

## WATERFOWL DIVERSITY OF KEOLADEO NATIONAL PARK BHARATPUR, RAJASTHAN

ALTAF AHMAD LONE

Ph. 8491031604, E-mail: lone.kasibtz73@gmail.com

### ABSTRACT:

*One hundred and Fifty three species of water birds belonging to 27 families were recorded in the three years study at the Keoladeo National Park Bharatpur, Rajasthan. Most of the families were represented by less than five species except for Anatidae (24 species), Scolopacidae (20 species), Ardeidae (15 species), Rostratulidae (11 species) and Rallidae (10 species).*

*These include 49 residents, 70 migratory birds and 34 residents migratory. Among the birds recorded in this study, about 40.5% are insectivores and other dominating types include piscivores (35.9%), vegetarian (11.7%), omnivores (8.6%), carnivores (2.7%) and grainivorous (0.6%) respectively. Furthermore, among the recorded water birds 28 have been found threatened species. Out of these threatened species 03 are Critically Endangered (CR), 01 is Endangered (EN), 10 are Vulnerable (VU) and 14 species are Near Threatened (NT) respectively. Also, among these threatened birds 12 are migratory, 8 are resident and 8 are resident migratory.*

**Key words:** Waterfowl, Biodiversity, Keoladeo National Park Bharatpur.

### INTRODUCTION

One of the best known functions of wetlands is to provide a habitat for birds. Wetlands are important bird habitats and birds use them for breeding, nesting, and rearing young ones (Vyas, *et. al.*, 2010). Birds also use wetlands as a source of drinking water and for feeding, resting, shelter, and social interactions (Stewart, 2007).

North India is part of a global biodiversity hotspot. The region has the highest faunal diversity in India. India being a mega diversity country is habitat to more than 1200 species of birds which amounts to 13% of the bird species of the world (Ali and Ripley, 1983). Birds contribute extensively to the diversity of aquatic species. Birds

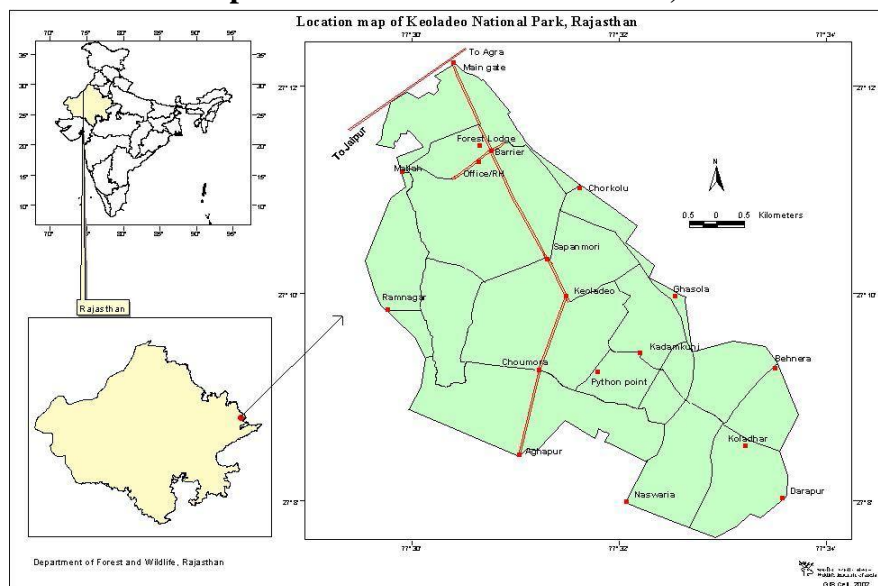
contribute exceptionally in conservation of rich biodiversity areas and also have the capacity to make conservation an “affair of the heart”. Probably birds are the most broadly surveyed and observed animals on the earth.

Among the threatened birds of the world, a great number is of aquatic species. Hence, appropriate measures are required to conservation them. One of the imperative measures can be to put our focus on conservation of lakes & wetlands. In the past a large proportion of aquatic bodies existed in forest, grassland, and scrub areas have been turned into the barren lands and hence lost their battle with aquatic habitats (wetlands - to be precise). The management of these areas is highly essential for the conservation of the most bird species.

### STUDY AREA

The Urban Agglomeration (UA) of Bharatpur is situated at the foothills of the Aravalli Mountain series and is strategically located between the most eastern part of the State (Bharatpur District Gazetteer 1971). It forms boundaries with Gurgaon district of Haryana in the north and north–east. Mathura and Agra lies in the east. Dhaulpur district lies in its south and Sawai Madhopur, Dausa and Alwar district in the west. Keoladeo National Park (KNP) ( $27^{\circ}7'6''N - 27^{\circ}12'2''N$  and  $77^{\circ}29'5''E - 77^{\circ}33'9''E$ ) is a 29 km<sup>2</sup> area situated on the extreme western edge of the Gangetic basin that was once confluence of Rivers Gambhir and Banganga in Bharatpur district in the State of Rajasthan (Figure 1). The park, known locally as ‘Ghana’, is a mosaic of dry grassland, woodlands, swamps and wetlands spread over 29 sq km. About 900 ha are divided into small, seasonally inundated reservoirs by a series of bunds and dykes (Chauhan, 2006, Mathur, V.B. *et. al*, 2009).

