



ISSN 0974-7907 (Online)
ISSN 0974-7893 (Print)

Journal of Threatened Taxa | www.threatenedtaxa.org | 26 September 2015 | 7(11): 7776–7785

AVIFAUNA OF SURAJPUR WETLAND, GREATER NOIDA, UTTAR PRADESH, INDIA

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Abstract: The present communication highlights the significant record of avifauna of the Surajpur Wetland, Greater Noida, Uttar Pradesh and forms the first record of its kind. The study was conducted during March 2010 to February 2013. During the study period, a total of 186 bird species belonging to 44 families were recorded. Of these 59% (n=109) were residents, 27% (n=51) were winter migrants, 13% (n=25) were summer migrants and only one percent (n=1) were passage migrants. Based on the frequency of sightings, 46% (n=85) bird species were common, 26% (n=49) fairly common, 17% (n=32) uncommon and 11% (n=20) rare. The mosaic of habitat types within the wetland serves as an ideal refuge for avifauna. Also the wetland holds potential of being developed into a green area in the Delhi-NCR region; management intervention needs to be concentrated towards this objective.

Keywords: Avifauna, Greater Noida, Surajpur Wetland, Uttar Pradesh.

Wetland ecosystem forms an important environment for aquatic, semi-aquatic and moisture loving floral and faunal associations (Adhikari & Babu 2008). The world's wetlands are increasingly receiving due attention as they contribute to a healthy environment in several ways. Wetlands are also described as the 'kidney of landscape' because of their role in the hydrological cycle, nutrient cycle and food chain (Mitsch & Gosselink 1993) or as 'biological supermarkets' as the water saturated soil of wetlands possesses high species diversity and form a

crucial incubator for a large number of aquatic species (Allen-Diaz et al. 2004).

Through the ages, urban wetlands have been the lifeline of most cities in India. They are found all over the country and are either natural or have been built by people (Water Contents 2011). Urban wetlands provide multiple values for suburban and city dwellers (Castelle et al. 1994). The capacity of a functional urban wetland in flood control, aquatic life support, and as a pollution sink implies a greater degree of protection. These wetlands provide a resource base for people dependent on them (Ramachandran 2001). In terms of urban biodiversity, wetlands form an important area in supporting species diversity and to regulate the ecological web. Surveys of waterbirds on urban wetlands received very little attention. Although most urban wetlands are considered to be extremely polluted areas, they still attract a large number of winged visitors (Reginald et al. 2007).

Surajpur Wetland is an excellent example of an urban wetland in the National Capital Region of India. Very few studies have been attempted to investigate the urban wetlands in India (Urfi 2003) and the growing need for their conservation. Surajpur wetland provides an opportunity to protect biodiversity and set an example

DOI: <http://dx.doi.org/10.11609/JoTT.o3519.7776-85> | **ZooBank:** urn:lsid:zoobank.org:pub:CE25C81B-6113-4BDB-BD05-3DC896213156

Editor: Nishith Dharaiya, HNG University, Patan, India.

Date of publication: 26 September 2015 (online & print)

Manuscript details: Ms # o3519 | Received 05 February 2013 | Final received 31 August 2015 | Finally accepted 05 September 2015

Citation: Ansari, N.A. & A. Nawab (2015). Avifauna of Surajpur Wetland, Greater Noida, Uttar Pradesh, India. *Journal of Threatened Taxa* 7(11): 7776–7785; <http://dx.doi.org/10.11609/JoTT.o3519.7776-85>

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Funding: Greater Noida Industrial Development Authority, Uttar Pradesh.

Conflict of Interest: The authors declare no competing interests.

Acknowledgements We thank the Forest Department, Gautam Budh Nagar for allowing the collection of data and for providing support during field visits. We are thankful to the Greater Noida Industrial Development Authority, Uttar Pradesh for funding the study. We are grateful to Mr. Ravi Singh (Secretary General & CEO, WWF-India) and Dr. Sejal Worah (Programme Director, WWF-India) for providing support and encouragements for this study. The help rendered by the field staff and our colleagues at the WWF-India Secretariat is highly appreciated. The anonymous reviewers are thanked for reviewing the manuscript.



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of how wildlife can be protected and preserved close to urban areas without hindering the development of the same. It will not only provide people an opportunity to experience the uniqueness of the area and the species it attracts, but also make them more environmentally conscious (Ansari 2009).

