

# Acacia repanda

EN

Taxonomic Authority: R.S.Cowan & Maslin

☒ Global Assessment ☐ Regional Assessment

Region: Global

☐ Endemic to region

## Upper Level Taxonomy

Kingdom: PLANTAE

Phylum: TRACHEOPHYTA

Class: MAGNOLIOPSIDA

Order: FABALES

Family: LEGUMINOSAE

## Lower Level Taxonomy

Rank:

Infra- rank name:

☐ Plant Hybrid

Subpopulation:

Authority:

Closely related to A. ephedroides.

## General Information

### Distribution

Acacia repanda is endemic to Australia, it has a disjunct distribution occurring in the Holt Rock area with one collection from Wongan Hills (c. 300 km to the northwest) in south-western Western Australia. Despite the fact that other wheatbelt acacia species show this pattern of distribution, the record in the Wogan Hills area is based on a collection from 1935, since then, this region has been thoroughly collected by the species was not found again, so it may have become extinct in this area (Cowan and Maslin 1995).

### Range Size

Area of Occupancy: 32

Extent of Occurrence: 780

Map Status:

### Elevation

Upper limit: 450

Lower limit: 380

### Depth

Upper limit:

Lower limit:

### Depth Zones

☐ Shallow photic ☐ Bathyl ☐ Hadal  
☐ Photic ☐ Abyssal

### Biogeographic Realm

☐ Afrotropical  
☐ Antarctic  
☒ Australasian  
☐ Neotropical  
☐ Oceanian  
☐ Palearctic  
☐ Indomalayan  
☐ Nearctic

## Population

Total population size is not known, it was last collected in 1999. It is not clear whether the plant still occurs in the northern locality in Wongan Hills, since it was last collected from here in 1935.

### Total Population Size

Minimum Population Size:

Maximum Population Size:

## Habitat and Ecology

A large shrub to 2 m high that usually grows in loam or sandy loam near granite outcrops, in heath, scrub and shrubland.

System	Movement pattern	Crop Wild Relative
<input checked="" type="checkbox"/> Terrestrial	<input type="checkbox"/> Freshwater	<input type="checkbox"/> Is the species a wild relative of a crop?
<input type="checkbox"/> Marine	<input type="checkbox"/> Nomadic	
	<input type="checkbox"/> Congregatory/Dispersive	
	<input type="checkbox"/> Migratory	
	<input type="checkbox"/> Altitudinally migrant	

Growth Form	Definition
Shrub - large	Perennial shrub (>1m), also termed a Phanerophyte (>1m)

### Threats

The Western Mallee region where this species occurs is highly fragmented almost completely cleared as wheatfields. Salinity, vegetation fragmentation, weeds, fire, feral herbivores and predators have had a profound affect on the region. Many ecosystems and species populations are in poor condition and trend is declining. Changes in hydrology due to drought and ground water extraction for agriculture is resulting in increase salinity. Lowland communities (tall woodlands, mallee and Melaleuca shrublands, freshwater and naturally saline wetlands) are under threat from rising watertables, and most of these communities will be lost. Mining activities are common in the area, especially gypsum mining (Beecham and Danks 2001).

	Past	Present	Future
1 Habitat Loss/Degradation (human induced)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.1 Agriculture	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.1.1 Crops	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.3 Extraction	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.3.1 Mining	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.3.6 Groundwater extraction	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.5 Invasive alien species (directly impacting habitat)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.7 Fires	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7 Natural disasters	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.1 Drought	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.4 Wildfire	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8 Changes in native species dynamics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.1 Competitors	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.3 Prey/food base	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10 Human disturbance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10.5 Fire	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Conservation Measures

It is known to occur within Lake Hurlstone Nature Reserve and atuer Reserve No. 29027. It is listed as 3KC- in Briggs and Leigh (1995) a poorly known taxon with a geographic range more than 100 km<sup>2</sup> that is known to occur within a reserved but the population size is not known. It is also listed as Priority 3 in Smith (2010); taxa which are known from several populations, at least some of which are not believed to be under immediate threat. The seeds for this species have been collected as part of the Millennium Seed Bank project. Seeds are located at: Wakehurst Place, Royal Botanic Gardens, Kew (UK) and Kings Park & Botanic Garden, Perth (Australia). Salinity revegetation works were planned in 2006 for the Narragin area (<http://www.dec.wa.gov.au/content/view/1475/772/>). Further monitoring is needed to review habitat status and levels of threat and to determine whether this species is still occurring in Wongan Hills area.

