



## *Polytelis anthoepus monarchoides* Regent Parrot (eastern)

### Taxonomy

*Polytelis anthoepus monarchoides* Schodde, 1993

The Regent Parrot has two subspecies, nominate *P. anthoepus anthoepus* (western Regent Parrot) occurring in south-western Australia, and *P. anthoepus monarchoides* occurring in the interior of south-eastern Australia (Higgins 1999).

### Current conservation status

Listed as Vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999*.

Listed as threatened under the *Flora and Fauna Guarantee Act 1988* as *Polytelis anthoepus anthoepus* (SAC 1994).

Categorised as Vulnerable in the 2013 Advisory list of threatened vertebrate fauna in Victoria (DSE 2013).

### Proposed conservation status

Vulnerable in Victoria

Criteria A2ace; B2ab(i,ii,iii,iv,v)

### Species Information

#### Description and Life History

The eastern Regent Parrot is a medium-sized, slender, long-tailed parrot from 37-42 cm in length and 160-190 g in weight. Adult males are bright yellowish with an olive green back, bluish-black wings and tail and red patches on the inner wings. Adult females and juveniles are mostly olive-green, with bluish-green wings and tail and less extensive red wing patches (Higgins 1999).

Regent Parrots nest in loose colonies of up to 61 pairs (Webster 2006), though most colonies are smaller (2-10 pairs). Colony areas range from 0.5 ha-90 ha (av. 20 ha (Higgins 1999; Webster 2002), depending on the numbers of birds involved and the

distribution of suitable habitat. Breeding pairs in colonies usually use different nest trees, although occasionally two or more active nests may be found in hollows in the same tree. Breeding occurs from August to December (Smith 1992). Up to six eggs are laid, incubated for about 21 days by the female alone, and the young fledge about 42 days later (Forshaw and Cooper 1981). During this time males feed their mate near the nest hollow by regurgitation, and females do most of the feeding of young. In Western Australia, three young were fledged per active nest. Regent Parrots may live 15-20 years (Burbidge 1985).

Eastern Regent Parrots feed mostly on plant seeds, and will also eat buds, flowers, and occasionally insect larvae, psyllids and lerps (Higgins 1999). Most foraging occurs on the ground in mallee, with some in mallee trees, vineyards, orchards, cereal crops and riparian woodlands (Burbidge 1985). Spilt grain is also eaten along roadsides (Forshaw and Cooper 1981).

#### Generation Length

The generation length of Regent Parrots is estimated to be 6 to 9 years. It is determined to be 7.5 years in the Bird Action Plan (Garnett et al. 2010).

# Polytelis anthoepplus monarchoides

## Regent Parrot

### Distribution

The taxon occurs in inland south-eastern Australia, in the lower Murray-Darling basin region of South Australia, New South Wales and Victoria. Within this range, it is found in riverine and mallee woodlands and forests (Baker-Gabb and Hurley 2011).

### Habitat

The eastern Regent Parrot breeds almost entirely in River Red Gum forest and woodland, and all known breeding colonies are located on floodplains or associated anabranch creeks and lakes. A small colony in Wyperfeld National Park nests in Slender Cypress Pine *Callitris gracilis* ssp. *gracilis* (Hurley 2011).

During the breeding season, Regent Parrots feed mostly in large blocks of intact mallee woodlands within 20 km (usually 5-10 km) of nest sites, with areas containing Red/Grey Mallee *Eucalyptus socialis*, or Ridge-fruited/Yellow Mallee *E. crassata* apparently favoured (Burbidge 1985). Foraging within riverine forests and other woodlands containing Black Box, Buloke *Allocasuarina leuhmanii*, Belah/Black Oak *Casuarina pauper* or Slender Cypress Pine has also been observed (Burbidge 1985; Emison et al. 1987). Nesting is restricted to stretches of mature riverine forest within 20 km of suitable feeding habitat, because male Regent Parrots are limited by their need to make at least 2-3 return trips per day to feed nesting females (Forshaw & Cooper 1981; Baker-Gabb and Hurley 2011).