Study Area

Surajpur Wetland (28°31.425'N & 77°29.714'E) is situated in the Dadri Tehsil of Gautam Budh Nagar District, Uttar Pradesh and located within a distance of only 28.6km from Ashram Chowk, Delhi (Fig. 1). The wetland falls in the Gangetic Plain Biogeographic Zone (Rodgers et al. 2002) at an elevation of 184.7m. The area is a reserve forest and spreads over 308ha that includes 60ha of natural wetland. The area is flat terrestrial with shallow to deep wetland area. The soil is fine grained called lacustrine soil and the vegetation is of tropical dry deciduous type (Champion & Seth 1968). The area have been divided into three major habitats namely woodland, grassland and wetland (Fig. 2; Images

1–3). Woodland includes *Phoenix sylvestris*, *Terminalia arjuna*, *Syzygium cumini* and *Prosopis juliflora*; grassland are dominant with *Sachharum* sp., *Vetiveria zizanioides* and *Desmostachya bipinnata*; whereas wetland includes clear water with submerged aquatic vegetation of *Certaophyllum demersum*, *Hydrilla verticillata*, *Vallisneria spiralis*; emergent aquatic vegetation of *Eichhornea crassipes*, *Alternanthera philoxeroides*, *Ipomoea* sp., *Typha angustata*; and marshland with *Phoenix sylvestris*, *Terminalia arjuna*, *Syzygium cumini* vegetation (Fig. 2). This mosaic of habitats serves as an ideal refuge for the nesting of resident as well as migratory waterbirds.

Surajpur Wetland is mainly rain-fed. Other sources for water recharge are the catchment area of Hawaliya drain which is attached to Hindon River and the irrigation canal of Tilapta Minor, which originates from Kulesra Bund, Hindon River. The general climate is tropical monsoon type and the south-west monsoons are the main source of rainfall. Maximum rainfall occurs from July to October ranging from 400–500 mm. During the

