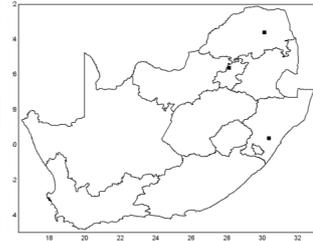


ARC-PPRI FACT SHEETS ON INVASIVE ALIEN PLANTS  
AND THEIR CONTROL IN SOUTH AFRICA

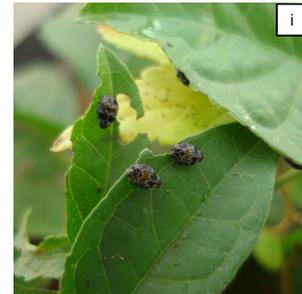
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The jewel beetle, *Hylaeogena (hedwigiella) jureceki* Obenberger, has been released as a biological control agent against cat's claw creeper (*Dolichandra unguis-cati* (L.) L.G. Lohmann) infestations in South Africa. The beetle has established at a number of sites around the country (see map), and is dispersing well.

#### DESCRIPTION

Adult beetles are blue-black in colour with an irregular metallic sheen, and measure up to 3 mm in length (i). Both adults and larvae can be readily found on the leaves. Larval tunnelling results in a trail of dead tissue, which creates distinctive light brown mines underneath the leaf epidermis (ii). When disturbed, the adults drop from the leaves and feign death.



#### LIFE CYCLE

Adult females lay numerous eggs on the underside of mature leaves, near the margin, and usually close to the base of the plant. These flat, shiny, disk-shaped eggs are about 0.75 mm in diameter, transparent when fresh, but become darker with age. Larvae emerge within about 12 days, living and feeding below the leaf epidermis. They pass through 3 instars (growth stages) and, after about 22 days, chew a characteristic disk into the epidermis in which to pupate (iii). Adults emerge after about 9 days, usually reproduce within another 16 days, and have a lifespan of about 9 months.



#### FEEDING DAMAGE

Both the larvae and adults feed on leaves. Larvae feed by mining below the leaf epidermis of mature leaves, creating blotches or lines of dead tissue. These mines are often extensive, destroying the entire leaf, and eventually causing the leaf to drop. Adults feed on the younger leaves near growth points, removing tissue which can eventually skeletonise the leaf (iv).



#### IMPACT ON CAT'S CLAW CREEPER

Cat's claw creeper is still widely found in suburban gardens despite its status as a weed, so the potential for further spread is great. Studies have shown that the plant is susceptible to sustained pressure by insect herbivores. At high population densities, *H. jureceki* feeding damage causes premature leaf drop and growth point die-back. This removal of leaf tissue severely limits the photosynthetic capacity of the plant, slowing its growth and, in some cases, causing it to draw on nutrient reserves held in the tuber bank. It is anticipated that the jewel beetle, together with the other biocontrol agents released, will achieve the intense, sustained pressure required to manage current cat's claw infestations, and also curtail the future spread of the weed.



environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA



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