Impact Assessment Record

Scientific name: *Galenia pubescens* (Eckl. & Zeyh.) Druce

Common name: blanket weed

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	The plant is a prostrate, spreading herb from 15 to 30 cm high (Kleinkopf *et al*, 1976). Negligible effect; would not restrict human access.	**L**	**H**
2. Reduce tourism?	Given this plant is found in the same locations as native saltbushes and herbs, and has a capacity to dominate and exclude those species (R. Reid, pers. coms.), its presence in dense infestations would certainly be noticeable. But such effect may not seriously alter tourism or recreational pursuits. It may impose a moderate negative effect on the aesthetics of an area, but not for the 'average' visitor, who may be unaware it is an exotic species.	**ML**	**M**
3. Injurious to people?	It is not known to cause any harm to humans. The plant has no prickles or thorns, nor has it been demonstrated to cause minor conditions such as skin irritations. It is not recorded on common Australian or international web sites that list poisonous plants. Consider low threat.	**L**	**L**
4. Damage to cultural sites?	No evidence this plant would affect the structure of a cultural site, or have a serious negative visual effect.	**L**	**L**
Abiotic			
5. Impact flow?	West of Melbourne it is noted to occur as dense populations on the streamsides along stretches of the lower Lerderderg and Werribee Rivers (R. Reid, pers. coms.). Although known to occur in riparian areas, it is a terrestrial plant. There is no evidence is grows into or across the stream.	**L**	**M**
6. Impact water quality?	See comment above.	**L**	**M**
7. Increase soil erosion?	In New South Wales it is abundant around mining sites (Harden 1990), however, it seems it presence was perhaps due to disturbance by the mining activity rather than deliberate planting. Lazarides *et al.* (1997) suggests it was used deliberately to stabilise mine tailings, but no direct evidence can be found where *G. pubescens* has been used for soil stabilisation. The spreading, mat-forming habit of the plant, up to 3 metres in diameter, would provide a good cover for otherwise bare soil. Kleinkopf *et al.* (1976) notes, "Its widespread, low, dense growth habit makes it capable of protecting hillsides from erosion." Unlikely to cause or contribute to soil erosion	**L**	**H**
8. Reduce biomass?	Most commonly found in highly disturbed situations such as coastal sites (Marchant *et al*, 1987), roadsides (Rycroft 1956), and stony flats and rocks (Adamson & Salter 1950). West of Melbourne, Victoria it is recorded on roadsides, flood ways, paddocks and nature strips (J. Forrester pers. coms). This plant exhibits somewhat woody stems and, with strong growth, it is likely to increase biomass slightly.	**L**	**H**
9. Change fire regime?	The leaves are 'slightly succulent' (Richardson *et al,* 2006) and Ross (1994) and Williams (1984) note *G. pubescens* var. *pubescens* was tested for fire resistance. There is no evidence of its effect on either fire intensity or frequency. From the scant comments consider it is unlikely to change either.	**L**	**MH**

