

## **Avifaunal Diversity of Nagrala Lake of Bhadrawati Tehsil in Chandrapur District, Maharashtra State, India**

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### **Abstract**

Birds are important to continue ecologic circle, especially in food chain. For the last three centuries, industrial developments and anthropological effects have degraded habitats and caused the natural balance to deteriorate. Approximately 200 bird species had been affected directly or indirectly from these negative changes. The present investigation was carried out to document the avifauna in and around the Nagrala lake of Bhadrawati town located in the Chandrapur District of Maharashtra State from June 2015 to May 2017 in which 45 species of birds were recorded of 10 different orders and 25 families during the study. Among the recorded species 28 were resident, 9 were resident migrant and 8 were winter visitor.

**KEYWORDS** : Avifauna, Nagralalake, Avifaunal diversity.

### **INTRODUCTION**

Birds are crucial to maintaining the balance of many ecosystems by providing various ecological services. Diversity of avifauna is very important ecological indicator to evaluate the quality of habitats. Birds are a diverse group and their bright colors, distinct songs calls, and showy displays add enjoyment to our lives. Birds are very visible, quite common, and offer easy opportunities to observe their diverse plumage and behaviors. Because of this, birds are popular to many who pursue wildlife watching and monitoring activities. Some birds transport a variety of things through the environment. For example, birds serve to spread seeds of various plants, thereby helping in plant dispersal.

The Nagralalake is principal fresh water body located within Bhadrawati tahsil in Chandrapur district of Maharashtra state. Bhadrawati is a tehsil place nearly 25 Km North of Chandrapur and 125 Km South East from Nagpur. Nagralalake is 2 km away and situated on the north side of Bhadrawati at about 205 m. above mean sea level and is at 20° 03' 51.93" N latitude and 79° 09' 55.47" E longitude. It receives the water from the surrounding catchment areas during the monsoon period. The area of Nagralalake is spread over 31.36 acres. The depth of water is 20 feet during the monsoon and 7 feet during the summer season. The water of this lake is primary used for washing, bathing, agriculture, fishing activities and other domestic purposes but now it is at a transitional state with respect to degradation.

During the last few decades considerable studies on avifauna diversity from different water bodies of India have been carried out by many researchers, like Singh

(1929), Ali (1932), Ghazi (1962), Kannon (1980), Davidar (1985), Jhingran (1988), Ghoshal (1995) and Yardi (2004). However very little information is available about avifauna of India. This work has therefore undertaken to document the avifauna of water body located near Mohabala village of Bhadrawati tahsil which lies in the central region of the country.

The pond harbors a large number of fauna which attract the resident, winter migratory and resident migratory birds shown that the entire pond basin is greatly productive and conducive to all kinds of birds. This lake harbors a number of aquatic weeds in the submerged as well as floating state on which thrive a large number of organisms. Due to rich food available throughout the year in this lake in the form of aquatic molluscs, crustaceans, insects, etc. the lake always attracts a large number of birds throughout the year.

## MATERIAL AND METHODS

Avian fauna including resident as well as resident migratory and winter visitors birds were recorded during the period of present study. The observations were usually undertaken early in the morning between 6 a.m. to 8 a.m. and in the evening between 5 p.m. to 7 p.m. Birds were observed with the help of a Binocular (10×15 magnification) and photographed using Nikon Camera (model no. D-70). Identification of avian fauna was done according to the keys given by Woodcock (1980), Ali, S. and Ripley, S.D. (1995).

## RESULTS AND DISCUSSION

In the present study, 45 species of birds were recorded from 10 different orders and 25 families among which order Passariformes was dominant by contributing 13 followed by order Ciconiformes with 9 species, order Anseriformes and Coraciiformes represented by 5 species each, order Charadriiformes represented by 4 species, order Galliformes represented by 3 species and order Pelicaniformes and Psittaciformes represented by 2 species each and order Columbiformes and Falconiformes represented by 1 species each.

Among the families recorded species of birds, 6 species belong to Anatidae and 4 species belong to Ardeidae, 3 species each belong to Ciconidae, Gruidae and Sturnidae, 2 species each belong to family Recurvirostridae, Threskiornithidae, Alcedinidae, Corvidae and Motacillidae, 1 species each belongs of family Charadriidae, Scolopacidae, Columbidae, Coraciidae, Meropidae, Upupidae, Necatarinidae, Passeridae, Muscicapidae, Pycnonotidae, Dicruidae and Hirudinidae. Out of total 45 species, 28 were resident, 9 were resident migrant and 8 were winter visitor.