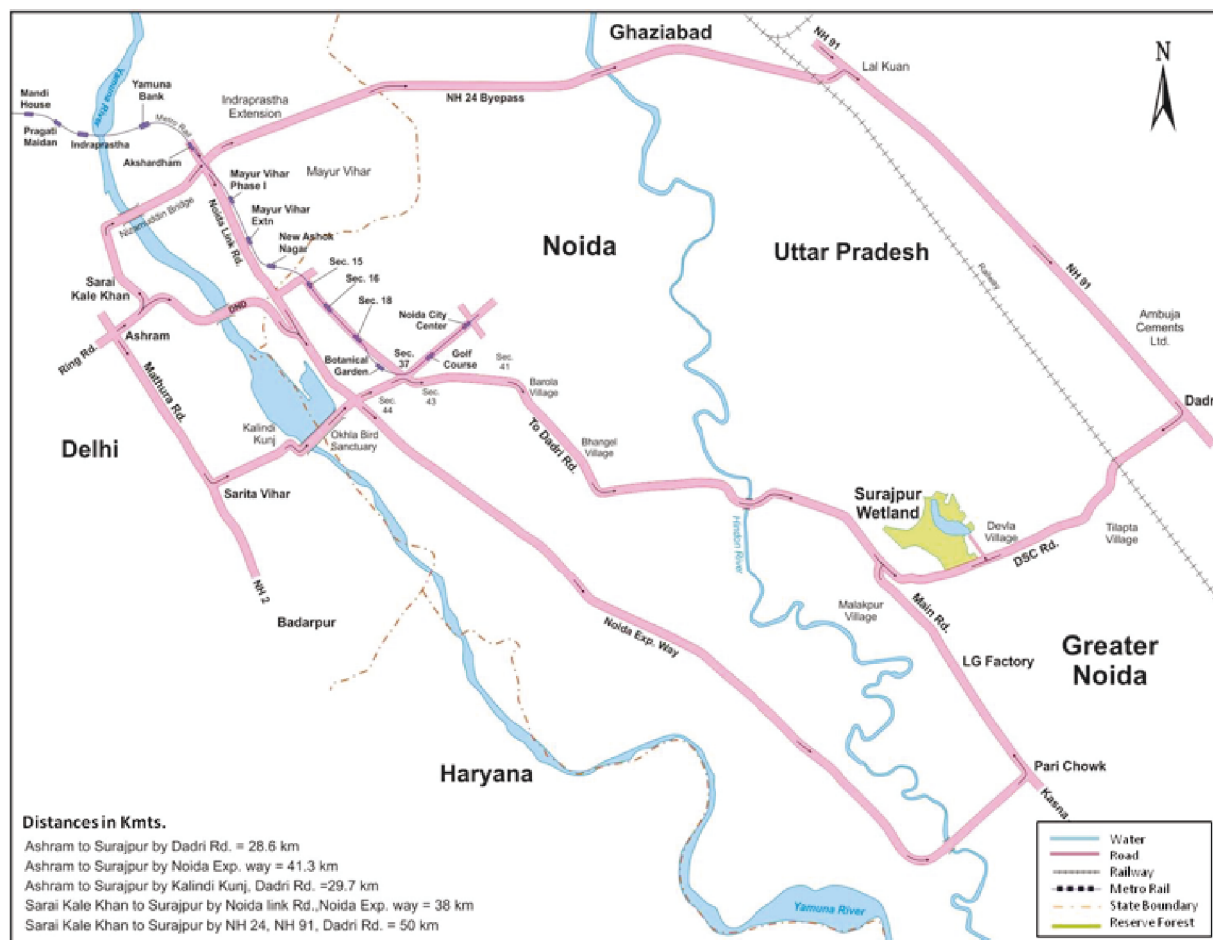


Figure 1. Location of study area in relation to the National capital Region (NCR) of Delhi

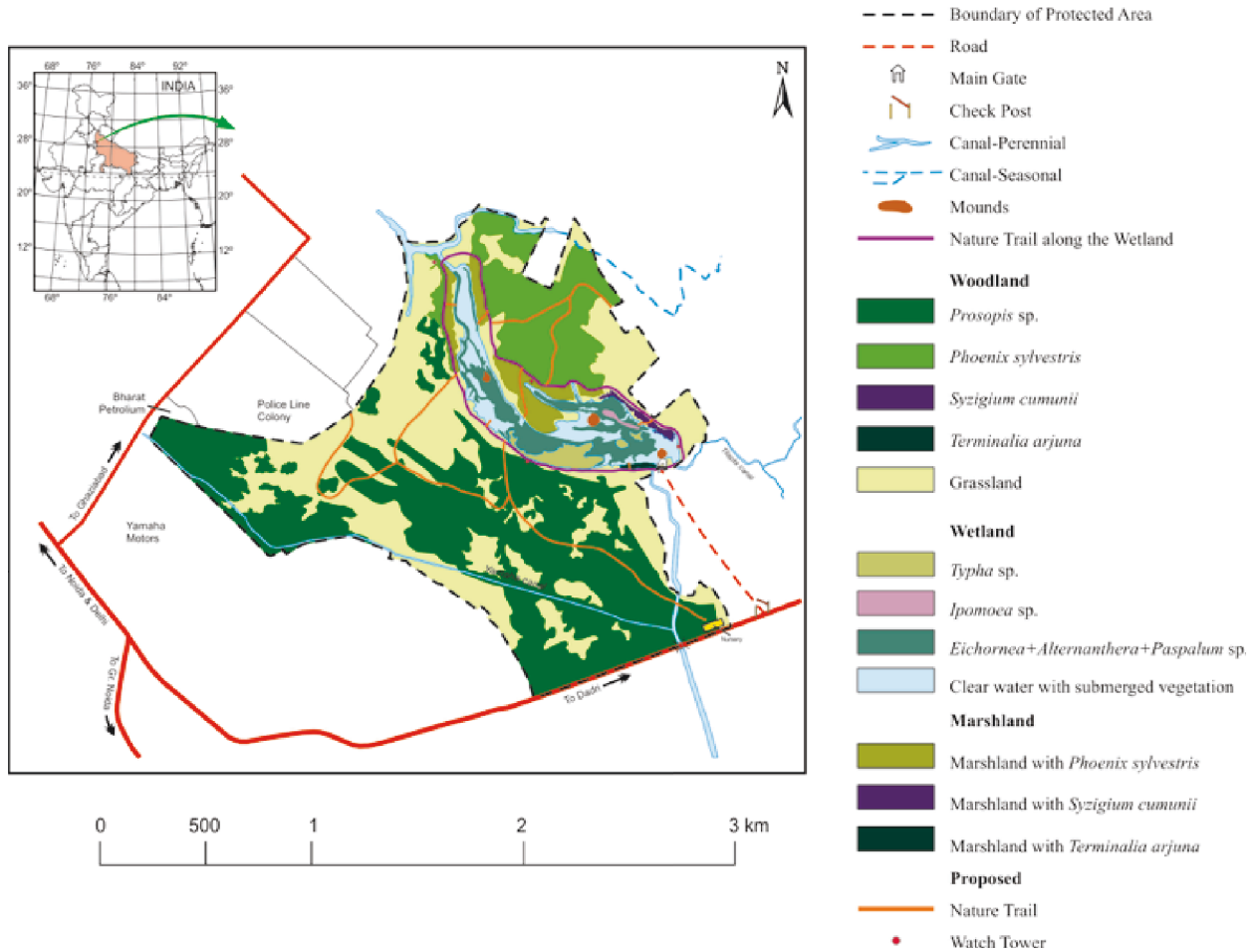


Figure 2. Study area

monsoons the catchment area is full of water and the inundated area extends up to 108ha. However, during summer the major portion of the wetland remains dry and the inundated area recedes to 30–40 ha.

