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SEVEN QUESTIONS ABOUT THE EUCALYPT PEST GUMLEAF SKELETONISER

What is Gumleaf skeletoniser?

Gumleaf skeletoniser is an Australian caterpillar (*Uraba lugens*) from the Nolidae family that causes damage mainly to gum (*Eucalyptus*) trees by eating the foliage. Caterpillars grow quickly and “skeletonise” gum leaves by eating the green parts of the leaves and avoiding the veins. Older larvae are capable of eating entire leaves.



Caterpillars “skeletonizing” a gum leaf. Photo: Scion.

Which species of tree does it or could it affect?

Gumleaf skeletoniser caterpillars have an appetite for many eucalypt species, and will try and feed on whatever tree the mother moth lays her eggs on, and this can include unusual ones from time to time like silver birch and copper beech! In NZ it is often seen on *E. nicholii*, *E. cinerea*, *E. globulus* and *Lophostemon confertus* in urban areas. It can be found on native trees when they are growing in very close proximity to eucalypts, but damage is usually not significant. In Australia gumleaf skeletoniser is a well-known outbreak species, which means that occasionally the population can explode causing damage of plague-like proportions to natural forests. Sometimes areas as large as 150,000 ha have been affected. Outbreaks in Australia have occurred in forests dominated by *E. marginata* (Western Australia), and *E. camaldulensis* (New South Wales and Victoria). Occasionally severe impacts have been observed in young plantations, such as *E. fastigata* in New South Wales, or *E. nitens* in Tasmania.

It is unknown whether outbreaks will ever occur in New Zealand, but if they did then tree growth may be affected, extending rotation times. Low levels of defoliation from time to time are unlikely to affect eucalypt trees, which are remarkably hardy.

How can I recognize it?

Caterpillars are hairy and coloured pale yellow with black and grey markings. The young larvae are very small, less than 1 mm in length. Older caterpillars are characterized with a distinctive black “hat” on their heads formed by shed former head capsules. Mature caterpillars generally reach a length of 20-25 mm. Other life stages are rarely seen. Cocoons are usually hidden under bark or in leaf litter. Moths are nocturnal and survive for about a week. They do not feed. Eggs are laid in groups of 100 to 200 in neat, parallel rows on young leaves.



Caterpillar with a distinctive black “hat” formed by former head capsules. Photo: Scion.

Are there other concerns related to gumleaf skeletoniser?

Exposure to the hairs of the caterpillars and their shed skins may cause an itchy raised rash on human skin referred to as contact dermatitis. The rash will repeatedly appear over many weeks and will require medical treatment. For this reason people handling infested plants or entering badly infested woodlots should wear protective clothing.

How did it get into New Zealand?

No-one is sure how gumleaf skeletoniser got into New Zealand but it was first found on trees on a Mount Maunganui golf course in 1992, a clue perhaps to an accidental human-mediated introduction. This first New Zealand incursion was recognised as posing a serious risk and initiated a dedicated management programme. The species was considered eradicated from Mount Maunganui in the late 1990s, but it was later discovered in Auckland in 2001. That population was too widely established for an eradication campaign to be effective, and the gumleaf skeletoniser has since spread to other regions (see distribution map in FH News, issue 251).

How far could it spread?

Climate models predict gumleaf skeletoniser has the potential to eventually spread throughout New Zealand apart from alpine areas above 600 m, areas of high rainfall on the west coast of the South Island, and cold, dry areas in Central Otago.

What can I do to reduce spread from the affected areas?

It is not economically feasible to try and reduce the spread of the gumleaf skeletoniser, however Scion was given permission to release a specialist natural enemy, a parasitoid named *Cotesia urabae* in 2010, following extensive safety testing. Scion is now undertaking mass releases of the parasitoid into areas where gumleaf skeletoniser has become abundant. It is hoped the parasitoid will assist with suppressing population growth of this pest.

Toni Withers and Nicolas Meurisse (Forest Protection, Scion)

FOLIAGE DISEASE REPORT

Forest growing regions that are prone to pine foliar diseases have generally experienced drier than normal weather over the last two summers and autumns. The dry weather over those periods has hampered development of the common foliage diseases dothistroma needle blight, red needle cast and cyclaneusma needle cast and has resulted in green forests that forest pathologists prefer to see. Dothistroma needle blight has not reached significant levels and last summer just under 11,000 ha were sprayed for control. This contrasts with an average of over 60,000 ha over the three previous years. Red needle

cast was not common in the central North Island. Some forests were affected in spring but by now needles have been cast and symptoms have disappeared. On the East Cape of the North Island similar expression was seen, with red needle cast appearing about the middle of the year, peaking quite quickly and then abating as affected needles were cast or blown off. Above average winter rainfall in Northland has resulted in the development of physiological needle blight (PNB). This disease appears sporadically, often after wetter than normal winters. Reports from Northland were first received in September and on some sites the disease has been severe. Based on past experience it is unlikely that PNB will be a significant problem next year. Cyclaneusma needle cast was not severe in spring 2014 because of low rainfall during the previous autumn.

Identifying the various foliage diseases on pine is not easy, especially during times when symptoms of different diseases can look similar. To help farm foresters and forest industry staff identify the four diseases mentioned above a field identification guide in hard copy and electronic format has been completed.



Clockwise from upper left: Dothistroma Needle Blight, Cyclaneusma Needle Cast, Physiological Needle Blight and Red Needle Cast, the most common foliage diseases of pine in New Zealand. Photos: Scion.

Copies are available from Rose O'Brien at Scion and can also be downloaded at:

<http://www.nzffa.org.nz/farm-forestry-model/the-essentials/forest-health-pests-and-diseases/diseases/Needle-diseases>

This link also provides access to an online key that helps the viewer identify the four diseases.

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