

Kopra Talashay, Bilaspur

Wetland Survey Report 2021



Purple Heron
Ardea purpurea

Report Submitted by:
Fergus Mark Anthony

Acknowledgement

On the very outset of this report I would like to thank **Shri. Arun Pandey, Member Secretary, Chhattisgarh State Biodiversity Board, Chhattisgarh** for his conscientious guidance and encouragement to conduct this bird survey.

I extend my gratitude to **Shri. Vishnuraj Nair, Field Director, Achanakmar-Amarkantak Biosphere Reserve** and **Shri. Kumar Nishant, DFO Bilaspur Circle** for their immense Support and Assistance.

I would also like to thank **Mr. Anurag Vishwakarma, Mr. Saurabh Tiwari** and **Mr. Shashi Choubey** for their contribution during the survey of this wetland.

Preface

The avian diversity of any ecosystem is considered to be an important indicator of its health (Lawson et al. 1998, Gregory et al. 2003, 2008). Bird surveys (biological monitoring) may be better than chemical or radiological monitoring of environmental health, as they are simple and relatively inexpensive and provide information on the possible impact of environmental change on the flora and fauna thriving at a given site, while the information derived from chemical testing merely reflects its contamination status (Khan et al. 2013). Thus the bird species assemblages characteristic of a given ecosystem can be a useful predictor of its integrity and functions.

In spite of their vital ecological role the importance of bird conservation in the country has not been given during cognition this has resulted in the loss of a large number of birds in the country and specifically due to loss of habitat many bird species are endangered or near threatened. Conservation of the habitat for the birds are the crucial element for their survival and to make this conservation successful a good conservation strategy is to be implemented.

Introduction

Wetlands are extensively important for groundwater recharge, recreational activity, retention, and regulation of pollutants and it supports many aquatic floral and faunal species for sustaining their life (Crisman 2001). The water dependent avifauna and their habitat are affected by various factors like food availability, hunting and poaching threats, the size of the wetland (Paracuellos 2006), and the abiotic changes in the wetlands (Jaksic 2004; Lagos et al. 2008; Vishwakarma et al. 2018).

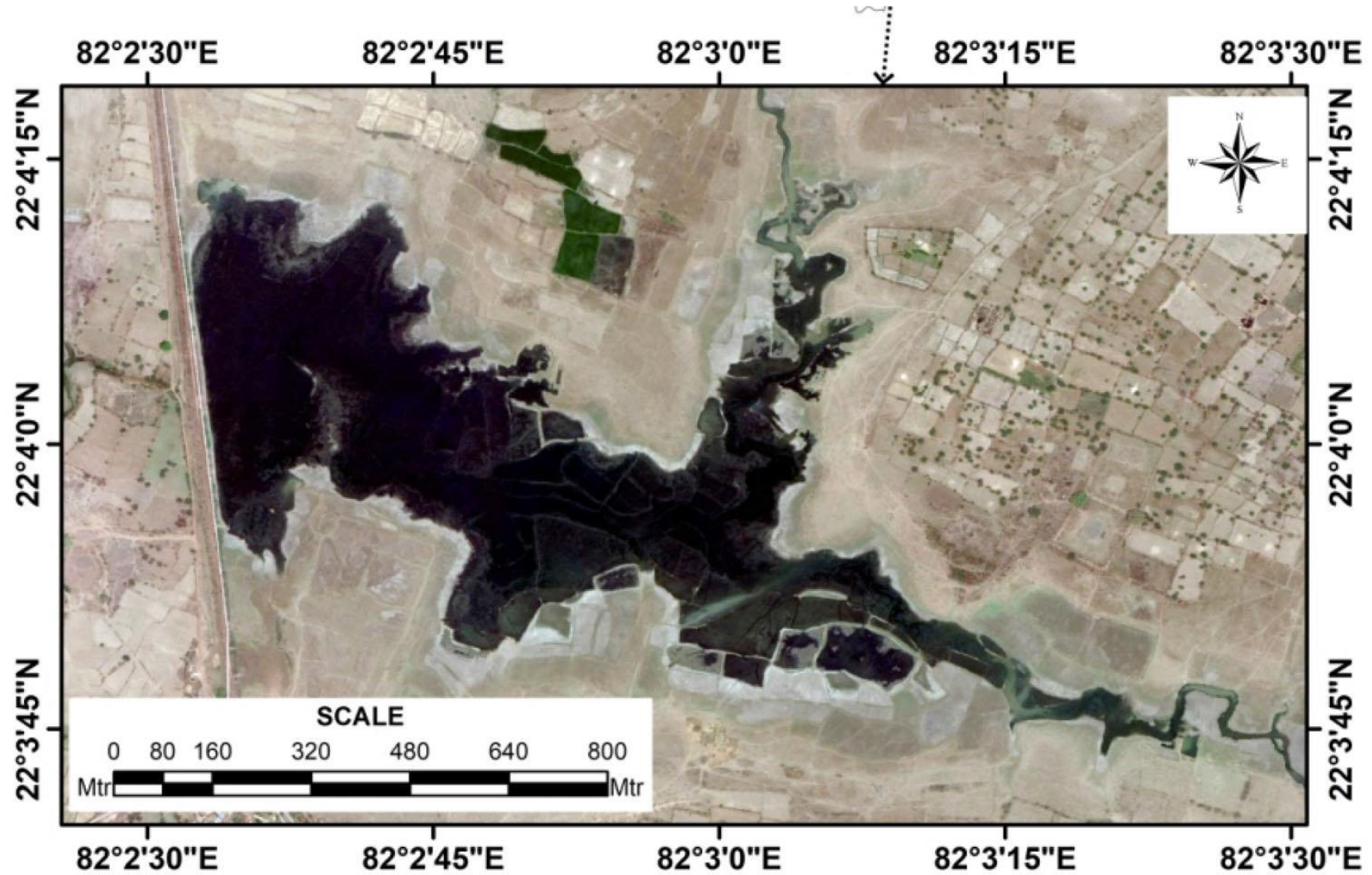
Birds are one of the most widely distributed animal taxa, living in diverse landscapes across continents. They show a substantial variety of distribution patterns and often prefer to live in heterogeneous environments. Birds generally colonize in an area with suitable resources for their survival (Veech et al. 2011), performing a variety of functional roles and providing vital ecological services in various ecosystems (Whelan et al. 2008, Sekercioglu 2006, 2012). Changes in vegetation composition can affect the quality and quantity of habitats for birds in terms of food, water and cover, which can further affect their diversity, abundance and distribution (Western and Grimsdell 1979).

Kopra Jalashay

Kopra Jalashay is one of the suitable habitats for water birds near Bilaspur city, Chhattisgarh and it was established in the year 1993 in the Mahanadi basin for the purpose of irrigation. The Kopra jalashay is situated on the Raipur–Bilaspur bypass in Sakri Village of Bilaspur district of Chhattisgarh, India. It is around 10 km from Bilaspur city. The Length of the wetland is 1680 m and 113 TCM total volume content (India-WRIS 2012). The main purpose of establishing this dam was to provide irrigation facilities to surrounding villages for the purpose of agriculture.

The wetland contains shallow water that is suitable for duck species and the surrounding marshy area is suitable feeding habitat for waders and stork species apart from this surrounding grassland and scattered trees species support diverse avifauna. The wetland is filled with many aquatic plant species such as *Ipomea carnea*, *Otella alismoides*, *Stratiotes aloides* and Cyperaceae species like *Schoenoplectus articulatus*, *Schoenoplectus lacustris*, etc., paddy fields and scattered tree species of Babool (*Acacia nilotica*), Imli (*Tamarindus indica*), Palas (*Butea monosperma*), Peepal (*Ficus religiosa*), Bargad (*Ficus bengalensis*), Arjun (*Terminalia arjuna*), etc. which are foraging substrates for the visiting and resident species.

Map of Kopra Jalashay



Goal

Wetland form an ecosystem which is extremely important to the conservation of biodiversity. The Futaha Muda Wetland Survey was designed with the objective in mind:

- To prepare a comprehensive and consolidated checklist of the birds inhabiting the wetland throughout the year.
- To help government officials and other decision makers in finding ways to protect wetland environment and provide them with information that can help in the development of management programs that support the protection of these areas.
- To provide fundamental knowledge to assist in the design of monitoring programs in wetland areas.
- To obtain comprehensive information of wetlands, and thus to serve as a basis for their conservation.

Survey outcome

- A Total of **148** bird species were recorded, which is an additional **15** species recorded by *Vishwakarma et. al. 2020*.
- Birds belonging to **18 orders** and **47 families** were recorded during the survey.
- Among these 148 bird species **87** species are resident of species and **61** species are migratory species.
- **137** species are listed under Schedule IV of the Wildlife protection Act 1972 while **11** species are listed as Schedule I of the Wildlife protection Act 1972.
- 2 Species “**Little Tern**” & “**Egyptian Vulture**” which have been recorded at Kopra Jalashay are categorized as **Endangered** by the International Union for Conservation of Nature. These species are facing a serious risk of Extinction in Nature and are a priority for conservation which require immediate action.

