

## Impact Assessment Record

Scientific Name: *Annona glabra*

Common name: pond apple

QUESTION	COMMENTS	RATING	CONFIDENCE
<b>Social</b>			
1. Restrict human access?	A semi-deciduous tree 12 – 15 metres tall, occurring on creek banks, wetlands, mangrove communities & high tide litter zones on beaches (NRM 2001). ‘Thickets of pond apple restrict access’ (ARMCANZ 2000).	<b>MH</b>	<b>MH</b>
2. Reduce tourism?	‘Thickets of pond apple restrict access and impair outlooks and the general variety of the coastal recreational experience’ (ARMCANZ 2000).	<b>H</b>	<b>MH</b>
3. Injurious to people?	“...pond apple was introduced to Australia as grafting stock for custard apple. In its native America pond apple fruit has some commercial use” (NRM 2001). No toxic principle or physical properties likely to cause injury.	<b>L</b>	<b>M</b>
4. Damage to cultural sites?	Occurs mostly in riparian or wetland areas subjected to regular natural disturbance. Not documented to occur in areas of cultural significance (WTMT 2004). Where it may occur, dense infestations (approaching a monoculture) it would present a moderate negative visual impact.	<b>ML</b>	<b>MH</b>
<b>Abiotic</b>			
5. Impact flow?	Terrestrial species. “It grows in fresh, brackish and even saline waters. The plant will not survive, however, in areas that are permanently inundated” (ARMCANZ 2000). Due to its dependence on a high water supply, it is found in riparian areas, floodplains and the margins of wetland areas. In such areas a dense infestation may affect the watercourse by narrowing the channel or reducing the size of the waterbody (WTMT 2004).	<b>ML</b>	<b>MH</b>
6. Impact water quality?	Not documented to affect water quality. Does not withstand permanent inundation (ARMCANZ 2000).	<b>L</b>	<b>MH</b>
7. Increase soil erosion?	A semi-deciduous tree that in open areas forms dense stands (NRM 2001). Unlikely to contribute to soil erosion.	<b>L</b>	<b>M</b>
8. Reduce biomass?	“Pond apple can establish as a dense understorey that suppresses other growth and under favourable conditions can replace mature stands of paperbark with a monoculture forest of pond apple” (NRM 2001). Suppression of other species may result in slight reduction of biomass.	<b>MH</b>	<b>M</b>
9. Change fire regime?	“Time between fires is lengthened due to the reduction in understorey in infested areas” (ARMCANZ 2000). Does not contribute to an increase in fire risk.	<b>L</b>	<b>MH</b>
<b>Community Habitat</b>			
10. Impact on composition (a) high value EVC	Basin=South Gippsland (ISC=very poor-moderate); CMA=West Gippsland; CLIMATE potential=L. Therefore no high value EVC exists.	<b>L</b>	<b>H</b>
(b) medium value EVC	All Victorian waterbodies are presumed to be high value EVCs.	<b>L</b>	<b>H</b>
(c) low value EVC	All Victorian waterbodies are presumed to be high value EVCs.	<b>L</b>	<b>H</b>

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11. Impact on structure?	"Pond apple forms a dense understorey/sub-canopy, replacing ferns, grasses, shrubs and sedges and prevents tree regeneration" (ARMCANZ 2000). "Creeks may become muddy monocultures" (NRM 2001). Major effect on all strata in some situations.	<b>H</b>	<b>MH</b>
12. Effect on threatened flora?	This species is not documented as posing an additional risk to threatened flora.	<b>MH</b>	<b>L</b>
<b>Fauna</b>			
<b>COMMENTS</b>		<b>RANKING</b>	
13. Effect on threatened fauna?	This species is not documented as posing an additional risk to threatened fauna.	<b>MH</b>	<b>L</b>
14. Effect on non-threatened fauna?	Dense infestations would alter the habitat for native fauna. The plant may provide suitable shelter/nesting sites, but food source is radically altered due to impacts on plant diversity (NRM 2001). Possible serious reduction in local faunal populations.	<b>MH</b>	<b>M</b>
15. Benefits fauna?	The fruit is a food source to some fruit-eating animals such as the cassowary and flying foxes (ARMCANZ 2000).	<b>MH</b>	<b>MH</b>
16. Injurious to fauna?	Not known to be harmful.	<b>L</b>	<b>MH</b>
<b>Pest Animal</b>			
17. Food source to pests?	The fruit is known as a food source to native fauna. In Queensland feral pigs spread the seed (ARMCANZ 2000).	<b>MH</b>	<b>MH</b>
18. Provides harbor?	May provide harbour to minor pest species such as birds (NRM 2001).	<b>ML</b>	<b>M</b>
<b>Agriculture</b>			
19. Impact yield?	Not known as a weed of agriculture (ARMCANZ 2000).	<b>L</b>	<b>MH</b>
20. Impact quality?	Not known as a weed of agriculture (ARMCANZ 2000).	<b>L</b>	<b>MH</b>
21. Affect land value?	Not known as a weed of agriculture (ARMCANZ 2000).	<b>L</b>	<b>MH</b>
22. Change land use?	Not known as a weed of agriculture (ARMCANZ 2000).	<b>L</b>	<b>MH</b>
23. Increase harvest costs?	Not known as a weed of agriculture (ARMCANZ 2000).	<b>L</b>	<b>MH</b>
24. Disease host/vector?	Not known to be a host or vector of disease for agriculture (ARMCANZ 2000).	<b>L</b>	<b>MH</b>

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### References cited:

Agriculture and Resource Management Council of Australia & New Zealand, Australian & New Zealand Environment & Conservation Council and Forestry Ministers, 2000, *Weeds of National Significance Pond Apple (Annona glabra) Strategic Plan*. National Weeds Strategy Executive Committee, Launceston.

Department of Natural Resources and Mines, (NRM), 2001, *Pond Apple*, Annona glabra. (PP58), State of Queensland. Available: <http://www.nrm.qld.gov.au/factsheets/pdf/pest/PP58.pdf> Accessed 11/07/03

Thorp, JR & Lynch, R, 2000, *The Determination of Weeds of National Significance*, National Weeds Strategy Executive Committee, Launceston.

Wet Tropics Management Trust (WTMT), 2004, 'Adaptive management: pond apple control in the catchments of the Russell-Mulgrave and Tully-Murray river systems', Queensland State Government. Online: [http://www.wetropics.gov.au/mwha/mwha\\_pdf/PondAppleReport.pdf](http://www.wetropics.gov.au/mwha/mwha_pdf/PondAppleReport.pdf) viewed 30 July 2005

### Revisions

Date	Revised by	Revision
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