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A Specimen Record of the Little Paradise-Kingfisher *Tanysiptera hydrocharis* from Torres Strait, Queensland: A New Bird for Australian Territory

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Summary

A fresh specimen of a Little Paradise-Kingfisher *Tanysiptera hydrocharis* was discovered within the township on Saibai Island, northern Torres Strait, Queensland, during ornithological fieldwork in January 2010. The specimen was lodged with the Western Australian Museum. A submission to the Birds Australia Rarities Committee, Case number 634, resulted in acceptance of the record. Here we document the occurrence, the first confirmed record for Australian territory of this little-known species, and discuss previous records of blue-and-white paradise-kingfishers from Torres Strait.

Introduction

Saibai Island, at 10 000 ha in size, is the largest of the three inhabited islands that collectively comprise the north-western island group in Torres Strait. Despite their close proximity to the Papua New Guinea (PNG) coastline, these islands and their fringing coastal waters fall within the Australian Exclusive Economic Zone and are Australian territory in the state of Queensland. At its closest point the open-water crossing between Saibai Island and New Guinea (NG) is just 3.7 km.

Between 21 and 27 January 2010, four of the authors visited Saibai Island to conduct ongoing avian pathogen research, whereas RG was there independently from 22 to 26 January 2010 to research knowledge of birds among Torres Strait Islanders. Whilst walking through the township on 25 January at ~1330 h Eastern Standard Time, RG and RC noted a dead bird on the ground in the vicinity of the council offices (9°23′S, 142°37′E). The bird was immediately identified as one of the blue-and-white paradise-kingfishers *Tanysiptera* spp., with the Common Paradise-Kingfisher *T. galatea* considered the most likely candidate given several previous, though unconfirmed, claims from islands in Torres Strait (Draffan 1978; Garnett & Smith 1997). Given the significance of the find, the specimen was retained with the intention that it be lodged with a museum. Inspection of the fresh specimen before preparation for transport revealed several characters that demonstrated the bird was a Little Paradise-Kingfisher *T. hydrocharis* [also known as Aru or Lesser Paradise-Kingfisher (Forshaw & Cooper 1983; Coates 1985)]. The specimen was lodged with the Western Australian Museum (Accession number A37190). The Birds Australia Rarities Committee has reviewed and accepted the occurrence as the first record of the species for Australian territory (Case number 634; T. Palliser *in litt.* July 2010).

Circumstances of the discovery

The specimen was found dead on the ground adjacent to the council offices on Saibai Island. The site is ~30 m from the sea and is orientated so that the mangrove-lined PNG coastline is visible just 5.2 km distant. The area is well lit at night and there are two rows of powerlines overhead. Given the fresh state of the specimen and the apparent absence of any damage to the bill (a common injury associated with birds flying into windows: Klem 1990), the bird was unlikely to have struck a window or other vertical structure, but the exact cause of death was unknown. In the days preceding the find, weather conditions in northern Torres Strait had been influenced by an intense monsoonal trough, which included Tropical Cyclone Olga that formed well to the south, off Cairns, Qld, on 23 January, and crossed the coast near Cairns on 24 January (Bureau of Meteorology data: www.bom.gov.au, accessed 8 July 2010). On Saibai Island during this period, winds were predominantly from the north and north-west, and were strong on most afternoons.

Description

A series of digital photographs of the fresh specimen was taken to document the colour of the bare parts and condition of the plumage before preparation as a specimen. Three of these are reproduced here (Plates 30–32, pp. 172–173).

Size, structure and moult

This was a small kingfisher, with a total length of ~20 cm (measured from the tip of the bill to the tip of the tail by laying the specimen on its back and tilting the head back; note absence of tail-streamers). In addition to the comparative measurements presented in Table 1, the fresh specimen had a bill depth at the nares of 10.4 mm. The bird appeared to be in fresh plumage and, except for the tail-streamers, there was no evidence of active moult. Primaries and secondaries were all fully erupted and fresh, with no evidence of wear, nicks or abrasions on the tips. One tail-streamer was missing and the other was growing, being just 17 mm in length from the base of the feather-shaft. Remaining tail-feathers were all fully erupted and appeared fairly fresh, although some (most notably the outermost rectrices) showed some nicks and abrasions. The fresh specimen weighed 36 g and did not appear to be emaciated.

Measurements of the fresh specimen were taken soon after discovery, and before freezing, with the aid of a butt-ended ruler and dial callipers; these and measurements of the prepared specimen (which was stored in 100% ethanol during transit and subsequently fixed with formaldehyde as a spirit specimen) are presented in Table 1. Museum workers were unable to determine the sex of the specimen.