**Figure- 1. Location map of the Keoladeo National Park, a World Heritage site**



Keoladeo National Park is popularly known as “bird paradise”. The KNP wetland is a major attraction to the migratory waterfowl and the trees clusters scattered amidst the reservoir is good nesting site for many water birds. During the monsoon an estimated 65 million fish-fry are carried by floods into the impoundments every year, providing the food base for the large numbers of wading and fish-eating birds: herons, storks and cormorants and wintering migrant ducks (Milne 1997).

## **METHODOLOGY:**

This report is based on both by self sighting the birds with binoculars and with the help of published lists of national park authorities. The field observations were carried out during wintering months (Oct to March) of the years 2009 to 2011. A weekly survey was done by systematically walking on fixed routes through the study area. The birds were mostly observed during the most active periods of the day i.e., from 7: 00 am- 10:00 am and from 6: 00 am to 7: 30 pm. However observations were also made during other timings according to the convenience. Field characteristics and the number of birds were counted on the data sheets. The identification of birds was done using field guides (Ali, 2002 and Ali & Ripley, 1996). Checklists of birds recorded in the Park are given in (Abdulali & Pandey, 1978) and (Ali & Hussain, 1982). Scientific and common names are after (Manakadan, R. & Pittie A., 2001), and local names have been taken after (Rathor, *et al.*, 2006). The status of the birds is categorized as Resident (R), Migratory (M) and Resident Migratory (RM) after Ali (2002) and the threatened status is taken according to the (Birdlife International IUCN redlist, 2008). On the basis of the frequency of sighting, the bird species were assigned categories of abundance (rare, uncommon, occasional and common). The birds recorded were categorized into six trophic guilds, namely piscivores, insectivores, omnivores, carnivores, Vegetarian and granivores based on Ali and Ripley (1987).

## **RESULTS AND DISCUSSION:**

The checklist of recorded birds in the national park and related comprehensive parameters along their common and Hindi names, residence status, feeding habit and threatened status is reported in appendix-A. The manuscript highlights the uniqueness of the KNP ecosystem for birdlife along with the checklist of avifauna. The work is an attempt to give an actual number of water bird species sighted inside the park since its origin.

**Table-1: The Status of water bird families in Keoladeo National Park.**

S. No	Family	Number of birds
1	Podicipedidae (Grebes)	3
2	Pelecanidae (Pelicans)	3
3	Phalacrocoracidae (Cormorants/Shags)	3
4	Anhingidae (Darters)	1
5	Ardeidae (Herons, Egrets & Bitterns)	15
6	Ciconiidae (Storks)	7
7	Threskiornithidae (Ibises & Spoonbills)	4
8	Phoenicopteridae (Flamingos)	2
9	Anatidae (Swans, Geese & Ducks)	24
10	Accipitridae (Hawks, Eagles, Buzzards, Old World Vultures, Kites, Harriers)	6
11	Pandionidae (Osprey)	1
12	Falconidae (Falcons)	1
13	Phasianidae (Pheasants, Partridges, Quails)	1
14	Gruidae (Cranes)	4
15	Rallidae (Rails, Crakes, Moorhens, Coots)	10
16	Rostratulidae (Painted-Snipes)	1
17	Jacaniidae (Jacanas)	2
18	Charadriidae (Plovers, Dotterels, Lapwings)	11
19	Scolopacidae (Sandpipers, Stints, Snipes, Godwits & Curlews)	20
20	Recurvirostridae (Ibis bill, Avocets & Stilts)	2
21	Burhinidae (Stone-Curlew & Stone-Plovers/Thick-knees)	1
22	Glareolidae (Courser & Pratincoles)	3
23	Laridae (Gulls, Terns & Noddies)	8
24	Rynchopidae	1
25	Alcedinidae (Kingfishers)	5
26	Hirundinidae (Swallows & Martins)	6
27	Motacillidae (Wagtails & Pipits)	8
	<b>Total</b>	<b>153</b>

**Source:** compiled from Appendix- A

The total 153 recorded species of KNP water birds belonged to 27 families. Out of these members of Anatidae, Scolopacidae and Ardeidae contributed maximum from the recorded waterfowl of the park. The members of 07 families including Anhingidae, Accipitridae, Pandionidae, Falconidae, Phasianidae, Burhinidae, Rynchopidae, contribute the least, (one specie) each (Table-1). Most of the species of the families Anatidae, Gruidae, Podicipedidae, Pelecanidae, Charadriidae, Scolopacidae and Motacillidae are migratory species those visit during

winter months and utilize the wetland for foraging during these months. However, the local migrants are widespread throughout the year both in park wetland and to adjacent wetlands, moving to and fro utilizing the best resources available to them.

