



Mr. Lachlan

## Garden Escapes

What does garden escape conjure up for you? The vision of a tranquil, leafy nook, where you can escape from the cares of the world? Or perhaps it's the name of a weekender at an enterprising luxury hotel which promises you an escape from the cares of maintaining your garden?

For several years **Greg Keighery**, botanist with CALM, has been involved in documenting a different kind of garden escape - a far more threatening kind, one which has the potential to seriously damage our environment. These garden escapes are plants that have been deliberately cultivated as ornamentals, or occasionally as small-scale crop plants, and have become partly or wholly naturalised.

**G**arden escapes are often found in cemeteries, rubbish tips, weedy road verges or abandoned town sites. Working in such areas can be construed a strange activity, even for a botanist (and I have been questioned by some subsequently very amused police officers while surveying road verges outside Northam, one evening). It is important,

however, to know your enemy, because if a species can persist and spread, unaided by people, then it can often have the potential to become an environmental weed.

Although in some definitions garden escapes may still be close to the original plantings (in New Zealand all they need to do is spread beyond the garden fence), the

ones we study and are concerned with have severed this link. Unfortunately, too many people still see our bushland as a convenient place to dump garden refuse. The following examples demonstrate that this can be at great cost to conservation, and, indeed, to the taxpayer, who has to bear the cost of removal.

## Agave on Rottnest Island

Rottnest has a long history of human settlement, resulting in an island with strong historical and recreational, as well as conservation values. Despite many introductions few species have escaped and flourished outside the settlement because of the island's harsh environment.

Two successful escapes were *Agave americana* (century plant) and *A. sisalana* (sisal). These were lumped as *Agave americana* in the management plan released by the Rottnest Island Management Planning Group, but Charlie Hansen (Re-afforestation Officer of the Rottnest Island Board) and I were able to work out that two species were present on Rottnest, and have their eradication documented separately.

*Agave sisalana* was probably imported as a source of sisal (or perhaps a hedge plant), and some were dumped near Garden Lake at least 50 years ago. Since that time the species slowly spread by rhizome and bulbils (it does not produce seed) till it occupied an area of about 0.5 ha, and had completely eliminated all other plants in this area.

During 1987 Charlie Hansen physically removed the infestation (spraying with herbicide had proved ineffective). Even with the aid of school group volunteers and other staff it was a major effort. Some 12 truckloads of *Agave* were removed and buried, each major clump weighing up to one tonne. The area has been fenced, and replanted with native shrubs, but will still need regular inspection to destroy any resprouting from the rhizome. Despite being a small infestation it was very expensive to remove. *Agave sisalana* is not known to have become naturalised elsewhere in W.A., and it will soon become extinct on Rottnest. Details



*Agave sisalana* infestation on Rottnest.



*Lampranthus glaucus*.



The problematic cairn at Torndirrup National Park.

of its extent, type of spread and methods of control have been documented and can be used if other populations are found.

### South coast succulents

Granite rocks are islands of unique plants scattered throughout southern W.A., and as such they are particularly threatened by garden escapes. Around Albany, the major threat appears to be succulent shrubs, which can tolerate the summer drought and smother out smaller natives. These are usually from southern Africa (*Lampranthus glaucus*) or the Mediterranean region (*Aoenium* species).

Perhaps the most unusual series of garden escapes I have encountered were those in Torndirrup National

Park. On the summit of one large granite rock a cairn of stones had been erected and a garden created below it, which was planted with succulents. Unfortunately, two of these species (*Crassula tetragona* and *Aoenium castello-paevoniae*) had become widespread on the rock, at the expense of the other native plants. Most of these escapes have now been removed.

Succulent plants are often encountered as outcasts in refuse tips and apparently rarely become naturalised. Nonetheless, within a specific habitat and perhaps climatic zone, they have the potential to destroy the conservation values of this habitat, and should be destroyed.



*Chasmanthe floribunda*

G. Keighery

### Agricultural Protection Board: Categories of Declared Plants

- P1:** cannot be brought into an area (may be all or part of W.A.), all declared plants

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- P2:** plants which will be eradicated in W.A., e.g. skeleton weed

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- P3:** plants which will be controlled (reduced) within the area, e.g. blackberry, saffron thistle

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- P4:** plants which will be contained within area declared, and prevented from spreading, e.g. Patterson's curse

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- P5:** plants treated only on road verges or reserves, e.g. watsonia

### Bulbs or Corms

Southern W.A. has few native species which possess bulbs or corms, unlike South Africa. Since settlement we have been importing bulbs for our gardens, and unfortunately many of these species shifted into our bushland by dumping over the years.

Probably, our ephemeral wetlands are most at risk from bulbous invaders, they contain a rich herb flora, which is overrun by bulbous invaders. A classic example is the picture showing a wetland succumbing to a wave of *Babiana* (Baboon flowers - so named because Baboons eat the corms). Heathlands, especially coastal areas, are also at risk, because the invaders can overrun the locals.

Woodlands, too, are susceptible; freesias have helped eliminate native orchids in banksia woodlands in Kings Park, and *Gladiolus caryophyllaceus* (a rare species in its native South Africa) is now spreading along the Swan coastal plain woodlands.

One final example can demonstrate how unpredictable plants' responses can be. *Amaryllis belladonna* (Easter lily) was a very popular nineteenth century garden plant in W.A. Generally, small, slowly spreading (adventive) clumps or persisting bulbs mark old



G. Keighery



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A wave of babianas engulfing a wetland at Waterloo, near Bunbury (top).

Easter lilies invade a woodland (above).

townsites, houses or farms. At Arumvale (north of Augusta), however, the bulb is widespread in the tall jarrah-marri forest. Here the species spreads by seeds, and evidence for this can be found by noting that the normal deep pink flowered cultivar has hybridized with the white-flowered cultivar (cv Hawthor).

The remedy is simple: if rubbish containing bulbs was not dumped in bushland, there wouldn't be a problem. Prevention is much easier than importing a troop of bulb hunting baboons, or CALM staff being paid to act as bulb hunters.

Unfortunately, public awareness of the problem is not high, and our

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## EDITORIAL

Anybody who reads tourist brochures in this State will appreciate that the tourist industry is, to a large extent, dependent on natural features and wildlife for its 'product'. Many people who are concerned with the natural environment are antagonistic to tourism, and it is certainly true that in the past there have been some insensitive tourist developments in the State. But, just as the farming community over the past ten years has become one of the greatest allies of conservation, so, increasingly, is the tourist industry. For example, in a recently published tourist industry report on tourism in the Kimberley, the need to preserve this environment was given top priority.

This report is indicative of the growing awareness in that industry of the symbiotic relationship between tourism and the protection and maintenance of our unique flora, fauna and landscapes. Rather than being despoilers, the tourist industry has the potential to become one of the strongest advocates for conservation in the broadest sense.

There is a great potential for synergism between those interested in the science of conservation and the tourist industry. One of the ways by which the tourist potential of any natural area can be enhanced without any cost to the environment is by providing information to the visitors on the natural science that makes that area special.

*Landscape* is one avenue by which we are attempting to provide an added dimension to the 'look it's lovely' tourist experience. Interestingly, while *Landscape* receives almost universal acclaim from the general public, there is ongoing, often vigorous, internal debate about how technical we should make the magazine. We would appreciate your views.



Shark Bay, p.8



Carving the Future, p.33



Garden Escapes, p.44

### Cover Photo

'Now, just how do I find my way out of this Renoir landscape?'  
Photographer **Richard Woldendorp** captured this lizard taking a sighting.