



Birds in Kurigram district of Bangladesh

Shawkat Imam Khan¹ & Habibon Naher²

¹ Department of Natural History, Bangladesh National Museum, Dhaka 1000, Bangladesh

² Lecturer, Department of Biology, Shahid Zia Girl's School and College, Jatrabari, Dhaka 1204, Bangladesh
Email: ¹ sukhi_194@yahoo.com

This study is an attempt to document the diversity, status, habitat, distribution and some other aspects of birds in Kurigram District in Bangladesh. Past major works of avifauna of Bangladesh include those of Khan (2005), Thompson & Johnson (2003), Islam (1970). The Kurigram District includes many islands or "Chars" making it difficult to assume the exact number of species of birds inhabiting these islands. These islands are of various sizes and they remain submerged during the monsoon and become exposed in winter. The area is very rich in faunal diversity, especially avifauna.

Study area

Kurigram (89°28'-89°50'E & 25°20'-26°15'N) is one of the northern districts of Bangladesh. The states of West Bengal and Assam in India border the north and east of Kurigram, respectively. Native district Gaibanda is to the south and Lalmonirhat and Rangpur districts are to the west. Kurigram District proper is 301km by road and 307km by rail from Dhaka. Total area of the district is 2296km² covering nine thanas (precincts). In the northern section of Kurigram is the flood plain of the Tista River while in the south is the Ganga-Brahmaputra basin. The north is at an altitude of 30m while the rest is 10m. The Tista, the Brahmaputra and the Dharala are the major rivers crisscrossing the district (Fig. 1). The annual rainfall is 2200mm. The temperature ranges between 9.3° and 36.7°C.

Materials and Methods

Field surveys were conducted along the rivers Dharala and Brahmaputra in Kurigram District from November 2000 to February 2002 to document avifaunal diversity. Birds were recorded during the first and last weeks in each month, between

0630-1800hr everyday.

Existing roads, bridle paths, embankments, cattle trails, agricultural fields, riversides, rivers, canals and pond banks were used to cover the study area.

All types of habitats were visited monthly. Most field visits were carried out on foot but sometimes vehicles were also used to cover long distances. A motorized boat was also used to cover the rivers and the canals.

Observations were made either with a pair of binoculars or by naked eyes depending on the distance of the bird. Standard literature (Ali 1996; Ali & Ripley 1983; Grimmett et al. 1999) were followed for species identification, gait, flight pattern, habitat, call and sitting posture.

Status of the recorded birds was assessed on the basis of standard methods outlined by Khan (1980). The status categories are: Very Common (VC) - bird species which were recorded on 80-100% of the field visits; Common (C) - species that were observed on 50-79% of the field visits; Fairly Common (FC) - species that were found on 20-49% of the field visits; and Rare (R) - species that were found on less than 19% of the visits.

We determined the status of each bird species using calculations, in terms of percentage of occurrence, while earlier studies (Khan 1980, 1982) determined these categories based on assumption and experience. Resident and migratory species were recognized by consulting old records (IUCN 2000; Harvey 1990; Khan 1982) and through our observations.

Resident - species that are found year-round and some of which were seen to make nests;

Migratory - species recorded only at certain times of the year.

Three canopies (levels) of vegetation could be recognized in the study area:

1. Lower canopy: maximum height of about 4m from the ground, including bushes, shrubs, small trees, and lower parts of big trees.
2. Middle canopy: 4-10m above the ground and
3. Upper canopy: above 10m high.

The bird species have been listed according to the taxonomic classification of Inskipp et al. (1996).

Results and Discussion

The avifaunal diversity of Bangladesh includes 632 species of birds belonging to 16 orders and 67 families (IUCN 2000). A total of 105 (16.6%) species (Table 1) of birds were recorded in the Kurigram District, belonging to 12 orders, 35 families, and 77 genera. Recorded species comprised of 51 (48.6%) non-passerine and 54 (51.4%) passerine birds. Out of 105 species, 33 (31.4%) were migratory and 72 (68.6%) were resident. Among the 51 species of non-passerine birds, 15 (29.4%) migratory and 36 (70.6%) were resident, while, among the 54 species of passerine birds, 18 (33.3%) were migratory and 36 (66.7%) were resident.

During the study period, out of 105 species, 14 (13.3%) were found to be very common, 30 (28.6%) common, 25 (23.8%) fairly common and 36 (34.3%) rare or few.