### Resident status

Among the birds recorded from Keoladeo National Park 32.1% are resident, 45.7% migratory (winter & summer) visitors and 22.2% resident migrants (Table- 2). Though the percentage of migratory species is comparatively larger than resident species; some of these species such as Great Crested Grebe, Great Bittern, Greater White-fronted Goose, and Pacific Golden-Plover are rare in the park. Furthermore, some important resident migratory like Lesser Adjutant-Stork, Greater adjutant stork, Marbled Teal, Pallas's Fish-Eagle, Eurasian Woodcock and Great Thick-Knee stopped to visit the park for about more than 20 long years.

**Table- 2**  
**Distribution of water bird species of KNP by Resident Status.**

Resident Status	Frequency	Percent (%)
<b>Resident</b>	49	32.1
<b>Migratory</b>	70	45.7
<b>Resident Migratory</b>	34	22.2
<b>Total</b>	<b>153</b>	<b>100</b>

**Source:** Compiled from Appendix- A

The most unwanted disappearance of migratory specie from the park is considered of Siberian crane *Grus leucogeranus* for the 10<sup>th</sup> consecutive year till 2011. These birds have not been sighted in the Park since 2002 year and the specie is now declared extinct from India. At its peak, in 1965, Bharatpur hosted over 200 Siberian cranes that were reduced barely to a pair of these birds by the late 1990s following by the last pair seen in 2001.

### Feeding Habits

In terms of the food preferences, among these birds 40.5% were insectivorous, 35.9% were piscivorous, 11.7% vegetarian, 8.6% omnivorous, 2.7% carnivorous and 0.6% grainivorous respectively (Table- 3).

The composition of birds in different guilds in KNP showed that the insectivorous guild was the most abundant (40.5%) followed by piscivorous guild (35.9%) and grainivorous were the least abundant guild with only (0.6%)

respectively. The composition of other three guilds is vegetarian 11.7%, omnivores 8.6% and carnivores 2.7% in order.

**Table -3**  
**Distribution of water bird species of KNP by feeding habits.**

Feeding Categories	Frequency	Percent (%)
<b>Insectivorous</b>	62	40.5
<b>Piscivorous</b>	55	35.9
<b>Grainivorous</b>	1	0.6
<b>Vegetarian</b>	18	11.7
<b>Omnivorous</b>	13	8.6
<b>Carnivorous</b>	4	2.7
<b>Total</b>	<b>153</b>	<b>100</b>

**Source:** Compiled from Appendix- A

Several species of water birds are threatened; more than 50 % of them fall in Piscivorous guild followed next by insectivorous and omnivores with 4 species (14.3%) each. The remained threatened proportion is of vegetarian (10.7%) and carnivorous guilds (7.1%) respectively.

**Table-3: Distribution of threatened water bird species of KNP by feeding habits.**

Threatened species		
Feeding Categories	Frequency	Percentage (%ge)
Piscivorous	15	53.6
Insectivorous	4	14.3
Omnivorous	4	14.3
Vegetarian	3	10.7
Carnivorous	2	7.1
<b>Total</b>	<b>28</b>	<b>100</b>

**Source:** Compiled from Appendix- A

Out of 28 Threatened species of water birds, 03 are Critically Endangered (CR), 01 is Endangered (EN), 10 are Vulnerable (VU) and 14 species are Near Threatened (NT) respectively. Further among these Threatened species 12 are migratory, 8 are resident and 8 are resident migratory (appendix- A).

**Table-4: Distribution of threatened water bird species of KNP by Resident Status.**

Threatened species		
Resident Status	Frequency	Percentage (%ge)
Resident	8	28.6
Migratory	12	42.8
Resident Migratory	8	28.6
<b>Total</b>	<b>28</b>	<b>100</b>

**Source:** Compiled from Appendix- A

Painted stork globally Near Threatened species (IUCN, 2008) is a resident with local movements. Identification of hundreds of these birds in one day in this park highlights the importance of this area. Similarly hundreds of Dartars, a Near Threatened species (IUCN, 2008) resident bird with local movements were also spotted on the same day. These two bird species were observed to be frequent visitors to Keoladeo National Park wetland during December to March. This indicates that during the season this area is a preferred site for these birds.

Other internationally important species like Spot-billed Pelican and Black-necked Stork are Near Threatened species (IUCN, 2008) were regularly recorded from this wetland. They were found spread in wetland during December to March, with a minimum of one and maximum of 10 individuals. Great White Pelical, a migratory species (Ali, S & Ripley, 1978 & Ali, S & Futehally, 89) which is another internationally important bird was observed in 4 or 5 flocks, with the individuals of 20-30 in each flock during the winter months. Some birds like Sarus Crane, White necked stork, Glossy Ibis and Gadwall were found very few (4-5) each species in numbers during the study period.

