Impact Assessment Record

Scientific name: *Asparagus asparagoides* – Western Cape form

Common name: Western Cape form bridal creeper

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	WCF supposedly not meant to grow in saline conditions, but found *thriving* on sand dunes adjacent to SA beaches (Hay '07). Perennial climber that dominates ground flora, and can form "dense curtains smothering shrubs and the lower canopy of trees" (Muyt, '01). Whilst the plant does occur in riparian areas, it is most vigorous on lighter well-drained soils. *Its presence proves a nuisance value to humans, impeding individual access to waterways and walking tracks.*	**ML**	**M**
2. Reduce tourism?	Perennial climber that dominates ground flora, and can form "dense curtains smothering shrubs and the lower canopy of trees" (Muyt, '01; Holland Clift, '05). *The smothering curtains that this species creates would present a major negative impact on aesthetics.*	**MH**	**M**
3. Injurious to people?	*This species seemingly presents no harmful or toxic properties to humans.*	**L**	**M**
4. Damage to cultural sites?	No specific mention of damage to cultural sites found in literature reviewed. However, as WCF grows prolifically in coastal areas (Hay, '07; Kleinjan, *et al*., '99) where Aboriginal middens are present, the reviewer has no hesitation in assuming that it has the potential to obscure, if not smother, sites of significance. It has also been mentioned that WCF can grow over and smother trees and small buildings, therefore Aboriginal scar trees, cemetery plots, and other sites of significance MAY be at risk. (NB. Cemeteries were mentioned as 'at risk' by smothering by bridal veil and the common form of bridal creeper; the extrapolation to WCF seemed quite acceptable.) *Assumption of potential to cause major structural and/or visual effect to culturally significant sites, that MAY adversely affects the heritage/cultural feature.*	**H**	**ML**
Abiotic			
5. Impact flow?	WCF is a terrestrial species. It has not been found growing within waterbodies, although it is very vigorous in riparian areas. According to many sources, including Muyt (2001), "… It is usually most vigorous on lighter, well-drained soils." It MAY reduce the volume of runoff in riparian areas where it is growing rampantly. *WCF appears to have little, or negligible, effect on water flow within waterbodies.*	**L**	**L**
6. Impact water quality?	WCF is a terrestrial species. *WCF has no noticeable effect on dissolved O_2, or light levels, within waterbodies.*	**L**	**L**
7. Increase soil erosion?	WCF is a terrestrial species. It has not been found growing within waterbodies, although it is very vigorous in riparian areas. According to many sources, including Muyt (2001), "… It is usually most vigorous on lighter, well-drained soils." WCF MAY temporarily aid in bank stabilisation whilst it is smothering undergrowth and impeding the access to river	**L**	**L**

Impact Assessment Record

Scientific name: *Asparagus asparagoides* – Western Cape form

Common name: Western Cape form bridal creeper

QUESTION	COMMENTS	RATING	CONFIDENCE
	banks by visitors; however, as it kills the substrate it MAY leave the bank less stable than prior to its infestation. *Low probability of large scale soil movement.*		
8. Reduce biomass?	It smothers pre-existing vegetation and prevents other plants from growing. (Holland Clift, '05) *Biomass may increase.*	**L**	**L**
9. Change fire regime?	Dead and dry matter may significantly add to the fuel load, which in turn may increase the intensity of a local fire. *NB.* "Bridal creeper (inc. WCF) is often the first plant to emerge post-fire, therefore herbicides can be carefully applied before native plants regenerate." NAWMC (2006) *Minor change to the intensity of fire risk.*	**ML**	**ML**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC = Coastal Headland Scrub (V); CMA = Glenelg Hopkins; Bioregion = Bridgewater; VH CLIMATE potential. Predictive mapping shows that it can potentially grow along all Australian coastlines with a Mediterranean climate. It smothers pre-existing vegetation and prevents other plants from growing. (Holland Clift, '05) *Monoculture within a specific layer; displaces all spp. within a strata/layer.*	**H**	**M**
(b) medium value EVC	EVC = Coastal Dune Scrub/Coastal Dune Grassland Mosaic (D); CMA = Corangamite; Bioregion = Victorian Volcanic Plain; VH CLIMATE potential. Predictive mapping shows that it can potentially grow along all Australian coastlines with a Mediterranean climate. It smothers pre-existing vegetation and prevents other plants from growing. (Holland Clift, '05) *Monoculture within a specific layer; displaces all spp. within a strata/layer.*	**H**	**M**
(c) low value EVC	EVC = Coastal Alkaline Scrub (LC); CMA = Glenelg Hopkins; Bioregion = Bridgewater; VH CLIMATE potential. Predictive mapping shows that it can potentially grow along all Australian coastlines with a Mediterranean climate. It smothers pre-existing vegetation and prevents other plants from growing. (Holland Clift, '05) *Monoculture within a specific layer; displaces all spp. within a strata/layer.Monoculture within a specific layer; displaces all spp. within a strata/layer.Monoculture within a specific layer; displaces all spp. within a strata/layer.*	**H**	**M**
11. Impact on structure?	It smothers pre-existing vegetation and prevents other plants from growing. (Holland Clift, '05) The tubers act as a barrier to impede the root growth of other plants, and often prevents their seedling	**H**	**M**

