Citrus longhorn beetle
(*Anoplophora chinensis*)

What is it?

The citrus longhorn beetle is a damaging quarantine pest of a range of trees and shrubs. The natural range of the beetle includes China, Japan and other countries in South East Asia. Citrus longhorn beetles have been moving around the world on ornamental trees imported from Asia. They are a threat to horticulture, forestry and woodland trees in the UK and also to citrus production in the Mediterranean.

Why the concern?

Citrus longhorn beetles have been intercepted in the UK at nurseries, bonsai importers and in private gardens on imported trees and bonsais from China, Japan and South Korea. The most common hosts have been maples especially *Acer palmatum* (Japanese maple) and *A. buergerianum* (Trident maple), also imported *Malus* spp. bonsais (dwarf apple trees).

There is an ongoing outbreak of the beetle in Lombardia, Italy. Eradication measures have included the destruction of hundreds of mature trees.

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What are the hosts?

Citrus longhorn beetles are a pest of citrus and apples, but their host range includes beech, birch, hawthorn, hazel, horse chestnut, maple, plane, poplar, oak and willow. Some shrubs can also be hosts.

What does it look like and what are the symptoms?

Adult beetles are large (21–37 mm long) and black with variable white markings. Their antennae are longer than their bodies (between 1.2–2 times body length) and are black with white/light blue bands.

***A. chinensis* adult beetle.**

***A. chinensis* larva.**

The larval stage of the beetle is the most damaging. The larvae feed internally on the pith and vascular systems of the lower trunk and root. The tunnels created by the feeding leave trees susceptible to disease and wind damage. The adults can cause more limited damage by feeding on foliage and eating young bark.

Citrus longhorn beetles spend most of their life (ranging from one to two years, in Asia), as larvae inside a trunk or root, and hence there can be little or no sign of their presence to anyone inspecting a host tree. The most obvious symptoms of citrus longhorn beetle damage are adult exit holes which are typically 6–11 mm in diameter and are generally found towards the base of trunks. Other less obvious symptoms include bleeding sap at the site where eggs have been laid, piles of frass (sawdust like droppings) at the base of an attacked tree and bulges in the trunk indicating a pupal chamber.

A. chinensis **adult beetle next to exit hole.**

This pest is most likely to be seen in July and August, but interceptions have occurred as early as May and as late as October.

A. glabripennis **(Asian longhorn beetle).**

The citrus longhorn beetle is very similar in appearance and biology to *Anoplophora glabripennis*, the Asian longhorn beetle, another important quarantine insect.

Asian longhorn beetles are indigenous to China and Korea and hosts include apple, beech, birch, elm, maple, poplar, *Prunus* (plums and cherries) and willow. There have been recent outbreaks of this pest in Austria, Germany and France and there have been numerous interceptions of the pest in the UK, all associated with wood packaging material (e.g. pallets) imported from China.

Damage inflicted to wooden pallet.

How can *Anoplophora* spp. beetles be controlled?

As well as being difficult to detect, *Anoplophora* spp. are difficult to control because the larvae and pupae are protected from foliar insecticide treatments and most predators, by the surrounding trunk or roots. Currently, the only totally effective way of controlling larvae and pupae is to fell and chip or burn infested trees. Foliar insecticide sprays can be effective against adults, but are not effective against larvae and pupae. An additional shortcoming of using foliar insecticides is that adults may fly off before they consume any treated foliage.

Keep a good look out

If you suspect the presence of this pest or see a beetle that you suspect to be an *Anoplophora* beetle, trap it if possible, and immediately report all findings to your local Defra Plant Health and Seeds Inspector (PHSI) or the PHSI HQ, York:

Tel: 01904 455174
Fax: 01904 455197
Email: planthealth.info@defra.gsi.gov.uk
Web: www.defra.gov.uk/planth/ph.htm

Or your local Forestry Commission Plant Health Inspector or the Plant Health Service, Edinburgh:

Tel: 0131 314 6414
Fax: 0131 314 6148
Email: plant.health@forestry.gsi.gov.uk
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