

## COMMENTS ON THE DISTRIBUTION OF FIVE BIRD SPECIES IN THE FLINDERS RANGES: SOME NEW DATA AND A REAPPRAISAL OF HISTORICAL RECORDS

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### SUMMARY

The distribution and status of five species of birds in the Flinders Ranges are reviewed, and some new records documented for Pied Butcherbird *Cracticus nigrogularis*, Laughing Kookaburra *Dacelo novaeguineae*, Noisy Miner *Manorina melanocephala*, Flock Bronzewing *Phaps histrionica* and Western Gerygone *Gerygone fusca*. Whereas the last two are rarely recorded vagrants, the Noisy Miner and Laughing Kookaburra are resident; the Pied Butcherbird's residential status is uncertain but it is speculated that transient populations establish periodically, most probably from the Lower North-Eastern region. Historical records of the Noisy Miner from north of Jamestown are rejected in the absence of strong supporting evidence, namely specimens or published descriptions that would demonstrate the distinction between this species and the similar Yellow-throated Miner *Manorina flavigula* that is common throughout the Flinders Ranges. Thus the Noisy Miner is apparently resident only on the southernmost margin of the region.

### INTRODUCTION

The Flinders Ranges extend for some 400 km from Crystal Brook and Jamestown north to Mt Hopeless and the Willouran Range. The precise boundaries of the region are open to interpretation, but the map in SAOA (1985) shows the area generally thought to comprise the Flinders, particularly from an ornithogeographic perspective. Climate varies greatly in the region and ranges from moist temperate in the extreme south to hot and arid in the north. Accordingly, a wide range of birds occurs in the region and many species reach their distributional limit within the Flinders. In reviewing the distribution and status of birds in the Flinders Ranges, Reid *et al.* (1996) note that the literature is too meagre to allow a precise delimitation of the distribution of many species. Our purpose here is to clarify the status and distribution of two species in particular, for which we have new data, and to comment on three other species of uncertain status in the Flinders. Surprisingly, considerable confusion surrounds the current status of even quite common birds.

### PIED BUTCHERBIRD

The Pied Butcherbird *Cracticus nigrogularis*

has been rarely recorded in the Flinders Ranges. McGilp (1923), a long-term northern Flinders resident, had only one record of a pair in the Moolawatana district. Terrill and Rix (1950) listed Quorn (and Moolawatana) as locality records without further details, and the source of the Quorn record is unknown. Condon (1969) indicated that the species was fairly common in the Murray Mallee near the river and in the arid interior of the State, an inadequate and inaccurate description as noted previously by Badman (1979). Published records from the Flinders are: Aroona Outstation and Wilpena Homestead in August 1954 (Jeffery 1955); Warren Gorge in August 1975 (R. Attwood in Reid 1976); and Leigh Creek in July 1979 (Walford 1983). As Warren Gorge is only c. 20 km N of Quorn, Terrill and Rix's Quorn record may be valid. Still, for such a conspicuous bird with a fine voice, the scarcity of records seems surprising, especially as the species is thought to be sedentary throughout its range (e.g. Blakers *et al.* 1984; Schodde and Tidemann 1986). We therefore document the following observations: in October 1986, in Wilawillina Gorge, 2 km downstream of the car park, in a *Melaleuca* grove by a pool, one bird was seen and heard repeatedly over several days (JP); one or two birds seen and heard, 2 September 1996, along the Wilcolo Track near the intersection of Bunyeroo and Wilcolo Valleys, Flinders Ranges National Park N of Wilpena Pound, in river red gum *Eucalyptus camaldulensis* and native pine *Callitris* sp. near Wilcolo Creek (PB).

Blakers *et al.* (1984) show the South Australian distribution of Pied Butcherbird as being divided among two main populations, one in the North-West, with the other along the Upper Murray and thence north to about the Barrier Highway in the easternmost portions of the Lower North-East. There is only one grid cell marked in the RAOU Atlas for the Flinders Ranges (in the Leigh Creek area, presumably Walford's record). Approximate liminary locality records of the north-

