

An annotated checklist of the birds of Silsako Beel, Guwahati

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Introduction

Guwahati, the largest city of the Northeastern states of India is one of the most biodiverse cities in the country (Purakayastha, 2018). The Brahmaputra and the Nilachal hill ranges provide a wide range of habitats, natural and human modified, in the form of wetlands, forest patches, chars, grasslands, agricultural fields and human settlements. These mosaic patches of habitats harbor several species of birds or avifauna (Das, 2011; Saikia *et al.*, 2015). Despite being a bustling city, a numbers of lakes (*beel* in Assamese), small to large, are present within Guwahati (ref). The role of these urban wetlands is multifarious in controlling urban floods, groundwater recharge, bioremediation, maintaining biodiversity, providing livelihood *etc.* (Min *et al.*, 2010; Acreman and Holden, 2013; Bhatia and Goyal, 2013). However, over the course of time, all such wetlands underwent several threats to its area and water quality due to continuous anthropogenic pressures (Bhattacharyya and Kapil, 2010).

The Silsako beel in the Kamrup Metropolitan district is one such lesser known wetlands located in the heart of the city (Sahoo and Sreeja, 2014). It is surrounded by expanding areas of urban settlements. However, the water of the beel has got unfathomably polluted as it continuously receives silt, solid waste and sewage from the adjacent areas. Also, there has been a steep climb in the rise of build-up land around the beel which has compromised with the ecological space of the wetland. Although, the beel is locally known to host several species of birds, there has been

no literature to understand the various species present and the habitat it offers. Thus, a study was conducted with an objective to scientifically document the diversity of avifauna in the Silsako beel. Findings of the study have been tabulated in the form of a checklist, providing status (IUCN, Residential and Abundance) for each of the species.

Methods

Study area

Silsako beel is located within the geographical coordinates of 26° 17' 15" N latitude and 91° 50' 11.63" E longitude in the heart of Guwahati city. The beel is surrounded by Satgaon, Hengrabari and Methgaria where most of the settlements exist. This area is also distantly bordered by a protected area Amchang Wildlife Sanctuary in the east, Narengi in the north, VIP road connecting Narengi and Six mile in the west and Chachal to its west (Kar *et al.*, 2014).

Field survey

Field surveys were done on foot by walking around and along the wetland and repeated on random days for three years from November, 2018 to November, 2020. A total of 30 field visits were carried out, that comprised 125 hours of observation.

The surveys for recording the birds were done without giving emphasis to find a particular species. All birds seen or heard were identified using field guide/s (Grimmet *et al.* 1999). The equipment used for the survey were Olympus 10 x 50 DPS I binoculars and a Camera- Sony HSC 300. All the checklists were submitted to eBird.org (www.ebird.org) a citizen science platform for people who take interest in birds and the records are made publicly accessible. All the species in this checklist are corroborated with photographs and videos combined with field notes.

Results

The survey done in the past three years resulted in the documentation of 111 species of birds (Table 1). Despite the poor water quality, the beel supported a diversity of birds belonging to 13 families, out of which 30 species are migratory. Furthermore, we found that this lake is occasionally visited by Greater Adjutant (*Leptoptilos dubius*) a species which falls under the

IUCN (International Union for Conservation of Nature) Red list category Endangered (EN) species. Two species, Lesser Adjutant (*Leptoptilos javanicus*) and Oriental Darter (*Anhinga melanogaster*) which are categorized as Near Threatened (NT) were also recorded from the beel

Conclusion

This checklist construes that Silsako beel is rich in avifauna despite the ongoing threats to its ecosystem. The poor water quality has made the place unsuitable for migratory waterfowl in the past few years, which was evident from the low count of water birds during the survey. However, other migratory species like waders, shrikes, chats and warblers, which do not completely depend on water for survival, are still fairly common in and around the wetland. The beel is currently being utilized in an unsustainable manner which can lead to further degradation of its ecology in the near future if not maintained well. This annotated checklist thus indicates the ecological importance of the habitat offered by the beel and can help in developing further conservation strategies from a policy perspective.

