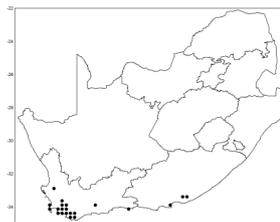
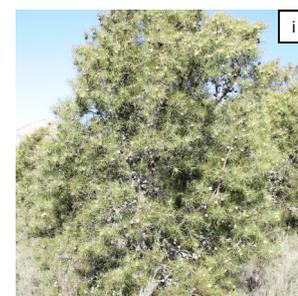


ARC-PPRI FACT SHEETS ON INVASIVE ALIEN PLANTS
AND THEIR CONTROL IN SOUTH AFRICA

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ROCK HAKEA (*Hakea gibbosa*) is a much-branched, prickly and bushy shrub or tree that reaches as high as four metres (i). Native to Australia, the plant was originally brought to South Africa in the 1850s. The needle-like leaves are greyish-green, hairy, have sharply pointed tips, and are up to 80 mm long (ii). Cream-coloured flowers occur in loose clusters in the leaf axils (ii) between June and early September. These are followed by grey, woody fruits (iii) approximately 35 mm long and 30 mm wide, with two sharp apical horns. Each fruit consists of two halves, each of which contains a single, winged seed. The annual fruit crops remain on the plant, and the seeds in the fruits are only released after the plant dies—usually as a result of fire. Rock hakea is a category 1 declared weed in South Africa, which is prohibited by law, and must be controlled or eradicated where possible.



THE PROBLEM

Rock hakea is a serious invader of mountain fynbos in the Western Cape (iv) and has shown that it has the capacity to form dense thickets in the natural vegetation in which it largely occurs. Dense stands of the weed increase the risk of fire, increase fire intensity, and reduce water runoff in mountain catchments. Rock hakea is largely restricted to the Western Cape, where it occurs in the Cape Peninsula, Klein River Mountains, Steenboksborg and Franschhoek Mountains.



THE SOLUTION

Mechanical control is the best method of controlling rock hakea, but the leaves are hard and prickly, which make it more difficult to work with than the other invasive hakea species. However, mechanical control is costly, and the plant often occurs in inaccessible areas. While herbicides have also been used to control rock hakea, these have played a minor role because they are expensive and difficult to apply, especially in infestations that are not easily accessible. The only sustainable solution to the problem is biological control and, to this end, rock hakea strains of three insect species introduced to control silky hakea were collected on rock hakea in Australia, and released on rock hakea in South Africa. The first agent introduced was the seed weevil, *Erytenna consputa*, the larvae of which feed on the seeds of the green developing fruits. The second insect was the stem-boring beetle *Aphanansium australe*, which tunnels in the base of the stem and roots. The most recent introduction is the hakea seed-moth, *Carposina autologa*, which feeds on the seeds in the mature fruits of the plant. These agents are discussed in separate fact sheets.



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA



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