



AVIFAUNA OF THE NATIONAL BOTANICAL GARDEN OF BANGLADESH

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ABSTRACT

The study was conducted to identify the occurrence and status of Avifauna in National Botanical Garden, Bangladesh (NBGB), by direct field observation from September 2011 to February 2012. A total of 65 species of birds belonging to 11 orders, 28 families and 53 genera were observed. Majority of the birds were resident (56 spp.) and very few were migratory (9 spp.) in nature. Among the identified birds, 34 species were passerine of which 29 species were resident and 31 species were non-passerine of which 30 species were resident. Identified birds were categorized into five groups (rare, few, fairly common, common and very common) based on their abundances where, more than half of the birds were found to be very common.

Key words : Bird's Status, National Botanical Garden, Bangladesh.

INTRODUCTION

Diversity of birds is considered to be a good indicator of the health of an ecosystem. Birds occupy a wide range of habitats from open field to forest, desert to high mountain and even up to ice zone. Bangladesh, having an area of 1,47,570 sq km, harbors about 650 species of birds, of which two have already been extinct and 47 species of birds fall under different categories of threats to extinction (IUCNB 2000). According to Siddique *et al.* (2008), 143 species are to be vagrant and 477 species are regularly seen. Of the regularly visited species, 302 species are residents and 176 are seasonal visitors. Unfortunately, lack of conservation awareness and scientific monitoring of these resources, they may face adverse conditions for their existence. The study was conducted at the National Botanical Garden of Bangladesh (NBGB) consisting of an area of 204 acre (84ha), divided into 57 compartments based on predominant flora. There are about 950 species of flora that includes trees, shrubs, herbs and others. There are also 7 water bodies in this garden that support different species of aquatic birds. Although, the main aims of this garden is to conserve plants but these flora harbor a large number of fauna for sustainable ecological balance. Due to habitat destruction, scarcity of food and other unavoidable circumstances, very few species of birds are seen in Dhaka city. Despite these facts, NBGB is known to be a key area in Dhaka city for bird watchers. However, there is no available published record of the bird status of NBGB. Hence, an attempt was taken to conduct a field survey to provide basic information on bird species with their status at the NBGB that might be helpful for extended workers.

MATERIALS AND METHODS

Data were collected by direct observations in the field during a period of six months (September 2011 to February 2012), mainly in the morning time (7-11am), when the birds were most active. Observations were made with the help of a binocular (Bushnell 8x21) and where possible photographs were taken by Semi DSLR or DSLR cameras (Lumix FZ50 and Nikon P100) in order to confirm the identification. Field guides, texts, reports and papers were frequently used for this purpose. Texts written by Halder (2010) and Grimmett *et al.* (1999) were consulted to study status of birds. Residency of the birds was categorized based on nesting and breeding activities and in rare cases, based on literatures given by Khan (2008), Sarker and Sarker (1988) and Rahman *et al.* (2011). At least 4 hours were spent every week for field observation and only the species with confirmed identification were listed.

RESULTS AND DISCUSSION

A total 65 species of birds belonging to 11 orders were recorded from the National Botanical Garden of Bangladesh (Table 1) under 28 families and 51 genera, none of which was categorized as threatened (IUCNB, 2000). Mohsanin and Khan (2009) found 180 species in Jahangirnagar University Campus (JUC) during a study period of 17 months. Current study listed only 6 months data which is shorter than the study of Mohsanin and Khan (2009). Duration of study may be a reason for recording less number of species in the present study. Besides this, larger area of JUC might have harbored greater number of bird species. Altogether, 79 species

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were recorded from Chittagong University Campus (Asmat *et al.*, 1985), and a later study added 34 additional species (Kamruzzaman *et al.*, 2007) in the same area that might have been due to changes in the habitat in 22 years (i.e., new plantation).

Among the presently recorded species, 34 spp. were passerine and 31 spp. were non-passerine birds which appear to be more or less fifty-fifty in number (Fig. 1). Of the recorded passerine species, 29 were found to be resident and 5 were migrants. In case of non-passerine birds, most of them were resident (30 spp.) and only a single species (*Falco tinnunculus*) was migratory in nature (Khan 2008).

