

# GORSE SOFT SHOOT MOTH

*Agonopterix ulicetella*

## The history of gorse soft shoot moths in New Zealand

The gorse soft shoot moth is native to western Europe and it was first imported from the UK by the DSIR in 1983. The moth was not released at this time because of concerns about its host specificity. The moth was released in Hawai'i where it did well and quickly built up damaging populations. Field trials in Hawai'i also showed that the moth was safe to release in New Zealand, so a second shipment was imported in 1990. The moth was subsequently mass-reared and released throughout the country in the early 1990s. The moth is well established now in parts of the South Island, but is still rare in the North Island.



Gorse soft shoot moth

## How would I find gorse soft shoot moths?

You are unlikely to see the moths as they are nocturnal and hide away down inside gorse bushes. You can flush them out during the day using a bee-smoker. The moths are light brown in colour with darker brown markings on the wings and are about 12 mm long. The females lay tiny pale yellow, barrel-shaped eggs singly at the base of spines next to developing buds in early spring. In the laboratory, females have been known to lay up to 250 eggs over a 53-day period.

The caterpillars hatch about 1–2 weeks later and migrate to the new growing buds, where they spin silken tubes and feed on new gorse shoots. If you examine webbed or deformed shoot tips in late November/early December, then you may be able to see the caterpillars inside – they wriggle rapidly when disturbed. Initially the caterpillars are dark brown (with black heads) but later turn greyish-green. You may confuse them with leaf roller caterpillars, which are commonly found on gorse. The leaf roller caterpillars are generally brighter green and smaller than the soft shoot moth caterpillars, which grow up to 2 cm long.



Gorse soft shoot moth larva



	Soft shoot moth pupae	Leaf roller pupae
<b>Colour</b>	Dark reddish-brown	Light brown to brown
<b>Movement</b>	Side to side	Circular
<b>Location</b>	Usually protrude from the web	Usually buried in the web

After feeding for about 5–6 weeks (under warm conditions), the caterpillars pupate. You can sometimes see the dark reddish-brown pupae in the webbed tips but they often fall to the ground. Be careful not to confuse them with the paler-brown leaf roller pupae (see box). New adult moths emerge about a month later and are believed to hibernate at the base of gorse bushes before emerging to mate the following spring. The moths are strong fliers and should be able to disperse readily. There is only one generation per year.

The gorse soft shoot moth is easy to differentiate from other gorse biocontrol agents.

See *Gorse colonial hard shoot moth*, *Gorse pod moth*, *Gorse seed weevil*, *Gorse spider mite*, *Gorse thrips*.

### How do gorse soft shoot moths damage gorse?

The caterpillars are the damaging stage, and they feed on the newly growing buds and soft tips in the spring. Each caterpillar can destroy up to five shoots.

### Will gorse soft shoot moths attack other plants?

No, it is extremely unlikely that gorse soft shoot moths will attack any plants other than gorse. In Europe it attacks other *Ulex* species that we do not have in New Zealand.



Gorse damaged by this agent in Hawai'i

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