Survey outcome

- **One** avian species belonging to **Vulnerable** Category and **6** species which are **Near Threatened** were also recorded.

These species do not face immediate risk of extinction but if favorable conditions do not prevail their numbers will also go down.

- A majority of the avian **(139)** species recorded belonged to the **Least concern** category.
- Regular monitoring is being done around the wetland and recommendations are also being made for the betterment and conservation of the wetland.

Checklist

S.No	Order	Family	English Name	Scientific Name	IUCN Status	Resident status	WPA
1	Passeriformes	Alaudidae	Asian Short-toed Lark	<i>Alaudala cheleensi</i>	Least concern	Resident	Sch IV
2	Passeriformes	Cisticolidae	Ashy Prinia	<i>Prinia socialis</i>	Least concern	Resident	Sch IV
3	Passeriformes	Alaudidae	Ashy-crowned Sparrow Lark	<i>Eremopterix griseus</i>	Least concern	Resident	Sch IV
4	Cuculiformes	Cuculidae	Asian Koel	<i>Eudynamys scolopaceus</i>	Least concern	Resident	Sch IV
5	Pelecaniformes	Ciconiidae	Asian Openbill	<i>Anastomus oscitans</i>	Least concern	Resident	Sch IV
6	Caprimulgiformes	Apodidae	Asian Palm Swift	<i>Cypsiurus balasiensis</i>	Least concern	Resident	Sch IV
7	Passeriformes	Sturnidae	Asian Pied Starling	<i>Gracupica contra</i>	Least concern	Resident	Sch IV
8	Gruiformes	Rallidae	Baillons crake	<i>Zapornia pusilla</i>	Least concern	Migratory	Sch IV
9	Anseriformes	Anatidae	Bar-headed Goose	<i>Anser indicus</i>	Least concern	Migratory	Sch IV
10	Passeriformes	Hirundinidae	Barn Swallow	<i>Hirundo rustica</i>	Least concern	Migratory	Sch IV
11	Charadriiformes	Scolopacidae	Bar-tailed Godwit	<i>Limosa lapponica</i>	Least concern	Migratory	Sch IV
12	Passeriformes	Laniidae	Bay-backed Shrike	<i>Lanius vittatus</i>	Least concern	Resident	Sch IV
13	Pelecaniformes	Ardeidae	Black Bittern	<i>Ixobrychus flavicollis</i>	Least concern	Resident	Sch IV
14	Pelecaniformes	Ardeidae	Black crowned night heron	<i>Nycticorax nycticorax</i>	Least concern	Resident	Sch IV
15	Passeriformes	Dicruridae	Black Drongo	<i>Dicrurus macrocercus</i>	Least concern	Resident	Sch IV

Checklist

S.No	Order	Family	English Name	Scientific Name	IUCN Status	Resident status	WPA
16	Accipitriformes	Accipitridae	Black Kite	<i>Milvus migrans</i>	Least concern	Resident	Sch I (iii)
17	Passeriformes	Muscicapidae	Black Redstart	<i>Phoenicurus ochruros</i>	Least concern	Migratory	Sch IV
18	Pelecaniformes	Threskiornithidae	Black-headed Ibis	<i>Threskiornis melanocephalus</i>	Near Threatened	Migratory	Sch IV
19	Passeriformes	Estrildidae	Black-headed Munia	<i>Lonchura malacca</i>	Least concern	Resident	Sch IV
20	Charadriiformes	Scolopacidae	Black-tailed Godwit	<i>Limosa limosa</i>	Near Threatened	Migratory	Sch IV
21	Accipitriformes	Accipitridae	Black-winged Kite	<i>Elanus caeruleus</i>	Least concern	Resident	Sch I (iii)
22	Charadriiformes	Recurvirostridae	Black-winged Stilt	<i>Himantopus himantopus</i>	Least concern	Migratory	Sch IV
23	Passeriformes	Muscicapidae	Bluethroat	<i>Luscinia svecica</i>	Least concern	Migratory	Sch IV
24	Passeriformes	Acrocephalidae	Blyth's Reed Warbler	<i>Acrocephalus dumetorum</i>	Least concern	Migratory	Sch IV
25	Accipitriformes	Accipitridae	Booted Eagle	<i>Hieraaetus pennatus</i>	Least concern	Migratory	Sch I (iii)
26	Passeriformes	Sturnidae	Brahminy Starling	<i>Sturnia pagodarum</i>	Least concern	Resident	Sch IV
27	Charadriiformes	Jacanidae	Bronze-winged Jacana	<i>Metopidius indicus</i>	Least concern	Resident	Sch IV
28	Passeriformes	Laniidae	Brown Shrike	<i>Lanius cristatus</i>	Least concern	Migratory	Sch IV
29	Charadriiformes	Laridae	Brown-headed Gull	<i>Chroicocephalus brunnicephalus</i>	Least concern	Migratory	Sch IV
30	Pelecaniformes	Ardeidae	Cattle Egret	<i>Bubulcus ibis</i>	Least concern	Resident	Sch IV

Checklist

S.No	Order	Family	English Name	Scientific Name	IUCN Status	Resident status	WPA
31	Pelecaniformes	Ardeidae	Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>	Least concern	Resident	Sch IV
32	Passeriformes	Motacillidae	Citrine Wagtail	<i>Motacilla citreola</i>	Least concern	Migratory	Sch IV
33	Gruiformes	Rallidae	Common Coot	<i>Fulica atra</i>	Least concern	Resident	Sch IV
34	Cuculiformes	Cuculidae	Common Hawk Cuckoo	<i>Hierococcyx varius</i>	Least concern	Resident	Sch IV
35	Bucerotiformes	Upupidae	Common Hoopoe	<i>Upupa epops</i>	Least concern	Resident	Sch IV
36	Passeriformes	Aegithinidae	Common Iora	<i>Aegithina tiphia</i>	Least concern	Resident	Sch IV
37	Falconiformes	Falconidae	Common kestrel	<i>Falco tinnunculus</i>	Least concern	Migratory	Sch IV
38	Coraciiformes	Alcedinidae	Common Kingfisher	<i>Alcedo atthis</i>	Least concern	Resident	Sch IV
39	Gruiformes	Rallidae	Common Moorhen	<i>Gallinula chloropus</i>	Least concern	Resident	Sch IV
40	Passeriformes	Sturnidae	Common Myna	<i>Acridotheres tristis</i>	Least concern	Resident	Sch IV
41	Anseriformes	Anatidae	Common Pochard	<i>Aythya ferina</i>	Least concern	Migratory	Sch IV
42	Galliformes	Phasianidae	Common Quail	<i>Coturnix coturnix</i>	Least concern	Migratory	Sch IV
43	Charadriiformes	Scolopacidae	Common redshank	<i>Tringa totanus</i>	Least concern	Migratory	Sch IV
44	Charadriiformes	Scolopacidae	Common Sandpiper	<i>Actitis hypoleucos</i>	Least concern	Migratory	Sch IV
45	Charadriiformes	Scolopacidae	Common Snipe	<i>Gallinago gallinago</i>	Least concern	Migratory	Sch IV

Checklist

S.No	Order	Family	English Name	Scientific Name	IUCN Status	Resident status	WPA
46	Passeriformes	Cisticolidae	Common Tailorbird	<i>Orthotomus sutorius</i>	Least concern	Resident	Sch IV
47	Anseriformes	Anatidae	Common teal	<i>Anas crecca</i>	Least concern	Migratory	Sch IV
48	Anseriformes	Anatidae	Cotton Teal	<i>Nettapus coromandelianus</i>	Least concern	Resident	Sch IV
49	Passeriformes	Alaudidae	Crested Lark	<i>Galerida cristata</i>	Least concern	Resident	Sch IV
50	Accipitriformes	Accipitridae	Egyptian Vulture	<i>Neophron percnopterus</i>	Endangered	Resident	Sch I (iii)
51	Columbiformes	Columbidae	Eurasian collared dove	<i>Streptopelia decaocto</i>	Least concern	Resident	Sch IV
52	Charadriiformes	Scolopacidae	Eurasian Curlew	<i>Numenius arquata</i>	Near Threatened	Migratory	Sch IV
53	Pelecaniformes	Threskiornithidae	Eurasian Spoonbill	<i>Platalea leucorodia</i>	Least concern	Migratory	Sch IV
54	Anseriformes	Anatidae	Eurasian Wigeon	<i>Mareca penelope</i>	Least concern	Migratory	Sch IV
55	Piciformes	Picidae	Eurasian Wryneck	<i>Jynx torquilla</i>	Least concern	Migratory	Sch IV
56	Anseriformes	Anatidae	Ferruginous duck	<i>Aythya nyroca</i>	Near Threatened	Migratory	Sch IV
57	Anseriformes	Anatidae	Gadwall	<i>Mareca strepera</i>	Least concern	Migratory	Sch IV
58	Anseriformes	Anatidae	Garganey	<i>Spatula querquedula</i>	Least concern	Migratory	Sch IV
59	Pelecaniformes	Phalacrocoracidae	Great Cormorant	<i>Phalacrocorax carbo</i>	Least concern	Migratory	Sch IV
60	Phoenicopteriformes	Podicipedidae	Great Crested Grebe	<i>Podiceps cristatus</i>	Least concern	Migratory	Sch IV

