

RECOVERY OUTLINE

Black-breasted Button-quail

| | | |
|---|---------------------|--|
| 1 | Family | Turnicidae |
| 2 | Scientific name | <i>Turnix melanogaster</i> (Gould, 1837) |
| 3 | Common name | Black-breasted Button-quail |
| 4 | Conservation status | Vulnerable: B1+2bcde |

5 Reasons for listing

The area occupied by this species is less than 2,000 km² and fragmented (Vulnerable: B1). Declines have occurred in area of occupancy (b), extent of habitat (c), number of locations (d) and thus number of mature individuals (e), and are expected to continue.

| | Estimate | Reliability |
|------------------------|-----------------------|-------------|
| Extent of occurrence | 5,200 km ² | medium |
| trend | decreasing | high |
| Area of occupancy | 750 km ² | low |
| trend | decreasing | high |
| No. of breeding birds | 5,000 | low |
| trend | decreasing | high |
| No. of sub-populations | 25 | medium |
| Largest sub-population | 2,000 | medium |
| Generation time | 3 years | low |

6 Intraspecific taxa

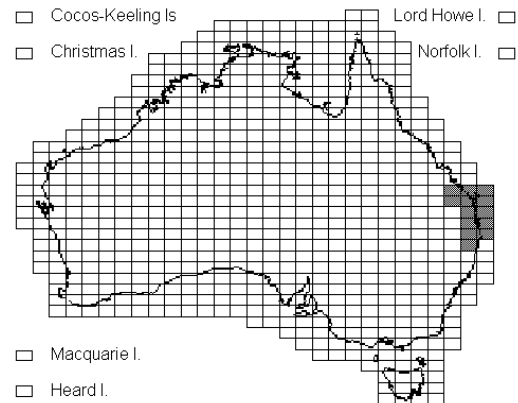
None described.

7 Past range and abundance

Marlborough and Fraser I., Qld, possibly occurred as far south as the Walcha-Yarrowitch area, N. S. W., extending 400 km inland, including the entire Dawson and Fitzroy R. valleys, as far west as Palm Grove National Park (Bennett, 1985, Holmes, 1987, Smyth and Young, 1996, Hamley *et al.*, 1997, Milledge and McKinley, 1998).

8 Present range and abundance

Still occurs within the limits of the historical range in Queensland, but at much reduced density, particularly in the Dawson and Fitzroy River catchments (Bennett, 1985, Hamley *et al.*, 1997). Most sub-populations probably isolated in fragments. A survey in 1992/3 in south-east Qld found evidence of birds at 75 sites, with incidental observations having been made at another 50. These were clustered into 14 discrete, areas although there was also fragmentation within areas (Hamley *et al.*, 1997). Largest known sub-population occurs in a 3 km x 100 km strip along the eastern edge of Fraser Island National Park (R. Hobson). In New South Wales, only 10 reliable records in last two decades, from six areas, mostly in the far north-east of the state (Milledge and McKinley, 1998).



9 Ecology

In Queensland, Black-breasted Button-quail are most frequently reported in vine thicket rainforest that receives 800-1200 mm annual average rainfall, and have a largely closed canopy and deep litter layer. They also occur in softwood scrubs in the brigalow belt, vine scrub regrowth, mature Hoop Pine *Araucaria cunninghamii* plantations, especially where there is *Lantana camara*, dry sclerophyll forest adjacent to rainforest and *Acacia* and *Austromyrtus* scrubs on sandy coastal soils (Bennett 1985, Hughes and Hughes, 1991, Marchant and Higgins, 1993, Hamley *et al.*, 1997, Smyth, 1997, Smith *et al.*, 1998, R. Hobson). In New South Wales, they are believed to occur in wetter subtropical rainforest, often in association with moist eucalypt forest, but possibly only during drought (J. Martindale). Their principal food is invertebrates from the litter on the forest floor (Marchant and Higgins, 1993, McConnell and Hobson, 1995) and possibly seeds (Smyth, 1997). Adults appear to be sedentary, and the extent of movement between isolated patches of habitat is unknown (Bennett, 1985, N. Lees and G. C. Smith).

