

Winter Avian Population of River Brahmaputra in Dibrugarh, Assam, India

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Abstract

The present study was carried out to record the avifaunal diversity and abundance of River Brahmaputra in Dibrugarh, Assam, India during the last week of December 2011. A total of 16 different bird species were recorded, of which five were winter migrants, one was passage migrant and rest of the ten bird species were resident. Though the present study area is facing an ever accelerating anthropogenic intervention, a healthy avifaunal diversity was recorded during the present study. More intensive investigations will certainly enrich our knowledge of avian diversity and distribution pattern from the present study location leading to the proper conservation of this important bird area.

Introduction

Brahmaputra with approximately 2,900 km length is a trans-boundary river in Asia that passes through the states of Arunachal Pradesh and Assam in India. The average depth of Brahmaputra is 38 m (with a maximum of 120 m) and it discharges on an average 19,300 cubic meters of water per second (floods can reach more than 100,000 cubic meters per second) (Catling 1990). This river is important in terms of irrigation and transportation though during the monsoon season (June – October), floods are common and occasional massive flooding causes huge losses to life, crops and property. Fresh alluvium deposited by floods replenishes the river valley which is important both in terms of agriculture and wildlife support. Two Endemic Bird Areas lies in Assam; these are the Eastern Himalayas (EBA 130) and the Assam Plains (EBA 131) (Islam & Rahmani 2004). Avifaunal diversity study of Brahmaputra valley semi-evergreen forests ecoregion are well on record (Neog 1957; Mackenzie 1969; Gauntlett 1971; Choudhury 1988, 1991, 1993, 2000; Barooah 1990, 1994; Barooah and Sharma 1999; Narayan and Rosalind 1990; Saikia and Bhattacharjee 1991; Robson 1994; Madge 1995; Samant et al. 1995; Sarma et al. 1997). The current study was carried out to record the avifaunal diversity and abundance of River Brahmaputra in Dibrugarh, Assam, India during the last week of December 2011.

Study Area

Brahmaputra valley semi-evergreen forests ecoregion has been included in the 200 global priority ecoregions identified by WWF in the year 2000. This region harbours a rich biodiversity and to conserve them a number of protected areas have been designated of which Kaziranga National Park is also a 'World Heritage Site'. Among the most notable animals of this area are the greater one-horned rhinoceros (*Rhinoceros unicornis*), hoolock gibbon (*Hoolock hoolock*), stump-tailed macaque (*Macaca arctoides*), capped leaf monkey (*Trachypithecus pileatus*), Asian elephant (*Elephas maximus*), tiger (*Panthera tigris*), clouded leopard (*Neofelis nebulosa*), Asiatic black bear (*Ursus thibetanus*), Sloth Bear (*Melursus ursinus*), Asiatic water buffalo (*Bubalus arnee*), gaur (*Bos gaurus*), swamp deer (*Rucervus duvaucelii*) and of course not to forget the freshwater dolphin, (*Platanista gangetica*).

Methods

The present study was undertaken on 24 December 2011 during 7:00 AM – 11:00 AM in the morning while crossing

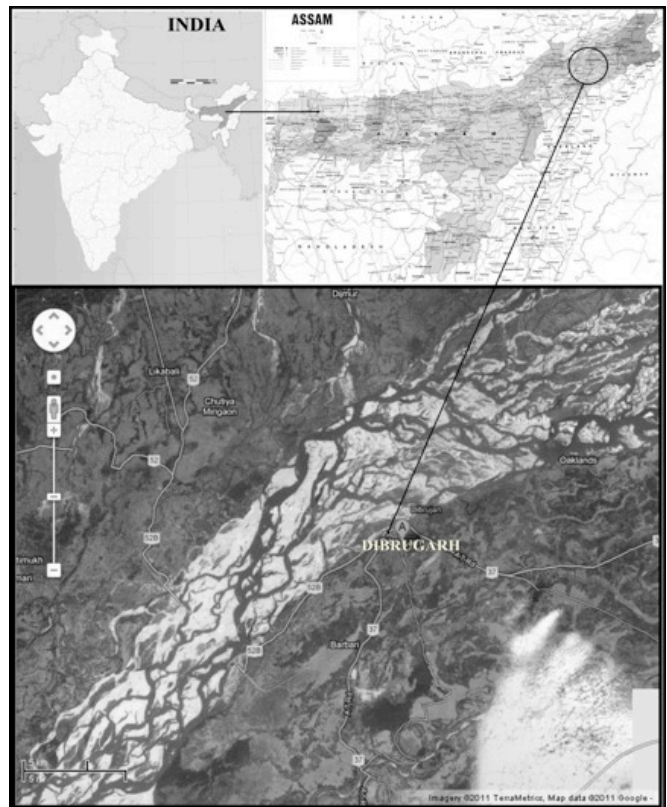


Fig. 1 Map showing study area at Brahmaputra River near Dibrugarh, Assam, India



Fig. 2 Regular ferry service at Brahmaputra River

the Brahmaputra River at Dibrugarh Majarbari Ferry Service from South bank to North bank and on 30 December 2011 during 10:00 AM – 2:00 PM while returning back.

