**Impact Assessment Record**

Scientific name: *Ligustrum sinense* Lour. Common name: Small-leaved privet

| QUESTION | COMMENTS | RATING | CONFIDENCE |
|---|---|---|---|
| **Social** | | | |
| 1. Restrict human access? | Occurring in riparian vegetation the species can form dense impenetrable monospecific thickets, able to sucker and can re-sprout from the stump if damaged; this species could therefore pose a major impediment to access to waterways and require significant works to provide access (Brown & Pezeshki 2000; Langeland & Burks 1998; Stromayer *et al* 1998). | **H** | **H** |
| 2. Reduce tourism? | While the species has not been reported to impact on tourism or recreation, its ability to form dense thickets and its toxic nature however could mean it has the potential to do so. | **M** | **L** |
| 3. Injurious to people? | The fruit and leaves of Ligustrum species are reported to be toxic and potentially fatal (Shepherd 2004). | **H** | **M** |
| 4. Damage to cultural sites? | Reported to thrive in sunny concrete crevices (Langeland & Burks 1998). Muyt (2001) however reports the species to be shallow rooted, therefore the species could cause some moderate structural damage to infrastructure. | **MH** | **MH** |
| **Abiotic** | | | |
| 5. Impact flow? | Being shallow rooted the species is reported to be capable of exploiting extra surface water and a similar species can reportedly impact on the flow of water along drainage lines (Blood 2001, Muyt 2001). The species could therefore impact on water flow, however it is unknown to what extent. | **M** | **L** |
| 6. Impact water quality? | The leaves of the plant have been found to have toxic effects of macro invertebrates (Llewellyn 2005). The species can therefore have a negative impact on water quality; it is unknown however to what extent. | **M** | **L** |
| 7. Increase soil erosion? | The species is reported to be shallow rooted and able to quickly take up extra surface water (Muyt 2001). Therefore the species is considered to decrease the probability of large scale erosion. | **L** | **MH** |
| 8. Reduce biomass? | The species is reported to form dense thickets, which can then cause a reduction in biomass of the lower strata (Muyt 2001; Stromayer *et al* 1998; Swarbrick, Timmins & Bullen 1999; Weber 2003). Invasion by the species is therefore considered to result in a net increase in biomass due to the significant increase in the middle strata. | **L** | **MH** |
| 9. Change fire regime? | The similar species *L.lucidum* is reported to reduce the biomass within the grass/herb layer which can limit a fire from spreading, instead in SE Queensland during dry winters the species can defoliate which allows a hot fire to be carried (Swarbrick, Timmins & Bullen 1999). As *L.sinense* is also able form dense stands within the shrub layer it is thought to have the same potential of altering both fire intensity and timing. | **MH** | **MH** |
| **Community Habitat** | | | |
| 10. Impact on composition (a) high value EVC | EVC= Damp Forest (E); CMA= West Gippsland; Bioreg= Strzelecki Ranges; VH CLIMATE potential. The species is reported to be highly invasive in moist habitats and can form dense monospecific stands within the forest understorey (Muyt 2001; Stromayer *et al* 1998). | **H** | **H** |

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| (b) medium value EVC | EVC=Wet Forest (D); CMA= West Gippsland; Bioreg= Strzelecki Ranges; VH CLIMATE potential.<br>The species is reported to be highly invasive in moist habitats and can form dense monospecific stands within the forest understorey (Muyt 2001; Stromayer *et al* 1998). | **H** | **H** |
| (c) low value EVC | EVC= Wet Forest (LC); CMA= West Gippsland; Bioreg= Wilsons Promontory; VH CLIMATE potential.<br>The species is reported to be highly invasive in moist habitats and can form dense monospecific stands within the forest understorey (Muyt 2001; Stromayer *et al* 1998). | **H** | **H** |
| 11. Impact on structure? | The species is reported to be capable of totally transforming invaded habitats, as it can form monospecific stands excluding many species in the lower strata and preventing regeneration of the upper strata (Muyt 2001; Stromayer *et al* 1998; Swarbrick, Timmins & Bullen 1999). The species is therefore considered to impact all layers but have a major impact on <60%. | **MH** | **H** |
| 12. Effect on threatened flora? | The species is reported to displace native shrub species and invade areas forests where rare species occur in New Zealand (Swarbrick, Timmins & Bullen 1999). The species could have the potential to impact upon threatened species in Victoria however this has not been reported to have occurred. | **MH** | **L** |
| **Fauna** | | | |
| 13. Effect on threatened fauna? | The increased food the species provides through the fruit load supports increased populations of aggressive bird species such as currowongs (Bass 1996; Muyt 2001; Swarbrick, Timmins & Bullen 1999). This then has the potential to impact on other bird species populations, it has not however been reported to specifically impact upon a threatened species. | **MH** | **L** |
| 14. Effect on non-threatened fauna? | The increased food the species provides through the fruit load supports increased populations of aggressive bird species such as currowongs (Blood 2001; Swarbrick, Timmins & Bullen 1999). This then has the potential to impact on other bird species populations, quantitative evidence of the impact on such species has not been reported however. | **M** | **L** |
| 15. Benefits fauna? | Native bird species eat the fruit (Bass 1996; Swarbrick, Timmins & Bullen 1999). The food and potentially shelter supplied by this small tree is not however reported to be important for a desirable species. | **MH** | **H** |
| 16. Injurious to fauna? | Suspected of poisoning chickens (Everist 1974).<br>The leaves of the plant have been found to have toxic effects of aquatic macro invertebrates (Llewellyn 2005). Therefore the species is considered to have potentially toxic impacts on at least some fauna species through out the year. | **H** | **MH** |
| **Pest Animal** | | | |
| 17. Food source to pests? | The species is reported to sustain pest bird species including blackbirds and starlings (Muyt 2001; Swarbrick, Timmins & Bullen 1999). | **ML** | **MH** |
| 18. Provides harbor? | The species is not reported to provide shelter for any one pest species, however it is reported to forms dense thickets (Stromayer *et al* 1998). Therefore there is the potential for the species to provide cover for pest species. | **M** | **L** |

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|---|---|---|---|
| **Agriculture** | | | |
| 19. Impact yield? | The species has been suspected of poisoning chickens and other *Ligustrum* species have been reported to have caused stock death (Everist 1974). It is unknown to what extent this species could impact on yield, it is suspected however to be minor. | **M** | **L** |
| 20. Impact quality? | Honey collected from privet species is reported to smell like fish (Swarbrick, Timmins & Bullen 1999). It is unknown to what extent this species could impact on product quality, it is suspected however to be minor. | **M** | **L** |
| 21. Affect land value? | The species has been used widely as an ornamental (Muyt 2001; Weber 2003). It is therefore unlikely to have any significant impact upon land values. | **L** | **MH** |
| 22. Change land use? | Unknown however as the species is considered to be largely and environmental weed this is unlikely. | **L** | **M** |
| 23. Increase harvest costs? | Unknown however as the species is considered to be largely and environmental weed this is unlikely. | **L** | **M** |
| 24. Disease host/vector? | Unknown. | **M** | **L** |