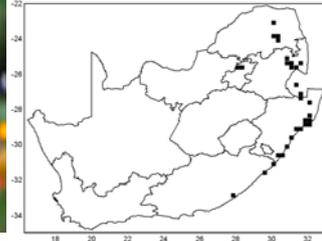


ARC-PPRI FACT SHEETS ON INVASIVE ALIEN PLANTS  
AND THEIR CONTROL IN SOUTH AFRICA  
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The lantana flower gall mite, *Aceria lantanae* (Cook) (family Eriophyidae), is native to the Gulf of Mexico region. This budmite causes its host plant to produce vegetative galls instead of flowers, which more-or-less neuters the plant. Tests in quarantine in Pretoria showed that this mite is extremely host specific: it will only attack lantana weed (*Lantana camara*), and no crop or indigenous plants in Africa or Australia. It was released from quarantine in 2007, and is now well established on budmite-susceptible varieties of lantana in the hot and humid coastal zone of South Africa, and at frost-free sites inland.

#### DESCRIPTION

The tiny mite (adult is about 0,15 mm long) cannot be observed with the naked eye. It is beige & white in colour with a characteristically elongate, flexible abdomen and only two pairs of legs (i). The mites crawl about actively and feed on new growth. The female lays eggs, which are as large as the diameter of her body, in crevices in developing flowerbuds (ii). Mite feeding induces the flowerbud to develop into a green, broccoli-like gall, about 20 mm in diameter (iii), instead of a multi-coloured flowerhead. When populations are high, the mites form a mildew-like swarm on the surface of the gall, and are dispersed by gusts of wind and flower-visiting insects (iv), spreading up to 50 km in about 2 years.

#### LIFE CYCLE

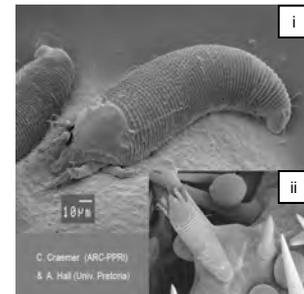
An adult male budmite deposits a mushroom-shaped packet of sperm on its host plant, close to a receptive adult female, which later straddles it and takes it in. Fertilised and unfertilised eggs develop through two juvenile stages into adult females and males (respectively) within about 10 days. The female budmite lays about 50 eggs over about 30 days. These mites are generally short-lived, but they overwinter in protected places.

#### FEEDING DAMAGE

Budmites pierce the most superficial cells of the plant, inject saliva, and drink the cell fluid. The saliva probably contains a chemical mimicking a plant hormone, which induces the undeveloped flowerbud to develop into a gall comprising hundreds of tiny leaves (iii), instead of a flowerhead. These mites can also deform young leaves on vegetative shoots.

#### IMPACT ON LANTANA

Galls act as nutrient sinks, which stunt vegetative growth, most visibly of seedlings (v). Galling of budmite-susceptible lantana varieties reduces seed production by up to about 90%. This should reduce both the rate at which lantana stands become denser, and the rate at which lantana is spread by fruit-eating birds and other animals. The reduction in growth and reproduction of lantana caused by the flower gall mite is highly beneficial, because it reduces the rate of loss of natural pasturage, and of biodiversity, and the frequency and cost of the essential mechanical-plus-chemical lantana control activities.



environmental affairs  
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