During observations, it was noticed that many species used more than one habitat. Out of 105 species, 30 (28.6%) species used aquatic and semi-aquatic habitats including river,

Date of publication 26 April 2009

ISSN 0974-7907 (online) | 0974-7893 (print)

Editor: C. Srinivasulu

Manuscript details:

Ms # o1698

Received 30 December 2006

Final revised received 29 November 2007

Finally accepted 19 June 2008

Citation: Khan, S.I. & H. Naher (2009). Birds in Kurigram district of Bangladesh. *Journal of Threatened Taxa* 1(4): 245-250.

Copyright: © Shawkat Imam Khan & Habibon Naher 2009. Creative Commons Attribution 3.0 Unported License. JoTT allows unrestricted use of this article in any medium for non-profit purposes, reproduction and distribution by providing adequate credit to the authors and the source of publication.

OPEN ACCESS | FREE DOWNLOAD



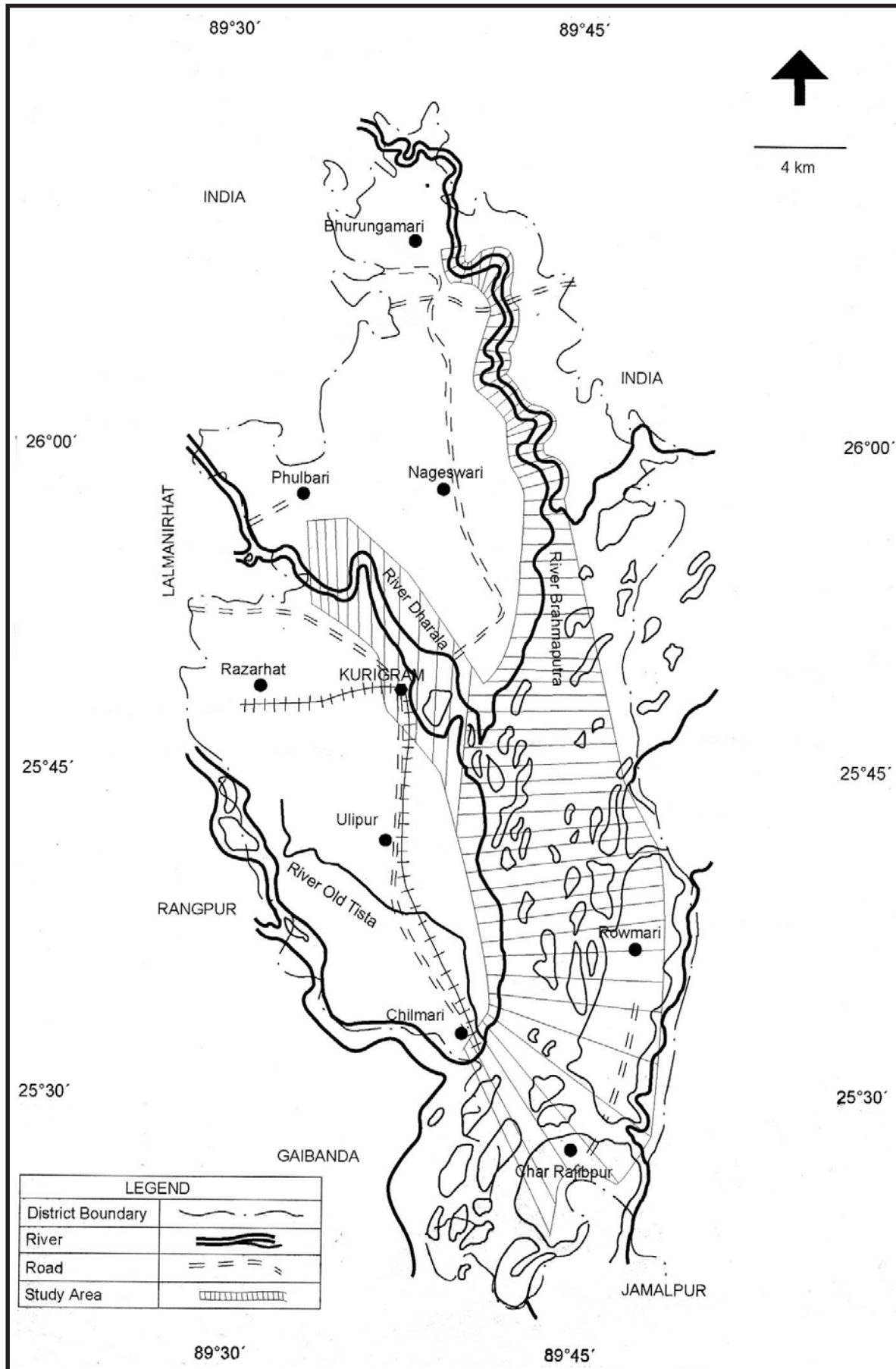


Figure 1. Map of the study area

Table 1. Systematic list of the bird species recorded along the Dharala and Brahmaputra rivers in Kurigram District, Bangladesh from November 2000 to February 2002.

Scientific name	Common Name	Migratory (M) / Resident (R)	Habitat	Local status	Local Distribution
Order: Anseriformes					
Family: Anatidae					
<i>Anser anser</i>	Greylag Goose	M	r, re	Ra	NE
<i>Tadorna ferruginea</i>	Ruddy Shelduck	M	r, re	Fc	NE
<i>Anas platyrhynchos</i>	Mallard	M	r	Ra	NE
Order: Piciformes					
Family: Picidae					
<i>Dinopium benghalense</i>	Black-rumped Flameback	R	T	Vc	W
<i>Celeus brachyurus</i>	Rufous woodpecker	R	J	Fc	Cn
Family: Megalaimidae					
<i>Megalaima asiatica</i>	Blue-throated Barbet	R	T	C	Cn, NW
<i>Megalaima rubricapilla</i>	Crimson-fronted Barbet	R	T	C	W
<i>Megalaima haemacephala</i>	Coppersmith Barbet	R	T	Fc	NW
Order: Upupiformes					
Family: Upupidae					
<i>Upupa epops</i>	Common Hoopoe	R	V	Ra	NE
Order: Coraciiformes					
Family: Alcedinidae					
<i>Alcedo atthis</i>	Common Kingfisher	R	T, We,	C	W
