

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

Approved Conservation Advice for
***Acacia cochlocarpa* subsp. *velutinos* (Velvety Spiral Pod Wattle)**

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

Acacia cochlocarpa subsp. *velutinos*, Family Mimosaceae, also known as Velvety Spiral Pod Wattle, is a spreading shrub growing 0.7 m high and 3 m across. Its branchlets are velvety and phyllodes are erect, 2.5–4 cm long, 3–5 mm wide, and have three to seven unequal hairy nerves. Flower-heads are bright golden, sub-globular, axillary, 5–7 mm long, and appear in May–August. Pods are tightly coiled, smooth, velvety, impressed around seeds, with broad yellow glabrous (hairless) margins (Maslin & Chapman, 1999).

Conservation Status

Velvety Spiral Pod Wattle 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 in 2006, the Minister considered the Threatened Species Scientific Committee's (TSSC) advice under section 189 of the EPBC Act and amended the list under section 184 to include Velvety Spiral Pod Wattle. The TSSC determined that this species met criteria 2, 3, and 4 of their eligibility criteria (TSSC, 2006b). The species is also listed as rare under Schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 1998* (Western Australia).

Distribution and Habitat

Velvety Spiral Pod Wattle is endemic to Western Australia and is known from three natural populations north-west of Watheroo, 200 km north of Perth. Stands consist of five, 30, and 50 individuals (TSSC, 2006b). Total area of occurrence is 5 km² and area of occupancy is less than 1 km² (TSSC, 2006b). The species is very fragmented with two remnants on private land and a third on Crown land (CALM, 2005). Many individuals are of poor condition and population numbers are in decline (CALM, 2005; TSSC, 2006b). Two translocated populations are in a nature reserve 12 km north of Watheroo (CALM, 2005).

Velvety Spiral Pod Wattle is found growing in hard white clay, which appears to be a localised unique soil type possibly associated with the Cadoux Fault Line (CALM, 2005). Topography is gently sloping and vegetation is open shrubland with an overstorey consisting mainly of *Allocasuarina campestris* with open heath below (TSSC, 2006a). The 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 communities.

Threats

The main identified threats to Velvety Spiral Pod Wattle are inappropriate fire regimes; track maintenance; illegal rubbish dumping; clearing; grazing; and weed invasion (CALM, 2005; Stack et al., 2003). Fire is vital for regeneration of this species and suppression by land managers is likely to limit recruitment.

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, recruitment requirements and the relative impacts of threatening processes (TSSC, 2006a).
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment (Stack et al., 2003).

Regional and Local Priority Actions

The following priority recovery and threat abatement actions can be done to support the recovery of Velvety Spiral Pod Wattle.

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 (TSSC, 2006a).
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.
- Protect the known sites from illegal rubbish dumping (Stack et al., 2003; TSSC, 2006a).
- Manage threats to areas of vegetation that contain populations/occurrences/remnants of Velvety Spiral Pod Wattle.
- Ensure road widening and maintenance activities (or other infrastructure or development activities involving substrate or vegetation disturbance) do not adversely impact on known populations.
- Control access routes to suitably constrain public access to known sites on public land.
- Suitably control and manage access on private land.
- Minimise adverse impacts from land use at known sites.
- Investigate formal conservation arrangements such as the use of covenants, conservation agreements or inclusion in reserve tenure (Stack et al., 2003; TSSC, 2006a).
- Carry out appropriate disturbance at stands in very poor condition to stimulate recruitment (CALM, 2005).

Invasive Weeds

- Identify and remove weeds in the local area, which could become a threat to Velvety Spiral Pod Wattle, using appropriate methods.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to the species, using appropriate methods.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Velvety Spiral Pod Wattle.

Trampling, Browsing or Grazing

- Manage known sites on private property to ensure appropriate cattle and sheep grazing regimes are conducted.
- Prevent grazing pressure at known sites on leased crown land through exclusion fencing or other barriers.

Fire

- Develop and implement a suitable fire management strategy (that includes appropriate intensity and interval of fire to promote seed germination) for Velvety Spiral Pod Wattle.
- Provide maps of known occurrences to landholders and local and state rural fire services, and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

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Conservation Information

- Raise awareness of Velvety Spiral Pod Wattle within the local community, particularly landowners.

Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed collection and storage (TSSC, 2006a).
- 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 Velvety Spiral Pod Wattle 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

- Declared Rare Flora and other plants in need of special protection in the Merredin District (Mollemans et al., 1993), and
- Draft Declared Rare and Poorly Known Flora largely restricted to the Shire of Wongan-Ballidu (Stack et al., 2003).

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

Information Sources:

CALM 2005, Records held in CALM's Declared Flora Database and rare flora files, WA Department of Conservation and Land Management.

Maslin, BR & Chapman, AR 1999, 'Acacia miscellany 19', *Nuytsia*, vol. 12, no. 3, pp. 475-476.

Mollemans, FH, Brown, PH & Coates, DJ 1993, *Declared Rare Flora and other plants in need of special protection in the Merredin District*, Wildlife Management Program No. 9, WA Department of Conservation and Land Management.

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Threatened Species Scientific Committee (TSSC) 2006a, '*Commonwealth Conservation Advice on Acacia cochlocarpa subsp. velutinosa*', Department of Environment, Water, Heritage, and the Arts, viewed 1 April 2008, <<http://www.environment.gov.au/biodiversity/threatened/species/pubs/acacia-cochlocarpa-velutinosa-conservation.pdf>>

Threatened Species Scientific Committee (TSSC) 2006b, *Commonwealth Listing Advice on Acacia cochlocarpa subsp. velutinosa*, Department of Environment, Water, Heritage, and the Arts, viewed 1 April 2008, <<http://www.environment.gov.au/biodiversity/threatened/species/pubs/acacia-cochlocarpa-velutinosa-listing.pdf>>

Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia - Second Edition*, Australian Network for Plant Conservation, Canberra.