

Impact Assessment Record

Scientific name: *Acer negundo* L.

Common name: Box Elder

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	This fast growing tree germinates on mass and can form dense thickets in riparian areas (Blood 2001). Therefore the species has the potential to be a major impediment in access to waterways and as a tree require significant works to remove.	H	MH
2. Reduce tourism?	Unknown.	M	L
3. Injurious to people?	People can have hypersensitivity to the species pollen (Shah & Lin 2004).	ML	MH
4. Damage to cultural sites?	Has extensive root system which can invade piping in the search for water (Blood 2001). This could be damaging to infrastructure.	MH	MH
Abiotic			
5. Impact flow?	Saplings can establish in the stream bed, they are however killed if inundated for more than 85 days during the growing season or if broken under the stress of the water (Friedman & Auble 1999). Unknown to what extent this would impact on actual water flows.	M	L
6. Impact water quality?	The species is a deciduous tree that is reported to occur in riparian habitats (Blood 2001). As a deciduous species alteration of seasonal light levels and changes to nutrient cycling could impact water quality, the impact this species has on water quality has not been reported however.	M	L
7. Increase soil erosion?	Has an extensive root system (Blood 2001). Therefore there is a low probability of large scale soil movement occurring in association with this species.	L	MH
8. Reduce biomass?	In open environments which are the species preferred habitat, establishment of the species especially in a thicket would increase biomass. In more heavily shaded environments where the species is more stunted its invasion is likely to cause a direct replacement of biomass (Mędrzycki 2007).	ML	MH
9. Change fire regime?	Unknown impact on fire regime, considering the species preference for wetter environments it is unlikely to be significant.	M	L
Community Habitat			
10. Impact on composition (a) high value EVC	EVC= Floodplain Riparian Woodland (E); CMA= Corangamite ; Bioreg= Otway Plain ; VH CLIMATE potential. Able to form thickets excluding all other species except winter growing bulb species (Blood 2001). Exclusion of all other species indicates a monoculture at least within a layer.	H	MH
(b) medium value EVC	EVC= Sedgy Riparian Woodland (D); CMA= Corangamite ; Bioreg= Otway Plain ; VH CLIMATE potential. Able to form thickets excluding all other species except winter growing bulb species (Blood 2001). Exclusion of	H	MH

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	all other species indicates a monoculture at least within a layer.		
(c) low value EVC	EVC= Riparian Scrub (LC); CMA= West Gippsland ; Bioreg= Wilsons Promontory; VH CLIMATE potential. Able to form thickets excluding all other species except winter growing bulb species (Blood 2001). Exclusion of all other species indicates a monoculture at least within a layer.	H	MH
11. Impact on structure?	Able to form thickets excluding all other species except winter growing bulb species (Blood 2001). Therefore the species is capable of major displacement.	H	MH
12. Effect on threatened flora?	Unknown; there is no evidence of this reported.	MH	L
Fauna			
13. Effect on threatened fauna?	Unknown; there is no evidence of this reported.	MH	L
14. Effect on non-threatened fauna?	Significant alteration of habitat in terms of flora composition could have a significant impact on food supply for fauna species. The degree to which this species would impact on Australian fauna has not been quantified however.	M	L
15. Benefits fauna?	Even in the species native range it is generally avoided by foraging insectivorous birds (Gabbe <i>et al</i> 2002). As a moderate sized tree it may provide some shelter for species.	MH	M
16. Injurious to fauna?	There is no evidence reported to support this.	L	M
Pest Animal			
17. Food source to pests?	Browsed by deer species (Rossell, Gorsira & Patch 2005).	ML	H
18. Provides harbor?	Dense thickets of the species have been described as places of informal intimate social life (Mędrzycki 2007). This dense vegetation cover could provide shelter for pest species.	M	M
Agriculture			
19. Impact yield?	Not reported as a significant weed of agriculture.	L	M
20. Impact quality?	Not reported as a significant weed of agriculture.	L	M

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21. Affect land value?	Not reported as a significant weed of agriculture.	L	M
22. Change land use?	Not reported as a significant weed of agriculture.	L	M
23. Increase harvest costs?	Not reported as a significant weed of agriculture.	L	M
24. Disease host/vector?	The species is effected by die back caused by <i>Fusarium solani</i> and cankers caused by <i>Eutypella parasitica</i> and <i>Inonotus rickii</i> (Annesi, Coppola & Motta 2003; Demirci & Maden 2006; Ogris, Jurc & Jurc 2006). <i>Fusarium solani</i> can also damage soybeans (Roy <i>et al</i> 1989). <i>Inonotus rickii</i> is a wood decaying fungus of hardwoods and could have implications for forestry (Barnard 1993).	M	H