

Western Conifer Seed Bug, *Leptoglossus occidentalis*

Overview

Short description of *Leptoglossus occidentalis*, Western Conifer Seed Bug

The Western Conifer Seed Bug *Leptoglossus occidentalis* is a large and conspicuous squashbug, reaching a length of 20mm when adult. It is easily distinguished from all other GB coreids by its reddish-brown body, transverse white zigzag line across the centre of its wings and characteristic leaf-like expansions on the hind tibiae.

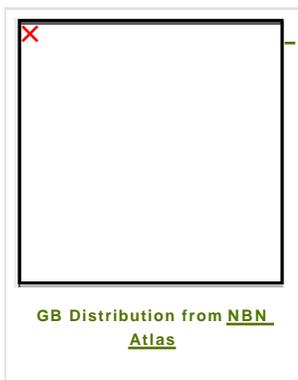
Description of *Leptoglossus occidentalis*, Western Conifer Seed Bug status in GB

Recorded widely from much of England and Wales; probably well-established in many parts of GB.

Habitat summary: *Leptoglossus occidentalis*, Western Conifer Seed Bug

L. occidentalis is associated with coniferous trees during the breeding season, particularly pines. Adults overwinter under bark, but may also enter buildings.

Distribution map



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We try to keep these factsheets up to date, however if you notice any issues please contact us

Overview table

Environment:	Terrestrial
Species status:	Non-Native
Native range:	Northern America
Functional type:	Herbivore
Status in England:	Non-Native
Location of first record:	Weymouth, Dorset (9)
Date of first record:	2008

Invasion history: *Leptoglossus occidentalis*, Western Conifer Seed Bug

Origin

Native to North America west of the Rocky Mountains and parts of southern Canada and northern Mexico.

First Record

Weymouth College, Dorset (January 2007)

Pathway and Method

Following accidental introduction by sea or air, *L. occidentalis* was first reported in Europe from northern Italy in 1999. It spread remarkably fast, probably aided by repeat introductions, and reached northern France and the low countries by 2007. The bug is a powerful flier and colonisation of GB was largely achieved via unassisted dispersal across the English Channel. This phenomenon was first noted during the autumn of 2008, when many adults reached the south coast of England with a scatter of records from further inland. Individuals were frequently found in moth traps and a large number were seeking hibernation sites in houses. This pattern of records was repeated during 2009 and 2010 with many more reports from inland locations, indicating continued northerly spread.

Species Status

L. occidentalis is probably well-established in GB and adults have been reported from many locations across England and Wales as far north as Northumberland, although nymphs have only been found in London and the Isle of Wight. There have been no

reports from Scotland but further northwards invasion is likely. The bug is invasive in north America outside its native range and occurs throughout much of central and eastern USA.

Ecology & Habitat: *Leptoglossus occidentalis*, Western Conifer Seed Bug

Dispersal Mechanisms

L. occidentalis flies strongly producing an audible buzz and can migrate long distances, as demonstrated by its ability to cross the English Channel. It may also be transported by man in timber shipments.

Reproduction

Adults and nymphs feed on the flowers, developing cones and seeds of over 40 species of coniferous trees, with a preference for Pinaceae, including Scots pine (*Pinus sylvestris*), Austrian and Corsican pine (*Pinus nigra*), lodgepole pine (*Pinus contorta*) and Douglas-fir (*Pseudotsuga menziesii*). *L. occidentalis* has also been observed feeding on spruce (*Picea*), fir (*Abies*), cedar (*Cedrus*) and juniper (*Juniperus*).

Females lay up to 80 eggs on the foliage during May or early June, which hatch after 10-14 days. These are barrel-shaped and about 2mm in length, and are laid in clusters along conifer needles. The early instar nymphs feed on the needles and tender tissue of cone scales, whereas the later nymphal stages and adults feed on developing seeds and cones. The immature nymphs go through five stages of development before becoming adults in late August.

Known Predators/Herbivores

As yet unclear in GB; a variety of Hymenopteran and Dipteran parasitoids are known to affect *L. occidentalis* in north America including scelionid wasps such as *Gryon pennsylvanicum* (Hymenoptera: Scelionidae). The generalist egg parasitoid *Anastatus bifasciatus* (Hymenoptera: Eupelmidae) has recently been recovered from *L. occidentalis* egg masses in Italy. One adult collected in Cornwall had the egg of a tachinid fly attached, possibly *Sybclytia rotundiventris*.

Resistant Stages

L. occidentalis survives the winter as adults, often in large aggregations when they are metabolically inactive (diapause).

Habitat Occupied in GB

A variety of habitats containing conifers such as plantation forestry, mixed woodlands, parks and gardens.

Distribution: *Leptoglossus occidentalis*, Western Conifer Seed Bug

Scattered widely throughout much of England and Wales as far north as Northumberland.

Impacts: *Leptoglossus occidentalis*, Western Conifer Seed Bug

Environmental Impact

As yet unclear in Britain. It is possible that *L. occidentalis* may have implications for the regeneration of coniferous woodland via reductions in seed yield.

Health and Social Impact

L. occidentalis does not bite, sting or carry any known disease and is therefore harmless. However, overwintering aggregations can be large and often form indoors, which can be a nuisance. Seed bugs also emit an unpleasant odour when disturbed.

Economic Impact

As yet unclear in GB. In parts of north America, *L. occidentalis* is a relatively serious pest of conifer seed nurseries, particularly Douglas fir. Adults and nymphs feed on the endosperm of the seeds and can induce seed crop losses of up to 80% in some cases. They can also cause abortion of first year conelets and feed on developing male flowers, reducing pollen production.

References & Links: *Leptoglossus occidentalis*, Western Conifer Seed Bug

Identification

[British Bugs website](#)

Biology, ecology, spread, vectors

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Management and impact

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General