

THE LANTANA HERRINGBONE LEAFMINER

(*Ophiomyia camarae*)

A natural enemy of
LANTANA (*Lantana camara*)
in South Africa

22

DOSSIERS ON BIOLOGICAL CONTROL AGENTS AVAILABLE TO AID ALIEN PLANT CONTROL

DESCRIPTION

The adult is a small (1.5 to 2.0 mm), shiny, black fly with red compound eyes.

LIFE CYCLE

Egg laying commences 1-2 days after the adults emerge from the leaves. The female inserts a single egg into a leaf vein. One to three eggs are laid per leaf. Eggs hatch after about 8 days. The larva mines within the leaf for 8-10 days, and pupates inside the leaf, often towards its tip. Pupation takes 9-12 days. The adult-to-adult generation time is 27-32 days. During her 18-day adult life, a female will lay approximately 92 eggs. *Ophiomyia camarae* has many overlapping generations per year. It therefore has the capacity to rapidly increase in numbers.

FEEDING DAMAGE

Female flies puncture the leaf veins with their egg laying organs. As they feed within the leaf tissue, the young larvae form dark, narrow mines that meander from the leaf veins. These mines become visible in transmitted light about 10 days after exposure of adults to plants. Older larvae form pale, yellowish green or brown, fishbone-shaped 'herringbone' mines, often centred along the midrib, with side-shoots along the lateral veins.

IMPACT ON LANTANA

Mining along the leaf veins damages the leaves' fluid transport system, which reduces water flow to the leaf and nutrient flow from the leaf to the shoots and roots. The damaged leaves often fall prematurely. This leafminer will augment the impact of the 11 biological control agents already established on lantana in South Africa. Increased suppression of the growth and reproduction of the weed will further reduce the cost of conventional control.



Adult *Ophiomyia*



Larva (late instar) along the leaf vein



Pupa in the leaf vein



Feeding damage caused by the late instar larvae



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