Checklist

S.No	Order	Family	English Name	Scientific Name	IUCN Status	Resident status	WPA
61	Pelecaniformes	Ardeidae	Great Egret	<i>Ardea alba</i>	Least concern	Resident	Sch IV
62	Cuculiformes	Cuculidae	Greater Coucal	<i>Centropus sinensis</i>	Least concern	Resident	Sch IV
63	Charadriiformes	Rostratulidae	Greater Painted-snipe	<i>Rostratula benghalensis</i>	Least concern	Resident	Sch IV
64	Passeriformes	Alaudidae	Greater Short-toed Lark	<i>Calandrella brachydactyla</i>	Least concern	Migratory	Sch IV
65	Coraciiformes	Meropidae	Green Bee-eater	<i>Merops orientalis</i>	Least concern	Resident	Sch IV
66	Charadriiformes	Scolopacidae	Green Sandpiper	<i>Tringa ochropus</i>	Least concern	Migratory	Sch IV
67	Galliformes	Phasianidae	Grey Francolin	<i>Francolinus pondicerianus</i>	Least concern	Resident	Sch IV
68	Pelecaniformes	Ardeidae	Grey Heron	<i>Ardea cinerea</i>	Least concern	Migratory	Sch IV
69	Passeriformes	Motacillidae	Grey Wagtail	<i>Motacilla cinerea</i>	Least concern	Migratory	Sch IV
70	Anseriformes	Anatidae	Greylag Goose	<i>Anser anser</i>	Least concern	Migratory	Sch IV
71	Passeriformes	Corvidae	House Crow	<i>Corvus splendens</i>	Least concern	Resident	Sch IV
72	Passeriformes	Passeridae	House Sparrow	<i>Passer domesticus</i>	Least concern	Resident	Sch IV
73	Suliformes	Phalacrocoracidae	Indian cormorant	<i>Phalacrocorax fuscicollis</i>	Least concern	Resident	Sch IV
74	Passeriformes	Oriolidae	Indian Golden Oriole	<i>Oriolus kundoo</i>	Least concern	Resident	Sch IV
75	Pelecaniformes	Ardeidae	Indian Pond Heron	<i>Ardeola grayii</i>	Least concern	Resident	Sch IV

Checklist

S.No	Order	Family	English Name	Scientific Name	IUCN Status	Resident status	WPA
76	Passeriformes	Muscicapidae	Indian Robin	<i>Saxicoloides fulicatus</i>	Least concern	Resident	Sch IV
77	Coraciiformes	Coraciidae	Indian Roller	<i>Coracias benghalensis</i>	Least concern	Resident	Sch IV
78	Passeriformes	Estrildidae	Indian Silverbill	<i>Euodice malabarica</i>	Least concern	Resident	Sch IV
79	Anseriformes	Anatidae	Indian Spot-billed Duck	<i>Anas poecilorhyncha</i>	Least concern	Resident	Sch IV
80	Charadriiformes	Burhinidae	Indian Thicknee	<i>Burhinus indicus</i>	Least concern	Resident	Sch IV
81	Pelecaniformes	Ardeidae	Intermediate Egret	<i>Ardea intermedia</i>	Least concern	Resident	Sch IV
82	Cuculiformes	Cuculidae	Jacobin Cuckoo	<i>Clamator jacobinus</i>	Least concern	Resident	Sch IV
83	Passeriformes	Leiothrichidae	Jungle Babbler	<i>Turdoides striata</i>	Least concern	Resident	Sch IV
84	Charadriiformes	Charadriidae	Kentish Plover	<i>Charadrius alexandrinus</i>	Least concern	Migratory	Sch IV
85	Anseriformes	Anatidae	Knob billed duck	<i>Sarkidiornis melanotos</i>	Least concern	Migratory	Sch IV
86	Passeriformes	Corvidae	Large-billed Crow	<i>Corvus macrorhynchos</i>	Least concern	Resident	Sch IV
87	Columbiformes	Columbidae	Laughing Dove	<i>Streptopelia senegalensis</i>	Least concern	Resident	Sch IV
88	Anseriformes	Anatidae	Lesser Whistling Duck	<i>Dendrocygna javanica</i>	Least concern	Resident	Sch IV
89	Passeriformes	Sylviidae	Lesser Whitethroat	<i>Curruca curruca</i>	Least concern	Migratory	Sch IV
90	Pelecaniformes	Phalacrocoracidae	Little Cormorant	<i>Microcarbo niger</i>	Least concern	Resident	Sch IV

Checklist

S.No	Order	Family	English Name	Scientific Name	IUCN Status	Resident status	WPA
91	Pelecaniformes	Ardeidae	Little Egret	<i>Egretta garzetta</i>	Least concern	Resident	Sch IV
92	Phoenicopteriformes	Podicipedidae	Little Grebe	<i>Tachybaptus ruficollis</i>	Least concern	Resident	Sch IV
93	Charadriiformes	Charadriidae	Little Ringed Plover	<i>Charadrius dubius</i>	Least concern	Resident	Sch IV
94	Charadriiformes	Scolopacidae	Little Stint	<i>Calidris minuta</i>	Least concern	Migratory	Sch IV
95	Charadriiformes	Laridae	Little tern	<i>Sternula albifrons</i>	Endangered	Migratory	Sch IV
96	Passeriformes	Laniidae	Long-tailed Shrike	<i>Lanius schach</i>	Least concern	Migratory	Sch IV
97	Charadriiformes	Scolopacidae	Marsh Sandpiper	<i>Tringa stagnatilis</i>	Least concern	Migratory	Sch IV
98	Anseriformes	Anatidae	Northern Pintail	<i>Anas acuta</i>	Least concern	Migratory	Sch IV
99	Anseriformes	Anatidae	Northern Shoveler	<i>Spatula clypeata</i>	Least concern	Migratory	Sch IV
100	Accipitriformes	Accipitridae	Oriental Honey Buzzard	<i>Pernis ptilorhynchus</i>	Least concern	Resident	Sch I (iii)
101	Passeriformes	Muscicapidae	Oriental Magpie Robin	<i>Copsychus saularis</i>	Least concern	Resident	Sch IV
102	Charadriiformes	Glareolidae	Oriental Pratincol	<i>Glareola maldivarum</i>	Least concern	Migratory	Sch IV
103	Accipitriformes	Pandionidae	Osprey	<i>Pandion haliaetus</i>	Least concern	Migratory	Sch I (iii)
104	Passeriformes	Motacillidae	Paddyfield Pipit	<i>Anthus rufulus</i>	Least concern	Resident	Sch IV
105	Pelecaniformes	Ciconiidae	Painted Stork	<i>Mycteria leucocephala</i>	Near Threatened	Migratory	Sch IV