METHODS

The study area was broadly categorised into different habitats (i.e., grassland, woodland and wetland) on the basis of the predominant vegetation type. Observations on the avifauna were made for a period of three years i.e. from March 2010 to February 2013. The data was collected on a fortnightly basis and a total of 72 surveys were made during the study period. Regular surveys were done by systematic walking on fixed routes through the study area in terrestrial habitats (woodland and grassland) while 10 vantage points were selected in the 10 blocks of wetland, one in each block respectively to facilitate easy count of the birds. These vantage points were identified on the basis of visibility and size of the blocks. Birds were mostly observed during the most active period of the day, i.e., from 0600–1000 hr and



Image 1. Overview of Surajpur Wetland - summer season

from 1600–1800 hr. However, observations were also made other than the survey timings to locate the illusive taxa. Nikon binoculars of 10x50 X' specification was used for sighting birds and the species were confirmed by consulting standard field guides (Grimmett et al. 2000;



Image 2. Overview of Surajpur Wetland - monsoon season



Image 3. Overview of Surajpur Wetland - winter season

Ali 2002) and the nomenclature followed Manakadan & Pittie (2001). The status of birds was categorized as resident (R), winter migrant (WM), summer migrant (SM) and passage migrant (PM) following Ali & Ripley (1972, 1983). The abundance status of the recorded bird species was established on the basis of frequency of sightings following Kumar & Gupta (2009) as, common recorded 9–10 times out of 10 visits, fairly common recorded 6–8 times out of 10 visits, uncommon recorded 3–5 times out of 10 visits, and rare recorded 0–2 times out of 10 visits.

RESULTS AND DISCUSSION

The study reveals the occurrence of a total of 186 bird species belonging to 44 families (Table 1). The list of birds of Surajpur Wetland and their common, scientific names, status and abundance is reported in Table 2. Of these 59% (n=109) were resident, 27% (n=51) were winter migrant, 13% (n=25) were summer migrant and only one percent (n=1) were passage migrant. Based on the frequency of sightings, 46% (n=85) bird species

Table 1. Status of bird families

	Family	No. of species
1	Accipitridae	13
2	Alaudidae	5
3	Alcedinidae	3
4	Anatidea	18
5	Anhingidae	1
6	Ardeidae	11
7	Bucerotidae	1
8	Burhinidae	1
9	Campephagidae	1
10	Capitonidae	1
11	Charadriidae	4
12	Ciconidae	4
13	Columbidae	5
14	Coraciidae	1
15	Corvidae	3
16	Cuculidae	6
17	Dicruridae	1
18	Estrildidae	4
19	Falconidae	2
20	Gruidae	1
21	Hirundinidae	5
22	Jacaniidae	2
23	Laniidae	3
24	Meropidae	2
25	Motacillidae	7
26	Muscicapidae	29
27	Nectariniidae	1
28	Oriolidae	1
29	Passeridae	4
30	Phalacrocoracidae	3
31	Phasianidae	3
32	Picidae	2
33	Podicipedidae	1
34	Psittacidae	2
35	Pycnonotidae	1
36	Rallidae	5
37	Recurvirostridae	2
38	Rostratulidae	1
39	Scolopacidae	13
40	Strigidae	3
41	Sturnidae	5
42	Threskiornithidae	3
43	Tytonidae	1
44	Upupidae	1

