

Potential Migratory Birds Habitats in the Northern Part of Bangladesh

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Introduction

Bangladesh is a riverine country. About 800 rivers including tributaries flow through the country constituting a waterway of total length around 24,140 km. The river system can be divided into four major networks: (1) Brahmaputra-Jamuna river system, (2) Ganges-Padma river system, (3) Surma-Meghna river system, and (4) Chittagong region river system.

The Padma-Ganges is the central part of the deltaic river system with hundreds of rivers. Within Bangladesh, Ganges is divided into two sections - first, the Ganges, 258 km long, starting from the western border with India. The second is the Padma, 120 kilometers long and from 48 km wide (Banglapedia 2006). Most of the major streams of the delta-rivers including its premier channel, the Ganges-Padma, have been ceaselessly changing their courses or migrating laterally and occupying new sites. Even the minor channels of the delta show the same tendency.

The mighty river Padma has become compartmentalized by the development of sandbars commonly called as 'char-lands' which are quite high from the water level. Char-lands are generally a seasonal natural process of the riverine ecology, especially at the lower reach of the rivers. On the part of the river that flowing adjacent to the Rajshahi district, there are few char-lands which become continuous escaping at some parts and are quite old. The chars at some part may be sandy, in some parts may be alluvial, having number of water pockets or channels of

different size, and have a complex ecosystem. On the areas having mixed soil the natural flora had grown. In the dry season, approximately the Padma had a total of 13 accreted island chars, each longer than 3.5 km and an additional 18 island chars were each between 0.35 and 3.5 km long. Char erosion and accretion depends on the migration of the meandering bends of the river.

Riverine habitats (water channels and sandbars) support a wide variety of bird species, many of them nests on sandbars, others forage along or in the water channel. During winter season a number of migratory birds invades the Padma char-land, and some people hunts these birds to earn money.

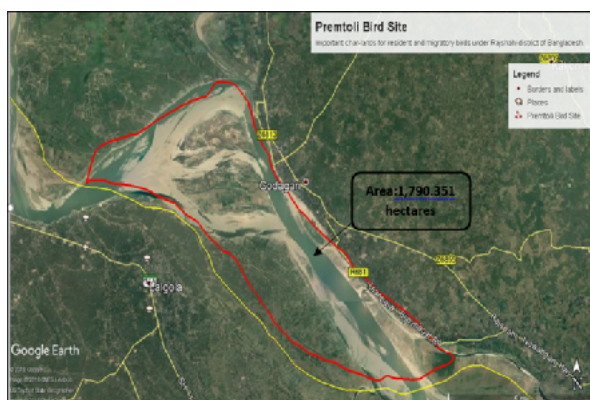
The survey work is the result of three months observation of migratory water birds at char-lands of Padma River covering two districts of Bangladesh and supported by the EAAF through small grant.

Study Sites

The study was conducted in 02 northern districts (Rajshahi and Chapai Nawabgonj) of the country basically focused on the char lands of the Padma river basin.

1. Premtoli

- Under Godagari and Paba Upazila of Rajshahi District
- Area- 1790.351 hectares



Map 1: Premtoli

2. Majhar Diyar/Majher Char

- Under Paba Upazila of Rajshahi District
- Area- 23.57 hectares



Map 2: Majhar Diyar/Majher Char

3. Bakor Ali Ghat

- Under Chapai Nawabgonj of Rajshahi Division
- Area- 5909.152 hectares



Map 3: Bakor Ali Ghat

Survey Methods

The survey was conducted in two districts- Rajshahi and Chapai Nawabgonj which supports the mighty Padma, between November 2018- December 2018 and January 2019. In the absence of a precise map of the wintering grounds of migratory water birds, specific survey locations (both char-lands and river channel) in the study area were identified from satellite images freely available from Google Earth.

In this survey, ‘Point Count’ method was used for determining the relative abundance of birds; in which an observer records all the birds seen and heard from a point count station for a set period of time. The survey was somewhere in boat-based and somewhere in char-land based. A minimum of three observers undertook this survey. While cruising the rivers, surveyors observed each bank of the river or char-lands, while another observed facing forward to minimize counting and identification errors.

In addition, local fishermen and villagers were interviewed about the occurrence and possible threats.