western population are Eringa, Todmorden and Copper Hill (Badman 1979) and Marla (JR pers. obs.) and Vokes Hill (Matthew and Carpenter 1990) in the south. Those for the eastern population are from just south of Blanchetown to the State border along the Murray River, thence, perhaps disjointedly, to the north in black oak *Allocasuarina pauper* woodland from Chowilla in the south, Lilydale in the west, to Mutooroo, Ballara and Boolcoomata in the north (Mack 1970, 1980), with recent records from Sturt Vale to the State border east of Canopus (GC pers. obs.; Forward and Reid 1996) and from Olary (two, 14 May 1996, C. Baxter *in litt.*). This north-eastern population had been overlooked by Parker in Badman (1979) who redefined the species' distribution in South Australia to allay the confusion caused by Condon's loose description. It remains to be established whether there are resident birds in the Flinders Ranges. Many experienced South Australian ornithologists have spent varying (but together considerable) amounts of time in the northern Flinders without detecting the Pied Butcherbird (GC, PP, JR; Joan Paton, Lynn Pedler and Gordon Ragless pers. comm.), thus a resident population seems unlikely. If the Flinders population proves to be transient, then the Lower North-East of the State is the most probable source population. Historically vagrants have been recorded in unexpected localities, such as at Lameroo in October 1965 (Eckert in Glover 1966). Longer-term observations from localities where the species has been recorded are now required to determine the species' current status in the Flinders Ranges, and we encourage observers to submit records from the Flinders or anywhere outside the South Australian distribution outlined above. In other parts of Australia the species is known to be expanding its distribution (Schodde and Tidemann 1986; Reid and Fleming 1992), and so observations in the Flinders and other parts of its South Australian range may become more frequent, and indeed, a resident population in the Flinders Ranges may (have) become established. The locality records we have documented span much of the central and northern Flinders, from Quorn northwards.

#### LAUGHING KOOKABURRA

The Laughing Kookaburra *Dacelo novaeguineae* is fairly common in open forest and woodland habitats in the southern Flinders

(e.g. Condon 1969; Paton 1980; Reid *et al.* 1996), north to the Quorn district (Paton 1989). Northern localities where Kookaburras regularly appear to be recorded are Warren and Buckaringa Gorges, just north of Quorn (Paton 1989). However, Paton (1989) documented a few additional records from between Wilpena and Parachilna Gorge, belonging, she felt, either to a disjunct or transient population (and note the parallels between this and the previous species in this regard). Paton (1989) gave Parachilna as a general location only for a record of this outlying 'population' since it derived from the RAOU Atlas (10 minute resolution). Therefore, we document the following sighting from Parachilna Gorge itself. On the morning of 23 September 1996 we observed two Kookaburras in open river red gum woodland along Parachilna Ck; they called several times. This is its northernmost confirmed locality record in the State. Because Paton (1989) speculated on an apparent gap in distribution from Buckaringa Gorge to Wilpena (c. 70 km), we provide details of recent records that narrow this gap. Chris Baxter (*in litt.*) saw one in the old Wilpena Homestead area on 17 November 1995 and reported the chalet manager there as saying the species occurred regularly at Arkaba, c. 30 km to the south. This last observation is corroborated by the sighting of a single bird there in river red gums along Arkaba Creek on 2 October 1996 (P. Langdon *in litt.* to JR). Although the short open vegetation of the Willochra Plain may pose a barrier to northward dispersing woodland birds to the north-east of Quorn, the taller ranges and associated river red gum creeks immediately west of there, that stretch from Dutchman's Stern, through Buckaringa, north to Yappala and Wonoka (near Arkaba Creek), may provide a route for the intermittent dispersal and colonization by the kookaburra and other southern woodland and heath-dwelling species occasionally reported from the Wilpena district (see Reid *et al.* 1996).

#### NOISY MINER

The distribution of the Noisy Miner *Manorina melanocephala* in the Flinders Ranges is also imprecisely known (Glover 1968, 1969) and clouded by erroneous records in the literature. Of the dozen records in the ornithological literature (Table 1), few were accepted by Reid *et al.* (1996) who stated "the Noisy Miner is resident around

Table 1. Published records of Noisy Miner in the Flinders Ranges (\* = a self-queried record). Only McGilp's record is accepted by the authors as valid.

Locality	Date	Reference
Mt Remarkable	late 1922	White (1923)
*Melrose-Mt Remarkable	8/27	Cleland (1928)
Jamestown	c. 1930	McGilp in Morgan (1931)
Jamestown, Melrose	undated	Terrill and Rix (1950)
*Parachilna Gorge	1965	Haselgrove in Glover (1966); Glover (1968)
Wilpena, Aroona, Angorichina	8-9/67	Paton in Glover (1969)
Partacoona	9/69	Paton in Glover (1972)
Edeowie, Brachina, Maralana (breeding)	8-9/74	McCulloch (1975)
Wilmington	11/8/75	Paton in Reid (1976)
Tothill Ranges	29/5/77	Bransbury (1984)

