

NOTES ON SOME MALLEE BIRDS OF THE FAR SOUTH-WEST OF SOUTH AUSTRALIA

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SUMMARY

A list of birds species in the narrow coastal band of mallee and mallee-heath in the far south-west of South Australia during 1995-1996 is presented. Western forms of the Silvereye *Zosterops lateralis*, Australian Magpie *Gymnorhina tibicen*, and Grey Currawong *Strepera versicolor* extend via these habitats into South Australia. Several southern (Bassian) species are found to be almost continuous along the coast between Eyre Peninsula and south-western Western Australia. Further study in this region is required to determine which western birds extend into the State and the continuity of the distribution of Bassian species.

INTRODUCTION

In the far south-west of South Australia mallee vegetation extends as a narrow coastal band about 75 km into the State, gradually merging with the low chenopod shrublands of the Nullarbor Plain (Parsons 1970, Figure 1). The area is interesting to ornithologists because it is the eastern limit of the Western Australian coastal mallee, lying immediately west of a gap in mallee habitats formed by the Nullarbor Plain between south-western Western Australia and Eyre Peninsula.

Morphological differentiation on either side of the Nullarbor Plain has been demonstrated in only

a few southern (Bassian) birds indigenous to mallee and mallee-heath (Ford 1971b and 1987; Schodde 1981 and 1990; Blakers *et al.* 1984), mostly those which breed at the higher rainfall limit (e.g. Western Whipbird *Psophodes nigrogularis* – Schodde and Mason 1991; Southern Emu-wren *Stipiturus malachurus* – Schodde and Weatherley 1981; Grey Fantail *Rhipidura fuliginosa* – Ford 1981). This suggests that most of these mallee and mallee-heath species are still or have until recently been in contact, although the gap in habitat has existed since the last sea-level rise flooded the coastal plain south of the Nullarbor cliffs about 12 000 years ago (Ford 1971a and 1987). Some birds of mallee woodlands have recently proven continuous north of the Nullarbor Plain via the Great Victoria Desert (e.g. Purple-crowned Lorikeet *Glossopsitta porphyrocephala*, Chestnut Quailthrush *Cinclosoma castanotus*, Gilbert's Whistler *Pachycephala inornata*, Yellow-plumed Honeyeater *Lichenostomus ornatus* – Ford 1971a; Black and Badman 1986), while others of mallee-heath occur along the southern margin of the Nullarbor Plain (e.g. Western Yellow Robin *Eopsaltria griseogularis*, Golden Whistler *Pachycephala pectoralis* Ford 1971a and b;

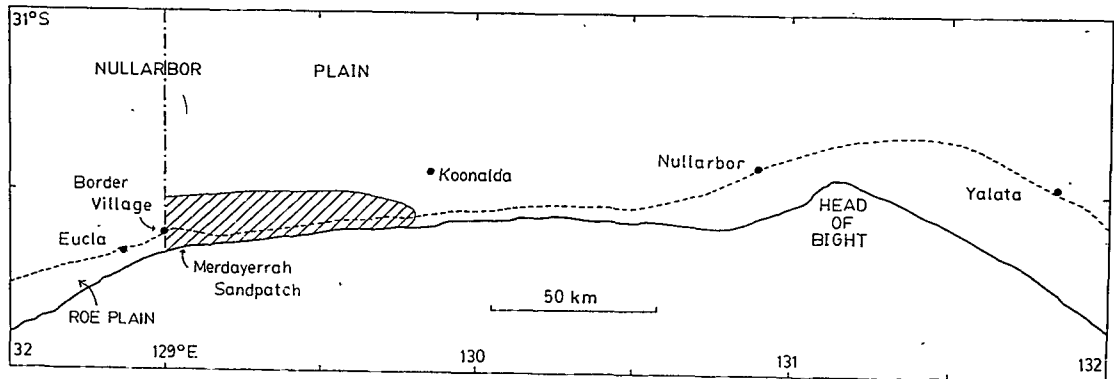


Figure 1. Map of the far south-west of South Australia indicating the study area: a narrow coastal band of mallee vegetation (////).

