

Bird Diversity of Satara Bhosale and Satara Tukum Lakes of Pombhurna Tehsil

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ABSTRACT

Birds are abundant in nature and play a varied role in shaping our environment. To establish a baseline data bird diversity in and around Satara Bhosale and Satara Tukum lakes of Pombhurna tehsil in Chandrapur district in Maharashtra State has been studied for a span of 2 years. There are 44 species of birds found in Satara tukum lake and 33 species were identified from Satara Bhosale lake and its adjoining areas belonging to 15 different families. The family Columbidae, Ardeidae, Pycnonotidae, Sturnidae, Passeridae and Cuculidae were found to be dominant in both the lakes. Bird diversity is more in Satara Tukum lake area as compared to Satara Bhosale.

Keywords- Diversity, Satara Bhosale, Satara Tukum, Pombhurna, birds.

INTRODUCTION

Birds are found everywhere and in all the continents of the world. They attract attention of people of all the ages today. Distinct types of birds are found in different geographic regions. Birds are always attracted towards water bodies of the world. They migrate from continent to continent depending on season and the food availability. Water is a key factor which affects aquatic vegetation, that influenced bird density, diversity and distribution. Water depth is also an important factor affecting habitat selection in water birds. The water birds obtain higher net energy intake in shallow water than deep water. The studies on birds are made by many researchers in India and abroad.

Studied the bird diversity of Jaikwadi reservoir [1]. The biodiversity of birds around Kunda reservoir are done [2]. Prominent studies on birds are done by many researchers in India [3-25]. As no previous studies were recorded from Satara Bhosale and Tukum lakes and their adjoining areas these regions were studied for bird diversity.

Satara Bhosale and Satara Tukum are the two different freshwater reservoirs of Pombhurna tehsil of Chandrapur district still with unrecorded bird population. So an attempt has been made to study them with respect to bird population in a two year span.

METHODOLOGY

The observing and recording of birds were carried out from Feb. 2016 to January 2018 in and around Satara

bhosale and Satara tukum lake. The birds observed with the help of binocular and their identification was done as per [26,27, 29]. Their colored photograph were taken with the help of canon camera.

RESULTS AND DISCUSSION

During present study 40 different kinds of birds were recorded in Satara Tukum lake (Plate 1) which represents 15 families and 13 different orders viz, Anseriformes, Apodiformes, Charadriiformes, Ciconiformes, Coraciformes, Columbiformes, Falconiformes, Galliformes, Gruiformes, Passeriformes, Pelecaniformes, Podicipediformes, Psittaciformes and the data is tabulated in the Table No. 1. Satara Bhosale lake has 33 bird species as shown in Table no. 2 and (Plate 2).

Table 1 : Birds Observed in Satara Bhosale Lake and its surrounding catchment areas

