Impact Assessment Record

Scientific Name: *Miconia* spp. Common name: miconia

| QUESTION | COMMENTS | RATING | CONFIDENCE |
|---|---|---|---|
| **Social** | | | |
| 1. Restrict human access? | 'Capable of reaching 15m in height, the majority … are 6 to 12m tall with slender, vertical stems' (Csurhes 1997). Forms dense monospecific stands (Csurhes 1997). In places where the weed forms dense stands, it would be a high nuisance value to both people and vehicles. | **MH** | **H** |
| 2. Reduce tourism? | Very attractive foliage. Can reach up to 15m height and capable of forming dense, monospecific stands. Can change forest composition (Brooks 2004). Plant could affect some recreational uses. | **MH** | **MH** |
| 3. Injurious to people? | Not documented as having injurious or toxic properties. | **L** | **MH** |
| 4. Damage to cultural sites? | Very attractive foliage. Can reach up to 15m height and capable of forming dense, monospecific stands (Csurhes 1997). Plant would have a moderate visual effect. | **ML** | **H** |
| **Abiotic** | | | |
| 5. Impact flow? | 'The hydrological properties of Miconia suggest that there may be a significant change in the water balance, with an increase in runoff and a potential reduction in groundwater recharge….Increased sedimentation will incur surface water quality damages on any infested island' (Brooks 2004). Plant may have a minor impact on surface or subsurface flow. | **ML** | **MH** |
| 6. Impact water quality? | 'The hydrological properties of Miconia suggest that there may be a significant change in the water balance, with an increase in runoff and a potential reduction in groundwater recharge….Increased sedimentation will incur surface water quality damages on any infested island' (Brooks 2004). Plant may have a noticeable but minor effect on water quality. | **ML** | **MH** |
| 7. Increase soil erosion? | 'The tentacular root system is also suspected to favour soil erosion and landslides' (ISSG 2005). 'Invaded slopes are prone to landslides as the weak root system does not hold the soil well and the soil lacks a herbaceous ground cover (Weber 2003). In areas of steep slopes and high rainfall, there would be a high probability of large-scale soil movement, but unlikely to occur in Victoria due to ecoclimatic limitations. | **ML** | **MH** |
| 8. Reduce biomass? | 'Dense shade produced by the overlapping foliage of *M.c.* prevents regeneration of local rainforest plants' (Csurhes 1997). Capable of forming dense mono-specific stands (Csurhes 1997). Biomass may increase. | **L** | **H** |
| 9. Change fire regime? | Forms dense monospecific stands (Csurhes 1997). By preventing regeneration of the understorey, *Miconia* may have a minor change on the intensity of the fire. | **ML** | **H** |
| **Community Habitat** | | | |
| 10. Impact on composition (a) high value EVC | Potential distribution of *Miconia* spp. excludes Victoria. No impact on EVCs in Victoria. | **L** | **H** |
| (b) medium value EVC | Potential distribution of *Miconia* spp. excludes Victoria. No impact on EVCs in Victoria. | **L** | **H** |
| (c) low value EVC | Potential distribution of *Miconia* spp. excludes Victoria. No impact on EVCs in Victoria. | **L** | **H** |

Impact Assessment Record

Scientific Name: *Miconia* spp. Common name: miconia

| QUESTION | COMMENTS | RATING | CONFIDENCE |
|---|---|---|---|
| 11. Impact on structure? | 'The *M. racemosa* plants .. were strangling shrubs up to 3 metres tall, entangled with giant bramble along the gully floor and sides for several hundred metres' (Wilson 2002) Forms dense stands preventing regeneration of understorey. Major effect on all layers. | **H** | |
| 12. Effect on threatened flora? | This species is not documented as posing an additional risk to threatened flora. | **MH** | **L** |
| **Fauna** | | | |
| 13. Effect on threatened fauna? | This species is not documented as posing an additional risk to threatened fauna. | **MH** | **L** |
| 14. Effect on non-threatened fauna? | 'Changes in forest composition [due to Miconia] may threaten endangered plant species, bird species, and invertebrate species in particular' (Brooks 2004. However, due to ecoclimatic limitations, species unlikely to occur in Victoria. | **L** | **MH** |
| 15. Benefits fauna? | Plant not documented as providing any additional benefit to fauna. | **H** | **MH** |
| 16. Injurious to fauna? | Plant not documented as having toxic effects. | **L** | **MH** |
| **Pest Animal** | | | |
| 17. Food source to pests? | Plant not documented as providing a food source to pest animals. | **L** | **MH** |
| 18. Provides harbor? | Plant not documented as providing harbour for pest species. | **L** | **MH** |
| **Agriculture** | | | |
| 19. Impact yield? | Not a weed of agriculture (ISSG 2005). | **L** | **MH** |
| 20. Impact quality? | Not a weed of cropping (ISSG 2005). | **L** | **MH** |
| 21. Affect land value? | Weed not known to affect land value. | **L** | **MH** |
| 22. Change land use? | Weed not known to cause a change in priority of land use. | **L** | **MH** |
| 23. Increase harvest costs? | Not a weed of cropping (ISSG 2005). | **L** | **MH** |
| 24. Disease host/vector? | Not a known host or vector for disease of agriculture. | **L** | **MH** |

Impact Assessment Record

Scientific Name: *Miconia* spp. Common name: miconia

References cited:


Brooks, K.A. 2004, 'Economic impacts of non-indigenous species: *Miconia* and the Hawaiian economy', *Hawaii's unsustainable development: Water, invasives and natural capital*, Gettysberg College, Washington, viewed 16 Jan 2006, http://homepage.mac.com/ondinebak/HI_Research1_files/BAKmiconia.pdf

Csurhes, S.M. 1997, '*Miconia calvescens*, a potentially invasive plant in Australia's tropical and sub-tropical rainforests in *Proceedings of the First Regional Conference on Miconia Control*, Papeete, August 26-29, pp. 72-77.

Invasive Species Specialist Group 2005, Miconia calvescens (tree), Global Invasive Species Database, The World Conservation Union, viewed 10 Jan 2006, http://www.issg.org/database/species/ecology.asp?si=2&fr=1&sts=sss

Weber, E. 2003, *Invasive plant species of the world: A reference guide to environmental weeds*, CABI Publishing, Wallingford.

Wilson, B. 2002, *Four weeds agenda paper*, Report to the Australian Weeds Committee, Department of Natural Resources and Mines, Queensland.


Revisions

| Date | Revised by | Revision |
|---|---|---|