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**Appendix- A**

**Water Birds of Keoladeo National Park Bharatpur, Rajasthan**

S. No	Species	Scientific name	Hindi Name	Residence status	Frequency	Feeding Habit	Threatened Status	Status in the KNP)
<b>Family Podicipedidae (Grebes)</b>								
1	Little Grebe (Dabchick)	<i>Tachybaptus ruficollis</i>	Pandubi	R <sup>1,6,7,10,11</sup>	C	P <sup>1,4,7,11</sup>		
2	Great Crested Grebe	<i>Podiceps cristatus</i>	Shiv Hans	M <sup>1,6,7</sup>	X	P <sup>1,2,4,6</sup>		Rare
3	Black-necked Grebe	<i>Podiceps nigricollis</i>	Badi pandubi	M <sup>1,9</sup>	O	P <sup>1,2</sup>		
<b>Family Pelecanidae (Pelicans)</b>								
4	Great White Pelican (Rosy Pelican)	<i>Pelecanus onocrotalus</i>	Hawasil	M <sup>1,7,10,11</sup>	O	P <sup>1,2,4,7</sup>		
5	Spot-billed Pelican (Grey Pelican)	<i>Pelecanus philippensis</i>	Jal Singn	R <sup>1,7,9</sup>	O	P <sup>1,7,8</sup>	NT	Last sighted

								20 yrs back
6	Dalmatian Pelican	<i>Pelecanus crispus</i>	Pili Chonch Hawasil	M <sup>1,7,9,11</sup>	O	P <sup>1,7,8,11</sup>	VU	
<b>Family Phalacrocoracidae (Cormorants/Shags)</b>								
7	Little Cormorant	<i>Phalacrocorax niger</i>	Chota Pankawwa	R <sup>1,6,9,10</sup>	C	P <sup>1,4,7</sup>		
8	Indian Cormorant (Indian Shag)	<i>Phalacrocorax fuscicollis</i>	Ganhil	RM <sup>1,6</sup>	O	P <sup>1,4,7</sup>		
9	Great Cormorant	<i>Phalacrocorax carbo</i>	Bada Pankawwa	RM <sup>1,6,11</sup>	O	P <sup>1,4,7,11</sup>		
<b>Family Anhingidae (Darters)</b>								
10	Datar or snake bird	<i>Anhinga rufa</i>	Panwa	RM <sup>1,6,8,11</sup>	C	P <sup>1,6,10</sup>	NT	
<b>Family Ardeidae (Herons, Egrets &amp; Bitterns)</b>								
11	Little Egret	<i>Egretta garzetta</i>	Karchai Bagla	R <sup>1,6,10,11</sup>	C	I <sup>1,7,11</sup>		
12	Western Reef-Egret	<i>Egretta gularis</i>	-	R <sup>1</sup>	O	P <sup>1</sup>		
13	Grey Heron	<i>Ardea cinerea</i>	Anjan	RM <sup>1,6,10</sup>	C	P <sup>1</sup>		Rare
14	Purple Heron	<i>Ardea purpurea</i>	Lal Anjan	RM <sup>1,6</sup>	O	P <sup>1,10</sup>		
15	Great Egret (Large Egret)	<i>Casmerodius albus</i>	Bada Bagla	R <sup>1,6</sup>	C	P <sup>1</sup>		
16	Intermediate Egret (Median Egret)	<i>Mesophoyx intermedia</i>	Manjhla Bagla	R <sup>1,6</sup>	C	P <sup>1,6</sup>		
17	Cattle Egret	<i>Bubulcus ibis</i>	Gai Bagla	R <sup>1,6</sup>	C	I <sup>1,7,10</sup>		
18	Indian Pond-Heron	<i>Ardeola grayii</i>	Andha Bagla	R <sup>1,7,11</sup>	C	I <sup>1,7</sup>		
19	Little Heron (Little Green Heron)	<i>Butorides striatus</i>	Hari Baguli	R <sup>1,6,9</sup>	O	P <sup>1</sup>		
20	Black Crowned night heron	<i>Nycticorax nycticorax</i>	Kwaak	R <sup>1,6</sup>	C	P <sup>1</sup>		
21	Little Bittern	<i>Ixobrychus minutus</i>	Choti Baguli	RM <sup>1</sup>	U	P <sup>1</sup>		Rare, breeds in water

								hysinth
22	Black Bittern	<i>Dupetor flavicollis</i>	Kala Bagla	RM <sup>1</sup>	O	P		
23	Great Bittern (Tiger bittern)	<i>Botaurus stellaris</i>	Nirgaug	M <sup>1</sup>	U	P		Rare
24	Yellow Bittern	<i>Ixobrychus sinensis</i>	Jun Bagla	RM <sup>1</sup>	U	P <sup>1</sup>		
25	Cinnamon Bittern (Chestnut Bittern)	<i>Ixobrychus cinnamomeus</i>	Lal Bagla	RM <sup>1,5</sup>	U	P <sup>1</sup>		breeds in water hysinth
<b>Family Ciconiidae (Storks)</b>								
26	Painted Stork	<i>Mycteria leucocephala</i>	Dhok	R <sup>6,8</sup>	O	P <sup>8</sup>	NT	
27	Asian Openbill-Stork	<i>Anastomus oscitans</i>	Ghonghila	R <sup>6</sup>	O	P <sup>4</sup>		
28	Black Stork	<i>Ciconia nigra</i>	Surmal	M <sup>1,6</sup>	O	P <sup>1,5</sup>		
29	Woolly-necked Stork (White-necked Stork)	<i>Ciconia episcopus</i>	Laglag	R <sup>1,5</sup>	O	P <sup>1,7</sup>		
30	Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	Loharajang	R <sup>1,6,8</sup>	U	P <sup>1,8</sup>	NT	
31	Lesser Adjutant-Stork	<i>Leptoptilos javanicus</i>	Chota Garur	RM <sup>1,4,8</sup>	O	P <sup>8</sup>	VU	Last sighted in 1990
32	Greater adjutant stork	<i>Leptoptilos dubius</i>	Garur	RM <sup>1,4,8</sup>	O	P <sup>1,8</sup>	EN	Last sighted in 1990
<b>Family Threskiornithidae (Ibises &amp; Spoonbills)</b>								
33	Glossy Ibis	<i>Plegadis falcinellus</i>	Chota Buzza	RM <sup>1,6</sup>	C	P <sup>1</sup>		
34	Black-headed Ibis (Oriental White Ibis)	<i>Threskiornis melanocephalus</i>	Safed Buzza	R <sup>1,6,8</sup>	C	P <sup>1,8</sup>	NT	
35	Black Ibis	<i>Pseudibis papillosa</i>	Kala Buzza	R <sup>1,6</sup>	U	P <sup>1</sup>		Breeds in Kosi & Kravali 30 kms-KNP
36	Eurasian Spoonbill	<i>Platalea leucorodia</i>	Chamcha	RM <sup>1,6</sup>	O	P <sup>1</sup>		

