

Early records of the Painted Finch, *Emblema pictum* Gould, 1842 and a review of its status in South Australia

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Abstract

Frank Gibson, a little known 19th century rural worker and collector, recorded the Painted Finch in 1868 from the Flinders Ranges near the southern limit of its distribution. In the following year he obtained the first ten specimens other than the holotype, four of which formed the basis of the British Museum's collection. He made the first recorded observations of its varied plumage, behaviour, habitat and diet, and inferred that it was a visitor rather than a resident. The species was thereafter almost unknown in South Australia until nearly a century later, but increasing numbers of observations since then, especially from the 1980s, have provided clarification of its status. There are resident populations in the Musgrave and other north-western ranges and the Davenport Range but at latitudes south of 30° S it is chiefly an irregular spring and summer visitor, with sporadic breeding in favourable seasons.

INTRODUCTION

Gould (1842) named the Painted Finch, *Emblema picta*, on the basis of a single male specimen obtained by Benjamin Bynoe, surgeon to H.M.S. *Beagle*, in June 1840 on Depuch Island east of Dampier, north-western Australia (21° 38' S, 117° 43' E) (Mathews 1925-1927, Whittell 1954). Gould's knowledge of the species was therefore limited and he could offer no further "account whatever of its habits or economy" in his subsequent *Handbook* (Gould 1865). Ramsay (1878) was likewise unaware of any subsequent record, but later described specimens collected in 1886

by T. H. Bowyer-Bower from near Derby in the Kimberley that he believed to be the first obtained since Gould's holotype (Ramsay 1886).

A little later Sharpe (1890) listed six specimens in the British Museum collection, not including the holotype, which Gould (1865) had reported was stolen in 1846, though it was actually stolen in September 1845 (Chisholm 1942). One of Sharpe's specimens was said to have come from Champion Bay (Geraldton, WA) and the other five were reported from the "Interior of Northern Australia".

North (1896, 1898) showed that G. A. Keartland collected seven Painted Finches in central Australia with the Horn Expedition in 1894 and five at Joanna Spring, northern Great Sandy Desert with the Calvert Expedition in 1897. Campbell (1905) provided two records from north-western Queensland, the earlier around 1900. Mathews (1925-1927) provided reports from 1895 (Roebuck Bay, WA) and 1898 (Northwest Cape Peninsula, WA) and listed specimens from central Australia, the Pilbara and the Kimberley.

Since those observations it has been understood that the Painted Finch generally occupies rocky ranges, gorges and gullies of the inland and arid and semi-arid coasts of the north-west, chiefly north of 25° S (Higgins, Peter and Cowling 2006). However Sharpe was mistaken about the locality of four of the five specimens listed from the "interior of northern Australia". He recorded that they had been obtained from F. Gibson, one apparently directly and three acquired from

Gould's collection. We have recently learnt a little about F. Gibson and are able to correct Sharpe's error. If he had known the true locality of those specimens, he would have provided a very different and somewhat enigmatic view of the natural distribution of the species.

Gibson's observations of the Painted Finch

The identity of F. Gibson, as named by Sharpe, became evident to us from an entry included by Datta (1997) in her monograph on Gould's Australian labours. Amongst summarised letters and other documents were "Notes on *Emblema picta* [by] F. Gibson. Ediwoii [sic], South Australia 1869". This confirms that the collector was Frank (or Francis) Gibson, who worked at Edeowie and other localities in the Flinders Ranges in the 1860s and collected a number of significant bird specimens from there, probably including the holotype of the Chestnut-breasted Whiteface, *Aphelocephala pectoralis* (Black 2013).

A. Black recently examined Gibson's notes in the Natural History Museum Library in London ("Gould, J. MSS. Letters and drawings re: Australian mammals and birds") and these were copied and subsequently transcribed (see Appendix). Gibson's records of the Painted Finch are summarised below and will be discussed in the context of the species' Australian distribution and a review of South Australian records.

