

Weed Risk Assessment: *Coprosma robusta*.

1. Plant Details

Taxonomy: *Coprosma robusta* Raoul. Family Rubiaceae

Common names: coprosma, karamu.

Origins: Native to New Zealand (Plants for a Future database).

Distribution: Naturalised in Australia (Tasmania and Victoria) (Blood, 2001).

Description: *C. robusta* is an evergreen shrub or tree that grows to 3-6 metres. Stems are pale brown. Leaves are leathery with sharp points. Flowers are green and grow in dense heads. Fruit are small and orange. The root system is dense and fibrous.



Biology and ecology:

Habitat. *C. robusta* grows from sea level to 1200m in its native range. It is described as a tough plant that will tolerate and grow well in poor soils, wet conditions and on exposed sites. It tolerates full sun and shade, wind and frost (Trees for Survival Trust). It is however, described as having a requirement for moist soils (Plants for a Future database). In its native range it is a common component of lowland forest and shrub lands and is described as a secondary succession plant in open situations (Williams and Buxton, 1989).

Life cycle. *C. robusta* flowers from winter to summer. Seeds mature in autumn and germinate in late summer to autumn – mid winter. Early growth can be rapid.

Reproduction and dispersal. Reproduction occurs via seeds. Plants are dioecious though occasionally flowers of the opposite sex or hermaphrodite flowers are produced before the main flowering (Plants for a Future database). In addition, apomictic seed formation has been documented (Heenan et al., 2003) Temporal spread of germination occurs but long-lived soil seed banks are not thought to form (Burrows, 1995). Dispersal occurs when birds or other animal eat the fruit or when garden waste is dumped.

Hybridisation. There is limited information about hybridisation of *C. robusta*.

Competition. *C. robusta* is a hardy colonising species. Williams and Buxton (1989) describe it as amongst the most common of seedlings on bare ground in open sites. It grows less rapidly and perhaps competes less effectively in shaded situations.

Harmful properties. None described.

Economic benefit. *C. robusta* is promoted and sold as a hardy ornamental plant. In its native range it is also described as a very useful soil conservation species and, due to its rapid growth, is often planted on bare infertile sites where it provides shelter for subsequent plants and stabilises the soil with its fibrous roots (Trees for Survival Trust). The fruit, though bitter, may also be eaten and the roasted seed may be used as a coffee substitute. It has a small number of medicinal uses including treatment of kidney ailments and wounds that are not healing (Plants for a Future database).

2. Weed Risk

World weed status

C. robusta is not described as a serious weed anywhere in the world at this time.

Australian weed status

C. robusta is naturalised in Victoria and Tasmania. Groves et al. (2003) list this plant as a major threat in three or fewer Australian locations. It is not regulated in any state or territory. It is permitted entry to Australia.

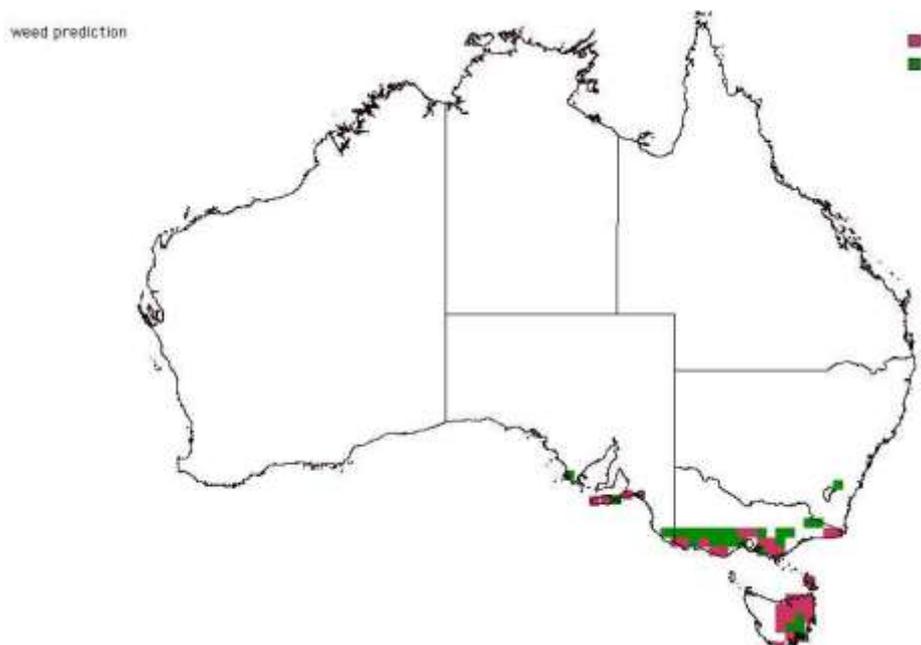
Weed potential in Tasmania.

