

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

Approved Conservation Advice for
Zieria sp. Brolga Park (A.R.Bean 1002)

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

Zieria sp. Brolga Park (A.R.Bean 1002), Family Rutaceae, now known scientifically as *Zieria bifida* (Duretto & Forster, 2007), is an open straggly shrub up to 2 m tall. Leaves are opposite with three leaflets. Leaflets are 7–20 mm long and 3.5–8 mm wide, weakly gland dotted, the upper surface with a few hairs along the margin, the lower surface hairy on the margin and midrib. The leaflet margins are thickened and flat. Inflorescences occur in leaf axils and are shorter or the same length as the subtending leaf, and have one to several flowers. Flowers are white, the petals 1.8–2 mm long. Fruit are hairless and not glandular. The species can be distinguished from the related *Zieria exsul* and *Zieria obovata* by the flat leaf margins and longer petioles (3–7 mm) (Duretto & Forster, 2007).

Conservation Status

Zieria sp. Brolga Park (A.R.Bean 1002) is listed as **endangered**. This species is eligible for listing as endangered 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 endangered under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth). *Zieria* sp. Brolga Park (A.R.Bean 1002) is also listed as vulnerable under the *Nature Conservation Act 1992* (Queensland).

Distribution and Habitat

Zieria sp. Brolga Park (A.R.Bean 1002) is endemic to Queensland and found at only two sites near Nambour on the Sunshine Coast. It occurs in the ecotone between complex notophyll vineforest and open forest of *Eucalyptus propinqua*, *Corymbia intermedia* and *Lophostemon confertus*, in loamy soil on metasediments (Duretto & Forster, 2007; Queensland Herbarium, 2008). One location is within Triunia National Park (17.9 ha) and the other on private land in an area of remnant vegetation (Environmental Protection Agency, 2008) as defined under the *Vegetation Management Act 1999* (Queensland) and is therefore currently protected from broad-scale land clearing. No population size estimates are available. This species occurs within the South East Queensland 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 identified threats to *Z. sp. Brolga Park* (A.R.Bean 1002) are competition from weeds, in particular *Lantana camara*, and inappropriate fire regimes. As this species occurs only on the ecotone, the available habitat is small and therefore highly susceptible to weed infestation and fire induced change (Duretto & Forster, 2007). The restricted population may also be at risk from extinction by stochastic events.

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.
- Investigate optimal fire interval and intensity for *Z. sp.* Brolga Park (A.R.Bean 1002).
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.

Regional and Local Priority Actions

The following regional and local priority recovery and threat abatement actions can be done to support the recovery of *Z. sp.* Brolga Park (A.R.Bean 1002).

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 chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on *Z. sp.* Brolga Park (A.R.Bean 1002).
- Suitably control and manage access on private land.
- Minimise adverse impacts from land use at known sites.
- Investigate formal conservation arrangements, management agreements and covenants on private land, and for crown and private land investigate inclusion in reserve tenure if possible.
- Manage any other known, potential or emerging threats.

Invasive Weeds

- Implement the management plan for the control of Lantana in the region.
- Identify and remove weeds in the local area, which could become a threat to *Z. sp.* Brolga Park (A.R.Bean 1002), 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 *Z. sp.* Brolga Park (A.R.Bean 1002).
- 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 *Z. sp.* Brolga Park (A.R.Bean 1002) within the local community.

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 *Z. sp.* Brolga Park (A.R.Bean 1002), but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

This Conservation Advice was approved by the Minister / Delegate of the Minister on:
1/10/2008

Existing Plans/Management Prescriptions that are Relevant to the Species

- Weeds of National Significance: Lantana (*Lantana camara*) (ARMCANZ, 2001), and
- Triunia National Park Management Plan (QPWS, 1998).

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

Information Sources:

Agriculture & Resource Management Council of Australia & New Zealand (ARMCANZ) 2001, *Weeds of National Significance: Lantana (Lantana camara) Strategic Plan*, National Weeds Strategy, viewed 15 May 2008, <<http://www.dpi.qld.gov.au/cps/rde/xbcr/dpi/IPA-Lantana-Nsplan.pdf>>.

Duretto, MF & Forster, PI 2007, 'A taxonomic revision of the genus *Zieria* Sm. (Rutaceae) in Queensland', *Austrobaileya*, vol. 7, no. 3, pp. 473–544.

Environmental Protection Agency 2008, *Copy of the certified regional ecosystem map for the purpose of the Vegetation Management Act 1999*, online RE Maps, Environmental Protection Agency, Brisbane, viewed 28 April 2008, <<http://www.epa.qld.gov.au/REMAP>>.

Queensland Herbarium 2008, specimen label information, viewed 29 April 2008.

Queensland Parks and Wildlife Service (QPWS) 1998, *Triunia National Park Management Plan*, Queensland Government Department of the Environment, Brisbane, viewed 20 May 2008, <http://www.epa.qld.gov.au/publications/p02364aa.pdf/Triunia_National_Park_management_plan.pdf>.

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.