1. A pair of Painted Finches (identified in retrospect) was seen near a well at "Saltia Station" in the Pichi Richi Pass southern Flinders Ranges in May 1868. This was not the railway station but evidently the pastoral property of Charles Simmons, who had built a hotel nearby in 1849 and laid out the town of Saltia (32° 28.5' S, 137° 57' E) in the Hundred of Woolundunga in 1861 (Manning 1986). Construction of the northern railway from Port Augusta began later, in 1878 (Mincham 1964).

2. A small flock was positively identified in the unnamed gorge in which the Willochra

Creek passes through the ranges near the former localities of Marachowie and Warrakimbo (31° 56' S, 138° 05' E) in October 1868.

3. A flock of twelve, six pairs, was observed closely over seven days at a waterhole in Bunyeroo Gorge (31° 25' S, 138° 32' E), about 8 km north-east of Edeowie in October 1869 and ten specimens were obtained.

An historical and distributional review of other records of the Painted Finch in South Australia

Condon (1968/9) accepted South Australian records only from the Musgrave Ranges, Lake Frome [sic] and Oodnadatta. The list of localities is now considerably expanded with more recent records and also with some overlooked by or not known to Condon. Pertinent locality records are:

20 July 1914 - S.A. White (1915) saw the species in the Musgrave Ranges and took a specimen at Tietkens Birthday Creek (SAMA B54892).

23 March 1925 - McGilp (1925) reported five Painted Finches in the verandah of the house at Poontana, his only record for the "Lake Frome District". Poontana no longer exists but it was presumably situated near Poontana Creek which is c 15 km NE of North Mulga Outstation, North Flinders Ranges at 30° 18' S, 139° 51' E.

30 November 1940 - W.B. Greenwood collected a Painted Finch (SAMA B22286) on Arkaroola Station (30° 20' S, 139° 20' E). This specimen has been missing from the collection for a long time, hence Condon (1968/9) not including it among his accepted records.

February 1956 - W.H. Lennon of Oodnadatta captured a small bird, presumably in or near Oodnadatta, and sent it to the SA Museum for identification. Condon identified it as a Painted Finch, but unfortunately did not keep the specimen as it was too decomposed for skinning and he did not routinely keep such specimens for skeletons.

23 November 1963 - a single bird was seen in a rocky gully near Woomera (Bell 1976).

8 September 1965 – G.O. Furness saw two on a rocky hillside on Plumbago Station, Olary Range near the Mount Victor boundary (unpublished SAOA record, B. Blaylock pers. comm.).

April-May 1967 - A pair was reported by C.N. Austin from the Everard Ranges (Glover 1968).

2 October 1973 - Brian Crisp saw two birds with a nest and five eggs on Mount Ward, Arkaroola, North Flinders Ranges (30° 12' S, 139° 23' E) (SAOA Newsletter 69, p. 13). This is the first breeding record for South Australia.

16 November 1973 - A single egg was collected on Mount Ward by Ian May (SAMA B35964).

31 December 1974 -12 January 1975 - Joseph (1975) reported up to five in Corunna Gorge, Baxter Hills, east of the Gawler Ranges proper.

September 1980 – Close and Jaensch (1984) reported 8-11 birds observed on Mount Woodroffe, Musgrave Ranges, by members of their party. P. Horton's field notes record the date as 2 September.

13 March 1983 – R.E. Read saw six at Kalka, Tomkinson Range, 20 km south-east of Surveyor General's Corner (unpublished SAOA record, B. Blaylock pers. comm.).

July 1985 - R. Jaensch saw a single bird at a waterhole near Amata, Musgrave Ranges (Jaensch and Jaensch 1987).

10-14 December 1985 - Hornsby (1987) observed a pair building a nest in the base of a *Triodia* tussock at Brindana Gorge above Hamilton Creek, Mt Fitton Station, North Flinders Ranges (29° 58' S, 139° 25'E).

24 October 1989 - Dennis and Dennis (1995) observed a single male drinking from the Alligator

Creek, Mt Remarkable National Park (32° 49' S, 138° 04' E) and noted extensive seeding *Triodia* and *Stipa* grasses in woodland burnt in January 1988.

July, August and October 1989 – 1993, and December 1994 – Gee, Gee and Read (1996) found the Painted Finch to be resident and numerous on every visit to the Davenport Range (28° 22'-32' S, 135° 58'-136°10' E), west of Lake Eyre. They reported nesting sites on steep *Triodia*-covered rocky slopes in September 1993.

