

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

Approved Conservation Advice for
Phebalium whitei

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

Phebalium whitei, Family Rutaceae, is a shrub with branchlets covered in silvery and rusty scales. Leaves are on short stalks, the blades oblong to elliptic (oval in outline, widest in the middle), to 6 cm long and 1 cm wide, narrowly channelled. The leaf margins are somewhat curved downwards, the apex rounded, base broadly wedge-shaped, upper surface smooth and hairless, the lower surface covered in silvery scales. Inflorescences are clusters of one to four (rarely as many as six) flowers at the ends of stems. Flowers are on short, thick stalks 2–4 mm long. The calyx is hemispherical, 2.5 mm long, 3.5 mm wide, with a covering of silvery and rusty scales. Petals are about 8 mm long, 3 mm wide, bright yellow, with silvery scales on the lower half and rusty scales on the upper half (Wilson, 1970). Flowering occurs in spring (Stanley & Ross, 1983).

Conservation Status

Phebalium whitei 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 *Nature Conservation (Wildlife) Regulation 2006* (Queensland).

Distribution and Habitat

Phebalium whitei is known from south-east Queensland in the Stanthorpe area from Lyra to Wyberba (Wilson, 1970; Stanley & Ross, 1983). The species is reserved in Girraween National Park (NP) (Briggs & Leigh, 1996). Collections have been made along Bald Rock Creek, at Wyberba, Lyra and The Junction, Girraween NP (BRI collection details, n.d.). Two populations occur in Girraween NP over about 10 ha with approximately 1000 plants in total (Brisbane Herbarium, 2001).

Collections have been made in heathland in granite soil, cracks in granite rock, among granite pavement and boulders along a creek and on or near a wet creek bank in shallow soil (BRI collection details, n.d.). The species is popular in cultivation (Elliot & Jones, 1997) and it is grown at the Australian National Botanic Gardens, Canberra (Meredith & Richardson, 1990; CHABG, 1994). This species occurs within the Border Rivers Maranoa–Balonne (Queensland) Natural Resource Management Region.

The distribution of this species overlaps with the “White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland” EPBC Act-listed threatened ecological community.

Threats

The main potential threats to *Phebalium whitei* include inappropriate fire regimes and changes in land use patterns, and increasing visitor pressure on the heath and scrub communities of Girraween NP (McDonald et al., 1995).

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.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.

Regional and Local Priority Actions

The following priority recovery and threat abatement actions can be done to support the recovery of *Phebalium whitei*.

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.
- Identify populations of high conservation priority.
- Suitably constrain public access to known sites on public land.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on *Phebalium whitei*.
- Ensure road widening and maintenance activities (or other infrastructure or development activities) involving substrate or vegetation disturbance in areas where *P. whitei* occurs do not adversely impact on known populations.
- Minimise adverse impacts from land use at known sites.

Fire

- Develop and implement a suitable fire management strategy for *Phebalium whitei*.
- Provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigative measures in bush fire risk management plan(s), risk register and/or operation maps.

Conservation Information

- Raise awareness of *P. whitei* 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 *P. whitei*, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Information Sources:

BRI Collection Records (no date), Queensland Herbarium specimens.

Briggs, JD & Leigh, JH 1996, *Rare or Threatened Australian Plants*, Centre for Plant Biodiversity Research, CSIRO Division of Plant Industry, Canberra, ACT.

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

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Elliot, WR & Jones DL 1997, *Encyclopaedia of Australian Plants Suitable for Cultivation*, vol. 7, Thomas C Lothian Pty Ltd, Port Melbourne, Victoria.

McDonald, B, Gravatt, C, Grimshaw, P & Williams, J 1995, *The Flora of Girraween and Bald Rock National Parks*, Queensland Department of Environment and Heritage.

Meredith, LD & Richardson, MM 1990, *Rare or Threatened Australian Plant Species in Cultivation in Australia*, Report Series No. 15, Australian National Parks and Wildlife Service.

Stanley, TD & Ross, EM 1983, *Flora of South-eastern Queensland*, vol. 1, Queensland Department of Primary Industries, Brisbane.

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.

Wilson, PG 1970, 'A revision of the genera *Crowea*, *Eriostemon* and *Phebalium* (Rutaceae)', *Nuytsia*, vol. 1(1), pp. 3–155.