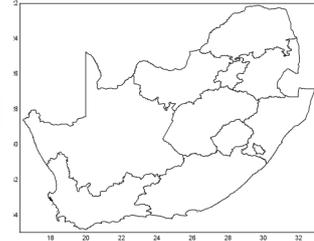


ARC-PPRI FACT SHEETS ON INVASIVE ALIEN PLANTS
AND THEIR CONTROL IN SOUTH AFRICA

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The lacebug, *Carvalhotingis hollandi* Drake, 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 insect has only recently been released, and its establishment status is still unclear. Nevertheless, laboratory testing has shown the insect to be capable of damaging the weed severely.

DESCRIPTION

The adult lacebug is approximately 3 mm in length (i). Adults are similar in appearance to the other lacebug released on cat's claw, *C. visenda*, except that they are flatter, more uniformly brown with no raised black knobs on the wings, and have less transparent wing area. They feed singly on leaves and, like *C. visenda*, also drop to the ground when disturbed. The nymphs (juveniles) are smaller and paler than the adults, and generally feed in small groups (5-10 individuals) on the underside of leaves (ii).



LIFE CYCLE

Adult females appear to be more fecund than *C. visenda*, laying 1-57 eggs scattered in loose groups, which are partially embedded in the tissue on the underside of leaves. The eggs from a particular group hatch at the same time, within about 14 days after laying.

Nymphs undergo 5 instars (growth stages), becoming adults in about 16 days. When the adults emerge, they are cream-coloured, becoming light brown as their wings harden. Adults become reproductive within about 13 days, and continue to reproduce throughout their lifespan of approximately 123 days.



FEEDING DAMAGE

Both adults and nymphs feed by sucking the contents of leaf cells (iii), which causes characteristic white speckling on the leaves (chlorosis). The nymphs tend to feed gregariously on the underside of the leaves, and substantially reduce the chlorophyll content. This, together with adult feeding, reduces the ability of the plant to photosynthesize (iv).



IMPACT ON CAT'S CLAW CREEPER

Despite its status as a weed, cat's claw creeper is still widely found in suburban gardens, so the potential for further spread is great. Studies have shown that the plant is susceptible to sustained pressure by herbivores. However, due to the presence of the tuber bank, control of cat's claw infestations is likely to take a number of years. Nevertheless, by significantly reducing the plant's ability to photosynthesize, *C. hollandi* is anticipated to make a valuable contribution to the biological control of cat's claw creeper in South Africa.



environmental affairs

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