

Another Black Falcon *Falco subniger* with yellow bare parts

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Abstract. We describe and illustrate a Black Falcon *Falco subniger*, observed in the field near Milparinka in outback New South Wales in May 2024, that had yellow bare parts. Following our online posts that generated debate on the bird's identity, and referral to raptor enthusiasts and experts, we here document the case and briefly review relevant background and questions for further investigation.

Introduction

In describing and discussing field observations and museum specimens of Black Falcons *Falco subniger* with yellow bare parts, MacColl & Debus (2022) and Slater & Elmer (2024) appealed for further reports and photographs of such individuals in the field. Here we detail one such observation that was posted on the Australian Bird Identification (ABID) Facebook page, and on iNaturalist, with a request for advice on the bird's identity. Respondents (especially on ABID) disagreed over whether the bird was a Black Falcon or a dark Brown Falcon *F. berigora*, with confident assertions either way. Recognition that Black Falcons can, albeit rarely, have yellow bare parts post-dated key raptor field guides (Debus 2019; Seaton *et al.* 2019), but that feature was subsequently publicised in a book (Debus 2022) and online (Debus 2023). Slater & Elmer (2024) also observed, illustrated (by a photograph) and discussed the occurrence of yellow bare parts in Black Falcons, estimating a frequency of <1% in the species' population.

Here we describe and illustrate, with photographs, a Black Falcon with yellow bare parts that we observed in May 2024, in far western New South Wales.

Observation

We observed a falcon, which we suspected was a Black Falcon by its shape, on 23 May 2024 halfway between Broken Hill and Tibooburra, at 1122 h as it perched on a fencepost (steel 'star picket') beside the Silver City Highway, near Milparinka (29.967719°S, 142.048123°E). We stopped and observed the bird for several minutes, through binoculars and cameras, from ~30 m away as it flew from post to post down the fenceline a few times, allowing us to follow at that distance. We noted the mottled brown plumage (lighter and richer than the dark sooty brown of a Black Falcon observed earlier), dark malar stripes, slightly pale cheeks, pale throat, barring on the undertail-coverts, and faint barring on the underside of the rectrices. The cere and feet were yellow and, on later viewing of our photographs, the orbital skin was revealed to be pale yellow.

We posted a photograph (Figure 1) on the ABID Facebook page (<https://www.facebook.com/groups/aubirdid/permalink/2702878606544780>) and also on eBird (<https://ebird.org/checklist/S176477999>) with five photographs (including Figure 2 and a warm tone edit of Figure 3 herein), and on iNaturalist (<https://inaturalist.ala.org.au/observations/218805231>) with one photograph (the



Figure 1. Black Falcon near Milparinka, NSW, May 2024. Photo: Chris Chapman



Figure 2. The same bird as in Figure 1. Photo: Chris Chapman



Figure 3. The same bird as in Figure 1, here edited with realistic white balance and colour selection (see text concerning colour balance in the online posts of this image). Photo: James Churches

same processed and overly saturated version of Figure 3). The iNaturalist Artificial Intelligence function identified it as a Brown Falcon, thus adding to the confusion among community respondents. Later, when we used the Cornell Lab of Ornithology application 'Merlin' (Cornell University, Ithaca, New York, USA) the bird in that image was correctly identified as a Black Falcon.

When the image of the falcon was posted on the BirdLife Australia Raptor Group (BARG) Facebook page (<https://www.facebook.com/groups/569799506926313>) some respondents queried whether the yellowness was an artefact of camera settings and image editing (white balance and saturation), with David Stowe advising on wildlife image processing and suitable colour profiles to use. JC's RAW files all show the falcon's yellow bare parts, and this colour remains even after extensive experimentation with colour profiles and white balance settings. CC's photograph (Figure 1) is processed in camera as a JPG file and his Canon R6 is configured to use the 'auto' picture style. JPG is not as forgiving of processing as a camera RAW file; however, we have experimented within the limits of the file type and conclude that the photograph has clearly captured yellow skin. Although the photograph originally posted by JC to iNaturalist and to the BARG Facebook page is overly 'warm', we are certain that the photographs have captured a bird with yellow bare parts. An edited photograph, where more care has been taken to accurately reproduce colour, is included here (Figure 3).

Diagnosis

Online respondents who identified the bird as a Black Falcon noted many salient features, such as the small head (and its shape) and large body; big shoulders and chest; large feet; long middle toe; long tail beyond the wing tips; white chin; and 'stepped' (shorter) outermost rectrix. The only reasons given for Brown Falcon, on the basis of Figure 1 only (i.e. the ABID post), were the (seemingly) small size (vs Black Falcon); crouching stance, perching on a star picket; apparently long legs; and yellow bare parts – these being subjective and/or not valid reasons for discounting a Black Falcon. Other points include the long streamlined shape, simple facial markings, and absence of markings on the nape. The perceived long tarsus relates to an unusual view of the inside of the leg (Figure 1), the outside of the tarsus normally being hidden by the long thigh-feathers (as in Figures 2–3). Black Falcon researcher Stephen Debus (pers. comm.) produced the following diagnosis:

...on shape, build, stance, leg length, mid-toe length, facial colours, and tail length and shape it is a Black [Falcon] and lacks definitive characters of the darkest Brown Falcons. Even Brown Falcons with yellow cere and eye-ring don't have yellow feet.

Furthermore, a photograph on eBird of the falcon taking off, slightly blurred by motion and not publishable here, unequivocally shows it to be a Black Falcon on the dark and minimally barred underwings and undertail, lack of dorsal barring and 'shiny' shafts on the outer remiges or spotting on the upperwing-coverts, and the clearly 'stepped' tail.

Discussion

This observation adds further evidence that Black Falcons with yellow bare parts may occasionally be observed in the field. Most previous such cases, in the field and in museums, have been the more lightly coloured (speckled and barred) individuals that were mostly males, although one dark and minimally speckled and barred specimen was a female (as was one male: MacColl & Debus 2022). The bird that we observed was mostly dark and unspeckled, minimally barred, and on relative tail length and projection beyond the wing tips appears to be female (Figures 1–2). Its blotchy appearance is a function of moult, with old and new feathers on the underbody and upperwing-coverts, consistent with having almost completed moult by May (Debus 2022, 2023). Our flight photograph (on eBird) shows the value of viewing such problematic birds in flight, in order to distinguish Black Falcons from dark Brown Falcons.

There is a clear need for further documentation of bare-part colour variation and yellowness in the Black Falcon, especially in relation to age, gender, plumage variation (speckling and barring), regional variation, and other factors that might be relevant (e.g. diet, regional longevity, habitat quality, seasonal change in brightness) (Debus & MacColl 2023). It may be significant that most recent field encounters and museum specimens of Black Falcons with yellow bare parts have been from the drier parts of Australia (although see Robertson 2024). Most Black Falcon field studies have been conducted (on small sample sizes) in the temperate south-eastern Australian sheep–wheat belt,

where researchers have not detected birds with yellow bare parts (Debus & MacColl 2023).

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