Plumage

Since the plumage of the Little Paradise-Kingfisher is poorly described in the literature (but see Forshaw & Cooper 1983), here we provide a detailed description including reference to a standard colour guide (see Plates 30–32). Capital letters and numbers in parentheses refer to colours presented in Smithe (1975), and indicate the closest match.

Forehead and crown iridescent Venetian Blue (168B); lores narrow, pointed

Table 1

Measurements of the Little Paradise-Kingfisher specimen from Saibai Island, compared with measurements from the literature for the Little Paradise-Kingfisher and Common Paradise-Kingfisher *Tanysiptera galatea* subspecies *minor*. M = male, F = female; *n* = number of specimens; mean values in parentheses.

Source	*Sex*	*n*	*Head–bill length (mm)*	*Bill length (mm)*	*Wing length (mm)*	*Tail length (excluding streamers) (mm)*
Saibai Island specimen						
Fresh (25 January 2010)	?	1	56.0	30.1	88[1,2]	70
Preserved in spirits (16 June 2010)	?	1	55.2	29.9	87[1]	66
Little Paradise-Kingfisher						
Forshaw & Cooper (1983)[3]	M	10		28–31 (29.4)	82–91[1] (87.6)	56–72 (63.9)
Forshaw & Cooper (1983)[3]	F	10		28–31 (29.8)	86–92[1] (88.4)	56–65 (59.0)
Common Paradise-Kingfisher						
Brown River, PNG (Bell 1980)	M	10			103.0 ± 1.8[4]	95, 101, 107, 108[5]
Brown River, PNG (Bell 1980)	F	10			100.3 ± 0.6[4]	
CSIRO Collection (Bell 1980)	M	10			107.2 ± 2.2[6]	
CSIRO Collection (Bell 1980)	F	7			104.4 ± 1.4[6]	
Forshaw & Cooper (1983)	M	26		31–36 (33.4)	98–109[1] (104.3)	85–117 (93.2)
Forshaw & Cooper (1983)	F	24		30–37 (33.5)	97–108[1] (103.0)	70–104 (88.9)

[1]Flattened chord
[2]Both left and right wings were 88 mm
[3]Gray & Gray (1859) and Mees (1964) provided earlier measurements for the Little Paradise-Kingfisher. As specimens of this species are rare, it is likely that those same specimens were remeasured by Forshaw & Cooper (1983), so these earlier measurements are excluded here.
[4]Natural wing (not flattened chord) ± 1 Standard Deviation
[5]Four adults, all in December
[6]Flattened chord ± 1 Standard Deviation

towards the base of the bill, Dark Neutral Gray (83) (so dark that they appeared black on the bird); ear-coverts, sides of head, nape, hindneck and mantle iridescent Cobalt Blue (168) with dark-grey bases of feathers showing through and imparting a darker mottled appearance. Back and rump clean white and unmarked. Flanks iridescent Cobalt Blue, as for mantle, extending onto sides of rump such that the white back and rump-patch narrowed towards the base of the tail. Tail Venetian Blue across all rectrices, except single central tail-streamer which was a recently erupted pin just 17 mm in length and completely white at this stage of development (Plate 31). The spread wing showed iridescent Venetian Blue lesser coverts, with the remaining coverts darker iridescent True Blue (168A). Flight-feathers were Dark Neutral Gray except for the leading edge of each feather, which was fringed Cobalt Blue; this blue fringe was narrowest on the outer primaries, but reached almost to the feather-shaft on the inner secondaries. Ventrally, the bird was mostly white, with dark-grey bases of the feathers showing through when feathers were dishevelled. Exceptions to this white were: a narrow but distinctive iridescent Venetian Blue fringe on the leading edge of the underwing from the base of p1 to a point about halfway between the carpal joint and the base of the wing; a Dark Neutral Gray underside to the flight-feathers except that the inner webbing of each feather was fringed white, as an indistinct fringe that was restricted to the base of the feather in the outer primaries but was broader elsewhere and reached almost to the tip of the inner secondaries; and a Dark Neutral Gray underside to the tail.

Bare parts

The bill was a striking feature of the bird, being uniform Ruby (10) red, though slightly paler along the cutting edges. Legs and feet were Olive Brown (28) with True Cinnamon (139) flecking between the scales. Claws varied in colour, generally dark grey above but also showing patches of Ruby red; this variable distribution of red suggested that this colour may have developed post-mortem. The colour of the eyes was indiscernible because of damage by ants or rapid drying in the tropical heat, or both.

Identification

Although superficially very similar to the Common Paradise-Kingfisher, identification of the Saibai Island specimen as a Little Paradise-Kingfisher was fairly straightforward. In the Little Paradise-Kingfisher, all feathers of the tail are blue, except for the central tail-streamers which are mostly blue and have white spatulate tips. In contrast, in the Common Paradise-Kingfisher all tail-feathers, other than the streamers, are distinctly white with blue margins (Forshaw & Cooper 1983; Coates 1985; Beehler *et al.* 1986; Coates & Peckover 2001; del Hoyo *et al.* 2001).