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Community Habitat			
10. Impact on composition (a) high value EVC	EVC= Grassy woodland (E); CMA=North Central; Bioreg=Central Victorian Uplands; CLIMATE potential=VH In natural ecosystems it has demonstrated to displace native chenopods and other understorey species. In one area near Bacchus Marsh *G. pubescens* had displaced all chenopods. It has also been observed in grassland ecosystems affecting the growth of native grasses and forbs (D'Ombrain & Leversha pers. coms.) Potential for major displacement of indicator species within a single layer.	**MH**	**M**
(b) medium value EVC	EVC= Riverine chenopod woodland(D); CMA=Wimmera; Bioreg=Lowan Mallee; CLIMATE potential=VH In natural ecosystems it has demonstrated to displace native chenopods and other understorey species. In one area near Bacchus Marsh *G. pubescens* had displaced all chenopods. It has also been observed in grassland ecosystems affecting the growth of native grasses and forbs (D'Ombrain & Leversha pers. coms.) Potential for major displacement of indicator species (chenopods) within a single layer.	**MH**	**M**
(c) low value EVC	EVC= Coastal Dune Scrub / Coastal Dune Grassland mosaic (LC); CMA=West Gippsland; Bioreg=Gippsland Plain; CLIMATE potential=VH It has also been observed in grassland ecosystems affecting the growth of native grasses and forbs (D'Ombrain & Leversha pers. coms.) In grassland situations, it may have less impact on displacing indicator species, but in dune scrub and with little other competition, it may dominate the landscape.	**MH**	**M**
11. Impact on structure?	In natural ecosystems it has demonstrated to displace native chenopods and other understorey species. In one area near Bacchus Marsh *G. pubescens* had displaced all chenopods. It has also been observed in grassland ecosystems affecting the growth of native grasses and forbs (D'Ombrain & Leversha pers. coms.) Serious impact on lower storey species and possible negative effect on mid-storey species (growth & regeneration).	**ML**	**M**
12. Effect on threatened flora?	*G. pubescens* is known to occur in habitat occupied by *Pterostylis truncata* (brittle greenhood), a species listed as threatened under the *Flora and Fauna Guarantee Act 1988*. Given that *G. pubescens* has demonstrated capacity to suppress vegetation in the lower layer, it is likely to add further pressure on this endangered orchid species. Potential to reduce populations of threatened flora.	**MH**	**M**
Fauna			
13. Effect on threatened fauna?	No effects documented or apparent. See comment below regarding potential affect on existing food sources for native herbivores.	**MH**	**L**
14. Effect on non-threatened fauna?	The evidence of domesticated animals browsing this species is variable, but it is clear that in some situations *G. pubescens* develops dangerous levels of nitrates and oxalates that can lead to animal death (Williams 1984). Native chenopod species known to be displaced by *G. pubescens* are known food sources for birds, wallabies, etc. (Watson 2005). Minor reduction in food source.	**ML**	**M**
15. Benefits fauna?	None documented. Under drought conditions it may provide a source of food to fauna; sheep (Honan unpublished) and cattle (Forrester pers. coms.) are known to eat the plant.	**L**	**M**

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16. Injurious to fauna?	In the U.S. *G. pubescens* was shown to be highly toxic where nutrients (nitrogen) and water are not limited. The potential for this condition to occur might be limited, but is possible.	**H**	**MH**
Pest Animal			
17. Food source to pests?	Not documented. In areas west of Melbourne it has been observed that, "…not even rabbits will eat it" (Forrester pers. coms.).	**L**	**M**
18. Provides harbor?	Low growing, mat-forming plant. In dense infestations, large mats may provide temporary shelter for rabbits, though this has not been documented.	**MH**	**L**
Agriculture			
19. Impact yield?	*G. pubescens* is considered more of an environmental than agricultural weed. It is noted to occur on annual and perennial pasture (Forrester pers. coms.), but impact on stocking rates, if any, is not documented. Little or no effect.	**L**	**L**
20. Impact quality?	Not documented to affect the quality of agricultural production. Not known in horticulture or cropping situations.	**L**	**L**
21. Affect land value?	Insufficient data to assess.	**M**	**L**
22. Change land use?	Insufficient data to assess. It is a growing problem on agricultural properties near Melbourne. "Previously productive grazing land…has been invaded by Carpet Weed. This has been made worse by below average rainfall for the last 11 years," (Reid pers. coms.). There is no indication that agricultural activities have changed due to an inability to control this weed.	**M**	**L**
23. Increase harvest costs?	Mechanical removal and follow-up spraying with herbicide provides effective control. The extra time and cost of additional chemicals has lead to increased costs. It is also noted to tangle under farm machinery and catches on tynes on implements (Forrester pers. coms.).	**M**	**M**
24. Disease host/vector?	None described.	**L**	**L**