Impact Assessment Record

Scientific name: *Asparagus asparagoides* – Western Cape form

Common name: Western Cape form bridal creeper

QUESTION	COMMENTS	RATING	CONFIDENCE
	establishment (NAWMC, '06). *Major effects on all layers. Forms monoculture.*		
12. Effect on threatened flora?	As WCF's habit often results in smothering of all flora in its way, any floral VROT species in its way MAY also be smothered, resulting in localised reductions in populations that may be significant. Although no such records could be found by the assessor at this time, this does not exclude it from the realm of probability within any vegetation communities that occur within WCF's preferred habitats. *WCF forms monoculture in preferred habitats.*	**H**	**L**
Fauna			
13. Effect on threatened fauna?	As WCF's habit often results in smothering of all flora in its way, any floral VROT species in its way MAY also be smothered, resulting in localised reductions in populations that may be significant food sources to local fauna (inc. faunal VROT). This MAY lead to local extinctions, reduction of local numbers of individuals, or local reduction in habitat for threatened species. Although no such records could be found by the assessor at this time, this does not exclude it from the realm of probability within any bio-communities that occur within WCF's preferred habitats. *Reduction in habitat for threatened species, leading to reduction in local numbers of individuals,* **OR** ***maybe*** *local extinctions.*	**MH**	**L**
14. Effect on non-threatened fauna?	As WCF's habit often results in smothering of all flora in its way, resulting in localised reductions in populations that may be significant food sources to local fauna. This MAY lead to local extinctions, reduction of local numbers of individuals, or local reduction in habitat for threatened species. Although no such records could be found by the assessor at this time, this does not exclude it from the realm of probability within any bio-communities that occur within WCF's preferred habitats. *Reduction in habitat for threatened species, leading to reduction in local numbers of individuals,* **OR** ***maybe*** *local extinctions.*	**MH**	**L**
15. Benefits fauna?	Some bird species, *Zosterops lateralis* (Silvereye) and *Corvus bennetti* (Little Crow) are known to feed on the fruit. (Stansbury, '96). *WCF provides some food to desirable species.*	**MH**	**MH**
16. Injurious to fauna?	*No documented adverse effects to fauna found in literature reviewed.*	**L**	**M**
Pest Animal			
17. Food source to pests?	Bird species, both native and introduced, are known to feed on the fruit. "… the introduced starling were identified as feeding on bridal creeper fruits in South Australia." (Stansbury, '96). *Potential to supply food to one, or more, minor pest species.*	**ML**	**MH**

Impact Assessment Record

Scientific name: *Asparagus asparagoides* – Western Cape form

Common name: Western Cape form bridal creeper

QUESTION	COMMENTS	RATING	CONFIDENCE
18. Provides harbor?	The dense growth, which occurs in late winter, may provide some temporary harbour, particularly for birds. *No documented harbour for pest animals found in literature reviewed.*	**L**	**L**
Agriculture			
19. Impact yield?	Adversely affects pine plantations (Blood, '01) and citrus orchards (Ibid, Kwong *et al.* '02). In citrus bridal creeper infestation is known to reduce fruit production (Ibid.). [Amount unknown.] *Minor impact on quantity of produce* (eg. ~ 10% assumed, if it was significant assume amount stated).	**M**	**M**
20. Impact quality?	Adversely affects pine plantations (Blood, '01) and citrus orchards (Ibid, Kwong *et al.* '02). In citrus bridal creeper infestation is known to reduce air movement, increasing local humidity, leading to *Septoria* spot on fruit (Ibid.). [Amount unknown.] *Impact on quality of produce (~ 10%).*	**M**	**M**
21. Affect land value?	Adversely affects pine plantations (Blood, '01) and citrus orchards (Ibid, Kwong *et al.* '02). In citrus bridal creeper infestation is known to reduce fruit production and quality [amount unknown.], thus reducing the value on land used for citrus orchards (Ibid.). *Decreases in land value ~ 10%.*	**M**	**M**
22. Change land use?	Adversely affects pine plantations (Blood, '01) and citrus orchards (Ibid, Kwong *et al.* '02). In citrus bridal creeper infestation is known to reduce fruit production and quality [amount unknown.], thus reducing the value on land used for citrus orchards leading to a change in land use (Ibid.). *Downgrading of the priority land use.*	**MH**	**M**
23. Increase harvest costs?	Adversely affects pine plantations (Blood, '01) and citrus orchards (Ibid, Kwong *et al.* '02). In citrus bridal creeper infestation is known to leave a large volume of dead stems reducing the ease of access whilst harvesting fruit (Ibid.). [Amount unknown.] *Minor increase in cost of harvesting.*	**M**	**M**
24. Disease host/vector?	Adversely affects pine plantations (Blood, '01) and citrus orchards (Ibid, Kwong *et al.* '02). In citrus bridal creeper infestation is known to leave a large volume of dead stems that serve as a disease reservoir for reinfestation of *Septoria* spot on fruit (Ibid.). [Amount unknown.] *Host to severe disease of citrus.*	**H**	**M**