Table 2. Checklist of avifauna of Surajpur Wetland

	Family, Common and Scientific name	Status of birds							
		1	2	3	4	5	6	7	8
	Family Podicipedidae: Grebes								
1	Little Grebe <i>Tachybaptus ruficollis</i>	•				•			
	Family Phalacrocoracidae: Cormorants								
2	Great Cormorant <i>Phalacrocorax carbo</i>		•					•	
3	Indian Cormorant or Indian Shag <i>Phalacrocorax fuscicollis</i>	•					•		
4	Little Cormorant <i>Phalacrocorax niger</i>	•				•			
	Family Anhingidae: Darter								
5	Darter or Snake Bird <i>Anhinga malanogaster</i>		•					•	
	Family Ardeidae: Herons, Egrets, Bitterns								
6	Black Bittern <i>Ixobrychus flavicollis</i>			•					•
7	Black-crowned Night Heron <i>Nycticorax nycticorax</i>	•				•			
8	Cattle Egret <i>Bubulcus ibis</i>	•				•			
9	Chestnut Bittern <i>Ixobrychus cinnamomeus</i>			•			•		
10	Grey Heron <i>Ardea cinerea</i>	•				•			
11	Indian Pond Heron <i>Ardeola grayii</i>	•				•			
12	Large Egret <i>Casmerodius albus</i>	•					•		
13	Little Egret <i>Egretta garzetta</i>	•				•			
14	Median Egret <i>Mesophoyx intermedia</i>	•				•			
15	Purple Heron <i>Ardea purpurea</i>	•				•			
16	Yellow Bittern <i>Ixobrychus sinensis</i>			•				•	
	Family Ciconiidae: Storks								
17	Asian Openbill <i>Anastomus oscitans</i>	•				•			
18	Black-necked Stork <i>Ephippiorhynchus asiaticus</i>	•				•			
19	European White-necked Stork <i>Ciconia ciconia</i>	•				•			
20	Painted Stork <i>Mycteria leucocephala</i>	•					•		
	Family Threskiornithidae: Ibises, Spoonbills								
21	Black Ibis <i>Pseudibis papillosa</i>	•				•			
22	Eurasian Spoonbill <i>Platalea leucorodia</i>		•				•		
23	Oriental-white Ibis <i>Threskiornis melanocephalus</i>	•				•			
	Family Anatidae: Ducks, Geese								
24	Bar-headed Goose <i>Anser indicus</i>		•				•		
25	Brahmini Shelduck <i>Tadorna ferruginea</i>		•			•			
26	Comb Duck <i>Sarkidiornis melanotos</i>	•					•		
27	Common Pochard <i>Aythya ferina</i>		•				•		
28	Common Teal <i>Anas crecca</i>		•			•			
29	Cotton Pygmy Goose <i>Nettapus coromandelianus</i>			•			•		
30	Eurasian Wigeon <i>Anas penelope</i>		•			•			
31	Ferruginous Pochard <i>Aythya nyroca</i>		•				•		
32	Gadwall <i>Anas strepera</i>		•			•			
33	Gargany <i>Anas querquedula</i>		•				•		
34	Greylag Goose <i>Anser anser</i>		•				•		
35	Lesser Whistling-Duck <i>Dendrocygna javanica</i>			•		•			
36	Mallard <i>Anas platyrhynchos</i>		•						•
37	Northern Pintail <i>Anas acuta</i>		•			•			
38	Northern Shoveller <i>Anas clypeata</i>		•			•			
39	Red-crested Pochard <i>Rhodonessa rufina</i>		•				•		

	Family, Common and Scientific name	Status of birds							
		1	2	3	4	5	6	7	8
40	Spot-billed Duck <i>Anas poecilorhyncha</i>	•				•			
41	Tufted Duck <i>Aythya fuligula</i>		•				•		
	Family Accipitridae: Kites, Eagles, Vultures etc.								
42	Black Kite <i>Milvus migrans</i>	•				•			
43	Black-shouldered Kite <i>Elanus caeruleus</i>	•					•		
44	Bonelli's Eagle <i>Hieraaetus fasciatus</i>	•						•	
45	Crested Serpent Eagle <i>Spilornis cheela</i>	•					•		
46	Egyptian Vulture <i>Neophron percnopterus</i>	•							•
47	Greater Spotted Eagle <i>Aquila hastata</i>	•				•			
48	Pallid Harrier <i>Circus macrourus</i>		•					•	
49	Oriental Honey Buzzard <i>Pernis ptilorhynchus</i>	•					•		
50	Shikra <i>Accipiter badius</i>	•				•			
51	Steppe Eagle <i>Aquila nipalensis</i>		•					•	
52	Tawny Eagle <i>Aquila rapax</i>	•						•	
53	Western Marsh-Harrier <i>Circus aeruginosus</i>		•			•			
54	White-eyed Buzzard <i>Butastur teesta</i>	•							•
	Family Falconidae: Falcons								
55	Eurasian Hobby <i>Falco subbuteo</i>			•					•
56	Lagger Falcon <i>Falco jugger</i>	•							•
	Family Phasianidae: Pheasants, Partridges								
57	Black Francolin <i>Francolinus francolinus</i>	•					•		
58	Grey Francolin <i>Francolinus pondicerianus</i>	•					•		
59	Indian Peafowl <i>Pavo cristatus</i>	•					•		
	Family Gruidae: Cranes								
60	Sarus Crane <i>Grus antigone</i>	•				•			
	Family Rallidae: Rails, Coots								
61	Common Coot <i>Fulica atra</i>		•			•			
62	Common Moorhen <i>Gallinula chloropus</i>	•				•			
63	Purple Moorhen <i>Porphyrio porphyrio</i>	•				•			
64	White-breasted Waterhen <i>Amaurornis phoenicurus</i>	•					•		
65	Watercock <i>Gallixrex cinerea</i>	•							•
	Family Jacanidae: Jacanas								
66	Bronze-winged Jacana <i>Metopidius indicus</i>	•				•			
67	Pheasant-tailed Jacana <i>Hydrophasianus chirurgus</i>			•		•			
	Family Rostratulidae: Painted Snipe								
68	Greater Painted Snipe <i>Rostratula benghalensis</i>	•						•	
	Family Charadriidae: Plovers, Lapwings								
69	Little-ringed Plover <i>Charadrius dubius</i>	•						•	
70	Northern Lapwing <i>Vanellus vanellus</i>		•						•
71	Red-wattled Lapwing <i>Vanellus indicus</i>	•				•			
72	White-tailed Lapwing <i>Vanellus leucurus</i>		•			•			
	Family Scolopacidae: Sandpipers, Snipes etc.								
73	Black-tailed Godwit <i>Limosa limosa</i>		•			•			
74	Common Greenshank <i>Tringa nebularia</i>		•				•		
75	Common Redshank <i>Tringa totanus</i>		•			•			
76	Common Sandpiper <i>Actitis hypoleucos</i>		•				•		
77	Common Snipe <i>Gallinago gallinago</i>		•					•	

