



Department
for Environment
Food & Rural Affairs

Plant Pest Factsheet

Tasmanian Eucalyptus Beetle

Paropsisterna selmani



Figure 1. Adult Tasmanian Eucalyptus beetle, pre-hibernation, London © ZooTaxa, Paula French.

Background

In 2007, an exotic leaf beetle (Coleoptera: Chrysomelidae) was found damaging cultivated *Eucalyptus* species in County Kerry, Republic of Ireland. The same beetle had been previously found damaging *Eucalyptus* plantations in Tasmania, Australia, and in 2012 a single adult was photographed in a garden in London. The beetle was tentatively identified as *Paropsisterna gloriosa* but later described in 2013 as a new species *P. selmani*.

Geographical Distribution

Paropsisterna selmani appears to be native to Tasmania, Australia, and has been introduced to the Republic of Ireland where it occurs widely in the south. In the UK, in addition to the findings in London, in June 2015 larvae of *P. selmani* were found causing severe defoliation to *Eucalyptus* plants at a public garden in Surrey (where a large population was still present as of 2024); and in August 2015 a single adult was found in West Sussex. The species was first found north of London in 2020 when an adult was found in a garden moth trap in Cambridgeshire, this was associated with leaf damage to a nearby *Eucalyptus*, with two more adults found in Bedfordshire later the same summer.

Host Plants

Paropsisterna selmani feeds exclusively on *Eucalyptus* species (Myrtaceae), preferentially on glaucous-foliaged (a bluish-grey green colour) eucalypt species of the subgenus *Symphyomyrtus*, particularly the plantation tree *E. nitens*. Host species include:

Eucalyptus brookeriana, *E. dalrympleana*, *E. glaucescens*, *E. globulus*, *E. gunnii*, *E. johnstonii*, *E. moorei*, *E. nicholii*, *E. nitens*, *E. niphophila*, *E. parvula*, *E. pauciflora* ssp., *E. perriniana*, *E.*, *pulverulenta*, *E. rubida*, *E. vernicosa* and *E. viminalis*.

Description

Adult *P. selmani* are rounded (Figs. 1 and 4), oval (Figs. 2 and 3), and about 9 mm in length, with the females being slightly larger than the males. In life, they may be recognised by two key features: wing cases (elytra) with a distinct bright yellow line along the outer edges (Figs. 1 and 4), and a yellow diamond shape in the lower half of the combined wing cases (Figs. 2 and 3). Dead specimens become a uniform brown and are more difficult to identify.



Figure 2. *Paropsisterna selmani*, post-hibernation, Tasmania © ZooTaxa DWdL.



Figure 3. *Paropsisterna selmani*, teneral (young adult), Ireland © Fera.



Figure 4. *Paropsisterna selmani*, teneral (young adult), Ireland © Fera.



Figure 5. Third instar larva of *Paropsisterna selmani* © Fera.

Biology

The biology of *P. selmani* has been studied in the field and under laboratory conditions in Ireland. Adult beetles and larvae both feed on the foliage. The feeding damage can lead the tree to produce abnormal broom-top growth (a mass of bird nest-like growth in the crown). Adult beetles over-winter in the soil, and, in the northern hemisphere, emerge in April. They mate and lay batches of approximately seven eggs on the leaves. There are four larval instars (growth stages) (the fourth growing to 12.5 mm long) which are pale yellowish-green with scattered dark brown markings (Fig. 5). Teneral (young) adults were most noticeable in late June and July. In laboratory experiments, the life cycle took approximately 26 days to complete at 20°C when fed on *Eucalyptus parvula*¹. Climate modelling suggests that in southern England, *P. selmani* could achieve up to four generations per year. Each adult female laid an average of 1480 eggs over a period of 130 days at 20°C. This egg-laying rate is comparable to other leaf beetles attaining pest status in other *Eucalyptus*-growing regions.

¹ Fanning, P.D. and Baars, J.R., 2014. Biology of the Eucalyptus leaf beetle *Paropsisterna selmani* (Chrysomelidae: Paropsini): a new pest of Eucalyptus species (Myrtaceae) in Ireland. *Agricultural and Forest Entomology*, 16(1), pp.45-53.

Dispersal and Detection

The adult beetles are winged and capable of natural dispersal to *Eucalyptus* trees. All stages may be accidentally transported over long distances with international trade in eucalypt plants and the adults may be carried as stowaways with non-host material. For example, live *Paropsisterna* beetles have been intercepted in the UK on several occasions with tree ferns (*Dicksonia* spp.) imported from Australia.

The adult beetles are colourful and relatively easy to detect. The adults and larvae (Fig. 5) cause conspicuous defoliation and damage to new growth.

Economic Impact

Paropsisterna selmani is an emerging pest of *Eucalyptus* plantations in Australia and the Republic of Ireland. Adults and larvae can cause significant defoliation (40%), completely stripping the leaves from branches (Figs. 6-7). Leaf consumption is highest in female larvae, with adult beetles being able to consume a leaf area of 100 mm² per day.

Eucalyptus species, native to the Australian biogeographic region, are planted world-wide as a fast-growing source of timber, pulpwood and other products. Therefore, *P. selmani* has the potential to have an economic impact in many parts of the world where suitable eucalypt hosts are grown.



Figure 6. Minor feeding damage caused by *Paropsisterna selmani* larvae © Fera.



Figure 7. Severe feeding damage by *Paropsisterna selmani* larva leaving only the mid veins of the apical foliage © Fera.

Cool temperate species of *Eucalyptus* are widely grown in the UK as ornamental plants. They are also cultivated as a source of foliage for the floristry industry and there has been resurgence in the *Eucalyptus* industry in the UK for utilising the woody biomass, grown under short rotation forestry management systems, to produce electricity or heat.

Paropsisterna selmani is a particular issue for the ornamental cut foliage industry, as even a small amount of feeding damage will make foliage unmarketable.

Advisory Information

As no statutory action is being taken on future UK findings of *Paropsisterna selmani*, there is no longer a requirement to report new findings of this pest to the relevant competent authority.

Industry should source material carefully and both commercial growers and gardeners may wish to monitor for its presence.

Suspected outbreaks of other non-native plant pests should be reported to the relevant authority:

For finds at garden centres, plant nurseries or private gardens in England and Wales, contact your local APHA Plant Health and Seeds Inspector, or the PHSI headquarters, in York:

Tel: 0300 1000 313

Email: planthealth.info@apha.gov.uk

For **Scotland**, contact the **Scottish Government's Horticulture and Marketing Unit:**

For non-agricultural crops, email: hort.marketing@gov.scot

For **Northern Ireland**, contact the **DAERA Plant Health Inspection Branch:**

Tel: 0300 200 7847 Email: planthealth@daera-ni.gov.uk

Web: <https://www.daera-ni.gov.uk/topics/plant-and-tree-health>

For additional information on UK Plant Health please see:

<https://planthealthportal.defra.gov.uk/pests-and-diseases/uk-plant-health-risk-register/>

<https://planthealthportal.defra.gov.uk/>

<https://www.gov.uk/plant-health-controls>

<http://www.gov.scot/Topics/farmingrural/Agriculture/plant/PlantHealth/PlantDiseases>

<https://www.daera-ni.gov.uk>

For finds in the wider environment:

<https://treealert.forestresearch.gov.uk/>

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