Impact Assessment Record

Scientific Name: *Euphorbia terracina* Common name: false capers (Geraldton carnation weed)

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	Can form dense monocultures (Brigham, 2005), but only grows to 1 m high (Parsons & Cuthbertson, 2001) and has succulent stems (Keighery & Keighery, 2000). Not likely to impede individual access.	**L**	**MH**
2. Reduce tourism?	"A very obvious weed…with a yellow hue that changes the look of the landscape" (Dempster, 2000). Minor effects to aesthetics	**ML**	**MH**
3. Injurious to people?	Sap is highly caustic and can cause painful inflammations, temporary blindness, or permanent vision loss (Randall & Brooks, 2000). This plant can cause serious injuries to people throughout the year.	**H**	**MH**
4. Damage to cultural sites?	This perennial herb (Parsons & Cuthbertson, 2001) may have been introduced as an ornamental (Keighery & Keighery, 2000). It is not likely to have any structural effect and, as a possible ornamental plant, little effect on aesthetics either.	**L**	**MH**
Abiotic			
5. Impact flow?	Whilst this species is known to invade ephemeral wetlands (Keighery & Keighery, 2000), swamps (Western Australian Herbarium, 2006), saltmarsh and riparian areas (DiTomaso, 2003), it is unlikely to affect the flow of waterways.	**L**	**MH**
6. Impact water quality?	As a perennial herb, growing to about 1m high (Parsons & Cuthbertson, 2001) this plant is unlikely to impact on water quality as it is not tall enough to shade waterways significantly. Its summer leaf loss is unlikely to fall into waterways in large enough concentrations to impact on water quality.	**L**	**MH**
7. Increase soil erosion?	This perennial herb (Parsons & Cuthbertson, 2001) is unlikely to leave bare patches of soil open to erosion.	**L**	**MH**
8. Reduce biomass?	Where this perennial herb (Parsons & Cuthbertson, 2001) displaces grasses and herbs this plant is likely to cause an increase in biomass, however, "in summer most leaves are lost and many of the stems die back to the base," (Keighery & Keighery, 2000), reducing the carbon stored by this plant. The result is probably a direct replacement of biomass.	**ML**	**MH**
9. Change fire regime?	This plant is capable of displacing indigenous herbs and grasses (Town of Cambridge, 2006) and its succulent foliage that is summer-deciduous (Keighery & Keighery, 2000) may reduce the incidence and intensity of ground fires. As trees and shrubs persist, this effect would be moderate.	**MH**	**M**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC= Semi Arid woodland (V); CMA=Mallee; Bioreg= Murray Mallee; CLIMATE potential=VH. Dense infestations in Australia of up to 85% canopy cover appear to seriously degrade herb/grass layer, but indigenous shrubs and trees persist (Town of Cambridge, 2006), however, in the US, this species can form monocultures that exclude all native vegetation (Brigham, 2005). Able to displace all herb/grass species.	**H**	**MH**

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QUESTION	COMMENTS	RATING	CONFIDENCE
(b) medium value EVC	EVC= Semi Arid woodland (D); CMA=Mallee; Bioreg= Lowan Mallee; CLIMATE potential=VH. Dense infestations in Australia of up to 85% canopy cover appear to seriously degrade herb/grass layer, but indigenous shrubs and trees persist (Town of Cambridge, 2006), however, in the US, this species can form monocultures that exclude all native vegetation (Brigham, 2005). Able to displace all herb/grass species.	**H**	**MH**
(c) low value EVC	EVC= Dunefield heathland (LC); CMA=Mallee; Bioreg=Lowan Mallee; CLIMATE potential=VH. Dense infestations in Australia of up to 85% canopy cover appear to seriously degrade herb/grass layer, but indigenous shrubs and trees persist (Town of Cambridge, 2006), however, in the US, this species can form monocultures that exclude all native vegetation (Brigham, 2005). Able to displace all herb/grass species.	**H**	**MH**
11. Impact on structure?	"Forms dense thickets [to 1m high] which out compete native species for space, light and nutrients" (Randall & Brooks, 2000) and form dense monocultures that exclude all native vegetation in the US (Brigham, 2005). Dense infestations in Australia of up to 85% canopy cover appear to seriously degrade herb/grass layer, but indigenous shrubs and trees persist (Town of Cambridge, 2006). This species is capable of having a major impact on the herb/grass layer, but the monocultures of the US are unlikely to refer to trees and tall shrubs.	**MH**	**MH**
12. Effect on threatened flora?	Threatens calcareous communities in southern Western Australia (Keighery & Keighery, 2000), however no specific information was found for Victorian flora.	**MH**	**L**
Fauna			
13. Effect on threatened fauna?	No information found.	**MH**	**L**
14. Effect on non-threatened fauna?	Dense thickets of *E. terracina* seriously degrading herbs and grasses (Randall & Brooks, 2000; Town of Cambridge, 2006) could reduce the food available to grazing fauna.	**ML**	**M**
15. Benefits fauna?	This unpalatable weed (Parsons & Cuthbertson, 2001) is "poisonous if eaten in large quantities" and "has no value as fodder" (Orchard & O'Neil, 1957). Whilst this information relates to stock, it is unlikely to provide benefit to indigenous fauna either.	**H**	**MH**
16. Injurious to fauna?	This unpalatable weed (Parsons & Cuthbertson, 2001) is "poisonous if eaten in large quantities." It may also be poisonous to indigenous fauna species when in leaf, however the "toxic sap deters native herbivores, like kangaroos" (Keighery & Keighery, 2000). May be poisonous if eaten.	**MH**	**MH**
Pest Animal			
17. Food source to pests?	This unpalatable weed (Parsons & Cuthbertson, 2001) is "poisonous if eaten in large quantities" and "has no value as fodder" (Orchard & O'Neil, 1957). Whilst this information relates to stock, it is unlikely to provide benefit to pest fauna either.	**L**	**MH**
18. Provides harbor?	"Provide little habitat value due to their toxic milky sap" (Brigham, 2005).	**L**	**MH**

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QUESTION	COMMENTS	RATING	CONFIDENCE
Agriculture			
19. Impact yield?	Whilst Smith (2000) states that *E. terracina* "poses very little threat to agricultural land," it is elsewhere described as a "common and serious weed of grazing lands" (Hussey et al, 1997). It "can be a serious competitor with pasture plants and is also toxic to stock," contributing to stock losses. It is also unpalatable (Parsons & Cuthbertson, 2001) and "has no value as fodder" (Orchard & O'Neil, 1957) so could have a major impact on stock yields. As it "does not persist on frequently cultivated soils" (Parsons & Cuthbertson, 2001) it is not likely to be a weed of crops.	**MH**	**MH**
20. Impact quality?	Whilst this plant may reduce quantity with stock losses, it is not likely to be a weed of crops (Parsons & Cuthbertson, 2001) and is not noted for causing loss of quality in livestock.	**L**	**MH**
21. Affect land value?	There is no evidence that the presence of this plant affects land value.	**L**	**L**
22. Change land use?	Control is possible with cultivation, but on light sandy soils, sowing to perennial pasture is a more soil-suitable solution (Parsons & Cuthbertson, 2001). Control options allow land use to continue unchanged.	**L**	**MH**
23. Increase harvest costs?	Older references only recorded successful control with heavily mown and grazed lucerne (O'Neil, 1959), which were considered to be "not economically practicable" (Clarke, 1939). Parsons & Cuthbertson (2001) suggest that simply sowing to perennial pasture as a solution. This may increase the cost of harvest slightly.	**M**	**MH**
24. Disease host/vector?	Not noted as a host for agricultural diseases.	**L**	**M**