	Family, Common and Scientific name	Status of birds							
		1	2	3	4	5	6	7	8
78	Green Sandpiper <i>Tringa ochropus</i>		•			•			
79	Little Stint <i>Calidris minuta</i>		•			•			
80	Temminck's Stint <i>Calidris temminckii</i>		•				•		
81	Marsh Sandpiper <i>Tringa stagnatilis</i>		•			•			
82	Pintail Snipe <i>Gallinago stenura</i>		•					•	
83	Ruff <i>Philomachus pugnax</i>		•			•			
84	Spotted Redshank <i>Tringa erythropus</i>		•					•	
85	Wood Sandpiper <i>Tringa glareola</i>		•			•			
	Family Recurvirostridae: Stilts, Avocet								
86	Black-Winged Stilt <i>Himantopus himantopus</i>	•				•			
87	Pied Avocet <i>Recurvirostra avocetta</i>		•						•
	Family Burhinidae: Stone curlew								
88	Stone-Curlew <i>Burhinus oedicnemus</i>	•							•
	Family Columbidae: Pigeons, Doves								
89	Blue Rock Pigeon <i>Columba livia</i>	•				•			
90	Eurasian Collared-Dove <i>Streptopelia dacocta</i>	•				•			
91	Little Brown Dove <i>Streptopelia senegalensis</i>	•				•			
92	Red Collared-Dove <i>Streptopelia tranquebarica</i>	•				•			
93	Yellow-legged Green-Pigeon <i>Treron phoenicoptera</i>	•				•			
	Family Psittacidae: Parakeets								
94	Alexandrine Parakeet <i>Psittacula eupatria</i>	•							•
95	Rose-ringed Parakeet <i>Psittacula krameri</i>	•				•			
	Family Cuculidae: Cuckoos, Crow pheasants								
96	Asian Koel <i>Eudynamis scolopacea</i>			•		•			
97	Brainfever Bird <i>Hierococcyx varius</i>			•		•			
98	Greater Coucal <i>Centropus sinensis</i>	•				•			
99	Grey-bellied Cuckoo <i>Cacomantis passerinus</i>			•					•
100	Pied Crested Cuckoo <i>Clamator jacobinus</i>			•				•	
101	Eurasian Cuckoo <i>Cuculus canorus</i>				•				•
	Family Tytonidae: Barn Owls								
102	Barn Owl <i>Tyto alba</i>	•							•
	Family Strigidae: Owls, Owlets								
103	Collared Scops Owl <i>Otus bakkamoena</i>	•							•
104	Dusky Eagle Owl <i>Bubo coromandus</i>			•				•	
105	Spotted Owlet <i>Athene brama</i>	•				•			
	Family Alcedinidae: Kingfishers								
106	White-breasted Kingfisher <i>Halcyon smyrnensis</i>	•				•			
107	Pied Kingfisher <i>Ceryle rudis</i>	•					•		
108	Small Blue Kingfisher <i>Alcedo atthis</i>	•					•		
	Family Meropidae: Bee-eaters								
109	Blue-tailed Bee-eater <i>Merops philippinus</i>			•			•		
110	Small Bee-eater <i>Merops orientalis</i>			•		•			
	Family Coraciidae: Rollers								
111	Indian Roller <i>Coracias benghalensis</i>	•				•			
	Family Upupidae: Hoopoes								
112	Hoopoe <i>Upupa epops</i>	•					•		