Birds were categorized into several groups based on their abundance, viz. R = Rare (1-5 individuals, scarcely visited), F= Few (6-15 individuals, hardly visited), FC= Fairly Common (16-30 individuals, fairly visited), C= Common (31-50 individuals, regularly visited), VC= Very Common (more than 50 individuals, most time visited) [Fig. 2].

Some of the species as for example, Spotted Dove, Asian pied starling, Common Myna, Chestnut Tailed Starling, Black Drongo, Coppersmith Barbet, Jungle Myna, Red vented Bulbul, Oriental Magpie Robin and

Ruffus treepie were found commonly in every working day. Most of the species that were found during the observation period belongs to the order Passeriformes (34), whereas order Gruiformes and Anseriformes encompassed only with one species in each (*Amaurornis phoenicurus* and *Dendrocygna javanica*) [Fig. 3].

Among the identified species, Blossom-headed Parakeet (*Psittacula roseate*) was rare in Bangladesh (Khan 2008). Among the passerine birds, family Corvidae comprised the highest number of species (11), whereas, Family-Ardeidae of non-passerine groups encompassed the highest number of species (4).

The richness of bird's species in NBGB might be due to availability of diversified habitats and availability of foods but the numbers of the individuals were too little that might be due to huge disturbances by the visitors. In the middle part of the garden, there were huge numbers of alien plant species (e.g. *Eucalyptus*), the ground soil of which was dry and clean. We found only the Common Hawk Cuckoo in this part of NBGB. The current communication represents only basic information on avifaunal diversity that could be helpful for further works on avifauna of NBGB.

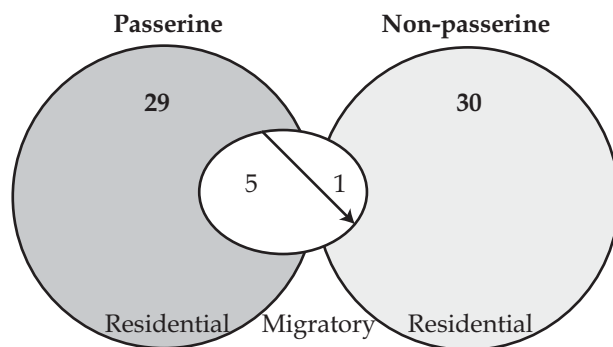


Figure 1 : Status of birds in the National Botanical Garden of Bangladesh on category basis.

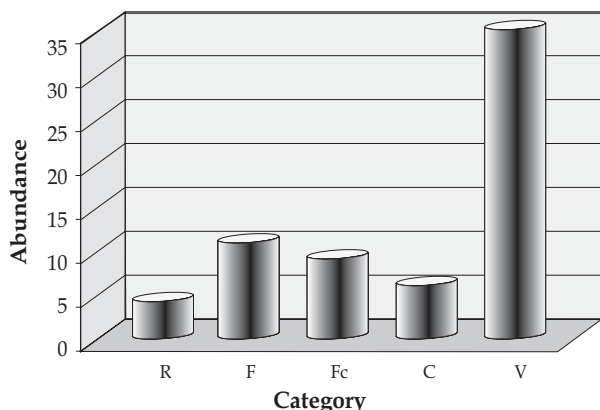


Figure 2 : Abundance of bird species based on different categories.

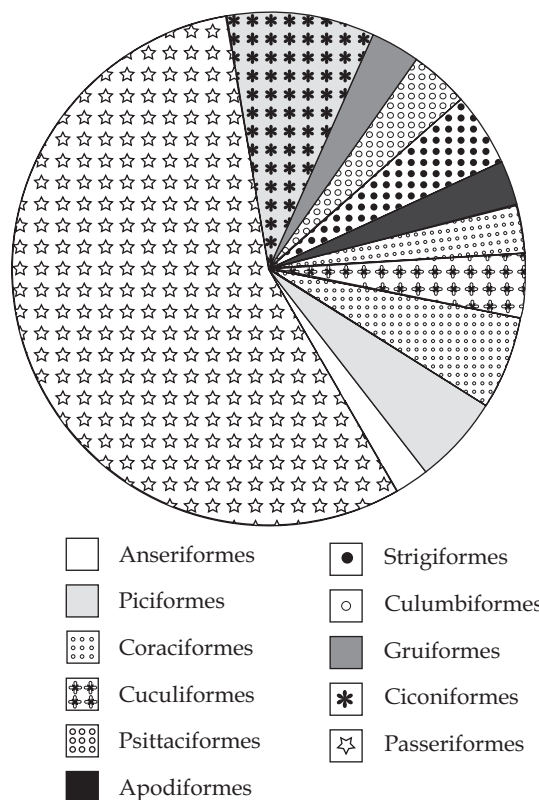


Figure 3 : Pie chart showing the comparison of abundance of species in order basis.

