

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

Approved Conservation Advice for
Plectranthus nitidus

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

Plectranthus nitidus, Family Lamiaceae, also known as Nightcap Plectranthus, is a multi-stemmed herb forming small clumps 30–150 cm tall. Leaves are opposite, oval-shaped, to 5 cm long, and fleshy with 6–8 teeth on each margin. The leaves are scentless, shiny green and almost hairless above, purple below. The inflorescence is a terminal spike to 35 cm long, with clusters of 6–10, small, lilac, two-lipped flowers, 8–9 mm long (Forster, 1992; DEC, 2005). It is distinguished from other species in the area by the stems, branches and lower leaf surfaces having non-glandular hairs that point upwards (Halford, 1998).

Conservation Status

Plectranthus nitidus 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). *Plectranthus nitidus* is also listed as endangered under the *Nature Conservation Act 1992* (Queensland) and the *Threatened Species Conservation Act 1995* (NSW).

Distribution and Habitat

Plectranthus nitidus is restricted to south-east Queensland and north-east NSW, where it occurs from Nightcap Range north to the McPherson Range, over a distance of approximately 60 km (Halford, 1998; DEC, 2005). It forms small clumps in gullies and on boulders in rainforest or open forest on the margins of rainforest (Queensland Herbarium, 2008). It is recorded from Springbrook National Park, though it is not common at this site (Queensland Herbarium, 2008). It has been recorded from Numinbah State Forest in roadside vegetation (Forster, 1992; Queensland Herbarium, 2008).

This species occurs within the South East Queensland and Northern Rivers (NSW) Natural Resource Management Regions.

Threats

The main identified threat to *P. nitidus* is the flooding of a known population by the planned increase in the reservoir capacity of the Hinze Dam Stage 3 project (D.A.Halford, 2008, pers. comm.).

The main potential threats to the species include competition from introduced weed species, especially Crofton Weed (*Ageratina adenophora*), Mistflower (*Ageratina riparia*), and Lantana (*Lantana camara*); roadside clearing and maintenance in Numinbah State Forest; habitat modification; and inappropriate fire regimes (Halford, 1998; DEC, 2005).

This species normally grows in full shade under rainforest canopy and therefore detrimental habitat modification may be a threat (DEC, 2005). Inappropriate fire regimes may also affect *P. nitidus* which is suspected of being fire sensitive, although its habitat may provide some protection from fire (Halford, 1998).

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.

Regional Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of *P. nitidus*.

Habitat Loss, Disturbance and Modification

Monitor known populations to identify key threats.

- Ensure road maintenance activities involving substrate and vegetation disturbance in areas where *P. nitidus* occurs do not adversely impact on known populations.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.

Invasive Weeds

- Develop and implement a management plan for the control of Crofton Weed, Mistflower and Lantana in the local region.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to the species, using appropriate methods.

Fire

- Develop and implement a suitable fire management strategy for *P. nitidus*.

Conservation Information

- Raise awareness of *P. nitidus* 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.

Local Priority Actions

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

Habitat Loss, Disturbance and Modification

- Identify populations of high conservation priority.
- Ensure dam building activities in areas where *P. nitidus* occurs do not adversely impact on known populations.
- Minimise adverse impacts from land use at known sites.

Invasive Weeds

- Identify and remove weeds in the local area, which could become a threat to *P. nitidus*, using appropriate methods.

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Fire

- 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.

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

- Weeds of National Significance: Lantana (*Lantana camara*) (ARMCANZ, 2001).

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

Information Sources:

Agriculture & Resource Management Council of Australia & New Zealand (ARMCANZ) 2001, *Weeds of National Significance: Lantana (Lantana camara) Strategic Plan*, National Weeds Strategy, <<http://www.dpi.qld.gov.au/cps/rde/xbcr/dpi/IPA-Lantana-Nsplan.pdf>>.

Department of Environment & Conservation New South Wales (DEC) 2005, *Plectranthus nitidus* – profile, viewed 27 May 2008, <<http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10638>>

Forster, PI 1992, 'Five new species of *Plectranthus* L. Herit (Lamiaceae) from Queensland', *Austrobaileya*, vol. 3, no. 4, pp. 729–740.

Halford, DA 1998, 'Survey of Threatened Plant Species in south east Queensland Biogeographical Region', Queensland CRA/RFA Steering Committee.

Halford, DA (Queensland Herbarium Environmental Protection Agency). Personal communication. 29 May 2008.

Queensland Herbarium 2008, specimen label information, viewed 21 May 2008.

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.