

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

Approved Conservation Advice for
***Eucalyptus steedmanii* (Steedmans Gum)**

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

Eucalyptus steedmanii, Family Myrtaceae, also known as Steedmans Gum and Steedman's Mallet, is a small, erect, smooth barked tree or mallee, growing up to 8 m tall, with a distinctive habit of producing numerous ascending branches from low on the trunk, forming a very dense crown. The smooth bark ranges from grey to red-brown to bright coppery in colour. Juvenile leaves are stalked and grow up to 9 cm long and 3 cm wide. Adult leaves, up to 8 cm long and 1.5 cm wide, are olive-green and glossy in appearance, and are crowded with oil veins. Each inflorescence contains three flowers which is usually cream or yellow, but occasionally pink or red. The yellowish-brown buds and fruits are held on long stalks and are square in cross-section. Fruits grow to 2.2 cm long and 1.7 cm in diameter, and are longitudinally winged. The pendulous buds are arranged in threes in the leaf axils, and are shaped in an elongated diamond, 3.3 cm long and 1.3 cm wide with a pyramidal cap. Flowering occurs from January to March (Brown et al., 1998; Durell & Buehrig, 2001; DEC, 2008).

Conservation Status

Steedmans Gum 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, prior to the commencement of the EPBC Act, it was listed as vulnerable under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth). The species is also listed as declared rare flora under the *Wildlife Conservation Act 1950* (Western Australia).

Distribution and Habitat

Steedmans Gum is endemic to Western Australia where it is confined to undulating country approximately 80 km east of Hyden in the Forrestania to North Ironcap areas. Six populations are known, with one divided into two subpopulations. Five populations occur on unallocated Crown land, and the population which is split occurs on unallocated Crown land and a road verge. It is estimated that there is a total of 24 500 mature plants recorded from three of these populations. All populations were thought to be burnt in a fire in 1994 and a survey of this species in 1994 resulted in no plants being located. Three of the populations have since been relocated and in 2002 one population was estimated to have at least 3000 plants, one at least 5000 plants and another more than 16 500 plants. Three of the six populations have recorded an area of occupancy in 2002, which totalled 0.167 km². The extent of occurrence for Steedmans Gum is 83.6 km² (DEC, 2008). This species grows in pure stands, inhabiting gravelly loam in dense low woodlands (Brown et al., 1998). This species occurs within the Avon (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

The main threat to Steedmans Gum is fire. Fire kills adult plants, but regeneration by seed has been observed following fire (Durell & Buehrig, 2001).

The main potential threats to Steedmans Gum are mining operations, firebreak maintenance and recreation activities. Populations located near mining operations may be damaged through mining exploration (Durell & Buehrig, 2001; DEC, 2008).

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, distribution, ecological requirements and the relative impacts of threatening processes.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnant, particularly populations not found since the 1994 fire.

Regional and Local Priority Actions

The following regional and local priority recovery and threat abatement actions can be done to support the recovery of Steedmans Gum.

Habitat Loss, Disturbance and Modification

- Monitor known populations to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Identify populations of high conservation priority.
- Control access routes to suitably constrain public access to known sites on public land.
- Minimise adverse impacts from land use at known sites.
- Ensure road widening and fire break maintenance activities (or other infrastructure or development activities) involving substrate or vegetation disturbance in areas where Steedmans Gum occurs do not adversely impact on known populations.
- Investigate formal conservation arrangements, management agreements and/or covenants on private land, and for crown and private land investigate inclusion in reserve tenure if possible.

Fire

- Develop and implement a suitable fire management strategy for Steedmans Gum.
- 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 Steedmans Gum within the local community. Provide fact sheets to local authorities and residents to stimulate encourage? potential future sightings.
- Maintain liaison with private landholders and managers of land on which populations occur.

Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed 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 Conservation Advice was approved by the Minister / Delegate of the Minister on:
16/12/2008

This list does not necessarily encompass all actions that may be of benefit to Steedmans Gum, 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

- Wildlife Management Program No. 30, Declared Rare and Poorly Known Flora in the Narrogin District (Durell & Buehrig, 2001).

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

Information Sources:

Brown, A, Thomson-Dans, C & Marchant, N (eds) 1998, *Western Australia's Threatened Flora*, Department of Conservation and Land Management, Western Australia.

Department of Environment and Conservation (DEC) 2008, Records held in DEC's Declared Rare Flora Database and rare flora files. Department of Environment and Conservation, Western Australia.

Durell, GS & Buehrig, RM 2001, *Declared Rare and Poorly Known Flora in the Narrogin District*, Wildlife Management Program No. 30, Department of Conservation and Land Management, Western Australia.

Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia* (2nd ed.), Australian Network for Plant Conservation, Canberra.