### Threats

The eastern Regent Parrot has suffered a decline in range and abundance over the last 100 years. In the mid Murray region, there has been a major contraction in range from the east along the Murray River, with birds no longer found in the Wangaratta, Mooroopna, Kerang, Lake Boga and Swan Hill districts (Baker-Gabb and Hurley 2011). Major threats include clearing and degradation of nesting and foraging habitat, disturbance around nesting sites, competition for nest hollows, deliberate killing of birds, road kills and accidental poisoning.

### IUCN Criteria

Criterion A. Population size reduction. Population reduction (measured over the longer of 10 years or 3 generations) based on any of A1 to A4			
	Critically Endangered	Endangered	Vulnerable
A1	≥ 90%	≥ 70%	≥ 50%
A2, A3, A4	≥ 80%	≥ 50%	≥ 30%
<p>A1 Population reduction observed, estimated, inferred or suspected in the past and the causes of the reduction are clearly reversible AND understood AND ceased.</p> <p>A2 Population reduction observed, estimated, inferred or suspected in the past where the causes of the reduction may not have ceased OR may not be understood OR may not be reversible.</p> <p>A3 Population reduction, projected or suspected to be met in the future (up to a maximum of 100 years) [(a) cannot be used for A3]</p> <p>A4 An observed, estimated, inferred, projected or suspected population reduction where the time period must include both the past and the future (up to a max. of 100 years in future), and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible.</p> <p>based on any of the following:</p> <p>(a) direct observation [except A3]</p> <p>(b) an index of abundance appropriate to the taxon</p> <p>(c) a decline in area of occupancy, extent of occurrence and/or quality of habitat</p> <p>(d) actual or potential levels of exploitation</p> <p>(e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites</p>			

# *Polytelis anthopeplus monarchoides* Regent Parrot

## Evidence:

### Eligible under Criterion A2 as Vulnerable

The population reduction over the past 18 to 27 years is estimated to be 25 to 35%, based on (a), (c) and (e) above.

The distribution of Regent Parrots has decreased by approximately 50%, where birds that previously bred between Hattah and Renmark no longer occur, plus contraction down river from the confluence of the Murrumbidgee River because of habitat loss for agriculture. Also the range has contracted from the east along the Murray River.

The causes of the reduction may not have ceased, be understood or be reversible.

Criterion B. Geographic range in the form of either B1 (extent of occurrence) and/or B2 (area of occupancy)			
	Critically Endangered Very restricted	Endangered Restricted	Vulnerable Limited
B1. Extent of occurrence (EOO)	< 100 km <sup>2</sup>	< 5,000 km <sup>2</sup>	< 20,000 km <sup>2</sup>
B2. Area of occupancy (AOO)	< 10 km <sup>2</sup>	< 500 km <sup>2</sup>	< 2,000 km <sup>2</sup>
AND at least 2 of the following 3 conditions:			
(a) Severely fragmented OR Number of locations	= 1	≤ 5	≤ 10
(b) Continuing decline observed, estimated, inferred or projected in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals			
(c) Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (iv) number of mature individuals			

## Evidence:

### Eligible under Criterion B2 as Vulnerable

The Area of Occupancy (AoO) across the taxon's range is estimated to be 1,966 km<sup>2</sup>, based on 2 x 2 km grids derived from accepted, post-1970 records in the Victorian Biodiversity Atlas.

It is estimated to have two locations. It has a continuing decline in (i), (ii), (iii), (iv) and (v) above. No new habitat is being created or protected, and the intensity of droughts, heat extremes and risk of further bushfires are likely to all act to increase threats to this taxon.

