	Elm	Very common trees. Many US records: American, Siberian and Chinese elms. Elms are apparently less preferred than maple.	<b>yes</b>
<b>Occasional to rare host in US<sup>4</sup></b>			
<i>Albizia</i>	Mimosa, silk tree, <i>A. julibrissin</i>	Occasional ornamental. Exit holes: 2 records from field in NY with additional emergence in laboratory. No Chinese record.	<b>yes</b>
<i>Cercidiphyllum</i>	Katsura tree, <i>C. japonicum</i>	Occasional ornamental. Four records from Worcester, MA, including 2 trees with exit holes.	<b>yes</b>
<i>Fraxinus</i>	Ash (especially green ash, <i>F. pennsylvanica</i> )	Very common tree, but injury infrequent relative to host abundance. Several US records, all from IL, most of these unverified (but at least two exit holes confirmed). Host in Chinese literature. Oviposition but no survival in Canada. Two exit holes were observed in green ash and <i>F. chinensis</i> in field test in China.	<b>yes</b>
<i>Platanus</i>	London plane tree, <i>P. acerifolia</i>	Very common urban trees. 12 US records (including 4 with exit holes, NY); no record for <i>P. occidentalis</i> , American sycamore. Host in Chinese literature. Exit holes observed in China.	<b>yes</b>
<i>Populus</i>	Poplar	Very common trees. Diverse and variable group, hybrids occur. Suitability apparently varies; some species and hybrids are prime hosts in China. Nine US records (NY, NJ, MA). Complete life cycle on eastern cottonwood, <i>P. deltoides</i> and quaking aspen, <i>P. tremuloides</i> . Oviposition on balsam poplar, <i>P. balsamifera</i> , Balm-of-Gilead (a hybrid cultivar), unidentified <i>Populus sp.</i>	<b>yes</b>
<i>Sorbus</i>	European mountain-ash, <i>S. aucuparia</i>	Occasional ornamental. Exit hole: 1 record from field in IL with additional emergence in laboratory. No Chinese record. Note: this is not a true ash; <i>Sorbus</i> is a member of the rose family.	<b>yes</b>

Genus <sup>1</sup>	Common Name	Host Abundance and Other Notes <sup>2</sup>	Treated, surveyed <sup>3</sup>
<b>Questionable US records<sup>4</sup></b>			
<i>Celtis</i> <sup>5</sup>	Hackberry, <i>C. occidentalis</i>	Fairly common tree. Oviposition: 1 unverified record from IL, with small/medium-sized larva identified as ALB. No Chinese record.	survey only
<i>Hibiscus</i>	Rose-of-Sharon, <i>H. syriacus</i>	Common ornamental shrub. Exit: 1 unverified report, NY; Oviposition: several records, NY, but no larval development, possibly incidental to heavy damage on nearby hosts. No Chinese record.	no
<i>Malus</i>	Apple, crab apple	Common ornamental. Oviposition: 1 questionable record, IL. Host in Chinese literature. Oviposition observed in China.	no
<i>Morus</i>	Mulberry	Very common tree. Oviposition: 1 record, NY. No Chinese record.	no
<i>Prunus</i>	Cherry, plum	Very common ornamental. Oviposition: 2 records, NY & IL, but no survival. Host in Chinese literature.	no
<i>Pyrus</i>	Pear	Common ornamental. Exit: 1 questionable record, IL. Host in Chinese literature. Few exit holes were observed on <i>Pyrus bretschneideri</i> trees in China.	no
<i>Quercus</i>	Oak, (pin oak, <i>Q. palustris</i> )	Very common tree. Oviposition: 1 record, NY (incidental to heavy damage on nearby hosts). No Chinese record.	no
<i>Robinia</i>	Black locust, <i>R. pseudoacacia</i>	Common tree. Exit: 2 doubtful records, IL. Host in Chinese literature. Quite a few egg sites were observed in China, no exit holes.	no
<i>Tilia</i>	Linden (little-leaf linden, <i>T. cordata</i> )	Common tree. Oviposition: 2 records (IL & NY) but no survival. Oviposition but no survival in Canada. Host in Chinese literature.	no
<b>No US record<sup>4</sup></b>			
<i>Alnus</i>	Alder	Locally common tree or shrub. No US record. Host in Chinese literature. Exit hole observed in gray alder, <i>A. incana</i> , in cage study in China.	no
<i>Elaeagnus</i>	Russian olive (Oleaster), <i>E. angustifolia</i>	Widely-distributed ornamental shrub and escaped weed; quite variable, easily confused with other <i>Elaeagnus</i> species. No US record. Host in Chinese literature; Heavy feeding damage and few exit holes observed in China.	no
<i>Koelreuteria</i>	Goldenraintree, <i>K. paniculata</i>	Occasional ornamental. No US record. Heavy feeding, oviposition sites and 2 exit holes observed in field studies in China. Also, exit holes were observed on roadside trees.	Yes
<i>Melia</i>	Chinaberry, <i>M. azedarach</i>	Uncommon shrub. No US record; reported <i>not</i> to be a host in Chinese literature but damage observed.	no
<b>Non-host<sup>4</sup></b>			
<i>Ailanthus</i>	Tree of heaven, <i>A. altissima</i>	Common tree. No US record; reported <i>not</i> to be a host in Chinese literature.	no

1. Host genera listed alphabetically within categories.
2. Host abundance based on (a) records and observations of infested areas in NY, IL, NJ and MA, (b) Nowak (1994) and (c) descriptions of range and abundance in several field guides.
3. Included in surveys and chemical treatments by USDA Cooperative ALB Eradication Program in IL, NY, NJ and MA.
4. Host status based on US records of infestation, field studies with North American trees planted in China and Chinese literature. Host range tests in laboratory and greenhouse settings not considered except as noted. See Hu et al. (2009) for a review of hosts with particular emphasis on the status of poplars in China.
5. *Celtis occidentalis* is most likely not a host of ALB, field studies, surveys and observations in China have found no evidence of *Celtis* as ALB host. However, its status would change if surveys reveal any infestation.

### References

- Hu, J., S. Angeli, S. Schuetz, Y. Luo and A. E. Hajek. 2009. Ecology and management of exotic and endemic Asian longhorned beetle *Anoplophora glabripennis*. *Agric. For. Entomol.* 11: 359-375.
- Nowack, D. J., 1994, "Urban Forest Structure: The State of Chicago's Urban Forest," pp. 3-18 In: E. G. McPherson et al., *Chicago's Urban Forest Ecosystem: Results of the Chicago Urban Forest Climate Project*. Gen. Tech. Rep. NE-186, USDA Forest Service, NE Forest Experiment Sta., Radnor, PA.