

Approved Conservation Advice for
***Lysiosepalum abollatum* (woolly lysiosepalum)**

(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

Lysiosepalum abollatum, Family Sterculiaceae, also known as woolly lysiosepalum, is a dense, erect shrub that can grow to 1.5 m high. White woolly hairs cover young growth and inflorescences. The leaves are small, narrow and mid-green in colour with hairs covering both sides. Inflorescences are between 40 mm and 90 mm in length, and contain up to eight flowers with flat, dark pink petals. The petals are surrounded by an enlarged, ovate to elliptic calyx (whorl of sepals) that is mauve to pink in colour. The flowering period is from August to September (Western Australian Herbarium, 2006; DEC, 2008).

Conservation Status

The woolly lysiosepalum 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 the estimated number of mature individuals is very low, and its geographic distribution is very restricted and precarious for its survival given its single location and the nature of ongoing threats (TSSC, 2011).

The woolly lysiosepalum 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

The woolly lysiosepalum is endemic to Western Australia. It is known from a single population in the Wongan Hills area, approximately 180 km north-east of Perth. The species occurs on private property (DEC, 2009). The area of occupancy for the single population is 0.5 km² and its extent of occurrence is 1 km² (DEC, 2009).

A translocation of 34 plants was undertaken in 2009. The site of this translocated population is located within the Wongan Nature Reserve, approximately 2.5 km north of the natural population. It is not known whether this population will survive to maturity and reproduce (DEC, 2009).

The population size of the species is 89 mature plants (DEC, 2009).

The species grows under open mallee-heath in orange-brown, sandy clay over laterite at the base and lower slopes of hills. It is associated with *Eucalyptus ebbanoensis* (sandplain mallee), *Acacia pharangites* (Wongan Gully wattle) and *A. congesta* subsp. *wonganensis* with an understorey of *Halgania*, *Allocasuarina*, *Leptospermum* and *Hibbertia* species (DEC, 2008).

The species occurs within the Avon Wheatbelt IBRA Bioregion and the Avon Natural Resource Management region in Western Australia. This species is not known to overlap with any EPBC Act-listed threatened ecological community.

Threats

The main threats to the woolly lysiosepalum are land clearing for agriculture, soil erosion, and grazing by rabbits and kangaroos. Inappropriate fire regimes are considered a potential threat to the species (DEC, 2009).

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 ecological requirements, and the relevant impacts of threatening processes, including:
 - factors that trigger or influence germination and recruitment
 - the pollination biology of the species and the requirements of pollinators
 - the reproductive strategies, phenology and seasonal growth of the species
 - longevity of plants and time taken to reach reproductive maturity
 - seed viability
 - the species' response to disturbance (e.g. fire).
- Undertake survey work in suitable habitat and potential habitat during the August to September flowering period to locate any additional populations.
- Undertake seed germination trials to determine the requirements for successful establishment.
- Undertake research to understand the role of fire in the ecology of the species' habitat.

Priority Actions

The following priority recovery and threat abatement actions can be done to support the recovery of the woolly lysiosepalum.

Habitat Loss, Disturbance and Modification

- Monitor the species to identify additional key threats.
- Minimise adverse impacts from land use at known sites.
- Manage any changes to hydrology that may result in increased runoff or sedimentation.
- Manage any disruptions to water flows.
- Ensure there is no disturbance in areas where the species occurs, excluding necessary actions to manage the conservation of the species.
- Investigate formal conservation arrangements, management agreements and covenants on private land.
- Manage any other known, potential or emerging threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.

Grazing

- Develop and implement a management plan to control the adverse impacts of kangaroos and rabbits in the region.
- Where appropriate, manage total grazing pressure through exclusion fencing or other barriers.

Fire

- Develop and implement a suitable fire management strategy for the habitat of the woolly lysiosepalum.
- Where appropriate provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigation measures in bush fire risk management plan(s), risk register and/or operation maps.

Conservation Information

- Raise awareness of woolly lysiosepalum within the local community through fact sheets/information brochures to be distributed to local land owners, relevant authorities and volunteer organisations.
- Engage with private landholders and land managers responsible for the land on which populations occur and encourage these key stakeholders to contribute to the implementation of conservation management actions.

Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed collection and storage.

- Investigate options for 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 the woolly lysiosepalum, but highlights those that are considered to be of highest priority at the time of preparing the Conservation Advice.

Existing Plans/Management Prescriptions that are Relevant to the Species

- Woolly lysiosepalum (*Lysiosepalum abollatum*) interim recovery plan 2008–2013 (DEC, 2008).

This prescription was current at the time of publishing; please refer to the relevant agency's website for any updated versions.

Information Sources:

Department of Environment and Conservation (DEC) (2008). Woolly lysiosepalum (*Lysiosepalum abollatum*) interim recovery plan 2008–2013. Interim Recovery Plan No. 280 Department of Environment and Conservation, Western Australia.

Viewed: 1 February 2010

Available on the Internet at:

www.dec.wa.gov.au/index.php?option=com_content&task=view&id=865&Itemid=2009#flora

Department of Environment and Conservation (DEC) (2009). Records held in DEC's declared flora database and rare flora files. Department of Environment and Conservation, Western Australia.

Threatened Species Scientific Committee (TSSC) (2011). Listing advice for *Lysiosepalum abollatum* (Woolly lysiosepalum).

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 (2006). FloraBase – The Western Australian flora. Department of Conservation and Land Management.

Available on the Internet at: <http://florabase.calm.wa.gov.au/>