Checklist

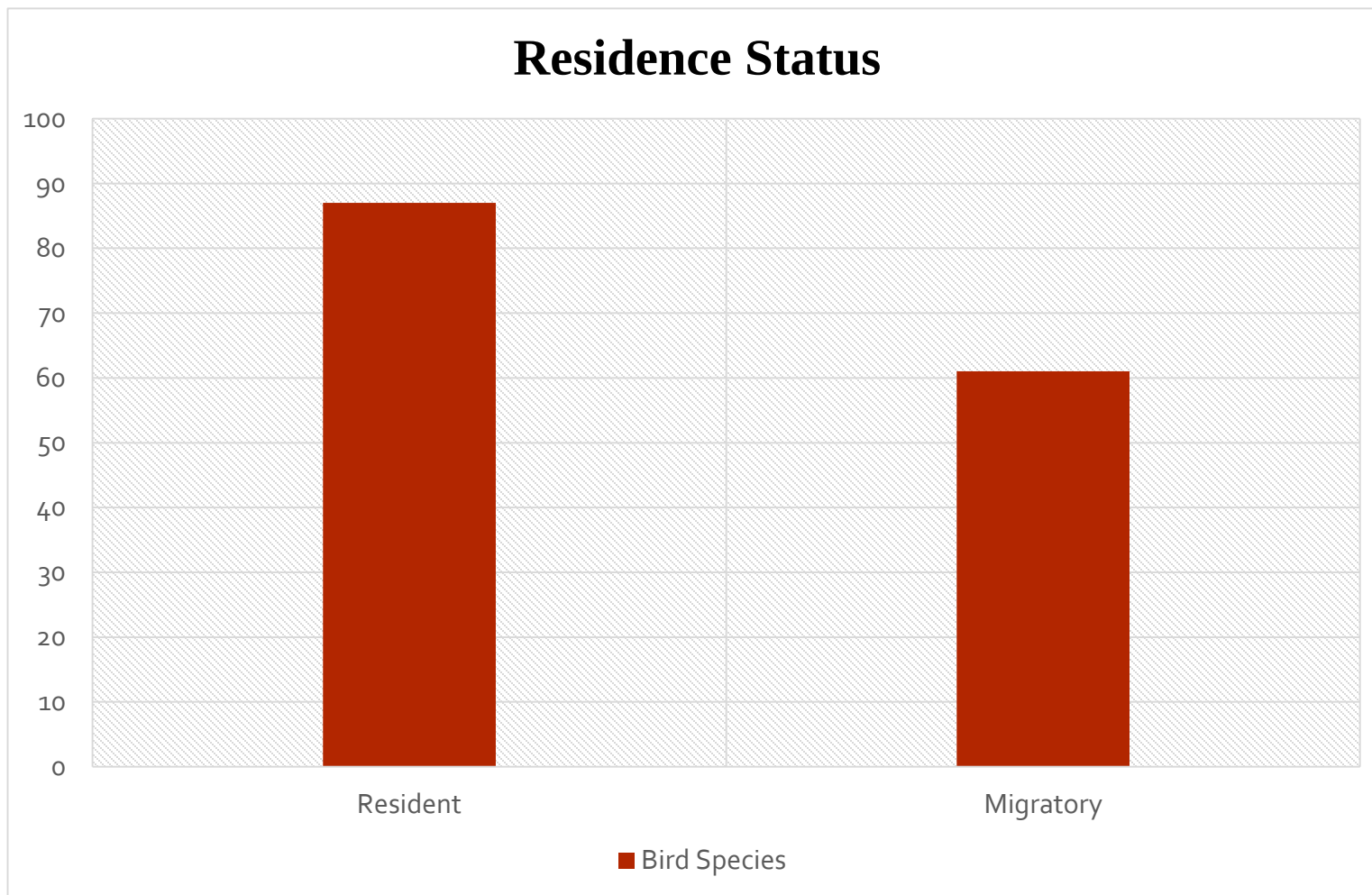
S.No	Order	Family	English Name	Scientific Name	IUCN Status	Resident status	WPA
106	Falconiformes	Falconidae	Peregrine Falcon	<i>Falco peregrinus</i>	Least concern	Migratory	Sch I (iii)
107	Charadriiformes	Jacaniidae	Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>	Least concern	Resident	Sch IV
108	Passeriformes	Muscicapidae	Pied Bushchat	<i>Saxicola caprata</i>	Least concern	Resident	Sch IV
109	Accipitriformes	Accipitridae	Pied harrier	<i>Circus melanoleucos</i>	Least concern	Migratory	Sch I (iii)
110	Coraciiformes	Alcedinidae	Pied Kingfisher	<i>Ceryle rudis</i>	Least concern	Resident	Sch IV
111	Passeriformes	Cisticolidae	Plain Prinia	<i>Prinia inornata</i>	Least concern	Resident	Sch IV
112	Pelecaniformes	Ardeidae	Purple Heron	<i>Ardea purpurea</i>	Least concern	Resident	Sch IV
113	Passeriformes	Nectariniidae	Purple Sunbird	<i>Cinnyris asiaticus</i>	Least concern	Resident	Sch IV
114	Gruiformes	Rallidae	Purple Swamphen	<i>Porphyrio porphyrio</i>	Least concern	Resident	Sch IV
115	Passeriformes	Nectariniidae	Purple-rumped Sunbird	<i>Leptocoma zeylonica</i>	Least concern	Resident	Sch IV
116	Passeriformes	Estrildidae	Red Munia	<i>Amandava amandava</i>	Least concern	Resident	Sch IV
117	Pelecaniformes	Threskiornithidae	Red Naped ibis	<i>Pseudibis papillosa</i>	Least concern	Resident	Sch IV
118	Anseriformes	Anatidae	Red-crested Pochard	<i>Netta rufina</i>	Least concern	Migratory	Sch IV
119	Passeriformes	Pycnonotidae	Red-vented Bulbul	<i>Pycnonotus cafer</i>	Least concern	Resident	Sch IV
120	Charadriiformes	Charadriidae	Red-wattled Lapwing	<i>Vanellus indicus</i>	Least concern	Migratory	Sch IV

Checklist

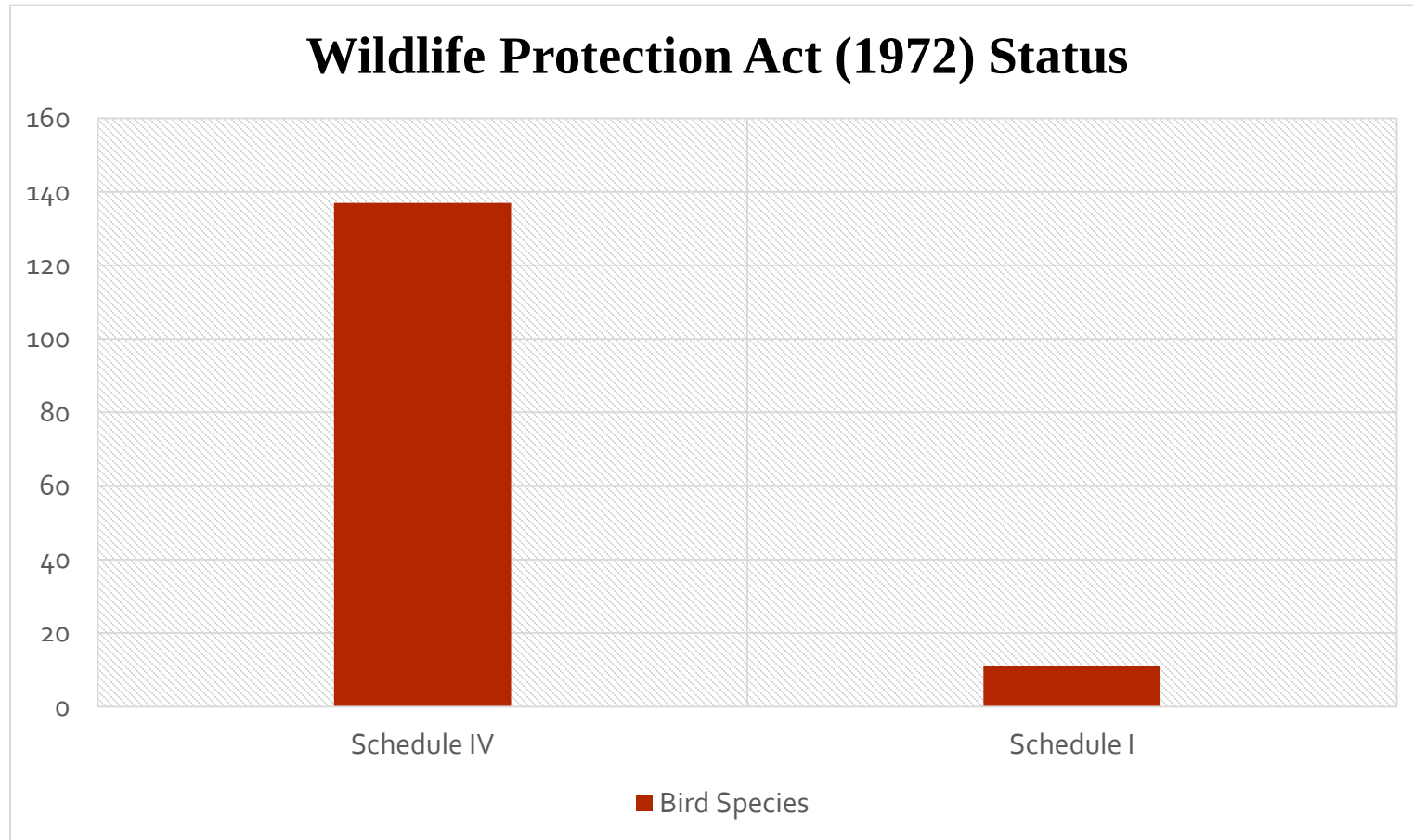
S.No	Order	Family	English Name	Scientific Name	IUCN Status	Resident status	WPA
121	Charadriiformes	Laridae	River tern	<i>Sterna aurantia</i>	Near Threatened	Resident	Sch IV
122	Columbiformes	Columbidae	Rock Pigeon	<i>Columba livia</i>	Least concern	Resident	Sch IV
123	Psittaciformes	Psittaculidae	Rose-ringed Parakeet	<i>Psittacula krameri</i>	Least concern	Resident	Sch IV
124	Passeriformes	Sturnidae	Rosy Starling	<i>Pastor roseus</i>	Least concern	migratory	Sch IV
125	Anseriformes	Anatidae	Ruddy Shelduck	<i>Tadorna ferruginea</i>	Least concern	Migratory	Sch IV
126	Gruiformes	Rallidae	Ruddy-breasted Crake	<i>Zapornia fusca</i>	Least concern	Resident	Sch IV
127	Passeriformes	Alaudidae	Rufous-tailed Lark	<i>Ammomanes phoenicura</i>	Least concern	Resident	Sch IV
128	Charadriiformes	Scolopacidae	Sanderling	<i>Calidris alba</i>	Least concern	Migratory	Sch IV
129	Passeriformes	Estrildidae	Scaly-breasted Munia	<i>Lonchura punctulata</i>	Least concern	Resident	Sch IV
130	Accipitriformes	Accipitridae	Shikra	<i>Accipiter badius</i>	Least concern	Resident	Sch I (iii)
131	Strigiformes	Strigidae	Short-eared Owl	<i>Asio flammeus</i>	Least concern	Migratory	Sch IV
132	Passeriformes	Muscicapidae	Siberian Stonechat	<i>Saxicola maurus</i>	Least concern	Migratory	Sch IV
133	Charadriiformes	Glareolidae	Small Pratincole	<i>Glareola lactea</i>	Least concern	Resident	Sch IV
134	Strigiformes	Strigidae	Spotted Owlet	<i>Athene brama</i>	Least concern	Resident	Sch IV
135	Charadriiformes	Scolopacidae	Temminck's Stint	<i>Calidris temminckii</i>	Least concern	Migratory	Sch IV