Blakers *et al.* 1984; Ford 1987).

The study area (Figure 1) comprises mostly Yalata mallee *Eucalyptus yalataensis*, yorrell *E. gracilis* and dryland tea-tree *Melaleuca lanceolata* open scrub, with white mallee *E. dumosa* and red mallee *E. oleosa* also present. Nearer the coast the trees are lower and tea-tree becomes more prominent. Coastal white mallee *E. diversifolia* also occurs about 10 km east of the border where the extensive limestone sea-cliffs are broken by an area of drifting sandhills known as Merdayerrah Sandpatch. To the north the mallee is taller and separated from the Nullarbor Plain by a thin band of western myall *Acacia papyrocarpa* low woodland. To the east the study area is separated from the mallee which reaches westwards along the coast of Eyre Peninsula to the Head of Bight by about 100 km, where the chenopod dominated shrublands of the Nullarbor Plain reach the coast. Within this area, however, occur patches of stunted mallee and tea-tree shrubland, except for a complete break of about 30 km W of the Head of Bight (Parsons 1970). Common understorey plants in the mallee are purple emubush *Eremophila weldii*, sheepbush *Geijera linearifolia*, old-man saltbush *Atriplex nummularia*, Mueller's daisy-bush *Olearia muelleri*, leafless cherry *Exocarpos aphyllus*, bluebush daisy *Cratystylis conocephala*, limestone honey-myrtle *Melaleuca quadrifaria*, samphire *Sclerostegia* sp., stiff westringia *Westringia rigida* and Forrest's pomaderris *Pomaderris forrestiana*.

Birds have previously been surveyed within the study area by J. Allen and others near Merdayerrah Sandpatch on 13-30 September 1984 and at its eastern margin 50 km ESE of Koonalda on 2-20 April 1984 (McKenzie and Robinson 1987). Nearby observations and specimens were obtained near Nullarbor Homestead in November-December 1962 (Hall 1974). To the west, Storr (1987) reviewed the birds of the Eucla region in south-eastern Western Australia, including the specimens of Ford (1971a and b) and Hall (1974) collected near Eucla.

We observed birds in the study area on 22-23 July 1995 (GAC), 16-17 November 1995 (GAC) and more thoroughly during 5-11 May 1996 (GAC and JSM). On the last visit observations concentrated around campsites 3 km E of Border Village (site A), 9 km ESE of Border Village adjacent to Merdayerrah Sandpatch (site B) and 34 km ENE of Border Village (site C). The

following list discusses the more significant species seen. A full list of birds recorded in mallee in the study area is appended.

ANNOTATED LIST

EMU

Dromaius novaehollandiae

A sternum was collected at Merdayerrah Sandpatch on 17 November 1995 (SA Museum B48019) and two adults were observed in the adjacent mallee on 8 May 1996. Emus are scarce in the district due to the lack of drinking water (Storr 1987).

MALLEEFOWL

Leipoa ocellata

An old disused nesting mound at site A on 6 May 1996. Storr (1987) considered the species declining in mallee east to Eucla since the advent of foxes. Neither Blakers *et al.* (1984) nor McKenzie and Robinson (1987) recorded Malleefowl in the region.

COLLARED SPARROWHAWK

Accipiter cirrhocephalus

Single adults overhead at sites A and B on 7 and 8 May 1996 respectively, identified by small size and square tail. Noted to be moderately common in Western Australia east to Eucla by Storr (1987).

AUSTRALIAN HOBBY

Falco longipennis

An adult in tall mallee at site C on 9 May 1996. Reported as uncommon to moderately common on the Roe Plain by Storr (1987).

BRUSH BRONZEWING

Phaps elegans

Two drinking at a rock hole on the cliffs adjacent to Merdayerrah Sandpatch on 16 November 1995 and two in the same area on 8 May 1996. Storr (1987) lists no records east of Eyre, 250 km W of the study area.

