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## **Avifauna diversity of Naleshwar Lake and its periphery in Mul Tehsil of Chandrapur District (Maharashtra State)**

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### **Abstract**

The wetlands of all types play a vital role in maintaining the diversity of avifauna worldwide. Avian species diversity and distribution in a particular area is influenced by limnological characteristics of the water body and surrounding locality conditions. As no previous studies were reported on Naleshwar lake bird biodiversity, the present study was carried out to document diversity of avifauna in and around Naleshwar Lake, located in Mul Tehsil of Chandrapur district in Maharashtra state. Since no data pertaining to avifauna of this region is available till date it was decided to find out the diversity of birds of this area during the span of 2016-2018. Based on the observation made over a period of two years time a wide variety of birds were found to inhabit the lake and its vicinity nearby. In our studies it is found that about 54 species of birds were present in the lake and its adjoining areas which visit the lake frequently for feeding, breeding and other activities. The maximum species of birds were sighted during the winter season followed by summer and monsoon season respectively.

**Keywords:** avifauna, Naleshwar Lake, Mul Tehsil, Chandrapur District, Maharashtra state

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### **Introduction**

Water plays an important role in sustaining the natural aquatic ecosystem's of the world on which maximum birds sustain. Birds are warm blooded feathered vertebrates which are at the top of the food chain and habitat of birds plays a very important role in diversity in any area of the world. Studies on birds in Indian sub continent are mostly done by researchers viz. Ghazi (1962) [5], Majumdar (1984) [22], Ghosal (1995) [6], Wadatkhar and Kasambe (2002) [30], Yardi *et al* (2004), Kedar and Patil (2005) [15], Kulkarni and Kanwate (2006) [17, 18, 19], Kedar *et al* (2008) [16], Kurhade (2010) [21], Thaokar *et al* (2010) [29], Kanwate and Jadhao (2010) [14], Harney *et al* (2011) [8], Narwade and Fartade (2011) [23], Joshi *et al* (2012) [12], Hippargi *et al* (2012) [11], Harney *et al* (2013) [10], Rasal and Chavan (2015), Rathod *et al* (2017) [27] and many more till date.

Freshwater lakes are important wetlands which play a vital role in sustaining the diversity of varied avifauna. Avian species distribution of a particular area is influenced by limnological characteristics of prevailing water bodies in the area.

Since no data pertaining to avifauna of Mul tehsil with respect to Naleshwar Lake in this region is available it was decided to analyze the birds of this area during the years 2016-2018. In this context the present study was carried out to document the diversity of avifauna in and around Naleshwar Lake located in Mul Tehsil of Chandrapur district, in Maharashtra state.

Naleshwar is a small village lake in Mul tehsil in Chandrapur district of Maharashtra state. The area of this lake is approx. 10 hector having irrigated area 48.27 hector. As the lake harbours anthropogenic activities it was quite polluted from its water quality analysis done for two years span by us. This lake harbours a lot of weeds of diverse nature on which a lot of birds of different

species sustain throughout the year. Their biodiversity is analyzed in this research work.

### **Materials and Methods**

Naleshwar is a small village lake in Mul tehsil in Chandrapur district of Maharashtra state. The area of this lake is approx. 10 hector. Present irrigated area is 48.27 hector. A checklist of birds of this area during the years 2016-2018 is prepared. The present research work on birds was carried out from 2016 to 2018 on Naleshwar Lake and its surrounding areas. The observation were carried out by using a field binocular (7 X 25 X magnification) during the early morning hours from 6 to 9 AM and in the evening time from 4 to 6 PM.

Identification of birds species was done with the help of standard literature i.e. Woodcock (1980), Ali S. and Ripley S.D. (1995) [3] and Grimmet *et. al.* (1999) [7].

### **Result and Discussion**

During present study 54 different birds belonging to different species were recorded in lake and its peripheral areas. The recorded birds are presented in Table 1. Out of the 54 different recorded bird species 07 different bird species were classified as migratory, 10 species as resident migratory and remaining birds as resident birds of the area..

Among the families recorded species of birds Scolopacidae was dominant family with 8 species, followed by Ardeidae and Columbidae with 5 and 4 species each. Further study reveals that Passeridae, Gruidae, Corvidae, Sturnidae with (3 species each); Alcedinidae, Anatidae, Ciconidae, Cuculidae, Psittacidae, Phalacrocoracidae with (2 species each). Coraccidae, Dicuridae, Hirudinidae, Lannidae, Meropidae, Muscipidae Phasinidae,

Recurvirostridae, Threskionithidae, Upupidae with one species each.

Maximum species of birds were spotted during winter season while very less birds observed in summer season. The birds have abundant opportunities of feeding during winter so maximum birds are present in winter season and less in summer.

The resident birds of the lake basin include little grebe, Indian pond heron, cattle egret, common snipe, little egret, cotton teal, purple moorhen etc. Similar findings were reported by Harney *et al* (2011)<sup>[8]</sup>, Joshi and Shrivastava (2012)<sup>[12]</sup>, Harney *et al* (2013)<sup>[10]</sup> supporting our findings.

The migratory birds recorded are black winged stilt, wood sandpiper, ruff, brahminy myna, and common hoopoe. The migratory birds migrate during October-november months and

come in flocks to the lake and return to their habitat after winter season.

