

## Impact Assessment Record

Scientific name: *Billardiera heterophylla* (Lindl.) L. Cayzer & Crisp/

Common Name: Blue-bell Creeper

*Billardiera fusifomis* Labill. (formally known as *Sollya heterophylla* Lindl.)\*

QUESTION	COMMENTS	RATING	CONFIDENCE
<b>Social</b>			
1. Restrict human access?	'Blue-bell creeper scrambles to head height on middle storey plants forming an almost impenetrable barrier that is difficult to treat or transverse with equipment (Hill 1997)'. High nuisance value, people access with difficulty.	<b>MH</b>	<b>M</b>
2. Reduce tourism?	'Blue-bell creeper scrambles to head height on middle storey plants forming an almost impenetrable barrier that is difficult to treat or transverse with equipment (Hill 1997)'. There is a possibility of it having a minor affect on recreational use if it grew across walking paths. It is also described as forming large colonies (Blood 2001), that could impact on the aesthetics of an area.	<b>ML</b>	<b>MH</b>
3. Injurious to people?	'It contains toxins, which can cause skin irritation and nausea, so it is important that gloves are worn when handling'. Mildly toxic.	<b>ML</b>	<b>MH</b>
4. Damage to cultural sites?	Though not specifically documented, as a climbing species that can reach up to 4 metres in height (DNRE 2002), there is potential for it to have a moderate visual affect on the aesthetics of a cultural site or infrastructure.	<b>ML</b>	<b>ML</b>
<b>Abiotic</b>			
5. Impact flow?	As a terrestrial species it is unlikely to impact on water flow.	<b>L</b>	<b>M</b>
6. Impact water quality?	As a terrestrial species it is unlikely to impact on water quality.	<b>L</b>	<b>M</b>
7. Increase soil erosion?	'It affects sites on slopes and with loss of biodiversity as a result of invasion this could lead to increased erosion risks e.g. at Arthur's seat (R. Adair pers. com.)'. Its ability to smother and eliminate other vegetation (Muyt 2001, DNRE 1997) particularly those with extensive root systems, could lead to an increase in soil erosion, especially as it often inhabits coastal areas (Muyt 2001). It has the potential to impact on erosion but the extent of its impact is unclear.	<b>M</b>	<b>M</b>
8. Reduce biomass?	Appears to increase biomass in communities due to development of heavily tangled shrub layer (R. Adair pers. com.).	<b>L</b>	<b>MH</b>
9. Change fire regime?	'Likely to increase fire risk due to increase in fine fuel loads (R. Adair pers. com.)'. This species invades many diverse ecosystems with varying fire regimes. An increase in fine fuel loads could cause a moderate change to both fire frequency and intensity. For example in a 'shrubby wet forest' habitat (White 2007) it could moderately increase fire frequency but decrease fire intensity.	<b>MH</b>	<b>MH</b>

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QUESTION	COMMENTS	RATING	CONFIDENCE
<b>Community Habitat</b>			
10. Impact on composition (a) high value EVC	Large colonies many metres across can be formed (Blood 2001) and isolated plants can develop into aggressive invading fronts that smother all vegetation in their path, forming virtual monocultures (Taylor 1997, Hill 1997).	<b>H</b>	<b>MH</b>
(b) medium value EVC	Large colonies many metres across can be formed (Blood 2001) and isolated plants can develop into aggressive invading fronts that smother all vegetation in their path, forming virtual monocultures (Taylor 1997, Hill 1997).	<b>H</b>	<b>MH</b>
(c) low value EVC	Large colonies many metres across can be formed (Blood 2001) and isolated plants can develop into aggressive invading fronts that smother all vegetation in their path, forming virtual monocultures (Taylor 1997, Hill 1997).	<b>H</b>	<b>MH</b>
11. Impact on structure?	Large colonies many metres across can be formed (Blood 2001) and isolated plants can develop into aggressive invading fronts that smother all vegetation in their path, forming virtual monocultures (Taylor 1997, Hill 1997).). Can impact on all strata including tree stratum due to lower availability of niches for seedling establishment (R. Adair pers.com.).	<b>H</b>	<b>MH</b>
12. Effect on threatened flora?	White (1997) identified 45 flora taxa that are threatened by habitat alteration as a result of invasion through direct competition for regeneration sites, light, water and space. However, no description of its specific impact on individual threatened flora species was documented.	<b>MH</b>	<b>M</b>
<b>Fauna</b>			
13. Effect on threatened fauna?	White (1997) identified 16 fauna taxa that are threatened by habitat alteration as a result of invasion, due to structural degradation, changed fire regimes, trophic disintegration, and loss of prey or food plants. However, no description of its impact on specific threatened fauna taxa was documented.	<b>MH</b>	<b>M</b>
14. Effect on non-threatened fauna?	White (1997) identifies that habitat alteration as a result of invasion threatens fauna, through structural degradation, changed fire regimes, trophic disintegration, and loss of prey or food plants. Reduction in habitat and food source would likely lead to a reduction in the number of individuals in a population.	<b>MH</b>	<b>MH</b>
15. Benefits fauna?	'A range of fauna including frugivorous birds, mammals and possibly reptiles (Bachmann and Johnson in prep) disperse seeds (White 2007)'. Likely to provide some assistance as a food source to desirable fauna species.	<b>MH</b>	<b>MH</b>
16. Injurious to fauna?	No reference was found in the literature to suggest that this species possesses any properties injurious to fauna.	<b>L</b>	<b>M</b>
<b>Pest Animal</b>			
17. Food source to pests?	Foxes are described as a seed disperser (Blood 2001, White 2007). Provides food to one serious pest species.	<b>MH</b>	<b>MH</b>
18. Provides harbour?	The nature of its habit suggests it is unlikely to provide harbour for serious pests like rabbits or foxes, and no information was found documented to indicate that it provides harbour for any minor pest species.	<b>L</b>	<b>M</b>

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QUESTION	COMMENTS	RATING	CONFIDENCE
<b>Agriculture</b>			
19. Impact yield?	<i>B. heterophylla</i> is not described as a weed of agriculture.	L	M
20. Impact quality?	<i>B. heterophylla</i> is not described as a weed of agriculture.	L	M
21. Affect land value?	<i>B. heterophylla</i> is not described as a weed of agriculture.	L	M
22. Change land use?	<i>B. heterophylla</i> is not described as a weed of agriculture.	L	M
23. Increase harvest costs?	<i>B. heterophylla</i> is not described as a weed of agriculture.	L	M
24. Disease host/vector?	<i>B. heterophylla</i> is not described as a weed of agriculture.	L	M

\* A revision of *Billardiera* and other closely related genera has been recently undertaken by Cayzer et al (2006). Analyses indicated that the genus *Billardiera* should incorporate *Sollya*, and the former species *Sollya heterophylla* has been reclassified as two species *Billardiera heterophylla* and *Billardiera fusiformis*.