



The stem-boring beetle *Aphanasium australe* (Boisduval) is native to Australia and occurs on both silky hakea (*Hakea sericea*) and rock hakea (*Hakea gibbosa*). Following extensive host-specificity testing to ensure that the insects cannot reproduce or survive on any other plant, this agent was cleared for release in South Africa in 2001. The first releases on silky and rock hakea were made in 2001/2 and 2003/4, respectively.

DESCRIPTION

The adults are blackish brown (i) and emerge from the roots or stems during November to January. The body length of the females vary between 19-25 mm, making them larger than the males, which vary between 11-19 mm. The adults are active fliers.



LIFE CYCLE

Aphanasium australe has a prolonged life cycle that lasts up to two years. The females lay clusters of 10-20 eggs on the base of the stem at soil level in the case of silky hakea, and anywhere on the stem of rock hakea. The cream-coloured eggs are approximately 1 mm in length and take approximately 14 days to hatch. The hatching larvae enter the stem directly from the eggs and an indication of penetration is the reddish-brown gum that exudes from the larval entry point. The larvae develop slowly, and may take one to two years to reach maturity. The mature larvae hollow out a chamber beneath the bark and just above the soil surface, in which they pupate.



FEEDING DAMAGE

The developing larvae tunnel gregariously at the base of the stem, and in the sub-surface roots of infested silky hakea plants. Indications of larval presence in the plants are characteristic, thickened stem bases caused by scar tissue formation, and copious amounts of frass at the base of the plant (ii). In the case of rock hakea, the larvae tunnel in the stems higher up on the plant, forming characteristic thickening of the stem or branch (iii). This is coupled with copious quantities of frass.



IMPACT ON SILKY AND ROCK HAKEA

Larval feeding can kill mature plants growing under natural conditions, especially if the plants are stressed by drought, disease or other factors. Extensive tunnelling can weaken the plants structurally and may cause them to fall over, particularly when subjected to the strong winds typical of the Western Cape (iv). Internal boring in smaller plants reduces plant vigour and causes stunting. Larval damage to the plant may also provide sites for further infection to occur, for example, by the damaging indigenous fungus *Colletotrichum acutatum*.



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