

AVIAN FAUNA ALONG THREE WATER RESERVOIR FROM SATARA DISTRICT (MAHARASHTRA), INDIA

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ABSTRACT

The three reservoirs namely Kas, Kanher and Mahadare from Satara district are located near about 30 km away from city. The majority of birds were observed during winter followed by rainy and summer season. The area is inhabited by more than 95 different types of birds, out of these 33 are residential migratory or local migratory, 7 are migratory and 55 remaining birds are resident. Family Accipitridae was found dominant representing 13 species.

INTRODUCTION

Avian fauna occupies a special position in an aquatic ecosystem. They not only have an aesthetic role but also occupy a very important position in food chain. India has 243 species of water birds and species of wetlands, dependent and associated birds. (Kumar *et al.*, 2005), almost half of which are migratory and come to the subcontinent from their

breeding grounds in northern latitude of Russia, china, central Asian countries, Mongolia and Persian gulf. Number of bird species have been recorded by various workers such as Hume (1878); Adam (1874); Barnes (1891); Whistler (1938); Ali, (1981); Roberts (1991-92); Sathe *et al.* (2008); Kumbhar *et al.* (2009). The reservoirs are the important area for supply of freshwater for drinking, domestic, irrigation, power generation and aquaculture practices. These regions are biologically very

Table 1: Scientific check list of birds along three reservoirs of Satara district

S. N.	Common Name	Scientific Name	Family	Order	Status
1	Indian pond Heron	<i>Ardeola grayii</i> Skyes	Ardeidae	Ciconiformes	R
2	Chestnut Bittern	<i>Ixobrychus cinnamomeus</i> Gmelin	Ardeidae	Ciconiformes	RM
3	Cattle Egret	<i>Bubulcus ibis</i> Linn	Ardeidae	Ciconiformes	R
4	Little Egret	<i>Egretta garzetta</i> Linn	Ardeidae	Ciconiformes	R
5	Little Bittern	<i>Ixobrychus minutus</i> Linn	Ardeidae	Ciconiformes	RM
6	Yellow Bittern	<i>Ixobrychus sinensis</i> Gmelin	Ardeidae	Ciconiformes	RM
7	Great Bittern	<i>Botaurus stellaris</i> Linn	Ardeidae	Ciconiformes	M
8	Spot billed Duck	<i>Anas poecilorhynha</i> J.R.Forster	Anatidae	Anseriformes	RM
9	Mallard	<i>Anas platyrhynchos</i> Linn	Anatidae	Anseriformes	RM
10	Gadwall	<i>Anas strepera</i> Linn	Anatidae	Anseriformes	M
11	Northern shoveller	<i>Anas clypeata</i> Linn	Anatidae	Anseriformes	M
12	Blackshouldered Kite	<i>Elanus caeruleus</i> Desfontaines	Accipitridae	Falconiformes	R
13	Oriental Honey Buzzard	<i>Pernis ptilorhynus</i> Temminck	Accipitridae	Falconiformes	RM
14	Eurasian SparrowHawk	<i>Accipiter nisus</i> Linn	Accipitridae	Falconiformes	R
15	Pariah Kite	<i>Milvus migrans</i> Boddaert	Accipitridae	Falconiformes	RM
16	Eastern Imperial Eagle	<i>Aquila heliaca</i> Savigny	Accipitridae	Falconiformes	R
17	Lesser Spotted Eagle	<i>Aquila pomarina</i> C.L. Brehm	Accipitridae	Falconiformes	RM
18	Greater Spotted Eagle	<i>Aquila clanga</i> Pallas	Accipitridae	Falconiformes	RM
19	Black Eagle	<i>Ictinaetus malayensis</i> Temmin	Accipitridae	Falconiformes	R

Continue.....Table 1: Scientific check list of birds along three reservoirs of Satara district

