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BIRDS OF POCHAMARIA OF PUTHIA UPAZILA IN RAJSHAHI, BANGLADESH

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ABSTRACT

A study was carried out on the birds of Pochamaria in Shilmaria Union Parishad under Puthia Upazila of Rajshahi District through direct field observations during the winter season from October 2009 to March 2010. A total of 54 species of birds belonging to 9 orders, 26 families and 45 genera were recorded. Among them, 26 (48.15%) species were passerines and 28 (51.85%) non-passerines, and 42 (77.8%) were resident species, 8 (14.8%) locally migratory and 4 (7.4%) winter visitor to Pochamaria. A total of 2,394 trees and 158 bamboo clusters support the roosting habitat. The environmental and human impacts on the roosting colonies and their population ecology and conservation awareness need further study.

Key words: Birds, Pochamaria, Rajshahi, population, roosting.

INTRODUCTION

Birds are warm-blooded, feathered vertebrates, which capable of powered flight. They have adapted to a wide range of habitats and are mainly arboreal, but some species are terrestrial. Domestic birds have lost their ability to fly. Birds play a vital role in maintaining essential ecological balance, and play a dominant role in controlling various pests, scavenging, pollinating and as well as providing us food. They also act as ecological indicators. There are about 9,703 species of birds divided up into 23 orders, 142 families, and 2,057 genera in the world (Sibley and Monroe 1993). There are about 650 species of birds in 16 orders, 64 families, and 295 genera, in Bangladesh (Siddiqui *et al.* 2008). Every county of a country should have a list of its birds because they are important biological components of all types of ecosystem (Ahsan and Khanom 2005). Therefore, an attempt was made to prepare a checklist and find out the roosting season and roosting season habitats of birds of the Pochamaria area.

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STUDY AREA

The study area is located at the village of Pochamaria (24°37′50″ N and 88°85′00″ E) in Shilmaria Union Parishad in Puthia Upazila under the Rajshahi District. This area is 17 km north from Puthia Upazila Headquarters and covers an area of about 8 ha. The soil of the study area is mainly loamy and is suitable for cultivation of various crops. The study area includes clusters of bamboos, homestead planted vegetations, agricultural fields and mixed orchards of mango, banana, jujube tree, mahogany, etc. The birds prefer to roost on the higher canopy of the bamboo clusters (*Bambusa tulda*), shil koroi (*Albizia procera*), shimul (*Salmalia malabarica*), mango (*Mangifera indica)* and mahogany (*Swietenia mahagoni*). There are 158 bamboo clusters and 2,394 trees of 30 species present within the study area to support the birds for roosting and shelter. The bamboo clusters mostly provide the roosting places for most of the species as these parts of vegetations are less disturbed. The birds visit the surrounding feeding places (*beels*) very early in the morning and return in the evening.

METHODS

The birds were observed and identified either through naked eyes and/or with the help of a pair of binoculars (Bushnell 10 x 40), and a field guide (Grimmett *et al*. 1999). A digital camera (Sony Cyber shot 10.1 Mega pixel, Model no. DSC-H20) was used for collecting photographs. The birds were identified on the basis of visible characters of external morphology (color, size, shape, flight, walk, etc.), habitat, their song and call sounds also used by Ali (2002), Ali and Ripley (1983), Sonobe and Usui (1993) and Grimmett *et al*. (1998). Birds were counted by both direct block method and indirect (i.e., call and song) method illustrated by Giles (1971) and Ahsan (2007). Data were collected by dividing the main roosting area into 20 blocks and the populations of 10 blocks were counted by random sampling method. Counting was repeated four times during the study period and then an average was calculated. The status of the recorded species of birds was assessed following Khan (1982). The local people of that area provided information about the feeding ground, roosting place and their efforts in protecting the birds.

RESULTS

Population

During the study period 54 species of birds belonging to 45 genera under 26 families of 9 orders were recorded (Table 1). Block counts method revealed that the total populations of all recorded species were 10,000 of which 26 (48.15%) were passerines and 28 (51.85%) were non- passerines. During roosting time, both resident and migratory (local and national) birds roost in the study area. Among 54 species, 42 (77.8%) were resident, 8 (14.8%) locally migratory and 4 (7.4%) winter visitor (national migratory) to Pochamaria. The population of little cormorant (*Phalacrocorax niger*) was the highest numbering, about 1,500 (15%), and the darter (*Anhinga melanogaster)* the lowest, 5 (0.05%), among the main roosting birds.