Nearly 130 species have become extinct due to human activity since the 17th century, and hundreds more before that. Human activity threatens about 1,200 bird species with extinction, though efforts are underway to protect them. Today in modern world Recreational bird watching is an important part of the ecotourism activity throughout the world. The avifauna vary from region to region across the world due to migration and various pressures of man on wetlands. In safeguarding their interest we must protect our beautiful wetlands and find out the species of birds thriving on them. In this research the birds of a perennial water body of Mul tehsil are recorded during a two years span, depicting its beautiful biodiversity.

**Table 1:** Avifauna in & around Naleshwar Lake of Mul Tehsil in Chandrapur District

Sr. No.	Common name	Scientific name	Family	Habit
1.	Indian Pond Heron	<i>Ardeola grayii</i>	Ardeidae	R
2.	Cattle Egret	<i>Bubulcus ibis</i>		R
3.	Little Egret	<i>Egretta garzetta</i>		R
4.	Large Egret	<i>Casmerodius albus</i>		R
5.	Purple Heron	<i>Ardea purpurea</i>		R
6.	Small Blue Kingfisher	<i>Alcedo atthis</i>	Alcedinidae	R
7.	Pied Kingfisher	<i>Ceryle rudis</i>		R
8.	Cotton Teal	<i>Nettapus coromandelianus</i>	Anatidae	R
9.	Spot Bill Duck	<i>Anas poecilorhyncha</i>	Ciconidae	RM
10.	Asian Open Bill Stork	<i>Anastomus osciatus</i>		RM
11.	Painted Stork	<i>Mycteria leucocephala</i>		RM
12.	Little Brown Dove	<i>Stigmatopelia senegalensis</i>	Columbidae	R
13.	Yellow Footed Green Pigeon	<i>Treron phoenicopterus</i>		R
14.	Rock (Blue) Pigeon	<i>Columba livia</i>		R
15.	Spotted Dove	<i>Streptopelia chinensis</i>		R
16.	Indian Roller	<i>Coracias benghalensis</i>	Coraciidae	R
17.	House Crow	<i>Corvus splendens</i>	Corvidae	R
18.	Jungle Crow	<i>Corvus macrohychos</i>		R
19.	Rufous Treepie	<i>Dendrocitta vagabunda</i>		R
20.	Asian Koel	<i>Eudynamis scolopaceus</i>	Cuculidae	R
21.	Greater Coucal	<i>Centropus sinensis</i>	Dicruidae	R
22.	Black Drongo	<i>Dicrurus macrocercus</i>		R
23.	White-Breasted Water Hen	<i>Amauromis phoenicurus</i>	Gruidae	R
24.	Purple Moorhen	<i>Prophyrio prophyrio</i>		R
25.	Common Coot	<i>Fulica atra</i>		RM
26.	Common Swallow	<i>Hirundo rustica</i>	Hirudinidae	RM
27.	Bay Backed Shrike	<i>Lanius vittatus</i>	Laniidae	R
28.	Small Green Bee Eater	<i>Merops orientalis</i>	Meropidae	R
29.	White Wagtail	<i>Motacilla alba</i>	Motacillidae	M
30.	Oriental Magpie Robin	<i>Copsychus saularis</i>	Muscicapidae	R
31.	Pheasant Tailed Jacana	<i>Hydrophasianus chirurgus</i>	Passeridae	R
32.	House sparrow	<i>Passer domesticus</i>		R
33.	Paddy field Pipit	<i>Anthus rufulus</i>		R
34.	Little Cormorant	<i>Phalacrocorax niger</i>	Phalacrocoracidae	RM
35.	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>		RM
36.	Grey Francolin	<i>Fracolinus pondicerianus</i>	Phasinidae	R
37.	Rose Ringed Parakeet	<i>Psittacula krameri</i>	Psittacidae	R
38.	Plum Headed Parakeet	<i>Psittacula cyanocephala</i>		R
39.	Yellow-Crowned Woodpecker	<i>Dendrocopus mahrattensis</i>	Picidae	R
40.	Little Grebe	<i>Tachybaptus ruficollis</i>	Podicipedidae	RM
41.	Black Winged Stilt	<i>Himantopus himantopus</i>	Recurvirostridae	M
42.	Common Sandpiper	<i>Actitis hypoleucos</i>	Scolopacidae	RM
43.	Common Greenshank	<i>Tringa nebularia</i>		M
44.	Green Sandpiper	<i>Tringa ochropus</i>		R
45.	Wood Sandpiper	<i>Tringa glareola</i>		M

46.	Common Redshank	<i>Tringa tetanus</i>		R
47.	Black Tailed Godwit	<i>Limosa limosa</i>		R
48.	Ruff	<i>Philomachus pugnax</i>		M
49.	Common Snipe	<i>Gallinago gallinago</i>		R
50.	Common Myna	<i>Acridotheres tristis</i>	Sturnidae	R
51.	Brahminy Myna	<i>Sturnia pagodarum</i>		M
52.	Pied Myna	<i>Sturnus contra</i>		R
53.	Black Ibis	<i>Pseudibis papillosa</i>	Threskionithidae	RM
54.	Common Hoopoe	<i>Upupa epops</i>	Upupidae	M

R = Resident, RM = Resident Migratory, M = Migratory

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