

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

Approved Conservation Advice for
***Pityrodia augustensis* (Mt Augustus Foxglove)**

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

Pityrodia augustensis, Family Chloanthaceae, also known as Mt Augustus Foxglove, is a small shrub growing to 1 m tall, with stems and branches densely clothed in greenish-white hairs. Leaves are held in opposite pairs and taper to the stem. Clusters of 1–5 flowers are situated along terminal stems to each stem bract. Flowers are about 2 cm long, hairy and lilac. The style is up to 1.8 cm long with two lobes at the end. The hairy, more or less spherical fruits, up to 3.5 cm long, are enclosed in the persistent calyx. Mt Augustus Foxglove has similar inflorescence and flower features to the related Lovely Foxglove (*P. axillaris*) and Sandplain Foxglove (*P. terminalis*), but can be easily distinguished by its leaves, which are up to 5 cm long, up to 1.2 cm wide and wedge-shaped at the end. Flowering occurs from August to October (Brown et al., 1998; DEC, 2008).

Conservation Status

Mt Augustus Foxglove 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

Mt Augustus Foxglove grows on rocky hillsides in the Mt Augustus area, north-east of Carnarvon, and Mt Fraser in the Robinson Range, north of Meekatharra in the Geraldton district of Western Australia (Brown et al., 1998). Nine populations have been recorded, of which five occur on pastoral leases, one on unallocated Crown land and three on conservation estates. A total of 1118 mature plants have been recorded; the largest population, which occurs on the unallocated Crown land, had an estimated 1000 mature plants in 1998. The extent of occurrence is estimated to be 6867 km². There is insufficient information available to determine the area of occupancy (DEC, 2008) or trends in population size in all but one population. This population consists of two subpopulations, one declining from 96 plants in 1993 to 10 plants in 2000, and the other from one plant in 2000 to zero in 2002 (DEC, 2008). This species occurs within the Rangelands (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 potential threats to Mt Augustus Foxglove include grazing, which has been evident in some populations; drought; mining; land clearing; and prescribed burning. Some populations occur near mining activities. Only low population numbers have been found in drought affected areas (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.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.

Regional Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of Mt Augustus Foxglove.

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.
- Ensure road widening and maintenance activities (or other infrastructure or development activities) involving substrate or vegetation disturbance in areas where Mt Augustus Foxglove occurs do not adversely impact on known populations.
- Manage any changes to hydrology that may result in changes to water table levels.
- Investigate formal conservation arrangements, management agreements and 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 Mt Augustus Foxglove.
- 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 Mt Augustus Foxglove within the local community.
- Establish and/or maintain partnerships with private landholders and managers of land on which populations occur to ensure appropriate conservation.

Enable Recovery of Additional Sites and/or Populations

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

Local Priority Actions

The following local priority recovery and threat abatement actions can be done to support the recovery of Mt Augustus Foxglove.

Habitat Loss, Disturbance and Modification

- Control access routes to suitably constrain public access to known sites on public land.
- Minimise adverse impacts from land use, such as mining, at known sites.
- Manage any disruptions to water flows.
- Protect populations of the listed species through the development of conservation agreements and/or covenants.

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Trampling, Browsing or Grazing

- Manage known sites to ensure that grazing, if it occurs, is undertaken in a manner that has no detrimental impacts on this species.
- Manage total grazing pressure at important sites through exclusion fencing or other barriers.

Fire

- Implement an appropriate fire management regime for local populations.

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

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.