

SHORT NOTE

First record of Horsfield's bronze-cuckoo (*Chrysococcyx basalis*) in New Zealand

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On 16 March 2024 an unusual small bird was found dead on Muriwai Beach, on the west coast near Auckland, by Ariel Wijaya and Miguel Mejías during the monthly Birds New Zealand (Auckland Branch) beach patrol organised by Ian McLean. It was Freshness Category B ("Decaying"; Powlesland & Imber 1988). Because the bird had rufous plumage, Ian initially thought it was a rufous fantail (*Rhipidura rufifrons*) but later realised it was a bronze-cuckoo (*Chrysococcyx* sp.). He took the bird to Auckland Museum for identification and preservation (freezer number Tax. 24-032). The specimen has been processed (registration number LB16349) into a spread wing and tail, feather and tissue samples, and set of bones.

We examined and measured the defrosted bird at Auckland Museum, confirming it was a bronze-cuckoo. With substantial rufous colouring on the under-tail it was clearly not a shining cuckoo *Ch. lucidus*, the only member of the genus normally present in New Zealand (as a summer migrant). The most likely candidate species were little bronze-cuckoo *Ch. minutillus*, Gould's bronze-cuckoo *Ch. russatus* (regarded as a subspecies of *Ch. minutillus* in some texts), or Horsfield's bronze-cuckoo *Ch. basalis* – all species found in northern and eastern Australia.

We compared measurements of the unknown specimen with those given by Higgins (1999) for various Australian bronze-cuckoo populations. Table 1 shows full ranges of measurements for Australian populations with sexes and ages combined. Measurements of the mystery bird are given in the table's first data column, taken in the same way as for the measurements tabulated in Higgins (1999).

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Table 1. Measurements (mm) of the beach-wrecked bronze-cuckoo found at Muriwai Beach, and of various populations of Australian bronze-cuckoos (*Chrysococcyx* spp.; ranges of adults and juveniles combined from Higgins 1999). An asterisk indicates that the measurement for the mystery bird lies within the given range.

	<i>Muriwai specimen</i>	<i>Ch. basalis</i>	<i>Ch. m. minutillus</i>	<i>Ch. m. barnardi</i>	<i>Ch. russatus</i>
Wing	94.5	93–108*	88–99*	98–107	89–102*
Tail	69	62–76*	56–66	58–69*	56–72*
Tarsus	19.8	14.9–19.8*	13.1–17.5	14.6–16.6	14.3–16.9
Bill S	14.3	13.9–18.7*	15.6–19.5	16.2–19.3	15.0–20.3
Bill N	9.4	8.0–11.8*	9.9–11.5	10.6–11.9	10.7–13.0

Wing was the flattened and straightened chord (W_{max} of Eck *et al.* 2011). Tail was taken ventrally from base to tip of the folded tail ($T1$ of Eck *et al.* 2011). Tarsus was taken from the posterior notch of the ankle joint to the edge of the bent-over foot ($Tar1$ of Eck *et al.* 2011). Bill S was taken from the junction of bill and skull to tip (BSk of Eck *et al.* 2011). Bill N was taken from the distal corner of the nostril to tip (BN_{dist} of Eck *et al.* 2011).

For plumage characteristics, we compared the unknown specimen with the illustrations and descriptions in Higgins (1999), and with images of representative study-skins of Australian bronze-cuckoos from the Australian Museum collection (e.g., those shown in Fig. 1) provided by Mark Eldridge and Emily Cave.

Table 1 shows that the measurements of the Muriwai cuckoo are a closest match to those of *Ch. basalis*, falling within the ranges of that species for all five selected characters. For the other populations the unknown bird matches on only one or two ranges. Despite the poor condition of the feathering, two key plumage features are evident that support an identification of *Ch. basalis*. First, the black and white patterning on the ventral side of the outermost rectrices more closely resembles that for *Ch. basalis* (Fig. 1B, 1C) than for the other species – specifically there are numerous white spots that are rounded rather than squarish (as in *Ch. minutillus*, Fig. 1D). Second, the dorsal wing coverts of *Ch. basalis* have prominent pale edges, and this is evident also in the unknown specimen (Fig. 2A).

