

An update on the Endangered Black-bellied Tern *Sterna acuticauda* (Gray, 1832) from D'Ering Memorial Wildlife Sanctuary and Dibru-Saikhowa National Park, Assam, India



Image 1. A Black-bellied Tern in breeding plumage flying over the Siang River in D'Ering WS on 10 February 2018. © Rohan K. Menzies

The Black-bellied Tern *Sterna acuticauda* (Gray, 1832) is an endangered species, mainly found in the Indian subcontinent and parts of southeastern Asia; however, it is thought to be nearing extinction in a large part of its distribution outside the subcontinent (Goes et al. 2010; BirdLife International 2017). This riverine specialist was extirpated from Cambodia mainly by domestic dogs preying on nests and local communities collecting eggs (Goes et al. 2010). The Black-bellied Terns are also susceptible to illegal fishing, sand

and gravel mining, predation by cats, and river damming (Goes et al. 2010; BirdLife International 2017). The Black-bellied Tern has a bright orange bill, which is longer than the Whiskered Tern; a black cap, and the black on the belly is fuller and more distinctive when in full breeding plumage. Due to the confusion with the Whiskered Tern, records without photographic evidence can be tricky to rely on. The decline of the species along with its limited range, therefore requires more detailed accounts of sightings from birdwatchers



Image 2. A Black-bellied Tern mid-moult, flying over the Siang River in D'Ering WS on 10 February 2018. © Rohan K. Menzies

and researchers, in order to build on understanding its current distribution. Here, we present details of four sightings of the Black-bellied Terns: one from D'Ering Memorial Wildlife Sanctuary (DMWS) and three while on a 39.1 km-long boat ride in Dibru-Saikhowa National Park (DSNP), Assam, India.

D'Ering Memorial Wildlife Sanctuary, Arunachal Pradesh

There is mention of the presence of the Black-bellied Tern in the DMWS, Arunachal Pradesh (Rahmani & Choudhury 2012; Rangini et al. 2014; Rahmani et al. 2016); However, it remains imperative to re-evaluate the situation of the species in the Sanctuary, considering that it is classified as Endangered (Birdlife International 2017).

On 10 February 2018, as part of a large-scale riverine bird survey across Arunachal Pradesh, a pair of Black-bellied Terns were seen at the DMWS (27.997°N, 95.463°E; 120m). The two Black-bellied Terns were observed calling and flying over the Siang

River, during the survey. One of the birds was in breeding (Image 1). The other Tern seemed to be moulting into breeding plumage with a patchily greyish underbelly, but with a pronounced black cap and a bright orange beak (Image 2). They were observed only flying over the Siang River, along a stretch of about 1 km. This was the only sighting of the Black-bellied Tern during our state-wide survey on riverine birds, across seven river basins covering 93 km, between October 2017 and March 2018.

There is some degree of boat traffic on the rivers in the protected area which could potentially disturb the birds. We also observed fishermen from a nearby village fishing on the river.

Dibru-Saikhowa National Park, Assam

The Black-bellied Terns have previously been observed in DSNP (Choudhury 1998), situated in the eastern reaches of the state of Assam, in northeastern India. DSNP (27.669°N, 95.362°E; 120m) is a river island



Image 3. The first pair of Black-bellied Terns seen perched on a sandbar and preening in DSNP on 13 December 2018. © Megha Rao



Image 4. One Black-bellied Tern of the second pair perching on a sandbar after displaying in DSNP on 13 December 2018. © Megha Rao

with the Brahmaputra and Lohit Rivers in the north and the Dibru River in the south. This results in a suitable habitat for species like the Black-bellied Tern since there are several sandbars and sandy banks all through the park. Previously, there have been three birds spotted in 1992 and 10 individuals in 1993 (Choudhury 1998). More recently, between 2013 and 2018, there have been six records from Kaziranga National Park (eBird 2018) which is over 300km west of DSNP; however, none from Dibru-Saikhowa.