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Table 1: Comprehensive checklist of birds from the Silsako wetland, surveyed during 2018 to 2020

BIRDS	IUCN STATUS	RESIDENTIAL STATUS	ABUNDANCE
Anseriformes			
Anatidae (Ducks, geese, swans)			
1. Lesser Whistling Duck	LC	R	O
Columbiformes			
Columbidae (Pigeons)			
2. Spotted Dove	LC	R	C
3. Red-collared Dove	LC	R	O
4. Eurasian-collared Dove	LC	R	O
5. Yellow-footed Green Pigeon	LC	R	C
Cuculiformes			
Cuculidae (Cuckoos)			
6. Greater Coucal	LC	R	FC
7. Lesser Coucal	LC	R	O
8. Asian Koel	LC	R	C
9. Plaintive Cuckoo	LC	R	C
Gruiformes			
Rallidae			
10. White-breasted Waterhen	LC	R	C
11. Grey-headed Swampphen	LC	R	C
12. Common Moorhen	LC	R	C
Pelecaniformes			
Ciconiidae (Storks)			
13. Greater Adjutant Stork	EN	R	R
14. Lesser Adjutant Stork	NT	R	R
15. Asian Openbill	LC	R	C
Ardeidae (Hérons)			
16. Yellow Bittern	LC	R	C
17. Cinnamon Bittern	LC	R	C
18. Black-crowned Night Heron	LC	R	FC
19. Indian Pond Heron	LC	R	C
20. Purple Heron	LC	R	C
21. Great Egret	LC		O
22. Intermediate Egret	LC		FC
23. Little Egret	LC		O
24. Cattle Egret	LC	R	C
25. Little Cormorant	LC	R	C
26. Oriental Darter	NT	R	O
Charadriiformes			
Charadriidae (Plovers and Lapwings)			

27. Grey-headed Lapwing	LC	M	C
28. Red-wattled Lapwing	LC	R	C
Rostratulidae (Painted Snipes)			
29. Greater Painted Snipe	LC	R	O
Jacanidae(Jacanas)			
30. Bronze-winged Jacana	LC	R	C
Scolopacidae (Sandpipers and allies)			
31. Temmicks Stint	LC	M	C
32. Common Snipe	LC	M	C
33. Common Sandpiper	LC	M	C
34. Wood Sandpiper	LC	M	FC
35. Green Sandpiper	LC	M	C
Accipiteriformes			
Accipitridae (Kites, hawks and eagles)			
36. Oriental Honey Buzzard	LC	R	C
37. Booted Eagle	LC	M	O
38. Black Kite	LC	R	C
39. Black-eared Kite	LC	M	C
Stringiformes			
Tytonidae (Barn Owls)			
40. Barn Owl	LC	R	O
Stringidae (Owls)			
41. Brown Hawk Owl	LC	R	O
42. Asian Barred Owlet	LC	R	FC
43. Spotted Owlet	LC	R	C
44. Collared Scops Owl	LC	R	C
Bucerotiformes			
Upupidae (Hoopes)			
45. Eurasian Hoopoe	LC	M	O
Piciformes			
Picidae (Woodpeckers)			
46. Eurasian Wryneck	LC	M	C
47. Fulvous-breasted Woodpecker	LC	R	C
48. Lesser Flameback	LC	R	C
Ramphastidae (Toucans and barbets)			
49. Lineated Barbet	LC	R	C
50. Blue-throated Barbet	LC	R	C
51. Coppersmith Barbet	LC	R	C
Coraciiformes			
Meropidae (Bee-eaters)			
52. Green Bee-eater	LC	R	C
53. Blue-tailed Bee-eater	LC	M	C
54. Indochinese Roller	LC	R	C
Acledinidae (Kingfishers)			

