

Identifying pests in Tasmania's forests: information sheet 3

Autumn gum moth

Scientific name: *Mnesampela privata*

Order: **LEPIDOPTERA** (Moths and Butterflies)

Characteristic Damage

Waxy juvenile or young adult leaves of certain eucalypts are skeletonised or completely eaten, leaving characteristic leaf shelters at the ends of branches (Fig. 1).



Figure 1. Leaf shelters for autumn gum moth larvae

Severe damage: trees are completely defoliated (Fig. 2).

Less severe damage: the tips of branches are skeletonised with some branches stripped.



Figure 2. Eucalypt plantation defoliated by autumn gum moth

Effect on the trees

Severe attack will slow tree growth and may reduce wood production for several seasons after the damage. Tree form and wood quality may also be affected. Repeated attacks may kill trees.

Trees most at risk

Gums which produce waxy juvenile foliage are the main host species: *E. nitens*, *E. globulus* and *E. dalrympleana*.

Ashes which produce waxy juveniles are also attacked: *E. delegatensis*.

Time of damage: Winter;

Warm areas: June - October

Cold areas: Feb - May (above 500m elevation)



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Time of emergence of adults from over-summering pupae and start of egg laying depends on the soil temperature - earlier in cold areas, later in warm areas. Significant damage commences about two months after eggs are laid.

The insect

Eggs: laid in rafts of 10 – 150 small, oval, greenish eggs on the outside leaves of the lower third of the canopy from February to June; they turn browner just before hatching (Fig. 3).



Figure 3. Autumn gum moth eggs (about life size)

Larvae: greenish brown with black and red markings, grow to about 3.5 cm; larger larvae have a characteristic pair of cream spots on a hump in the middle of the body. Young larvae skeletonise the leaf surface (Fig. 4), but older larvae feed on all the leaf tissue causing most of the damage. They tie leaves together to form shelters where they hide by day and come out at night to feed (Fig. 5). When fully grown they crawl down the tree and pupate in the soil under the trees over the summer.

Adult moths are mottled orange - brown, about 2 cm long (Fig. 6); they emerge from pupae in



Figure 4. Young autumn gum moth larvae skeletonising the leaf (x2)

the soil in late summer, shelter in host trees by day and lay eggs at night.



Figure 5. Older autumn gum moth larvae in leaf shelter (x2)



Figure 6. Autumn gum moth adult (about life-size)

Controlling damage

Natural control

The eggs are parasitised by a tiny wasp; parasitised eggs turn black and the wasps emerge after the un-parasitised eggs have hatched. Larvae are also parasitised by several species of wasps and can be affected by viral and bacterial diseases. Damage to trees can be reduced by removing leaves with eggs and young larvae by hand, leaving the black, parasitised eggs.

Chemical control

Populations of autumn gum moth adults can be monitored using light traps and assessing eggs and larvae on the trees to indicate whether the population may need controlling.

No insecticides are registered specifically for autumn gum moth but most broad spectrum insecticides will kill it, including Dominex®, a synthetic pyrethroid, which is registered in Tasmania to control the Tasmanian *Eucalyptus* leaf beetle on eucalypts. However, it also kills most other insects including the natural enemies. Research is currently testing alternative, more environmentally-friendly insecticides. Refer to entomology staff in Forestry Tasmania for when and how to monitor and control outbreaks.