# Polytelis anthoepplus monarchoides

## Regent Parrot

Criterion C. Small Population size and decline		Critically Endangered	Endangered	Vulnerable
Number of mature individuals		< 250	< 2,500	< 10,000
AND at least one of C1 or C2				
C1	An observed, estimated or projected continuing decline of at least (up to a max. of 100 years in future):	25% in 3 years or 1 generation (whichever is longer)	20% in 5 years or 2 generations (whichever is longer)	10% in 10 years or 3 generations (whichever is longer)
C2	An observed, estimated, projected or inferred continuing decline AND least 1 of the following 3 conditions:			
(a)	(i) Number of mature individuals in each subpopulation	≤ 50	≤ 250	≤ 1,000
	(ii) % of mature individuals in one subpopulation =	90 – 100%	95 – 100%	100%
(b)	Extreme fluctuations in the number of mature individuals			

### Evidence:

#### Ineligible under Criterion C

It is suspected that there are 2,000 to 3,000 mature individuals, but other thresholds under this criterion have not been met.

Criterion D. Very small or restricted population <sup>a</sup>		Critically Endangered <sup>a</sup>	Endangered <sup>a</sup>	Vulnerable <sup>a</sup>
Number of mature individuals (observed or estimated) <sup>a</sup>		< 50 <sup>a</sup>	< 250 <sup>a</sup>	< 1,000 <sup>a</sup>
D2. Only applies to the VU category <sup>f</sup> Restricted area of occupancy or number of locations with a plausible future threat that could drive the species to critically endangered or Extinct in a very short time. <sup>a</sup>		- <sup>a</sup>	- <sup>a</sup>	D2. Typically: <sup>f</sup> AoO < 20 km <sup>2</sup> or number of locations ≤ 5 <sup>a</sup>

### Evidence:

#### Ineligible under Criterion D

It is suspected that there are 2,000 to 3,000 mature individuals.

Criterion E (Quantitative Analysis) was not addressed as the taxon does not have a detailed Population Viability Analysis.

### References

Baker-Gabb, D., and V.G. Hurley (2011). *National Recovery Plan for the Regent Parrot (eastern subspecies) Polytelis anthoepplus monarchoides*. Department of Sustainability and Environment, Melbourne. Available from: <http://www.environment.gov.au/biodiversity/threatened/recovery-plans/national-recovery-plan-regent-parrot-eastern-subspecies-polytelis-anthoepplus-monarchoides>.



# *Polytelis anthopeplus monarchoides* Regent Parrot

Burbidge, A.H. (1985). The Regent Parrot. A report on the breeding distribution and habitat requirements along the Murray River in south-eastern Australia. *Australian National Parks and Wildlife Service, Report Series No. 4.*

DSE (2013). *Advisory List of Threatened Vertebrate Fauna in Victoria - 2013.* Department of Sustainability and Environment, Melbourne

Emison, W.B., Beardsell, C.M., Norman, F.I., Loyn, R.H. and Bennett, S.C. (1987). *Atlas of Victorian Birds.* Department of Conservation, Forests and Lands and Royal Australasian Ornithologists Union, Melbourne

Forshaw, J.M. and Cooper, W.T. (1981). *Australian Parrots* second (revised) edition. Lansdowne Editions, Melbourne.

Higgins, P. (ed). 1999. *Handbook of Australian, New Zealand and Antarctic Birds. Volume 4.* Oxford University press, Melbourne.

Hurley, V.G. (2011). Results from the 2010 breeding survey of Major Mitchell's Cockatoo (*Lophocroa l. leadbeateri*) Pine Plains, Wyperfeld NP. Draft Report Department of Sustainability and Environment, Mildura.

SAC (1994). Flora and Fauna Guarantee Scientific Advisory Committee: Final Recommendation on a Nomination for Listing. Nomination No. 290 *Polytelis anthopeplus anthopeplus*

Smith, K. (1992). The Regent Parrot in South Australia. Report to the Department for Environment and Heritage, Adelaide.

Webster, R. (2002). Surveys of Regent Parrot *Polytelis anthopeplus monarchoides* breeding colonies in Victoria between Piambie State Forest and Nangiloc. Report to Mallee Catchment Management Authority.

Webster, R. (2006). Regent Parrot nest monitoring on Tammit Western Lands Lease. Unpublished report to Forests NSW