Impact Assessment Record

Scientific name: *Carex divisa* Huds. Common name: Divided Sedge

QUESTION	COMMENTS	RATING	CONFIDENCE
Social			
1. Restrict human access?	Described as a tufted sedge or as a creeping perennial herb with slender and wiry stems arising singly along a creeping rhizome, to 80cm/1m (Marchant et al 1987, Richardson et al 2006; Walsh & Entwisle 1994). Likely to have minimal impact on human access.	**L**	**M**
2. Reduce tourism?	Described as being very similar in appearance to the rare native sedge *Carex chlorantha*, so it is probable that this weed would not be obvious to the 'average' visitor.	**L**	**M**
3. Injurious to people?	No information was found to suggest this species is injurious to people.	**L**	**M**
4. Damage to cultural sites?	Possesses thick, woody creeping rhizomes (Jermy & Tutin 1982), but no information was found documented to suggest that this species causes damage to cultural sites or infrastructure.	**L**	**M**
Abiotic			
5. Impact flow?	Described as occurring adjacent to aquatic habitats but 'rarely in the water' (Jermy & Tutin 1982), and as a lower growing herbaceous monocot it is unlikely to have much affect on water flow.	**L**	**M**
6. Impact water quality?	Described as occurring adjacent to aquatic habitats but 'rarely in the water' (Jermy & Tutin 1982). No information was found to suggest this species impacts on water quality.	**L**	**M**
7. Increase soil erosion?	Has been deliberately introduced in some areas for the stabilization of stream banks (Walsh & Entwisle 1994; Richardson et al 2006). Rhizomes, thick woody, some-times far creeping and branched (Jermy & Tutin 1982). Likely to decrease the probability of soil movement.	**L**	**MH**
8. Reduce biomass?	Described as smothering a *Poa* grass community in Sunbury, Victoria (K. Roberg pers. com.) and because it grows to a similar height as many *Poa* and other grass species (80-100cm), it is probable that almost direct replacement of biomass by *C. divisa* may occur rather than a noticeable increase.	**ML**	**M**
9. Change fire regime?	In Victoria, *C. divisa* has been observed forming a monoculture and completely smothering a *Poa* grass community (K. Roberg pers. com.). With *Poa* spp. having high flammability foliage (Chladil & Sheridan 2006) the replacement by *C. divisa,* with broader foliage that does not dry out as intensely as that of *Poa* spp., is likely to reduce fuel flammability and may cause some reduction to the intensity of fire in grassland situations.	**ML**	**ML**
Community Habitat			
10. Impact on composition (a) high value EVC	EVC= Creekline Tussock Grassland (BCS= E); CMA= Glenelg Hopkins; Bioreg= Victorian Volcanic Plain; CLIMATE potential=VH. Inhabits wetland areas and creek edges displacing *Poa* and *Bolboschoenus* spp. 'It formed monocultures; overtaking all native vegetation….it completely smothered what was once a productive Poa seed collection site' (K. Roberg pers.com.). Monoculture within a specific layer; displaces all species within a strata/layer.	**H**	**M**

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(b) medium value EVC	EVC= Sedgy Riparian woodland (BCS= D); CMA= North Central; Bioreg= Central Victorian Uplands; CLIMATE potential=VH. Inhabits wetland areas and creek edges displacing *Poa* and *Bolboschoenus* spp. 'It formed monocultures; overtaking all native vegetation….it completely smothered what was once a productive Poa seed collection site' (K. Roberg pers.com.). Monoculture within a specific layer; displaces all species within a strata/layer.	**H**	**M**
(c) low value EVC	EVC= Seasonally Inundated Shrubby Woodland (BCS= LC); CMA= Glenelg Hopkins; Bioreg= Wimmera Plain; CLIMATE potential=VH. Inhabits wetland areas and creek edges displacing *Poa* and *Bolboschoenus* spp. 'It formed monocultures; overtaking all native vegetation….it completely smothered what was once a productive Poa seed collection site' (K. Roberg pers.com.). Monoculture within a specific layer; displaces all species within a strata/layer.	**H**	**M**
11. Impact on structure?	Inhabits creek and wetland edges displacing *Poa* and *Bolboschoenus* spp. (pers.com.). 'It formed monocultures; overtaking all native vegetation….it completely smothered what was once a productive Poa seed collection site' (K. Roberg pers.com.). It is described as forming a 'monoculture' but no information was found specifically of its specific on recruitment of upper strata species. However, the above information indicates it is likely to have at least a major affect on < 60% of the floral strata.	**MH**	**M**
12. Effect on threatened flora?	Inhabits creek and wetland edges displacing *Poa* and *Bolboschoenus* spp. (pers.com.). 'It formed monocultures; overtaking all native vegetation….it completely smothered what was once a productive Poa seed collection site' (K. Roberg pers.com.). It is likely to have similar impacts on threatened flora, however, no information specific to threatened flora was found documented.	**MH**	**L**
Fauna			
13. Effect on threatened fauna?	*C. divisa* has been observed forming monocultures, displacing native vegetation and more specifically smothering *Poa* tussock grass communities in the western outskirts of Melbourne (K. Roberg pers.com.). It is also described as invading grasslands in general as well as woodland and riparian communities (Richardson et al 2006, I. Higgins pers. com). Tussock grassland provides important feeding and nesting habitat to small mammals, birds and insects (EWR 2007, MV 2005, Prober & Thiele 2005). The displacement of Poa grass communities by *C. divisa* would likely lead to reduced habitat and potential decrease in associated faunal populations. No information specific to threatened fauna was found documented, but species for which tussock grasslands are important habitat, such as the endangered Eastern barred bandicoot, could potentially be affected. (EWR2007).	**MH**	**L**
14. Effect on non-threatened fauna?	*C. divisa* has been observed forming monocultures, displacing native vegetation and more specifically smothering *Poa* tussock grass communities in the western outskirts of Melbourne (K. Roberg pers.com.). It is also described as invading grasslands in general as well as woodland and riparian communities (Richardson et al 2006, I. Higgins pers. com). Tussock grasslands provide important feeding and nesting habitat to small mammals, birds and insects (EWR 2007, MV 2005, Prober & Thiele 2005). The displacement of Poa grass communities by *C. divisa* would likely lead to reduced habitat and potential decrease in associated faunal populations.	**MH**	**ML**

