

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

Approved Conservation Advice for
***Grevillea iaspicula* (Wee Jasper Grevillea)**

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

Description

Grevillea iaspicula, Family Proteaceae, also known as Wee Jasper Grevillea, is an erect shrub, growing to 2.5 m tall (DECC, 2005a). Flowers are pale green to cream and pink to red (Briggs & Leigh, 1990; Butler et al., 1991; Olde & Marriott, 1995; Makinson, 2000) and hang in spider-like clusters (DECC, 2005a). The species flowers between May and November, and fruits between November and December (Butler et al., 1991; Makinson, 2000).

Conservation Status

Wee Jasper Grevillea 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). The species is also listed as endangered under the *Threatened Species Conservation Act 1995* (NSW).

Distribution and Habitat

Wee Jasper Grevillea is restricted to the Wee Jasper-Burrinjuck area in NSW, north-west of Canberra. The species is known from eight small populations on private land on the edge of Lake Burrinjuck, around Wee Jasper, and along the steep cliffs of the Goodradigbee River, with fewer than 250 plants in total (Hoebee et al., 2007). This species occurs within the Murrumbidgee (NSW) Natural Resource Management Region.

Wee Jasper Grevillea grows on steep slopes and around sinkholes in limestone-derived soil, in rock crevices around the entrance to caves, on steep rocky hillsides or at the base of cliffs. It occurs in *Eucalyptus* and *Brachychiton* low woodland with a generally open shrub and grass understorey (Briggs & Leigh, 1990; Butler et al., 1991; Olde & Marriott, 1995; Makinson, 2000).

The distribution of this species overlaps with the “Natural Temperate Grassland of the Southern Tablelands of NSW and the Australian Capital Territory” EPBC Act-listed threatened ecological community.

Threats

The main identified threats to Wee Jasper Grevillea are grazing by domestic and feral animals, especially sheep (*Ovis aries*) and goats (*Capra hircus*) (Butler et al., 1991); loss and degradation of habitat and populations by invasion of weeds, including Blackberry (*Rubus fruticosus*) and Sweet Briar (*Rosa rubiginosa*); disturbances such as fire and drought (DECC, 2005a); and altered land use.

The species is also threatened by demographic factors associated with small population size, including low recruitment and low gene flow among populations (Hoebee et al., 2007). Hoebee and colleagues (2007) found that the species has an extremely low establishment rate and stated that Wee Jasper Grevillea is unlikely to be viable in the long-term without artificial enhancement of the populations.

Research Priorities

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

- Undertake research on genetic diversity and breeding system to inform strategies to artificially increase the population (DECC, 2005b; Hoebee et al., 2007).

Priority Regional and Local Actions

The following priority recovery and threat abatement actions can be done to support the recovery of Wee Jasper Grevillea.

Habitat Loss, Disturbance and Modification

- Monitor all populations annually to detect new 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.
- Manage areas of vegetation that contain populations/occurrences/remnants of Wee Jasper Grevillea.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations.
- Minimise adverse impacts from changed land use at known sites.
- Mark sites and potential habitat onto maps used for planning (rehabilitation and recovery) (DECC, 2005b).
- Investigate formal conservation arrangements, such as the use of covenants, conservation agreements or inclusion in reserve tenure.

Invasive Weeds

- Identify and remove weeds in the local area, which could become a threat to Wee Jasper Grevillea, using appropriate methods.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Wee Jasper Grevillea.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to Wee Jasper Grevillea, using appropriate methods.
- Undertake annual control of Blackberry and Sweet Briar at all affected sites (DECC, 2005b).

Fire

- Develop and implement a suitable fire management strategy for Wee Jasper Grevillea.
- 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.

Trampling, Browsing or Grazing

- Prevent grazing pressure at known sites on leased crown land through exclusion fencing or other barriers.

Animal Predation or Competition

- Manage threats at known sites in reserve areas to control introduced pests, such as rodents (*Rattus rattus*), pigs (*Sus scrofa*) and goats.

Conservation Information

- Raise awareness of Wee Jasper Grevillea within the local community.
- Develop management agreements with landowners to ensure the species is managed sustainably on private land (DECC, 2005b).

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.
- Establish and/or maintain ex-situ populations.
- Undertake enrichment planting of Burrinjuck sites and Wee Jasper crown land site (DECC, 2005b).
- Implement management practices aimed at increasing germination and establishment rates (Hoebee et al., 2007).
- Enhance population sizes with clones taken from cuttings of other plants within other populations (Hoebee et al., 2007).

This list does not necessarily encompass all actions that may be of benefit to Wee Jasper Grevillea, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Existing Plans/Management Prescriptions that Could Affect the Species

- Blackberry, *Rubus fruticosus*: Best Practice Management Guide (Bruzzese et al, 1990),
- Recovery plan for *Grevillea iaspicula* McGillivray (Wee Jasper Grevillea) - 1991-2000 (Butler et al., 1991),
- Threat Abatement Plan for Competition and Land Degradation by Feral Goats (EA, 1999), and
- NSW Threatened Species Priority Action Statement for *Grevillea iaspicula* (DECC, 2005b).

Information Sources:

Briggs, JD & Leigh, JH, 1990, *Delineation of important habitats of threatened plant species in south-eastern New South Wales*, Australian Heritage Commission, Canberra.

Bruzzese, E, Mahr, F, & Faithful, I, 2000, *Blackberry, Rubus fruticosus: Best Practice Management Guide. #5*, CRC for Weed Management Systems, Adelaide

Butler, G, Richardson, M & Ganter, W, 1991, *Recovery plan for Grevillea iaspicula McGillivray (Wee Jasper Grevillea) – 1991–2000*, Australian National Botanic Gardens, Canberra.

Department of Environment and Climate Change (DECC) 2005a, *Threatened species profile database, Wee Jasper Grevillea – profile*, viewed 11 March 2008,

<http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10366>.

Department of Environment & Climate Change (DECC) 2005b, *Grevillea iaspicula - Priority actions* (NSW Threatened Species Priority Action Statement), viewed 11 March 2008,

http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/pas_profile.aspx?id=10366.

Environment Australia (EA) 1999, *Threat Abatement Plan for Competition and Land Degradation by Feral Goats*. Biodiversity Group, Environment Australia, viewed 11 March 2008,

<http://www.environment.gov.au/biodiversity/threatened/publications/tap/goats/index.html>.

Hoebee, SE, Thrall, PH & Young, AG, 2007, Integrating population demography, genetics and self-incompatibility in a viability assessment of the Wee Jasper Grevillea (*Grevillea iaspicula* McGill., Proteaceae) *Conservation Genetics*, viewed 11 March 2008,

<http://www.springerlink.com/content/d82151k525g62147/?p=46c34e39f1df40dabdf200407efdebbc&pi=0>.

Makinson, RO 2000, 'Proteaceae 2 – Grevillea', *Flora of Australia*, vol. 17A, pp. 1-524, ABR/CSIRO, Melbourne.

Olde, PM & Marriott, NR 1995, *The Grevillea book; volume 2*, Kangaroo Press Kenthurst, NSW.

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.