MAJOR MITCHELL'S COCKATOO

Cacatua leadbeateri

A flock of about 14 at site C, at the margin of the study area. Storr (1987) listed it in Western Australia eastwards along the Roe Plain to Eucla. Larger mallee on the inland margin of the study area would provide suitable nesting sites.

FAN-TAILED CUCKOO

Cacomantis flabelliformis

Heard overnight at site A on 6 May 1996 and an adult seen at site B on 8 May 1996. Storr (1987) lists no records east of Eyre, 250 km W of the study area.

TAWNY FROGMOUTH

Podargus strigoides

Heard overnight at sites A and B on 6 and 9 May 1996 respectively.

SPOTTED NIGHTJAR

Eurostopodus argus

One hunting low at site B in the evening of 6 May 1996.

AUSTRALIAN OWLET-NIGHTJAR

Aegotheles cristatus

Heard calling overnight at sites A and C on 5-6 and 9-10 May 1996 respectively. This and the previous two species are sparsely recorded in the Nullarbor region (Blakers *et al.* 1984).

BLUE-BREASTED FAIRY-WREN

Malurus pulcherrimus

Pairs or small groups of fairy-wrens were observed in low mallee and tea-tree 12 km ESE of Border Village on 17 November 1995 and at sites A and B on 6-9 May 1996. Although no coloured males were seen the wrens were all identified as *M. pulcherrimus* from the pale red-brown rather than chestnut lores of female-plumaged birds.

Wrens observed 50 km ESE of Koonalda by McKenzie and Robinson (1987) in 1984 were identified as *M. pulcherrimus*, but those in the Merdayerrah area were listed by them as Variegated Fairy-wrens *M. lamberti*.

Our observations suggest that the chestnut-shouldered wrens which occur sparsely in the study area are *M. pulcherrimus*, although any observations in South Australia W of Ceduna (134°) need to be verified by taking museum specimens. In Western Australia Ford (1969b) reported *M. pulcherrimus* along the coast to 128° and suggested they should occur further east to Eucla. Furthermore, *M. lamberti* was not listed by Storr (1987) from the SE of Western Australia.

YELLOW-RUMPED PARDALOTE

Pardalotus punctatus xanthopygus

Several small feeding flocks, usually in

company with Striated Pardalotes *P. striatus* and Silvereyes *Zosterops lateralis*, at site A on 5-7 May 1996, plus single birds at sites B and C on 8 and 10 May 1996 respectively. Also reported in the Merdayerrah area in April 1984 (McKenzie and Robinson 1987).

CHESTNUT QUAIL-THRUSH

Cinclosoma castanotus

Two pairs at site A on 6 May 1996 and a female 30 km E of Border Village on 10 May 1996. Also reported near Merdayerrah Sandpatch in April 1984 by McKenzie and Robinson (1987). Specimens collected near Eucla appeared similar to those from Eyre Peninsula (Ford 1971a).

GOLDEN WHISTLER

Pachycephala pectoralis

An uncoloured bird seen in tea-tree at site A on 6 and 7 May 1996. Storr (1987) recorded the species east to Eucla.

MAGPIE-LARK

Grallina cyanoleuca

A pair at Border Village on 23 July 1995 and a pair with an immature on 17 November 1995. An old nest only was recorded here on 9 May 1996 but an adult female was observed flying west along the coast at site B on 7 May 1996.

GROUND CUCKOO-SHRIKE

Coracina maxima

Observed only in areas where the mallee merges to western myall low woodlands and chenopod shrublands, including a group of about six at site C on 10 May 1996, at the margin of the study area. Adjacent to the study area two were seen on the Roe Plain near Eucla on 23 July 1995 and three 5 km W of Koonalda on 22 July 1995.

DUSKY WOODSWALLOW

Artamus cyanopterus

A group of about 10 overhead at site A on 6 May 1996. Storr (1987) and McKenzie and Robinson (1987) list records in Western Australia east to Madura, 200 km W of the border.