Family Phoenicopteridae (Flamingos)								
37	Greater Flamingo	<i>Phoenicopterus ruber</i>	-	RM <sup>1,4</sup>	O	I <sup>1,4</sup>		
38	Lesser Flamingo	<i>Phoenicopterus minor</i>	-	RM <sup>1,4,8</sup>	C	I <sup>1,4</sup>	NT	
Family Anatidae (Swans, Geese & Ducks)								
39	Lesser Whistling-Duck	<i>Dendrocygna javanica</i>	Seelhi	RM <sup>1,6</sup>	C	V <sup>1</sup>		
40	Greater White-fronted Goose	<i>Anser albifrons</i>	Safad Hans	M <sup>1</sup>	O	V <sup>1</sup>		Rare
41	Lesser White-fronted Goose	<i>Anser erythropus</i>		M <sup>1</sup>	-	V <sup>1</sup>	VU	Single bird used to be sighted
42	Greylag Goose	<i>Anser anser</i>	Hans	M <sup>1</sup>	C	V <sup>1</sup>		
43	Bar-headed Goose	<i>Anser indicus</i>	Kareyee Hans	M <sup>1</sup>	C	V <sup>1</sup>		
44	Ruddy Shelduck (Brahminy Shelduck)	<i>Tadorna ferruginea</i>	Surkhaba or Chakwa	M <sup>1,6</sup>	C	Om <sub>1</sub>		
45	Common Shelduck	<i>Tadorna tadorna</i>	Safed Surkhab	M <sup>1</sup>	U	Om <sub>1</sub>		
46	Comb Duck	<i>Sarkidiornis melanotos</i>	Nukta	R <sup>11</sup>	C	V		
47	Falcated Duck	<i>Anas falcata</i>	Kala Sinkhur	M <sup>1</sup>	U	V <sup>1</sup>	NT	Not seen past 12 yr
48	Eurasian Wigeon	<i>Anas Penelope</i>	Chota Talsir	M <sup>6</sup>	O	V		
49	Mallard	<i>Anas platyrhynchos</i>	Nilsir	M <sup>1,6</sup>	U	V <sup>1</sup>		
50	Cotton Pygmy-Goose (Cotton Teal)	<i>Nettapus coromandelianus</i>	Girja	M <sup>1,6</sup>	U	V <sup>1</sup>		
51	Gadwall	<i>Anas strepera</i>	Beykhour	M <sup>1,6</sup>	O	V <sup>1</sup>		
52	Spot-billed Duck	<i>Anas poecilorhyncha</i>	Gugral	RM <sup>1,6</sup>	U	V <sup>1</sup>		
53	Northern Shoveller	<i>Anas clypeata</i>	Tidari	M <sup>1,7</sup>	-	Om		

