

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

Approved Conservation Advice for
***Cupaniopsis shirleyana* (Wedge-leaf Tuckeroo)**

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

Description

Cupaniopsis shirleyana, Family Sapindaceae, commonly known as Wedge-leaf Tuckeroo or Kooraloo, is a small tree growing to 10 m tall. The leaves are a glossy green colour and are hairy on their underside. The species flowers from April to June. The fruits are orange capsules that are spherical to egg-shaped in cross section (Stanley & Ross, 1983; Barry & Thomas, 1994).

Conservation Status

Wedge-leaf Tuckeroo 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). Wedge-leaf Tuckeroo is also listed as vulnerable under Schedule 3 of the *Nature Conservation Act 1992* and on the *Nature Conservation (Wildlife) Regulation 2006* (Queensland).

Distribution and Habitat

Wedge-leaf Tuckeroo is known from south-eastern Queensland over a range of approximately 450 km, between Brisbane and Curtis Island (SHG, 2006). Wedge-leaf Tuckeroo occurs in a number of small populations throughout its range, in dry rainforest and scrubby urbanised areas on moderate to very steep slopes, screeslope gullies and rocky stream channels at elevations of 60–550 m above sea level (Thomas & McDonald, 1989). The species is protected at Mount Larcom and Sankey Scrub (EPA, 2005; Gasteen & Petter, 2006).

This species occurs within the Fitzroy, Burnett Mary and South East Queensland Natural Resource Management Regions.

The distribution of Wedge-leaf Tuckeroo overlaps with the following EPBC Act-listed threatened ecological communities:

- Brigalow (*Acacia harpophylla* dominant and co-dominant), and
- Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions.

Threats

The main identified threats to Wedge-leaf Tuckeroo are clearing and disturbance from activities such as roadworks and other infrastructure works, including associated drainage works. These activities can impact directly on the species and also promote canopy gaps which are readily colonised by weed species, such as *Muraya ovatifoliolata* and *Lantana* (*Lantana camara*), which form dense thickets.

An area containing remnant Wedge-leaf Tuckeroo habitat within the Cordalba State Forest has been declared a Scientific Area under the *Forestry Act 1959* to protect the largest known population of Isis Tamarind (*Alectryon ramiflorus*). Stock proof fencing has been erected and firebreaks constructed to protect the community from accidental disturbance, grazing and fire impacts (Barry, 2000).

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.
- 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 Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of Wedge-leaf Tuckeroo.

Habitat Loss, Disturbance and Modification

- Identify populations of high conservation priority.
- Ensure road widening and maintenance activities (or other infrastructure or development activities involving substrate or vegetation disturbance) in areas where Wedge-leaf Tuckeroo occurs do not impact on known populations.
- Manage any changes to hydrology that may result in changes to the water table levels, increased run-off, sedimentation or pollution.
- Manage any disruptions to water flows.
- Investigate formal conservation arrangements, such as the use of covenants, conservation agreements or inclusion in reserve tenure.

Invasive Weeds

- Develop and implement a management plan for the control of Lantana and *Murraya ovatifoliata* in the local region.

Fire

- Develop and implement a suitable fire management strategy for Wedge-leaf Tuckeroo.
- 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 Wedge-leaf Tuckeroo 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.
- Undertake seed germination/propagation trials to enhance likelihood of successful establishment.
- 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 Wedge-leaf Tuckeroo.

Habitat Loss, Disturbance and Modification

- Monitor sites to identify key threats.

- Monitor progress of recovery, including effectiveness of management actions and the need to adapt them is necessary.
- Control access routes to suitably constrain public access to known sites on public land.
- Suitably control and manage access on private land.
- Conduct appropriate surveys ahead of any clearing or modification of potential habitat sites.
- Minimise adverse impacts from land use at known sites.
- Protect populations of Wedge-leaf Tuckeroo through the development of conservation agreements and covenants.

Invasive weeds

- Undertake appropriate weed management at known sites.

Fire

- Implement an appropriate fire management regime to protect local populations.

Trampling, Browsing or Grazing

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

Existing Plans/Management Prescriptions that are Relevant to the Species

- Recovery Plan for White's Hill/Pine Mt Reserve (Gasteen & Petter, 2006),
- Curtis Coast Regional Coastal Management Plan (Curtis Coastal Plan) (EPA, 2005). Protection of the Wedge-leaf Tuckeroo has been targeted at Mt Larcom, which has been identified as a 'key coastal site' by the Curtis Coast region, and
- Weeds of National Significance: Lantana (*Lantana camara*) (ARMCANZ, 2001).

These prescriptions were 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 Executive Committee, Launceston.

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Gasteen D & Petter M 2006, *Recovery Plan for White's Hill/Pine Mt Reserve*, Brisbane Region Environment Council, Whites Hill Pine Mtn Community Group, viewed on 31 March 2008, <<http://brec.ozecol.org/news/current/WHPMREC2.html#Recovery%20Plan%20Introduction>>.

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Stanley, TD & Ross, EM 1983, *Flora of south-eastern Queensland - Volume I*, Queensland Department of Primary Industries, Brisbane, Australia.

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