Brahmaputra at this stretch is more than 10km wide with numerous small islands, mostly inhabited by extensive grassland patches of *Saccharum spontaneum* and *Tamarix dioica*. The present study area (Figs. 1 & 2) falls within the Upper Dihing (West Block) complex, an Important Bird Area

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Table 1. Birds recorded from Brahmaputra River near Dibrugarh, Assam, India during the last week of December 2011 (R – Resident, W – Winter migrant, P – Passage migrant).

Family	Common Name	Scientific Name	Total Number Recorded	Status
Phalacrocoracidae	Little Cormorant	<i>Phalacrocorax niger</i>	24	R
	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	32	R
Ardeidae	Grey Heron	<i>Ardea cinerea</i>	5	R
	Little Egret	<i>Egretta garzetta</i>	12	R
Ciconiidae	Black Stork	<i>Ciconia nigra</i>	2	W
Anatidae	Rudy Shelduck	<i>Tadorna ferruginea</i>	>1000	W
	Gadwall	<i>Anas strepera</i>	48	W
Accipitridae	Black Kite	<i>Milvus migrans</i>	39	R
Falconidae	Lesser Kestrel	<i>Falco naumanni</i>	1	P
Scolopacidae	Common Sandpiper	<i>Actitis hypoleucos</i>	1	W
Burhinidae	Eurasian Thick-knee	<i>Burhinus oedicnemus</i>	1	R
Alcedinidae	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	3	R
	Crested Kingfisher	<i>Megaceryle lugubris</i>	4	R
Dicruridae	Black Drongo	<i>Dicrurus macrocercus</i>	24	R
	Bronzed Drongo	<i>Dicrurus aeneus</i>	7	R
Motacillidae	White Wagtail	<i>Motacilla alba</i>	37	W

(IBA Site Code: IN-AS-45) fulfilling the IBA criteria of A1 and A2.

All birds (sitting on the river beds, perched, swimming and flying) were recorded and identified following Ali (1996), Grimmett *et al.* (1998) and Kazmierczak & Perlo (2000).

Results and Discussion

A total of 16 different bird species belonging to 11 avian families were

recorded during the present study (Table 1). Rudy Shelduck (*Tadorna ferruginea*) was the most abundant among all the birds recorded (Fig. 3). Asian populations of this bird are mostly migratory in nature which migrates to winter at lower latitudinal and altitudinal freshwater or saline water sources, grasslands, marshlands, open steppe, upland plateaus and mountainous regions reaching up to 5000m in Himalayas in India and

South-East Asian countries (BirdLife International 2012). Mazumdar *et al.* (2011) have reported this bird wintering and breeding at high altitude wetland (Tsomgo Ama wetland, altitude 4535m) of Arunachal Pradesh. Rudy Shelduck recorded from the present study were in isolated pairs as well as in small flocks of 50 – 60 ducks resting on the banks, flying or foraging in the river. These flocks again was found to share their feeding areas with small loose groups of Gadwall (*Anas strepera*), also a winter migrant in Indian subcontinent. Other winter migrants recorded from the present study location were Black Stork (*Ciconia nigra*) (Fig. 4), Common Sandpiper (*Actitis hypoleucos*) and White Wagtail (*Motacilla alba*). While wagtails were recorded abundantly (a total of 37 individuals recorded) while only one Common Sandpiper and 2 individuals of Black Stork were recorded during the present study.

A single individual of Lesser Kestrel (*Falco naumanni*) was found perched while crossing a small island. This species is thought to be a passage migrant in India between their breeding grounds in China and Mongolia and their main wintering grounds in Africa (Ali & Ripley 1987). Rest of the avifauna recorded during the present study were residents in nature these comprised Little Cormorant (*Phalacrocorax niger*), Indian Cormorant (*Phalacrocorax fuscicollis*), Grey Heron (*Ardea*



Fig. 3 Rudy Shelduck (*Tadorna ferruginea*) recorded during the present investigation in flocks of 50-60 individuals (3a) and also in isolated pairs (3b).



Fig. 4 Black Stork (*Ciconia nigra*) recorded at the bank of River Brahmaputra during the present investigation.



Fig. 5 Grey Heron (*Ardea cinerea*) recorded during the present study, resting (5a) and foraging (5b).

cinerea), Little Egret (*Egretta garzetta*), Black kite (*Milvus migrans*), Eurasian Thick-knee (*Burhinus oedipnemus*), White-throated Kingfisher (*Halcyon smyrnensis*), Crested Kingfisher (*Megaceryle lugubris*), Black Drongo (*Dicrurus macrocercus*) and Bronzed Drongo (*Dicrurus aeneus*).

The present study was done for a very short period, yet, was very much rewarding so far as the avifaunal diversity is concerned. More intensive studies will definitely enrich our knowledge of avifaunal diversity from this location.

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