On 13 December 2018, at 11.00h, we started our boat journey from Guijan into DSNP which lasted over five hours during which we observed three pairs of Black-bellied Terns. The first pair was observed at 13.31h, perched on a sandbar (Image 3). The birds were fairly sedentary and did not flee even upon hearing the noise of the motor. This pair was less than 50m away from the boat. Beyond 4.65km from the first pair, we saw the second pair of Black-bellied Terns at 1407h. The birds were

flying ahead of the boat and displaying in the air. Unfortunately, this could not be photographed from the boat. The two birds then landed on a sandbar and one was photographed (Image 4). The pair stayed on the sandbar after being sighted and did not fly away with the sound of the motor. At 15.46h, the third pair of Black-bellied Terns was seen flying and feeding. They took turns swooping down to the water surface and picking up fish. Both individuals were seen successfully fishing and eating (Image 5). The fish can be seen in the bird's beak as well. They would swoop, feed, and circle back to the same stretch of the river to feed again, perhaps indicating a decent fish population of suitable feeding size. All the three pairs were seen in full breeding plumage and considering the breeding season is between February and June, and these sightings being in December, it is likely that these pairs were courting or pairing up in this season.



Image 5. One Black-bellied Tern of the third pair seen flying with a fish in its beak while feeding in DSNP on 13 December 2018. © Megha Rao

We observed a number of threats in the area which could impact this unique habitat which continues to have new records of birds (Menzies & Rao 2019). Firstly, the large number of cattle and buffaloes in the area could trample nests and destroy eggs on the sandbars. Secondly, fishing could be detrimental to the Black-bellied Terns as boat traffic in the breeding or courtship phase could disturb them. Thirdly, increased footfall on the sandbars, and catching targeted fish could impact their dietary requirements. Fourthly, excessive tourism could possibly impact the Black-bellied Terns in the area since motor boats will increase. Finally, we observed a number of domestic dogs in and around the settlements within the biosphere reserve which suggest some level of nest predation. Potentially, proposed dams of this habitat could alter the river, rendering it unsuitable for the Black-bellied Terns to breed. The close proximity between DMWS and DSNP, along with similarities in habitats, could suggest a restricted suitable range for Black-bellied Terns which also implies a greater need for its protection and preservation. The human-induced impact should not result in northeastern India going the way of Cambodia with this species' extinction.

References

BirdLife International (2017). *Sterna acuticauda* (amended version of 2016 assessment). The IUCN Red List of Threatened Species 2017: e.T22694711A110488626. Downloaded on 22 December 2018. <https://doi.org/10.2305/IUCN.UK.2017-1.RLTS.T22694711A110488626.en>.

Choudhury, A. (1998). Mammals, birds and reptiles of Dibru-Saikhowa Sanctuary, Assam, India. *Oryx* 32(3): 192–200. <https://doi.org/10.1046/j.1365-3008.1998.d01-36.x>

Choudhury, A. (2006). Birds of Dibru-Saikhowa National Park and Biosphere Reserve, Assam, India. *Indian Birds* 2(4): 95–105.

eBird Basic Dataset. Version: EBD_reINov-(2018). Cornell Lab of Ornithology, Ithaca, New York. Nov 2018.

Goes, F., A. Claassen & H. Nielsen (2010). Obituary to the Black-bellied Tern. *Cambodian Journal of Natural History* 1: 5–6.

Menzies, R.K. & M. Rao (2019). Eastern Imperial Eagle *Aquila heliaca* at Dibru-Saikhowa National Park, Assam. *Indian Birds* 15(2): 60–61.

Rahmani, A.R. & A. Choudhury (2012). *Threatened Birds of Assam*. India. Oxford University Press; Indian Bird Conservation Network; Bombay Natural History Society; Royal Society for the Protection of Birds; BirdLife International, I–viii+167pp.

Rahmani, A.R., M.Z. Islam & R.M. Kasambe (2016). Important Bird and Biodiversity Areas in India: Priority Sites for Conservation (Revised and updated). *Bombay Natural History Society, Indian Bird Conservation Network, Royal Society for the Protection of Birds and BirdLife International (U.K.)*. 1992pp + xii.

Rangini, N., M.S. Lodhi, L.M.S. Palni, S. Chaudhry & P.K. Samal (2014). A review of avifaunal diversity of Dehang Debang Biosphere Reserve, Arunachal Pradesh. *Indian Forester* 140(10): 998–1004.

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