April 1993 - Reid (2000) saw two birds at the Clayton Bore drain, Birdsville Track this being the first record from the north-east of the State.

1994 – 2003 - Kovac and Niejalke (2004) reported observations at Hermit Hill artesian springs and nearby Finnis Creek (29° 34' S, 137° 25' E) in May 1994 and December 1997 and breeding in September 2000 and September 2003, having failed to see them on earlier regular trips during the 1980s and early 1990s.

Discussion of Gibson's observations and notes in the context of more recent records

Sharpe's (1890) misunderstanding over the locality of Gibson's records requires an explanation. It is evident that at least three of the Painted Finch specimens as well as the "Notes on *Emblema picta*" (hereafter The Notes) were sent to Gould, because they were received in the British Museum from him.

Historical documents in the South Australian Museum show that between 1865 and 1870 Gibson sent specimens of natural history to its Curator, Frederick George Waterhouse, from three or more localities in the Flinders Ranges, all designated "the Far North" in Waterhouse's records and reports (Black 2013, Horton, Black and Blaylock in prep.). The localities named in those documents, Woolundunga, Marachowie and Edeowie align closely with the sites of Gibson's three Painted Finch records, Saltia Station, the Willochra Creek gorge and Bunyeroo Gorge, showing that he was collecting in the general area on each occasion.

Waterhouse corresponded with Gould and used the term "Far North" in relation to material supplied by Gibson (Sutton 1929) and The Notes disclose that Gibson and Waterhouse were in close communication regarding the former's Painted Finch observations. Gibson wrote The Notes to redress a deficiency in Gould's publications and that of Maunder (1852), all of which recorded its occurrence only in north-western Australia, but they were not addressed to a particular person and it took two decades before they were directly cited by Sharpe (1890), who quoted Gibson's description of bill colour in the fresh specimen.

There is little doubt that Gibson sent both the specimens and The Notes to Waterhouse, who forwarded The Notes and some of the specimens to Gould. There is further evidence of the likely intermediary involvement of Waterhouse. Firstly, in the Museum Curator's report for October 1869, he reported that [the taxidermist] Mr Withers had mounted a specimen of "Painted Finch (*Emblema picta*) from the Far North". Secondly, in his list of bird species known to occur in South Australia and the Northern Territory (Waterhouse 1876), he included the Painted Finch for the former portion of the Colony but not for the latter. Gould would have known from earlier correspondence between the two what Waterhouse meant by "the Far North", but Sharpe would have assumed it referred to the north of Australia, whether he was aware that the Northern Territory was under South Australian jurisdiction at the time or not.

Gibson's records were only the second for the species and his specimens were the first following the theft of Gould's holotype. It is remarkable that they came from almost the southernmost limits of its distribution; indeed only the record of Dennis and Dennis (1995) is farther south in this State (by about 40 km) than Gibson's first sighting in Pichi Richi Pass (but see below for the most southerly report of all, from the Riverina, New South Wales). All three records preceded the next from the Flinders Ranges by nearly 60 years and most by over 100. His conclusions that the species

inhabited only the roughest mountain gorges and fed on the seeds of "*Spinifex Sturtii*" [= *Triodia* spp.] are generally supported by reports of the species although there are obvious exceptions, notably those of Kovac and Niejalke (2004) who found them in wetland vegetation associated with artesian springs in the absence of *Triodia*. Gibson also reasonably concluded that the species was rare ("scarce") and this is consistent with the years that passed before further sporadic reports emerged from the Flinders Ranges.

Throughout its continental range, the Painted Finch appears nowhere to be especially common, except perhaps in the Pilbara where breeding records are said to be widespread, though scattered elsewhere (Higgins, Peter and Cowling 2006). In South Australia reports have been relatively infrequent until recently, even from the far north-western ranges where the species is close to its centre of distribution. Only four records apart from Gibson's were documented in South Australia before 1960 and ten before 1980, but there have been nearly 100 in the last three decades (see discussion of its present status below).

Migratory or sedentary?