55. Common Kingfisher	LC	R	C
56. White-throated Kingfisher	LC	R	C
Falconiformes			
Falconidae			
57. Common Kestrel	LC	M	FC
Psittaciformes			
Psitticulidae (Old world parrots)			
58. Rose-ringed Parakeet	LC	R	C
Passeriformes			
A. Camphiphagidae (Minivets and cuckooshrikes)			
59. Large Cuckooshrike	LC	R	O
B. Oriolidae (Orioles)			
60. Black-hooded Oriole	LC	R	C
C. Aegithinidae (Ioras)			
61. Common Iora	LC	R	C
Dicruridae (Drongos)			
62. Black Drongo	LC	R	C
63. Hair-crested Drongo	LC	R	O
Laniidae (Shrikes)			
64. Brown Shrike	LC	M	C
65. Long-tailed Shrike	LC	M	FC
66. Grey-backed Shrike	LC	M	C
Corvidae (Crows and jays)			
67. Rufous Treepie	LC	R	C
68. House Crow	LC	R	C
69. Large-billed Crow	LC	R	C
Dicaeidae (Flowerpeckers)			
70. Plain Flowerpecker	LC	R	C
71. Crimson Sunbird	LC	R	C
72. Purple Sunbird	LC	R	C
Ploceidae (Weavers)			
73. Baya Weaver	LC	R	FC
Estrildidae (Waxbills)			
74. Scaly-breasted Munia	LC	R	C
75. Chestnut Munia	LC	R	C
Passeridae (Sparrows)			
76. House Sparrow	LC	R	C
77. Eurasian Tree Sparrow	LC	R	C
Motacilidae (Wagtails and Pipits)			
78. Olive-backed Pipit	LC	M	FC
79. Rosy Pipit	LC	M	C
80. Paddyfield Pipit	LC	R	C
81. Richards Pipit	LC	M	C
82. Citrine Wagtail	LC	M	C
83. White Wagtail	LC	M	C
Paridae (Tits, chickadees)			

84. Cinereous Tit	LC	R	C
Alaudidae (Larks)			
85. Bengal Bushlark	LC	R	C
Cisticolidae (Cisticolas)			
86. Zitting Cisticola	LC	R	C
87. Plain Prinia	LC	R	C
88. Common Tailorbird	LC	R	C
Locustellidae (Bush warblers)			
89. Rufous-rumped Grasshopper Warbler			
90. Striated Grassbird	LC	R	C
Acrocephalidae (Brush, reed and swamp warblers)			
91. Thick-billed Warbler	LC	M	C
Hirundinidae (Swallows)			
92. Red-rumped Swallow	LC	M	FC
93. Streaked Swallow	LC	M	O
94. Barn Swallow	LC	M	C
95. Grey-throated Martin	LC	R	C
Pycnonotidae (Bulbuls)			
96. Red-whiskered Bulbul	LC	R	C
97. Red-vented Bulbul	LC	R	C
Phylloscopidae (Old world leaf warblers)			
98. Dusky Warbler	LC	R	C
99. Tickells Leaf Warbler	LC	R	C
Zosteropidae (white-eyes)			
100. Indian White-eye	LC	R	C
Leiothrichidae (Babblers, laughing thrushes, and allies)			
101. Jungle Babbler	LC	R	C
Sturnidae (Starlings)			
102. Asian Pied Starling	LC	R	C
103. Chestnut-tailed Starling	LC	R	C
104. Jungle Myna	LC	R	C
105. Great Myna	LC	R	C
106. Common Myna	LC	R	C
Muscicapidae (Chats and flycatchers)			
107. Bluethroat	LC	M	C
108. Siberian Rubythroat	LC	M	C
109. Oriental Magpie Robin	LC	R	C
110. Taiga Flycatcher	LC	M	C
111. Siberian Stonechat	LC	M	C

Table 2: Expansion of abbreviations used to define the status of birds

Abbreviation	LC	NT	EN	M	R	C	FC	O
Expansion	Least Concern	Near Threatened	Endan- gered	Migrant	Resident	Common	Fairly Common	Occasional