

- Short communication

A preliminary list of the migratory birds of the Padma charland, Rajshahi

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The mighty river Padma has become compartmentalized by the development of sandbars commonly called as 'charlands'. Charlands are generally a seasonal natural process of the riverine ecology, especially at the lower reach of the rivers. Sandbars or the 'char' is typically composed of sand, silt and/or small pebbles, which emerge as islands within the river channel or as attached land to the riverbanks. Padma shows meandering characteristic and produce stable attached char to the riverbanks and the entire process of char formation would be completed within twelve to fifteen years (Rahman & Rahman, 2012) after 12-15 years it is turned into stable char. Stable chars are more resourceful than semi stable char (Sarker *et al.*, 2003). Construction of large dams on the rivers, very often affect the flow and current of the river water, resulting in the formation of sandbars. The Padma river is known for heavy bank erosion, shifting channels, and sandbars that continually emerge in its course (Rahman & Rahman, 2010).

There are a large number of charlands, small and large, have been formed in the Padma river which are quite high from the water level. On the part of the river that flowing adjacent to the Rajshahi district, there are few charlands which become continuous escaping at some parts and are quite old. During monsoon greater part of this charland becomes flooded. 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. The Padma charland is mostly sandy, with parts having sand and alluvial mixed soil. On the areas having mixed soil the natural flora had grown and people use the land for agriculture because of its rich fertile soil. There are several villages with school and community health centre at the charland of Padma lying within the Rajshahi district. At the human habitation there are a number of species of trees and plants which produce fruits and woods. Besides that, plantation programs have been carried out to protect the river side from water current. The Padma charland has a great economic value by producing huge amount of sand, different types of crops, fruits and vegetables, riverine species of fish and fire woods.

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 (Claassen,

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2004). During winter season a number of migratory birds invades the Padma charland, and some people hunts these birds to earn money. The Padma charland inhabited by wildlife species, but there is no information on the wildlife of this important habitat. However, the riverine fish species were recorded by several workers, but a few reports have been published (Islam & Hossain, 1983; Ali *et al.*, 2013). Khan (1973) published a checklist of birds of Rajshahi, but did not mention the riverine species.

The present work is the result of seven years bird of watching at charlands of Padma extending from Premtali of Godagari Upazilla to Charchat Upazilla of the Rajshahi district, and here reported the list of migratory birds of the charland.

Study area and tenure: The study area extending from Premtali of Godagari Upazilla (24°28'N 88°19.8'E) to Rajshahi Cadet College, Sardah of Charchat Upazilla (24°17'N 88°46.5'E), Rajshahi district. The charland is more or less continuous throughout this part of the river, and at some places cut by small water areas and a few channels. The distance between Premtali to Sardah is approximately 60 kilometers.

The main bird observation sites were three: (i) Premtali, covering an area of 2-3 km East-West and approximately 1 km inside the char; (ii) Rajshahi City, covering approximately 10.2 km long East-West, and around 2-4 km inside the char; and (iii) Sardah Cadet College covering approximately 2 km East-West and 0.5 km inside the char. During the survey the water areas, grasslands, and bushes were observed carefully. However, some birds were found in the dry sandy and bare soils by the side of small grasses.

Bird watching in the Padma charland was started since 2008 and still continuing. For nearly 2 years the bird watching was confined at 3-4 sites of the Rajshahi City area such as, Central Park, Boro Kuthi, Alupatti, Talaimari Shaheed Minar & Kazla. After that period the total study area between Premtali to Sardah (from west to east approximately 60 kilometers) was extensively surveyed to record the avifauna.

Habitats of the charland: Habitats of the study area were categorized as water area and charland. The charland includes four types of habitat, such as, grass land, sandy area, agricultural land and open wood land (plantation areas). The characteristics of the soil of the habitats are different, i.e., sandy, alluvial, clay and sandy-alluvium mixed. Accordingly flora and fauna of these habitats are differently composed.

Bird watching schedule: The study area was extensively surveyed each year from autumn (October) to summer (June). Most regular bird watching activity was in the Rajshahi City area, at least once in a fortnight. However, at the points from Kazla to Talaimari Shaheed Minar the bird observation was carried once in a week, and at the distant sites like Premtali, and Sardah it was 2-3 times in a year from December to early May. Bird watching at the Padma char was mostly started before sun rise, and spent more or less 3-4 hours. During October-June occasional survey was carried at the late afternoon till sunset, for about 2 hours.

