

First confirmed records of little black cormorant (*Phalacrocorax sulcirostris*) for the Solomon Islands

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The little black cormorant (*Phalacrocorax sulcirostris*) occurs as a breeding species from Java eastwards through the Indonesia Archipelago to New Guinea, Australia, New Caledonia and New Zealand (Harrison, 1983; Marchant & Higgins 1990; MacKinnon & Phillipps 1993; Dutson 2011; Crossland 2013). In the Solomon Islands, the little black cormorant has been considered a possible vagrant on the strength of a pre-1990 report of a large flock on Guadalcanal (Buckingham *et al.* 1990). The account reads: "A villager at Haimarao described a flock of about 100 cormorants which visited Lauvi Lagoon 'after a recent cyclone'. Compared with little pied cormorant (*Phalacrocorax melanoleucos*), with which he was familiar, the birds were the same size but black all over. He described the frenetic, gregarious hunting technique used to catch fish, as in Marchant & Higgins (1990)."

In assessing this record, Buckingham *et al.* (1990) state that: "it was not possible to judge whether this record was reliable so it should be treated as unconfirmed. If it was, it would represent the first record for the Solomon Islands." Tarburton (2017c), in his checklists of Melanesian islands, followed the recommended approach and has bracketed little black cormorant on the Guadalcanal list but not assigned it a species number. Little black cormorant has not been recorded on any other island in the Political Solomon Islands (Dutson 2011; Tarburton 2017b), although it has been recorded in the Solomon Island archipelago on Bouganville (part of the Papua New Guinea) to the north-west (Hadden 2004; Tarburton 2014b). Here we report new observations, supported by photographs, of little black cormorants on the island of Guadalcanal and confirm the addition of this species to the avifauna of the Solomon Islands.

The Solomon Islands comprise a 1,500 km double chain of 6 main islands (Choiseul, New Georgia,

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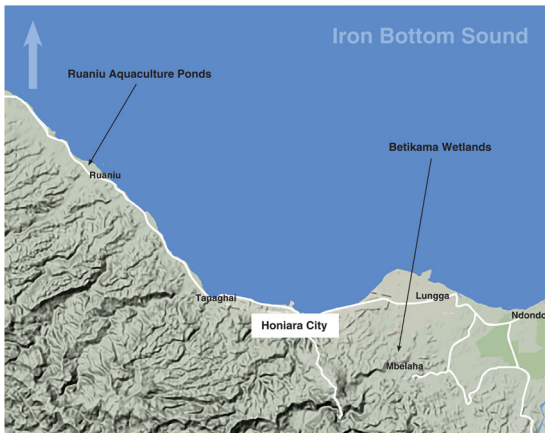


Fig. 1. The environs of Honiara, Guadalcanal, with locations (Ruaniu and Betikama) where little black cormorants were observed. (Map data © 2018 Google)



Fig. 2. Lake-edge habitat at Betikama wetlands where little black cormorants were observed.

Santa Isabel, Guadalcanal, Malaita and Makira) and hundreds of smaller islands, located between latitudes 5° and 13°S, and longitudes 155° and 169°E in the western Pacific Ocean. The country is situated east of Papua New Guinea, north-west of Vanuatu, and north-east of Queensland, Australia.

SB was resident on Guadalcanal during 2014 and 2015, while the other authors visited Guadalcanal and neighbouring islands (Fig. 1) in February and March 2015. Over this period we searched for birds at many wetland habitats (Butcher *et al.* 2015; Crossland *et al.* 2016) and made records of all cormorant species observed.

On 1 February 2015, SB found 3 little black cormorants perching in a tree overhanging a small

lake (<1 ha) in the Betikama wetland complex (Fig. 2) (9°26.40' S, 160°02.06' E) which is located south-east of Honiara on Guadalcanal (Fig. 1). The birds were observed through 10x50 binoculars at a distance of 140 m for 10 minutes under excellent light conditions. Several long-range photographs were also taken. The birds were clearly different in plumage and structure from the resident little pied cormorants which were also present at the site. SB easily recognised them as little black cormorant, a species with which he was very familiar in New Zealand and Australia. Identification was based on all-over black plumage and long, slender dark grey bill (rather than the stubby yellow bill of a juvenile little pied cormorant (*Phalacrocorax melanoleucos*)). These were the first little black cormorants SB had seen in Guadalcanal during the 5 months he had been resident, and they had not been recorded at the Betikama wetlands on a previous visit on 18 October 2014, nor on visits by other ornithologists in July 2014 (Hottola 2014) or August 2013 (Van Beirs 2013). There were also no previous records of little black cormorant at this site (or elsewhere on Guadalcanal) on eBird (eBird.org downloaded on 1 December 2017)