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15. Benefits fauna?	Described as being low in palatability and rarely grazed unless animals are forced through starvation (I. Higgins pers. com.). Other information suggests that in Europe it is grazed by sheep and by red deer in low quantities (Aich et al 1980, Malo & Suarez 1995). Small numbers of seeds were found cached by mole rats in Israel (Heth, Golenberg & Nevo 1989). No information was found in the literature to suggest *C. divisa* benefits desirable native fauna, but there is potential for it to provide some assistance to native grazers and rodents.	**MH**	**M**
16. Injurious to fauna?	Although the literature is limited, no information was found to indicate that *C. divisa* possesses any properties injurious to fauna.	**L**	**ML**
Pest Animal			
17. Food source to pests?	Seeds of *C. divisa* were found cached by mole rats in Israel (Heth, Golenberg & Nevo 1989) and in the dung of red deer in Spain (Malo & Suarez 1995) suggesting that *C. divisa* may provide some food source to one or more minor pest species, such as deer or rodents.	**ML**	**M**
18. Provides harbor?	The habit of *C. divisa* to form substantial monocultures to 1m high adjacent to riparian systems (Walsh & Entwisle 1994; Richardson 2006, K. Roberg pers.com.), gives it the potential capacity to provide some harbour to pest animals, however, no information in relation to pest harbour was found documented.	**M**	**L**
Agriculture			
19. Impact yield?	*C. divisa* is known to invade pasture (Richardson 2006, Walsh & Entwisle 1994) and has been observed 'colonising entire paddocks' on creek flats near Castlemaine, Victoria. It is also described as being rarely grazed, having low palatability and disliked by farmers (I. Higgins pers. com.). Its ability to 'colonise entire paddocks' could lead to significant yield loss (>5%) because of reduced stocking potential due to low quality grazing land.	**MH**	**ML**
20. Impact quality?	Although literature on this species is limited, it is described as being invasive in pasture (Richardson 2006, Walsh & Entwisle 1994) and has been observed 'colonising entire paddocks' (I. Higgins pers.com.), but no information was found to suggest *C. divisa* reduces agricultural quality.	**L**	**ML**
21. Affect land value?	Documented as being invasive in pasture (Richardson 2006, Walsh & Entwisle 1994) and observed 'colonising entire paddocks' (pers.com.). It is also described as being rarely grazed, having low palatability and disliked by farmers (I. Higgins pers. com.). However, no information was found documented to indicate that this species would affect land value.	**L**	**L**
22. Change land use?	Documented as invading pasture (Richardson 2006, Walsh & Entwisle 1994), 'observed' colonising entire paddocks' near Castlemaine (I. Higgins pers. com.), and described as being rarely grazed, having low palatability and disliked by farmers (I. Higgins pers. com.). Although no information was found documented that *C. divisa* specifically causes a change in land use, it is documented as grazed by sheep in Europe (Aich et al 1980) and it is possible that a downgrading of land use priority, for example to a grazing species with less agricultural return, but that will eat *C. divisa*, may be necessary on invaded grazing land.	**M**	**L**
23. Increase harvest costs?	Although *C. divisa* is documented as invading pasture, being rarely grazing and having low palatability to stock (Richardson 2006, Walsh & Entwisle 1994, I. Higgins pers. com.), there is no information to suggest this species	**L**	**M**

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	would cause an increase in harvest costs in grazing situations.		
24. Disease host/vector?	No information was found documented to indicate this species acts as a host or vector for diseases of agriculture	**L**	**M**