<i>Alcedo meninting</i>	Blue-eared Kingfisher	R	J, We	Ra	Cn
<i>Halcyon smyrnensis</i>	White-throated Kingfisher	R	V, J, r	C	W
Family: Cerylidae					
<i>Ceryle rudis</i>	Pied Kingfisher	R	re	C	W
Family: Coraciidae					
<i>Coracias benghalensis</i>	Indian Roller	R	T	Ra	Cn, NE
Family: Meropidae					
<i>Merops orientalis</i>	Green Bea-eater	R	T	Fc	W
Order: Cuculiformes					
Family: Centropodidae					
<i>Hierococcyx varius</i>	Common Hawk Cuckoo	R	V	Fc	W
<i>Cuculus micropterus</i>	Indian Cuckoo	R	V, T	Fc	N, NE, NW
<i>Eudynamis scolopacea</i>	Asian Cuckoo	R	T	C	W
<i>Centropus sinensis</i>	Greater Coucal	R	T	Fc	W
Order: Psittaciformes					
Family: Psittacidae					
<i>Psittacula krameri</i>	Roseringed Parakeet	R	V	Fc	W
Order: Apodiformes					
Family: Apodidae					
<i>Cypsiurus balasensis</i>	Asian Palm Swift	R	ht	Vc	W
<i>Apus affinis</i>	House Swift	R	ht	Vc	W
Order: Strigiformes					
Family: Strigidae					
<i>Athene brama</i>	Spotted owl	R	J	Ra	W
Order: Columbiformes					
Family: Columbidae					
<i>Columba livia</i>	Rock Pigeon	R	ht	C	Cn
<i>Streptopelia tranquebarica</i>	Red Collared Dove	R	T, V	Ra	Cn, N
<i>Streptopelia chinensis</i>	Spotted Dove	R	T, V, J	C	W
<i>Streptopelia decaocto</i>	Eurasian Collared Dove	R	T, V, J	C	NE, NW
Order: Gruiformes					
Family: Rallidae					
<i>Amauromis phoenicurus</i>	White-breasted Waterhen	R	P, We	Fc	W
Order: Ciconiiformes					
Family: Scolopacidae					
<i>Actitis hypoleucos</i>	Common Sandpiper	M	S	C	W
<i>Tringa glareola</i>	Wood Sandpiper	M	re	Ra	NE, NW
<i>Tringa stagnatilis</i>	Marsh Sandpiper	M	re	Ra	NE, NW
<i>Calidris minuta</i>	Little Stint	M	S	Ra	NW
<i>Tringa nebularia</i>	Greenshank	M	re	Ra	NE, NW
<i>Tringa totanus</i>	Common Redshank	M	re	Ra	NE, NW
Family: Glareolidae					
<i>Charadrius alexandrinus</i>	Kentish Plover	M	S	Fc	NW
<i>Charadrius dubius</i>	Little Ringed Plover	M	S	Vc	W
<i>Charadrius mongolus</i>	Lesser Sand Plover	M	re	Fc	SE
<i>Charadrius placidus</i>	Long-billed Ringed Plover	M	re, S	Ra	Cn, NE

