

Section IV: Community

A short story

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My contribution here is purely subjective, but I think that any small piece of information can help fit in to the jigsaw we must make to try to halt the advance of this alien or it will overtake us.

I have in my driveway a very tall tree-like shrub which appears to be a hybrid of *Calothamnus gilesii* and *Calothamnus homalophyllus* (subsequently referred to as *Calothamnus* ×). It is a very prolific flowerer but appears to be somewhat opportunistic in that it flowers at slightly different times each year.

Many people have reached the conclusion that the seed of bridal creeper is dispersed by birds, I would like to go even

further and say it is dispersed by honeyeaters and that eating bridal creeper fruits is a learned behaviour on their part or we would have been overcome by this weed long before now.

Almost all of the hundreds of seedlings of bridal creeper which appear in my garden do so beneath nectar producing plants. This information does not seem to avail us much because we can't do away with the honeyeaters or the nectar producing plants. But the interesting thing that emerged was that, one year, under *Calothamnus* × I found 150 seedlings of bridal creeper, which of course, I removed. This seemed to indicate that it

flowered at the same time the bridal creeper was seeding. The following year there were no seedlings under *Calothamnus* × showing that perhaps it flowered at a different time than the creeper and that no seeds had lasted over 12 months.

This seems to tell the tale that the seeds of bridal creeper will not remain viable from one year to another or that every single one germinated the first winter, which would be unusual for seeds. The only other explanation is that they could be removed or eaten. In either case it seems very encouraging to think that, once the weed has been properly disposed of it will not return by way of seed, which may be remaining in waiting to grow for an indefinite period of many years, as in the way of some weed seed. I believe one of the most important things to know in the control of weeds is the length of time seeds will remain viable in the ground.

Boomerang Gorge Bridal Creeper Project

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Introduction

Boomerang Gorge is located in the southern part of Yanchep National Park, north of Perth, Western Australia. It is the site of an ancient collapsed cave system, and still has a stream and wetland area running through it. Although near the developed tourist area of the Park, Boomerang Gorge is surrounded by remnant vegetation; mostly limestone heath vegetation and tuart (*Eucalyptus gomphocephala*) woodland. Up to 1994, the remnant vegetation of the gorge was badly infested by bridal creeper (*Asparagus asparagoides*); out-competing and replacing native plants and detracting from the gorges natural beauty.

History

It is thought that bridal creeper was introduced into Yanchep National Park as a garden plant, being grown outside one of the tram carriages overlooking Boomerang Gorge. The tram carriages were

rented out as holiday accommodation for many years.

A wheelchair accessible limestone trail was constructed through Boomerang Gorge in 1981 for 'The Year of the Disabled'. Several people involved with the trail project have said they remember seeing "a couple of bridal creeper plants" along the gorge at that time. In the 15 years since then the weed has spread at least 5½ km out from the gorge, and now covers most of the limestone outcrop areas on the eastern side of Loch McNess. Seed spread appears to be by silver-eye birds which, liking good vegetation cover, do not stray across the lake. Hence there does not appear to be any bridal creeper on the western side. Bridal creeper seems to favour limestone outcrop areas in the Park, possibly due to water retention and insulation from summer heat provided by the rock crevices.

Boomerang Gorge Bridal Creeper Removal Group

The project described below was only possible with the help of members of the community. In 1993 a group, the Boomerang Gorge Bridal Creeper Removal Group (Boomerang Gorge BCRG) was formed to eradicate the bridal creeper menace from

Boomerang Gorge. The history and activities of this group are described by Vines (1996).

Bridal creeper removal

The area being covered by our project is bordered by the rim of Boomerang Gorge, an area of approximately 20 ha. A Works Program for the project is drawn up each year, with a list of action points etc. Senior Ranger at Yanchep, Ron Shimmon, as project facilitator (through the Yanchep National Park Advisory Committee), ensures that the management plan for the park and volunteer regulations are adhered to.

Because of the environmental sensitivity of the Boomerang Gorge area it was decided early in the project that the use of herbicides, at least in the western half of the Gorge, was not appropriate. This decision was backed up by the recently published results of Curtin University tests on the effects of herbicides on frog species in wetland areas. Of course this has left us with manual removal as the only other option.

As with all bushland weeding/regeneration projects, it is not effective to have people carrying out odd bits of weeding here and there. A concerted effort is needed in one area to totally clear bridal creeper before moving on. An enlargement of the small Boomerang Gorge area was made from the Park map. The resultant map was used to mark the area into sections on a 'priority' basis, each of the sections being broken down as necessary into smaller

Footnote

¹ For his efforts in this project and many other bushland conservation projects in Perth's northern suburbs, David Pike received the 1995 John Tonkin Individual Endeavour Award from Greening Western Australia.

achievable sections which can be tackled at one working bee.