Data Recording: Digital still camera (Nikon D3000 DSLR, 300 mm Nikor lens) and video camera (Sony DCR SR68) were used for recording data of birds of the charland. A binocular was also used to observe the birds.

Identification of birds: The birds those were photographed were identified in the Department of Zoology, University of Rajshahi consulting the published literature, viz., Baker (1922-1930), Ali (2002), Ali and Ripley (1968-1972), Khan (2008), Siddiquee *et al.* (2008), Halder (2010) and the Internet (Birdlife International).

During the study period total 141 species of birds were identified from the charland of the Padma river (Reza *et al.*, 2014), of which 58 (41.43%) are migratory to Bangladesh, and the rest **83** (58.86%) are resident of this country. Among these migratory species, 47 (81.03%) are water birds and 11 (18.96%) are small passerine species (Table 1).

Total number of winter visitors were recorded as 53 (91.38%) and among them eight (8) are reported to be resident locally. Two species of water birds, the Tufted Pochard (*Aythya fuligula*) and the Asian Dowitcher (*Limnodromus semipalmatus*) are listed as Near Threatened species (IUCN, 2008). There are six (5) species of rare winter visitors and more five (5) species are known as uncommon winter visitors of Bangladesh.

Other than the winter visitors, there found four (4) species of summer visitors (6.98%) and two (2) species of passage migrants (3.45%). Among the summer visitors two (2) species are reported to often reside in Bangladesh. The Grey Bushchat (*Saxicola ferrus*) is normally a winter visitor, but sometimes they do not pass the whole season, spend few days during the journey within Bangladesh territory as a passage migrant. During the present study this bird could not recorded each year from the Padma charland.

However, flocks of ducks in the main channel were seen from distance, but absence of proper instruments good photographs could not be taken from which the species could be identified. Bird watcher James Pender reported the presence of Teal, Wigeon, Garganey, Shovelar, Common Shelduck and Mallard in the charlands of the Padma river (personal communication). Because of social risks to pass through the tall grassland, the bird watcher team could not reach near the main channel.

Among the total bird species of Bangladesh, 171 species are migratory, of which 160 are winter visitors, six (6) are summer visitors and 10 are passage migrants or spring visitors (Siddiquee *et al.*, 2008). Migratory birds are excellent indicators of the environmental state of a region. The migratory birds play important roles in pest control (insects and rodents) of the croplands and increase the nutrients of the soil by dropping faecal materials, disperse seeds and pollinates.

The Padma charland is totally a virgin area for wildlife study and documentation. The present study is providing a list of the migratory birds of this habitat for the first time.

Table 1. Check list of migratory birds of the Padma charland (Godagari to Charghat, Rajshahi)

