Impact Assessment Record

Scientific Name: *Senecio glastifolius* L. f. Common name: holly leaved senecio

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	As a short-lived herbaceous perennial (Williams et al, 1999) it is not likely to prevent human access to any destination.	**L**	**H**
2. Reduce tourism?	1-1.5m tall, occasionally up to 2m, to 0.5m wide, pink to mauve to nearly white daisy flowers. "Most conspicuous to the casual observer where it grows on road cuttings and banks…The most obvious impact …is aesthetic-it is a spectacular plant" (Williams et al, 1999). Although it is not "native-looking," the plant is cultivated in gardens for its "cheerful flowers" (van der Walt, 2002) which wouldn't bother most people.	**ML**	**H**
3. Injurious to people?	"Hand pulling…required thick gloves and trousers" (Brown & Brooks, 2002). "The edges of the…leaves are coarsely toothed and can be quite prickly" (van der Walt, 2002). The toothed edges of the leaves may cause some discomfort if grasped, but unlikely to cause injury to most people.	**ML**	**MH**
4. Damage to cultural sites?	At 1-2m tall and with pink to mauve to nearly white daisy flowers (Williams et al, 1999) this plant may have a moderate visual effect on the aesthetics of cultural sites.	**ML**	**H**
Abiotic			
5. Impact flow?	As it is "unlikely to tolerate permanently saturated soils" (Williams et al, 1999), it is unlikely to grow near enough to waterways to impact on them.	**L**	**H**
6. Impact water quality?	As it is "unlikely to tolerate permanently saturated soils" (Williams et al, 1999), it is unlikely to grow near enough to waterways to impact on them.	**L**	**H**
7. Increase soil erosion?	Displacing low-growing herbs and ferns and preventing establishment of native seedlings (Dept. cons., 2002). Ability to dominate understorey vegetation in open damp areas (CRC Weed Management, 2003). Given its ability to replace native vegetation and that "in drought conditions it may not grow at all over summer" (Williams et al., 1999), *S. glastifolius* may leave patches of soil that could be prone to soil erosion until there is enough soil moisture for the *Senecio* to germinate and establish. Without evidence of this having happened and no record of it forming monocultures, the likelihood of this occurring is presumed moderate, given the chain of events that would have to occur.	**ML**	**MH**
8. Reduce biomass?	"Seems to have a particular affinity for the open areas of scree and bare ground between the shrubs…[some species] vulnerable to shading by the invasion" (Williams et al,1999). When colonising bare ground this plant would increase biomass. Where it prevents the establishment of native vegetation it may replace or slightly increase or decrease biomass depending on the type of vegetation that it supresses. Given the sparse nature of the sites that it tends to invade and its "strong association with sparsely vegetated sites," (Williams et al, 1999) on balance it is likely to slightly increase biomass, but as a short-lived perennial will not act as a carbon sink.	**ML**	**H**
9. Change fire regime?	Whilst fire seems to stimulate germination (see Brown &Brooks, 2002), there is no evidence of mature plants surviving fire. As an herbaceous perennial (ie not woody) that tends to fall over as it grows older (Williams, 1999) there is no evidence that it provides fuel for fire. As it can replace native vegetation, it has the potential to reduce the incidence and perhaps the intensity of fires in some vegetation types eg. Grasslands and possible heaths, but the effect would probably be minor.	**ML**	**H**