Checklist

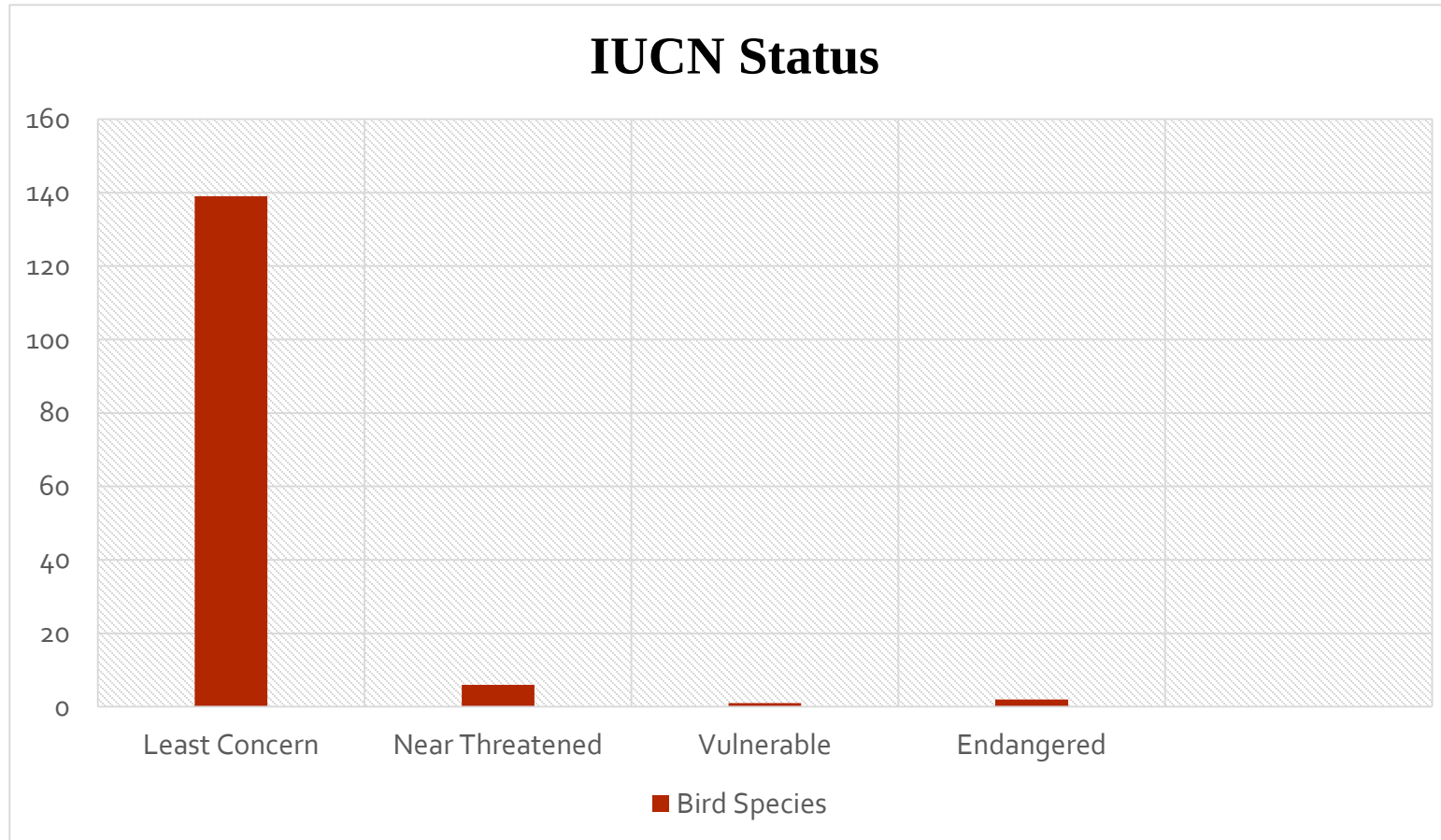
S.No	Order	Family	English Name	Scientific Name	IUCN Status	Resident status	WPA
136	Anseriformes	Anatidae	Tufted Duck	<i>Aythya fuligula</i>	Least concern	Migratory	Sch IV
137	Accipitriformes	Accipitridae	Western Marsh Harrier	<i>Circus aeruginosus</i>	Least concern	Migratory	Sch I (iii)
138	Passeriformes	Motacillidae	White Wagtail	<i>Motacilla alba</i>	Least concern	Migratory	Sch IV
139	Gruiformes	Rallidae	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	Least concern	Resident	Sch IV
140	Passeriformes	Motacillidae	White-browed Wagtail	<i>Motacilla maderaspatensis</i>	Least concern	Resident	Sch IV
141	Accipitriformes	Accipitridae	White-eyed Buzzard	<i>Butastur teesa</i>	Least concern	Resident	Sch I (iii)
142	Coraciiformes	Alcedinidae	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	Least concern	Resident	Sch IV
143	Passeriformes	Hirundinidae	Wire-tailed Swallow	<i>Hirundo smithii</i>	Least concern	Resident	Sch IV
144	Charadriiformes	Scolopacidae	Wood Sandpiper	<i>Tringa glareola</i>	Least concern	Migratory	Sch IV
145	Pelecaniformes	Ciconiidae	Woolly-necked Stork	<i>Ciconia episcopus</i>	Vulnerable	Resident	Sch IV
146	Charadriiformes	Charadriidae	Yellow wattled Lapwing	<i>Vanellus malarbaricus</i>	Least concern	Resident	Sch IV
147	Passeriformes	Passeridae	Yellow-throated Sparrow	<i>Gymnoris xanthocollis</i>	Least concern	Resident	Sch IV
148	Passeriformes	Cisticolidae	Zitting Cisticola	<i>Cisticola juncidis</i>	Least concern	Resident	Sch IV



87 avian Species are resident while 61 species recorded are migratory



**137 species are listed under Schedule IV of the Wildlife protection Act 1972 while
11 species are listed as Schedule I of the Wildlife protection Act 1972.**