Order/Family	Scientific Name	English Name	Bangla Name	Habitat	Status in Bangladesh (IUCN, 2008)
Anseriformes Anatidae	<i>Dendrocygna bicolor</i> Vieillot, 1816)	Large Whistling Duck	Boro Sarali	Water area	Common Winter Visitor
	<i>Aythya fuligula</i> (Linnaeus, 1758)	Tufted Pochard	Tiki Hans	Water area	Common Winter Visitor
	<i>Aythya nyroca</i> (Guldenstadt, 1770)	Ferruginous Duck	Morcherong Bhuti Hans	Water area	Common Winter Visitor (Near Threatened)
	<i>Tadorna ferruginea</i> (Pallas, 1964)	Brahminy Shelduck	Khoira Chokachoki	Water area	Common Winter Visitor
	<i>Anas poecilorhyncha</i> Forster, 1781	Indian Spot-bi Duck	Deshi Mete Hans	Water area	Common Winter Visitor / Resident
	Coraciiformes Meropidae	<i>Merops philippinus</i> (Linnaeus, 1766)	Blue tailed Bee-eater	Neel-lej Suichora	Terrestrial (aerial feeding)
Cuculiformes Cuculidae		<i>Clamator jacobinus</i> (Boddaert, 1783)	Pied-crested Cuckoo	Pakra Papia	Terrestrial
	<i>Hierococcyx varius</i> (Vahl, 1797)	Common Hawk Cuckoo	Pati Chokhgelo	Terrestrial	Summer Visitor
Ciconiiformes colopacidae	<i>Tringa glareola</i> Linnaeus, 1758	Wood Sandpiper	Tila Chapakhi	Water area	Common Winter Visitor
	<i>Tringa ochropus</i> Linnaeus, 1758	Green Sandpiper	Sabuj Batan	Water area	Uncommon Winter Visitor
	<i>Tringa stagnatilis</i> (Bechstein, 1803)	Marsh Sandpiper	Beel Batan	Water area	Uncommon Winter Visitor
	<i>Tringa nebularia</i> (Gunnerus, 1767)	Common Greenshank	Pati Sabujpa	Water area	Common Winter Visitor
	<i>Actitis hypoleucos</i> Linnaeus, 1758	Common Sandpiper	Pati Batan	Water area	Common Winter Visitor
	<i>Calidris alpina</i> (Linnaeus, 1758)	Dunlin	Dunlin	Water area	Rare Winter Visitor
	<i>Calidris alba</i> (Pallas, 1764)	Sanderling	Sanderling	Water area	Uncommon Winter Visitor
	<i>Calidris temminckii</i> (Leisler, 1812)	Temminck's Stint	Temminker Chaha	Water area	Common Winter Visitor
	<i>Calidris minuta</i> (Leisler, 1812)	Little Stint	Chhoto Chaha	Water area	Common Winter Visitor
	<i>Calidris ruficollis</i> (Pallas, 1776)	Red-necked Stint	Lalghar Chaha	Water area	Common Winter Visitor

Order/Family	Scientific Name	English Name	Bangla Name	Habitat	Status in Bangladesh (IUCN, 2008)
	<i>Limosa limosa</i> (Linnaeus, 1758)	Black-tailed Godwit	Kalo-lej Jorali	Water area	Common Winter Visitor
	<i>Xenus cinereus</i> (Guldenstadt, 1775)	Terek Sandpiper	Terek Batan	Water area	Common Winter Visitor
	<i>Philomachus pugnax</i> (Linnaeus, 1758)	Ruff (male), Reeve(female)	Jeola Batan	Water area	Common Winter Visitor
	<i>Limnodromus semipalmatus</i> (Blyth, 1848)	Asian Dowitcher	Asio Doucher	Water area	Rare Winter Visitor (Near Threatened)
	<i>Gallinago gallinago</i> Brisson, 1760	Common Snipe	Kada Khocha	Water area	Common Winter Visitor
Charadriidae	<i>Charadrius dubius</i> Scopoli, 1786	Ring Plover	Chhoto Noth Jiria	Water area	Common Winter Visitor / Resident
	<i>Charadrius alexandrinus</i> Linnaeus, 1758	Kentish Plover	Kentisher Jiria	Water area	Common Winter Visitor /Rare Resident
	<i>Charadrius mongolus</i> Pallas, 1776	Lesser Sand Plover	Chhoto Dhuli Jiria	Water area	Common Winter Visitor
	<i>Pluvialis squatarola</i> (Linnaeus, 1758)	Grey Plover	Mete Jiria	Water area	Common Winter Visitor
	<i>Arenaria interpres</i> (Linnaeus, 1758)	Ruddy Turnstone	Lal Nuribatan	Water area	Uncommon Winter Visitor
Accipitridae	<i>Buteo rufinus</i> (Cretzschmar, 1826)	Long-legged Buzzard	Dhuti (male), Beshra (female)	Terrestrial	Common Winter Visitor
	<i>Aquila clanga</i> Pallas, 1811	Greater Spotted Eagle	Boro Gutimar	Terrestrial	Rare Winter Visitor (Near Threatened)
Falconidae	<i>Falco tinnunculus</i> Linnaeus, 1758	Common Kestrel	Chhoto Shikrebaz	Terrestrial	Common Winter Visitor
	<i>Falco peregrinus</i> Tunstall, 1771	Peregrine Falcon	Peregine Shaheen	Terrestrial	Common Winter Visitor
Podicipedae	<i>Podiceps cristatus</i> (Linnaeus, 1758)	Great Crested Grebe	Khopa Duburi	Water area	Uncommon Winter Visitor
Phalacrocoracidae	<i>Phalacrocorax carbo</i> (Linnaeus, 1766)	Great Cormorant	Boro Pankouri	Water area	Common Winter Visitor