54	Northern Pintail	<i>Anas acuta</i>	Seenkh Par	M <sup>1,7</sup>	C	V <sup>1</sup>		
55	Garganey	<i>Anas querquedula</i>	Chaita	M <sup>1,7</sup>	O	V <sup>1</sup>		
56	Common Teal	<i>Anas crecece</i>	Choti Murgabi	M <sup>1,7</sup>	O	V <sup>1</sup>		
57	Marbled Teal	<i>Marmaroneta angustirostris</i>	Choi	RM <sup>1</sup>	U	V <sup>1</sup>	<b>VU</b>	Last sighted 22 yrs back
58	Baikal Teal`	<i>Anas formosa</i>	-	M <sup>1</sup>	U	Om <sub>1</sub>	<b>VU</b>	Last sighted 22 yrs back
59	Red-crested Pochard	<i>Rhodonessa rufina</i>	Lal Chonch	M <sup>1,6</sup>	O	V <sup>1</sup>		
60	Common Pochard	<i>Aythya ferina</i>	Lal Sir	M <sup>1,6</sup>	O	V <sup>1</sup>		
61	Ferruginous Pochard	<i>Aythya nyroca</i>	Kurchia	M <sup>1,6</sup>	O	Om <sub>1</sub>	<b>NT</b>	
62	Tufted Pochard	<i>Aythaya fuligula</i>	Ablak	M <sup>1,6</sup>	U	Om <sub>1</sub>		
<b>Family Accipitridae (Hawks, Eagles, Buzzards, Old World Vultures, Kites, Harriers)</b>								
63	Pallas's Fish-Eagle	<i>Haliaeetus leucoryphus</i>	Machhar anga	RM <sup>1,8</sup>	O	P <sup>1,4,8</sup>	<b>VU</b>	stopped breeding for 20 yrs
64	White-tailed Eagle (White-tailed Sea-Eagle)	<i>Haliaeetus albicilla</i>	Kuhasa	M <sup>1,8</sup>	-	P <sup>4,8</sup>	<b>NT</b>	
65	Lesser Fish Eagle	<i>Ichthyophaga humilis</i>		R <sup>1,8</sup>	-	P <sup>8</sup>	<b>NT</b>	
66	Grey headed fish eagle	<i>Ichthyophaga ichthyaetus</i>		R <sup>1,8</sup>	O	P <sup>8</sup>	<b>NT</b>	
67	Greater Spotted Eagle	<i>Aquila clanga</i>	Kaljunga	RM <sup>1,8</sup>	C	Cr <sup>1</sup>	<b>VU</b>	One breeding attempt recorded in 1985

68	Imperial Eagle (Eastern Imperial Eagle)	<i>Aquila heliaca</i>	Buta Jumiz	RM <sup>1,8</sup>	C	Cr <sup>5</sup>	VU	
<b>Family Pandionidae (Osprey)</b>								
69	Osprey	<i>Pandion haliaetus</i>	Machlim ar	M <sup>1,6</sup>	O	P <sup>1</sup>		
<b>Family Falconidae (Falcons)</b>								
70	Peregrine Falcon	<i>Falco peregrinus japonensis</i>	Bhyri	M <sup>1,6</sup>	U	Cr <sup>1,6</sup>		
<b>Family Phasianidae (Pheasants, Partridges, Quails)</b>								
71	Black Francolin	<i>Francolinus francolinus</i>	Kala Teetur	R <sup>7</sup>	O	G <sup>4</sup>		
<b>Family Gruidae (Cranes)</b>								
72	Siberian Crane	<i>Grus leucogeranus</i>	Siberian Sarus	M <sup>6</sup>	–	P <sup>7</sup>	CR	Last sighted in 2002
73	Sarus Crane	<i>Grus antigone</i>	Sarus	R <sup>7</sup>	C	P <sup>4</sup>	VU	
74	Common Crane	<i>Grus grus</i>	Sarang or Kunj	M <sup>4</sup>	O	P <sup>4</sup>		
75	Demoiselle crane	<i>Grus virgo</i>		M <sup>4</sup>	O	P		
<b>Family Rallidae (Rails, Crakes, Moorhens, Coots)</b>								
76	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	Dauk	R <sup>7</sup>	C	I <sup>7</sup>		
77	Baillon's Crake	<i>Porzana pusilla</i>	Jhilli	M	U	I		
78	Spotted Crake	<i>Porzana porzana</i>	Chitli Jalbodar	M	U	I		
79	Ruddy-breasted Crake	<i>Porzana fusca</i>	Khairi Jalbodar	R <sup>7</sup>	O	I <sup>7</sup>		
80	Water Rail	<i>Rallus aquaticus</i>	Pankupri	RM	O	Om		
81	Brown Crake	<i>Amaurornis akool</i>	–	R	O	Cr		
82	Water cock	<i>Gallicrex cinerea</i>	Kora	M <sup>7</sup>	U	I <sup>7</sup>		
83	Purple Moorhen	<i>Porphyrio porphyrio</i>	Kalim	R <sup>7,12</sup>	O	I <sup>7</sup>		
84	Common Moorhen	<i>Gallinula chloropus</i>	Jal Murgi	R <sup>6,12</sup>	C	I <sup>7</sup>		
85	Common Coot	<i>Fulica atra</i>	Tikri	RM <sup>6</sup>	C	P <sup>7</sup>		

