

Approved Conservation Advice for *Hypocalymma longifolium* (long-leaved myrtle)

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

Hypocalymma longifolium, family Myrtaceae, also known as the long-leaved myrtle, is a low hairless shrub, up to 20 cm tall, with rigid erect branches and pale pink to white flowers that have five petals. The leaves are held in opposite pairs and are 4–6 cm long, linear and triangular in cross-section, and taper to a slightly recurved point. The flowers are stalkless and are in pairs held on a short, thick inflorescence stalk (Brown et al., 1998, p. 145).

Conservation Status

Hypocalymma longifolium is listed as **vulnerable**. This species is eligible for listing as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as it has a low number of mature individuals (TSSC, 2011).

This species is also listed as declared rare flora under the *Wildlife Conservation Act 1950* and is managed as vulnerable by the Western Australian Government.

Distribution and Habitat

The long-leaved myrtle is endemic to Western Australia, where it is known from one location near the Murchison River (WA DEC, 2010). It occurs in damp areas on the west-facing slopes of breakaways and grows amongst open, low scrub on white sand with sandstone (Brown et al., 1998, p. 145). The species' area of occupancy is estimated to be 0.25 km² (WA DEC, 2010). The long-leaved myrtle is associated with *Melaleuca uncinata*, *M. filifolia*, *Lechenaultia chlorantha* and *Acacia* species (Phillimore and English, 2001). The known number of mature individuals has increased since 1992, with an estimated 500+ plants found at the site in November 2009. It is expected that this number will increase with further surveying (WA DEC, 2010).

This species occurs within the Northern Agricultural (Western Australia) Natural Resource Management Region.

The distribution of this species is not known to overlap with any EPBC Act-listed threatened ecological community.

Threats

There are no current known threats to this species.

Potential threats include grazing and trampling by feral pigs and goats, which have been observed to be present where the species occurs. While grazing on this species has not been observed, the impact that feral species may have on the surrounding habitat is a threat to the long-leaved myrtle (Phillimore and English, 2001). An additional potential threat to the species may be inappropriate fire regimes, as the species' response to fire is uncertain (Phillimore and English, 2001).

Research Priorities

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

- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.
- Continue to monitor population size and distribution at the one known location.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations.
- Identify the appropriate intensity and/or interval of fire to promote seed germination and vegetation regeneration.
- Assess ecological requirements and the relative impacts of threatening processes, including inappropriate fire regimes.

Regional and Local Priority Actions

The following regional and local priority recovery and threat abatement actions can be done to support the recovery of the long-leaved myrtle.

Habitat Loss, Disturbance and Modification

- Monitor the one known population to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Manage hydrological changes that may result in changes to water table levels, increased run-off, salinity or damage during high rainfall events (Phillimore and English, 2001).

Trampling, Browsing or Grazing

- Investigate the feasibility of erecting an exclusion fence/ barrier around the one known long-leaved myrtle site.
- Implement the threat abatement plans for feral goats and feral pigs (DEWHA, 2008; DEH 2005) within the area that the long-leaved myrtle is found.

Fire

- Conduct research to develop and implement a suitable fire management strategy for the long-leaved myrtle.
- Provide maps of the one known occurrence 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 the long-leaved myrtle within the local community. Fact sheets and the organisation of field days would benefit this species.

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 long-leaved myrtle, 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

- Threat Abatement Plan for Competition and Land Degradation by Unmanaged Goats (DEWHA, 2008).
- Threat Abatement Plan for Predation, Habitat Degradation, Competition and Disease Transmission by Feral Pigs (DEH, 2005).
- Long-leaved myrtle (*Hypocalymma longifolium*) Interim Recovery Plan 2001–2004 (Phillimore and English 2001).
- Declared Rare and Poorly Known Flora in the Geraldton District (Patrick, 2001, p. 66).

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

References cited in the advice

- Brown A, Thomson-Dans C and Marchant N (eds) (1998). Western Australia's threatened flora, Department of Conservation and Land Management. Western Australia.
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- Patrick SJ (2001). Declared rare and poorly known flora in the Geraldton district, Wildlife Management Program No. 26, Department of Conservation and Land Management.
- Phillimore R and English V (2001). Long-leaved Myrtle (*Hypocalymma longifolium*) Interim Recovery Plan 2001-2004, Interim Recovery Plan No. 88, Department of Conservation and Land Management. Wanneroo, Western Australia.
- Threatened Species Scientific Committee (TSSC) (2011). Listing Advice for *Hypocalymma longifolium* (long-leaved myrtle).
- Vallee L, Hogbin T, Monks L, Makinson B, Matthes M and Rossetto M (2004). Guidelines for the translocation of threatened plants in Australia (2nd ed.), Australian Network for Plant Conservation. Canberra.
- Western Australian Department of Environment and Conservation (WA DEC) (2010). Records held in DEC's Declared Flora Database and rare flora files. Western Australia.