



First record of *Limnodromus scolopaceus* (Say, 1823) and *Calidris ferruginea* (Pontoppidan 1763) from North East India

Nilutpal Mahanta^{1*}, Dr. PK Saikia², Pranjal Mahananda³, Sangeeta Das⁴, Raktim Saikia⁵

^{1,4} Department of Zoology, Gauhati University, Assam, India

² Professor, Department of Zoology, Gauhati University, Assam, India

³ Biswanath Charali, Biswanath, Assam, India

⁵ We Foundation India, Assam, India

Abstract

Shorebirds are a diverse group of mostly small, long-legged and gregarious birds that live along shorelines and inland waterways worldwide. According to Thurston, 1996 waders fly swiftly in large flocks migrating long distances between their seasonal ranges. *Limnodromus scolopaceus* and *Calidris ferruginea* are two migratory waders which have never been recorded from North East India. This paper reports the first record of these two waders from North East India.

Keywords: long-billed, dowitcher, curlew, sandpiper, Assam

Introduction

Diversified habitat conditions as well as occurrence of various ecological association of North East India have helped to flourish a total of 814 avian species belonging to 336 genera and 70 families [2]. North East India is part of two Biodiversity Hotspots (BH) namely the Eastern Himalayas BH and Indo Burma BH. Sandwiched between these two BHs lies the Brahmaputra floodplains of Assam. Out of 46 important bird and biodiversity area (IBA) identified by Birdlife International in Assam, India, more than 24 are either wetlands, marshlands of swampy grasslands. Though waders are widely distributed in these habitat types there are very few published literatures available about waders of North east India. World-wide population declines in waders are of great concern, loss of wetlands and destruction of associated food supplies is likely implicated in most population declines [3].

Long-billed Dowitcher *Limnodromus scolopaceus* (Say, 1823) was added to the avifauna of India by Holt in 1999 [4], which was reported from Keoladeo National Park, Rajasthan. It was then reported by Sharma *et al.* from Haryana in 2013 [5], followed by a report by Sreenivasan from Kerala in 2016 [6]. Curlew Sandpiper *Calidris ferruginea* (Pontoppidan 1763) is a maritime wader species with a slightly curved bill reported mostly from coastal wetlands [7]. This is the first record of *L. scolopaceus* (Figure 2A) and *C. ferruginea* (Figure 3C) from North East India. These reports will give us more insight towards understanding the migratory flyways of these two species.

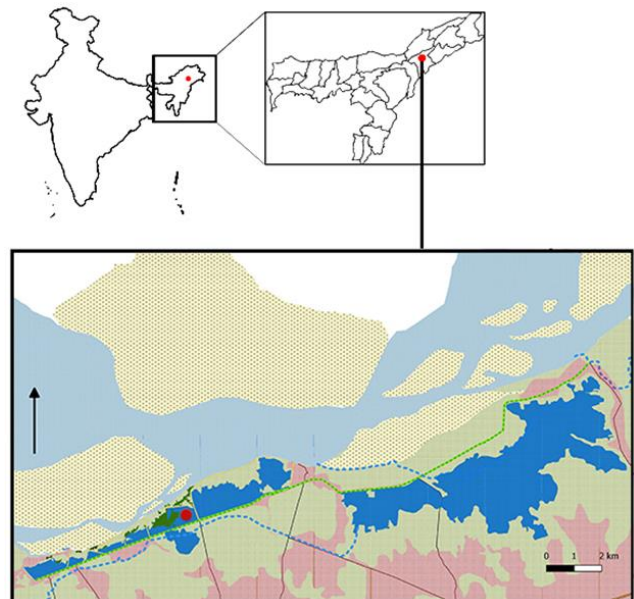
Materials and methods

Study Area

Jhanjimukh-Kokilamukh IBA located on the South bank of river Brahmaputra in the northern areas of Jorhat district of Assam (Figure1). With an estimated area of 25 square km [8] the IBA ranges from Jhanjimukh, confluence zone of river

Jhanji (26°53'43.19"N 94°21'11.25"E) on the East to Nahotiya (26°49'8.02"N 94° 8'56.75"E) on the west. Jhanjimukh-Kokilamukh IBA is mostly composed of Wetlands, Grasslands, Shrublands, and Woodlands.

