

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

**Approved Conservation Advice for
Boronia hippopala (Velvet Boronia)**

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

Boronia hippopala, Family Rutaceae, also known as Velvet Boronia, is an erect, woody shrub that grows to 2.5 m tall. It is covered in stiff, bristle-like hairs except on the flowers. Branchlets are slightly glandular with small, blunt projections. The leaves are composed of 3 to 7 parts, entire in outline, 6–10 mm long, 6–14 mm wide and slightly covered in glandular bristles. The terminal leaflets are 1–9 mm long and up to 1.75 mm wide. The side leaflets are 2.5–11 mm long and the proximal leaflets are sparsely covered in stiff, bristle-like hairs at the base, or going to hairless. Flowers are located in the leaf axils and cluster in groups of 1–3. The sepals are small, triangular and green. The petals are pink or white and 3.5–8 mm long. Flowering occurs between September and December. Fruit are 2.5 mm long and 1.5 mm wide with stiff, bristle-like hairs (Duretto, 2003; DPIWE, 2005; TSSC, 2005).

Conservation Status

Boronia hippopala 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, in 2005, 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 *Boronia hippopala*. The TSSC determined that this species met criterion 4 of their eligibility criteria (TSSC, 2005). *Boronia hippopala* is also listed as vulnerable under the *Threatened Species Protection Act 1995* (Tasmania).

Distribution and Habitat

Velvet Boronia is known from three populations occurring in the upper catchment of the St Pauls River in the Eastern Tiers, northern Tasmania. A population of up to 2000 mature plants occurs in 10 hectares at Horseshoe Marsh; another population occurs along the north-western margin of Dukes Marsh with up to 2000 mature plants in 2 hectares; and a population occurs south of the Dukes River with up to 5000 mature plants in 10 hectares. This species is conserved within Mt Puzzler Forest Reserve and state forest.

Velvet Boronia grows in *Eucalyptus pauciflora*-*E. dalrympleana* woodland and at the margins of wet heath/scrub, on gentle slopes with a high surface rock cover of Jurassic dolerite (DPIWE, 2005; TSSC, 2005). This species occurs within the North (Tasmania) 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 potential threats to Velvet Boronia include the impact of dieback caused by *Phytophthora cinnamomi*, an inappropriate fire regime, permanent flooding of riparian habitat, and activities that affect its habitat directly, such as roadwork and maintenance, or that indirectly alter the hydrology, for example increased run-off and sediment loads from upstream (TSSC, 2005).

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, fire ecology and the relative impacts of threatening processes.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.
- Conduct research on the susceptibility of Velvet Boronia to dieback caused by *Phytophthora* species.

Regional and Local Priority Actions

The following priority recovery and threat abatement actions can be done to support the recovery of Velvet Boronia.

Habitat Loss, Disturbance and Modification

- Manage any changes to hydrology that may result in changes to the water table levels, increased run-off, sedimentation or pollution (TSSC, 2005).
- Manage any disruptions to water flows.
- 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 Velvet Boronia occurs do not adversely impact on known populations.
- 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

- Investigate, develop and implement a suitable fire management strategy for Velvet Boronia (TSSC, 2005).
- Identify appropriate intensity and interval of fire to promote seed germination (Chuter & Duncan, 2006).
- 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.

Diseases, Fungi and Parasites

- Monitor for evidence of outbreaks of dieback caused by *Phytophthora cinnamomi*.
- Implement suitable hygiene protocols from the Threat Abatement Plan for Dieback caused by the Root-rot Fungus *Phytophthora cinnamomi* (EA, 2001) to protect known sites from outbreaks of dieback caused by *Phytophthora cinnamomi* (TSSC, 2005).

This list does not necessarily encompass all actions that may be of benefit to Velvet Boronia, 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

- Threat Abatement Plan for Dieback caused by the Root-rot Fungus *Phytophthora cinnamomi* (EA, 2001).

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

This prescription was current at the time of publishing; please refer to the relevant agency's website for any updated versions.

Information Sources:

Chuter, A & Duncan, F 2006, 'Some giant steps for threatened Boronias', *Forest Practices News*, vol. 7, no. 2, pp. 18–20.

Department of Primary Industries, Water and Environment (DPIWE) 2005, Threatened Flora of Tasmania – *Boronia hippopala* Notesheet, viewed 23 June 2008, <[http://www.dpiw.tas.gov.au/inter.nsf/attachments/ljem-74d7v7/\\$file/boronia%20hippopala.pdf](http://www.dpiw.tas.gov.au/inter.nsf/attachments/ljem-74d7v7/$file/boronia%20hippopala.pdf)>.

Duretto, MF 2003, 'Notes on *Boronia* (Rutaceae) in eastern and northern Australia', *Muellaria*, vol. 17, pp. 19–135.

Environment Australia (EA) 2001, *Threat Abatement Plan for Dieback caused by the Root-rot Fungus Phytophthora cinnamomi*, viewed 30 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/publications/tap/phytophthora/index.html>>.

Threatened Species Scientific Committee (TSSC) 2005, Threatened species & ecological communities – Velvet Boronia (*Boronia hippopala*) listing advice, Department of the Environment, Water, Heritage and the Arts (DEWHA), viewed 29 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/species/boronia-hippopala.html>>.