Results

During the three months survey periods, total 13 sites or points was identified in between two above mentioned districts of Rajshahi Division, Bangladesh as wintering grounds. GPS coordinates of these 13 sites are given below:

Table 1. GPS coordinates of specific sites in Rajshahi District

Site No.	Sites Name	Lattitude	Longitude
1	Srirampur (East)	N 24° 20.94'	E 88° 450'
2	Khanpur	N 24° 19.502'	E 88° 35.570'
3	Majhar Diyar 1	N 24° 20.426'	E 88° 33.329'
4	Majhar Diyar 2	N 24° 20.450'	E 88° 32.941'
5	Char Khidirpur	N 24° 18.962'	E 88° 37.299'
6	10 number Char	N 24° 19.033'	E 88° 39.072'
7	Premtoli (Limmon char)	N 24° 23.000'	E 88° 23.989'
8	Premtoli (Nilbon char)	N 24° 22.870'	E 88° 24.077'

Table 2. GPS coordinates of specific sites in Chapai Nawabgonj District

Site No.	Sites's Name	Lattitude	Longitude
1	Bakoralighat 1	N 24° 32.40'	E 88° 10.363'
2	Bakoralighat 2	N 24° 31.783'	E 88° 09.403'
3	Rohonpur-Charolbeel	N 24° 51.923'	E 88° 17.841'
4	Charolbeel 2	N 24° 52.397'	E 88° 18.387'
5	Shonatola	N 24° 52.573'	E 88° 19.007'

During the survey period, total 30 species of waterbirds were identified from the char-lands of the Padma River, which are migratory to Bangladesh. Twenty-one species were recorded from Rajshahi district and rest nine species were recorded from Chapai Nawabgonj district. Three globally vulnerable species, the Common Pochard (*Aythya ferina*), the Lesser Adjutant (*Leptoptilos javanicus*) and the Wolly-necked Stork (*Ciconia episcopus*) were recorded during the survey.

In November 2018, the survey was conducted in Rajshahi district and the recorded species are presented below as per recorded sites.

Site 1. Srirampur (East)

Table 3. Numbers of birds recorded along Padma river: Srirampur

English Name	Scientific Name	Number of Species	IUCN Red List Status
Brown-headed Gull	<i>Larus brunnicephalus</i>	1	LC
Common Greenshank	<i>Tringa nebularia</i>	7	LC
Pallas's Gull	<i>Larus ichthyaetus</i>	2	LC
Red-crested Pochard	<i>Netta rufina</i>	3	LC
Ruddy Shelduck	<i>Tadorna ferruginea</i>	44	LC
Tufted Duck	<i>Aythya fuligula</i>	9	LC
Wood Sandpiper	<i>Tringa glareola</i>	5	LC

Site 2. Khanpur

Table 4. Numbers of birds recorded along Padma river: Khanpur

English Name	Scientific Name	Number of Species	IUCN Red List Status
Ruddy Shelduck	<i>Tadorna ferruginea</i>	102	LC
Common Greenshank	<i>Tringa nebularia</i>	3	LC
Great-crested Grebe	<i>Podiceps cristatus</i>	2	LC
Pied Avocet	<i>Recurvirostra avosetta</i>	4	LC
Grey Plover	<i>Pluvialis squatarola</i>	6	LC

Site 3. Majhar Diyar 2

Table 5. Numbers of birds recorded along Padma river: MajharDiyar 2

English Name	Scientific Name	Number of Species	IUCN Red List Status
Wood Sandpiper	<i>Tringa glareola</i>	3	LC

Ruddy Shelduck	<i>Tadorna ferruginea</i>	31	LC
Gadwall	<i>Mareca strepera</i>	15	LC
Pin-tailed Snipe	<i>Gallinago stenura</i>	20	LC

In December 2018, the survey was conducted in Chapai Nawabgonj district and the recorded species are presented below as per recorded sites.

Site 4. Bakoralighat 1

Table 6. Numbers of birds recorded along Padma river: Bakoralighat 1

English Name	Scientific Name	Number of Species	IUCN Red List Status
Ruddy Shelduck	<i>Tadorna ferruginea</i>	65	LC
Wood Sandpiper	<i>Tringa glareola</i>	7	LC
Greylag Goose	<i>Anser anser</i>	8	LC
Pallas's Gull	<i>Larus ichthyaetus</i>	1	LC
Gadwall	<i>Mareca strepera</i>	28	LC

Site 5. Bakoralighat 2

Table 7. Numbers of birds recorded along Padma river: Bakoralighat 2

English Name	Scientific Name	Number of Species	IUCN Red List Status
Northern Pintail	<i>Anas acuta</i>	6	LC
Gadwall	<i>Mareca strepera</i>	105	LC
Ruddy Shelduck	<i>Tadorna ferruginea</i>	169	LC
Ruff	<i>Calidris pugnax</i>	1	LC
Black-winged Stilt	<i>Himantopus himantopus</i>	2	LC
Green Sandpiper	<i>Tringa ochropus</i>	14	LC
Wolly-necked	<i>Ciconia episcopus</i>	2	VU

Stork			
Black-headed Gull	<i>Larus ridibundus</i>	1	LC
Pallas's Gull	<i>Larus ichthyaetus</i>	1	LC

