

# Photographs and observations suggest Superb Fairy-wren *Malurus cyaneus* x Variegated Fairy-wren *Malurus lamberti* hybridisation

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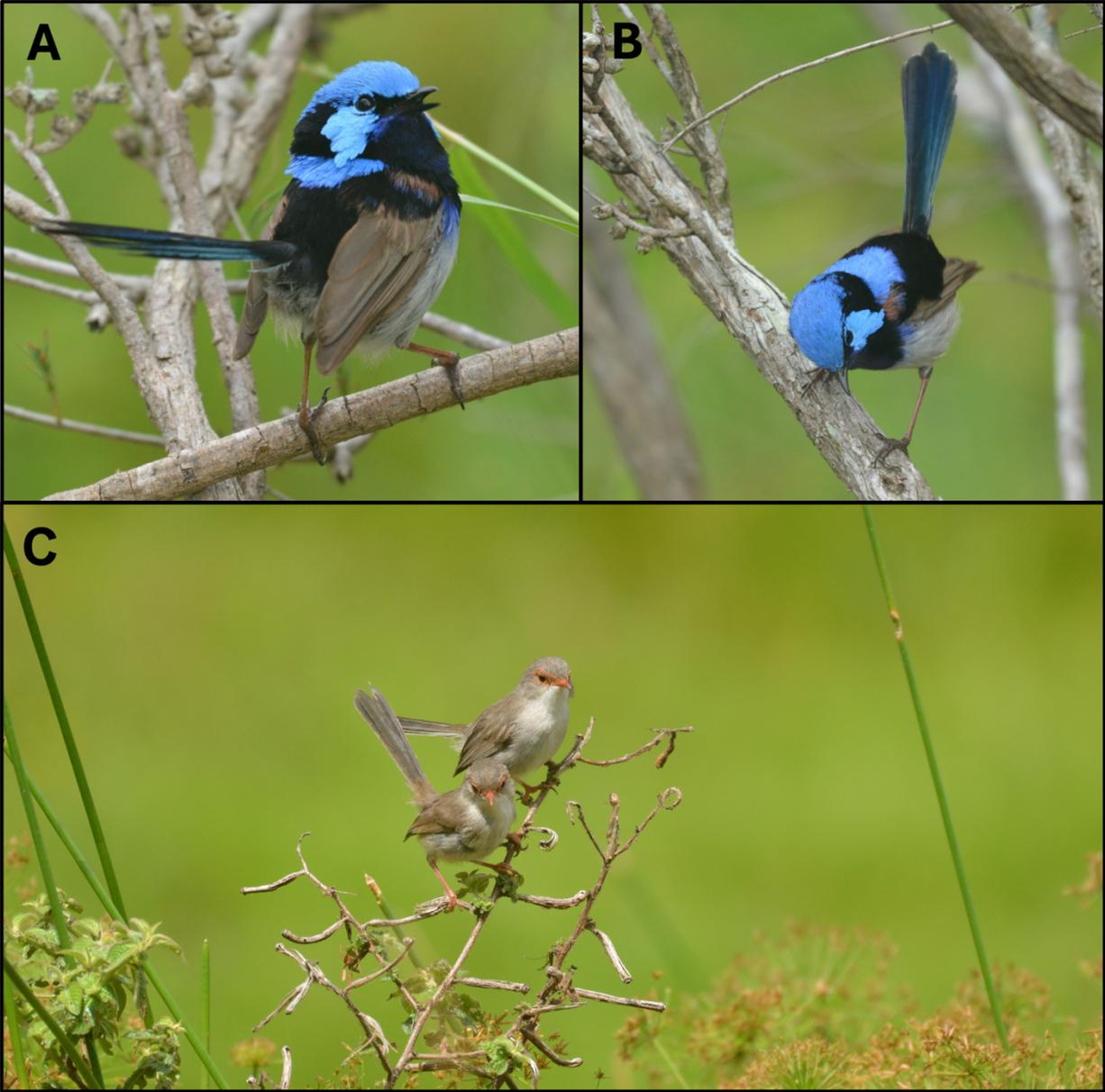
## Abstract

We observed and photographed an unusual looking male Fairy-wren at Lake Eden, just north of Brisbane, Queensland. The plumage of this individual displays a blend of Superb Fairy-wren *Malurus cyaneus* and Variegated Fairy-wren *Malurus lamberti* characteristics, supporting the notion of a novel hybridisation event between these two species. We have observed this likely hybrid on multiple occasions in close association with two individuals displaying female or immature Superb Fairy-wren plumage, pointing to the possibility of backcrossed offspring at this location now or in the near future.