Sr. No.	Order	Family	Common Name	Scientific Name	Habit
1	Anseriformes	Anatidae	White winged Duck	<i>Cairina scutulata</i>	R
2	Charadriiformes	Charadriidae	Red Wattled Lapwing	<i>Vanellus malabaricus</i>	R
3	Charadriiformes	Charadriidae	Kentish Plover	<i>Charadrius alexandrinus</i>	RM
4	Charadriiformes	Recurvirostridae	Black Winged Stilt	<i>Himantopus himantopus</i>	R
5	Ciconiformes	Ardeidae	Large Egret	<i>Casmerodius albus</i>	RM
6	Ciconiformes	Ardeidae	Cattle Egret	<i>Bubulcus Ibis</i>	RM
7	Ciconiformes	Ardeidae	Median Egret	<i>Mesophosyx intermedia</i>	RM
8	Ciconiformes	Ciconidae	European White Stork	<i>Ciconia Ciconia</i>	M
9	Ciconiformes	Threskiornithidae	Black Ibis	<i>Pseudibis papillosa</i>	RM
10	Ciconiformes	Ciconidae	Painted Stork	<i>Mycteria leucocephala</i>	WV
11	Ciconiformes	Ardeidae	Indian Pond Heron	<i>Ardeola grayii</i>	R
12	Columbiformes	Columbidae	Spotted Dove	<i>Streptopelia chinensis</i>	R
13	Coraciformes	Alcedinidae	Blue Kingfisher	<i>Alcedo mehinting</i>	R
14	Coraciformes	Meropidae	Small Green Bee Eater	<i>Merops orientalis</i>	R
15	Passeriformes	Laniidae	Bay Backed Shrike	<i>Lanius vittatus</i>	R
16	Passeriformes	Nectarinidae	Purple Sunbird	<i>Nectarina asiaticus</i>	R
17	Passeriformes	Muscicapidae	Large Grey Babbler	<i>Turdoides malcoini</i>	R
18	Passeriformes	Muscicapidae	Common Babbler	<i>Turdoides caudate</i>	R
19	Passeriformes	Nectarinidae	Baya Weaver	<i>Ploecus philippinus</i>	R
20	Passeriformes	Sturnidae	Common Myna	<i>Acridotheres tristis</i>	R
21	Passeriformes	Sturnidae	Brahminy Starling	<i>Sturnia pagodarum</i>	R
22	Passeriformes	Dicruidae	Black Drongo	<i>Dicrurus macrocercus</i>	R
23	Passeriformes	Estrildidae	Scaly breasted Munia	<i>Lonchura punctulata</i>	RM
24	Passeriformes	Motacillinae	White Wagtail	<i>Motacilla alba</i>	RM
25	Passeriformes	Motacillinae	Grey Wagtail	<i>Motacilla cinerea</i>	WV

Table 1 : Continued...

Sr. No.	Order	Family	Common Name	Scientific Name	Habit
26	Passeriformes	Corvidae	House Crow	<i>Corvus splendens</i>	R
27	Passeriformes	Ploceidae	House Sparrow	<i>Passer domestic</i>	R
28	Passeriformes	Ploceidae	Yellow Throated Sparrow	<i>Petronia xanthocollis</i>	R
29	Pelecaniformes	Phalacrocoracidae	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	R
30	Psittaciformes	Psittacidae	Rose Ringed Parakeet	<i>Psittacula krameri</i>	R
31	Psittaciformes	Cuculidae	Greater Coucal	<i>Centropus sinensis</i>	R
32	Psittaciformes	Cuculidae	Asian Koel	<i>Eudynamys colopaceus</i>	R
33	Psittaciformes	Pyconitidae	Red Vented Bulbul	<i>Pycnonotus cafer</i>	R

R= Resident, M= Migratory, RM= Resident Migratory,
RMC= Resident Migratory Common, WV=Winter Visitor

