Threatened Species Assessment

Pachycephala rufogularis
Red-lored Whistler

Taxonomy

Pachycephala rufogularis Gould, 1841

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* (SAC 1994).

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

Proposed conservation status

Vulnerable in Victoria

Criteria B1ab(ii,iii,v)+2ab(ii,iii,v); D2

Species Information

Description and Life History

Red-lored Whistlers are about 19 to 22 cm long with a wing-span of 30 to 33 cm, and a mass of about 37 g (Higgins and Peter 2002). Adults are mainly dull-brownish grey, but have a distinct rufous-orange facial patch that extends from the lores (i.e. between the bill and eyes) down to the chin and throat and, in all males and most adult females, rufous-orange colouring on the lower underbody (i.e. the lower breast, belly, vent and undertail-coverts). The sexes generally appear alike, but some females can have a duller colouration that makes them difficult to distinguish from immature males (Higgins and Peter 2002). Juvenile birds can be distinguished from the adults on the basis of their much browner plumage and streaked underbody. Immature birds can be distinguished from the adults when in their first or, less often, in their second plumage by their duller colouration (although immature males can appear similar to dull-coloured adult females) (Higgins and Peter 2002). Red-lored Whistlers are probably resident or sedentary species in suitable habitat.

Generation Length

The generation length of Red-lored Whistlers is estimated to be 6 to 10 years. Garnett et al (2011, p. 380) indicates a generation time of 9.8 years while BirdLife International (2016) gives a figure of 6.7 years.

Distribution

In Victoria, Red-lored Whistlers have been recorded from the Murray-Sunset National Park, Hattah-Kulkyne National Park, Big Desert Wilderness Park and Wyperfeld National Park. There is also an isolated population in the Annuello Block north-east of Ouyen.

Habitat

The Red-lored Whistler inhabits low mallee shrublands, heathlands and woodlands that have an open canopy and a moderately dense but patchy understorey (Department of the Environment 2019). In tree mallee environments in the Murray Mallee region (such as those that occur in Murray Sunset National Park and Riverland Biosphere Reserve), the taxon displays a preference for habitats that support a mosaic of mallee and *Triodia* vegetation. In the more heath-dominated environments located further south, it displays a preference for taller mallee heath.

The taxon has been detected at sites where the vegetation exhibits a post fire age of between five to fifty or more years. In tree mallee habitats, the taxon displays a preference for habitats that have remained unburnt for long periods, with post-fire ages of 20 or more years (in Murray Sunset National Park) or 40 or more years (in Riverland Biosphere Reserve) being of most significance.

Threats

The extensive clearance of mallee vegetation that occurred during the 19th and 20th centuries is believed to have been the main factor in the decline of the Red-lored Whistler. Furthermore, although clearing has subsided, the mallee vegetation that remains is fragmented into small and scattered patches. This can prevent or limit the dispersal of sedentary species such the Red-lored Whistler, which in turn can increase the risk of extinction.

The current major threat to the taxon is fire, which could potentially impact on whistler populations in two ways: by destroying areas of habitat and the populations that inhabit them; and by altering the structure and composition of vegetation, thus reducing the suitability of habitat (the taxon displays a preference for vegetation that has remained unburnt for at least five years). There is a high risk that whistler populations will be exposed to fire, since their preferred habitat, mallee vegetation, is described as fire-prone, and may be capable of supporting a wildfire every 10 to 20 years. Furthermore, single large-scale wildfires in mallee areas can burn hundreds of thousands of hectares of vegetation, and thus are capable of affecting large numbers of birds. For example, large tracts of the Big Desert were made uninhabitable because of fires between 1986 to 1988.

Other potential threats include harvesting of mallee vegetation e.g. Broombush (Woinarski 1989), illegal collection of eggs, degradation of habitat by grazing mammalian herbivores, predation, and displacement by Gilbert's Whistler (Department of the Environment 2019).

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%

A1 Population reduction observed, estimated, inferred or suspected in the past and the causes of the reduction are clearly reversible AND understood AND ceased.

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.

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*]

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.

based on any of the following:

(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.

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 km²	< 5,000 km²	< 20,000 km²
B2. Area of occupancy (AOO)	< 10 km²	< 500 km²	< 2,000 km²
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 B1 as Vulnerable

The Extent of Occurrence (EoO) across the taxon's range is estimated to be 18,981 km², based on accepted, post-1970 records from the Victorian Biodiversity Atlas (VBA).

Given that a fire could seriously affect all or each of the subpopulations and sites the number of locations is assumed to be five - Sunset Country, Big Desert (East and West), Annuello Block, Hattah.

It has a continuing decline in (ii), (iii) and (v) above. The major current threat to the taxon is fire (Connell 2014). Numbers are expected to decline, on the basis that increasing frequency and intensity of fires can potentially destroy the area and suitability of habitat, and the populations that inhabit them.

Eligible under Criterion B2 as Vulnerable

The Area of Occupancy (AoO) across the taxon's range is estimated to be 616 km², based on 2 x 2 km grids derived from accepted, post-1970 records in the VBA. As above, the taxon is inferred to have 5 locations and a continuing decline in (ii), (iii) and (v) above.

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 estimated that there are 850 to 2,000 mature individuals but other thresholds under this criterion have not been met. It might satisfy criterion C2a(i), depending on the size of the largest subpopulation.

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 km2 or number of locations ≤ 5

Evidence:

Eligible under Criterion D2 as Vulnerable

The taxon is estimated to be very restricted.

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

References

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