Scientific Name: *Acroptilon repens* Common name: Hardheads, Russian knapweed

QUESTION	COMMENTS	REFERENCE	RANKING
Social			
1. Restrict human access?	An erect perennial herb, 40 cm to 100 cm high, with narrow stems and leaves. Dense patches (100 to 300 stems per square metre) would be annoying to pedestrians, but is unlikely to restrict human access.	P & C (2001)	**ML**
2. Reduce tourism?	Dense infestations would have a minor effect on aesthetics.	P & C (2001)	**ML**
3. Injurious to people?	No spines or burrs. Not toxic.	P & C (2001)	**L**
4. Damage to cultural sites?	The plant has an extensive root system but there is no evidence to suggest it is sufficiently vigorous to cause structural damage. Dense infestations may create a moderate negative visual impact.	P & C (2001)	**ML**
Abiotic			
5. Impact flow?	Terrestrial species. The plant can be killed if inundated by water for a month.	P & C (2001)	**L**
6. Impact water quality?	Terrestrial species.	P & C (2001)	**L**
7. Increase soil erosion?	Perennial with an extensive network of vertical and horizontal roots to 5 to 7 metres deep and several metres laterally. Not likely to contribute to soil erosion.	P & C (2001)	**L**
8. Reduce biomass?	Commonly a weed of irrigated crops, vines, and dryland cereals. Weed replaces biomass.	P & C (2001)	**ML**
9. Change fire regime?	"Aerial growth dies off by autumn." This leaves dry matter that, in dense infestations, may increase fuel load. Minor change to the frequency of fire risk.	P & C (2001)	**ML**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC=Grassy woodland (E); CMA=Wimmera; Bioreg=Wimmera; VH CLIMATE potential "Russian knapweed does not establish readily in healthy, natural habitats." However, it can establish on neglected or disturbed areas where it would have a major impact on ground-flora.	Carpenter & Murray[1] P & C (2001)	**MH**
(b) medium value EVC	Unlikely to occur in any medium value EVC		**L**
(c) low value EVC	Unlikely to occur in any low value EVC		**L**
11. Impact on structure?	"In recent years it has established in the Eastern Mallee of Victoria, forming dense patches to the virtual exclusion of all other vegetation [i.e. agricultural vegetation]." Not known as a weed of natural ecosystems (not recorded in Carr *et al* 1992), but, "…establishes readily on…neglected areas." Would have a minor effect on ground-flora (20 to 60%).	P & C (2001)	**ML**
12. Effect on threatened flora?			

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QUESTION	COMMENTS	REFERENCE	RANKING
Fauna			
13. Effect on threatened fauna?			
14. Effect on non-threatened fauna?	Not a weed of natural ecosystems. However, "…dense patches exclude almost all other vegetation and, in Victoria, the horizontal spread of a patch of creeping knapweed from root growth has been measured at 1 metre annually." May slightly reduce habitat for native fauna through competition with other species.	P & C (2001)	**ML**
15. Benefits fauna?	"The leaves have a bitter disagreeable taste but, nevertheless, are grazed by sheep." Possible limited food source for native species.	P & C (2001)	**MH**
16. Injurious to fauna?	No physical properties such as spines or burrs. "Creeping knapweed is claimed overseas to be poisonous to livestock and to cause a neurological disorder in horses, but these problems have not been reported in Australia." It is grazed by sheep, so may be mildly toxic to fauna.	P & C (2001)	**ML**
Pest Animal			
17. Food source to pests?	No evidence of this plant being a food source for pest animals.		**L**
18. Provides harbor?	Not known to provide harbor for pest animals. Aerial parts of the plant die back.	P & C (2001)	**L**
Agriculture			
19. Impact yield?	"…dense patches [have lead] to the virtual exclusion of other vegetation and reducing the yield of cereal crops by as much as 75%." Significant impact on yield in these situations.	P & C (2001)	**H**
20. Impact quality?	"Creeping knapweed seed is unlikely to occur in cereal grain because the heads are immature at the time of harvest, however, it commonly contaminates lucerne seed in parts of the United States." Farmers may have difficulty selling contaminated seed. "The seeds are bitter and impart an unpleasant taste to flour made from contaminated grain."	P & C (2001)	**MH**
21. Affect land value?	"It is one of the most competitive of all weeds and agricultural land in California has been abandoned because of it." It is difficult to control and eradicate. "In 1982 the Victorian Government initiated a programme of assistance to landholders by subsidising the purchase of herbicides." Likely to have a major negative impact on the value of land.	P & C (2001)	**H**
22. Change land use?	"It is one of the most competitive of all weeds and agricultural land in California has been abandoned because of it." "The roots are long lived and one patch studied in Canada has survived for almost 80 years despite numerous attempts at eradication." "…some growers not longer crop heavily infested paddocks." Major detrimental change to land use resulting in significant loss.	P & C (2001)	**H**
23. Increase harvest costs?	Not known to affect harvest costs.		**L**
24. Disease host/vector?	None evident.		**L**

[1] Carpenter, A., Murray, T. n.d. Acroptilon repens *Russian knapweed.* Elemental Stewardship Extract, The Nature Conservancy. Available http://tncweeds.ucdavis.edu/esadocs/documnts/acrorep.html Last accessed 04/06/03.