

# *Glycaspis brimblecombei*

RED GUM LERP PSYLLID  
HEMIPTERA: PSYLLIDAE



FOREST PEST SPECIES PROFILES  
SEPTEMBER 2012



## MAJOR SAP-SUCKING PEST OF EUCALYPT SPECIES.

Native to Australia, *Glycaspis brimblecombei* has been introduced into Africa, Europe, Latin America, and North America.



Adult *Glycaspis brimblecombei*  
(Credit: Bugwood.org/L. Ingram/5401806)

## DISTRIBUTION

**Native:** Australia

**Introduced:**

**Africa:** Madagascar (2004), Mauritius (2001), South Africa (2012)

**Europe:** France (2011), Italy (2010), Portugal (2007), Spain (2007)

**Latin America and the Caribbean:** Argentina (2005), Brazil (2003), Chile (2002), Ecuador (2006), Peru (2008), Uruguay (2008), Venezuela (2007)

**North America:** Mexico (2000), USA (California [1998]; Florida, Hawaii [2001])

## IDENTIFICATION

Eggs are laid randomly on the leaves or in clusters of 50-75 eggs, usually at an angle or perpendicular to the plant surface. They are spindle-shaped, yellow or cream coloured, and are slightly less than 1 mm in length.

Nymph size varies depending on the instar; last instar is approximately 1.5-2.0 mm in length. The body colour is yellowish orange, with dark-brown coloration on the wing pads, legs, antennae, last abdominal segments, and in blotches on the dorsal areas of the head and thorax. The wing pads and other parts of the body have bright white spots associated with setal positions. The nymphs do not produce white flocculent wax secretions as in some other eucalyptus feeding species, but instead use the lerp covering as a source of shelter and protection from the elements. Lerp are 1-4 mm in diameter depending on the stage of the nymph, and are usually whitish in appearance, but may take on a grey or black coloration with age or if sooty mould begins to grow on the lerp. Lerp still occupied by nymphs often have curled tendrils of wax protruding from the upper surface.

Adults are approximately 4-5 mm in length from the head to the wing tips. They are yellow or light green in colour with contrasting dark eyes, and occasional dark-brown markings. The genal cones, a common morphological feature of most psyllids, consist of a pair of cone-shaped extensions of the frons and may extend anteriorly or downward depending on the head orientation of a given species. In *G. brimblecombei*, the genal cones are extremely long and well developed, being as long as or longer than the head itself.

## HOSTS

*Eucalyptus* species. Mainly *E. camaldulensis*, but also: *E. rudis*, *E. globulus*, *E. diversicolor*, *E. sideroxylon*, *E. nicholii*, *E. lehmannii* (in California); and *E. blakelyi*, *E. nitens*, *E. tereticornis*, *E. dealbata*, *E. bridgesiana*, *E. brassiana*, and *E. mannifera* (in Australia).

## PATHWAYS

International transport of nursery stock is believed a significant pathway for this pest. Adults can be moved by vehicles. Local spread can be rapid as adults are strong fliers.

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*Glycaspis brimblecombei* on eucalypt leaves  
(Credit: Bugwood.org/W. Ciesla/1244007)

## SYMPTOMS AND DAMAGE

Adults and nymphs feed on sap and produce large amounts of honeydew on which sooty mould develops. Nymphs construct individual white waxy covers (called lerp) of conical shape. Infested leaves are covered with these waxy secretions, honeydew and sooty mould. Damage caused includes leaf discoloration and, in heavy infestations, severe leaf drop and twig dieback. Infested trees are susceptible to attacks by secondary pests such as cerambycid beetles (*Phoracantha* spp.). Severe and multiple defoliations can result in tree death.

## BIOLOGY

Lerp insects usually live in colonies of mixed stages. Each female lays between 45 and 700 eggs. Egg incubation times may last a week to 5 months depending on temperature and other environmental conditions. Eggs hatch and the young nymphs or "crawlers" move about the host plant searching for a place to settle; usually settling within 48 hours of hatching. Once settled they insert their stylets (mouthparts) into the leaf and begin feeding and excreting honeydew which hardens on contact with air to form a lerp. They feed and find shelter under the lerp until they become adults. Nymphs pass through four stages or moults before becoming winged adults. At every moult the insect withdraws its stylets from the leaf and selects a new feeding site. The new site is usually within the existing lerp but occasionally the insect moves to a new site and constructs a new lerp.

The number of generations per year also varies with temperature. In southern California, generations are continuous and usually overlapping, with apparently no winter diapause. In northern California, there appears to be only one annual generation and a partial second in the interior valleys. In Australia, 2 to 4 generations per year are observed. The whole life cycle takes approximately 1-2 months but may be longer, depending on temperature.

## CONTROL MEASURES

Both chemical and biological insecticides have been used in an attempt to control infestations of the red gum lerp psyllid. Contact insecticides are known to be ineffective as the nymphs are protected by their covers (lerps). Systemic insecticides have been used with some success, but their use is of limited value in plantation forestry due to the high cost.

In the USA, natural enemies of the red gum lerp psyllid were imported from Australia. One of these, the parasitic wasp *Psyllaephagus bliteus* (Hymenoptera: Encyrtidae) has become established in the USA as a biological control agent for the red gum lerp psyllid.

## REFERENCES

CABI. 2012. Invasive Species Compendium report - *Glycaspis brimblecombei* (red gum lerp psyllid). Available at: [www.cabi.org/isc/?compid=5&dsid=25242&loadmodule=datasheet&page=481&site=144](http://www.cabi.org/isc/?compid=5&dsid=25242&loadmodule=datasheet&page=481&site=144) (Accessed 04/09/12)

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