10 Threats

At least 90% of Black-breasted Button-quail habitat has been cleared for agriculture or plantations of Hoop Pine, the area of bottletree scrubs being reduced from several hundred thousand to only a few thousand hectare by the 1960s (Hamley *et al.*, 1997). This undoubtedly caused the local extinction from the Dawson River valley. Surviving sub-populations in vine thickets are affected by grazing and other disturbance by cattle, horses, feral pigs and wallabies, which have increased as a result of partial clearing, as

well as by timber harvesting. Such disturbance has greatest effect during droughts when the habitat, particularly the leaf litter, is also vulnerable to fire. Habitat is also being affected by urban development (G. C. Smith). As a ground-dweller that becomes immobilised in the face of danger (Marchant and Higgins, 1993), the species may be vulnerable to introduced predators and is known to be killed by feral cats (G. C. Smith).

11 Information required

- 11.1 Develop a standard monitoring technique to determine presence and trends in abundance.
- 11.2 Determine whether cat and fox predation has a significant impact on population trends, particularly in small fragments.
- 11.3 Determine the extent of movement between habitat patches.
- 11.4 Validate predictive models for the south-east Queensland biogeographic area.
- 11.5 Map suitable habitat at 150,000 to assess degree of connectivity.

12 Recovery objectives

- 12.1 To retain all remaining sub-populations.
- 12.2 To restore and consolidate habitat fragments within sub-populations.

13 Actions completed or under way

- 13.1 Detailed surveys have been conducted in Qld, excluding Fraser I., and N. S. W.

- 13.2 Research has been undertaken to determine habitat use, particularly of hoop pine plantations.

14 Management actions required

- 14.1 Confirm size and distribution of sub-population on Fraser I.
- 14.2 Determine status of remaining sub-populations in N. S. W.
- 14.3 If legislative power exists, survey likely habitat for Black-breasted Button-quail before licensing clearing, burning, logging, roading and grazing
- 14.4 Ensure appropriate conservation management of all remaining breeding habitat, including protection from clearing, burning, logging, roading and grazing.
- 14.5 Rehabilitate and consolidate habitat fragments.
- 14.6 Prepare a management plan for remaining vine thickets.

15 Organisations responsible for conservation

New South Wales National Parks and Wildlife Service, Queensland Parks and Wildlife Service.

16 Other organisations involved

State Forests of New South Wales, Queensland Department of Natural Resources, Queensland Ornithological Society, Birds Australia, Australian Bird Study Association, other bird-watching societies, local government, Landcare groups, private land-holders.

17 Staff and financial resources required for recovery to be carried out

| | | |
|---|------------|--------------------------|
| <i>Staff resources required 2001-2005</i> | <i>0.5</i> | <i>Project Officer</i> |
| | <i>1.0</i> | <i>Technical Officer</i> |
| | <i>0.5</i> | <i>Extension Officer</i> |

Financial resources required 2001-2005

| <i>Action</i> | <i>Conservation agencies</i> | <i>Other funding sources</i> | <i>Total</i> |
|---|------------------------------|------------------------------|--------------------|
| <i>Develop standard monitoring technique</i> | \$5,000 | \$15,000 | \$20,000 |
| <i>Test effects of fox and cat control</i> | \$5,000 | \$15,000 | \$20,000 |
| <i>Determine the extent of movements</i> | \$5,000 | \$30,000 | \$35,000 |
| <i>Validate predictive models</i> | \$2,000 | \$15,000 | \$17,000 |
| <i>Map habitat</i> | \$3,000 | \$7,000 | \$10,000 |
| <i>Survey Fraser I.</i> | \$10,000 | \$0 | \$10,000 |
| <i>Surveys in N. S. W.</i> | \$15,000 | \$0 | \$15,000 |
| <i>Instigate appropriate habitat protection</i> | \$330,000 | \$0 | \$330,000 |
| <i>Environmental Impact Assessment surveys</i> | \$0 | \$50,000 | \$50,000 |
| <i>Habitat rehabilitation</i> | \$300,000 | \$200,000 | \$500,000 |
| <i>Manage the recovery process</i> | \$12,000 | \$2,000 | \$14,000 |
| <i>Total</i> | \$687,000 | \$334,000 | \$1,021,000 |

18 Bibliography

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Comments received from

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