Asian Longhorned Beetle: Annotated Host List

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Genus[1]	Common Name	Host Abundance and Other Notes[2]	Treated, Surveyed[3]
Preferred host in US[4]			
Acer	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.	**yes**
Aesculus	Horsechestnut, buckeye	Fairly common trees. Several US records, some heavily infested.	**yes**
Betula	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. No exit holes found in laboratory studies with black and yellow birches yet although some larva developments inside trees of these two species have been observed.	**yes**
Salix	Willow	Fairly common trees. Several US records: weeping, pussy and white willows highly favored; black willow (oviposition only) less favored.	**yes**
Ulmus	Elm	Very common trees. Many US records: American, Siberian and Chinese elms. Elms are apparently less preferred than maple.	**yes**
Occasional to rare host in US[4]			
Albizia	Mimosa, silk tree, *A. julibrissin*	Occasional ornamental. Exit holes: 2 records from field in NY with additional emergence in laboratory. No Chinese record.	**yes**
Cercidiphyllum	Katsura tree, *C. japonicum*	Occasional ornamental. Four records from Worcester, MA, including 2 trees with exit holes.	**yes**
Fraxinus	Ash (especially green ash, *F. pennsylvanica*)	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). Chinese ash, *F. chinensis* and white ash, *F. americana* were confirmed to be host in China	**yes**
Platanus	London plane tree, *P. acerifolia*	Very common urban trees. 12 US records (including 4 with exit holes, NY); no record for *P. occidentalis*, American sycamore. Host in Chinese literature. Exit holes observed in China.	**yes**
Populus	Poplar	Very common trees. Diverse and variable group, hybrids occur. Suitability apparently varies; some species and hybrids are prime hosts in China, others are rare host. Nine US records (NY, NJ, MA). Complete life cycle on eastern cottonwood, *P. deltoides* and quaking aspen, *P. tremuloides*. Oviposition on balsam popular, *P. balsamifera*, Balm-of-Gilead (a hybrid cultivar), unidentified *Populus sp*. Generally, *Populus* section Aigeiros (black poplars) are more preferred than other sections.	**yes**
Sorbus	European mountain-ash, *S. aucuparia*	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; *Sorbus* is a member of the rose family.	**yes**

Genus[1]	Common Name	Host Abundance and Other Notes[2]	Treated, surveyed[3]
Questionable US records[4]			
Celtis	Hackberry, *C. occidentalis*	Fairly common tree. Oviposition: 1 unverified record from IL, with small/medium-sized larva identified as ALB. No Chinese record. No egg sites were found in laboratory studies with caged trees and beetles and no active egg sites or exit holes were found in ALB host studies in a "common garden" setting and surveys in China. Feeding by adults was observed.	no
Hibiscus	Rose-of-Sharon, *H. syriacus*	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. Adult feeding, oviposition, egg sites and active egg sites were observed in caged studies in "common garden" settings in China.	no
Malus	Apple, crab apple	Common ornamental. Oviposition: 1 questionable record, IL. Host in Chinese literature. Oviposition observed in China. No exit holes found yet.	no
Morus	Mulberry	Very common tree. Oviposition: 1 record, NY. No Chinese record. Unlikely to be ALB host.	no
Prunus	Cherry, plum	Very common ornamental. Oviposition: 2 records, NY & IL, but no survival. Host in Chinese literature. No exit holes have been found in our study in "common garden" setting.	no
Pyrus	Pear	Common ornamental. Exit: 1 questionable record, IL. Host in Chinese literature. Few exit holes were observed on *Pyrus bretschneideri* trees in China.	no
Quercus	Oak, (pin oak, *Q. palustris*)	Very common tree. Oviposition: 1 record, NY (incidental to heavy damage on nearby hosts). No Chinese record.	no
Robinia	Black locust, *R. pseudoacacia*	Common tree. Exit: 2 doubtful records, IL. Host in Chinese literature. Quite a few egg sites were observed in China, no exit holes.	no
Tilia	Linden (little-leaf linden, *T. cordata*)	Common tree. Oviposition: 2 records (IL & NY) but no survival. Oviposition but no survival in Canada. Host in Chinese literature.	no
No US record[4]			
Alnus	Alder	Locally common tree or shrub. No US record. Host in Chinese literature. Exit hole observed in gray alder, *A. incana*, in caged study in China.	no
Elaeagnus	Russian olive (Oleaster), *E. angustifolia*	Widely-distributed ornamental shrub and escaped weed; quite variable, easily confused with other *Elaeagnus* species. No US record. Host in Chinese literature; Heavy feeding damage and few exit holes observed in China.	no
Koelreuteria	Goldenraintree, *K. paniculata*	Occasional ornamental. No US record. Heavy feeding, oviposition sites and 2 exit holes observed in field studies in China. Other exit holes were also found on trees along roadside.	Yes
Melia	Chinaberry, *M. azedarach*	Uncommon shrub. No US record; reported *not* to be a host in Chinese literature but damage observed. Host of the citrus longhorned beetle, *Anoplophora chinensis*.	no
Non-host[4]			
Ailanthus	Tree of heaven, *A. altissima*	Common tree. No US record; reported *not* 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.

Additional notes:

1. *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.
2. *Styphnolobium japonicum* syn. *Sophora japonica* (the pagoda tree), ALB completed development in 2-3 years on this species in caged study.
3. *Rosa* listed as host in some literature. The beetle may be the citrus longhorned beetle (CLB), *Anoplophora chinensis*. Some species of trees in *Rosa* are good host of this beetle.

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.

Nowak, 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.