S. N.	Common Name	Scientific Name	Family	Order	Status
20	Crested Serpent Eagle	<i>Spilornis cheela</i> Lath.	Accipitridae	Falconiformes	R
21	Short toed Snake Eagle	<i>Circaetus gallicus</i> Gmelin	Accipitridae	Falconiformes	R
22	Pallas's fishing eagle	<i>Haliaeetusle coryphus</i> Pallas	Accipitridae	Falconiformes	RM
23	Grey Heron	<i>Ardea Cinered</i> Linn	Ardeidae	Ciconiiformes	RM
24	Common sandpiper	<i>Tringo hypoleucos</i> Linn	Scolopacidae	Charadriiformes	RM
25	Western Pale Harrier	<i>Circus macrourus</i> Gmelin	Accipitridae	Falconiformes	M
26	Osprey	<i>Pandion haliaetus</i> Linn	Accipitridae	Falconiformes	RM
27	Common Quail	<i>Coturnix coturnix</i> Linn	Phasianidae	Galliformes	RM
28	Rain Quail	<i>Corturnix coromandelica</i> Gmelin	Phasianidae	Galliformes	RM
29	Blue breasted Quail	<i>Cortunnix chinesis</i> Linn	Phasianidae	Galliformes	RM
30	Rock Bush Quail	<i>Perdicula argoondah</i> Sykes	Phasianidae	Galliformes	R
31	Indian peafowl	<i>Pavo cristatus</i> Linn	Phasianidae	Galliformes	R
32	Blue breasted Rail	<i>Rallus striatus</i> Linn	Rallidae	Gruiforms	R
33	White breasted Water hen	<i>Amaurornis phoenicurus</i> Pennant	Rallidae	Gruiforms	R
34	Purple Moorhen	<i>Porphyrio porphyrio</i> Linn	Rallidae	Gruiforms	R
35	Common Coot	<i>Fulica atra</i> Linn	Rallidae	Gruiforms	RM
36	Common Myna	<i>Acridotheres tristis</i> Linn	Sturnidae	Passeriformes	R
37	Jungle Myna	<i>Acridotheres fuscus</i> Wagler	Sturnidae	Passeriformes	R
38	Black Myna	<i>Acridotheres ginginianus</i> Latham	Sturnidae	Passeriformes	R
39	Tickell's Blue flycatcher	<i>cyornis tickelliae</i> Latham	Muscicapidae	Passeriformes	R
40	Jungle prinia	<i>Prinia sylvactica</i> Jerdon	Muscicapidae	Passeriformes	R
41	Eurasian Blackbird	<i>Turdus merula</i> Linn	Muscicapidae	Passeriformes	RM
42	Grey Tit	<i>parus major</i> Linn	Parinae	Passeriformes	R
43	Thickbilled Flowerpecker	<i>Dicaeum agile</i> Tickell	Dicaeidae	Passeriformes	R
44	Tickell's Flowerpecker	<i>Dicaeumerythrorhynchus</i> Latham	Dicaeidae	Passeriformes	R
45	Yellow Wagtail	<i>Motacilla flava</i> Linn	Motacillidae	Passeriforms	WM
46	Citrine Wagtail	<i>Motacilla citreola</i> Linn	Motacillidae	Passeriforms	WM
47	Grey Wagtail	<i>Motacilla cinere</i> Linn	Motacillidae	Passeriforms	WM
48	Purple Sunbird	<i>Nectarinia asiaticA</i> Latham	Nectariniidae	Passeriforms	R
49	Oriental white eye	<i>Zosteropsalpebrosus</i> Latham	Zosteropidae	Passeriformes	R
50	Yellow throated sparrow	<i>Petronia xanthocollis</i> Temminck	Passerinae	Passeriformes	R
51	Baya	<i>Ploceus philippinus</i> Linn	Ploceinae	Passeriformes	R
52	Spotted Munia	<i>Lonchura punctulata</i> Linn	Ploceinae	Passeriformes	R
53	Blackheaded Munia	<i>Lonchura Malacca</i> Linn	Estrildinae	Passeriformes	R
54	Indian grey Hornbill	<i>Ocyrceros birostri</i> Scopoli	Bucerotidae	Passeriformes	R
56	Crested Bunting	<i>Melophus latham</i> Linn	Emberizidae	Passeriformes	R
57	Oriental White Ibis	<i>Threskiornis melanocephala</i> Latham	Threskiornithidae	Ciconiformes	R
58	Spotted owl	<i>Athene brama</i> Temminck	Striginae	Strigiformes	R
59	Asian koel	<i>Eudynamys scolopacea</i> Linn	Cuculidae	Cuculiformes	R
60	Pied Crested Cuckoo	<i>Clamator jacobinus</i> Boddaert	Cuculidae	Cuculiformes	R
61	Plum headed Parakeet	<i>Psittacula cyanocephala</i> Linn	Psittacidae	Psittaciformes	R
62	Rose ringed Parakeet	<i>Psittacula krameri</i> Scopoli	Psittacidae	Psittaciformes	R
63	Indian Lorikeet	<i>Loriculus vernalis</i> Sparman	Psittacidae	Columbiformes	R
64	Pied flycatcher- Shrike	<i>Hemipus picatus</i> Sykes	Campephagidae	Passeriformes	R
65	Small Minivet	<i>pericrocotus cinnamomeus</i> Linn	Campephagidae	Passeriformes	R
66	Brahminy shelduck	<i>Tadorna ferruginea</i> Linn	Campephagidae	Passeriformes	RM
67	Pied Bush Chat	<i>Saxicola caprata</i> Linn	Turdinae	Passeriformes	RM
68	Red-wattled Lapwing	<i>Vanellus indicus</i> Boddaert	Daniidae	Charadriiformes	R
69	Yellow- wattled Lapwing	<i>Vanellus malabaricus</i> Boddaert	Daniidae	Charadriiformes	R
70	Black winged Stilt	<i>Himantopus himantopus</i> Linn	Recurvirostridae	Charadriiformes	WM
71	Little Grebe	<i>Tachybaptus ruficollis</i> Pallas	Podicipitidae	Podicipediformes	M
72	Common Redshark	<i>Tringa tetanus</i> Linn	Charadriidae	Charadriiforms	RM
73	Spotted Redshark	<i>Tringa erythropus</i> Linn	Charadriidae	Charadriiforms	M
74	Indian Roller	<i>Coracias benghalensis</i> Linn	Coraciidae	Coraciiformes	R
75	Green imperial Pigeon	<i>Ducula aenea</i> Linn	Columbidae	Columbiformes	RM
76	Greater couecal	<i>Centropus sinensis</i> Stephens	Cuculidae	Cuculiformes	RM
77	Green billed Malkoha	<i>Rhopodytes tristis</i> Lesson	Cuculidae	Cuculiformes	RM
78	Crested tree swift	<i>Hemiprocne coronata</i> Rafinesque	Hemiprocninae	Apodiformes	RM
79	House swift	<i>Apus affinis</i> J.E.Gray	Apodinae	Apodiformes	R.
80	Long tailed Nightjar	<i>Caprimulgusmacrurus</i> Horsfield	Caprimulgidae	Caprimulgiformes	RM
81	Black winged stilt	<i>Himantopus himantopus</i> Linn	Recurvirostridae	Charadriiformes	R
82	Great stone plover	<i>Esacas magnirostris</i> Veilloti	Charadriidae	Charadriiformes	R
83	Common Teal	<i>Anas crecca</i> Linn	Anatidae	Anseriformes	R
84	Bronze winged Jacana	<i>Metopidius indicus</i> Latham	Jacaniidae	Charadriiformes	R
85	Pheasant- tailed Jacana	<i>Hydrophasianus chirurgus</i> Scopoli	Jacaniidae	Charadriiformes	R