Gibson's final inference was that the species was migratory. Condon (1968/9), on the other hand, suggested that there were scattered resident populations in the Musgrave and Flinders Ranges; Joseph (1975) believed that long term studies would be needed to address that question. Higgins, Peter and Cowling (2006) found that movements of the Painted Finch were still poorly known, apparently largely sedentary, but "capable of wide dispersal and irruptive movements", with "scattered and irregular records in SA and WA, sometimes far outside usual range".

An irruption or rather an incursion was reported by Reid (1975) who observed between two and fifteen Painted Finches on four occasions between September 1973 and February 1974 near Menzies and Leonora in the north-eastern goldfields of Western Australia "south and west of the bird's

usual range" after widespread exceptional rainfall in the area. The scattered records in South Australia "outside usual range" included those in the Flinders and Gawler Ranges and near Woomera. More recently McAllan *et al.* (2010) reviewed records of the Painted Finch in New South Wales, only two accepted from the north-west of the State before an influx in 2007-2008, during which breeding was documented near Menindee and much farther south in the Riverina at 35° 09' S, 145° 46' E.

At issue therefore is the definition of usual range, which appears at least to include the Pilbara and northern Gascoyne Regions, north-eastern Great Sandy Desert and Kimberley in Western Australia, ranges in far western Queensland and those between 20° and 25° S in the Northern Territory, notably the MacDonnell Ranges, Uluru and Katajuta (Higgins, Peter and Cowling 2006).

Status of the Painted Finch in South Australia

We now consider the status of the species in South Australia on a regional basis and refer to records not already provided in the distributional review above, including the Birdlife Australia database (Andrew Silcocks pers. comm.) and the Atlas of Living Australia (ALA) website (www.ala.org.au accessed 23 July 2013).

In the far north-west, closest to the central Australian ranges, earlier observers found the Painted Finch to be rare or uncommon. White (1915) visited the Musgrave and Everard Ranges in drought conditions; he called it a very rare bird that he saw only once or twice in the deep gorges of the Musgrave Ranges. McGilp (1935) did not record it at all. Close and Jaensch (1984) and Jaensch and Jaensch (1987) each made only one observation and only the record from the Everard Range in 1967 and those from the Tomkinson Range in 1979 (Blakers, Davies and Reilly 1984) and 1983 (as above) were added before 1985.

The species has evidently become more common since the 1990s and particularly in the present century. Copley *et al.* (2003) recorded a total of

26 Painted Finches at 5 sites in the Musgrave, Everard and Mann Ranges during the biological survey of the region between 1994 and 2001, while David Hartland counted 30-50, 18, 14 and 100 on 4 occasions at Amata wastewater treatment plant from 16-24 February 2013 (ALA).

Between 2001 and 2013 John Read (pers. comm.) observed Painted Finches on 9 of 17 visits to Kalka and 6 of 22 visits to New Well in the Tomkinson and Musgrave Ranges respectively. He saw over 20 birds including fledglings at Ninuku Spring near Kalka in May 2011. This last record is the first documentation of breeding in the north-western ranges of South Australia.

Gee, Gee and Read (1996) reported what they considered to be the southern-most resident breeding population in the State in the Davenport Range, west of Lake Eyre. In fact, in the absence of continuous records in the far north-west, they were actually the first to document any resident population. Philip Gee (pers. comm.) has visited the Davenport Range in most years since and has confirmed their presence on each occasion.

To the south of Lake Eyre, Kovac and Niejalke (2004) inferred the recent establishment of a resident breeding population at Hermit Hill, birds first being observed in May 1994 and nesting recorded in September 2000 and September 2003. Bird observation in the area since then has been irregular and only one definite sighting has been reported (in 2008) and so its current status is uncertain (Kelli-Jo Kovac pers. comm.).

In the North Flinders Ranges, from where the majority of incidental observations have been reported, including breeding records, the species has not been shown to be a continuous resident in our view. In support of this we note that Hornsby (1997) recorded a pair of Painted Finches in only two months, December 1985 and May 1989, and considered it a rare visitor during more than a decade of observations at Brindana Gorge, Hamilton Creek in the period 1984-1994. Of interest, the species was recorded at the same

place in November 2001 (ALA) and P. Koch saw five birds there in May 2011 (SAOA Newsletter 219).