The Little Paradise-Kingfisher is smaller than the Common Paradise-Kingfisher. Although there are few measurements of both taxa, those of the Saibai Island specimen fall within the range for the Little Paradise-Kingfisher (Table 1). Furthermore, Forshaw & Cooper (1983) presented measurements for 14 subspecies of the Common Paradise-Kingfisher, from 455 specimens, and none of these displayed a wing length as short as in the Saibai Island specimen. At 36 g, the weight of the specimen was also consistent with the Little Paradise-Kingfisher, and fell below the range given for the Common Paradise-Kingfisher (Forshaw & Cooper 1983).

There is some variability in descriptions of the colour of the head for the two species, though this is probably exacerbated by the extensive subspecific variation in the Common Paradise-Kingfisher (see Forshaw & Cooper 1983; del Hoyo *et al.* 2001). Coates (1985) described the forehead of the Little Paradise-Kingfisher as blackish, whereas that of the Common Paradise-Kingfisher was described as light blue, like that of the crown. Although Coates (1985) dealt specifically with the birds of PNG, it is unclear if this blackish forehead was considered a feature of populations of NG, the Aru Islands, or both. Similarly, del Hoyo *et al.* (2001) suggested that the Little Paradise-Kingfisher can be distinguished from the Common Paradise-Kingfisher by the former's dark-blue [c.f. paler (?) blue] crown. Nevertheless, a blackish forehead may not be significant, as the description of the type specimens of the Little Paradise-Kingfisher (collected by Alfred Wallace on the Aru Islands) made no mention of a blackish forehead, and simply described the top of the head as 'blue' (Gray & Gray 1859). The definitive work by Forshaw & Cooper (1983) stated that the forehead of both the Little and Common Paradise-Kingfishers is 'bluish black', but the lores of the Little Paradise-Kingfisher are black whereas those of the Common Paradise-Kingfisher are bluish black. It may be that confusion over where the feathering of the forehead stops and of the lores commences has led to these inconsistencies. The Saibai Island specimen showed black lores extending narrowly to a point where the base of the bill meets the forehead, and a largely pale-blue forehead and crown. This is consistent with both the most definitive description in the literature of the Little Paradise-Kingfisher (Forshaw & Cooper 1983) and with an adult male specimen collected in January 1961 at Merauke (8°30′S, 140°22′E), southern Irian Jaya, Indonesia, ~260 km north-west of Saibai Island (specimen number ZMA 23901: Zoological Museum, University of Amsterdam, viewable online at http://ip30.eti.uva.nl/zma3d/extinct_large/23901.jpg, accessed 8 July 2010).

The Little Paradise-Kingfisher has a rather restricted range, occurring on the Aru Islands and in southern NG (Forshaw & Cooper 1983; Coates 1985; del Hoyo *et al.* 2001). Mayr (1941) listed the species' distribution in southern PNG as from Wassi Kussa River (the mouth of which lies ~65 km to the north-west of Saibai Island) to the lower and middle Fly River. Forshaw & Cooper (1983) extended this distribution west to the Merauke River, in extreme south-eastern Irian Jaya. The species is considered rare and very poorly known. For example, only five or six specimens are known from southern NG (Forshaw & Cooper 1983), and it was not reported in PNG for a considerable period of time until it was rediscovered at sites along the Elevala River north of Kiunga, Western Province, ~400 km north-north-west of Saibai Island, on 14 September 1987 (Forshaw & Cooper 1983; Hobcroft 1988; del Hoyo *et al.* 2001; P. Gregory pers. comm. 30 January 2010). More recently (2006), there is also a record from Lake Murray ~300 km north-north-west of Saibai Island (G. Roberts pers. comm. 31 January 2010). From a conservation perspective, it may be noteworthy that there are also no recent records of the species from the Aru Islands (Forshaw & Cooper 1983; Birdlife International 2009). Given the dearth of recent information and sightings, the species is nevertheless considered Data Deficient, rather than Threatened, using 2009 IUCN Red List criteria (BirdLife International 2009). Given the apparent rarity of the Little Paradise-Kingfisher, therefore, the Saibai Island specimen is significant not only as the first record for Australian territory, but it also provides evidence of the species' persistence in near-coastal habitats of southern PNG and adds another specimen record to the limited number that exists.