AUSTRALIAN MAGPIE

Gymnorhina tibicen

Although difficult to approach, several groups of magpies were observed at the margin of the study area in western myall low woodland between site C and Koonalda. The few adult

females seen had from dark grey to black backs suggesting they were intergrades between White-backed *G. t. leuconota* and Western Magpies *G. t. dorsalis*. Adult females of *G. t. dorsalis* differ in having a black back with feathers edged white.

Ford (1969a) and Storr (1987) recorded *G. t. dorsalis* east to Eucla and Black (1975) suggested that intermediates extend into South Australia. Black and Ford (1982) found that magpies similar to *G. t. leuconota* and intermediates occurred north of the Nullarbor Plain in Western Australia.

GREY CURRAWONG

Streperoversicolor

Up to 10 at Border Village (all visits) and east to site C on 9-11 May 1996. Also recorded in the Merdayerrah area by McKenzie and Robinson (1987) and near the border by Ford (1971a). Storr (1987) listed birds east to Eucla as the western subspecies *S. v. plumbea*. The birds we saw had a large white area in the wing and appeared and called similarly to birds on Eyre Peninsula, regarded as *S. v. intermedia*. Dell, in Ford (1971a), considered the differences between these forms to be minor and clinal rather than distinct.

SILVEREYE

Zosterops lateralis

One flying over Merdayerrah Sandpatch on 16 November 1995. Many small flocks were seen, mostly flying overhead, at sites A, B and C on 5-11 May 1996. Several were also flushed from fruiting black nightshade *Solanum nigrum* at Merdayerrah Sandpatch on 8 May 1996. One bird seen clearly at site C had a green back and yellow-green throat and undertail coverts, typical of the western subspecies *Z. l. gouldi*. Storr (1987) listed *Z. l. gouldi* as common near the coast in south-eastern Western Australia, visiting adjacent areas in autumn-winter.

In South Australia *Z. l. gouldi* is known from two specimens (SA Museum B26972 and B26973) collected 8 km SW of Nullarbor Homestead during the Harold Hall Australian expeditions (Hall 1974). Another specimen collected 5 km SE of Streaky Bay was considered intermediate between *Z. l. gouldi* and the eastern subspecies *Z. l. halmaturina* in having the throat and undertail yellow but with a grey, slightly tinged greenish, back (Mees 1969). Condon (1968), Mees (1969) and Hall (1974) also noted that *Z. l. halmaturina* from Eyre Peninsula have a

greenish wash on the back and yellowish sides to the throat compared with those from eastern Australia. Ford (1971c) has collected *Z. l. halmaturina* west to Cook, indicating a broad hybrid zone in between (Ford 1987). During several visits to the western agricultural regions of South Australia we have observed many silvereyes along the coast between Ceduna and Nundroo which have all appeared characteristic of *Z. l. halmaturina* (including birds mist-netted 20 km SW of Nundroo on 12 February 1993).

DISCUSSION

Our observations show that the western forms of Silvereye *Z. l. gouldi*, Australian Magpie *G. t. dorsalis* and, if subspecifically distinct, Grey Currawong *S. v. plumbea* extend via mallee habitats into South Australia. Other birds which occur in mallee in Western Australia to within 250 km of the State border include Western Gerygone *Gerygone fusca* and Brown Honeyeater *Lichmera indistincta* (Storr 1987), and thus could also be found in the study area occasionally.

Our records support Ford's (1971a) predictions that the Brush Bronzewing, Fan-tailed Cuckoo, Blue-breasted Fairy-wren, Golden Whistler, Chestnut Quail-thrush, Yellow-rumped Pardalote, Magpie-lark, Dusky Woodswallow and Grey Currawong are distributed in mallee and mallee-heath between Eyre Peninsula and south-western Western Australia. Recent observations west of Nundroo (McKenzie and Robinson 1987, pers. obs.) show that several southern (Bassian) species are almost continuous along the coast between Eyre Peninsula and south-west Western Australia (Table 1). More observations are however required between the Head of Bight and Koonalda, where patches of coastal mallee and tea-tree shrublands are likely to provide a corridor for movements in the absence of resident populations.