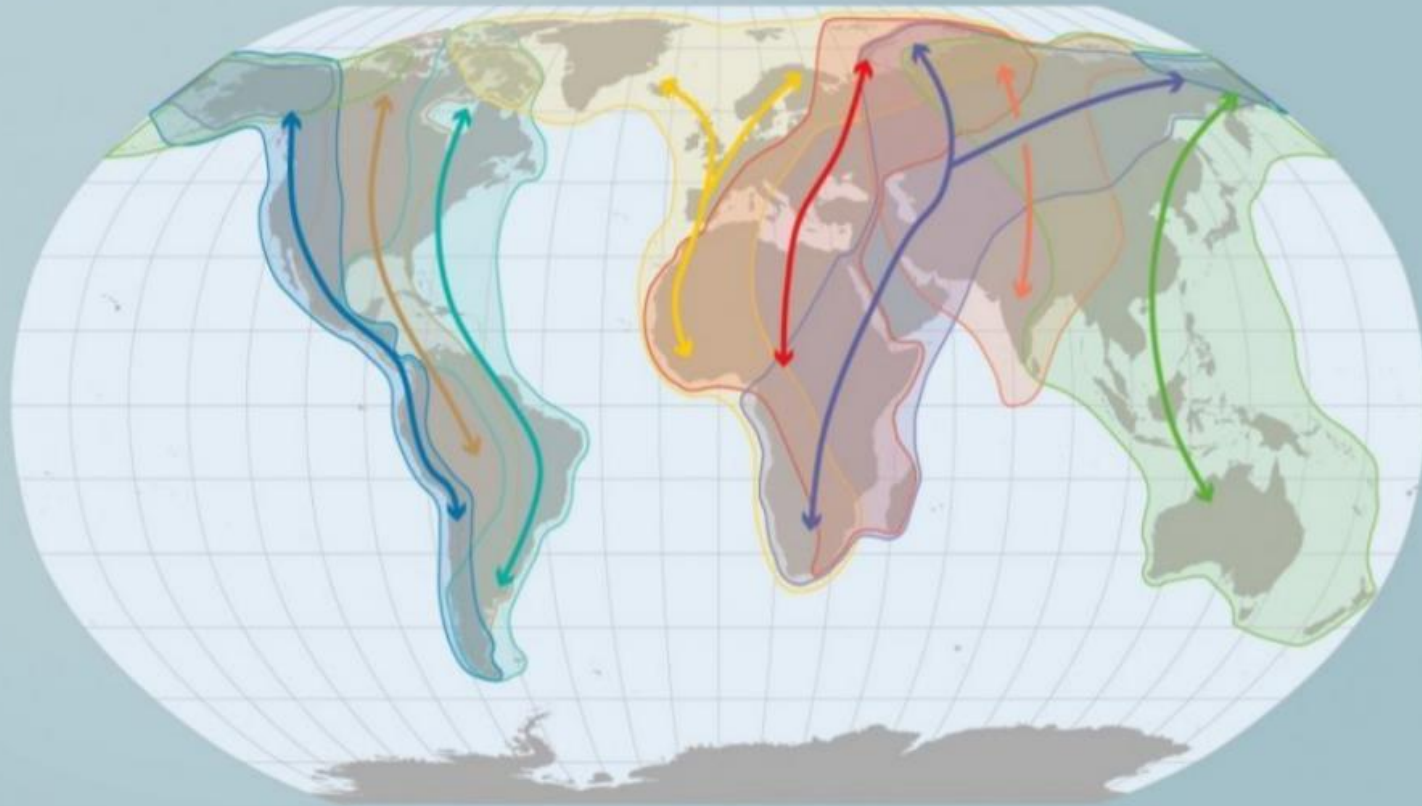


139 avian species are categorized as Least concern, 6 as Near threatened, 1 as Vulnerable and 2 species belong to Endangered Category of IUCN Red list

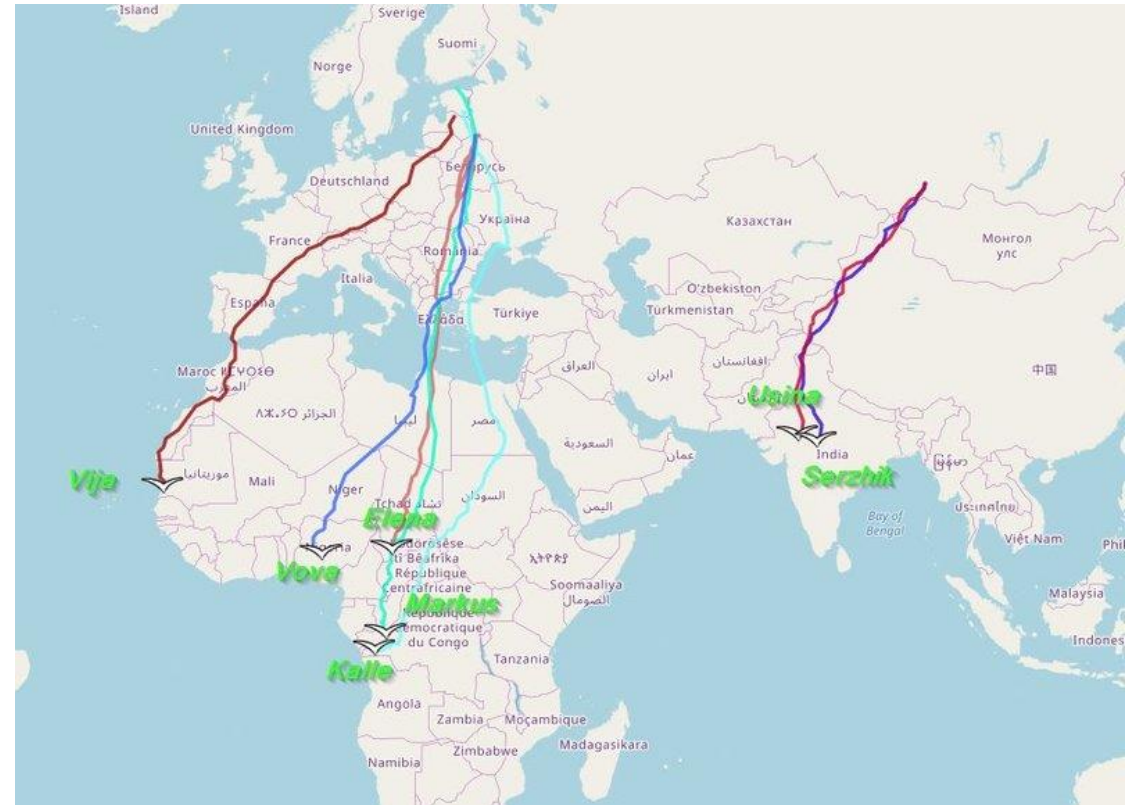
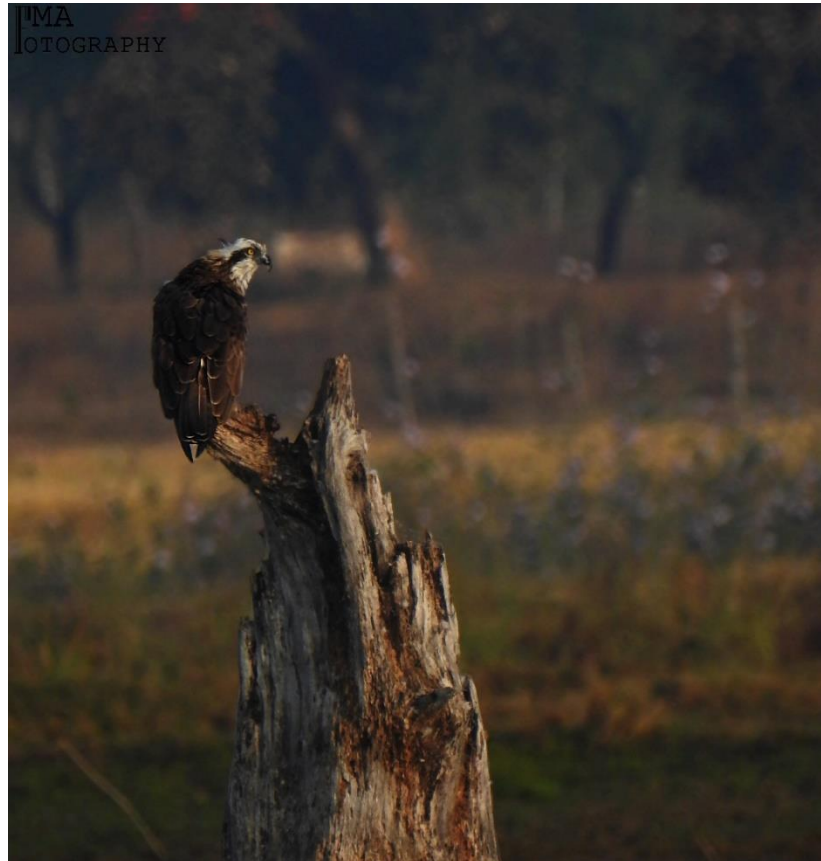
Migratory routes used by birds

THE EIGHT MAJOR MIGRATORY BIRD FLYWAYS

- ↓ PACIFIC AMERICAS
- ↓ CENTRAL AMERICAS
- ↓ ATLANTIC AMERICAS
- ↓ EAST ATLANTIC
- ↓ BLACK SEA-MEDITERRANEAN
- ↓ EAST ASIA-EAST AFRICA
- ↓ CENTRAL ASIA
- ↓ EAST ASIA-AUSTRALASIA

