

Technical Bulletin # 9

Monitoring Black-eared Miners and the incursions of Yellow-throated Miners within Bronzewing Flora and Fauna Reserve, 2010

This technical bulletin summarises the findings of field research on the colony numbers and phenotypic quality of Black-eared Miners (*Manorina Melanotis*) at Bronzewing Flora and Fauna Reserve in October 2010.

The project aimed to refine the knowledge of the distribution and abundance of Black-eared Miners at the reserve and to reduce the impact of genetic introgression to Black-eared Miners from Yellow-throated Miners.

Background

The National Recovery Plan for the Black-eared Miner sets out a long term goal to maintain a population of at least 1000 birds in at least five locations across its former range (Baker-Gabb 2003). To contribute towards achieving this goal, 45 captive Black-eared Miners were released into Bronzewing Flora and Fauna Reserve in 2003. Intensive monitoring of the captive-released birds occurred immediately after their release in 2003, followed by less intensive monitoring annually during 2004-2007.

Whilst the earlier surveys (2004 and 2005) revealed that Black-eared Miners of captive origin persisted in the Bronzewing Flora and Fauna Reserve two years after release, limited conclusions could be



Above: Black-eared Miner located within Bronzewing Flora and Fauna Reserve during October 2010. Photo: Chris Tzaros.

drawn from the 2005 and 2006 studies due to an absence of Black-eared Miner breeding events. It was recommended that further monitoring be undertaken when Black-eared Miners are known to be breeding.

Method

In October 2010, field surveys were conducted by four Birds Australia staff over two days. Bird surveys were carried out by walking an established monitoring grid, recording all birds sighted and heard between survey points 500 metres apart. At each survey point, calls of Black-eared Miners were broadcast for five minutes using an MP3 player and megaphone.



At a glance

- The Black-eared Miner is listed as endangered under the Environment Protection and Biodiversity Conservation Act 1999;
- A research survey conducted to monitor Black-eared Miners found just one bird in a colony consisting of two Yellow-throated Miners and three hybrid Miners.



Above: Birds Australia and Parks Victoria staff in Black-eared Miner habitat in the reserve. Photo: Ashley Herrod.

Observers then listened for responding Miners. Any Miners that were located were scored for phenotype (Black-eared Miner, Yellow-throated Miner, hybrid Miner), and the co-ordinates of their location were recorded. Where Yellow-throated Miners were detected, Birds Australia staff returned to the location with a Parks Victoria ranger, to instruct the Ranger on which individuals to cull from the colony. At every fourth survey point, the level of eucalypt flowering was recorded and lerp counts (for two separate species) were conducted on 20 leaves on each of four trees.

Findings

Black-eared Miners

One Black-eared Miner was located within the reserve (photo right), in a colony of Miners consisting of two Yellow-throated Miners and three hybrid Miners. The colony was located on the north west corner of the established monitoring grid.

The Black-eared Miner was banded with an aluminium ring, indicating it has been present in the reserve for at least seven years, since the release of the 45 captive individuals in Spring 2003.

One of the hybrid Miners was a fledgling, indicating the colony had just recently bred. Two Miner nests were located at the site of the Miner colony, one used, and the other under construction.

Culling of Yellow-throated Miners

One Yellow-throated Miner and one hybrid Miner from the colony were culled by Parks Victoria. The decision of which individuals to cull was based on the assessments of the quality of the two individuals made by Birds Australia staff in the field at the time. The culling of the

two individuals will ultimately lead to the reduction of Black-eared Miner/Yellow-throated Miner hybridization.

Flowering levels and lerp counts

Levels of Mallee eucalypt flowering and lerp counts were conducted at 15 sites within the monitoring grid. At 33% of survey sites, trees were not in flower. Buds were present on trees at one survey site. At the majority of survey sites (60%), flowering was sparse. No lerp were observed at any of the 15 survey sites.



Above: A Black-eared Miner. Photo: Ashley Herrod.



Above: A Black-eared Miner. Photo: Chris Tzaros.

Other bird species detected

In total, 45 species of birds were recorded during Black-eared Miner surveys, including uncommon species such as Hooded Robin (*Melanodryas cucullata*) and Crested Bellbird (*Oreoica gutturalis*), and Mallee associated species such as Malleefowl (*Leipoa ocellata*) and Chestnut Quail-thrush (*Cinclosoma castanotus*).

Limitations

Moderate to strong winds and rain showers greatly limited survey conditions on the second day. Birds Australia staff returned with Parks Victoria staff to locate the colony that was found on the first survey day, in order to cull Yellow-throated Miners. Unfortunately the colony could not be located. When it was located on the third day, one of the Yellow-throated Miners was not present and therefore it could not be culled.

Implications of the findings

The finding of the Black-eared Miner, and the assessments of the quality of the other Miners in the colony has provided new and current information on the presence of the species in Bronzewing Flora and Fauna Reserve, and contributes

to the ongoing management of conserving Black-eared Miners within the reserve.

Since the release of 45 captive Black-eared Miners into Bronzewing Flora and Fauna Reserve, annual surveys have produced progressively fewer sightings of this species, from 32 birds in 2004 to three birds in 2006 (with three unconfirmed birds in 2007). Although one Black-eared Miner was sighted during the 2010 survey in Bronzewing Flora and Fauna Reserve, seven years after the captive-release, the species is under threat from introgression by Yellow-throated Miners, illustrated by the presence of a fledgling hybrid miner in the colony, along with Yellow-throated Miners and adult hybrids.

