

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

**Approved Conservation Advice for  
*Acacia curranii* (Curly-bark Wattle)**

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**

*Acacia curranii*, Family Mimosaceae, also known as Curly-bark Wattle, is an erect or spreading multi-stemmed shrub growing to 4 m tall, with distinctive red curling (minniritchi) bark. Branches are angular, maroon-grey with silky, downy hairs. The leaf-like phyllodes are erect, linear, depressed along the midrib, 13–18 cm long, 1–1.5 mm wide and covered by silky silver hairs. Flowers are golden yellow in colour and arranged in spikes 5–7 mm long on a stalk 1.5 mm long. Pods are flat, up to 6 cm long by 3 mm wide and with coarse long hairs. Seeds are oblong, about 3 mm long, greyish-brown with a pale area and a basal seed stalk (aril). Flowering time is August and September (Pedley, 1978; Tindale & Kodela, 2001; DECC, 2005a).

**Conservation Status**

*Acacia curranii* 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). *Acacia curranii* is also listed as vulnerable under the *Threatened Species Conservation Act 1995* (NSW) and vulnerable under the *Nature Conservation (Wildlife) Regulation 2006* (Queensland).

**Distribution and Habitat**

Curly-bark Wattle is known from three separate areas: Lake Cargelligo and Gunderbooka Range near Bourke in NSW, and Gurulmundi in Queensland. A population of about 150 trees has been recorded on Mount Gunderbooka (NSW NPWS, 2005). This species is conserved within the Gundabooka National Park and Nombininie Nature Reserve (DECC, 2005a). Curly-bark Wattle grows in dry sclerophyll forests and semi-arid woodlands. This species occurs within the Lachlan, Western (NSW), and Border Rivers Maranoa–Balonne (Queensland) Natural Resource Management Regions.

The distribution of this species overlaps with the following EPBC Act-listed threatened ecological communities:

- Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions,
- Brigalow (*Acacia harpophylla* dominant and co-dominant),
- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland, and
- Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions.

**Threats**

The main identified threats to Curly-bark Wattle are habitat erosion; grazing, browsing and horning of adult and seedling plants by feral goats (*Capra hircus*); grazing by stock, rabbits (*Oryctolagus cuniculus*), and macropods; clearing of vegetation for fire trail widening; quarrying activities at the Shephards Hill and Gurulmundi sites; predation of seeds by insects

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causing a large number of seeds to be non-viable; and lack of suitable fire disturbance for seedling establishment (DECC, 2005a).

### **Research Priorities**

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

- Identify three representative populations (per year over initial two years) to focus research actions and adaptive management, and apply knowledge gained to other populations (DECC, 2005b).
- Design and implement a long term monitoring program and opportunistically monitor populations after wildfire to determine fire ecology (DECC, 2005b).
- More precisely assess ecological requirements, including fire ecology and response to disturbance, and undertake field studies to monitor insect attack on seed, seedling establishment and survivorship (DECC, 2005b).
- Assess published fire research on Curly-bark Wattle and develop knowledge of fire ecology in NSW (DECC, 2005b).
- Undertake survey work in suitable habitat to confirm less known sites, potential habitat to locate any additional populations/occurrences/remnants (DECC, 2005b).

### **Regional and Local Priority Actions**

The following priority recovery and threat abatement actions can be done to support the recovery of Curly-bark Wattle.

#### **Habitat Loss, Disturbance and Modification**

- Ensure that Development Applications are carefully assessed to deter further clearing of potential habitat (DECC, 2005b).
- 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.
- Ensure road widening and maintenance activities (or other infrastructure or development activities) involving substrate or vegetation disturbance in areas where the Curly-bark Wattle occurs do not adversely impact on known populations.
- Provide fencing and signage to prevent quarry activities impacting where Curly-bark Wattle occurs (DECC, 2005b).
- Encourage conservation through rangeland management practices that maintain and enhance populations and address threats (DECC, 2005b).
- Implement conservation management agreements for high priority sites (DECC, 2005b), and investigate conservation arrangements for other areas such as the use of covenants or inclusion in reserve tenure.

#### **Trampling, Browsing or Grazing**

- Develop and implement a stock management plan for roadside verges and travelling stock routes.
- Implement the threat abatement plan for the control and eradication of feral goats in the local region (EA, 1999b).
- Implement the threat abatement plan for the control and eradication of feral rabbits in the local region (EA, 1999a).
- Prevent grazing pressure by rabbits, stock, kangaroos, and goats at known sites through exclusion fencing or other barriers with allowances for population growth, and include ecological monitoring programs (DECC, 2005b).
- Close or restrict access to artificial watering points by feral goats and kangaroos in regions where Curly-bark Wattle occurs (DECC, 2005b).

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### Conservation Information

- Raise awareness of the location and identification of Curly-bark Wattle with all personnel undertaking maintenance of road verges, trails, quarrying, and mining activities (DECC, 2005b).
- Raise awareness of the Curly-bark Wattle within the local community by developing educational material to encourage protection and rehabilitation of habitat where Curly-bark Wattle occurs.

### Enable Recovery of Additional Sites and/or Populations

- Investigate options for undertaking research into regeneration, such as seed-set, germination and seedling survival (DECC, 2005b).
- 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 Curly-bark Wattle, 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

- NSW Priority Action Statement for Curly-bark Wattle (DECC, 2005b),
- Threat Abatement Plan for Competition and Land Degradation by Feral Rabbits (EA, 1999a),
- Threat Abatement Plan for Competition and Land Degradation by Feral Goats (EA, 1999b), and
- Gundabooka National Park and Gundabooka State Conservation Area – Plan of Management (NSW NPWS, 2005).

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

### **Information Sources:**

Department of Environment & Climate Change New South Wales (DECC) 2005a, *Curly-bark Wattle – Profile*, viewed 16 May 2008, <<http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10012>>.

Department of Environment & Climate Change New South Wales (DECC) 2005b, *Curly-bark Wattle – Priority actions (New South Wales Threatened Species Priority Action Statement)*, viewed 16 May 2008, <[http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/pas\\_profile.aspx?id=10012](http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/pas_profile.aspx?id=10012)>.

Environment Australia (EA) 1999a, *Threat Abatement Plan for Competition and Land Degradation by Feral Rabbits*, Biodiversity Group, Environment Australia, viewed 16 January 2008, <<http://www.environment.gov.au/biodiversity/threatened/publications/tap/rabbits/index.html>>

Environment Australia (EA) 1999b, *Threat Abatement Plan for Competition and Land Degradation by Feral Goats*, Biodiversity Group, Environment Australia, viewed 26 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/publications/tap/goats/index.html>>.

NSW National Parks & Wildlife Service (NSW NPWS) 2005, *Gundabooka National Park and Gundabooka State Conservation Area – Plan of Management*, Department of Environment and Climate Change.

Pedley, L 1978, 'A revision of *Acacia* Mill. in Queensland', *Austrobaileya*, vol. 1, no. 2, pp. 75–234.

Tindale, MD & Kodala, PG 2001, '*Acacia curranii*', In: Orchard, AE & Wilson, AJG (Eds.), *Flora of Australia*, vol. 11B, ABRS/CSIRO Publishing, Melbourne, pp. 287–288.

Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia* (2<sup>nd</sup> ed.), Australian Network for Plant Conservation, Canberra.