## Introduction

Hybridisation is relatively common in bird species, with a recent estimate of between 15 to 20% of all species hybridising globally (Ottenburghs 2023). Taxonomic and regional bias in reporting constrains the confidence of these estimates, with few published records from Australia in particular (Groom 2019). Hybridisation can lead to transfer of adaptive traits between species—in some cases even leading to speciation (Ottenburghs 2023)—while in others causing the loss of existing species (Rhymer & Simberloff 1996; Seehausen 2006; Seehausen et al. 2008), so it is important to document and study suspected hybrids.

Fairy-wrens are the best studied clade of Australian birds and are known to hybridise among each other (Wilson 1983, Low 2014, Ross and Briggs 2022, Welklin et al. 2022). However, outside of the recently diverged Variegated *Malurus lamberti* and Purple-backed Fairy-wren *Malurus assimilis*, which readily hybridise in their contact zone (McLean et al. 2017a, McLean et al. 2017b), incidence of hybridisation in *Malurus* appears to be quite rare. Here we present photographs and observations of a suspected Superb Fairy-wren *Malurus cyaneus* and Variegated Fairy-wren hybrid near Brisbane, Australia. This male individual displays alternate (breeding) plumage that differs from both parent species, with some patches more consistent with *M. cyaneus*, others with *M. lamberti*, or otherwise appearing to be intermediate between the two. We have observed him on multiple occasions foraging with two individuals matching female or immature plumage of *M. cyaneus* in his territory (Figure 1).



**Figure 1.** Photographs of the presumed Superb Fairy-wren *Malurus cyaneus* x Variegated Fairy-wren *Malurus lamberti* hybrid (A-B) and individuals in his group showing plumage consistent with female or immature *M. cyaneus* (C). All images by Martin Ross.

### Study Site

All observations occurred on the north shore of Lake Eden, near Brisbane, Queensland, Australia (27°14'S, 153°01'E; <https://ebird.org/hotspots?hs=L2560112>). This small, protected park is embedded in a residential area and has a mix of marshland, savanna, thicket, and forested habitat.

**Table 1.** Field marks that differentiate Superb Fairy-wren *Malurus cyaneus* and Variegated Fairy-wren *Malurus lamberti* and how the suspected hybrid compares.

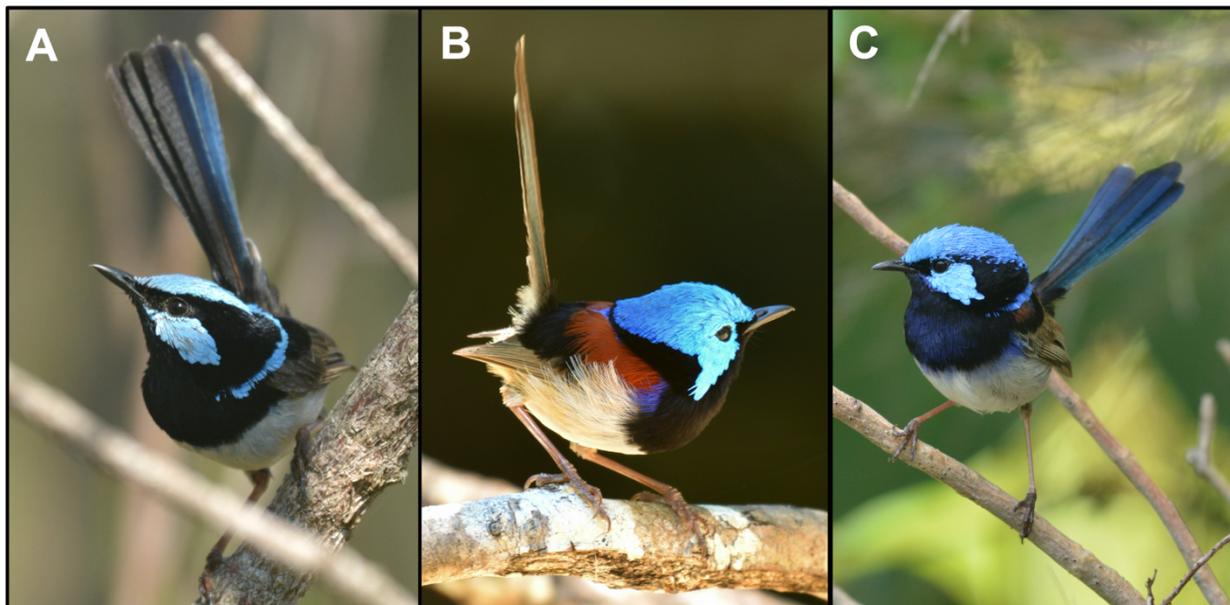
Species	Crown	Eyebrow?	Cheek	Shoulders	Back	Chest	Tail color	Tail length
Superb Fairy-wren	light blue	present	light blue	black	light blue & black	dark blue	blue	shorter
Variegated Fairy-wren	azure	absent	azure	chestnut	azure & black	black	blue w/ pale tips	longer
Suspected hybrid	cerulean	intermediate	cerulean	chestnut, black, & blue	cerulean & black	dark blue & black	blue w/ pale tips	intermediate