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S. N.	Common Name	Scientific Name	Family	Order	Status
86	Lesser Pied Kingfisher	<i>Ceryle rudis</i> Linn	Alcedinidae	Coraciiformes	R
87	SmallBlueKingfisher	<i>Alcedo atthis</i> Linn	Alcedinidae	Coraciiformes	RM
88	Whitebreasted Kingfisher	<i>Halcyon coromanda</i> Linn	Alcedinidae	Coraciiformes	R
89	Black capped Kingfisher	<i>Halcyon pileata</i> Linn	Alcedinidae	Coraciiformes	R
90	Small bee eater	<i>Merops orientalis</i> Latham	Meropidae	Coraciiformes	R
91	Blue cheekedBeeeater	<i>Merops persicus</i> Latham	Meropidae	Coraciiformes	RM
92	Chestnut Bee Eater	<i>Merops Lesehenaulti</i> Latham	Meropidae	Coraciiformes	R
93	Common Hoopoe	<i>Upupa epops</i> Linn	Upupidae	Coraciiformes	RM
94	Black Drongo	<i>Dicrurus adsimilis</i> Bechstein	Dicruridae	Passeriformes	R
95	White billed Drongo	<i>Dicrurus caerulescens</i> Linn	Dicruridae	Passeriformes	R