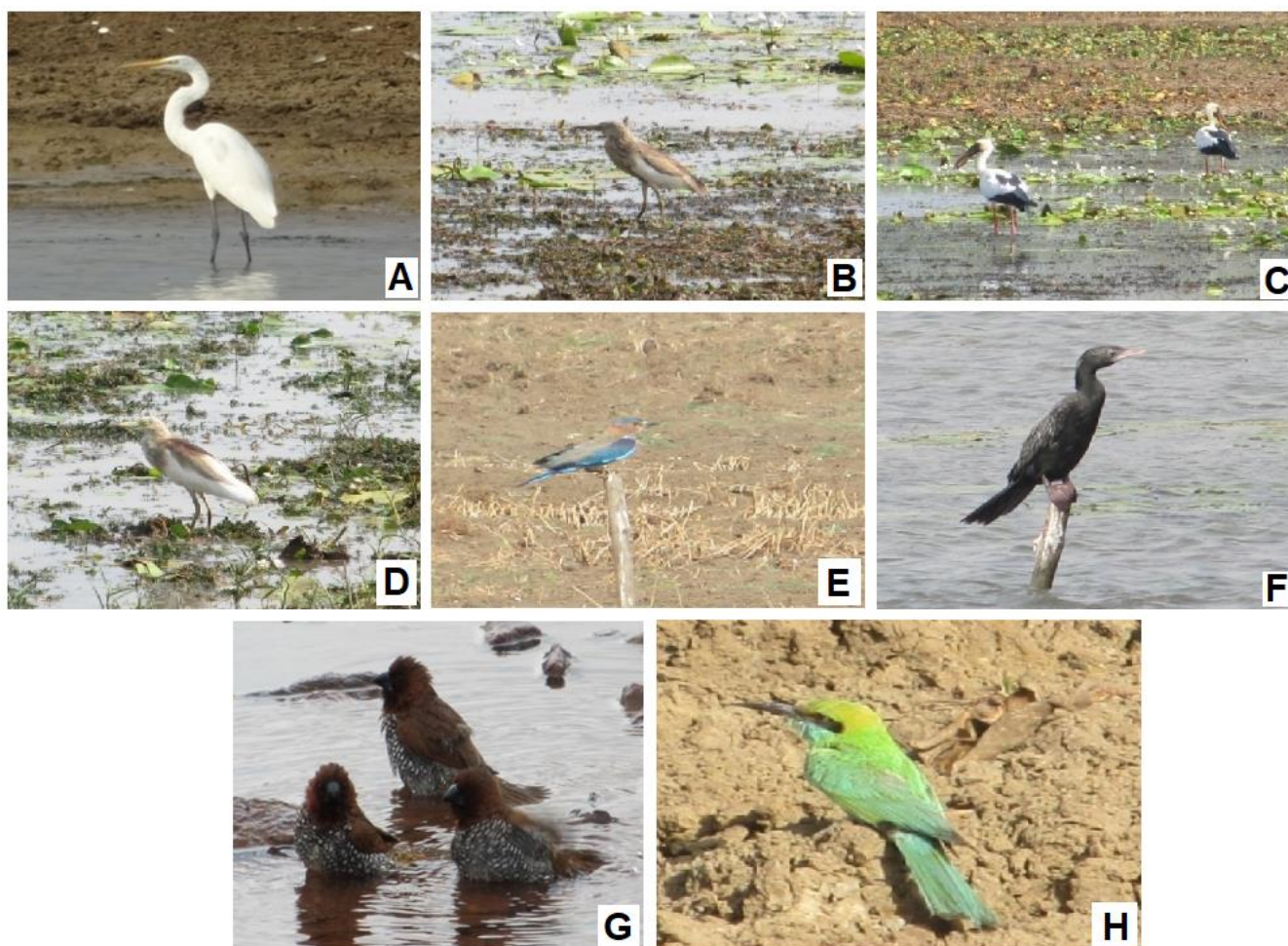
Table 2 : Birds observed in and around Satara Tukum Lake and its catchment areas

Sr. No.	Order	Family	Common Name	Scientific Name	Habit
1	Anseriformes	Anatidae	White winged Duck	<i>Cairina Scutulata</i>	R
2	Anseriformes	Anatidae	Common Teal	<i>Anas Crecca</i>	WV
3	Charadriiformes	Charadriidae	Red wattled Lapwing	<i>Vanellus Malabaricus</i>	R
4	Charadriiformes	Charadriidae	Kentish Plover	<i>Charadrius alexandrinus</i>	RM
5	Charadriiformes	Recurvirostridae	Black Winged Stilt	<i>Himantopus himantopus</i>	R
6	Ciconiformes	Ardeidae	Large Egret	<i>Casmerodius albus</i>	RM
7	Ciconiformes	Ardeidae	Cattle Egret	<i>Bubulcus Ibis</i>	RM
8	Ciconiformes	Ardeidae	Median Egret	<i>Mesophosyx intermedia</i>	RM
9	Ciconiformes	Ciconidae	European White Stork	<i>Ciconia Ciconia</i>	M
10	Ciconiformes	Threskiornithidae	Black Ibis	<i>Pseudibis papillosa</i>	RM
11	Ciconiformes	Threskiornithidae	Oriental White Ibis	<i>Threskiornismelano cephalus</i>	R
12	Ciconiformes	Ciconidae	Painted Stork	<i>Mycteria leucocephala</i>	WV
13	Ciconiformes	Ardeidae	Indian Pond Heron	<i>Aredeola grayii</i>	R
14	Columbiformes	Columbidae	Little Brown Dove	<i>Streptopelia senegalensis</i>	R
15	Columbiformes	Columbidae	Spotted Dove	<i>Streptopelia chinensis</i>	R
16	Coraciformes	Alcedinidae	Blue Kingfisher	<i>Alcedo mehinting</i>	R
17	Coraciformes	Coraciidae	Indian Roller	<i>Coracias benghalensis</i>	RM
18	Coraciformes	Meropidae	Small Green Bee Eater	<i>Merops orientalis</i>	R
19	Gruiformes	Rallidae	White - Breasted Water hen	<i>Amauromis phoenicurus</i>	R
20	Passeriformes	Laniidae	Bay Backed Shrike	<i>Lanius vittatus</i>	R
21	Passeriformes	Nectarinidae	Purple Sunbird	<i>Nectarina asiaticus</i>	R
22	Passeriformes	Muscicapidae	Large Grey babbler	<i>Turdoides malcoini</i>	R
23	Passeriformes	Muscicapidae	Common babbler	<i>Turdoides caudate</i>	R
24	Passeriformes	Passeridae	Pheasant Tailed Jacana	<i>Hydrophasianus chirurgus</i>	R
25	Passeriformes	Nectarinidae	Baya Weaver	<i>Ploecus philippinus</i>	R
26	Passeriformes	Strurnidae	Common Myna	<i>Acrido theres tristis</i>	R
27	Passeriformes	Strurnidae	Brahminy starling (Myna)	<i>Sturnia pagodarum</i>	R
28	Passeriformes	Dicruidate	Black Drongo	<i>Dicrurus macrocercus</i>	R
29	Passeriformes	Estrildidae	Scaly Breasted Munia	<i>Lonchura punctulata</i>	RM