Jamestown, records further north from Melrose...Partacoona...and Parachilna...require confirmation." Their residency at Jamestown is based on McGilp's remarks (in Morgan 1931) – he considered the Noisy Miner to have displaced the Yellow-throated Miner *M. flavigula* in the Jamestown district only 'recently'. When one Yellow-throated Miner was clearly seen at Jamestown on 22 September 1996 (in planted gums in the central park – PP pers. obs.), we wondered if the Noisy Miner occurs presently in the southern Flinders at all. However Lynn Pedler (*in litt.* to JR) has recorded them in recent years at Jamestown (along with Yellow-throated Miners), at the Jamestown Golf Course, in the township of Belalie East and in the Bundaleer Forest (all in the Jamestown general environs, at the southernmost margin of the Flinders Ranges). The South Australian Museum has two specimens of Noisy Miner from this locale: a male on Never Never Creek, 14 km SSW of Jamestown, and a female from Brown Hill Range, 11 km E of Jamestown, both procured on 12 November 1978 in South Australian blue gum *E. leucoxylo*n wooded grasslands (per Dr P. Horton). It is worthwhile to note that Lynn Pedler (*in litt.*) has, without success, specifically searched for the species for 15 years in the Melrose-Wilmington district. In his opinion all records from Melrose, Mt Remarkable and further north in the Flinders Ranges should be rejected as they are unsubstantiated by descriptions or specimens. Therefore, we urge observers to pay careful attention to all miners in the high-rainfall portions of the southern Flinders (and further south, e.g. between Wilmington and Clare). L. Pedler advises that only records supported with adequate descriptions are acceptable – the black crown and grey non-contrasting rump of the

Noisy Miner should both be noted. In Table 1 we list the known published records of the Noisy Miner from the Flinders Ranges. Of these we accept only McGilp's record from Jamestown (McGilp in Morgan 1931). We reject the 11 remaining locality records. In contrast the Yellow-throated Miner is distributed widely throughout the Flinders Ranges and it extends south deeply into the Adelaide Plains region, occupying drier habitats marginal to the Mt Lofty Ranges (e.g. Paton *et al.* 1994).

The historical Jamestown observations of McGilp, and recent records documented here, would indicate that interactions between these two miner species which lead to changes in distribution and mutual exclusion would seem to be fluid over time and reversible<sup>1</sup>. However, we find it significant that two long-term residents of the southern Flinders region – Tom Brandon of Wilmington and James Gray of Orroroo – never listed Noisy Miner amongst the numerous bird notes they submitted to the *South Australian Ornithologist*. Nor did Morgan (1897, 1917) at Laura, where he stated that only the Yellow-throated Miner occurs. Adelaide residents may have assumed that birds seen in river red gum habitats around Melrose and Wilmington in particular, that look much like the habitats around Adelaide and the Mount Lofty Ranges which are occupied by Noisy Miners, were that species by

1. Also note, for example, the extension of range of the Noisy Miner on to the Adelaide Plains. Zietz (1914) records them as "rarely met with on the Adelaide Plains" and as winter visitors to the foothills suburb of Kingswood; more recently in the 1980s they extended their range eastwards from the city along the River Torrens Linear Park, in association with the planting of river red gums and S.A. blue gums. Ref. for Zietz: Note on the Southern Black-headed Minah (*sic*) (*Myzantha melanocephala whitei*). *South Australian Ornithologist*, 1, 11-12. – Eds

default. The retraction by Haselgrove (in Glover 1966; see Glover 1968) supports this view.

In relation to distributional matters of this kind we do accept that vagrant birds (of any species) could appear almost anywhere. We also acknowledge that some bird distributions have proven to be highly dynamic in the face of massive human-induced habitat changes in the agricultural regions of southern Australia that accompanied European settlement. The genus of Australian miners has provided several examples of such responses (e.g. Blakers *et al.* 1984; Loyn 1985) and there is the serious case of the historical invasion of Yellow-throated Miners into the previous domain of the Black-eared Miner *M. melanotis*, causing the virtual extinction of the latter through the process of genetic swamping (Schodde 1981; Joseph 1986; McLaughlin 1996). It is possible, therefore, that Noisy Miners could have been distributed more widely in the past in the southernmost Flinders Ranges districts, and that as their favoured habitats were cleared for agriculture, Yellow-throated Miners became more prevalent in the more open woodlands that resulted. Nevertheless, though some doubt must remain, we think it prudent to remove all uncertainty by rejecting the unsubstantiated records identified above. We encourage observers to publish any new sightings of the Noisy Miner in the Flinders with full descriptions of the birds, location and habitat.