<b>Rostratulidae (Painted-Snipes)</b>								
86	Greater Painted-Snipe	<i>Rostratula benghalensis</i>	Raj Chaha	R <sup>6</sup>	O	Om		
<b>Family Jacanidae (Jacanas)</b>								
87	Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>	Pihuya or Piho	R <sup>7</sup>	C	Om <sub>7</sub>		
88	Bronze-winged Jacana	<i>Metopidius indicus</i>	Pipi	R <sup>7</sup>	O	Om <sub>4</sub>		
<b>Family Charadriidae (Plovers, Dotterels, Lapwings)</b>								
89	Little Ringed Plover	<i>Charadrius dubius</i>	Jira	RM <sup>6</sup>	O	I <sup>7</sup>		
90	Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>	Zirdi	R <sup>7</sup>	O	I <sup>7</sup>		
91	Red-wattled Lapwing	<i>Vanellus indicus</i>	Titori	R <sup>7</sup>	C	I <sup>7</sup>		
92	Sociable Lapwing	<i>Vanellus gregarius</i>	Ngahoibi	M <sup>7</sup>	U	Om <sub>8</sub>	<b>CR</b>	
93	Pacific Golden-Plover	<i>Pluvialis fulva</i>	–	M	U	I		Rare
94	Common Ringed Plover	<i>Charadrius hiaticula</i>	Kantiya Tittib	M	O	I		
95	Kentish Plover	<i>Charadrius alexandrines</i>	Merwa	R	–	I		
96	Northern Lapwing	<i>Vanellus vanellus</i>	Titti	M	O	I		
97	River Lapwing	<i>Vanellus duvaucelii</i>	–	R	–	I		
98	Grey-headed Lapwing	<i>Vanellus cinereus</i>	Salang	M	U	I		
99	White-tailed Lapwing	<i>Vanellus leucurus</i>	Shwet Poonch Titti	M	C	I		
<b>Family Scolopacidae (Sandpipers, Stints, Snipes, Godwits &amp; Curlews)</b>								
100	Eurasian Curlew	<i>Numenius arquata</i>	Bada Gulinda	M	U	I	<b>NT</b>	
101	Eurasian Woodcock	<i>Scolopax rusticola</i>		RM	–	I		Not sighted for past 25 yrs
102	Pintail Snipe	<i>Gallinago stenura</i>	Bharak	M	U	I		

103	Common Snipe	<i>Gallinago gallinago</i>	Chaha	M	O	I		
104	Jack Snipe	<i>Lymnocyrtus minimus</i>	Chota Chaha	M	U	I		
105	Black-tailed Godwit	<i>Limosa limosa</i>	Jangral	M <sup>7</sup>	U	I <sup>7</sup>	NT	
106	Spotted Redshank	<i>Tringa erythropus</i>	Surma	M	O	I		
107	Common Redshank	<i>Tringa totanus</i>	Chota Batan	M	O	I		
108	Marsh Sandpiper	<i>Tringa stagnatilis</i>	–	M <sup>7</sup>	O	I <sup>7</sup>		
109	Common Greenshank	<i>Tringa nebularia</i>	Timtima	M	O	I		
110	Green Sandpiper	<i>Tringa ochropus</i>	Tutuari	M <sup>6</sup>	-	I		
111	Wood Sandpiper	<i>Tringa glareola</i>	Chupka	M <sup>7</sup>	U	I <sup>7</sup>		
112	Common Sandpiper	<i>Actitis hypoleucos</i>	Panewa	M <sup>6</sup>	O	I <sup>7</sup>		
113	Long billed Dowitcher	<i>Limnodromus scolopaceus</i>		RM	–	I		Last sighted 10 yrs back
114	Little Stint	<i>Calidris minuta</i>	Chota Panlowa	M <sup>6</sup>	O	I		
115	Temminck's Stint	<i>Calidris temminckii</i>	Jalrang	M	O	I		
116	Dunlin	<i>Calidris alpina</i>		M	U	I		
117	Curlew Sandpiper	<i>Calidris ferruginea</i>	Curlew Tilua	M	C	I		Rare
118	Spoonbill sandpiper	<i>Calidris pygmaea</i>	–	M	O	I <sup>5</sup>	CR	
119	Ruff	<i>Philomachus pugnax</i>	Bagbad	M	O	I		
<b>Family Recurvirostridae (Ibis bill, Avocets &amp; Stilts)</b>								
120	Black -winged stilt	<i>Himantopus himantopus</i>	Gaz Paon	R <sup>7</sup>	C	I <sup>7</sup>		
121	Pied avocet	<i>Recurvirostra avouetta</i>	Kusya Chaha	RM	U	I		
<b>Family Burhinidae (Stone-Curlew &amp; Stone-Plovers/Thick-knees)</b>								
122	Great Thick-Knee (Great Stone-Plover)	<i>Esacus recurvirostris</i>	–	RM <sup>6</sup>	O	I <sup>4</sup>		Sighted 20 years back
<b>Family Glareolidae (Courser &amp; Pratincoles)</b>								