Order/Family	Scientific Name	English Name	Bangla Name	Habitat	Status in Bangladesh (IUCN, 2008)
Ardeidae	<i>Ardea cinerea</i> Linnaeus, 1758	Grey Heron	Dhushar Bok	Water area	Common Winter Visitor/ Resident
Passeriformes Laniidae	<i>Lanius cristatus</i> Linnaeus, 1758	Brown Shrike	Badami Koshai Pakhi	Terrestrial	Common Winter Visitor
	<i>Terpsiphone paradise</i> (Latham, 1758)	Paradise Flycatcher	Shah Bulbul	Terrestrial	Summer Visitor /Resident
	<i>Pericrocotus divaricatus</i> (Raffles, 1822)	Ashy Minivet	Dhushar Sat Saheli	Terrestrial	Common Winter Visitor
	<i>Dicrurus leucophaeus</i> Vieillot, 1817	Ashy Drongo	Dhusar Fingey	Terrestrial	Common Winter Visitor
Muscicapidae	<i>Muscicapa dauurica</i> Pallas, 1811	Asian-brown Flycatcher	Badami Chatak	Terrestrial	Passage Migrant
	<i>Eumyias thalassina</i> Swainson, 1838	Verditer Flycatcher	Firoza Chotok	Terrestrial	Common Winter Visitor
	<i>Saxicola ferrues</i> (Gray, 1846)	Grey Bushchat	Mete Jhar Fidda	Terrestrial	Winter Visitor / Passage Migrant
	<i>Saxicola insignis</i> Gray, 1846	Hodgson's Bushchat	Dholagola Jhar Fidda	Terrestrial	Common Winter Visitor
	<i>Saxicola leucura</i> (Blyth, 1847)	White-tailed Stonechat	Sada-lej Fidda	Terrestrial	Common Winter Visitor
	<i>Saxicola toquatas</i> (Linnaeus, 1766)	Eurasian Stoecat/ Common Stonechat	Pati Shila Fidda	Terrestrial	Common Winter Visitor
	<i>Luscinia svecica</i> Linnaeus, 1758	Bluethroat	Neelgola Fidda	Terrestrial	Common Winter Visitor
Hirundidae	<i>Riparia riparia</i> (Linnaeus, 1758)	Sand Martin	Balu Nakuti	Water area	Common Winter Visitor
Sylviidae	<i>Acrocephalus dumetorum</i> Blyth, 1849	Brown Back Reed Warbler	Badami Pith Nolphutki	Near Water area	Common Winter Visitor
	<i>Sylvia curruca</i> (Linnaeus, 1758)	Lesser Whitethroat	Chhoto Dholagola	Terrestrial	Rare Winter Visitor
Passeridae	<i>Motacilla citriola</i> Pallas, 1776	Citrine Wagtail	Holde-matha Khonjon	Near Water area	Common Winter Visitor
	<i>Motacilla alba</i> Linnaeus, 1758	White Wagtail	Sada Khonjon	Near Water area	Common Winter Visitor
	<i>M. a. leucopsis</i> (Linnaeus, 1758)	White Wagtail (sub-sp.)	Sada Khonjon (sub-sp.)	Near Water area	Common Winter Visitor

Order/Family	Scientific Name	English Name	Bangla Name	Habitat	Status in Bangladesh (IUCN, 2008)
	<i>M. a. personata</i> (Linnaeus, 1758)	White Wagtail (sub-sp.)	Sada Khonjon (sub-sp.)	Near Water area	Common Winter Visitor
	<i>Motacilla cinerea</i> Tunstall, 1771	Grey Wagtail	Dhusar Khonjon	Near Water area	Common Winter Visitor
	<i>Anthus richardi</i> Vieillot, 1818	Richard's Pipi	Richarder Tulika	Terrestrial	Common Winter Visitor
	<i>Anthus similis</i> Jerdon, 1840	Brown Rock Pipit	Lombathot Tulika	Terrestrial	Rare Winter Visitor
	<i>Anthus campestris</i> (Linnaeus, 1758)	Tawny Pipit	Tamatey Tulika	Terrestrial	Passage Migrant
	<i>Emberiza pusilla</i> Pallas, 1776	Little Bunting	Khude Chotok	Terrestrial	Common Winter Visitor

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