INFORMATION SHEET 8

FORESTS DEPARTMENT WESTERN AUSTRALIA



# THE JARRAH LEAF MINER

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Many types of insects feed upon the leaves and buds of forest trees, but the one which causes the most conspicuous damage is the Jarrah Leaf Miner (*Perthida glyphopa*). This small native moth causes widespread damage during the winter months, primarily on jarrah (*Eucalyptus marginata*) and flooded gum (*Eucalyptus rudis*), although some ten other species of eucalypt may sometimes be affected.

The adult moth is inconspicuous, darkish-grey in colour, 3-4 mm long and with a wingspan of about 7 mm. When at rest the wings are folded together in a tent shape, and some of the long scales near the tips of the wings give the moth the appearance of having a large "tail fin". The adults are very active, flying and running along the branches. At first glance, they can easily be mistaken for ants.

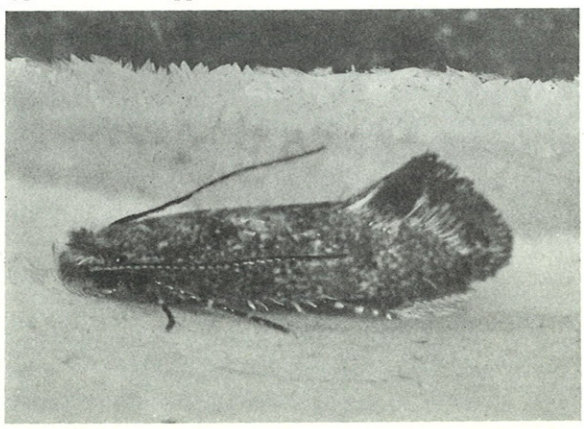
The eggs are laid in autumn (April and May), by piercing the underside of the leaf and inserting a thin-shelled egg just under the surface. The young larvae appear about six weeks later and begin to tunnel through the leaf tissue forming reddish-brown blotches. They reach maturity some three months after hatching. When the larvae emerge, they cut typical oval-shaped holes in the leaf and these holes, together with the larval mines, produce an overall effect on the tree similar to leaf scorch due to fire. On reaching the ground, the head of the larva appears out of one end of the cell; it then pulls itself along and into a suitable crack in the ground, where it comes to rest about 13 mm below the surface. Here it remains in the larval stage until the following autumn, when the larva pupates and the new adults emerge.

The number of mines in a single leaf usually ranges from 10 to 50, although up to 178 have been recorded. In the latter case, the leaf was unable to support such a great number of larvae and only 64 of these reached maturity.

In a normal year, the foliage is replaced during spring and summer and the tree appears to recover completely from the attack. However, successive infestations may adversely affect the vigour of the tree and reduce its growth. Some control of the moth population is exercised by parasitic wasps, predatory birds and ants. Some jarrah trees have an inbuilt resistance to attack. Systemic insecticides have proved effective for small scale control in ornamental trees, but are too costly for use on a large scale.

To effect control, holes (1 cm by 4 cm deep) are bored into the trunk of the tree. These are placed 15 cm apart and at an angle of 45° to the vertical. In early to mid June a teaspoon of systemic insecticide

Jarrah leaves showing typical damage caused by larval galleries and the oval holes produced when the larvae drops out of the leaves in cases. Below: moth at rest showing the typical "tail fin" appearance.



is placed into each hole. This is translocated to the leaves and kills the emerging larvae as they commence feeding. This treatment must be carried out annually to be fully effective.

No attempt has yet been made to follow the leaf miner to the limits of its occurrence. It is known to be present as far north as the Murchison River; south to Augusta and east to the Stirling Range.

Two other leaf miners with rather similar habits have been collected on jarrah. These could be called the "marginal leaf miner" and the "mid-rib leaf miner".

The "marginal leaf miner" always occupies an area on the margin of the leaf affecting a half-moon portion. On maturity, it cuts out a hole as does the jarrah leaf miner. It is present the whole year round. The adult moth is smaller, and has two distinct white or silver patches on its wings.

The "mid-rib leaf miner" invariably occupies an area surrounding the mid-rib and is frequently found towards the distal end of the leaf, so that the end portion of the leaf dies off. Some curling of the leaf usually results. It can be found at any time of the year and seems to prefer the new and more succulent leaves.

Both these miners could easily be confused with the jarrah leaf miner.