Scientific name	Common Name	Migratory (M) / Resident (R)	Habitat	Local status	Local Distribution
Family: Accipitridae					
<i>Milvus migrans</i>	Black Kite	R	ht	C	W
<i>Haliastur indus</i>	Brahminy Kite	R	V	Ra	NE, NW
<i>Accipiter badius</i>	Shikra	R	V, T	Ra	N
<i>Circus macrourus</i>	Pallid Harrier	M	T	Ra	Cn
Family: Falconidae					
<i>Falco tinnunculus</i>	Common Kestrel	M	V, O	Ra	W
Family: Phalacrocoracidae					
<i>Phalacrocorax niger</i>	Little Cormorant	R	r	C	W
<i>Phalacrocorax carbo</i>	Great Cormorant	R	r	Ra	Cn
Family: Ardeidae					
<i>Egretta garzetta</i>	Little Egret	R	we	Vc	W
<i>Mesophoyx intermedia</i>	Intermediate Egret	R	we	C	W
<i>Casmerodius albus</i>	Great Egret	R	re	Ra	N
<i>Bubulcus ibis</i>	Cattle Egret	R	pf, re	C	W
<i>Ardea cinerea</i>	Grey Heron	R	re	Ra	N
<i>Ardeola grayii</i>	Indian Pond Heron	R	P, r	Vc	W
Order: Passeriformes					
Family: Irenidae					
<i>Chloropsis aurifrons</i>	Golden-fronted Leafbird	R	V, J	Ra	W
Family: Laniidae					
<i>Lanius schach</i>	Long-tailed Shrike	R	V	C	W
<i>Lanius cristatus</i>	Brown Shrike	M	V	Fc	W
Family: Corvidae					
<i>Dendrocitta vagabunda</i>	Rufous Treepie	R	J, V	C	Cn, SE, SW
<i>Corvus splendens</i>	House Crow	R	ht	Fc	W
<i>Corvus macrorhynchos</i>	Jungle Crow	R	V	C	W
<i>Oriolus chinensis</i>	Black-naped Oriole	M	V	Ra	SE
<i>Oriolus xanthornus</i>	Black-headed Oriole	R	V, ht	C	W
<i>Pericrocotus ethologus</i>	Long-tailed Minivet	M	ri	C	NE, NW
<i>Pericrocotus flammeus</i>	Scarlet Minivet	R	V, ri	Ra	Cn, NE
<i>Dicrurus macrocercus</i>	Black Drongo	R	ht	Vc	W
<i>Dicrurus leucophaeus</i>	Grey Drongo	M	T, J	Fc	W
<i>Aegithina tiphia</i>	Common Iora	R	V, J	C	W
Family: Muscicapidae					
<i>Turdus naumanni</i>	Dusky Thrush	M	J	Ra	NW
<i>Zosterops citrina</i>	Orange-headed Thrush	M	V	Ra	Cn, NW
<i>Muscicapa dauurica</i>	Asian Brown Flycatcher	M	V, ri	Fc	NE, NW
<i>Culicicapa ceylonensis</i>	Grey-headed canary Flycatcher	R	V	Fc	W
<i>Luscinia svecica</i>	Bluethroat	M	ri	Ra	SE, SW
<i>Copsychus saularis</i>	Oriental Magpie Robin	R	ht	C	W
<i>Phoenicurus ochruros</i>	Black Redstart	M	ri	Ra	NE
<i>Heterophasia picaoides</i>	Long-tailed Sibia	M	V, J	Fc	NE
Family: Sturnidae					
<i>Sturnus contra</i>	Asian Pied Starling	R	ht	Vc	W
<i>Sturnus malabaricus</i>	Chestnut-tailed Starling	R	V	Fc	SW
<i>Acridotheres tristis</i>	Common Myna	R	ht	C	W
<i>Acridotheres fuscus</i>	Jungle Myna	R	V, J	C	W
<i>Acridotheres ginginianus</i>	Bank Myna	R	L	Ra	NW
Family: Paridae					
<i>Parus major</i>	Great Tit	R	V	Fc	W
<i>Riparia riparia</i>	Sand Martin	M	V	Ra	W
Family: Hirundinidae					
<i>Hirundo rustica</i>	Barn Swallow	M	V	Vc	W
Family: Pycnonotidae					
<i>Pycnonotus cafer</i>	Red-vented Bulbul	R	V, ht	Vc	W
<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul	R	ht	Fc	Cn, SE
Family: Cisticolidae					
<i>Prinia inornata</i>	Plain Prinia	R	ri	C	NE, NW
<i>Prinia sylvatica</i>	Jungle Prinia	R	ri	Vc	NE, NW
<i>Prinia flaviventris</i>	Yellow-bellied Prinia	R	ri	Ra	NE
<i>Prinia gracilis</i>	Graceful Prinia	R	ri	Vc	NE, NW
Family: Zosteropidae					
<i>Zosterops palpebrosus</i>	Oriental White-eye	R	V	C	W
Family: Sylviidae					
<i>Phylloscopus fuscatus</i>	Dusky Warbler	M	ri	Fc	NE, NW
<i>Orthotomus sutorius</i>	Common Tailorbird	R	V	C	W
<i>Malacocincla abbotti</i>	Abbot's Babbler	R	V, J	Ra	SW
<i>Turdoides striatus</i>	Jungle Babbler	R	J	C	W