Table 1 : Checklist of birds in the National Botanical Garden of Bangladesh (NBGB).

S. N.	Order/ Family	Scientific Name	English Name (Local Name)	LS			
				SS	Khan	OSA	OT
01	Anseriformes/ Dendrocygnidae	<i>Dendrocygna javanica</i> (Horsfield, 1821)	Lasser Whisling-duck (Choto Sarali)	Fc, r	V, r	F, r	5
02	Piciformes/ Picidae/	<i>Celeus brachyurus</i> (Vieillot, 1818)	Rufous Woodpecker (Khayra Kaththokra)	F,r	V, r	V, r	14
03	Megalaimidae	<i>Dendrocopos macei</i> (Vieillot, 1818)	Fulvous-breasted Woodpecker (Batabi Kathkurali)	Fc,r	V, r	V,r	9
04		<i>Dinopium bengalensis</i> (Linnaeus, 1758)	Black-rumped Flameback (Sonali Kaththokra)	C, r	V, r	V, r	6
05		<i>Megalaima haemacephala</i> (Muller, 1776)	Coppersmith Barbet (Choto Basantabauri)	C, r	V, r	V, r	20
06	Coraciiformes/	<i>Coracias benghalensis</i> (Linnaeus, 1758)	Indian Roller (Nilkantha)	Fc, r	V, r	Fc, r	7
07	Coraciidae/ Alcedinidae/	<i>Alcedo atthis</i> (Linnaeus, 1758)	Common Kingfisher (Choto Maachranga)	C, r	V, r	Fc, r	3
08	Halcyonidae/ Meropidae	<i>Halcon capensis</i> (Linnaeus, 1766)	Stork-billed Kingfisher (Megh-hao Maachranga)	Fc,r	C, r	R, r	7
09		<i>Halcon smrynensis</i> (Linnaeus, 1758)	White-throaed Kingfisher (Dolagola Machranga)	C,r	V, r	V, r	10
10		<i>Merops orientalis</i> (Latham, 1801)	Green Bee-eater (Sobuj Suichora)	C, r	V, r	V, r	9
11	Cuculiformes/	<i>Centropus sinensis</i> (Stephens, 1815)	Greater Coucal (Boro Kanakua)	V, r	V, r	F, r	3
12	Cenropodidae/ Cuculidae	<i>Cuculus micropterus</i> (Gould, 1837)	Indian Cuckoo (Bou-katha-ka Papia)	Fc, m	V, m	R,m	10
13		<i>Hierococcx varius</i> (Vhal, 1797)	Common Hawk Cuckoo (Pati Chokhgelo)	C, r	V, r	V, r	7
14	Psittaciformes/	<i>Psittacula krameri</i> (Scopoli, 1769)	Rose-ringed Parakeet (Sobuj Tia)	V, r	V, r	V, r	15
15	Psittacidae	<i>Psittacula roseate</i> (Biswas, 1951)	Blossom-headed Parakeet (Fulmatha Tia)	F, r	R, r	R, r	2
16	Apodiformes/	<i>Apus affinis</i> (Gra, 1830)	House Swift (Ghor Batashi)	V, r	V, r	V, r	19
17	Apodidae	<i>Cpsiusurus balasiensis</i> (Gray, 1829)	Asian Palm Swift (Asio Talbatashi)	Fc, r	V, r	V, r	16
18	Strigiformes/	<i>Tyto alba</i> (Scopoli, 1769)	Barn owl (Laxmi Pencha)	Fc, r	V, r	F, r	7
19	Tytonidae/	<i>Ninox scutulata</i> (Raffles, 1822)	Brown Hawk Owl (Ku-pokh)	Fc, r	V, r	Fc	2