C. robusta is naturalised in Tasmania (since when) but its distribution is relatively limited. Plants have been recorded on the east coast, Mt Wellington and possibly the south west, check Norske Skog. Rozefelds et al. (1999) assign a moderate weed threat.

Climate matching indicates the plant is likely to grow well in a range of Tasmanian environments, The following analyses describe the weed potential of *C. robusta* in Tasmania.

Weed risk assessment

Weed risk assessment undertaken by DPIWE involves use of a point scoring system devised by Pheloung (1996). *C. robusta* scores 12 on a scale that is positively correlated to weediness. The nominal score for rejection of a plant on this scale is 7 or greater (see Appendix 1 for risk assessment scoring).



3. Weed Impact Assessment

Weed impact assessment is based on the DPIWE scoring system designed for that purpose. *C. robusta* scores x points on a scale where 4 points or more indicates a plant has significant potential impact. The impact scoring system requires that questions be answered with a particular land use and probable density in mind. *C. robusta* was assessed for its potential impacts upon the environment at moderate densities.

Economic impact. The economic impact of *C. robusta* in Tasmania is difficult to determine as it is most likely to manifest in natural environments and is not likely to establish on productive land. Impacts on eco-tourism values are likely to be small at in most cases.

Environmental impact: *C. robusta* appears to have naturalised in Tasmania in a limited fashion to date. Its climatic suitability to many parts of the state appears to be high and its distribution in gardens, whilst not well known, is probably significant. Thus, given source and a suitable environment the most likely explanation of its failure to establish widely to date may lie in the fact that it is largely dioecious and requires a male and female plant to produce fertile seed (check Allens). Continuing trade in this species may result in the future introduction of clones of the appropriate gender.

Social impact. *C. robusta* is unlikely to have significant social impacts in Tasmania.

4. Management feasibility.

Weed eradication assessment is based on the DPIWE scoring system designed for that purpose. *C. robusta* scores 10 points on a scale where 6 points or more indicates there is potential for the plant to be eradicated successfully from the entire state.

Current distribution: *C. robusta* has a limited known distribution in Tasmania at this time having only been recorded around the East Coast and Hobart. Populations in the Derwent Valley and at Mount Wellington need to be surveyed to determine whether they are naturalised or amenity/ornamental plantings. A report concerning plants in the Gordon Dam area also required verification. The distribution of this plant across the state has never been thoroughly investigated and formal survey work is recommended.

Detectability: It may be confused with *Coprosma repens*, mirror bush, a more widespread environmental weed but is otherwise conspicuous for its glossy, leathery, pointed leaves, green flowers and bright red berries.

Control Options: A number of methods are known to be effective for *C. robusta* control. These include grubbing of isolated plants and possibly spraying with Grazon DS. *Coprosma repens*, a close relative has been described as hard to kill.

Chance of Reinvasion: The introduction of *C. robusta* to Tasmania is likely to be via ornamental trade. The extent of ornamental planting is not known but could be substantial. Therefore, even if the sale of this plant is prohibited, re-invasion is possible. The limited distribution of the plant at this time however means eradication and awareness programs in affected areas may help encourage and facilitate compliance by people who harbour this plant in their gardens.

Persistence: The seed of *C. robusta* is not thought to be long-lived so persistence is not a major obstacle to effective control.

Compliance Issues or Conflicts of Interest: The most important compliance issue is likely to arise in relation to people who value this plant for its ornamental appeal and who therefore will be reluctant to remove it from their gardens. There may also be a conflict of interest with people wishing to sell the plant. Both situations can be addressed by highlighting the range of alternatives available.

Eradication Feasibility: Eradication of *C. robusta* at this time appears both achievable and desirable.

5. Declaration Recommendation.

C. robusta appears to have potential to establish, reach moderate densities and cause environmental harm in certain vegetation communities in Tasmania. Therefore it should be nominated for declaration under the *Weed Management Act 1999*. This will support removal of the plant from trade and timely eradication of existing infestations.

6. References.

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Trees for Survival (undated) Coprosma fact sheet (check website)

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