

Eastern distributional limit of the Western population of the Blue-breasted Fairy-wren

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During three return trips along the Eyre Highway from Perth to Port Augusta in April–May 2003, July–August 2007 and December 2011, we searched for Blue-breasted Fairy-wrens, *Malurus pulcherrimus* in vegetation adjacent to the highway, and visited sites where they had been recorded previously by Burbidge, Casperson and Fuller (1987) and Rowley and Russell (1998).

Wrens were found at the Rowley and Russell site (25 kilometres east of the border) and at 63, 80, 88, 108 and 109 kilometres east of the border, the co-ordinates of the latter being 31° 34' 20" S, 130° 07' 44" E. All of these sites had procumbent mallees and shrubs, whereas the country east of 109 kilometres had fewer eucalypts and the inter-shrub areas were almost bare of vegetation. This apparently unsuitable habitat east of our last sighting continued along the highway for about 30 kilometres.

Wrens were not found at 133 kilometres, where Burbidge, Casperson and Fuller (1987) recorded them in 1984 on their Koonalda KD 1 site (1 kilometre south of the highway), or at 142, 154 and 155 kilometres east of the border. Some of these sites had the same procumbent mallee, teatree and shrubs as found on the more western sites but these plants tended to occur in taller, denser clumps and were surrounded by grassland. However, we suggest that the western population of the Blue-breasted Fairy-wren is unlikely to extend further east along the

highway than the 120 kilometre peg (31° 34' S, 130° 14' E), as the vegetation beyond that point appears to be unsuitable. Map "Nullabor 10" of Department of Environment and Heritage (2007) indicates that the vegetation here changes from "mallee heath and shrublands" where we know the wrens occur, to "mixed chenopod, samphire and forblands" and "chenopod shrublands", in neither of which we have records.

We did not search for the western boundary of the eastern population: the most westerly record we could find in the literature was a 1993 sighting at 20 kilometres south-west of Nundroo (Carpenter and Matthew 1997). Therefore, it would seem that the distance between the western and eastern populations is much less than the 600 kilometres given by Rowley and Russell (1997); i.e. about 210 kilometres for the definite sighting at the 109 peg, or about 200 kilometres for our presumed limit at the 120 peg.

Given that much of the distribution of this fairy-wren in Western Australia lies in the highly fragmented wheatbelt (Brooker and Brooker 2002, 2003), the relatively undisturbed coastal strip that it occupies in far south-east Western Australia and far south-west South Australia represents an important part of its range.

Of the two species of birds which, from our experience in Western Australia, we would have expected to favour similar habitat to that of the Blue-breasted Fairy-wren, the Inland Thornbill, *Acanthiza apicalis* was not recorded east of the 108 kilometre peg and the Redthroat, *Pyrholaemus brunneus* was not recorded east of 154 kilometres. We observed the Silvereye, *Zosterops lateralis* at 80 kilometres east of the border (31° 35' 11" S, 129° 50' 02" E) on 30 December 2011, representing an extension of its range in south-western South Australia to that reported by Carpenter (2009).

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