

A statement for the purposes of approved conservation advice
(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

Approved Conservation Advice for
***Boronia deanei* (Deane's Boronia)**

This Conservation Advice has been developed based on the best available information at the time this conservation advice was approved.

Description

Boronia deanei, Family Rutaceae, also known as Deane's Boronia, is an erect shrub 0.2 m to 1.5 m high (Harden, 1991). The leaves are strongly aromatic and divided into narrow, paired leaflets. The flowers are white to bright pink (Duretto, 2003). Flowering occurs between August and November (Harden, 1991; Fairley & Moore, 2000) with fruits present in December (Duretto, 2003).

Conservation Status

Deane's Boronia 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 vulnerable under the *Threatened Species Conservation Act 1995* (NSW).

Distribution and Habitat

Deane's Boronia is mainly found in the higher Blue Mountains, north of Clarence and Kanangra-Boyd National Park NSW, with an isolated occurrence at Fitzroy Falls, and south to near the Victorian border (Ollerenshaw, 1979; Fairley & Moore, 2000), in the Nalbaugh National Park (Duretto, 2003). The species is known from Budderoo, Kanangra-Boyd, Morton (less than 1000 plants) and Nalbaugh National Parks (more than 1000 plants) and in the Upper Kangaroo River area (15 plants) (Briggs & Leigh, 1990). Deane's Boronia occurs within the Hawkesbury-Nepean and Southern Rivers (NSW) Natural Resource Management Regions (DECC, 2005).

The species grows on the margins of high altitude swamps (Ollerenshaw, 1979), in wet heath (Harden, 1991) and in drier open forest (Duretto, 2003) on low nutrient, poorly drained peaty soils on sandstone or granite (Benson & McDougall, 2001). It used to grow profusely in Morton National Park near Bundanoon but has rarely been seen in that area since the devastating bushfires of the 1960s (Anon, 2000).

The distribution of this species overlaps with the following EPBC Act-listed threatened ecological communities:

- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland,
- Natural Temperate Grassland of the Southern Tablelands of NSW and the Australian Capital Territory, and
- Temperate Highland Peat Swamps on Sandstone.

Threats

The main identified threats to Deane's Boronia include feral pigs (*Sus Scrofa*) (which cause direct damage to the species and to its swamp and stream bank habitat); habitat loss and/or fragmentation through clearing of riparian zones in rural residential developments; and frequent burning (DECC, 2005).

Potential threats include unintentional impacts on populations from development and land management activities (DECC, 2005) and changes to hydrology.

Research Priorities

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

- Design and implementation of a monitoring program, and
- Undertake survey work in suitable habitat or potential habitat to locate any additional populations/occurrences/remnants.

Regional Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of Deane's Boronia.

Habitat Loss, Disturbance and Modification

- Identify populations of high conservation priority.
- Manage threats to areas of native vegetation that contain populations/occurrences/remnants of Deane's Boronia.
- Ensure development activities do not adversely impact on known populations of Deane's Boronia.
- Manage any changes to hydrology which may result in changes to the water table levels, increased run-off, sedimentation or pollution.
- Investigate formal conservation arrangements such as the use of covenants, conservation agreements or inclusion in reserve tenure.

Animal Predation or Competition

- Develop and implement a management plan for the control and eradication of feral pigs in the local region.

Fire

- Develop and implement a suitable fire management strategy for Deane's Boronia.
- Identify appropriate intensity and interval of fire to promote seed germination.
- 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 Deane's Boronia within the local community, including with local government and the Rural Fire Service (DECC, 2005).

Enable Recovery of Additional Sites and/or Populations

- 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.
- Undertake appropriate seed collection and storage.
- Undertake seed germination and propagation trials to determine requirements for successful establishment.

Local Priority Actions

The following local priority recovery and threat abatement actions can be done to support the recovery of Deane's Boronia.

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.
- Control known sites in reserve areas to prevent public access.

- Avoid clearing riparian vegetation, especially during rural residential development.
- Minimise adverse impacts from changed land use at known sites.
- Manage any disruptions to water flows.

Animal Predation or Competition

- Manage threats at known sites in reserve areas to control feral pigs.
- Continue baiting to control population numbers of feral pigs.

Fire

- Inform relevant authorities about populations to ensure that plants are considered when hazard reduction activities are planned (DECC, 2005).
- Implement an appropriate fire management regime for local populations, that avoids burning plants before new seed has been produced (DECC, 2005).
- Undertake monitoring of populations affected by fire (DECC, 2005).

This list does not necessarily encompass all actions that may be of benefit to Deane's 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

- Budderoo National Park Plan of Management (NSW NPWS, 1998) and Amendments (NSW NPWS, 2004),
- Kanangra-Boyd National Park Fire Management Strategy (NSW NPWS, 2006) and Plan of Management (NSW NPWS, 2001a),
- Morton National Park Plan of Management (NSW NPWS, 2001b), and
- Threat Abatement Plan for Predation, Habitat Degradation, Competition and Disease Transmission by Feral Pigs (DEH, 2005).

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