Table 2 : Birds observed in and around Satara Tukum Lake and its catchment areas

Sr. No.	Order	Family	Common Name	Scientific Name	Habit
30	Passeriformes	Motacillinae	White Wagtail	<i>Motacilla alba</i>	RM
31	Passeriformes	Motacillinae	Grey Wagtail	<i>Motacilla cinerea</i>	WV
32	Passeriformes	Corvidae	House Crow	<i>Corvus splendens</i>	R
33	Passeriformes	Ploceidae	House Sparrow	<i>Passer domesticus</i>	R
34	Passeriformes	Ploceidae	Yellow Throated Sparrow	<i>Petronia xanthocollis</i>	R
35	Pelecaniformes	Phalacrocoracidae	Little Cormorant	<i>Phalacrocorax niger</i>	RM
36	Pelecaniformes	Phalacrocoracidae	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	R
37	Psittaciformes	Psittacidae	Rose Ringed Parakeet	<i>Psittacula krameri</i>	R
38	Psittaciformes	Cuculidae	Greater Coucul	<i>Centropus sinensis</i>	R
39	Psittaciformes	Cuculidae	Asian Koel	<i>Eudynamys scolopaceus</i>	R
40	Psittaciformes	Pyconitidae	Red Vented Bulbul	<i>Pycnonotus Cafer</i>	R

R= Resident, M= Migratory, RM= Resident Migratory, RMC= Resident Migratory Common, WV=Winter Visitor

**PLATE 1: Birds Recorded in Satara Bhosale Lake and Adjoining Areas**

A: Great Egret, B: Chinese Pond Heron, C: Openbill White Stork, D: Indian Pond Heron, E: Indian Roller
F: Little Cormorant, G: Scaly Breasted Munia, H: Small Beateater