Scientific name	Common Name	Migratory (M) / Resident (R)	Habitat	Local status	Local Distribution
Family: Alaudidae					
<i>Mirafra erythroptera</i>	Indian Bushlark	R	J	Fc	W
<i>Calandrella raytal</i>	Sand Lark	R	S, re	Ra	NW
Family: Nectariniidae					
<i>Dicaeum erythrorhynchos</i>	Pale-billed Flowerpecker	R	V	C	W
<i>Dicaeum concolor</i>	Plain Flowerpecker	R	V	Fc	SE
<i>Nectarinia asiatica</i>	Purple Sunbird	R	V, J	C	W
Family: Fringillidae					
<i>Emberiza pusilla</i>	Little Bunting	M	V	Ra	NW, SW
Family: Passeridae					
<i>Passer domesticus</i>	House Sparrow	R	ht	Vc	W
<i>Motacilla flava</i>	Yellow Wagtail	M	S, re	Ra	NE, NW
<i>Motacilla alba</i>	White Wagtail	M	S, re	Vc	W
<i>Motacilla cinerea</i>	Grey Wagtail	M	S, re	Fc	W
<i>Anthus rufulus</i>	Paddyfield Pipit	M	ri	Ra	NW
<i>Ploceus philippinus</i>	Baya weaver	R	V	C	W
<i>Lonchura malacca</i>	Black-headed Munia	R	V	Fc	SW
<i>Lonchura punctulata</i>	Scaly-breasted Munia	R	V, ri	Ra	SW

Habitat: r – River; re – River edge; T – Tree; J – Jungle; V – Village area; We – Water edge; P – Pond, S – Sand; pf – Paddy field; L – Land; O – Open field; ri – River island; ht – Homestead area

Local status: Ra – Rare; Fc – Fairly common; Vc – Very common; C – Common

Local Distribution: W – Wide; N – North; NE – Northeast; NW – Northwest; SE – Southeast; SW – Southwest; Cn – Central