Further study in the far south-west of South Australia could add western birds to the State's list and prove that more inhabitants of mallee and mallee-heath have wider and more continuous distributions along the southern edge of the Nullarbor Plain.

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Table 1. East-west distribution of southern (Bassian) species which are almost continuous along the coast between Eyre Peninsula and south-west Western Australia (References: F = Ford 1971a; M = McKenzie and Robinson 1987; P1 = pers. obs. 12/2/1993; P2 = pers. obs. 11/8/1994; and S = Storr 1987).

Distance from SA-WA border:	250km W	10km W	0-75km E	130km E	220km E	250km E	300km E
Locality:	Eyre	Eucla	Border Village to Koonalda	50km ESE of Koonalda	50km WNW of Yalata	20km W of Yalata	20km SW of Nundroo
References:	S	F; S	This study	M	M; P2	M	P1
Species							
Malleefowl	+	+	+				1
<i>Leipoa ocellata</i>							
Brush Bronzewing	+		+		2		+
<i>Phaps elegans</i>							
Common Bronzewing	+						+
<i>Phaps chalcoptera</i>							
Purple-crowned Lorikeet	+				+		
<i>Glossopsitta porphyrocephala</i>							
Fan-tailed Cuckoo	+		+				
<i>Cacomantis flabelliformis</i>							
Southern Scrub-robin	+						
<i>Drymodes brunneopygia</i>							
Jacky Winter	+	+			+	+	
<i>Microeca fascinans</i>							
Western Yellow Robin	+	+				3	+
<i>Eopsaltria griseogularis</i>							
Golden Whistler	+	+	+		+	+	+
<i>Pachycephala pectoralis</i>							
Grey Fantail	+	+		+	+		+
<i>Rhipidura fuliginosa</i>							
Restless Flycatcher	+				+		+
<i>Myiagra inquieta</i>							
Chestnut Quail-thrush	+	+	+			+	
<i>Cinlosoma castanotus</i>							
Blue-breasted Fairy-wren	+		+	+			+
<i>Malurus pulcherrimus</i>							
Shy Heathwren	+					+	+
<i>Hylacola cauta</i>							
Yellow-rumped Pardalote	+	+	+	+	+	+	+
<i>Pardalotus punctatus xanthopygus</i>							
Red Wattlebird	+	+		+	+	+	+
<i>Anthochaera carunculata</i>							
White-eared Honeyeater	+	+			+	+	+
<i>Lichenostomus leucotis</i>							
Purple-gaped Honeyeater	+						+
<i>Lichenostomus cratitius</i>							
Yellow-plumed Honeyeater	+	+			+	+	+
<i>Lichenostomus ornatus</i>							
Brown-headed Honeyeater	+					+	
<i>Melithreptus brevirostris</i>							
Maggie-lark	+		+	+			
<i>Grallina cyanoleuca</i>							
Dusky Woodswallow	+	+	+		+	+	+
<i>Artamus cyanopterus</i>							
Grey Currawong	+	+	+		+	+	+
<i>Strepera versicolor</i>							

1. old mounds reported by local residents

2. one seen by the authors 20 km ESE Nullarbor on 12 July 1990

3. breeding S of Yalata on 2 September 1983 (P. Bird, pers. comm.)

western South Australia. C. Kemper assisted with field work on 5-11 May 1996.

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APPENDIX

Annotated list of birds recorded (excluding those discussed above) in mallee habitats in the far south-west of South Australia. The location of Sites A-C and dates surveyed are described in the Introduction.

