Impact Assessment Record

Scientific name: *Ligustrum lucidum* W.T. Aiton

Common name: Broadleaf privet

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	As a tree species particularly of riparian vegetation which is reported to form dense thickets and can re-sprout from the stump if damaged, this species could pose a major impediment to access to waterways and require significant works to provide access (Mowatt 1981; Muyt 2001; Weber 2003).	**H**	**MH**
2. Reduce tourism?	Unknown.	**M**	**L**
3. Injurious to people?	The leaves and berries of Ligustrum species are poisonous and possibly fatal particularly *L.vulgare*, the toxicity of this species has not been confirmed (Everist 1974; Shepherd 2004). The species pollen may cause some allergies (Cariñanos *et al* 2002).	**H**	**M**
4. Damage to cultural sites?	The species is an ornamental plant, which can form dense thickets (Weber 2003). Therefore it has the potential to have some impact on aesthetics. It is unlikely to have any significant structural impact as it is reported to be shallow rooted (Muyt 2001).	**ML**	**L**
Abiotic			
5. Impact flow?	The species reportedly can impact the flow of water along drainage lines (Blood 2001). It is not however reported to what extent this species impact on flow.	**M**	**L**
6. Impact water quality?	Chemicals released from the leaves of the similar species *L.sinense* have been reported to impact on aquatic macro invertebrates (Llewellyn 2005). The species does occur in riparian areas, and could have some impact on water quality by changing light levels and nutrient imputes. There has been however no quantifiable reports of this species impacting upon water quality.	**M**	**L**
7. Increase soil erosion?	The species is shallow rooted, but is reported to reduce water flow within drainage lines (Blood 2001; Muyt 2001). The species therefore is considered to reduce the probability of large scale soil erosion	**L**	**MH**
8. Reduce biomass?	The species is reported to form dense thickets, which can then cause a reduction in biomass of the lower strata (Blood 2001; Muyt 2001; Swarbrick, Timmins & Bullen 1999; Weber 2003). Invasion by the species is therefore considered to result in a net increase in biomass due to the significant increase in the middle strata.	**L**	**MH**
9. Change fire regime?	The species reduces the biomass within the grass/herb layer which can limit a fire from spreading, instead in SE Queensland during dry winters the species can defoliate which allows a hot fire to be carried (Swarbrick, Timmins & Bullen 1999). Therefore the species is capable of altering both fire intensity and timing.	**MH**	**H**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC= Riparian Forest (V); CMA= Corangamite ; Bioreg= Otway Plain ; VH CLIMATE potential. Highly invasive in moist vegetation including riparian habitats, the species is reported to be capable of totally transforming invaded habitats, as it can form monospecific stands excluding many species in the lower strata and preventing regeneration of the upper strata (Muyt 2001; Swarbrick, Timmins & Bullen 1999).	**H**	**H**

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QUESTION	COMMENTS	RATING	CONFIDENCE
(b) medium value EVC	EVC= Sedgy Riparian Woodland (D); CMA= Corangamite ; Bioreg= Otway Plain ; VH CLIMATE potential. Highly invasive in moist vegetation including riparian habitats, the species is reported to be capable of totally transforming invaded habitats, as it can form monospecific stands excluding many species in the lower strata and preventing regeneration of the upper strata (Muyt 2001; Swarbrick, Timmins & Bullen 1999).	**H**	**H**
(c) low value EVC	EVC= Riparian Forest (LC); CMA= Corangamite ; Bioreg= Otway Ranges; VH CLIMATE potential. Highly invasive in moist vegetation including riparian habitats, the species is reported to be capable of totally transforming invaded habitats, as it can form monospecific stands excluding many species in the lower strata and preventing regeneration of the upper strata (Muyt 2001; Swarbrick, Timmins & Bullen 1999).	**H**	**H**
11. Impact on structure?	The species is reported to be capable of totally transforming invaded habitats, as it can form monospecific stands excluding many species in the lower strata and preventing regeneration of the upper strata (Muyt 2001; Swarbrick, Timmins & Bullen 1999). The species is therefore considered to impact all layers but have a major impact on <60%.	**MH**	**H**
12. Effect on threatened flora?	Unknown; The species has not been specifically reported to impact on a threatened species it has been reported to have a substantial overall impact on ecosystems including reduction of grass and herb layer species richness and the regeneration of canopy species (Muyt 2001; Swarbrick, Timmins & Bullen 1999).	**MH**	**L**
Fauna			
13. Effect on threatened fauna?	The increased food the species provides through the fruit load supports increased populations of aggressive bird species such as currowongs (Blood 2001; Swarbrick, Timmins & Bullen 1999). This then has the potential to impact on other bird species populations, it has not however been reported to specifically impact upon a threatened species.	**MH**	**L**
14. Effect on non-threatened fauna?	The increased food the species provides through the fruit load supports increased populations of aggressive bird species such as currowongs (Blood 2001; Swarbrick, Timmins & Bullen 1999). This then has the potential to impact on other bird species populations, quantitative evidence of the impact on such species has not been reported however.	**M**	**L**
15. Benefits fauna?	Native bird species eat the fruit (Blood 2001; Swarbrick, Timmins & Bullen 1999). The food and potentially shelter supplied by this small tree is not however reported to be important for a desirable species.	**MH**	**MH**
16. Injurious to fauna?	The leaves and fruit of *Ligustrum* sp. are considered toxic (Shepherd 2004). There has no evidence reported on if this species is toxic to native fauna and if so to what extent it impacts on them.	**M**	**L**
Pest Animal			
17. Food source to pests?	The fruit production of the species can support unnaturally high populations of currawongs (Blood 2001). Currawongs are a native species however in large numbers can be considered a pest. Blackbirds and starlings are also reported to eat fruit of the species (Swarbrick, Timmins & Bullen 1999).	**ML**	**H**

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QUESTION	COMMENTS	RATING	CONFIDENCE
18. Provides harbor?	The species is not reported to provide shelter for any one pest species, however it is reported to forms dense thickets (Weber 2003). Therefore there is the potential for the species to provide cover for pest species.	**M**	**L**
Agriculture			
19. Impact yield?	Not reported as an agricultural weed. The species however has been suspected in some cases of poisoning in cattle and the similar species *L.vulgare* has been linked to cases of stock death (Everist 1974).	**M**	**L**
20. Impact quality?	Honey collected from privet species is reported to smell like fish (Swarbrick, Timmins & Bullen 1999).	**M**	**L**
21. Affect land value?	The species has been used widely as an ornamental (Blood 2001; Weber 2003). It is therefore unlikely to have any significant impact upon land values.	**L**	**MH**
22. Change land use?	Unknown however as the species is considered to be largely and environmental weed this is unlikely.	**L**	**M**
23. Increase harvest costs?	Unknown however as the species is considered to be largely and environmental weed this is unlikely.	**L**	**M**
24. Disease host/vector?	The species is reportedly a host to *Nezara viridula, Plautia affinis* & *Glaucias amyoti* which are pests of agricultural and horticultural crops in Australia (Coombs 2004).	**M**	**H**