

RECOVERY OUTLINE

Black-eared Miner

1	Family	Meliphagidae
2	Scientific name	<i>Manorina melanotis</i> Wilson, 1911
3	Common name	Black-eared Miner
4	Conservation status	Endangered: B1+2bde, C2a, D

5 Reasons for listing

The subspecies occupies less than 500 km² at fewer than 5 location (B1) and a decline is likely in area of occupancy (2b), number of subpopulations (c) and number of mature individuals (e). No sub-population of phenotypically pure Black-eared Miners exceeds 250 mature individuals, and the population is decreasing (Endangered: C2a). The total population is no more than 250 (D). The species cannot be listed as Critically Endangered: C2b, unless current efforts to prevent the disappearance of all three sub-populations outside the Bookmark Biosphere Reserve fail.

Phenotypically pure birds	Estimate	Reliability
Extent of occurrence	1,750 km ²	medium
trend	decreasing	medium
Area of occupancy	450 km ²	medium
trend	decreasing	high
No. of breeding birds	250	medium
trend	decreasing	high
No. of sub-populations	4	medium
Largest sub-population	240	medium
Generation time	1.5 years	medium

6 Intraspecific taxa

None described, although relationship with the eastern subspecies of Yellow-throated Miner *M. f. flavigula*, with which it interbreeds to produce fertile hybrids, is still debated (Christidis, 1995, Schodde and Mason, 1999).

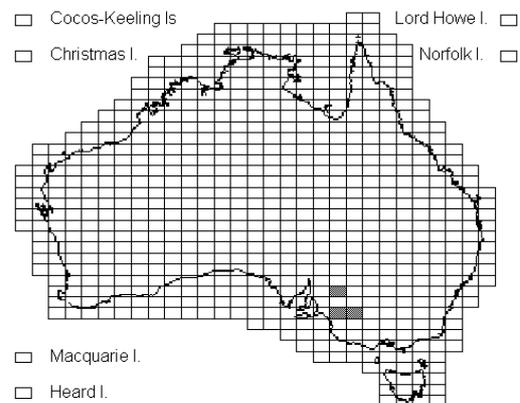
7 Past range and abundance

Endemic to Murray Mallee region of Victoria, South Australia and New South Wales, including Canegrass, Gluepot, Calperum and Canopus stations in South Australia, extending east to the western anabranch of the Darling R., N. S. W., and Hattah, Vic., and south to the northern Big Desert, Vic. and Ninety Mile Desert, S. A. and west to Murray Bridge, S. A. (Backhouse *et al.*, 1997).

8 Present range and abundance

Phenotypically pure birds are thought to persist only in Bookmark Biosphere Reserve, north-west of Renmark, S. A. (Backhouse *et al.*, 1997), where 120 phenotypically pure birds have been banded as part of the research phase of the recovery effort (Clarke and Clarke 1999). Elsewhere in South Australia, 1-2 birds

may persist at Chapman Bore near Murray Bridge, but subspecies is otherwise regionally extinct (Joseph, 1986, G. Backhouse, R. Clarke). In north-western Victoria five pure birds were recorded in 1986 and eight in 1987, but only one was present at the same sites in 1990, although 11 additional birds were found at other sites. In 1992, only two of these remained and in 1995 only three colonies, all hybrids, could be found. One colony was captured to establish a captive population (McLaughlin, 1990, 1992, Backhouse *et al.*, 1997). Currently 1-2 birds are known from each of Bronzewing Flora and Fauna Reserve and Hattah Lakes, Vic. (G. Backhouse, R. Clarke). In south-western New South Wales, there are eight accepted records, the last in 1985 (Franklin, 1996). Extensive surveys in December 1999 located three hybrid colonies in south-western New South Wales, but no phenotypically pure individuals (R. Boulton per R. Clarke).



9 Ecology

Large blocks of long unburnt (more than 50 years), uncleared, 5-8 m tall mallee, principally White Mallee *Eucalyptus gracilis*, Grey Mallee *E. socialis*, Dumosa Mallee *E. dumosa* and Oil Mallee *E. oleosa*, usually with an understorey of small shrubs including *Acacia*, *Melaleuca*, various chenopods and *Spinifex Triodia scariosa*. Occurrence in Victoria is associated with stable dune-fields that have a relatively high loam level, the amount of decorticating bark, in which the miners obtain much of their insect food, tree density, stem density, canopy cover and litter cover, and negatively correlated with diameter of tree stems (McLaughlin, 1992, Backhouse *et al.*, 1997).