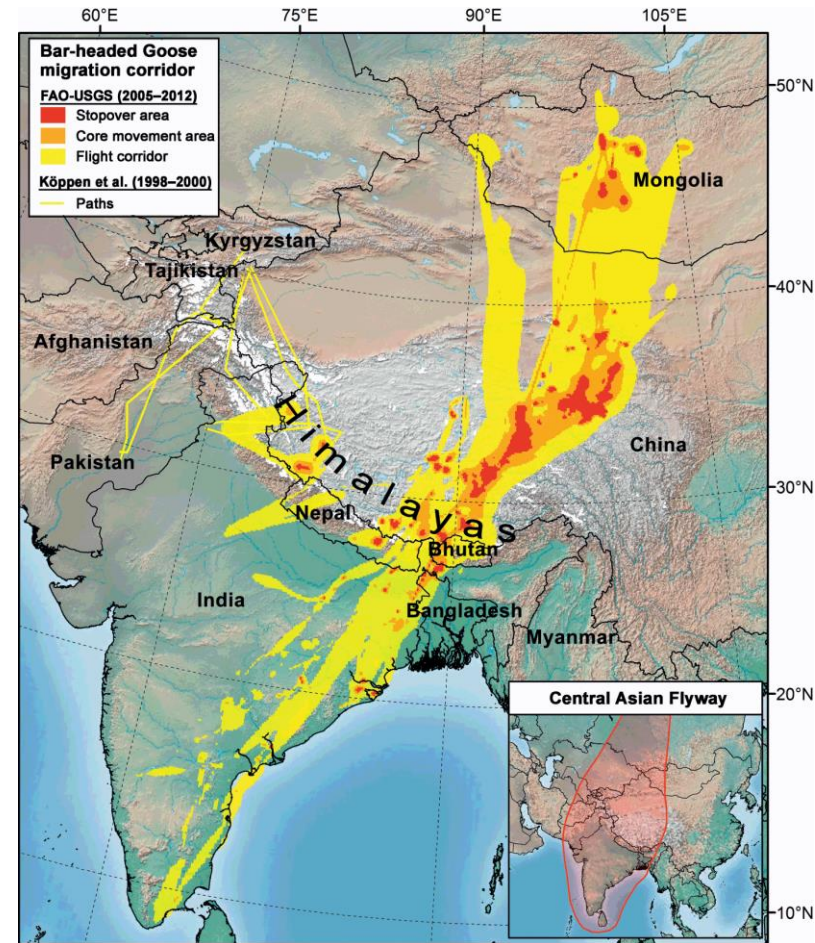
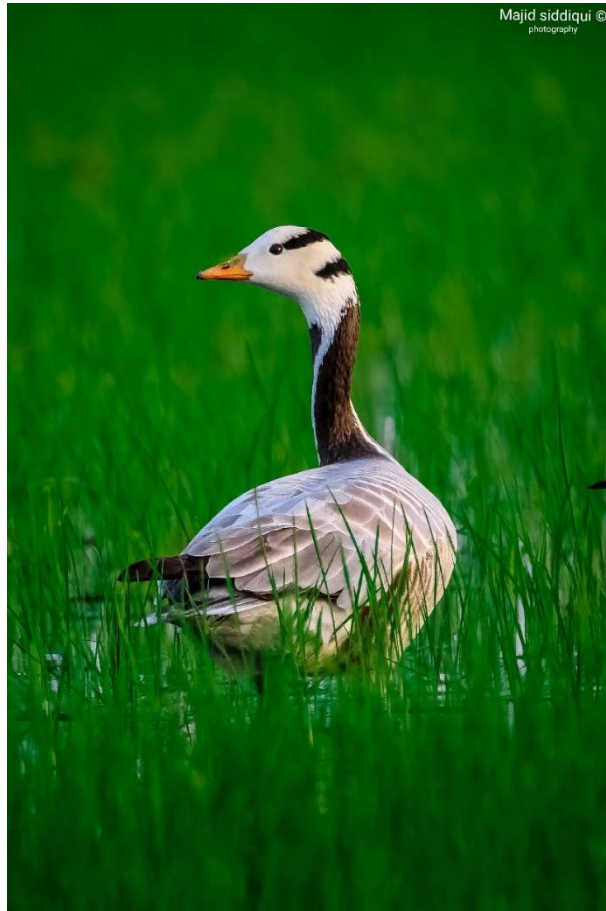


Osprey (*Pandion haliaetus*)



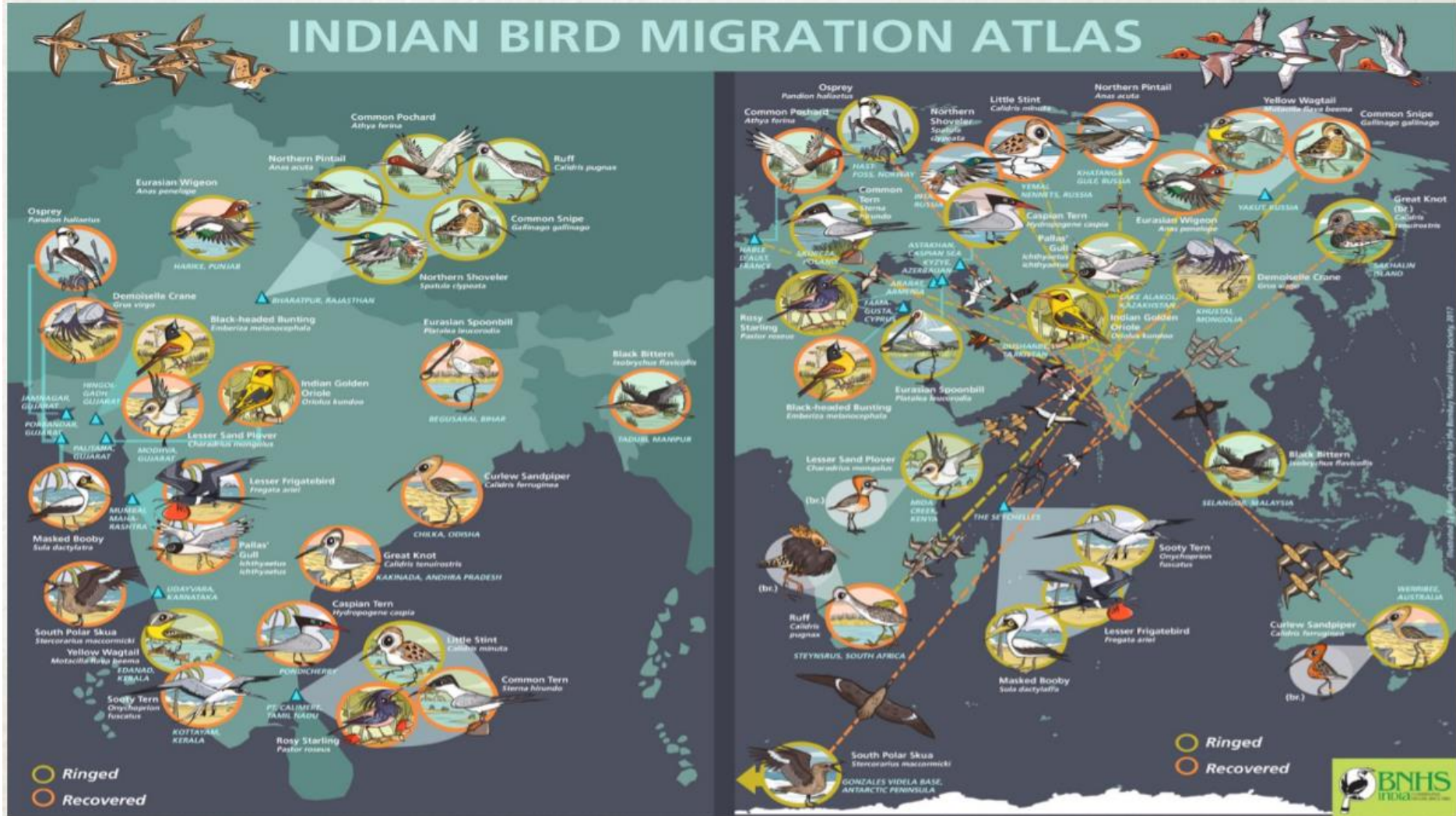
Satellite tagged osprey's Migration routes

Bar headed Goose (*Anser indicus*)



The Bar-headed Goose migrates to India from Mongolia, it is known as one of the highest flying birds as it flies Over the Himalayas to its wintering grounds in India

Indian Bird Migration Checklist





Avifaunal Diversity of Winter Season in Kopra Reservoir of Bilaspur, Chhattisgarh, India

Anurag Vishwakarma¹ · Fergus Mark Anthony² · Sourabh Tiwari³ · Shashi Choubey³

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Abstract Wetlands are an important habitat for all kinds of dependent water birds. They are vital habitats for resident as well as migratory birds for foraging, roosting and breeding activities. Kopra wetland is an important and suitable bird habitat for both resident and migratory birds in Chhattisgarh. This wetland fulfills the need of water for the surrounding agricultural land and it also acts as a site for food as well as a roosting ground to many resident and migratory bird species. Every year a huge number of birds including Waterfowl, waders and Terrestrial Birds migrate to this wetland between the months of October to March. A study was carried out to estimate the avifaunal diversity during three consecutive winter seasons from 2016 to 2018 and estimated 133 avifauna species belonging to 18 orders and 47 families. Out of 133 avifauna 80 resident and 53 migratory species were recorded, including four Near Threatened species which are Painted Stork (*Mycteria leucocephala*), Black-headed Ibis (*Threskiornis melanoccephalus*), Eurasian Curlew (*Numenius arquata*), Black-tailed Godwit (*Limosa limosa*) and one Vulnerable (VU) Woolly-necked Stork (*Ciconia episcopus*) and one Endangered (EN) Egyptian Vulture (*Neophron percnopterus*).

Keywords Wetland · Avifauna · Population · Conservation strategy

Introduction

Wetlands are extensively important for groundwater recharge, recreational activity, retention, and regulation of pollutants and it supports many aquatic floral and faunal species for sustaining their life (Crisman 2001). The water-dependent avifauna and their habitat are affected by various factors like food availability, hunting and poaching threats, the size of the wetland (Paracuellos 2006), and the abiotic changes in the wetlands (Jaksic 2004; Lagos et al. 2008; Vishwakarma et al. 2018). Not only the birds but all the organisms, belonging to the plant and the animal communities are affected by the physical characteristics of the environment (Wilson and Keddy 1986; Gaudet and Keddy 1995; Weiher et al. 1996; Euliss et al. 2004; Gillis et al. 2008; Rajashekara and Venkatesha 2017). In a wetland ecosystem, these biotic factors are mostly dependent on the seasons and hydrology (Hussain 1995).

