



Turnix pyrrhothorax Red-chested Button-quail

Taxonomy

Turnix pyrrhothorax (Gould, 1841)

Current conservation status

Listed as threatened under the *Flora and Fauna Guarantee Act 1988* (SAC 2002).

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

Proposed conservation status

Endangered in Victoria

Criterion B2ab(iii,v)

The taxon could conceivably satisfy criterion C2a, as the number of mature individuals is thought to be very small, but numbers cannot be determined with any precision.

Species Information

Description and Life History

Adult Red-chested Button-quails are 12-16 cm long with males weighing 27-46 g and females 31-83 g. The taxon is smaller in size than the more common and widespread Painted Button-quail. Viewed from behind, Red-chested Button-quails look uniformly pale grey across the upper-wings and back. Side-on, the rufous wash on the upper-parts of the Red-chested Button-quail is obvious. From close range its thick blue-grey beak, pink legs and feet, and pale eyes can be seen. Females are brighter than males, with rufous of underparts brighter and extending over throat to sides of head, and narrower and denser barring on flanks that rarely extend onto breast as scalloping. Juveniles are smaller, darker above with white streaks and dark barring, bold white spots on wing-coverts, underparts white with rufous-brown throat and upper breast scalloped.

Red-chested Button-quails are partial migrants. They are known to have seasonal migration between inland arid regions to semi-arid areas nearer the coast, from winter to spring and summer. Some populations remain in one region all year round. The amount of movement is influenced by factors such as rainfall, plant growth and food availability (Atlas of Living Australia 2019).

Generation Length

The generation length of Red-chested Button-quails is estimated to be 3 to 5 years. This is based on Bird Action Plan data for congeners. BirdLife International (2019) gives a figure of 3.5 years with an unstated reliability.

Distribution

The taxon occurs in northern and eastern Australia. It is partially migratory and occurrences are erratic. Most records in Victoria are from the Murray River Valley, around Horsham and near Melbourne (west side) (Victorian Biodiversity Atlas (VBA) data).

Habitat

The Red-chested Button-quail is more commonly recorded from woodland habitats than grassland habitats. The taxon's preferred habitat is in dense grasslands, and open grassy woodland of *Acacia* spp., River Red Gum

Turnix pyrrhothorax

Red-chested Button-quail

(*Eucalyptus camaldulensis*) and Black box (*E. largiflorens*) or *Melaleuca* spp., but also in crops and weedy fields with dense ground cover, and from coastal plains. They occur between sea level and 1000m above sea level. The common factors in their preferred habitat appears to be bare ground and abundant leaf litter, little or no understorey and patches of tussock grass or sedges. The birds normally forage in open areas of deep leaf litter, and retreat to the undercover of tussocks or woody debris if threatened (Atlas of Living Australia 2019). In Victoria they have been recorded in cereal crops in spring and summer, as well as grassy pastures and wheat stubble (Emison et al. 1987).

Threats

The taxon was formerly hunted for food and sport, and occasionally killed by feral predators, e.g. cats and foxes. The major threat to the birds is loss of suitable habitat. They have not adapted to crop and farmland habitats to the extent of many other Button-quail taxa. Red-chested Button-quail nesting in crops have been known to lose their clutches as a result of harvesting machinery impacts (Debus and Kirwan 2019). As a taxon that prefers grassland and grassy woodlands, it is likely to suffer ongoing decline as a result of the continuing loss of native grassy ecosystems.

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

There is insufficient evidence to determine whether there has been or will be a reduction in population sufficient to meet any threshold for Criterion A.

There are very little reliable population data. In the one area that is monitored (Plains-wanderer habitat in the Terrick Terrick region), numbers fluctuate but are always small, with no discernible trend. There has been historic habitat loss and recorded declines in the Australian range (BirdLife International 2019). The national trend for the species is 'Declining' (BirdLife International 2019).

Turnix pyrrhothorax

Red-chested Button-quail

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:

Eligible under Criterion B2 as Endangered

The Area of Occupancy (AoO) across the taxon's range is estimated to be 208 km², based on 2 x 2 km grids derived from accepted, post-1970 records in the VBA.

The taxon is inferred to be severely fragmented, as subpopulations are likely to be discrete with little or no interchange.

It has a continuing decline in (iii) and (v) above. There has been some improved management of native grassland on the Patho Plains, however there has been no similar improvement on the Werribee Plains and Murray River corridor. The taxon's decline in south eastern Australia is likely to be due to the conversion of native grasslands to agriculture, with 95% of such habitat having been destroyed or degraded in Victoria (Atlas of Living Australia 2019). Losses of native grassland continue, especially south of the Divide.

Turnix pyrrhothorax Red-chested Button-quail

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 50 to 300 mature individuals, but this qualifier is too weak and other thresholds under this criterion have not been met.

Numbers are not known with any precision. It is a highly mobile taxon and numbers fluctuate according to conditions in inland eastern Australia.

Criterion D. Very small or restricted populations				
		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 suspected that there are 50 to 300 mature individuals, but this qualifier is not adequate to satisfy criterion D.

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

References

Atlas of Living Australia (2019) Red-chested Button-quail. (downloaded from <https://bie.ala.org.au/species/urn:lsid:biodiversity.org.au:afd.taxon:486b871c-47d6-4b3b-8044-22abbfc6e255> on 16/5/2019)



Turnix pyrrhоторax Red-chested Button-quail

BirdLife International (2019) Species factsheet: *Turnix pyrrhоторax*. (downloaded from <http://www.birdlife.org> on 16/05/2019)

Conole, L.E. and Mac Nally, R.C. (2001) Field identification, ecology and conservation status of the Red-chested Button-quail *Turnix pyrrhоторax* in Northern Victoria. *The Victorian Naturalist* 118(2): 56 - 58.

Debus, S. and Kirwan, G.M. (2019) Red-chested Buttonquail (*Turnix pyrrhоторax*). In: del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. and de Juana, E. (eds.) *Handbook of the Birds of the World Alive*. Lynx Edicions, Barcelona. (retrieved from <https://www.hbw.com/node/53547> on 16 May 2019).

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. and Loyn, R.H. and Bennett, S.C. (1987) *Atlas of Victorian Birds*. Red-chested Button-quail, p. 91. Department of Conservation, Forests and Lands, Royal Australasian Ornithologists Union, Melbourne.

SAC (2002). Flora and Fauna Guarantee Scientific Advisory Committee: Final Recommendation on a Nomination for Listing. Nomination No. 552 *Turnix pyrrhоторax*.