

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

Approved Conservation Advice for
Grevillea shiressii

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

Description

Grevillea shiressii, Family Proteaceae, is an erect shrub 1.5–5 m high, with flowers bluish to mauve at the base and along the dorsal side, creamy white elsewhere. The style is dull, purplish red or brown-maroon, with green tip and ovary (Olde & Marriott, 1995; Makinson, 2000). Flowers are pollinated by honeyeaters and appear mainly between July and December (McGillivray & Makinson, 1993; Olde & Marriott, 1995; Benson & McDougall, 2000; Makinson, 2000). Seed is released at maturity in October and is dispersed by ants (DECC, 2005).

Conservation Status

Grevillea shiressii is listed as **vulnerable**. The 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 on the *Threatened Species Conservation Act 1995* (NSW).

Distribution and Habitat

Grevillea shiressii is known from only two localities on the central coast of NSW, on tributaries of the lower Hawkesbury River, (Mooney Mooney Creek in Brisbane Water National Park, and Mullet Creek, near Gosford) at altitudes up to 30 m above sea level (McGillivray & Makinson, 1993; Olde & Marriott, 1995; Benson & McDougall, 2000; Makinson, 2000). It occurs on lower hillsides and slopes, and beside streamlines in alluvial grey sandy or loamy soils over sandstone. The species inhabits tall scrub or wet sclerophyll forest or shrub associations with *Eucalyptus deanei*, *Syncarpia glomulifera*, *Angophora floribunda*, *Tristaniopsis laurina* and *Lomatia myricoides* (Olde & Marriott, 1995; Benson & McDougall, 2000; Makinson, 2000).

This species occurs within the Hawkesbury–Nepean (NSW) Natural Resource Management Region (DECC, 2005).

The distribution of *G. shiressii* is not known to overlap with any EPBC Act-listed threatened ecological communities.

Threats

The main identified threats to *G. shiressii* are inappropriate fire regimes; incursions of pathogens, such as *Phytophthora cinnamoni*; and habitat loss or degradation. The impacts of these factors are exacerbated by the species' very small range (DECC, 2005).

The main potential threats are that *G. shiressii* is fire frequency, as it is killed by fire and regenerates only from seed (McGillivray & Makinson, 1993; Olde & Marriott, 1995; Benson & McDougall, 2000; Makinson, 2000). It is also prone to pre-dispersal seed loss to wasps, which may potentially influence available seed numbers in the soil and hence recruitment levels after fire (Auld & Denham, 2001).

Research Priorities

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

- Design and implement a monitoring program.
- Undertake survey work in suitable habitat and 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 *Grevillea shiressii*.

Habitat Loss, Disturbance and Modification

- Identify populations of high conservation priority.
- Manage threats to areas of vegetation that contain populations/occurrences/remnants of *Grevillea shiressii*.
- Investigate formal conservation arrangements such as the use of covenants, conservation agreements or inclusion in reserve tenure.

Fire

- Develop and implement a suitable fire management strategy for *Grevillea shiressii*.
- 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.

Diseases, Fungi and Parasites

- Develop and implement suitable hygiene protocols to protect known sites from further outbreaks of dieback caused by *Phytophthora cinnamoni*.

Conservation Information

- Raise awareness of *G. shiressii* within the local community.
- Encourage reporting of sightings of *G. shiressii* from the local area to NSW DECC (DECC, 2005).

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.

Local Priority Actions

The following local priority recovery and threat abatement actions can be done to support the recovery of *Grevillea shiressii*.

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 access routes to suitably constrain public access to known sites on public land.
- Minimise adverse impacts from land use at known sites.

Fire

- Monitor impacts of fire on known populations (DECC, 2005).
- Implement an appropriate fire management regime for local populations.

This list does not necessarily encompass all actions that may be of benefit to *G. shiressii*, 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

- Brisbane Water National Park Management plan (NSW NPWS, 1992) and Fire Management Strategy (NSW NPWS, 2006), and
- Private Native Forestry Code of Practice for northern NSW (DECC, 2007).

Information Sources:

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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.