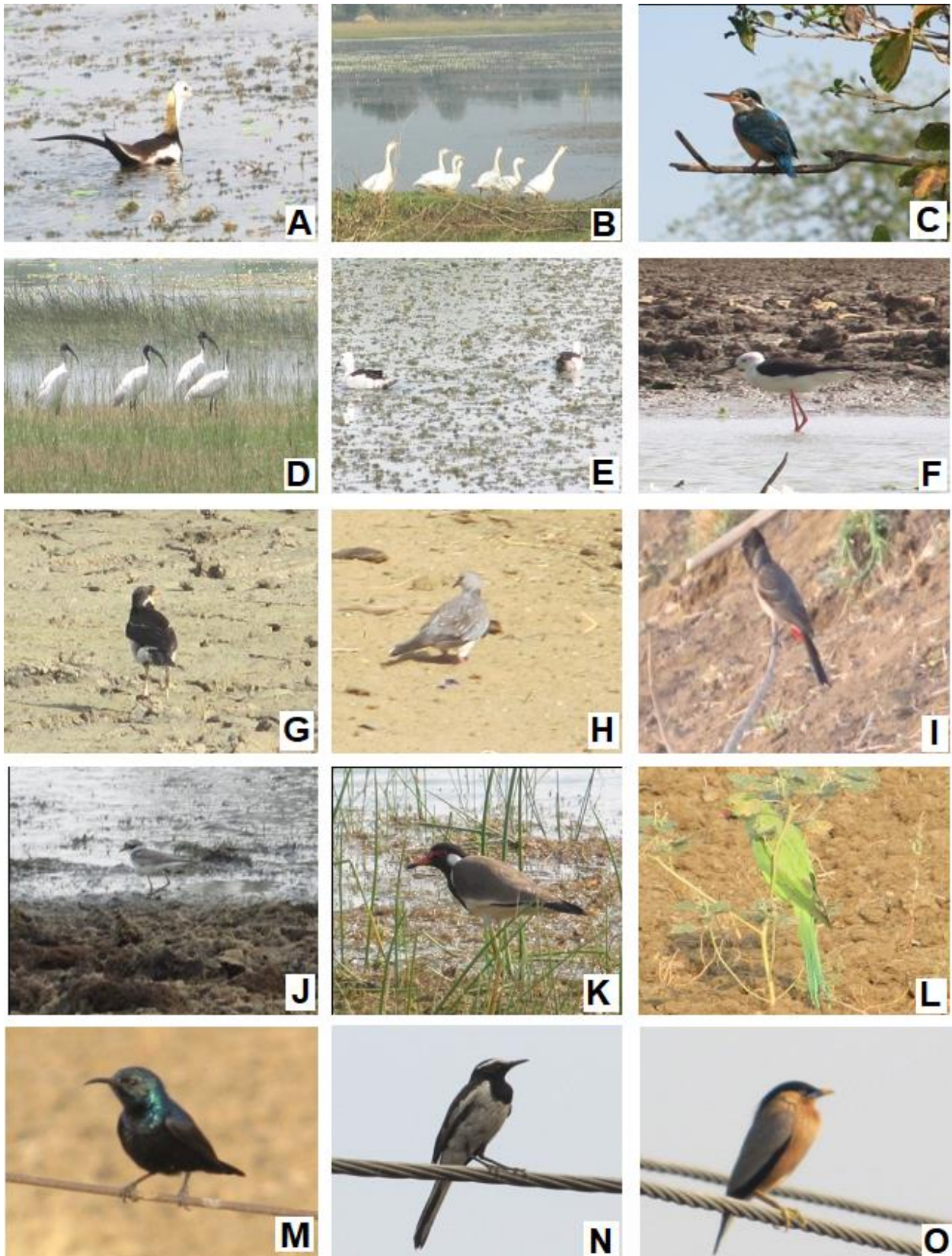


PLATE 2: Birds Recorded in Satara Tukum Lake and Adjoining Areas : A: Pheasant Tailed Jacana, B: White winged Duck, C: Blue Kingfisher, D: Black headed White Ibis E: Cotton Teal, F: Black winged Stilt G: Common Myna, H: Little Brown Dove I: Red Vented Bulbul, J: Kentish Plover, K: Red-Wattled Lapwing L: Parrot, M: Purple Sunbird, N: White Wagtail, O: Brahminy Starling(myna)