TABLE 1: BIRDS OF POCHAMARIA WITH THEIR STATUS

Sl. No.	**Family**	**Scientific name**	**Common name**	**Vernacular name**
	Non-passerine			
1	Picidae	*Dendrocopos macei* (Vieillot)	Fulvous-breasted woodpecker	Batabi Kathkurali
2		*Dinopium benghalense* (L.)	Lesser goldenback woodpecker	Bangla Kaththokra
3	Capitonidae	*Psilopogon lineatus* (Vieillot)	Lineated barbet	Dagi boshonta bauri
4		*Psilopogon haemacephalus* (Müller)	Coppersmith barbet	Choto basanto bauri
5	Coraciidae	*Coracias benghalensis* (L.)	Indian roller	Neelkantha
6	Alcedinidae	*Alcedo atthis* (L.)	Common kingfisher	Pati/Chotot machranga
7	Dalcelonidae	*Halcyon smyrnensis* (L.)	White-throated kingfisher	Dholagola machranga
8	Meropidae	*Merops orientalis* Latham	Green bee-eater	Banaspati
9	Cuculidae	*Eudynamys scolopaceus* (L.)	Asian koel	Kokil
10	Centropodidae	*Centropus bengalensis* (Gmelin)	Lesser coucal	Kukka
11	Psittacidae	*Psittacula krameri* (Scopoli)	Rose-ringed parakeet	Tia
12	Apodidae	*Cypsiurus balasiensis* (Gray)	Asian palm swift	Nakkati
13		*Apus nipalensis* (Gray)	House swift	Ghor batashi
14	Strigidae	*Athene brama* (Temminck)	Spotted owlet	Khuruley pencha
15	Columbidae	*Columba livia* Gmelin	Rock pigeon	Jalali kobutor
16		*Spilopelia chinensis* Gmelin	Spotted dove	Tila ghughu
17	Accipitridae	*Milvus migrans* (Boddaert)	Black kite	Bhubon chil
18		*Haliastur indus* (Boddaert)	Brahminy kite	Shonkho chil
19	Anhingidae	*Anhinga melanogaster*# Pennant	Oriental darter	Udoi goyar
20	Phalacrocoracidae	*Phalacrocorax carbo*** L.	Great cormorant	Boro pankauri
21		*Phalacrocorax fuscicollis** Stephens	Indian cormorant	Deshi pankowri
22		*Microcarbo niger* (Vieillot)	Little cormorant	Choto pankauri
23	Ardeidae	*Egretta garzetta* (L.)	Little egret	Choto bok
24		*Egretta intermedia* (Wagler)	Intermediate egret	Majlari bok
25		*Ardea albus* (L.)	Great egret	Boro bok, Jathua
26		*Ardeola grayii* (Skyes)	Indian pond heron	Kani Bok
27		*Nycticorax nycticorax* (L.)	Black-crowned night heron	Waak
28	Ciconiidae	*Anastomus oscitans* (Boddaert)	Asian open-bill stork	Shamukh bhanga

TABLE 1:. Contd.

	Passerine	Scientific name	Common name	Vernacular name
29	Laniidae	*Lanius cristatus*** (L.)	Brown shrike	Badami koshai
30		*Lanius schach* L.	Long-tailed shrike	Lenja latora
31	Corvidae	*Dendrocitta vagabunda* (Latham)	Rufous treepie	Hari chacha
32		*Corvus levaillantii* Lesson	Large-billed crow	Danr kak
33		*Corvus splendens* Vieillot	House crow	Pati kak
34		*Oriolus xanthornus* (L.)	Black-hooded oriole	Halde pakhi
35		*Dicrurus macrocercus* Vieillot	Black drongo	Kala fingey
36		*Terpsiphone paradisi**** (L.)	Asian paradise flycatcher	Eshio shabulbuli
37		*Aegithina tiphia* (L.)	Common iora	Fatik jal
38	Muscicapidae	*Culicicapa ceylonensis*** (Swainson)	Grey headed canary flycatcher	Futki
39		*Copsychus saularis* (L.)	Oriental magpie robin	Doel
40	Sturnidae	*Sturnus contra* (L.)	Pied myna, Asian pied starling	Gobrey shalik
41		*Sturnus malabaricus* (Gmelin)	Grey headed starling	Kath shalik
42		*Acridotheres fuscus* (Wagler)	Jungle myna	Jhuti shalik
43		*Acridotheres tristis* (L.)	Common myna	Bhat shalik
44	Paridae	*Parus major* L.	Great tit	Tit pankhi
45	Pycnonotidae	*Pycnonotus cafer* (L.)	Red-vented bulbul	Bulbul
46		*Pycnonotus jocosus* (L.)	Red-whiskered bulbul	Sipahi bulbul
47	Silvidae	*Orthotomus sutorius* (Pennant)	Common tailorbird	Pati tuntuni
48		*Turdoides striata* (Dumont)	Jungle babbler	Bon satarey, Sat-bhaia
49	Nectariniidae	*Leptocoma zeylonica* (L.)	Purple-rumped sunbird	Begunikomor moutushi
50		*Nectarinia asiatica* (Latham)	Purple sunbird	Beguni moutushi
51	Passeridae	*Passer domesticus* (L.)	House sparrow	Chorui
52		*Motacilla alba*** L.	White wagtail	Dhola khonjon
53		*Ploceus philippinus* (L.)	Baya weaver	Deshi babui
54		*Lonchura punctulata* (L.)	Scally-breasted munia	Tila munia

*** indicates uncommon resident and summer visitor, ** winter visitor, *vagrant (winter visitor), # uncommon resident, and others are common resident.