Site 6. Rohonpur-Charolbeel

Table 8. Numbers of birds recorded along Padma river: Rohonpur-Charolbeel

English Name	Scientific Name	Number of Species	IUCN Red List Status
Black-winged Stilt	<i>Himantopus himantopus</i>	39	LC
Common Sandpiper	<i>Actitis hypoleucos</i>	2	LC
Wood Sandpiper	<i>Tringa glareola</i>	1	LC
Common Snipe	<i>Gallinago gallinago</i>	3	LC

Site 7. Charolbeel 2

Table 9. Numbers of birds recorded along Padma river: Charolbeel 2

English Name	Scientific Name	Number of Species	IUCN Red List Status
Lesser Adjutant	<i>Leptoptilos javanicus</i>	10	VU
Black-winged Stilt	<i>Himantopus himantopus</i>	1	LC

In January 2019, the survey was conducted in Rajshahi district for the second time as because the number of species was high in the previous year and the recorded species are presented below as per recorded sites.

Site 1. Srirampur (East)-Monitoring

Table 10. Numbers of birds recorded along Padma river: Srirampur (East)

English Name	Scientific Name	Number of Species	IUCN Red List Status
Ruddy Shelduck	<i>Tadorna ferruginea</i>	18	LC

Gadwall	<i>Mareca strepera</i>	3	LC
Great Crested Grebe	<i>Podiceps cristatus</i>	2	LC

Site 8. Majhar Diyar 1

Table 11. Numbers of birds recorded along Padma river: Majhar Diyar 1

English Name	Scientific Name	Number of Species	IUCN Red List Status
Ruddy Shelduck	<i>Tadorna ferruginea</i>	11	LC
Common Redshank	<i>Tringa totanus</i>	4	LC
Garganey	<i>Spatula querquedula</i>	30	LC
Gadwall	<i>Mareca strepera</i>	70	LC

Site 9. Char Khidirpur

Table 12. Numbers of birds recorded along Padma river: Char Khidirpur

English Name	Scientific Name	Number of Species	IUCN Red List Status
Wood Sandpiper	<i>Tringa glareola</i>	1	LC
Gadwall	<i>Mareca strepera</i>	118	LC
Ruddy Shelduck	<i>Tadorna ferruginea</i>	99	LC
Garganey	<i>Spatula querquedula</i>	72	LC
Great crested Grebe	<i>Podiceps cristatus</i>	3	LC
Northern Pintail	<i>Anas acuta</i>	2	LC
Common Teal	<i>Anas crecca</i>	24	LC
Common Pochard	<i>Aythya ferina</i>	3	VU
Bar-headed Goose	<i>Anser indicus</i>	25	LC
Eurasian Spoonbill	<i>Platalea leucorodia</i>	2	LC
Kentish Plover	<i>Charadrius alexandrinus</i>	3	LC

Tufted Duck	<i>Aythya fuligula</i>	9	LC
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Site 10. 10 Number Char

Table 13. Numbers of birds recorded along Padma river: 10 Number Char

English Name	Scientific Name	Number of Species	IUCN Red List Status
Ruddy Shelduck	<i>Tadorna ferruginea</i>	4	LC
Pallas's Gull	<i>Larus ichthyaetus</i>	2	LC
Common Shelduck	<i>Tadorna tadorna</i>	3	LC
Garganey	<i>Spatula querquedula</i>	20	LC
Gadwall	<i>Mareca strepera</i>	80	LC

References

Banglapedia (2006) Padma River.

Downloaded from

<http://www.banglapedia.org/> on 08/02/2012

Chowdhury, S. U., Foysal, M., Sharpe, J. & Shahadat, O. (2014) A survey for Black-bellied Tern *Sterna acuticauda* and other riverine birds on the Jamuna and Padma rivers in Bangladesh. Forktail 30: 84–89.

Kabir, M. T., Chowdhury, S. U., Tareq, O., Alam, A. B. M. S., Ahmed, S., Shahadat, O., & Foysal, M. (2016) New breeding records of riverine birds in Bangladesh. BirdingASIA 26: 39–42.

Siddique, K. U., Islam, M. A., Kabir, S. M. H., Ahmed, M., A., Rahman, A.T. A., Rahman, A. K. A., Haque, E. U., Ahmed, Z. U., Begum, Z. N. T., Hassan, M. A., Khondker, M. and Rahman, M. M. (eds.) 2008. Encyclopedia of Flora and Fauna of Bangladesh. Birds (Vol. 26), Asiatic Society of Bangladesh.

Photographs



Pied Avocet (*Recurvirostra avosetta*)



Lesser Adjutant (*Leptoptilos javanicus*)



Greylag Goose (*Anser anser*)



Ruddy Shelduck (*Tadorna ferruginea*)