In the first year the island area in the middle of the Gorge was chosen as a trial area, being a discreet section bounded by limestone track. At successive working bees the different sections of the island were tackled, the tubers dug out, then carted away to be burned at the Park's 'fauna tip' by park staff. The results from the first year were most satisfactory, but certainly showed what a long term project this was going to be. During the year a number of large fig (*Ficus* sp.) trees were declared 'Honorary Bridal Creeper' for the day, and many have now been removed.

It was originally intended that each area cleared would be replanted the following autumn with indigenous species to stop further weed growth in the bare ground. All plants for the project are to be grown from seed and cuttings collected from in and around the Gorge. Unfortunately, owing to constant problems with loss of power to the nursery reticulation, the quantity of plants required could not be produced for planting in 1995. The problem has been rectified, enabling production seedlings for planting in 1996 to go ahead. Yanchep Primary School have also shown interest in helping to grow plants for the project, and 1st Wanneroo Guides and Brownies are interested in being involved with future plantings.

During 1994, expert advice was received from Mal Graham from CALM (Katingann District), John Scott, CSIRO (Division of Entomology) and Patrick Pigott, CALM (Science and Information), all of whom suggested trials and controls which should be carried out in the Park. Also during the year Chris Stansbury (Edith Cowan University) carried out research work on bridal creeper in Yanchep National Park for his Honours thesis.

The first working bee for 1995 was held in April, volunteers re-weeded the island section, picking up any bridal creeper regrowth, especially from small pieces broken off during the previous years weeding. It was pleasing to see that amongst the weed growth there was some natural regeneration of native plants. The main species present were those with hard coated seed, including *Hardenbergia comptoniana*, *Acacia pulchella* and the annual *Parietaria debilis*. A few *Spyridium* and *Rhagodia* seedlings were also spotted.

During the early part of 1995 some work was undertaken in the Gorge by a 'New Work Opportunities' group working in the park. They removed fennel and buffalo grass, both escapees from the tram gardens, from a section of the cliff face. The Boomerang Gorge Bridal Creeper Removal Project also benefited from the additional labour, bridal creeper was targeted several times by 'New Work

Opportunities' group. The tubers form a thick carpet over the limestone rocks, and are wedged into every crevice. Selection of tools for this type of project can be quite a challenge, caulking chisels are quite useful in crevices, and crowbars have proved to be effective in a lot of different situations.

Conclusions

Back at the start of the project, it was quite obvious that without a concerted effort by CALM to start controlling bridal creeper outside the Gorge, what we were doing would really just be a futile gesture. If in 15 years the bridal creeper has spread at least 5½ km, and like most things in nature spreads exponentially, the conservation value of the whole Park is now under very serious threat. At the very least, the spread has to be stopped, and ideally the bridal creeper has to be pushed back further and further each year. As well as doing something practical about bridal creeper in Boomerang Gorge, the Project was to stir some action about the weed problems facing the Park.

Our successes up to 1995 have been, firstly to involve the Scouting and Guiding movements, providing them with the environmental 'hands on' activities (removing bridal creeper) they need for their badges. Secondly, we have shown that bridal creeper can be manually removed, and lastly, we have been successful in gathering information and ideas, and importantly promoting our groups activities.

Funding the activities of the Boomerang Gorge BCRG is a major problem. The group was successful in 1993 in getting publicity and education activities funded by the Gordon Reid Foundation. Through the Yanchep National Park Volunteer Association (the BGRG is a member), we could probably get additional grants from Gordon Reid Foundation and other funding bodies for a herbicide spraying project higher up the Gorge. Unfortunately volunteers can't be used for spraying. CALM, being a government organization, can't apply for grants from such sources for a spraying program and has to rely on their own budgeting—a 'Catch 22' situation.

The conservation value of the whole Park has been compromised by this weed, surely a prime objective of a National Park. From our point of view, we failed to get any spraying has been carried out in the Park to stop the spread of bridal creeper up to 1995 and until recently no permission had been given to carry out spraying or burning trials. On a positive note CALM's Perth District has recently allocated funds for spraying in 1996. A bridal creeper control trial will be conducted at Yanchep National Park (away from Boomerang Gorge) and at Woodmans Point (J.P. Pigott personal communication).

Reference

- Vines, J. (1996). Volunteer involvement with the Boomerang Gorge Bridal Creeper project. In 'Proceedings of the Bridal Creeper Symposium, held at CALM, Perth, October 24 1995', eds. J.P. Pigott, D.L. Lamont and G.J. Keighery (1996). *Plant Protection Quarterly* 11, 74-5.