

Approved Conservation Advice for *Guichenotia seorsiflora* (a shrub)

(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

This Conservation Advice has been developed based on the best available information at the time this conservation advice was approved; this includes existing plans, records or management prescriptions for this species.

Description

Guichenotia seorsiflora, Family Sterculiaceae, is a multi-stemmed shrub that can grow to 0.6 m high. The flowers are pink and cream, the petals are 10-14 mm long and joined in their lower third. The leaves are 8-20 mm long, 1-2 mm wide with a short stalk, and covered in white star-shaped hairs. The flowering period for the species is from July to September (Western Australian Herbarium, 2005; Wilkins and Chappill, 2003).

Conservation Status

Guichenotia seorsiflora is listed as **critically endangered**. This species is eligible for listing as critically endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as it has a very restricted geographic distribution which is precarious for its survival (TSSC, 2009).

Guichenotia seorsiflora is also listed as declared rare flora under the *Western Australian Wildlife Conservation Act 1950*, and is managed as critically endangered (according to IUCN criteria) by the Western Australian Government.

Distribution and Habitat

Guichenotia seorsiflora is endemic to Western Australia, and is known from four subpopulations in the Cunderdin and Corrigin areas, which are approximately 135 km to 205 km east of Perth. The extent of occurrence of the species is approximately 3700 km², with subpopulations located 50–100 km apart, and its estimated area of occupancy is less than 1 km² (CALM, 2006).

The population size of the species is approximately 110 mature plants, based on population surveys undertaken in 2006 and 2008 (DEC, 2008).

Guichenotia seorsiflora occurs on sandy clay with lateritic gravel and on breakaways (a lateritic ridge with a steep eroded slope) (Western Australian Herbarium, 2005).

The species is located within the Avon Wheatbelt IBRA Bioregion and the Avon Natural Resource Management region. The distribution of this species is not known to overlap with any EPBC Act-listed threatened ecological community.

Threats

The main identified threats to the species include road maintenance works, inappropriate fire regimes, erosion, and weed invasion by introduced Dodder Vine (*Cuscuta* species) (CALM, 2006).

Research Priorities

Research priorities that would inform future regional and local priority actions include:

- Design and implement a monitoring program or, if appropriate, support and enhance existing programs.

- More precisely assess population size, geographic distribution, ecological requirements and demographic information, including;
 - factors that trigger or influence germination and recruitment;
 - the pollinating mechanism of the species and the requirements of pollinators;
 - seed viability;
 - conditions necessary for germination;
 - the reproductive strategies, phenology and seasonal growth of the species;
 - the species' response to disturbance; and
 - other relevant mortality and morphological data for the species.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants. Surveys should ideally be undertaken during the species' main flowering period (July to September).
- Undertake seed germination and/or vegetative propagation trials to determine the requirement for successful establishment.

Priority Actions

The following priority recovery and threat abatement actions can be done to support the recovery of *G. seorsiflora*.

Habitat Loss, Disturbance and Modification

- Ensure road maintenance activities, involving substrate or vegetation disturbance in areas where *G. seorsiflora* occurs, do not adversely impact on the known subpopulations.
- Where appropriate, mitigate against further soil erosion. This may include stabilising the breakaway, diverting water flows or returning the topsoil to the site for natural recruitment of local plant species (CALM, 2006).
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Investigate formal conservation arrangements, management agreements and covenants on private land, and for crown and private land investigate inclusion in reserve tenure if possible.

Invasive Weeds

- Develop and implement a management plan for the control of Dodder Vine (*Cuscuta* species) in the region.
- Ensure chemicals or other mechanisms used to control Dodder Vine do not have a significant adverse impact on *G. seorsiflora*.

Fire

- Develop and implement a suitable fire management strategy for *G. seorsiflora*.
- Identify appropriate intensity and interval of fire to promote seed germination.
- Where appropriate provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

Conservation Information

- Raise awareness of *G. seorsiflora* within the local community through site visits, signage (e.g. declared rare flora markers to help prevent disturbance at sites), local print and electronic media, and fact sheets/information brochures.
- Maintain liaison with private landholders and land managers of land on which populations occur.

Enable Recovery of Additional Sites and/or Populations

- Maintain appropriate seed or germplasm collection and storage.
- Investigate options for linking, enhancing or establishing additional populations.

- Implement national translocation protocols (Vallee et al., 2004) if establishing additional populations is considered necessary and feasible.

This list does not necessarily encompass all actions that may be of benefit to *G. seorsiflora*, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Information Sources:

- CALM (2006). Conservation and Land Management. Records held in the Department of Environment and Conservation's (formerly the Department of Conservation and Land Management) Declared Flora Database and Rare Flora Files. Western Australian Department of Environment and Conservation, Western Australia.
- DEC (2008). Department of Environment and Conservation. Records held in DEC's Declared Flora Database and Rare flora files. Western Australian Department of Environment and Conservation, Western Australia.
- TSSC (2009). Threatened Species Scientific Committee Listing Advice for *Guichenotia seorsiflora* (a shrub).
- Vallee L, Hogbin T, Monks L, Makinson B, Matthes M and Rossetto M (2004). Guidelines for the Translocation of Threatened Plants in Australia - Second Edition. Australian Network for Plant Conservation, Canberra.
- Western Australian Herbarium (2005). FloraBase – The Western Australian Flora. Department of Environment and Conservation. Available on the Internet at: <http://florabase.calm.wa.gov.au/>
- Wilkins CF and Chappill JA (2003). Taxonomic Revision of *Guichenotia* (Lasiopetaleae: Malvaceae s.l. or Sterculiaceae). Australian Systematic Botany. Volume 16: 355-356, Figure 15.