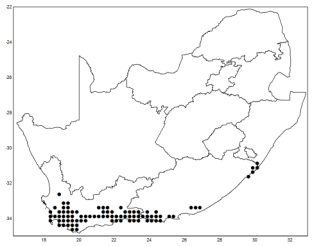
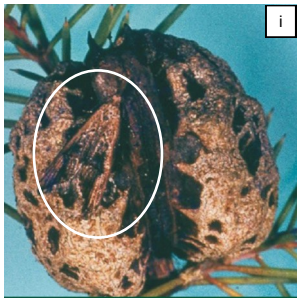


The hakea seed-moth ***Carposina autologa*** Meyrick is native to Australia, and is found on both silky hakea (*Hakea sericea*) and rock hakea (*Hakea gibbosa*). The moth was released on silky hakea in South Africa in 1970 following extensive host-specificity testing to ensure that it could not survive on any indigenous plants, or plants of economic importance. In 2014, a strain of this moth was also released on rock hakea (*Hakea gibbosa*) in South Africa.



DESCRIPTION

The moth is brownish black in colour (i) and is not very conspicuous. The moths are small and their body length is 10—13 mm long.

LIFE CYCLE

Carposina autologa has a one-year life cycle. In autumn, the moths lay single eggs in crevices on the surface of mature fruits, or between touching fruits. The eggs hatch a couple of weeks later, and the larvae enter the fruit at a point along the suture on the upper surface. Only a single larva develops per fruit, and both seeds are consumed by it. The mature larva exits via a tunnel it excavates through the woody fruit. The larva drops to the ground and pupates in the soil.

FEEDING DAMAGE

The fruit of silky and rock hakea consists of two halves, each of which contains a single black, winged seed (ii). A larva of the seed-moth initially feeds on one of the two seeds (iii) and only feeds on the second when the first one has been consumed. The only indication that the seeds have been consumed is the 2 mm larval exit hole on the side of the fruit.

IMPACT ON SILKY AND ROCK HAKEA

The larvae destroy the seeds in the mature fruits of hakea and, at some sites, the moth has destroyed more than 65% of the silky hakea seeds. It is still too early to predict the impact the moth will have on the seeds of rock hakea. The moth has been released throughout the South African range of silky hakea, and also in two rock hakea sites in the Western Cape Province. The seed-moth may be redistributed to areas where it does not occur by stripping all the fruits from the trees in April/May in areas where the moth is abundant, and then inspecting the fruits for newly-laid eggs using an illuminating magnifier. Any fruit halves that contain eggs are then attached to healthy fruits in the field, using a silicon adhesive, so that the emerging larvae can enter the healthy fruit (iv). Approximately 200 egg-bearing fruits should be released in each new infestation.

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