In July 1992, J. Ramsey observed 30 Painted Finches at Chambers Gorge, this being the first winter record for the Flinders Ranges (Carpenter *et al.* 2003). They were also recorded at Terrapinna Waterhole in June and July 2003 (ALA) and perhaps through the years 2006-2007 near Depot Creek, north-west of Quorn (a claim of up to 20 birds including juveniles; per P. Langdon, whose only personal observation in the Flinders Ranges, of 2 birds in Depot Creek, was on 9 January 1994).

All other records from the Flinders Ranges, including nine or more between 1982 and 2010 (Carpenter *et al.* 2003, Rogers 2008-2012, ALA), and from other southerly localities have been made between 25 September and the month of May. That pattern suggests that the Painted Finch is generally an irregular spring and summer visitor to latitudes south of 30° S, with breeding occurring opportunistically in favourable seasons and over-wintering the exception. While records from the Flinders Ranges have accumulated steadily since the 1970s it is uncertain whether the reporting rate has increased since the 1990s as it has further north. There were two reports from the Flinders during the conduct of the first national atlas (1977-1981) and only one in the second atlas (1998-2002); there have been another three in the "continuing atlas" since 2002 (Andrew Silcocks pers. comm.).

Recent records from other parts of the State include a sighting of three birds by R. Whatmough near Andamooka in September 1992 (Carpenter *et al.* 2003) and an observation north of Nilpena Homestead, east of Lake Torrens in August 2007 (ALA). A further seven reports have come from the north-west between The Painted Desert, Tallaringa Well and Algebuckina (Rogers 2008-2012, ALA). Twelve individuals were seen in April 2008 (E. Macilwain, ALA) and 11 in February 2010 (P. Barron and N. Doecke, Rogers 2008-2012) on Mount Ive Station, Gawler Ranges.

A number of reports have also come from the far north, north-east and Lake Eyre Basin, Witjira NP (two in June 1992, P. Copley), the Peake ruins (eight in November 1996, H. Owens), Cordillo Downs (May 2011), Muloorina (May 2009) and Kalamurina (October 2001) Stations and Montecollina Bore, Strzelecki Track (August 2000) (ALA). McAllan *et al.* (2010) included a nesting record from Cooper Creek SA on 9 April 2007, but this proved to be from outside the State: a pair at a nest in roadside litter (fallen branches) among low chenopods at the western margin of Cooper Creek channels, south of Ballera Gas Centre, south-west Queensland (Graham Turner and Matthew Stanton pers. comm.).

Records in north-western New South Wales (McAllan *et al.* 2010) were documented only in January 1977 and September 1992 before the reported influx in April 2007 and breeding near Menindee in September 2007, followed by the remarkable southern breeding observations in the Riverina between August and November 2008. That report is pertinent to this review in two respects. First, the authors suggested that there has been a southward and eastward extension of range of the Painted Finch in recent decades; second, they inferred that, as the Painted Finch "now regularly occurs" in South Australia from the Musgrave to the northern Flinders Range, the Flinders Ranges were the likely origin of birds observed in New South Wales.

To summarise our review of distributional records of the Painted Finch in South Australia, we find that it appears to be a breeding resident in the Musgrave and other north-western ranges and in the Davenport Range. These populations are likely to have been small until recently relative to that of the species as a whole, whose core distribution lies farther north. Farther south at Hermit Hill, while recent breeding has been recorded, its long term status is uncertain. In the Flinders Ranges the species appears to be an irregular visitor, chiefly from late spring to autumn, with sporadic breeding and occasional over-wintering.

Evidence presented here allows an inference that the species has become more prevalent in the far north-west and is expanding its range in the north, north-west and Lake Eyre Basin, perhaps in a sequence of vagrant movements, followed by the establishment of breeding resident populations, such as shown by Eckert (2006) to be the pattern of expansion of the Pied Butcherbird, *Cracticus nigrogularis*, in South Australia. Such a conclusion must be treated with some caution, since increasing reports in recent decades will be influenced by the greater scrutiny of arid zone fauna during this time, as a result of the State's biological survey program, the greater mobility of bird observers and ongoing professional appraisal of the environmental impacts of recent or proposed land use changes. Whether South Australian populations spilled over into New South Wales in 2007 or whether the irregular more southerly occurrences in South Australia and in New South Wales reflect periodic expansion of central Australian populations and subsequent dispersals remains a matter of conjecture.