Impact Assessment Record

Scientific Name: *Senecio glastifolius* L. f. Common name: holly leaved senecio

QUESTION	COMMENTS	RATING	CONFIDENCE
Community Habitat			
10. Impact on composition (a) high value EVC	EVC=Coast Banksia Woodland (V), CMA=West Gippsland, Bioreg.=Gippsland Plain, CLIMATE=VH. Ability to dominate understorey vegetation in open damp areas (CRC Weed Management). There is the potential for this plant to cause major displacement of some dominant species in the grass and herb layers.	**MH**	**MH**
(b) medium value EVC	EVC=Coastal Alkaline Scrub (D), CMA=West Gippsland, Bioreg.=Gippsland Plain, CLIMATE=VH. Ability to dominate understorey vegetation in open damp areas (CRC Weed Management). There is the potential for this plant to cause major displacement of some dominant species in the grass and herb layers.	**MH**	**MH**
(c) low value EVC	EVC=Heathy Woodland (LC), CMA=West Gippsland, Bioreg.=Gippsland Plain, CLIMATE=VH. Ability to dominate understorey vegetation in open damp areas (CRC Weed Management). There is the potential for this plant to cause major displacement of some dominant species in the grass and herb layers.	**MH**	**MH**
11. Impact on structure?	Ability to dominate understorey vegetation in open damp areas (CRC Weed Management). There is the potential for this plant to have a major effect on the grass and herb layers and a minor effect on the low shrub layer of some communities.	**MH**	**MH**
12. Effect on threatened flora?	No information found.	**MH**	**L**
Fauna			
13. Effect on threatened fauna?	No information found.	**MH**	**L**
14. Effect on non-threatened fauna?	Displacing low-growing herbs and ferns and preventing establishment of native seedlings (Dept. cons., 2002). Ability to dominate understorey vegetation in open damp areas (CRC Weed Management, 2003). There is the potential for a minor effect on food sources and/or shelter for some fauna.	**ML**	**MH**
15. Benefits fauna?	As it is eaten by the larvae of the native magpie moth and diurnal moth in NZ and seems to be palatable to sheep (Williams et al, 1999), it may provide an alternative food source for some animals.	**L**	**H**
16. Injurious to fauna?	Although it is somewhat prickly (Williams, 1999), *S. glastifolius* is unlikely to cause fauna to lose condition.	**L**	**H**
Pest Animal			
17. Food source to pests?	Although recorded as palatable it is not noted as a food source for pests in Williams et al (1999).	**L**	**H**
18. Provides harbor?	As an herbaceous perennial with widely spaced branches (CRC Weed Management, 2003), this plant is unlikely to provide habitat or harbor for pest species.	**L**	**MH**
Agriculture			
19. Impact yield?	Occurs naturally in pastoral areas A general agricultural weed (Williams et al, 1999). However it is palatable to sheep (Williams et al, 1999), so it may simply provide an alternative fodder source and its ability to outcompete pasture would probably be controlled by grazing.	**L**	**H**

Impact Assessment Record

Scientific Name: *Senecio glastifolius* L. f. Common name: holly leaved senecio

QUESTION	COMMENTS	RATING	CONFIDENCE
20. Impact quality?	See q. 19, the plant is unlikely to reduce form in stock and does not have spines or burrs that might affect meat or wool quality.	**L**	**H**
21. Affect land value?	See q. 19, without significantly reducing yield or quality, land value is unlikely to be affected.	**L**	**H**
22. Change land use?	Would not require a change in land use.	**L**	**H**
23. Increase harvest costs?	"A troublesome weed in newly planted plantations" (Williams et al, 1999). Possibly increases harvest costs in weed control costs.	**M**	**L**
24. Disease host/vector?	None recorded	**L**	**L**

References cited:

Brown K & Brooks K 2002, *Bushland Weeds* Environmental Weeds Action Network, Australia.

CRC Weed Management 2003, *Weed Management Guide: Holly leaved senecio* – Senecio glastifolius, Australia.

Dept. cons. (Department of Conservation) *Have you seen these plants on Matiu/Somes Island?* (2002) NZ

van Der Walt, L 2002, *PlantZAfrica.com*, South African National Biodiversity Institute, viewed: 21/11/2005, www.plantzafrica.com/plantqrs/senecioglast.htm.

Williams, PA, Ogle, CC, Timmins, SM, La Cock, F & Reid, V 1999, 'Biology and ecology of *Senecio glastifolius* and its spread and impacts in New Zealand' *Science for Conservation* vol. 112, Deparment of Conservation, New Zealand

Revisions

Date Revised by Revision