Previous Australian claims of blue-and-white paradise-kingfishers

We are aware of three previous reports of blue-and-white paradise-kingfishers in Torres Strait. The first is the sighting of a bird on Darnley Island, ~75 km south-east of the PNG mainland, on 22 February 1978. This bird was calling from low perches within a small treed gully. A good view of it was obtained, and the following description was given: 'kingfisher, red bill, white underparts, blue back with white centre, long blue tail with white racquet, pale legs and pale blue crown' (Draffan 1978). In the light of subsequent records, it is noteworthy that this bird was observed during a period of strong gales (Draffan *et al.* 1983). Although the bird was claimed as the first Australian record of the Common Paradise-Kingfisher, the record was not accepted by the Royal Australasian Ornithologists Union Records Appraisal Committee on the basis that (a) the Common Paradise-Kingfisher was thought to be largely sedentary (Bell 1980, but see Coates 1985) and, despite the prevailing weather conditions, the bird may have been brought to Darnley Island by Papuan fishermen, and (b) the Little Paradise-Kingfisher had not been adequately eliminated (Anon. 1988; Garnett & Smith 1997). It is perhaps noteworthy that the call of the Darnley Island bird was described as 'a plaintive tu' given 'seven or eight times in succession in the gully. After a short silence, the call started again and it was constantly repeated' (Draffan 1978, p. 11). This description would appear to be a better match for the territorial call of the Little Paradise-Kingfisher rather than the Common Paradise-Kingfisher (P. Gregory unpublished recordings), although P. Gregory (*in litt.* 4 March 2010) cautioned that 'the anxiety call of Common is a plaintive "tew", repeated at intervals.' The RAOU Records Appraisal Committee would have been unaware of the significance of a written description of the call, as 5 years later Forshaw & Cooper (1983) continued to report that the call of the Little Paradise-Kingfisher was undescribed.

The second record of a blue-and-white paradise-kingfisher in Torres Strait relates to one observed on Stephens Island, ~55 km south-east of the PNG mainland and just 25 km north-west of Darnley Island, on 15 March 1993 (Garnett & Smith 1997). At the time a 'pink bill, white breast, blue upperparts and long tail feathers were noted', but Garnett & Smith (1997, p. 83) did not identify the bird to species, although they did argue that this second record supported the case for natural vagrancy of blue-and-white paradise-kingfishers in Torres Strait.

The third report concerns a bird observed on Saibai Island by local resident Sol (Solomon) Aniba. This bird was also found dead within the township, adjacent to the airstrip access road and just several hundred metres to the east of the location of the specimen recorded in this paper. Although Aniba is not an ornithologist, his description at the time of our visit of a blue-and-white kingfisher with a red bill is noteworthy, as these features alone appear to narrow the identification to either Little or Common Paradise-Kingfisher. However, subsequent conversation left open the possibility that the bird in question may have been a Buff-breasted Paradise-Kingfisher *T. sylvia*, as there appeared to be some uncertainty on the colour of the breast. The date of the observation is unknown, but was probably about a year before January 2010 (S. Aniba pers. comm. 12 March 2010).

All three records with known dates fall in the period late January to mid March, at a time when strong winds blew from the north or north-west. The nearest available long-term dataset for wind direction from the Bureau of Meteorology is from Thursday Island at the southern end of Torres Strait, where prevailing wind direction, measured on a daily basis at 1500 h Eastern Standard Time between 1950 and 1993, was predominantly easterly and south-easterly from April to December

but westerly and northerly from January to March (Bureau of Meteorology data: www.bom.gov.au, accessed 8 July 2010).

Although each record is referable to one of the blue-and-white paradise-kingfishers, it is not possible to identify the species involved with certainty, because the pattern and colour of the tail were either not noted or only briefly described in each instance (Anon. 1988; Schodde & Mason 1997; Christidis & Boles 2008). The discovery of a dead Little Paradise-Kingfisher, therefore, provides the first irrefutable evidence of the species occurring in Australia as a vagrant. That this, the first specimen record of a blue-and-white paradise-kingfisher for Australian territory, was of a little-known and apparently rare species, rather than the widespread and often abundant Common Paradise-Kingfisher (Bell 1980; Forshaw & Cooper 1983), also validates the cautious approach of rarities committees when dealing with 'highly probable' records that nevertheless are not supported by appropriate evidence. This find also provides further validation for the reports of blue-and-white paradise-kingfisher by Draffan (1978) and Garnett & Smith (1997) and of the recent claim by Aniba.

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Dorsal view of Little Paradise-Kingfisher found dead on Saibai Island on 25 January 2010. Note the ruby-red bill, dark lores, pale-blue crown and forehead, and white back and rump.

Plate 30 Photo: Rohan H. Clarke

View of spread tail of Little Paradise-Kingfisher found dead on Saibai Island, 25 January 2010. Note that all rectrices are blue except for the central tail-streamer which is just erupting from pin.

Plate 31 Photo: Rohan H. Clarke

Ventral view of Little Paradise-Kingfisher found dead on Saibai Island, 25 January 2010
Plate 32 Photo: Rohan H. Clarke

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