WEED ALERT

PEST OF BRIDAL CREEPER RELEASED

By Tim Woodburn

MOST Land for Wildlifers *will be aware of bridal creeper, one of the most significant environmental weeds in the southwest of WA. CSIRO has recently released a biological control agent.*

CSIRO and the Cooperative Research Centre for Weed Management Systems have been studying the possibility of using natural enemies for bridal creeper for some years now. Bridal creeper is a much less vigorous plant in its native range, South Africa, where it never forms impenetrable blankets of vegetation, as it does here.

The first insect to be imported from South Africa for detailed study of its specificity in Perth, was the bridal creeper leafhopper *Zygina* sp. This small, whitish insect is only 2.5mm long. Females lay about 200 eggs singly just below the leaf surface. The eggs hatch within about a week, and the nymphs feed on the undersurface of the leaf by sucking out the leaf cell contents. Adults feed in a similar way. This causes a silvering of the leaves, and reduces their ability to photosynthesise. The insect has many generations a year and thus it is hoped that field populations should build up rapidly in Australia.

The specificity testing showed that the bridal creeper leafhopper is a very specific insect, and is only able to complete its life cycle on the weed. Cultivated asparagus, a close relative, is at no risk and neither are any Australian plants. After careful consideration by 21 State and Federal bodies, the bridal creeper leafhopper was approved for release into the Australian environment by the Australian Quarantine and Inspection Service and Environment Australia.

The first releases were made in South Australia, which funded the survey work in South Africa for many years. Subsequent releases have been done in WA, Vic and NSW. CSIRO is developing release strategies for the distribution of this insect by community groups and expects to have these in place in time for next year's growing season.

Biological control of this weed will be a slow process due to the biology of the weed. Although it blankets vegetation during autumn to late spring, about 90% of its biomass is in fact underground in the form of fleshy tubers. It is the running down of the reserves in these tubers which will take many years. This may well work to our advantage, however, as the decline should be a gradual one. This will allow the bush to regenerate at a slow pace. A rapid decline could pose revegetation problems for land managers.

Other potential agents are being studied in quarantine. In Canberra, host testing is progressing well for a rust fungus that really impressed the scientists by the damage it causes in South Africa (*see WW3/4 – Ed*). Two further insects are under investigation in Perth, a leaf beetle that attacks new growth, and a seed wasp that feeds on developing seeds within the fruit of bridal creeper.

The insects have been released at a few trial sites in WA – the photos were taken during a weed management workshop at Kojonup in August – but by next year millions of insects should be ready for release. It is hoped that community groups will take responsiblity for spreading them onto infestations in their local area. If you are interested in helping with this, please inform your local *LFW* Officer, or ring the author direct. (*There will be a reminder in Western Wildlife next year- Ed.*)

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Tim Woodburn explains the program at Kojonup (photo: David Lamont)

Participants at the workshop studying bridal creeper leafhoppers (photo: David Lamont)