Roosting season

The birds start arriving at Pochamaria during the beginning of the winter (November and December) mostly for roosting. They start to leave the place in February and complete leaving by March. The cormorants (*Phalacrocorax* spp.), night heron (*Nycticorax nycticorax*), darter (*A. melanogaster*) were the first to arrive and the Asian open-bill stork (*Anastomus oscitans*) the last.

DISCUSSION

The birds mainly roosted in the bamboo clusters (*Bambusa tulda*), shil koroi (*Albizia procera*), shimul (*Salmalia malabarica*), mango (*Mangifera indica)* and mahogany (*Swietenia mahagoni*). Among the 54 species of birds some species (e.g., darter, cormorants, egrets, etc.) roosted in the upper canopy of trees, some (e.g., night heron) preferred to live in the middle canopy and others (e.g., jungle babler, Asian koel, rufous treepie, etc.) in the lower canopy and bushes. The birds come to that place due to safe shelter and availability of food in the winter season; when the summer approaches, food becomes scarce and the birds start to leave the place. The birds have both negative and positive impacts in that area. The negative impacts are: (1) guano of the birds makes the place dirty; (2) peoples suffer from the dusty smell of their guano; (3) they create chirping noise and (4) the enormous number of birds need huge amount of food from the habitat (beels, khals, ponds and rivers) which creates shortage of fish supply (said by local people) for human.

The positive impacts of these birds are: (1) the guano of birds acts as fertilizers and it fertiles the lands, ponds and beels and provides a good source of fish food; (2) the people of surrounding areas and also the bird lovers come to the place for observing the birds for study and recreation; and (3) the birds play an important role in controlling various pests from the crop fields and thus help economically.

Mr. Md. Sajjad Hossain Mukul, Chairman of 5 No. Shilmaria Union Parishad under Puthia Upazila of Rajshahi, took initiatives to create awareness amongst the local people against bird hunting and formed a committee for conserving the birds in that area, thus the hunting of birds has been totally stopped and they live freely there. But now, the roosting habitat of birds is being destroyed through cutting big trees day by day for financial benefits of the land owners. Thus birds are losing their habitats at an alarming rate and also extending their roosting habitats to the surrounding areas and subsequently the bird population of that area is decreasing day by day. To protect the habitat of birds, Government and NGOs should come forward to take necessary steps.

REFERENCES

AHSAN, M.F. 2007. Bird counting methods. In: *Wildlife Management Training Manual* (T.K. Dey ed.). Dulahazara Safari Park, Advance Development Project of Cox′s Bazar, Forest Directorate, Bangladesh. pp. 399-404.

AHSAN, M.F. AND KHANOM, N. 2005. Birds of the Chittagong University Campus, Chittagong. *The Chittagong Univ. J. Sci.* **29**: 77-88.

ALI, S. 2002. *The Book of Indian Birds, Thirteen Revised Edition.* Bombay Natural History Society. Mumbai. 326 pp.

ALI, S. AND RIPLEY, S.D. 1983. *Handbook of the Birds of India and Pakistan Together with Those of Bangladesh Nepal Bhutan and Sri Lanka, Compact Edition.* Oxford University Press, Delhi, Oxford, New York. 737 pp.

GILES, R.H. 1971. *Wildlife Management Technique.* Prepared by the Wildlife Technique Mammal Committee. The Wildlife Society Washington, D.C. 549 pp.

GRIMMETT, R., INSKIPP, C. AND INSKIPP, T. 1998. *Birds of the Indian Subcontinent.* Oxford University Press, New Delhi. 888 pp.

GRIMMETT, R., INSKIPP, C. AND INSKIPP, P. 1999. *Pocket Guide to the Birds of the Indian Subcontinent.* Oxford University Press, New Delhi. 384 pp.

KHAN, M.A.R. 1982. *Wildlife of Bangladesh: A Checklist.* The Dhaka University Press, Dhaka. 173 pp.

SIBLEY, C.G. AND MONROE, B.L. 1993. *A World Checklist of Birds.* Yale University Press. New Heaven and London. 393 pp.

SIDDIQUI, K.U., ISLAM, M.A., KABIR, S.M.H., AHMAD, M., AHMED, 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*, *Vol. **26**. Birds*. Asiatic Society of Bangladesh, Dhaka. 662 pp.

SONOBE, K. AND USUI, S. (eds.) 1993. *A Field Guide to the Water Birds of Asia*. Wild Bird Society of Japan, Tokyo. 224 pp.

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