#### FLOCK BRONZEWING

Read (1991) and Read *et al.* (1996) document recent southern records of the Flock Bronzewing *Phaps histrionica* in the central-north of the State. A brief review of historical observations was given in the latter article. However, the following records from the northern Flinders were overlooked: a flock on Moolawatana 20 September 1931 (McGilp 1932); flocks of 20 (and a few others) 8 km S and 10 km N of Lyndhurst in October 1973 (Ragless 1974). The furthest south that we have observed them in the north-eastern deserts was c. 10 km SW of Moppa Collina Channel in 1987-88 (date not recorded, JR pers. obs.): a few birds flying swiftly across the Strzelecki Track in gibber plains habitat. This locality is c. 35 km N of the Moolawatana Homestead; other recent records from there and the Lake Callabonna district are presented in Read *et al.* (1996).

#### WESTERN GERYGONE

A breeding pair of Western Gerygone *Gerygone fusca* was observed by R. Schodde (pers. comm.) on 29 August 1996 along Balcoracana Creek, Lake Frome district, in open false sandalwood *Myoporum platycarpum* woodland. This is the second record for the Flinders Ranges region. An earlier record was overlooked by Reid *et al.* (1996): one at Wilpena Pound on 24 September 1978 (Tedder 1978). There are several other instances of the species occurring in eastern South Australia, mainly in the Mount Lofty Ranges (e.g. McNamara 1975; Paton *et al.* 1994, p. 185). The source population of these apparent vagrants is unknown. Taxonomic opinion varies on the number of subspecies that ought to be recognised (Ford 1981; Schodde and Tidemann 1986), but there appear to be at least four distinct populations (see Blakers *et al.* 1984). This includes the southern Eyre Peninsula population which is thought to be resident (Reid 1975) and has been ascribed variously to the south-western Australian form by Schodde and Tidemann (1986) and to the eastern Australian form by Ford (1981), while Parker and Horton (1990) were uncertain of its affinities due to limited material. The patterns of movement in the species are complex and incompletely understood (Ford 1981). This is reflected in the many conflicting and cautious remarks found in a range of texts examined, but all agree that stray birds appear infrequently in areas well outside of their customary range, such as Tibooburra (Morris *et al.* 1981) and elsewhere (Blakers *et al.* 1984) in the far west of New South Wales. As the eastern form is a summer breeding migrant in the south of its range (Victoria – Emison *et al.* 1987; Southern Highlands of New South Wales – M. Clayton pers. comm.) and, therefore, capable of large movements; we suspect that most if not all of the eastern South Australian records derive from this population. This speculation partly stems from biogeographic analyses of the affinities of the State's eastern temperate avifauna, that clearly demonstrate its strong links with the Bassian avifauna of south-eastern Australia (Schodde 1981; Reid *et al.* 1996; references therein).

#### CONCLUSION

We have attempted to correct some errors and uncertainties in the Flinders Ranges' ornithological

literature. Although three of the species discussed are basically sedentary (kookaburra, butcherbird, miners), some of the confusion over their distribution and residential status undoubtedly stems from their mobility, that most definitive characteristic of birds. The capability of birds to disperse through, migrate to or colonise areas and habitats that are not considered their norm will always bedevil attempts at precise (and artificially static) delimitation of avian distribution. It is important to be aware of the various time scales over which these events affecting distributional patterns occur. As isolated and perhaps inconsequential events, vagrants may appear from time to time (e.g. the Western Gerygone records presented here), while small populations may found and persist in places for short periods of a few years (examples in Ashton 1996), and others for longer periods again or even 'permanently'. The gradual expansion and contraction in species' distributions, such as with the Yellow-throated and Black-eared Miners, is another variant of this theme – although the changes may appear to be gradual or 'smooth' they are still the nett result of many individual events trending in common. Some of these distributional changes and founder events can be thought of as natural and, for instance, may result from unusual weather patterns (again single events or longer-term cycles of a few years may be involved); others undoubtedly are occurring in response, wholly or partly, to environmental changes caused by human activities. Regardless of their causes they are one of the processes that can result in biogeographic and, ultimately, evolutionary change. Which changes should be tolerated and which changes are symptomatic of downhill slides towards extinction will always be open to interpretation. If the latter case is suspected, then it should demand attention and management action designed to halt and reverse trends. Some trends may prove impossible to halt, in which case regional or total extinction will result. A combination of monitoring studies and targeted research will be critical in attempting to unravel the patterns of change, identify trends and determine the causes. Amateur ornithologists can play a vital role in monitoring programs and contribute directly to effective conservation measures, because the important first step is to obtain sufficient information with which to draw reasonable conclusions about changes in birds' status and distributions – the South Australian

'Bird Atlases' and long-term studies of Ashton (1996) are prime examples. Accurate knowledge is a key ingredient to effective management. Political will and dedication of sufficient resources to the task by governments are also required. Our conclusions and recommendations in these respects echo strongly those made by Paton *et al.* (1994) and by Possingham (1996).

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