Praveen et al. (2018) concluded that the number of species across the Indian geographical boundaries is 1306. With that figure, India accounts for 12% of the total number of bird species in the world, amounting to 10,135 among the 1306 species. The previous study and published

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Threats to birds at Kopra Jalashay

- Pisciculture.
- Use of Soap, Detergents deteriorating water quality.
- Waste water being channelized into the reservoir.
- Plastic waste being dumped around the reservoir.

Opportunities for locals at Kopra Jalashay

- **Eco-tourism**
- **Tour guides**
- **Home stay**
- **Camping**
- **Shops/Catering**

Glimpse of Kopra Jalashay

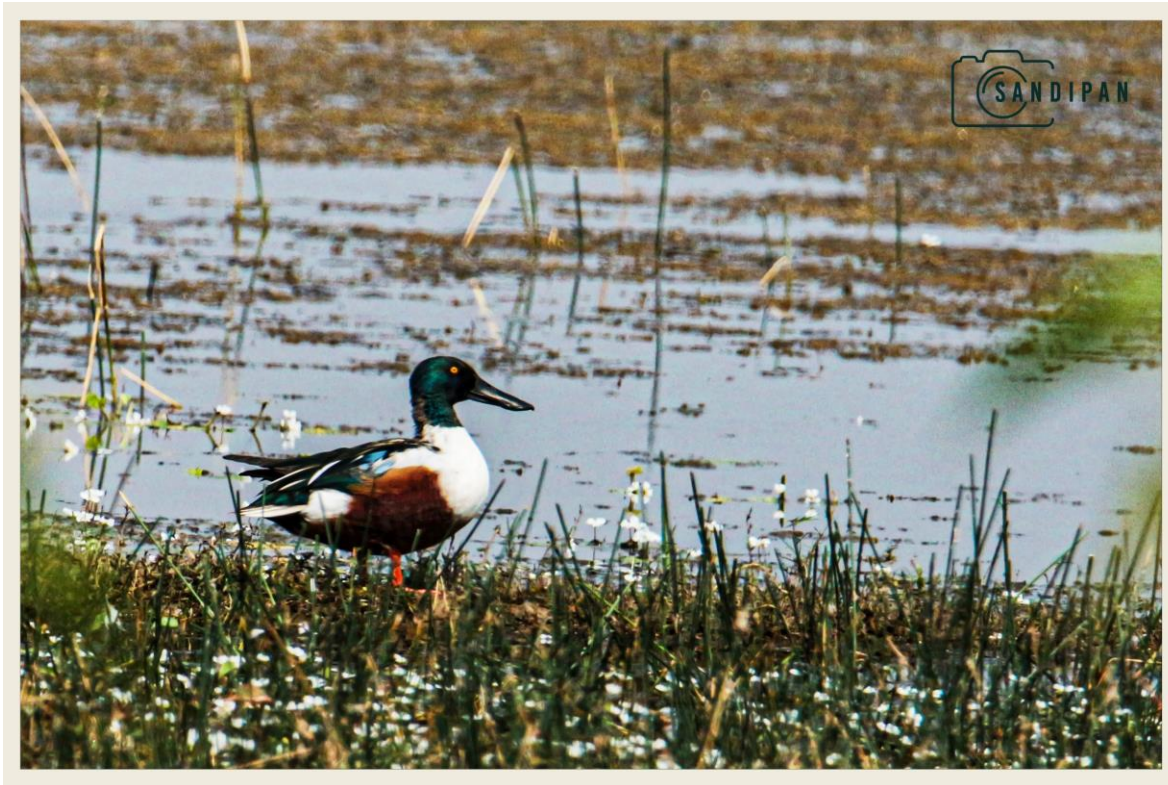


A cormorant colony at Kopra jalashay consisting of all 3 species of cormorants found in India



Birding trail at Kopra

Winter Migratory Birds



Northern Shoveler



Whiskered Tern

Winter Migratory Birds



Red crested pochard



Garganey

Winter Migratory Birds



Black winged stilt



Marsh Harrier

Winter Migratory Birds



Wood sandpiper



Grey Heron & Great Egret

Winter Migratory Birds



Bluethroat



Green Sandpiper

Winter Migratory Birds



Northern Pintail



Oriental Pratincol

Resident Birds



Great Cormorant



Indian Thicknee

Resident Birds



Pied Kingfisher

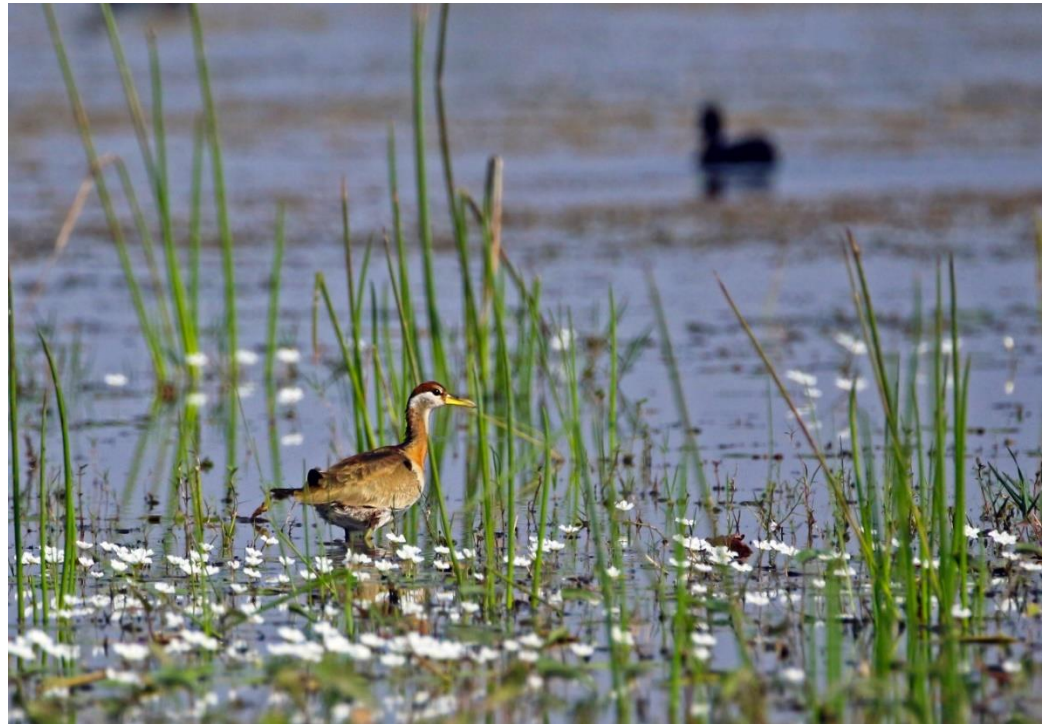


Black-headed Ibis

Resident Birds



Indian cormorant

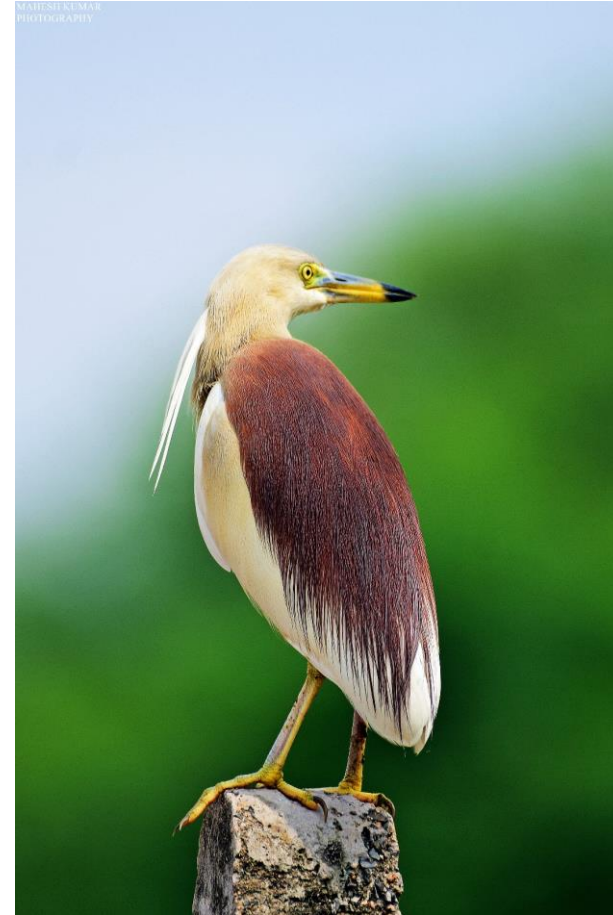


Bronze-winged Jacana

Resident Birds



Baya Weaver preparing nest



Pond Heron

Resident Birds



Egyptian Vulture



Ashy-crowned Sparrowlark

Resident Birds



Woolly-necked Stork



Common coot

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