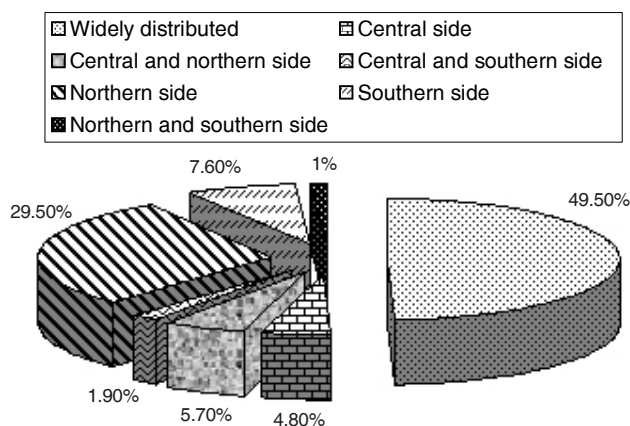


Figure 2. Distribution of birds in the study area

riverside areas, ponds, water edges, beaches etc. The rest, 75 species (71.4%), were observed on land, in agricultural fields, trees, village, bush, etc. Many aquatic and semi-aquatic species used terrestrial habitats and vice versa. Terrestrial areas supported more species because the areas were favorable for feeding and nesting purposes and had comparatively good vegetation.

Species distribution was not the same throughout the study area. Out of 105 species, 52 (49.5%) were widely distributed in Kurigram District (Fig. 2). From the remaining 53 (50.5%) species, 31 (29.5%) were restricted only to the northern side, five (4.8%) to the central side, and 8 (7.6%) to the southern side. Nine (8.6%) species were common in two or three parts of the study area among which six (5.7%) were recorded from the central and northern sides, two (1.9%) were from the central and southern sides, and only one (1%) was common in the northern and southern parts of the study area. From our observations it was apparent that the northern side of the study area supported more species because it was far away from human habitation and less disturbed.

Among the three canopy levels, 16 (15.2%) species were

recorded in lower canopy, 32 (30.5%) were recorded in both lower and middle canopies, 19 (18.1%) species in upper and middle canopies, and only 1 (1%) species in upper canopy. Thirty-seven (35.2%) species used all three canopy levels.

A total of 44 species of plants were observed being used by birds. Among these 15 (34.1%) were fruiting trees and 18 (40.9%) woody trees, 10 (22.7%) were shrubs, and only 1 (2.3%) was an aquatic species. Out of 105 species, 30 (28.6%) were predominantly ground dwelling birds, five (4.8%) species were observed on fruiting trees, four (3.8%) species were observed on woody trees, and 16 (15.2%) species were observed on shrubs only. Five (4.8%) species of birds used all types of plants species. Each of the cultivated fields and aquatic vegetation contained only a single (1%) species.

From direct observation it was found that most of the birds eat a variety of food types. When a bird eats a single item of food more than 60 percent of the time, then we considered it as the main food type for that species. Of the total (105) species of birds, 48 (45.7%) were insectivorous, 11 (10.4%) grainivorous, five (4.8%) frugivorous, 10 (9.5%) piscivorous, five (4.8%) predatory, and 19 (18.1%) species of birds were omnivorous. Only one (1%) was vegetarian and the foods of six (5.7%) species could not be determined.

References

Ali, S. (1996). *The Book of Indian Birds* (12th revised and centenary edition). Bombay Natural History Society, New Delhi, 345pp.

Ali, S. & S. D. Ripley (1983). *A Pictorial Guides to the Birds of the Indian Subcontinent*. Bombay Natural History society, New Delhi. ii + 177pp.

Grimmett, R., C. Inskipp & T. Inskipp (1999). *Pocket Guide to the Birds of the Indian Subcontinent*. Oxford University Press. New Delhi, 888pp.

Harvey, W.G. (1990). *Birds in Bangladesh*. University Press Limited. Dhaka. viii + 188 pp.

Inskipp, T., N. Lindsey & W. Duckworth (1996). *An Annotated Checklist of the Birds of the Oriental Region*. Oriental Bird Club. Berdfordshire, 294pp.

IUCN (2000). *Red Book of Threatened Birds of Bangladesh*. IUCN-The World Conservation Union, xii + 116pp.

Khan, M.A.R. (1982). *Wildlife of Bangladesh: A Checklist*. University of

Dhaka, Dhaka, iv + 174pp.

Khan, M.A.R. (1980). A Comparative account of the avifauna of the shoals and the neighbouring plantation in the Nilgiri. *Journal of the Bombay Natural History Society* 75(3): 1028-1035.

Khan, M.M.H. (2005). Species diversity, relative abundance and habitat use of the birds in the Sundarbans East Wildlife Sanctuary,

Bangladesh. *Forktail* (21): 79-86.

Thompson, P.M. & D.L. Johnson (2003). Further notable bird records from Bangladesh. *Forktail* (19): 85-102.