	Family, Common and Scientific name	Status of birds							
		1	2	3	4	5	6	7	8
	Family Bucerotidae: Hornbills								
113	Indian Grey Hornbill <i>Ocyclus birostris</i>	•					•		
	Family Capitonidae: Barbets								
114	Brown-headed Barbet <i>Megalaima zeylanica</i>	•					•		
	Family Picidae: Woodpeckers, Wrynecks								
115	Lesser Golden-backed Woodpecker <i>Dinopium benghalense</i>	•					•		
116	Eurasian Wryneck <i>Jynx torquilla</i>	•						•	
	Family Alaudidae: Lark, Bushlark								
117	Ashy-crowned Sparrow-Lark <i>Eremopterix grisea</i>	•						•	
118	Bengal Bushlark <i>Mirafra assamica</i>	•					•		
119	Common Crested Lark <i>Galerida cristata</i>			•				•	
120	Oriental Skylark <i>Alauda gulgula</i>			•					•
121	Red-winged Bushlark <i>Mirafra erythroptera</i>			•				•	
	Family Hirundinidae: Martins and Swallows								
122	Common Swallow <i>Hirundo rustica</i>		•			•			
123	Plain Martin <i>Riparia paludicola</i>		•			•			
124	Red-rumped Swallow <i>Hirundo daurica</i>		•					•	
125	Streak-throated Swallow <i>Hirundo fluvicola</i>		•					•	
126	Wire-tailed Swallow <i>Hirundo smithii</i>	•				•			
	Family Motacillidae: Wagtails, Pipits								
127	Citrine Wagtail <i>Motacilla citreola</i>	•				•			
128	Eurasian Tree Pipit <i>Anthus trivialis</i>		•						•
129	Grey Wagtail <i>Motacilla cinerea</i>		•				•		
130	Large-pied Wagtail <i>Motacilla maderaspatensis</i>	•						•	
131	Paddy-field Pipit <i>Anthus rufulus</i>	•				•			
132	White Wagtail <i>Motacilla alba</i>		•			•			
133	Yellow Wagtail <i>Motacilla flava</i>		•			•			
	Family Campephagidae: Minivets								
134	Small Minivet <i>Pericrocotus cinnamomeus</i>			•				•	
	Family Pycnonotidae: Bullbills								
135	Red-vented Bulbill <i>Pycnonotus cafer</i>	•				•			
	Family Laniidae: Shrikes								
136	Bay-backed Shrike <i>Lanius vittatus</i>	•					•		
137	Brown Shrike <i>Lanius cristatus</i>	•				•			
138	Rufous-backed Shrike <i>Lanius schach</i>	•					•		
	Family Musicapidae: Redstarts, Chats, Robins								
139	Black Redstart <i>Phoenicurus ochruros</i>	•				•			
140	Blue-throat <i>Luscinia svecica</i>		•				•		
141	Common Stonechat <i>Saxicola torquata</i>		•			•			
142	Indian Chat <i>Cercomela fusca</i>	•						•	
143	Indian Robin <i>Saxicoloides fulicata</i>	•					•		
144	Orange-headed Thrush <i>Zoothera citrina</i>	•							•
145	Oriental Magpie Robin <i>Copsychus saularis</i>	•						•	
146	Pied Bushchat <i>Saxicola caprata</i>	•				•			
147	Common Babbler <i>Turdoides caudatus</i>	•					•		
148	Jungle Babbler <i>Turdoides striatus</i>	•				•			
149	Large Grey Babbler <i>Turdoides malcolmi</i>	•				•			