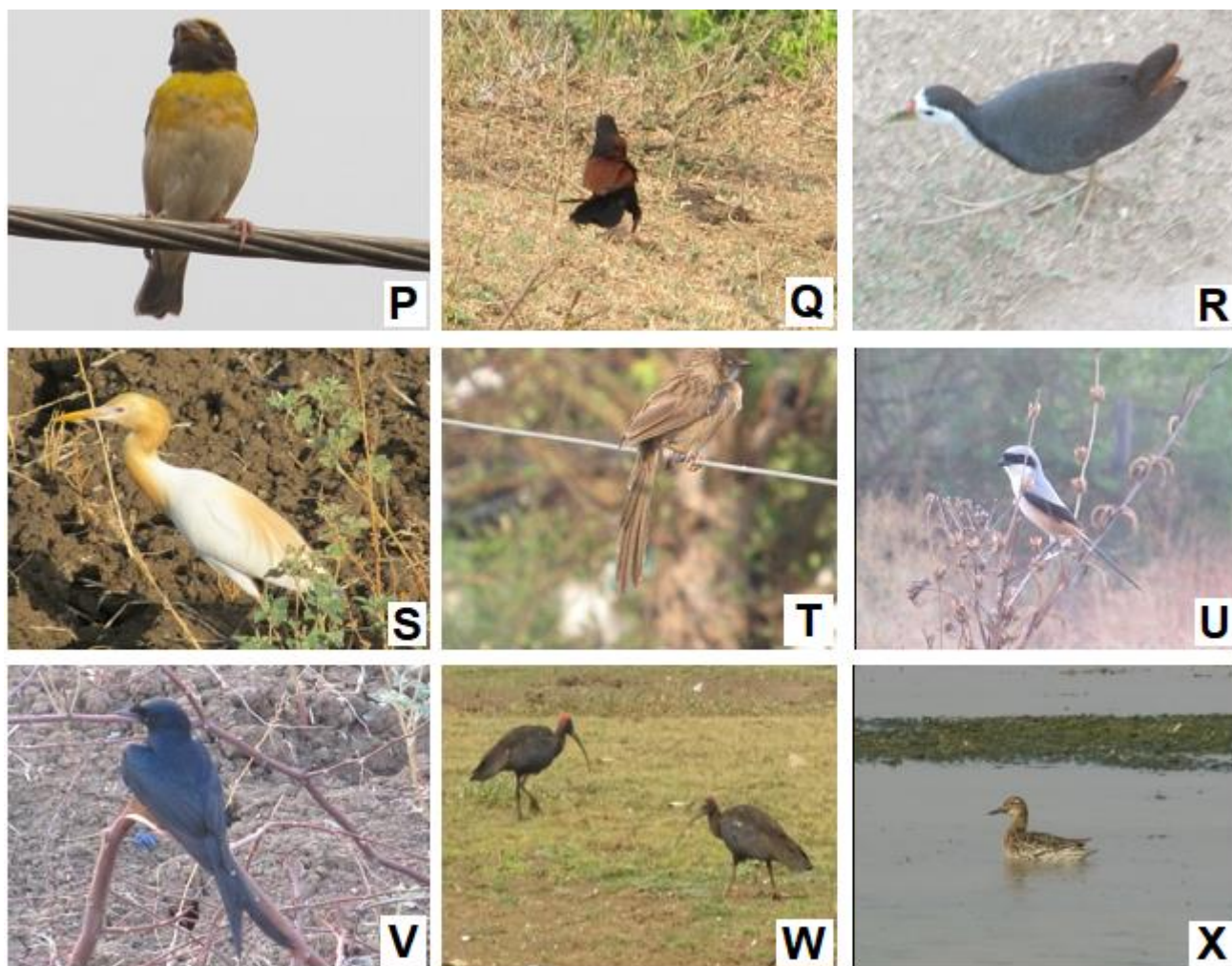


PLATE 2: Birds Recorded in Satara Tukum Lake and Adjoining Areas :

P: Baya Weaver **Q:** Greater Coucal, **R:** White-Breasted WaterHen **S:** Cattle Egret **T:** Jungle Babbler
U: Bay Backed shrike **V:** Black Drongo, **W:** Black Ibis, **X:** Marbled Teal

The family Columbidae (Order-Columbiformes) is represented by *Streptopelia chinensis* (Spotted Dove); and family Ardeidae (Order-Ciconiiformes) is represented by *Bubulcus ibis* (Cattle Egret), *Ardeola grayii* (Indian Pond Heron) and *median egret*. The order Passeriformes consists of four families *i.e.* *Pycnonotus cafer* (Red-Vented Bulbul), *Nectarinia asiatica* (Purple Sunbird) and *Acridotheres tristis* (Common Myna. *Dicrurus macrocercus* (Black Drongo) belongs to the family Passeridae. The order Coraciiformes include three families namely; Meropidae, Accipitridae and Coraciidae. The family Meropidae have two species *viz;* *Merops orientalis* (Small Bee-Eater) Coraciidae consists of *Coracias benghalensis* (Indian Roller). Whereas, the family Cuculidae (Order- Cuculiformes) includes species *Eudynamis scolopaceus* (Asian Koel). Among avian species *Bubulcus ibis* (Ardeidae),

