Impact Assessment Record

Scientific name: *Cylindropuntia tunicata* (Lehm.) F. M. Knuth Common name: Abrojo (chain-link cactus, sheathed cholla)

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	'If uncontrolled the plant can also form relatively dense infestations that are unsafe for an animal to walk through' (WSC 2004). Has 'numerous, long, tough, sharp, sheathed spines, which can penetrate leather boots, vehicle tyres and animals' and is difficult to control (Laity 2005). Grows to 60cm (Britton & Rose 1919). Therefore would be of high nuisance value to people and due to the potential of puncturing tyres a major impediment to vehicles.	**H**	**MH**
2. Reduce tourism?	The species is mat forming cactus recorded in Eucalypt woodland (Hosking, Conn & Lepschi 2006). Spines can penetrate boots and vehicle tyres (Laity 2005). The species could therefore affect some recreational activities such as bush walking of 4WDriving.	**MH**	**M**
3. Injurious to people?	The species has spines that can be from 3-6cm long (FNA 2007). Spines can penetrate boots and vehicle tyres (Laity 2005).	**H**	**MH**
4. Damage to cultural sites?	Unlikely to cause structural damage the species could have some impact on the aesthetics of an area. This has not however been reported.	**ML**	**L**
Abiotic			
5. Impact flow?	Terrestrial species	**L**	**MH**
6. Impact water quality?	Terrestrial species	**L**	**MH**
7. Increase soil erosion?	Many of the *Cylindropuntia* spp. have fibrous root systems (Britton & Rose 1919). Unlikely to contribute to large scale soil movement.	**L**	**MH**
8. Reduce biomass?	The species is a mat forming cactus which if left uncontrolled can form relatively dense infestations (Hosking, Conn & Lepschi 2006; WSC 2004). Therefore if the species invades a relatively open habitat as it is reported to do it is likely to cause an increase in biomass.	**L**	**MH**
9. Change fire regime?	Due to the higher moisture content of succulents and therefore the decreases flammability of the plant tissue Invasion by *Opuntia* spp. may decrease fire frequency and intensity, however this has not been fully proven (Brooks et al 2004).	**ML**	**M**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC= semi-arid woodland (V); CMA=Mallee; Bioregion= Murray Mallee; CLIMATE potential=VH. 'Bushy or mat-forming and creeping' (Benson 1982). 'If uncontrolled the plant can also form relatively dense infestations' (WSC 2004). Minor displacement of some dominant species within the lower layer.	**ML**	**M**

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QUESTION	COMMENTS	RATING	CONFIDENCE
(b) medium value EVC	EVC= semi-arid woodland (D); CMA=Mallee; Bioregion= Lowan Mallee; CLIMATE potential=VH. 'Bushy or mat-forming and creeping' (Benson 1982). 'If uncontrolled the plant can also form relatively dense infestations' (WSC 2004). Minor displacement of some dominant species within the lower layer.	**ML**	**M**
(c) low value EVC	EVC= lowan sands mallee (LC); CMA=Mallee; Bioregion= Lowan Mallee; CLIMATE potential=VH. 'Bushy or mat-forming and creeping' (Benson 1982). 'If uncontrolled the plant can also form relatively dense infestations' (WSC 2004). Minor displacement of some dominant species within the lower layer.	**ML**	**M**
11. Impact on structure?	Tends to be found in grasslands or very open woodlands. 'Bushy or mat-forming and creeping' (Benson 1982). 'If uncontrolled the plant can also form relatively dense infestations' (WSC 2004). Minor effect on lower 20 – 60% of ground layer.	**ML**	**M**
12. Effect on threatened flora?	This species is not documented as posing an additional risk to threatened flora.	**MH**	**L**
Fauna			
13. Effect on threatened fauna?	Unknown.	**MH**	**L**
14. Effect on non-threatened fauna?	Unknown.	**M**	**L**
15. Benefits fauna?	Weed not documented to provide benefits to desirable species.	**H**	**M**
16. Injurious to fauna?	'Their spines readily penetrate the flesh of domestic grazing animals, thereby harming the animal' (WSC 2004). Likely that the weed could also affect indigenous fauna. Large spines dangerous to fauna.	**H**	**M**
Pest Animal			
17. Food source to pests?	The similar species *C.imbracata* is reported to be eaten by rabbits and rodents in the US especially during times of drought (Bunting & Wright 1976). Therefore *C. tunicata* may provide some food to pest species.	**M**	**M**
18. Provides harbor?	The species is not reported to provide shelter to pest species, as it is a mat forming cactus with large spines it could have the potential to do so (Hosking, Conn & Lepschi 2006).	**M**	**L**
Agriculture			
19. Impact yield?	Unknown; due to the species spines and matt forming nature, like other Opuntia species it may restrict grazing animals and therefore reduce the effective area of production (Hosking, Conn & Lepschi 2006; Pierper 1971).	**M**	**L**
20. Impact quality?	Unknown; However other similar Cylindopuntia species have been reported to reduce the quality of wool (Pierper 1971).	**M**	**L**

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QUESTION	COMMENTS	RATING	CONFIDENCE
21. Affect land value?	*O. aurantiaca* infestations 'seriously inhibit pastoral activities and result in a marked devaluation in the price of infested land' 'Control can be very costly' (Stirton 1978). Possible that *C. tunicata* could have a similar impact but no documented evidence.	**M**	**L**
22. Change land use?	*O. aurantiaca* infestations 'seriously inhibit pastoral activities and result in a marked devaluation in the price of infested land' 'Control can be very costly' (Stirton 1978). Possible that *C. tunicata* could cause a change in priority of land use but no documented evidence.	**M**	**L**
23. Increase harvest costs?	Their spines readily penetrate the flesh of domestic grazing animals, thereby harming the animal' (WSC 2004). The species spines can penetrate tyres (Laity 2005). Therefore extra care would need to be taken with stock near populations increasing time or labour and the damage the species could cause to tyres may increase maintenance costs..	**M**	**M**
24. Disease host/vector?	Other Opunita species are reported as a host of Fruit fly (Blood 2001).	**M**	**L**