The climate of the area is classified as the mesothermal wet climate. January is the coldest month with a temperature of 6.1°C. July and August are the hottest period with an average monthly temperature of about 29 °C. The average relative humidity in a year is 78.7 per cent. The average annual rainfall is 1,867.08 mm. The amount of rainfall increases from southwest to northeast [9].



● Wetland from which Long-billed Dowitcher and Curlew Sandpiper were recorded

Fig 1: Map of Jhanjimukh-Kokilamukh IBA;

Data Collection

On 23rd March 2018, during a survey of the migratory birds in the wetlands of Jhanjimukh-Kokilamukh IBA (N26°50'13.41" E 94°12'21.53") located in the Jorhat District of Assam, India, an unfamiliar wader foraging in the shallow waters of Fakua dowl beel (wetland) was observed. It was a medium-sized sandpiper distinguished by a sturdy bill that extends twice the length of its head. Few photographs of the bird were taken but were sufficient for proper identification, the distinguishing morphological features suggested it to be a dowitcher species. During this survey period another medium sized wader species with a downward curved bill was also observed in the wetland. Photographs taken for both the observations were analyzed using taxonomic keys described by Ali and Ripley 1981 [7] and Lee and Birch 2006 [10] and other available literatures such as Holt 1999 [4], Sharma 2013 [5] and Sreenivasan 2016 [6]

Results

Limnodromus scolopaceus (Say, 1823) - Long-billed Dowitcher

Limnodromus scolopaceus has some similar physical features compared to Asian Dowitcher *L. semipalmatus* but on closer observations it showed some striking dissimilarities. The colour of the bill is completely black in case of *L. semipalmatus*, whereas it is two-toned with a pale base in *L. scolopaceus*. The supercilium of *L. scolopaceus* is continuous from the base of the bill to the back of the head and the eye stripe is prominent which runs parallelly with the supercilium



Fig 2: A: Long-billed Dowitcher photographed from Jhanjimukh-Kokilamukh IBA. B and C: Comparison of Loral angles of Long-billed Dowitcher (B) and Asian Dowitcher (C)

behind the eye. In case of *L. semipalmatus* eye stripe is prominent from base of the bill to the eye. For confirmation a comparison was also made with Short-billed Dowitcher *L. griseus*. In *L. griseus*, the bill begins to gently curve downward about one third of the way from the tip. This gives Short-billed a somewhat down-curved bill shape. Long-billed Dowitcher has more acute loral angles [7]. While comparing the loral angle of these three Dowitchers, it was found that the *L. scolopaceus* has more acute Loral angle in comparison to *L. semipalmatus* and *L. griseus*.

Calidris ferruginea (Pontoppidan 1763) – Curlew Sandpiper

Calidris ferruginea is often confused with Dunlin *Calidris alpina*. In *C. ferruginea* the upper body is greyish brown with fine dark mottling and below the breast is streaked and washed with brown [6]. In *C. ferruginea* the legs are longer and the bill is slender and longer in compared to *C. alpina*. The *C. ferruginea* is comparatively larger in body size, tall and the

bill is slenderer, curved and longer than *C. alpina* (Figure 3 A-B)

This species is listed as Near Threatened (IUCN Ver3.1) owing to a global population decline which is thought to approach the threshold for Vulnerable under the population size reduction criterion [11].

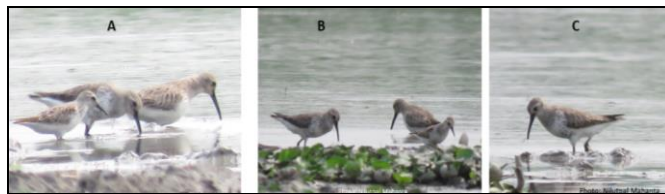


Fig 3: A-B. Pair of Curlew Sandpiper with a Dunlin, C. Curlew Sandpiper

From the above analysis it was evident that the recorded wader species are *L. scolopaceus* and *C. ferruginea*

Discussion and Conclusion

Jhanjimukh-Kokilamukh IBA is one of the most suitable habitats for wetland birds in Assam. Although situated in middle of human habitation, yet it harbours a wide variety of avian fauna, including many elusive resident and migratory birds. These wetlands are often been overlooked since they are not under any legal protection. Presence of these two rare migratory wader species is an indicator of the importance of this IBA as important parts of the migratory pathways of these waders. More extensive survey could help in reporting many species in future. It is a suggestion the Forest department of Assam to provide protection to these wetlands for better conservation of the area.

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