Pycnonotus cafer (Pycnonotidae), *Acridotheres tristis* (Sturnidae), and *Eudynamis scolopaceus* (Cuculidae) were found to be dominant species. However, *Merops orientalis* is found to be least recorded.

The total of 58 species of birds belonging to 9 orders and 29 families were recorded from Bamanwada Lake of Maharashtra noted that Passeriformes is the dominant order of birds [3]. The fresh and saline water ecosystems are rich in aquatic vegetation and several kinds of birds were found in and around Digha, District of East Midnapore . There are a total 86 bird species belonging to 10 orders and 35 families in the 2-year study period. The Passeriformes is the dominant order of birds Whereas, there are a total 61 species of birds belonging to 27 family of avifauna diversity in and around Ansupa lake, Odisha,

identified from June 2012 till May 2013. These birds include both wetland dependant birds and terrestrial birds. It was found that the importance of Ansupa lake as a preferred habitat for birds and provided a baseline data about avifauna diversity of the lake.

The recent studies on birds show that the freshwater bird biodiversity is the most threatened of all types of diversity and wetlands are found to be the richest zone of existing avifauna. It was found that bird communities respond to the factors like food availability predator abundance, human density, competition, and climate, among others. Out of these, availability of food and substrate may be an important parameter in avian habitat selection.

Results of the present study are also supported by works of [5,6,7, 29]. The present investigation exhibit the richness of bird fauna in and around two beautiful water bodies of Satara Bhosale and Satara Tukum.

Conflicts of interest: The authors stated that no conflicts of interest.

REFERENCES

1. Kurhade S. Status and diversity of Avifauna in Jaikwadi reservoirs, Maharashtra J. Aqua. Biol. 2010; Vol.25(1); 32-40.
2. Rawal R, Ghaherwal S, Nageshwar W. Avian diversity in and around Kunda Reservoir(District-Dhar), Int. Jou. Research 2016; vol.4 IssueI,690-695.
3. Chilke AM. Avian diversity in and Bamanwada lake of Rajura, District-chandrapur(Maharashtra), Annals of Biological Research,2012; 3(4),2014-2013.
4. Lad D, Patil S. Status and Diversity of Avian Fauna in the Estuarine wet land area of Bhayander and Naigaon, Maharashtra, India. Bioscience discovery, 2015; 6(1): 39-44, Jan 2015.
5. Ghosal, DN. Avifauna of conservation area, No. 7, Fauna of Kanha Tiger Reserve Zoological survey of India(ZSI), 1995; pp. 63-91.
6. Gupta RC., Kaushik TK and Gupta PK. Analysis of avian-biodiversity in rural wetland environs in Panipat district in Haryana, India. Journal of applied and natural science 2012; 4(2):252-257(2012).
7. Harney, NV , Bhute KB. Diversity of avifauna in and around Chalbaradi (Rai) Lake near Bhadrawati, District Chandrapur (M.S.), India., Journal of Global Biosciences, 2014; Vol.3(2) 2014,pp. 399-405.
8. Harney NV., Dhamani AA., and Andrew RJ. Studies on avifaunal diversity of three water bodies near Bhadrawati, Distt. Chandrapur(M.S.)India, Indian Streams Research Journal 2014; Vol.1(6): 216-218.
9. Wanjari HV. Diversity of aquatic birds of Ekburji reservoir, Washim, M.S., India., Int. J. of fisheries and Aquatic Studies 2016; 4 (5); 192-195.
10. Mistry J. Avifaunal diversity in and around Berhampore, Murshidabad district, WestBengal. India., International Journal of Fauna and Biological Studies,2015; Vol. 2(4): 06-10.
11. Joshi PP. Assessment of avian population in different habitats around amolakchand mahavidyalaya campus, Yavatmal, Maharashtra, India. Journal of Global Biosciences, 2015; volume 4, number 5, 2015. pp. 2244-2250.
12. Joshi, PP. Avian Diversity in and Around Durge lake and their Surrounding Forest of Kalamb, District - Yavatmal, Maharashtra, India. Vidyabharti International Interdisciplinary Research Journal 2016; pp. 126 - 130.
13. Kadam SS , Dhar AS. Status and diversity of avian fauna in and around Bordi regioan, west coast of India; Int. Res. J of Biological sciences, 2017 ; Vol. 6(5),15-18
14. Kakde VR. A Report on Avifaunal Diversity at and Around Buldhana Town, District Buldana(M.S.), Online International Interdisciplinary ResearchJournal, 2012, Voume-III, 30-36.
15. Katore DP. Avian Fauna of Aundha dam in Aundha Nagnath Dist-Hingoli; Int. J. of life sciences 2017 vol.5(1);114-116.
16. Kulkarni, AN and Kanwate, VS. Avifauna of forest Jaldhara, Kinwat, District Nanded, Maharashtra, J. Aqua. Biol. 2016 ; Vol. 21(1); 46-51.
17. Chavhan PR, Dhamani AA . Avian diversity in and around chaprala wild life sancturay, District-Gadchiroli, Maharashtra, India, IJFBS 2014,1(6);90-95.
18. Puri SD , Virani RS. Avifaunal diversity from khairbandha lake in Gondia district, Maharashtra state, India.,Bioscience discovery, 2016; 7(2): 140-146, July 2016.
19. Dapke S, Didolkar R, Kaushik S. Studies on diversity and abundance of avifauna in and

