

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

Approved Conservation Advice for
***Microtis globula* (South-Coast Mignonette Orchid)**

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

Microtis globula, Family Orchidaceae, also known as South-Coast Mignonette Orchid and Globula Mignonette Orchid, is a herbaceous perennial, with a single terete leaf, 2–4 mm wide and 8–25 cm long, and flowering stems, up to 35 cm, with up to 40 pale yellow-green flowers. Flowers are 2 mm wide and long and are crowded along the upper stem. Lateral sepals curve inwards, giving each flower a globular appearance. It is one of the last *Microtis* species to flower each year, in December and January (Robinson & Coates, 1995; Brown et al., 1998; Hearn, et al., 2006).

The species is susceptible to fire in the vegetative and flowering phase. It needs a hot summer fire to promote germination, but if the fire is not of the right intensity or at the correct time of year it will not germinate (Brown et al., 1998).

Conservation Status

South-Coast Mignonette Orchid 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

South-Coast Mignonette Orchid is endemic to Western Australia and is known from seven populations near Albany and Walpole. Six of the populations occur within national parks or nature reserves, and one on private land. The number of mature plants is estimated to be 850. The extent of occurrence is approximately 660 km² (DEC, 2008). The area of occupancy cannot be determined due to insufficient data. As many populations are located within national parks, the species should remain largely undisturbed unless threatened by fire; however, plants have not been recorded at many populations for a number of years (DEC, 2008).

South-Coast Mignonette Orchid grows in peaty soils in seasonally wet swamps, often nine to twelve months after summer fire, with other more common species of mignonette orchids (Robinson & Coates, 1995; Brown et al., 1998; Hearn, et al., 2006). This species occurs within the South Coast and South West (Western Australia) Natural Resource Management Regions.

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

Threats

The main identified threat to South-Coast Mignonette Orchid is inappropriate fire regimes.

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The main potential threat to South-Coast Mignonette Orchid is feral pigs (*Sus scrofa*). Feral pigs are a threat to populations occurring in the D'Entrecasteaux National Park, through habitat degradation and grazing (EA, 2005).

Research Priorities

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

- 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/remnants, particularly in any areas of swamp that have been subjected to fire.
- Design and implement a monitoring program or, if appropriate, support and enhance existing programs.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment including mycorrhizal association trials.
- Determine susceptibility to dieback caused by *Phytophthora cinnamomi*.

Regional and Local Priority Actions

The following regional and local priority recovery and threat abatement actions can be done to support the recovery of South-Coast Mignonette Orchid.

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.

Trampling, Browsing or Grazing

- Manage known sites to ensure appropriate grazing regimes occur.
- Manage total grazing pressure at important sites through exclusion fencing or other barriers.

Fire

- Develop and implement a suitable fire management strategy for South-Coast Mignonette Orchid.
- Ensure appropriate intensity and interval of fire to promote vegetation regeneration.
- Amend fire management practices in the area of previously known populations to favour a summer regime.
- 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.

Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed and mycorrhizal fungi 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 South-Coast Mignonette Orchid, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

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Existing Plans/Management Prescriptions that are Relevant to the Species

- Declared Rare and Poorly Known Flora in the Albany District (Robinson & Coates, 1995),
- Declared Rare and Poorly Known Flora in the Warren Region (Hearn et al., 2006), and
- Threat Abatement Plan for Predation, Habitat Degradation, Competition and Disease Transmission by Feral Pigs (DEH, 2005).

These prescriptions were 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.

Department of Environment and Heritage (DEH) 2005, *Threat abatement plan for the predation, habitat degradation, competition and disease transmission by feral pigs*, viewed 30 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/publications/tap/pig/pubs/feral-pig-tap.pdf>>.

Environment Australia (EA) 2005, *Threat Abatement Plan for Predation, Habitat Degradation, Competition and Disease Transmission by Feral Pigs*, Biodiversity Group, viewed 30 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/publications/tap/pig/index.html>>.

Hearn, RW, Meissner, R, Brown, AP, Macfarlane, TD & Annel, TR 2006, *Declared Rare and Poorly Known Flora in the Warren Region*, Wildlife Management Plan No 40, Department of Conservation and Land Management, WA.

Robinson, CJ & Coates, DJ 1995, *Declared Rare and Poorly Known Flora in the Albany District*, Wildlife Management Plan No 20, Department of Conservation and Land Management, WA.

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.