

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

Approved Conservation Advice for
***Pultenaea pauciflora* (Narrogin Pea)**

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

Pultenaea pauciflora, Family Papilionaceae / Fabaceae, also known as Narrogin Pea, is a shrub growing to 80 cm when mature, that has abundant branches and branchlets that are mostly in false whorls. Branches are grey becoming brown, and younger ones have fine, whitish-grey hairs. Leaves are narrow or sickle-shaped and end in a 1.5–2 mm long sharp point. The green leaf blade, 15–17 mm long and 1.7 mm wide, is flat or slightly thickened. Younger leaves are greyish-green, with spreading white hairs about 2 mm long. Large, yellow, pea-like flowers are borne singly or in pairs in the leaf axils at the ends of the branchlets from October through December. Each flower has a densely haired calyx, with five lobes as long as the calyx tube. Two reddish-brown bract-like structures, 3–5 mm long, arise near the base of the calyx. The standard petal is 1 cm in diameter with a 2.5 mm claw at the base, the wing petals are 1 cm long and 3.5 mm wide, whilst the keel petal is about 1 cm long and 4.5 mm wide. Egg-shaped pods, about 9 mm long and 4.5 mm wide, are covered with long hairs (Brown et al., 1998; Durell & Buehrig, 2001).

Conservation Status

Narrogin Pea 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

Narrogin Pea is endemic to south-west Western Australia. Known locations include Narrogin, Boddington, and Brookton. There are nine populations recorded for the species including one large population (previously considered 17 subpopulations) occurring in a conservation park. The other populations occur in parkland, nature reserves and road verges. Narrogin Pea is estimated to have 8250 mature plants. The extent of occurrence is estimated to be 1840 km² and the area of occupancy 31 km². Currently only one population (on a road verge) has experienced a severe decline in recent years. Within the conservation park two subpopulations have increased and two have disappeared in recent years (DEC, 2008). This species occurs within the South West and Avon (Western Australia) Natural Resource Management Regions.

The species can be found growing in white sand over laterite, in association with open woodlands of Wandoo (*Eucalyptus wandoo*), Marri (*Corymbia calophylla*), and Parrot Bush (*Dryandra sessilis*) (Brown et al., 1998).

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

Threats

The main identified threats to Narrogin Pea are road maintenance activities, weeds and drought. The four populations that occur on road verges are vulnerable from damage caused by maintenance activities, such as grading and road widening. Weed invasion has been noted as a threat to many populations that occur outside conservation areas. Drought appears to have caused death in one of the subpopulations within the conservation park; therefore changes in hydrology may be detrimental to the species (Durell & Buehrig, 2001; DEC, 2008).

The main potential threats to Narrogin Pea include recreation and inappropriate fire regimes. As the majority of populations occur within conservation estate and parklands, recreational activities such as illegal off-road driving and riding may potentially threaten many populations. Inappropriate fire is also a threat and needs further investigation. Narrogin Pea re-sprouts after fire and is thought to be an obligate seeder, thus too frequent or too infrequent fire would reduce population health (Brown et al., 1998; 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/remnants.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.
- Investigate the effects of fire on the species, including intensity and interval required for successful germination and re-sprouting.

Regional and Local Priority Actions

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

Habitat Loss, Disturbance and Modification

- Control access routes to suitably constrain public access to known sites on public land.
- 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.
- Ensure road widening and maintenance activities (or other infrastructure or development activities) involving substrate or vegetation disturbance in areas where Narrogin Pea occurs do not adversely impact on known populations.
- Minimise adverse impacts from land use at known sites, including recreational activities in conservation estate and parklands.
- Manage any changes to hydrology that may result in changes to water table levels.
- 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.

Invasive Weeds

- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Narrogin Pea.

This Conservation Advice was approved by the Minister / Delegate of the Minister on:
16/12/2008

- Identify and remove weeds in the local area, which could become a threat to Narrogin Pea, using appropriate methods.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to the species, using appropriate methods.

Fire

- Develop and implement a suitable fire management strategy for Narrogin Pea.
- 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 Narrogin Pea within the local community. Providing property owners with fact sheets and organising field days in conjunction with known industry or community interest groups would be beneficial, potentially leading to further sightings of the species.

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 list does not necessarily encompass all actions that may be of benefit to Narrogin Pea, 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

- Western Australia Wildlife Program No. 30: Declared Rare & 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 Flora Database and rare flora files, WA Department of Environment and Conservation.

Durell, G & Buehrig, R 2001, *Declared Rare & Poorly Known Flora in the Narrogin District*, Western Australia 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.