- around Laxminarayan Institute of Technology
Campus, Nagpur, Central India;2015; JEZS 2015;
3(5);141-146.
20. Chandel S, Vijay Kumar, Sharma BS, Patiyal R.
Bird diversity of Dhauladher nature Park
Gopalpur, District Kangra, Himachal Pradesh.,
Asian Journal of conservation Biology, 2014, Vol. 3
no.1 pp. 68-74.
21. Shirbhate MV and Vyas A. Avifaunal Diversity
Near Morna Dam of Akola, Maharashtra, India.
Vidyabharti International Interdisciplinary
Research Journal (Special Proceeding Issue) 2016;
pp. 11-14.
22. Patil SR, Sawant RS, Patil SS, Sathe TV, Patil RS
. Avian fauna and Physico chemical parameters of
Gajagoan pond of Arara Tahsil, Kolhapur(M.S.),
Rasayan J. Chem 2013; Vol.6/no.1,176-179 .
23. Tijare RV. Biodiversity of Avian Fauna Visited To
Wetlands Of Gadchiroli District(Maharashtra),
Indian Journal of Applied Research, 2011;
Volume:1,Issue:2, 103-104.
24. Vikas kumar. Biodiversity of Avain fauna of
vandsa national park, Gujrat, conservation issues.
Nat. Env. and Poll Tech. 2015; vol. 14 no.3 pp. 709-
714(2015)/
25. Yardi, D, Patil, SS and Auti, RG. Diversity of Avian
Fauna from salim ali lake of Aurangabad, paper
presented in 21st meet of birds lovers of
Maharashtra held at Nanded on 3rd, 4th April-2004.
26. Jain A. Studies on the status of the birds
Inhabiting Sirpur Lake Indore, M.P., with
reference to the changing enviroment, *Research
Journal of Recent science*, 2015; vol.4, 18-21.
27. Ali, S. The Book in Indian Birds, Bombay Natural
History Society ,2002; Oxford, 13 edition.
28. Ali, S. Ripley, SD A Pictorial Guide to the Birds of
the Indian Subcontinent, Bombay Natural History
Society,1995 Mumbai.
29. Patil Kishor G, Bobade Sumedh L, Shende
Virendra A, Pawar Santosh S, Chavhan Arvind B.
Aves of Ajanti reservoir region of Wena River,
Hinganghat (Wardha) Central India. *Int. Res.
Journal of Science & Engineering*, 2018, 6 (2): 55-76.