	Family, Common and Scientific name	Status of birds							
		1	2	3	4	5	6	7	8
150	Striated Babbler <i>Turdoides earlei</i>	•					•		
151	Ashy Prinia <i>Prinia socialis</i>	•				•			
152	Blyth's Reed-Warbler <i>Acrocephalus dumetorum</i>	•						•	
153	Booted Warbler <i>Hippolais colligata</i>		•					•	
154	Bristled Grassbird <i>Chaetornis striata</i>			•		•			
155	Common Chiffchaff <i>Phylloscopus collybita</i>	•					•		
156	Common Lesser Whitethroat <i>Sylvia curruca</i>		•			•			
157	Common Tailorbird <i>Orthotomus sutorius</i>	•					•		
158	Graceful Prinia <i>Prinia gracilis</i>	•						•	
159	Greenish Warbler <i>Phylloscopus trochiloides</i>		•					•	
160	Jungle Prinia <i>Prinia sylvatica</i>	•					•		
161	Plain Prinia <i>Prinia inornata</i>	•				•			
162	Rufous-fronted Prinia <i>Prinia buchanani</i>	•						•	
163	Streaked Fantail-Warbler <i>Cisticola juncidis</i>	•				•			
164	Yellow-bellied Prinia <i>Prinia flaviventris</i>	•						•	
165	Red-throated Flycatcher <i>Ficedula parva</i>		•			•			
166	Asian Brown Flycatcher <i>Muscicapa dauurica</i>	•					•		
167	Grey headed Canary Flycatcher <i>Cuculicapa ceylonensis</i>			•					•
	Family Nectariniidae: Sunbirds								
168	Purple Sunbird <i>Nectarinia asiatica</i>	•					•		
	Family Estrildidae: Munias								
169	Black-headed Munia <i>Lonchura malacca</i>	•						•	
170	Red Munia <i>Amandava amandava</i>	•				•			
171	Spotted Munia <i>Lonchura punctulata</i>	•					•		
172	White-throated Munia <i>Lonchura malabarica</i>	•				•			
	Family Passeridae: Sparrows								
173	House Sparrow <i>Passer domesticus</i>	•				•			
174	Baya Weaver <i>Ploceus philippinus</i>	•				•			
175	Black-breasted Weaver <i>Ploceus benghalensis</i>			•			•		
176	Streaked Weaver <i>Ploceus manyar</i>			•			•		
	Family Sturnidae: Mynas, Starlings								
177	Asian-pied Starling <i>Sturnus contra</i>	•				•			
178	Bank Myna <i>Acridotheres ginginianus</i>	•					•		
179	Brahminy Myna <i>Sturnia pagodarum</i>	•						•	
180	Common Myna <i>Acridotheres tristis</i>	•				•			
181	Common Starling <i>Sturnus vulgaris</i>		•					•	
	Family Oriolidae: Orioles								
182	Eurasian Golden Oriole <i>Oriolus oriolus</i>			•		•			
	Family Dicruridae: Drongos								
183	Black Drongo <i>Dicrurus macrocercus</i>	•				•			
	Family Corvidae: Crows, Treepies								
184	House Crow <i>Corvus splendens</i>	•				•			
185	Indian Treepie <i>Dendrocitta vagabunda</i>	•				•			
186	Jungle Crow <i>Corvus macrorhynchos</i>			•			•		

Footnote: 1 - Resident; 2 - Winter Migrant; 3 - Summer Migrant; 4 - Passage migrant; 5 - Common; 6 - Fairly Common; 7 - Uncommon; 8 - Rare

were common, 26% (n=49) fairly common, 17% (n=32) uncommon and 11% (n=20) rare. Among 44 families, Muscicapidae dominated the list with 29 species followed by Anatidae with 18 species; Scolopacidae, Accipitridae with 13 species each; Ardeidae with 11 species; Motacillidae with seven species; Cuculidae with six species; Sturnidae, Rallidae, Hirundinidae, Columbidae, Alaudidae with five species each; Charadriidae, Ciconidae, Estrildidae, Passeridae with four species each; Alcedinidae, Corvidae, Laniidae, Phalacrocoracidae, Phasianidae, Strigidae, Threskiornithidae with three species each; Falconidae, Jacanidae, Meropidae, Picidae, Psittacidae, Recurvirostridae with two species each whereas Anhingidae, Bucerotidae, Burhinidae, Campephagidae, Capitonidae, Coracidae, Dicruridae, Gruidae, Nectariniidae, Oriolidae, Podicepsidae, Picnonotidae, Rostratulidae, Titonidae and Upupidae with only one species each respectively.

Surajpur Wetland has been reported as an important breeding and resting ground of threatened birds like Sarus Crane *Grus antigone*, Bristled Grassbird *Chaetornis striata*, Black-necked Stork *Ephippiorhynchus asiaticus*, Black-headed Ibis *Threskiornis melanocephalus*. Other important threatened birds recorded were Egyptian Vulture *Neophron percnopterus*, Bonelli's Eagle *Hieraetus fasciatus*, Greater Spotted Eagle *Aquila hastata*, Ferruginous Pochard *Aythya nyroca* and Red-crested Pochard *Rhodonessa rufina*.

Waterbirds, being generally at or near the top of most wetland food chains are highly susceptible to habitat disturbances and are, therefore, good indicators of the general condition of aquatic habitats (Kushlan 1992; Jayson & Mathew 2002; Kler 2002). The mosaic of habitat types within a wetland helps colonise a wide range of specialist and generalist species (Masing et al. 2000). Surajpur wetlands has been established as a prominent site for wintering birds, this study helps to stress the importance of the area in providing the waterbirds a larger place to congregate. The study area represents the mosaic of habitats which help in supporting a high diversity of plant life and avifauna (Bura et al. 2013; Vardhan 2013). As Surajpur wetland site comes under the purview of the National Capital Region (NCRPB 2013), the study can be used by the National Capital Region Planning Board to develop this area as a green zone or wildlife zone. The study area also serves to promote Surajpur reserve as a good place for eco-tourism, since it is located on the outskirts of Delhi.

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