## Observations

MR first observed the suspected hybrid male foraging with two individuals with plumage aligning with female or immature Superb Fairy-wren on 14 January 2026. The male was in full alternate plumage with a blue breast and throat with a black border, with sparse chestnut and mottled blue shoulder feathers, a black eyebrow, and dark blue tail with some white tips (Figure 1). These field marks alongside blue plumage color and tail length being intermediate relative to Superb and Variegated Fairy-wrens (Table 1, Figure 2) support hybridisation of the two species.

MR continued to observe the suspected hybrid alongside the two same brown-plumaged individuals foraging in trees and thicket habitat near Lake Eden on 15 January 15 2026. Consistent observations of the male's plumage across lighting conditions supported the likelihood of a hybridization event between a Superb and Variegated Fairy-wren.

The likely hybrid was observed again with his family group at Lake Eden on 21 and 23 January 2026 by MR. The suspected hybrid continued to show alternate plumage, with no signs of moult to basic (eclipse) plumage. The group was seen allopreening and foraging together, supporting this being a family group containing the suspected hybrid as the breeding male mated to a Superb female with a young hatched on their territory.



**Figure 2.** Comparison of males in alternate (breeding) plumage across: Superb Fairy-wren *Malurus cyaneus* (A), Variegated Fairy-wren *Malurus lamberti* (B), and presumed Superb and Variegated hybrid (C). All images by Martin Ross.

## Discussion

The observations reported here support a novel hybridisation event of Superb and Variegated Fairy-wren, which adds to a short list of known hybrid taxa in *Malurus* (Welklin et al. 2022) and in Australian avian taxa more broadly (Groom 2019). Both Superb and Variegated Fairy-wrens have been documented hybridising with other Fairy-wren species (Welklin et al. 2022), but this is the first indication of these two species hybridising together. The likely hybrid displays intermediate plumage colors between these two species across patches (Figure 2, Table 1). In addition, this male is within an area inhabited by both species, with the one other Fairy-wren species within range— Red-backed— being uncommonly observed in the vicinity (eBird 2021, [ebird.org](http://ebird.org)) and unlikely to produce such plumage hybridising with either species, especially given evidence from known Red-backed x Superb hybrids (Welklin et al. 2022; Boersma et al. *personal data*).

The extent to which bird species hybridise remains roughly estimated owing to so few published records of these taxa (Ottenburghs 2023). Hybrids are under-reported for a variety of reasons (see discussions in Justen et al. 2020; Ottenburghs and Slager 2020; Hill and Justyn 2021; Minor et al. 2022), including that they can be difficult to tell apart from parent taxa when hybridising taxa are closely related (Randler 2004), and reluctance of birders to report hybrids in favor of expanding life lists of established species (Justen et al. 2020). While the incidence of female hybrids is certainly under-reported in Fairy-wrens, the striking alternate plumage displayed by males aids detection and reporting of hybrids in these species. Additionally, outside of the Chestnut-shouldered clade (*M. lamberti*, *M. amabilis*, *M. plcherrimus*, and *M. elegans*), hybrid male Fairy-wrens are likely to display alternate plumage that greatly contrasts with parent species (Welklin et al. 2022).

Hybridisation is a powerful evolutionary force with major implications for conservation of species (Ottenburghs 2023). We encourage others to search for and publish observations of suspected hybrids so we can better understand where and in which taxa hybrids occur. This information is both important for science and sparks interest in birders and the general public that can be leveraged for conservation.

## Acknowledgements

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