

# Weed Management Society of South Australia



## Strategies for wheel cactus (*Opuntia robusta*) – a significant non-WoNS for South Australian rangelands

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### Introduction

*Opuntia* species management in South Australia is clustered under the banner of the leading invasive; wheel cactus (*Opuntia robusta*). This formidable invasive degrades semi-arid ecosystems and has become well established over significant areas within SA. A cross-regional taskforce has formed to raise the profile of *Opuntias* and coordinate a strategy to prevent further expansion. Communities have formed local groups to raise their concern and coordinate control.

### The Problem

Wheel cactus is a difficult enemy. It has a thick outer skin that reduces moisture loss and specific mechanisms for storing water in the roots and reducing transpiration during the day. In its home range in Mexico it is a valued plant, however in Australia, where it grows in the absence of its suite of natural invertebrate herbivores there is little to stop its ongoing invasion. It has gradually invaded as birds source seeds from unmanaged plants and spread it over a vulnerable landscape. Floods that pass along watercourses snap off the fleshy plant parts and distribute them downstream where they rapidly re-establish. Pieces of stem have been found taking root in the drying flood-out less than six days after the water had passed through one intermittent watercourse in the Flinders Ranges.

If unchecked wheel cactus slowly replaces native arid zone plants and alters habitat. Flow pattern in watercourses is changed as dense cactus holds back the water, causing it to divert and erode riverbanks, which increases sediment load. The degradation to semi-arid ecosystems dependent on intermittent watercourses is difficult to quantify.

### Distribution

Wheel cactus infests extensive areas of semi-arid environments in SA, Vic and NSW. The largest 400 km<sup>2</sup> infestation is in the Flinders Ranges, and the other areas are around lower Lake Torrens and in the Parnaroo Hills where plants occur at a density of 200 plants per Ha in the most densely infested parts. Low density plants can be found expanding 10 or 20 km away from these areas and there are extensive scattered plants in other places. Whilst it is almost beyond a strategy of containment, the current distribution is only an estimated one fifth of its potential range within SA.

### Cross-border taskforce

Management across administrative boundaries is challenging and early in 2008 a State *Opuntia* Taskforce was formed with the intent of raising visibility and improving coordination across natural resources management boundaries in relation to the *Opuntias*. Whilst the taskforce considers all invasive *Opuntias*, wheel cactus has emerged as the 'banner' species alongside prickly pear (*Opuntia stricta*). A key benefit is the taskforce forum is information exchange and the taskforce has tackled review of policy, clarification of the extent of distribution and degree of threat, coordination of strategic on-ground action, advocacy for a

biocontrol solution, and oversight for an *Opuntia* Management Plan.

### Involving community

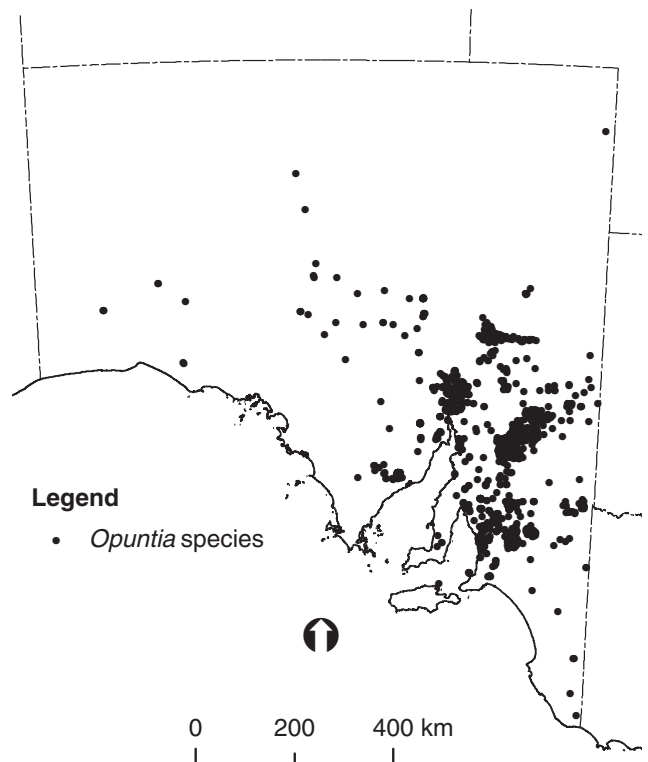
Community concern is high as the wheel cactus expansion and infilling within has occurred with alarming rapidity. Infestations often occur in rugged and inaccessible parts of the ranges, and control methods are labour intensive. Local groups of landowners have formed in key areas as a strategy to overcome the scale of spread and overwhelming density in core areas. These groups are supported by natural resources management boards in SA to plan and coordinate control and access grants to fund control work. Local champions report stories of killing a thousand or more plants on a single property in their effort to stop further invasion.

### Research

The Natural Resources Management Standing Committee has approved wheel cactus as a candidate for biocontrol (18/4/08) and this option is recognized as the only method of control that will be effective in the long term. A survey of organisms present has taken place and the foundations are now laid for future research on biological control.

### Acknowledgments

David Cooke (DWLBC), Adrian Harvey and Kate Willing (Rural Solutions SA), Lorraine Edmunds (Blinman-Parachilna Pest Plant Group).



**Distribution of *Opuntias* in South Australia**  
(Map produced by Rural Solutions SA, May 2009).