R-Residential, RM-Residential Migratory, M-Migratory

potential and rich in flora and fauna. The marshy places forms natural habitat for feeding, breeding and nesting grounds.

The present study was undertaken to enlist, identify and record different species of bird. During identification, the care was taken to avoid any disturbance to them.

The reservoirs in the present study are located with in the geographical co-ordinates of 17° 51"- 18 °11" N longitude and 73°33"-74°55" S latitude.

- 1. Kas Reservoir: (Natural water reservoir):** This reservoir is situated about 28 km away from Satara city. The tank was constructed in 1882 at the origin of Urmodi River. The storage capacity of the reservoir is 1.20 TMC.
- 2. Kanher dam:** It is man made reservoir built on Venna river near Kanher. It is situated in Medha Tahsil of Satara district. It is about 15 km away from city.
- 3. Mahadare reservoir:** This reservoir is constructed at the foot of Yawteshwar to supply of water to the city. The length of tank is 79.248 meter, width is 78.33 meter and depth is about 9.14 meter.

MATERIALS AND METHODS

Three reservoirs namely Kas, Kanher and Mahadare reservoir was visited regularly from June 2006 to June 2008. The observation on birds were carried out and identified with the help of noting, expert guidance and standard methods given by Ali and Ripley (1995); Grimmert *et al.* (1999); Salim (2002); Satish, (2003).

RESULTS AND DISCUSSION

Birds have been considered as useful biological indicators because they are ecologically versatile and live in all kinds of habitats as herbivores or carnivores. They are susceptible to the changes in wetlands or ecosystem. Some birds are migratory, which are responsible for fluctuations in the population of birds that occur during different seasons of the year, which may help to know whether area is normal or getting polluted, as total absence of birds from any area may be considered as pollution indication (Borale *et al.* 1994). Similar type of studies was carried out by Kurhade (1991) recorded 51 bird species in Ahmednagar district. Vyawahare (1991) listed 245 bird species in Dhule district of Maharashtra. Prashant *et al.*, (1994) in their study of coastal area of Nellora district recorded 78species of birds. Bhargavi *et al.*, (1996), recorded 45 species of birds belonging to 13 families in their

study on wetlands while Terdalkar *et al.* (2005) were listed 45 species of birds belonging to 18 families around Bhatye estuary, Ratnagiri. Quadros (2001) in his study on Thane creek reported 55 species. Sathe and Pawar (2005) recorded 72 species of birds in Sagreshwar Sanctuary. Sathe *et al.* (2008) recorded 48 species of birds in Sukacharya hills, Kumbhar *et al.*, (2009) recorded 99 species of birds along Krishna river of Sangli during their study.

The present study shows 95 different types of birds belonging to different species, genera and families. Out of these 33 are residential migratory or local migratory, 7 are migratory and 55 remaining birds are resident. Family Accipitridae was found dominant representing 13 species. Birds have been considered as useful biological indicators because they are ecologically versatile and live in all kinds of habitats. The aquatic fauna is susceptible to the changes in aquatic bodies. Some birds are migratory, responsible for fluctuations in the population of birds which is help to know whether area is normal or getting polluted. Total absence of birds from any area is considered as pollution indication.

The present study shows rich diversity of avifauna in the vicinity of reservoir. The majority birds were sighted in thick vegetation of trees.

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