123	Collared pratincole	<i>Glareola pratincola</i>	Bada Babui Baton	M	U	I		
124	Small pratincole	<i>Glareola lactia</i>	Chota Babui Baton	RM	O	I		
125	Oriental pratincole	<i>Glareola maldivarum</i>	–	R	C	I		
<b>Family Laridae (Gulls, Terns &amp; Noddies)</b>								
126	Brown-headed Gull	<i>Larus brunnicephalus</i>	Dhomra	M <sup>14</sup>	U	P <sup>4,14</sup>		
127	Herring gull	<i>Larus argentatus</i>	Pitpaga Dhomra	M	–	Om		
128	Black-headed Gull	<i>Larus ridibundus</i>	Ganga Chilli	M <sup>14</sup>	U	P <sup>4,14</sup>		
129	Gull-billed Tern	<i>Gelochelidon nilotica</i>	Safed Kurari	RM <sup>14</sup>	C	P <sup>4,14</sup>		
130	River Tern	<i>Sterna aurantia</i>	Badi Kurari	R <sup>6,14</sup>	O	P <sup>4,14</sup>		
131	Little Tern	<i>Sterna albifrons</i>	Choti Kurari	R	U	P <sup>4,14</sup>		
132	Black-bellied Tern	<i>Sterna acuticauda</i>	Kalpeti Kurari	R <sup>5,8,14</sup>	–	P <sup>8</sup>	NT	
133	Whiskered Tern	<i>Chlidonias hybridus</i>	Kurari	RM	C	P <sup>4</sup>		
<b>Family Rynchopidae</b>								
134	Indian skimmer	<i>Rynchoes albicollis</i>	–	R <sup>8</sup>	U	Om <sup>8</sup>	VU	Last 15 years back
<b>Family Alcedinidae (Kingfishers)</b>								
135	Common Kingfisher (Small Blue Kingfisher)	<i>Alcedo atthis</i>	Chota Kilkilla	R <sup>2,6</sup>	O	P <sup>2,7</sup>		
136	Stork-billed Kingfisher	<i>Halcyon capensis</i>	Badami Kourilla	R <sup>2,7</sup>	O	P <sup>2</sup>		
137	White-breasted Kingfisher	<i>Halcyon smyrnensis</i>	Kilkila	R <sup>2,7</sup>	C	P <sup>2</sup>		
138	Black-capped Kingfisher	<i>Halcyon pileata</i>	Syamsir Kilkila	RM <sup>2</sup>	O	P <sup>2</sup>		
139	Pied kingfisher (lesser pied)	<i>Ceryle rudis</i>	Koryala Kilkila	R <sup>2,7</sup>	C	P <sup>2</sup>		

	kingfisher)							
<b>Family Hirundinidae (Swallows &amp; Martins)</b>								
140	Sand Martin	<i>Riparia riparia</i>	Ababil	RM <sup>3</sup>	-	I <sup>3,4</sup>		
141	Plain Martin	<i>Riparia paludicola</i>	Mati Ababil	R <sup>3</sup>	O	I <sup>3,4</sup>		
142	Dusky Crag-Martin	<i>Hirundo concolor</i>	Chatan Ababil	R <sup>3</sup>	-	I <sup>3,4</sup>		
143	Barn Swallow (Common Swallow)	<i>Hirundo rustica</i>	Ababil	M <sup>3,6</sup>	C	I <sup>3,4</sup>		
144	Wire-tailed Swallow	<i>Hirundo smithii</i>	Leishra	R <sup>6</sup>	C	I		
145	Streak-throated Swallow (Indian cliff swallow)	<i>Hirundo fluvicola</i>	Nahar Ababil	RM <sup>3,6</sup>	U	I <sup>3,4</sup>		
<b>Family Motacillidae (Wagtails &amp; Pipits)</b>								
146	White Wagtail	<i>Motacilla alba</i>	Dhoban	M <sup>6</sup>	M	I <sup>7</sup>		
147	White-browed Wagtail (Large Pied Wagtail)	<i>Motacilla maderaspatensis</i>	Khajan	R <sup>7</sup>	C	I <sup>7</sup>		
148	Citrine Wagtail	<i>Motacilla citreola</i>	Pan Peelak	M <sup>6</sup>	O	I		
149	Yellow Wagtail	<i>Motacilla flava</i>	Pilammo da	M <sup>6</sup>	O	I <sup>7</sup>		
150	Grey Wagtail	<i>Motacilla cinerea</i>	Bhura Khanjan	M <sup>6</sup>	C	I <sup>7</sup>		
151	Rosy Pipit	<i>Anthus roseatus</i>	Anguri Chiri	M <sup>5</sup>	U	I <sup>13</sup>		
152	Long-billed Pipit	<i>Anthus similis</i>	-	M <sup>6</sup>	O	I		
153	Tawny pipit	<i>Anthus campestris</i>	Chillu	M <sup>5</sup>	O	I		

**Sources:**

\*Birdlife International's IUCN Red List 2008.

<sup>1</sup> Ali & Ripley, 1978<sup>3</sup> Ali & Ripley, 1987<sup>5</sup> Listed in Barua & Sharma, 2005<sup>7</sup> Listed in Rejinald *et al.*, 2007<sup>9</sup> Bikram *et al.*, 2002<sup>11</sup> Tiwari, 2002<sup>13</sup> Rasmussen, 2005<sup>2</sup> Ali & Ripley, 1983<sup>4</sup> Ali & Futehally, 1989<sup>6</sup> Listed in. Pasha *et al.*, 2004<sup>8</sup> Listed in Subramanian *et al.*, 2004<sup>10</sup> Parasharya, 2004<sup>12</sup> Singh and Singh, 1995<sup>14</sup> Sashikumar, 2004

**Keys:**

**Food habits:** I= Insectivore, P= Piscivore, Cr= Carnivore, Om= Omnivore, V=Vegetarian, G= Granivorpous.

**Resident Status of the birds:** R= Resident, M= Migratory and RM=Resident migratory. **Frequency codes:** C=

Common, U= Uncommon, X= Rare and O= occasional. **Threatened Status:** CR- Critically endangered, EN-

Endangered, VU- Vulnerable and NT- Near threatened.