

## Sawflies / Spitfires

Other names: Spitfire caterpillars

Scientific name: *Perga* spp., *Pseudoperga* spp., *Pergagraptia* spp.

Order: Hymenoptera

Family: Pergidae

Sawflies are a type of 'wasps' whose larvae, commonly known as spitfires, feed on plants. In WA they cause only occasional damage to *E. globulus* plantations, though in eastern Australia they have been recorded as causing occasional severe damage. *Perga schiodtei* and *Pseudoperga lucida* are the most commonly encountered species, though a number of other unidentified species are also known to occur. *P. schiodtei* is generally found feeding on juvenile leaves, and *P. lucida* on adult leaves. From studies done on *Perga affinis* in south-east Australia, it is thought that spitfires prefer sites with low clay content, as they cannot burrow into clay soils to pupate and complete their lifecycle. High rainfall sites (especially summer rainfall sites) are also favoured as vigorously growing trees at these sites provide a continual source of food.



*Perga* sp.

Eggs, laid along leaf mid-vein

The larvae are the damaging agents. In young plantations, early in the season, damage is concentrated at the bottom of the canopy where the majority of eggs are laid, and where the early instars aggregate. As larvae mature damage progresses towards the upper canopy late in the season. Whole saplings or trees can be defoliated. In older plantations, eggs may be laid in the middle to upper canopy resulting in emerging larvae defoliating the tops. When a leaf is nearly consumed, the larvae feeding on that leaf move to another leaf. The last larvae to leave the nearly consumed leaf chew off the petiole. Hence, damage by spitfire sawfly larvae can be recognised by the remaining stubs of petioles.

Ten to 40 elongate and flattened eggs are laid in a slit in the leaf cut by the female. The *Perga* females make one slit next to the mid vein of a leaf, while the *Pseudoperga* females make two slits on both sides of the mid vein. Larvae form conspicuous clusters on trees, and when disturbed, they regurgitate highly concentrated eucalyptus oil (hence the name spitfire).

Eggs are laid on the lower canopy of young trees. The female sawfly has a saw-like ovipositor, and she uses it to cut the epidermis of leaf and lays eggs in leaves. However as canopy closure is reached in older plantations, eggs are laid higher in the canopy

# Sawflies



***Pseudograptia* sp.**

Left to right: Defoliated tree tops due to sawfly larvae; *Pseudograptia* sp. first instar larvae, not gregarious habit; sixth and final instars; adult,



***Pseudoperga lucida***

Left to right: first instar larvae; disturbed cluster of sixth instar larvae, note characteristic oil exudates; adult



***Pseudoperga lewisii***



***Perga affinis***

Adult and sixth instar larvae



***Perga schiodtei***

Adult and sixth instar larva