Recommendations for further research

1. Survey beyond the established monitoring grid in the following areas to determine if a viable population exists:
 - a. West of the grid, using the centre break of the reserve and Desert Track, respectively, as the eastern and western boundaries of the survey area. Extra effort could be dedicated to the north-western

section of the grid where Black-eared Miners were thought to be present during 2007, and were found in 2010.

- b. North-east of the grid where Black-eared Miners were found in 2005.

If a viable population exists, then:

2. Conduct surveys for Black-eared Miners within the Bronzewing Flora and Fauna Reserve every two years, and cull any Yellow-throated Miners found within the Reserve.
3. Conduct surveys before Black-eared Miner breeding commences, so that any Yellow-throated Miners associating with Black-eared Miners can be culled to prevent hybridisation.
4. Cull all Yellow-throated Miners around the perimeter of Bronzewing Flora and Fauna Reserve annually.
5. In the event that no Black-eared Miners are located during a survey period, the next survey period should be carried out in the area where previous surveys located Black-eared Miners.

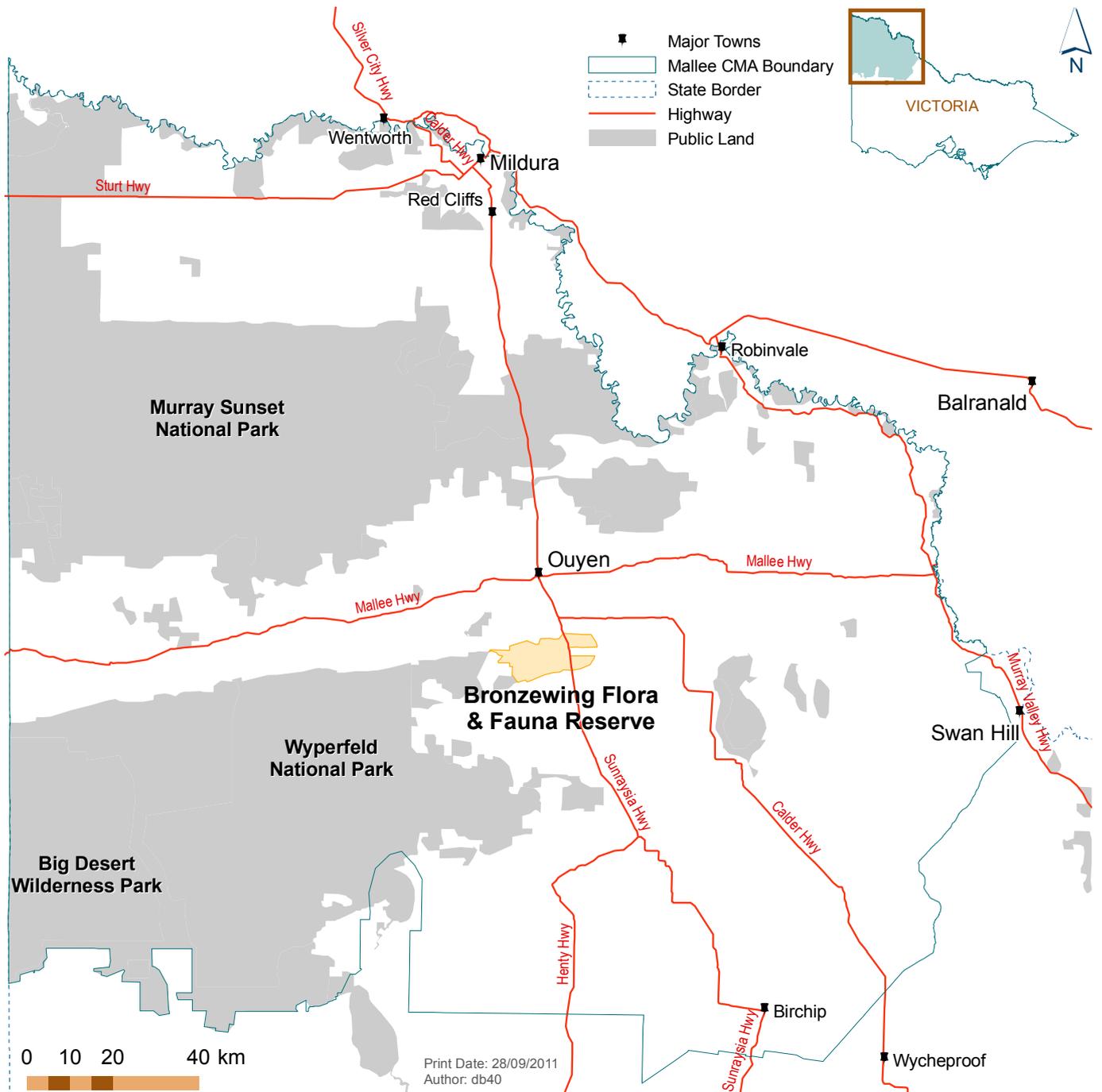
Acknowledgements

The Mallee Catchment Management Authority (CMA) engaged Birds Australia to undertake this project, with funding provided by the Victorian Government. In kind support was provided by Parks Victoria.

Further information

The information for this technical bulletin has been taken from 'Monitoring Black-eared Miners and the incursions of Yellow-throated Miners within Bronzewing Flora and Fauna Reserve 2010', a report for the Mallee CMA by A. Herrod of Birds Australia.

For more information, please contact the Mallee CMA on 5051 4377.



Above: Map of the Mallee CMA region showing the location of Bronzewing Flora and Fauna Reserve.

Project Partners



Published September 2011

This publication may be of assistance to you but the Mallee Catchment Management Authority refers readers to our Terms and Conditions, available from our website.

Printed on 100% recycled Australian paper, made from pre- and post-consumer waste.