Within the *Ch. basalis* size-ranges, the wing and bill measurements of the unknown bird are relatively short,

contrasting with the tarsal measurement being at the upper end of the range. This suggests that the mystery bird is a juvenile. Higgins (1999) states that juvenile Horsfield's bronze-cuckoos "are significantly smaller than adults for all measurements except the tarsus of males and toe of both sexes". Plumage characters confirm that the specimen is a juvenile. It lacks the barring on the chest, belly and flanks that characterises adults in the candidate species; the drab upperparts with quite weak green iridescence are also typical of juvenile Horsfield's bronze-cuckoo. The rectal flanges of the gape are pale and fleshy in the Muriwai bird (Fig. 2B), also suggesting a young bird.

The beach-wrecked bird weighed about 17 g, but that is merely indicative as the bird was partly decayed, possibly emaciated, damp when weighed and the plumage infiltrated by sand. The head–bill length (HL of Eck *et al.* 2011) was 32.3 mm and the exposed culmen (BF of Eck *et al.* 2011) 11.1 mm. The bill was black, slightly paler at the base of the lower mandible. The feet and soles were dark grey.

Among the cuckoos, New Zealand has two breeding species and four other species recorded as stragglers (Miskelly *et al.* 2022). The discovery of a Horsfield's bronze-cuckoo at Muriwai Beach brings New Zealand's number of cuckoo straggler species to five. There is a long history of birds from south-east Australia turning up in New Zealand aided by the predominantly westerly winds.

Horsfield's bronze-cuckoo is common throughout Australia, where it is a summer migrant in the south and an all-year resident in the north (Menkhurst *et al.* 2019). It is unsurprising that this species should reach



Figure 1. Ventral comparison of Muriwai beach-wrecked cuckoo with study-skins from the Australian Museum. (A) Muriwai cuckoo. (B) Juvenile male Horsfield's bronze-cuckoo (*Ch. basalis*). (C) Adult male Horsfield's bronze-cuckoo. (D) Adult male little bronze-cuckoo (*Ch. minutillus*). Photos: (A) J.A. Galbraith, (B–D) E. Cave.

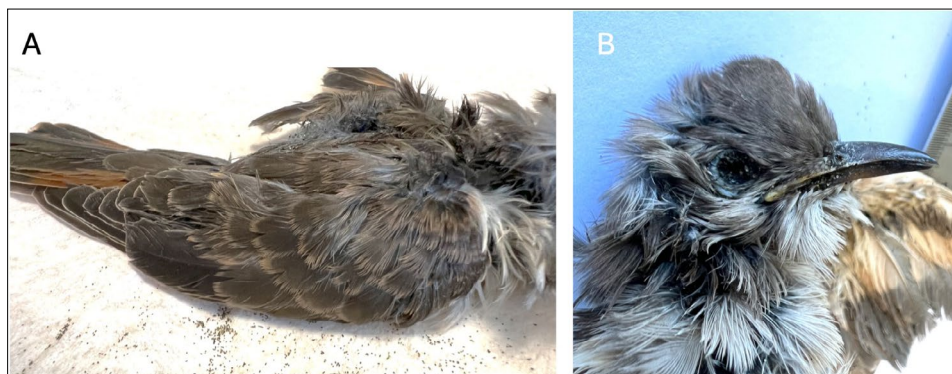


Figure 2. Features of the Muriwai beach-wrecked cuckoo used in identifying and aging the bird. (A) Prominent pale edges of the dorsal wing coverts (R wing) support the identification as Horsfield's bronze-cuckoo (*Ch. basalis*). (B) Pale and fleshy rictal flanges of the gape (R view of head) suggest the bird is a juvenile. Photos: J.A. Galbraith.

New Zealand, given that it is widespread in south-east Australia. However, the timing is odd. You might expect a cuckoo to reach New Zealand in Spring by overshooting on the southwards migration. Such a bird would be adult. Instead, the Muriwai bird arrived in Autumn. It was a juvenile, probably raised in the 2023–2024 breeding season and due to head north on its first migration. Instead it travelled south-east.

The cuckoo may not have quite reached the New Zealand mainland, and it is likely to have died at sea and been carried to Muriwai Beach by ocean currents. However, it cannot have been at sea for long because it was still intact (head, wings, legs and tail still attached to body) and fairly well preserved (much of the plumage still attached to skin).

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