20	Strigidae	<i>Athene brama</i> (Temminck, 1821)	Spotted Owlet (Khuruley Pencha)	C, r	V, r	Fc, r	2
21	Columbiformes/	<i>Columba livia</i> (Gmelin, 1789)	Rock Pigeon (Jalali Kobutar)	V, r	V, r	C, r	13
22	Columbidae	<i>Streptopelia chinensis</i> (Scopoli, 1786)	Spotted Dove (Tila Ghughu)	V, r	V, r	V, r	20
23	Gruiformes/Rallidae	<i>Amaurornis phoenicurus</i> (Pennant, 1769)	White-breasted Waterhen (Dahuk)	C, r	V, r	V, r	12
24	Ciconiiformes/	<i>Haliaeetus Indus</i> (Boddaert, 1783)	Brahminy Kite (Shankho Chil)	C, r	V, r	C, r	8
25	Accipitridae/	<i>Mitopus migrans</i> (Boddaert, 1783)	Black Kite (Bhubon Chil)	C, r	V, r	V, r	20
26	Phalacrocoracidae/	<i>Phalacrocorax niger</i> (Vieillot, 1817)	Little Cormorant (Choto Paan-kowri)	C, r	V, r	Fc, r	5
27	Ardeidae/	<i>Ardeola grayii</i> (Sykes, 1832)	Indian Pond Heron (Kani Bok)	C	V, r	V, r	9
28	Falconidae	<i>Bubulcus ibis</i> (Linnaeus, 1758)	Cattle Egret (Go-bok)	Fc	V, r	V, r	4
29		<i>Casmerodius albus</i> (Linnaeus, 1758)	Great Egret (Boro Boga)	C, r	C, r	Fc, r	7
30		<i>Nycticorax nycticorax</i> (Linnaeus, 1758)	Black-crowned NightHeron (Nishi Bok)	F	C, r	F, r	2
31		<i>Falco tinnunculus</i> (Linnaeus, 1758)	Common Kestrel (Pati Kestrel)	F	V, m	F, m	3
32	Passeriformes/ Laniidae/	<i>Lanius crisatatus</i> (Linnaeus, 1758)	Brown Shrike (Badami Kosai Pakhi)	C, m	V, m	C, m	3
33	Corvidae	<i>Lanius schach</i> (Linnaeus, 1758)	Long-tailed Shrike (Lenja Latora)	C, r	V,r	V, r	3
34		<i>Lanius tephronotus</i> (Vigors, 1831)	Grey-backed shrike (Metepith Latora)	F, m	C, m	F, m	2
35		<i>Corvus macrorhynchos</i> (Wagler, 1827)	Large-billed Crow (Dar Kak)	C, r	V, r	V, r	13
36		<i>Corvus splendens</i> (Viellot, 1817)	House Crow (Pati Kak)	V, r	V, r	V, r	20
37		<i>Aegithina tiphia</i> (Linnaeus, 1758)	Common Iora (Fatikjal)	V, r	V, r	V, r	16
38		<i>Oriolus xanthornus</i> (Linnaeus, 1758)	Black-hooded Oriole Holdey Pakhi	C, r	V, r	V, r	15
39		<i>Dicrurus hottentottus</i> (Linaeus, 1766)	Spangled Drongo (Keshraj)	F, r	C, r	V, r	7
40		<i>Dicrurus macrocercus</i> (Vieillot, 1817)	Black Drongo (Kala Fingey)	F, r	V, r	V, r	20
41		<i>Dicrurus remifer</i> (Temminck, 1823)	Lasser Racket-tailed Drongo (Choto Bimraj)	Fc, m	V, m	F, m	10

Contd. ...

