

Key to Black-eared Miners, hybrids and Yellow-throated Miners

For each 'mallee miner' encountered assess the two characters depicted. With reference to the table it is then possible to identify individuals as either Black-eared Miners, hybrids or Yellow-throated Miners.

Feathering on lower jaw.....

a) Paler than throat



b) Same as throat



c) Darker than throat



Degree of contrast between dorsum and rump.....

a) Very strong

b) Strong

c) Moderate

d) Weak

e) Very weak

f) No contrast



Degree of contrast between the dorsum and the rump

Contrast of feathering on lower jaw with that of throat		Degree of contrast between the dorsum and the rump					
		Very strong	Strong	Moderate	Weak	Very weak	No contrast
Paler	Very strong	YtM	YtM	YtM	Hybrid	Hybrid	Hybrid
	Strong	Hybrid	YtM	YtM	Hybrid	Hybrid	Hybrid
	Moderate	Hybrid	YtM	Hybrid	BeM	BeM	BeM
Same	Weak	Hybrid	YtM	YtM	Hybrid	Hybrid	Hybrid
	Very weak	Hybrid	YtM	Hybrid	BeM	BeM	BeM
	No contrast	Hybrid	YtM	Hybrid	BeM	BeM	BeM
Darker	Very strong	Hybrid	YtM	Hybrid	BeM	BeM	BeM
	Strong	Hybrid	YtM	Hybrid	BeM	BeM	BeM
	Moderate	Hybrid	YtM	Hybrid	BeM	BeM	BeM

Black-eared Miner Taxonomy

Scientific name: *Manorina melanotis*

Common name: Black-eared Miner

There has been controversy over the taxonomic status of the Black-eared Miner. Various authors have considered it to be a full species (Christidis & Boles 1994; Clarke et al. 2001; Schodde 1975; Wilson 1911), a subspecies or morphological variant of the Yellow-throated Miner (Matthews 1912, 1913; RAOU 1913; Schodde & Mason 1999; Silveira 1995) or a subspecies of the Western Australian 'Dusky Miner' *Manorina flavigula obscura* (Ashby 1922; Matthews 1925; RAOU 1926).

There are morphological and behavioural differences between Black-eared and Yellow-throated Miners (Clarke et al. 2001; Ford 1981; Joseph 1986; McLaughlin 1990, 1992; Starks 1987), and evidence for marked ecological separation exists (McLaughlin 1992; Joseph 1986). This morphological and ecological evidence supports the contention that the two miners are separate species (Fitzherbert et al. 1992). Molecular assessment by Christidis (1995) also indicated that the Black-eared Miner is a distinct species. Moreover, Clarke et al. (2001) showed that Black-eared and Yellow-throated Miners were clearly separable on phenotypic characters prior to extensive modification of mallee habitat that occurred after 1950. They argue that the Black-eared Miner should be afforded full species status given that widespread hybridisation is a recent development facilitated by human disturbance of their habitat. Black-eared Miners can interbreed with Yellow-throated Miners, resulting in fertile hybrids that display a range of intermediate plumages (Ford 1981; McLaughlin 1990, 1993).

Source: Department of the Environment, Water, Heritage and the Arts (2009). *Manorina melanotis* in Species Profile and Threats Database, Department of the Environment, Water, Heritage and the Arts, Canberra. Available from: <http://www.environment.gov.au/sprat>. Accessed 2009-08-09

Intraspecific phenotypic variability in the black-eared miner (*Manorina melanotis*); human-facilitated introgression and the consequences for an endangered taxon

Abstract

Prior to this study the circumscription of the endangered black-eared miner (*Manorina melanotis*) and the common yellow-throated miner (*Manorina flavigula*) has been clouded by the existence of hybrid individuals. We examined the intra- and inter-specific phenotypic variation of the two taxa. All available museum specimens ($n=138$) and a sample of live individuals ($n=83$) were examined. Cluster analysis revealed a continuum of phenotypic traits now exists between the two taxa. However, further analysis revealed the black-eared miner and yellow-throated miner were separable on phenotypic characters prior to extensive modification of mallee habitat after 1950, suggesting the black-eared miner should be afforded full species status [contrary to Schodde and Mason, 1999. (Schodde, R., Mason, I.J., 1999. The Directory of Australian Birds: Passerines. CSIRO Wildlife and Ecology, Canberra). Our study highlights the need to carefully examine, not only intraspecific phenotypic variation within a taxon, but to also consider how such variation may be affected by hybridisation facilitated by human disturbance of habitat.

Source: *Intraspecific phenotypic variability in the black-eared miner (Manorina melanotis); human-facilitated introgression and the consequences for an endangered taxon*. *Biological Conservation*, Volume 99, Issue 2, June 2001, Pages 145-155. Rohan H. Clarke, Ian R. Gordon and Michael F. Clarke