	In Place	Needed
1 Policy-based actions	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1 Management plans	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.1.1 Development	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.1.2 Implementation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3 Research actions	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2 Population numbers and range	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.4 Habitat status	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.5 Threats	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4 Habitat and site-based actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.4 Protected areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Species-based actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.7 Ex situ conservation actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.7.2 Genome resource bank	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Countries of Occurrence

	PRESENCE							ORIGIN				
	Year Round	Breeding Season only	Non-breeding season only	Passage migrant	Possibly extinct	Extinct	Presence uncertain	Native	Introduced	Re-Introduced	Vagrant	Origin uncertain
Australia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Western Australia	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### General Habitats

	Score	Description	Major Importance
3 Shrubland	1	Suitable	Unset
3.8 Shrubland - Mediterranean-type Shrubby Vegetation	1	Suitable	Unset

### Species Utilisation

☒ Species is not utilised at all

Trend in the level of wild offtake/harvest in relation to total wild population numbers over the last five years:

Trend in the amount of offtake/harvest produced through domestication/cultivation over the last five years:

CITES status: Not listed

### IUCN Red Listing

Red List Assessment: (using 2001 IUCN system) Endangered (EN)

Red List Criteria: B1ab(iii)+2ab(iii)

Date Last Seen (only for EX, EW or Possibly EX species):

Is the species Possibly Extinct? ☐ Possibly Extinct Candidate? ☐

#### Rationale for the Red List Assessment

A. repanda is a large shrub that has a restricted distribution to shrublands in granite outcrops in Western Australia. It is known from two main areas Holt Rock area and Wongan Hills, however it hasn't been collected in the latter since 1935 and it is presumed to be extinct in this area. The area of occupancy warrants this species an Endangered category (AOO ~32 km<sup>2</sup> based on 2x2 cells). The total extent of occurrence of the species will qualify it as Vulnerable (EOO ~7,800 km<sup>2</sup>) and if the species is not found in the Wongan Hills area then it will qualify as Endangered (EOO ~780 km<sup>2</sup>). The habitat is highly fragmented due to clearing for agriculture and there is a continuing decline of the quality of the habitat mainly due to higher salinity and mining activities. Further changes in species dynamics are due to changes in fire regimes and introduced weeds and grazing pressure. The species is currently known from 3 locations (excluding the Wogan Hills record and making the assumption that increasing salinity might affect populations in nature reserves differently than those outside of these).

Reason(s) for Change in Red List Category from the Previous Assessment:

- ☐ Genuine Change
  - ☐ Genuine (recent)
  - ☐ Genuine (since first assessment)
- ☐ Nongenuine Change
  - ☐ New information
  - ☐ Knowledge of Criteria
  - ☐ Incorrect data used previously
- ☐ No Change
  - ☐ Same category and criteria
  - ☐ Same category but change in criteria
- ☐ Taxonomy
- ☐ Criteria Revisio
- ☐ Other

Current Population Trend: Decreasing

Date of Assessment: 09/09/2010

Name(s) of the Assessor(s): Malcolm, P.

Evaluator(s):

Notes:

% population decline in the past:

Time period over which the past decline has been measured for applying Criterion A or C1 (in years or generations):

% population decline in the future:

Time period over which the future decline has been measured for applying Criterion A or C1 (in years or generations):

Number of Locations: 3

Severely Fragmented:

Number of Mature Individuals:

## Bibliography

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