

Anoplophora chinensis



| Taxon | Family / Order / Class / Phylum |
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| <i>Anoplophora chinensis</i> (Forster, 1771) | Cerambycidae / Coleoptera / Insecta / Arthropoda |

COMMON NAMES (English only)

Citrus Longhorned beetle

SYNONYMS

Anoplophora malasiaca (Thomson 1865)

Callophora abbreviata Thomson 1865

Callophora afflicta Thomson 1865

Callophora sepulcralis Thomson 1865

Callophora luctuosa Thomson 1865

Callophora malasiaca Thomson 1865

Cerambyx farinosus Houttuyn 1766

Cerambyx pulchricornis Voet 1778

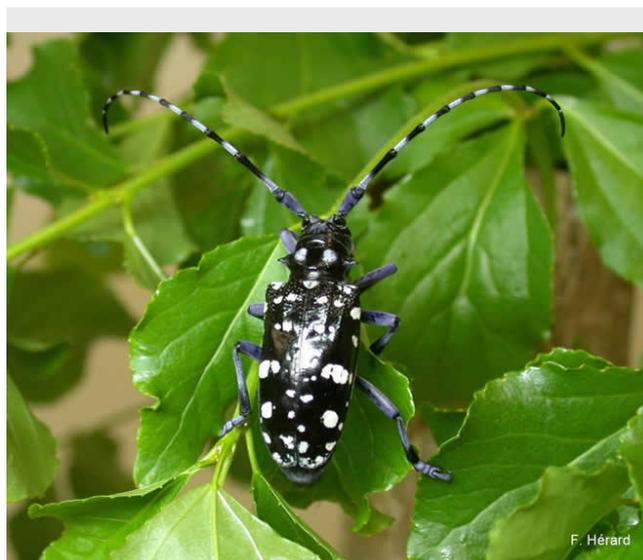
Cerambyx sinensis Gmelin 1790

Lamia punctator Fabricius 1777

Melanauster perroudi Pic 1953

SHORT DESCRIPTION

Large, 21- 37 mm long, stout beetle with shiny black elytra marked with 10- 12 white round spots; long antennae basally marked with white or light blue bands; polyphagous insect attacking over 100 species of broadleaved trees and shrubs; of major concern on *Citrus spp.* (lime/lemon/oranges/tangor).



Adult *Anoplophora chinensis* on foliage

Photo: Franck Hérard

BIOLOGY/ECOLOGY

Dispersal mechanisms

Adults can fly up to 1.5km from their emergence place. Man-mediated long-distance dispersal is possible (i.e. infested wood movement, adults hitch-hiking on vehicles).

Reproduction

Classic sexual reproduction. Females lay eggs throughout their life. Egg laying occurs from spring to late summer. Fecundity varies from tens to more than a hundred 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 their tunnels in wood.



Larva *Anoplophora chinensis* in a branch

Photo: Franck Hérard

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; could probably survive in a large part of Europe

DISTRIBUTION**Native Range**

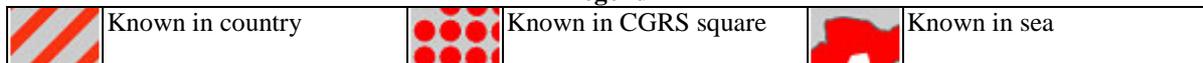
East Asia (China, Taiwan, Korea, Japan, Myanmar, Vietnam).

Known Introduced Range

USA, France, Italy.

Trend

Increasing frequency of introduction during the last ten years in Europe. At the places of introduction, all in urban areas, the beetles are presumed to have been eradicated, except in Italy where populations are in expansion and their eradication is beginning to prove problematic.

MAP (European distribution)**Legend****INTRODUCTION PATHWAY**

Introduced with infested woody materials, especially bonsai plants.

IMPACT**Ecosystem Impact**

It is little known. It may disturb broadleaved ecosystems by selective tree killing or direct/indirect competition with native xylophagous insects, including protected ones.

Health and Social Impact

In urban areas (streets, private and public gardens), the species is killing trees and *Rosa* shrubs.

Economic Impact

It is one of the most destructive cerambycid pests of fruit orchards in its native range, especially on *Citrus* trees. Larval tunnels also depreciate harvested wood.

MANAGEMENT

Prevention

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

Mechanical

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

Chemical

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

Biological

Natural enemies (parasitoid insects, entomopathogenic nematodes, fungi or bacteria) are under investigation but not yet being used. However, trees may develop resistance as well.

REFERENCES

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Date Last Modified: December 12th, 2006