

# *Anoplophora glabripennis*



Taxon	Family / Order / Class / Phylum
<i>Anoplophora glabripennis</i> (Motschulsky, 1853)	Cerambycidae / Coleoptera / Insecta / Arthropoda

## COMMON NAMES (English only)

Asian Longhorned beetle  
Asian long-horn beetle

## SYNONYMS

*Anoplophora nobilis* Ganglbauer 1890  
*Cerosterna glabripennis* Motschulsky 1853  
*Cerosterna laevigator* Thomson 1857  
*Melanauster nobilis* Ganglbauer 1890  
*Melanauster luteonotatus* Pic 1925  
*Melanauster angustatus* Pic 1925  
*Melanauster nankineus* Pic 1925  
*Melanauster glabripennis* var. *laglaisei* Pic 1953

## SHORT DESCRIPTION

Large, stout beetle, 20-35 mm long with a jet-black body with white spots on the elytra; the antennae are longer than the body, black with blue rings at segment base. It is a xylophagous species, feeding on a wide range of deciduous trees, mostly species with soft wood such as *Acer* or *Populus* where the larvae live inside the wood, in tree bole or large branches, adults eat bark on small branches.

## BIOLOGY/ECOLOGY

### Dispersal mechanisms

Adults flight up to 1.5km from the emergence place. Possible man-mediated long-distance dispersal (e.g. infested wood movement, adults hitchhiking on vehicles).

### Reproduction

Classic sexual reproduction. Eggs are laid throughout female life from spring to late summer; fecundity is variable from tens to more than a 100 eggs per female. Full development is achieved in 1 or 2 years depending on climate and egg laying date.

### Known predators/herbivores

Insect parasitoids (hymenoptera, diptera) and predators (Coleoptera), woodpeckers.

### Resistant stages (seeds, spores etc.)

Larvae and pupae overwinter inside wood tunnels.

## HABITAT

### Native (EUNIS code)

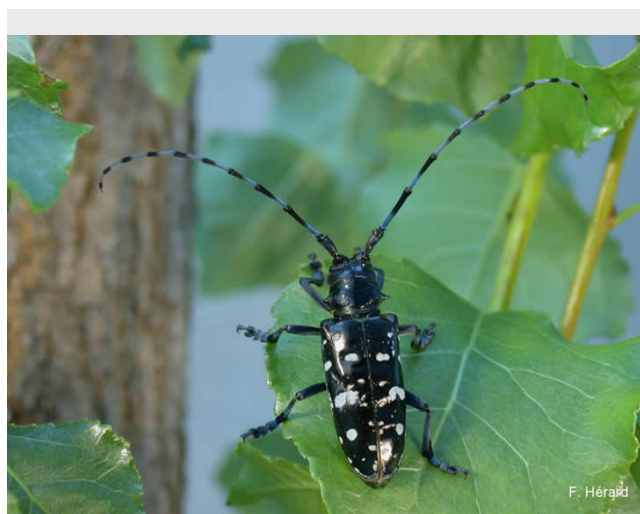
G1: Broadleaved deciduous woodland, G5: Lines of trees, small anthropogenic woodlands.

### Habitat occupied in invaded range (EUNIS code)

G5: Lines of trees, small anthropogenic woodlands.

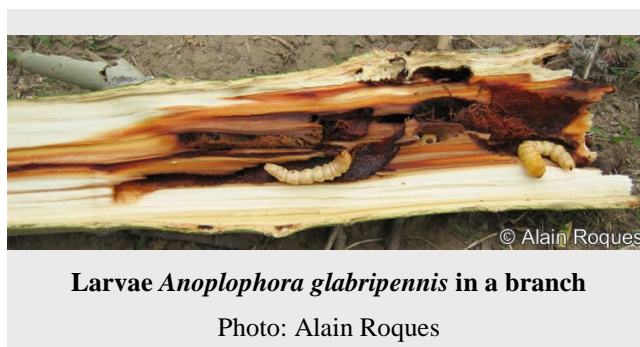
### Habitat requirements

Subtropical to temperate climate; can probably survive in a large part of Europe up to Southern Sweden.



*Anoplophora glabripennis* on foliage

Photo: Franck Hérard



Larvae *Anoplophora glabripennis* in a branch

Photo: Alain Roques

## DISTRIBUTION

### Native Range

East Asia (China, Taiwan, Korea, Japan)

### Known Introduced Range

USA, Canada, Austria, France, Germany.




### Trend

Increasing frequency of interceptions and introductions in Europe during the last ten years: where the species has been introduced, all in urban areas, they are in the process of eradication.

## MAP (European distribution)



### Legend

	Known in country		Known in CGRS square		Known in sea
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## INTRODUCTION PATHWAY

Introduced repeatedly with infested woody materials, especially wood packaging, pallets and waste materials.

## IMPACT

### Ecosystem Impact

Little known; may disturb European broadleaved ecosystems by selective tree killing or direct/indirect competition with native xylophagous insects, including protected ones.

### Health and Social Impact

Primary introduction always in urban areas; important social impact by killing trees in streets, private and public gardens.

### Economic Impact

Weaken or kills healthy trees. It is one of the most destructive cerambycid forest pests in its native range, inducing heavy damage in broadleaved stands, including poplar plantations. Larval tunnels also depreciate harvested wood.

## MANAGEMENT

### Prevention

Difficult to trap; survey generally based on visual detection of damage.

### Mechanical

Destruction of infested trees by chipping or burning; trees could also be protected with fine wire mesh to prevent oviposition.

**Chemical**

Limited because the insects live deep within the tree; possible use of systemic insecticides.

**Biological**

Natural enemies (parasitoid insects, entomopathogenic nematodes, fungi or bacteria) under investigation but not yet being used; tree resistance as well.

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- MacLeod A, Evans HF, Baker RHA (2002) An analysis of pest risk from an Asian longhorn beetle (*Anoplophora glabripennis*) to hard wood trees in the European community. *Crop Protection* 21:635-645

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- Smith MT, Tobin PC, Bancroft J, Li G, Gao R (2004) Dispersal and spatiotemporal dynamics of Asian longhorned beetle (Coleoptera: Cerambycidae) in China. *Env Ent* 33:435-442

Author: D. Sauvard

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