



Oreoica gutturalis Crested Bellbird

Taxonomy

Oreoica gutturalis (Vigors & Horsfield, 1827)

The Victorian subspecies is the nominate *gutturalis*.

Current conservation status

Listed as threatened under the *Flora and Fauna Guarantee Act 1988* (SAC 2000).

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

Proposed conservation status

Endangered in Victoria

Criterion C2a(ii)

Species Information

Description and Life History

Crested Bellbirds are medium to large (205-230mm) black, white and brown birds. Males have crown feathers that can be raised as a crest, a feature which is lacking in females. They usually occur singly or in pairs and are best known for their remarkable call (Pizzey and Knight 1997). Crested Bellbirds are usually recorded as single birds (often only heard) or sometimes as pairs, rarely are the birds reported in groups. The taxon is rare and now can only reliably be observed in suitable habitat found in the north-west and some northern Goldfields locations.

Generation Length

The generation length of Crested Bellbirds is estimated to be 5 to 9 years. This range is based on other passerine birds. Garnett and Crowley (2000, p. 553) give a 'Generation time' of five years, while the more recent figure of 7.9 years is given by BirdLife International (2019).

Distribution

Crested Bellbirds occur across mainland Australia and are not found in Tasmania (Blakers et al. 1984, Pizzey and Knight 1997). In Victoria the taxon occurs in two main regions which are probably isolated from each other, one in the north-west (including the Little Desert) and the other in the Goldfields area of Bendigo and Maryborough regions (Emison et al. 1987). There may be small outlying populations elsewhere (e.g. Lerderderg Gorge) however the status of these populations is unknown. Recent records of Crested Bellbirds have been from Rushworth State Forest, St Arnaud and Dunolly regions (VBA data).

Habitat

Crested Bellbirds inhabit Slender Cypress Pine-Belah woodlands and Dumosa Mallee scrubs (particularly in the Sunset Country) and Red Ironbark and Grey Box forests in the Northern Goldfields. They have often been recorded where their favoured habitats adjoin farmland (Emison et al. 1987). They are generally sedentary in Victoria and no regular long distance movements were found in Victorian Atlas data (Emison op cit).

Threats

The Crested Bellbird has been eliminated from much of its former range by clearing. It seems particularly sensitive to subsequent fragmentation, with areas of apparently suitable habitat as large as 5,000 hectares now unoccupied (e.g. Chiltern area, M.O'Brien pers. comm. May 2019). The pattern of contraction of the taxon from the periphery of its range is characteristic of arid zone birds in Australia (Reid and Fleming 1992). However, clearance and fragmentation does not explain the decline in eastern Queensland, which occurred before the clearing in the area was widespread (Garnett and Crowley 2000).

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> <ul style="list-style-type: none"> (a) direct observation [except A3] (b) an index of abundance appropriate to the taxon (c) a decline in area of occupancy, extent of occurrence and/or quality of habitat (d) actual or potential levels of exploitation (e) the effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites 			

Evidence:

Ineligible under Criterion A

The past population reduction does not meet the threshold for eligibility under criterion A2, and the future population reduction does not meet the threshold for eligibility under criterion A3.

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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 ²	< 5,000 km ²	< 20,000 km ²
B2. Area of occupancy (AOO)	< 10 km ²	< 500 km ²	< 2,000 km ²
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:

Ineligible under Criterion B

The Extent of Occurrence (EoO) across the taxon's range is estimated to be 113,231 km² and the Area of Occupancy (AoO) is estimated to be 4,120 km², both of which exceed the thresholds for criterion B.

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 <u>C1</u> or <u>C2</u>				
<u>C1</u>	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)
<u>C2</u>	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:

Eligible under Criterion C2 as Endangered

It is estimated that there are 1,000 to 3,300 mature individuals. Based on old Australia-wide population estimates (Garnett and Crowley 2000), the possible Victorian population could be up to 3300 mature individuals. The few

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measures of abundance for Crested Bellbirds suggest the taxon occurs at low densities (e.g. 0.05 birds/ha), even in apparently suitable habitat (Blakers et al. 1984). There is some agreement amongst ornithologists that Crested Bellbirds currently occur in very low densities in Victoria and have declined (or become extinct) at some locations. Most of the population is now likely to be confined to north-west Mallee and the northern Goldfields.

The number of mature individuals is projected to continue to decline, and the percentage of mature individuals in one subpopulation is 95-100 %.

A decline is inferred due to the reduced rate of reporting from significant areas of its former range in Victoria. As well, the fuel reduction burning program recently introduced to dry forest environments is likely to have deleterious consequences for many ground and shrub-layer frequenting bird species. Burns during spring are particularly destructive as birds are likely to be breeding then and nests in understorey are likely to be destroyed.

Criterion D - Very small or restricted population [Ⓜ]			
	Critically Endangered [Ⓜ]	Endangered [Ⓜ]	Vulnerable [Ⓜ]
Number of mature individuals (observed or estimated) [Ⓜ]	<50 [Ⓜ]	<250 [Ⓜ]	<1,000 [Ⓜ]
D2 - Only applies to the VU category [Ⓜ] 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. [Ⓜ]	- [Ⓜ]	- [Ⓜ]	D2 - Typically: [Ⓜ] AoO < 20 km ² or number of locations ≤ 5 [Ⓜ]

Evidence:

Ineligible under Criterion D

It is estimated that there are 1,000 to 3,300 mature individuals.

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

References

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