- Wedge-tailed Eagle *Aquila audax*. Scattered throughout.
- Brown Falcon *Falco berigora*. One at Border Village on 16 Nov. 1995 and one at site C.
- Nankeen Kestrel *Falco cenchroides*. Several pairs along coastal cliffs.
- Little Button-quail *Turnix velox*. Heard overnight at site C.
- Banded Stilt *Cladorhynchus leucocephalus*. Small flock heard overhead during night at site C.
- Banded Lapwing *Vanellus tricolor*. Six flying east at Wilson Bluff (S of Border Village) on 16 Nov. 1995.
- Australian Ringneck *Barnardius zonarius*. Pair at site C.
- Mulga Parrot *Psephotus varius*. Pair at site A, several pairs at site C.
- Pallid Cuckoo *Cuculus pallidus*. One at site C.
- Horsfield's Bronze-cuckoo *Chrysococcyx basalis*. Heard overnight at site C.
- Fork-tailed Swift *Apus pacificus*. About 10 overhead 6 km S of Border Village on 16 Nov. 1995.
- Striated Pardalote *Pardalotus striatus*. One at Border Village on 16 Nov. 1995, several feeding groups of up to 20 birds at site A and C.
- White-browed Scrubwren *Sericornis frontalis*. Widespread in mallee and mallee-heath up to 10 km from the coast, especially where low spreading forms of *E. yalataensis* occur (e.g. site C).
- Redthroat *Pyrholaemus brunneus*. Widespread in the mallee understorey on 5-11 May 1996, often in company with White-browed Scrubwrens, Weebills and Inland Thornbills.
- Weebill *Smicronis brevirostris*. Several throughout.
- Inland Thornbill *Acanthiza apicalis*. Common throughout.
- Yellow-rumped Thornbill *Acanthiza chrysorrhoa*. One group at site A and a few groups at site C.
- Spiny-cheeked Honeyeater *Acanthogenys rufogularis*. Common throughout, especially nearer the coastal cliffs and on the inland margins of the mallee where it merges with *Acacia papyrocarpa*.
- Yellow-throated Miner *Manorina flavigula*. Common throughout. 1 at Border Village mimicked a Magpie-lark.
- Singing Honeyeater *Lichenostomus virescens*. Common throughout, especially nearer the coastal cliffs and on the inland margins of the mallee where it merges with *Acacia papyrocarpa*.
- White-fronted Honeyeater *Phylidonyris albifrons*. Several

APPENDIX continued

- at Border Village on 16 Nov. 1995. Small numbers flying east at sites A, B. Feeding in flowers of parrot-pea *Templetonia retusa* at site B.
- White-fronted Chat *Ephianura albifrons*. Four in dunes at site B.
- Red-capped Robin *Petroica goodenovii*. Few pairs at site C.
- White-browed Babbler *Pomatostomus superciliosus*. Several groups throughout.
- Grey Shrike-thrush *Colluricincla harmonica*. Several throughout.
- Crested Bellbird *Oreoica gutturalis*. A pair in mallee at site A and one at site B.
- Willie Wagtail *Rhipidura leucophrys*. A pair at site C.
- Black-faced Cuckoo-shrike *Coracina novaehollandiae*. Small group at site A, 2 at site B and 2 at site C.
- Black-faced Woodswallow *Artamus cinereus*. Few in open spear-grass plains at site C.
- Grey Butcherbird *Cracticus torquatus*. Common throughout. An adult with a juvenile at Merdayerrah Beach on 16 Nov. 1995.
- Australian Raven *Corvus coronoides*. Scattered throughout with up to 20 at Border Village.
- Richard's Pipit *Anthus novaeseelandiae*. Few on open spear-grass plains at site C.
- Welcome Swallow *Hirundo neoxena*. About 100 at Border Village on 16-17 Nov. 95 and common along coastal cliffs. Several flying over at other sites.
- Tree Martin *Hirundo nigricans*. Small numbers with Welcome Swallows along the coast at Merdayerrah Sandpatch on 16 Nov. 1995 and 7-9 May 1996.
-