On 26 February 2015, we made a visit to the Betikama area and undertook a survey of wetland birds. We observed 6 little pied cormorants and 3 little black cormorants, the latter being easily identified by the combination of dark bill, entirely black plumage, scalloped appearance of feathers on the mantle, back and closed wings, and relatively short tail. All 3 were in nuptial plumage with small white filoplumes on the sides of their heads (Fig. 3). These develop during courtship and disappear once breeding commences (Marchant & Higgins 1990). We watched these birds for 20 minutes through a 40x80 scope at a distance of 180 m. Several photographs were also taken (Fig. 3 and 4). The birds roosted near the top of a small, bushy tree over-hanging open water and water-lily beds. A careful scan of trees around the site failed to find any further birds or evidence of possible nesting activity.

On 1 March 2015, we visited part of a 26.4 ha complex of abandoned and overgrown aquaculture ponds (9°21.17'S, 159°5 0.28' E) located near the coast at Ruaniu, 23.5 km north-west of Betikama (Fig. 1). This site comprises 23 ponds in various stages of habitat succession from open water to complete infill by reed beds. Aquaculture ponds are uncommon in the Solomons and this abandoned mosaic of open water, reed-bed, mangrove and regenerating woodland appear to now constitute one of the largest wetland habitats on Guadalcanal. We found a range of wetland bird species at this site including 2 little black cormorants. These birds were flushed from 1 open water pond and flew



Fig. 3. Two little black cormorants roosting in a tree at Betikama wetlands. Note white nuptial filoplumes on sides of the head.



Fig. 4. Aquaculture pond at Ruaniu where 2 little black cormorant were observed.

over trees to an adjacent pond where they landed on the water. Although sharing this second pond with 5 little pied cormorants, the 2 species did not mix. Viewed from a distance of 80–120 m, the diagnostic combination of all-over black plumage, black bill and short tail was carefully noted and the identification confirmed.

Until the 1950s the breeding range of the little black cormorant comprised localised parts of eastern Indonesia, New Guinea, Australia and the North Island of New Zealand (Harrison 1983; Marchant & Higgins 1990). At the north-western end of its range the species expanded westward into Java in 1954 and is now common there (MacKinnon & Phillipps 1993; Strange 2001) with non-breeders reaching Sumatra, Singapore and recently Borneo also (Van Marle & Voous 1988; MacKinnon *et al.* 1999; Nijman *et al.* 2005; Lim 2009). At the south-eastern end of its range, the little black cormorant is thought to be a relatively recent colonist in New Zealand, where in recent decades it has undergone a population increase and a range expansion (Holdaway *et al.* 2001; Armitage 2013; Scofield & Stephenson 2013). Seasonal movements to the South Island became evident from the 1980s onwards (Heather & Robertson 2015), and the first South Island breeding was confirmed in 2008 (Crossland 2013). Further north, the first breeding record in New Caledonia was even more recent when a colony of 20 nests was discovered on the main island of Grande Terre in 2009 (Dutson 2011). Prior to this, the species had been classified as a vagrant with records of individuals and occasional small irruptions dating back to 1865 (Barré & Dutson 2000; Tarburton 2017a).

Our sightings appear to constitute the first verified records of little black cormorant on

Guadalcanal and in the Solomon Islands. The presence of multiple birds and the appearance of individuals in breeding plumage invites the possibility that breeding could potentially occur. This species has been actively expanding its global range for some time and its recent move into New Caledonia as a breeding species suggests that further expansion into the Solomon Islands seems likely. We recommend visitors to lakes, ponds and freshwater wetlands on Guadalcanal and other islands be aware of the potential presence of little black cormorant, and check for any breeding activity if birds are encountered.

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