10 Threats

The fundamental reason for decline of the Black-eared Miner is that most favourable habitat on fertile soils has been cleared (Starks, 1987). Clearing of the remaining habitat for mineral exploration is still possible under existing legislation (Backhouse *et al.*, 1997), though currently unlikely. The result of the clearing has been replacement of the subspecies in habitat remnants by Yellow-throated Miners. Interbreeding with Yellow-throated Miners is now the greatest threat to the Black-eared Miner. It has effectively swamped most remaining sub-populations and, if unchecked, will also swamp those at Bookmark Biosphere Reserve (Starks, 1987, McLaughlin, 1990, Backhouse *et al.*, 1997). The other major threat is fire. Much of the remaining habitat in Victoria and New South Wales has been burnt within the last 25 years, although the miners can use habitats that have been burnt patchily if some long-unburnt vegetation remains (McLaughlin, 1992, Backhouse *et al.*, 1997). Isolated colonies also seem to have a low rate of recruitment, either as a result of elevated rates of nest predation or high rates of loss of females as a result of emigration from the natal colony (Backhouse *et al.*, 1997).

11 Information required

- 11.1 Study rate and mechanisms for genetic introgression
- 11.2 Develop and test a population viability model.

12 Recovery objectives

- 12.1 Maintain existing colonies or habitat.
- 12.2 Maintain the captive colony.

13 Actions completed or under way

- 13.1 Genetic and phenotypic definition of species has been completed.
- 13.2 Surveys have been conducted throughout range and monitoring occurs regularly.

- 13.3 Habitat preferences have been studied in Victoria.
- 13.4 Leases within Bookmark Biosphere Reserve, including Gluepot and Calperum Stations, have been purchased for conservation purposes.
- 13.5 A policy of rapid fire suppression has been adopted within mallee in Vic. and S. A.
- 13.6 Research into the reproductive biology and ecology has been undertaken.
- 13.7 Captive populations have been established at three separate locations and are being maintained.
- 13.8 Community support for the project has been generated successfully.
- 13.9 A translocation proposal has been prepared.
- 13.10 Recovery is being managed by a Recovery Team

14 Management actions required

- 14.1 Increase number and quality of Black-eared Miner colonies in Victoria through translocation.

15 Organisations responsible for conservation

New South Wales National Parks and Wildlife Service, South Australian Department of Environment and Heritage, Victorian Department of Natural Resources and Environment.

16 Other organisations involved

Birds Australia, Museum of Victoria, Australian Heritage Commission, Bookmark Biosphere Reserve, Bookmark Biosphere Trust, Parks Victoria, Latrobe University, Australian Regional Association of Zoological Parks and Aquaria, Australian Passerine Taxon Advisory Group, Adelaide Zoo, Monarto Zoo, Healesville Sanctuary, Parks Victoria.

17 Staff and financial resources required for recovery to be carried out ¹

<i>Staff resources required 2001-2005</i>	<i>1.0</i>	<i>Project Officer (translocation)</i>
	<i>0.2</i>	<i>Project Officer (population modelling)</i>
	<i>0.6</i>	<i>Technical Officer (control introgression)</i>
	<i>1.0</i>	<i>Technical Officer (bird keeping)</i>
	<i>0.3</i>	<i>Recovery Team coordinator</i>

Financial resources required 2001-2005

<i>Action</i>	<i>Conservation agencies</i>	<i>Other funding sources</i>	<i>Total</i>
<i>Study and control genetic introgression</i>	\$85,000	\$27,000	\$112,000
<i>Habitat protection</i>	\$65,000	\$200,000	\$265,000
<i>Determine and monitor colony quality</i>	\$127,000	\$102,000	\$229,000
<i>Captive breeding</i>	\$0	\$272,500	\$272,500
<i>Reintroduction in Victoria</i>	\$456,000	\$38,000	\$494,000
<i>Population Viability Analysis</i>	\$40,000	\$0	\$40,000

<i>Community awareness</i>	\$5,000	\$43,000	\$48,000
<i>Manage the recovery process through a Recovery Team</i>	\$125,000	\$102,000	\$227,000
<i>Total</i>	\$903,000	\$784,500	\$1,687,500

¹ Costs extrapolated from Backhouse *et al.* (1997)

18 Bibliography

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Comments received from

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