S. N.	Order/ Family	Scientific Name	English Name (Local Name)	LS			
				SS	Khan	OSA	OT
42		<i>Dicrurus aeneus</i> (Vieillot, 1817)	Bronzed Drongo (Bronz Fingey)	Fc, r	V,r	F, r	17
43		<i>Artamus fuscus</i> (Vieillot, 1817)	Ashy Woodswallow (Latoa)	C, r	V, r	V, r	7
44		<i>Coracina macei</i> (Lesson, 1830)	Large Cuckoo shrike (Boro Kabasi)	F, r	C, r	F, r	6
45	Muscicapidae/ Sturnidae/	<i>Hypothymis azurea</i> (Boddaert, 1783)	Black-naped Monarch (Kalaghar Rajon)	C, r	C, r	Fc, r	5
46	Certhiidae/	<i>Copsychus saularis</i> (Linnaeus, 1758)	Oriental Magpie Robin (Doel)	V, r	V, r	V, r	20
47	Pycnonoidae/ Sylviidae/	<i>Culicicapa ceylonensis</i> (Swainson, 1820)	Grey-headed Canary Flycatcher (Jar-futki)	Fc, m	V, m	C, m	5
48	Nectariniidae/	<i>Zoothera dauma</i> (Latham, 1790)	Scaly Thrush (Ashte Dhama)	F, m	R, m	R, m	3
49	Passeridae	<i>Ficedula albicilla</i> (Pallas, 1811)	Taiga Flycatcher (Taiga Chutki)	Fc, m	V,m	V, m	7
50		<i>Acridotheres fuscus</i> (Wagler, 1827)	Jungle Myna (Jhuti Shalik)	C, r	V, r	V, r	20
51		<i>Acridotheres tristis</i> (Linnaeus, 1766)	Common Myna (Bhat Shalik)	V, r	V, r	V, r	20
52		<i>Sturnus contra</i> (Linnaeus, 1758)	Asian Pied Starling (Gobre Shalik)	C, r	V, r	V, r	20
53		<i>Sturnus malabaricus</i> (Gmelin, 1789)	Chestnut-tailed Starling (Kath Shalik)	C, r	V, r	V, r	20
54		<i>Parus major</i> (Linnaeus, 1758)	Great Tit (Titpokh)	C, r	V, r	C, r	5
55		<i>Pycnonotus cafer</i> (Linnaeus, 1766)	Red-vented Bulbul (Bulbuli)	V, r	V, r	V, r	20
56		<i>Orthotomus sutorius</i> (Pennant, 1769)	Common Tailorbird (Tuntuni)	C, r	V, r	V, r	19
57		<i>Turdoides striatus</i> (Dumon, 1823)	Jungle Babbler (Satbhai)	C, r	V, r	V, r	18
58		<i>Nectarinia asiatica</i> (Latham, 1790)	Purple Sunbird (Niltuni)	V, r	V, r	V, r	11
59		<i>Nectarinia zeylonica</i> (Linnaeus, 1766)	Purple-rumped Sunbird (Beguni komar Moutushi)	Fc, r	C, r	Fc, r	6
60		<i>Dicaeum erythrorhynchos</i> (Latham, 1790)	Pale-billed Flowerpecker (Metethot Fuljhuri)	V, r	V, r	F, r	2
61		<i>Passer domesticus</i> (Linnaeus, 1758)	House Sparrow (Charui)	V, r	V, r	V, r	14
62		<i>Ploceus philippinus</i> (Linnaeus, 1766)	Baya Weaver (Babui)	C, r	V, r	Fc, r	5
63		<i>Moacilla alba</i> (Linnaeus, 1758)	White Wagtail (Dhola Khonjon)	C, m	V, m	C, m	2
64		<i>Moacilla flava</i> (Linnaeus, 1758)	Yellow Wagtail (Halud Khonjan)	V, m	V, m	F, m	1
65		<i>Lonchura punctulata</i> (Linnaeus, 1758)	Scaly-breasted Munia (Tila Munia)	C, r	V, r	V, r	2

Code used: C = Common (31-50 individuals, regularly visited), DD = Data Deficient, F = Few (6-15 individuals, hardly visited), Fc = Fairly Common (16-30 individuals, fairly visited), Khan = According to Khan, M.M.H. (2008), LS = Local Status, m = migratory, OSA = Observed in study area, OT = Observed times, R = Rare (1-5 individuals, scarcely visited), r = Resident (Breeds in Bangladesh), SS = According to Sarker, S.U and Sarker, N.J. (1988), Vc = Very Common (more than 50 individuals, most time visited).

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