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APPENDIX: NOTES BY F. GIBSON

Notes on *Emblema picta*

The first time that I saw this bird was in May 1868, the day following a very violent thunderstorm, when I saw a pair near a well at the Saltia Station (10 miles East of Port Augusta). I happened, unfortunately, to be without a gun with me that day and although I kept a close watch for several days after I never saw anything more of them so I concluded that they were driven out of their latitude by the storm.

I did not on this occasion recognize the birds as *Emblema picta*, as at the distance I was from them the entire of the head and neck appeared to be covered with brilliant scaly scarlet feathers, but thought they were some hitherto unknown species. I was much struck by their peculiar cry, totally unlike that of any other bird with which I am acquainted, & which is indescribable in words, the only English word which would convey any idea of it is 'jerking'.

In October 1868, as I was crossing Flinders' Range by the gorge thro' which the Willochra Creek runs [p. 2] and which is about 60 miles North of Port

the same cry and on looking in the direction from which it proceeded I saw a small flock of birds which allowed me to get sufficiently close to identify them as *Emblema picta* from the description of that bird in Maunder's "Treasury of Nat: His:" [Maunder 1852]. When I got within about 30 yards of them they all flew up to some pines growing about 80 yds up on the side of precipitous hills which line the gorge and altho' I waited for some time to have a closer look at them they did not come down. I was again on this occasion without a gun with me, but about six weeks afterwards (I was unable to go sooner) I went with a gun right thro' the same gorge stopping, during the heat of the day, at the place where I had seen the birds, but could not see one. I wrote to Mr Waterhouse of the Adelaide Museum announcing my having seen so rare a bird & stating that I believed it to be an inhabitant of the most rugged of our mountains gorges which has turned out to be correct.

[p. 3] In October 1869 I again saw a flock of twelve (six pairs) of this bird in the gorge thro' which the Bunyeroo Creek runs thro' the Flinders' range, which is about ninety miles North of Port

Augusta and after perseveringly watching the hole they watered at for seven days succeeded in shooting all the males and four of the females.

Mr Waterhouse kindly sent me a copy of the portion of "Gould's Manual" [Gould 1865] relating to this bird & as I see by it that the only specimen obtained when that was written was unaccompanied by any account of its habits, food &c I am happy to be able to supply those omissions.

Habits – Gregarious but not sociable as the individuals composing the flock feed & perch some distance apart. Excessively shy which is remarkable in a bird of this family (Fringillidae): they feed on the most inaccessible parts of the hills in the vicinity of their watering place & do not come often to the water – they utter the peculiar cry I have alluded to while flying & are very restless.

[p. 4] I carefully dissected all the specimens I shot to ascertain sex & food & in all found the food to be solely the seeds of "Spinifex Sturtii".

The plumage of the upper surface of the female is similar to the male that of the under surface black or brownish black thickly spotted with white or buffy white all over & having three or four of the central breast feathers tipped with red.

Irides – pale straw color.

Mr Gould, doubtless from having only a dried skin before him, has incorrectly described the tarsi & beak: all my specimens were thus colored –

Tarsi – dirty brown getting very light on the hinder side.

Beak – upper mandible, black tipped with scarlet – under mandible, scarlet with a triangular patch of livid blue (same shade as that on beak of *Artamus melanops*) at the base.

Females vary greatly in color, some being jet black spotted with white & others brownish black spotted with buff on the under surface.

F Gibson

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[p. 5] I forgot to state, that the fact of my not seeing this bird on my second visit to the Willochra gorge (there being no ostensible cause for its departure) & that altho I took a flock of sheep to water in the Bunyeroo gorge from the latter end of August to the second week in October on every alternate day I did not see one till the latter period when they arrived as described, warrants me in pronouncing them, as inhabiting the roughest only of the mountain gorges, as being very migratory & very scarce.
FG