Ali (1939) published a list of 278 species of birds from central India. Newton, *et al.*, (1986) have listed the birds of Kanha Tiger Reserve (M.P.), Ghosal (1995) have listed the birds of Kanha Tiger Reserve (M.P.), Wadkar and Kasambe (2002) reported 171 species of birds at Pohara Malkhed forest reservoir of Amravati district (M.S.), Kedar and Patil (2005) reported 60 bird species from Rishi lake, Karanja Lad, (M.S.), Kulkarni and Kanwate (2006) observed 18 species of birds 10 as resident, 2 migratory and 6 as

residential migratory from Dongarkheda irrigation tank of District Hingoli (M.S.),Kurhade (2010) reported 208 species of birds in Jaikwadi reservoirs near Ahmadnagar (M.S.),Kukade,*et.al.*,(2011) recorded 68 birds species of Chhatri lake of Amravati district (M.S.), Harney, N.V.*et.al.*, (2012) recorded 37 species of birds from Kanhala pond of Bhadrawati of District Chandrapur (M.S.), Joshi and Shrivastava (2012) reported 64 species of birds in Tawa reservoir of Hoshangabad District (M.P.), Harney, N.V.*et.al.*,(2013) recorded 37 species of birds from Kanhala pond with preference to feeding habits of Bhadrawati of District Chandrapur (M.S.) and NatarajanMariappan*et.al.*, (2013) recorded 92 species of birds from different Habitats of Agricultural Ecosystem of Pollachi (Tamilnadu), Manjunath,*et.al.*, (2014) recorded the occurrence of 26 species of birds belonging to 8 orders of 13 families in ShriSharanabasaveshwara lake of Gulbarga District, Karnataka.

This lake is somewhat affected by pollution, various human activities but still avifauna of Nagralalake is diverse.

**Table No. 1: Birds species in Nagralalake during 2015-17**

Sr. No.	Order/Family	Scientific name	Common name	Habit
1	Ansiriformes Anatidae	<i>Anaspoecilorhyncha</i>	Spot Bill Duck	WV
2	Ansiriformes Anatidae	<i>Tadornaferruginea</i>	Brahminy Shelduck	WV
3	Ansiriformes Anatidae	<i>Anasclypeata</i>	Northern Pintail	WV
4	Ansiriformes Anatidae	<i>SarkidiornisMelanotos</i>	Comb Duck	WV
5	Ansiriformes Anatidae	<i>Nettapuscoromandelianus</i>	Cotton Teal	R
6	Charadriformes Charadriidae	<i>Vanellusindicus</i>	Red wattled Lapwing	R
7	Charadriformes Recurvirostridae	<i>Himantopushimantopus</i>	Black Winged Stilt	R
8	Charadriformes Scolopacidae	<i>Actitishypoleucos</i>	Common Sandpiper	RM
9	Charadriformes Recurvirostridae	<i>Himantopushimantopus</i>	Black winged Stilt	R
10	Ciconiformes Ardeidae	<i>Bubulcus ibis</i>	Cattle Egret	RM
11	Ciconiformes Ardeidae	<i>Ardeacinerea</i>	Grey Heron	RM

Sr. No.	Order/Family	Scientific name	Common name	Habit
12	Ciconiformes Ciconidae	<i>Ephippiorhyrchosasiaticus</i>	Black Naked Stork	WV
13	Ciconiformes Ardeidae	<i>Casmerodiusalbus</i>	Large Egret	RM
14	Ciconiformes Ciconidae	<i>Anastomusosciatans</i>	Asian Open Bill Stork	R
15	Ciconiformes Ciconidae	<i>Mycterialeucocephala</i>	Painted Stork	WV
16	Ciconiformes Threskiornithidae	<i>Pseudibispapillosa</i>	Black Ibis	RM
17	Ciconiformes Threskiornithidae	<i>Pseudibispapillosa</i>	Black headed Ibis	RM
18	Ciconiformes Ardeidae	<i>Aredeolagrayii</i>	Indian Pond Heron	R
19	Columbiformes Columbidae	<i>Streptopeliachinensis</i>	Spotted Dove	R
20	Coraciformes Alcedinidae	<i>Halyconsmyrnesis</i>	White Breasted Kingfisher	R
21	Coraciformes Alcedinidae	<i>Alcedoatthis</i>	Small Blue Kingfisher	RM
22	Coraciformes Coraciidae	<i>Coraciasbenghalensis</i>	Indian Roller	RM
23	Coraciformes Meropidae	<i>Meropsorientalis</i>	Small Green Bee Eater	R
24	Coraciformes Upupidae	<i>Upupaepops</i>	Common Hoopoe	R
25	Falconiformes Anatidae	<i>Milvusmigrans</i>	Black Kite	R
26	Galliformes Gruidae	<i>Amauromisphoenicurus</i>	White-Breasted Water Hen	R
27	Galliformes Gruidae	<i>Porphyrioporphyrio</i>	Purple Swamphea	R
28	Galliformes Gruidae	<i>Fulicaatra</i>	Common Coot	RM
29	Passeriformes Necatarinidae	<i>Cinnyrisasiaticus</i>	Purple Sunbird	R

Sr. No.	Order/Family	Scientific name	Common name	Habit
30	Passeriformes Passeridae	<i>Hydrophasianuschirurgus</i>	Pheasant Tailed Jacana	R
31	Passeriformes Muscicapidae	<i>Saxicolodiesfulicatus</i>	Indian Robin	R
32	Passeriformes Sturnidae	<i>Acridotherestrictis</i>	Common Myna	R
33	Passeriformes Pycnonotidae	<i>Pycnonotuscafer</i>	Red Vented Bulbul	R
34	Passeriformes Dicrudidae	<i>Dicrurusmacrocerus</i>	Black Drongo	R
35	Passeriformes Sturnidae	<i>Sturniapagodarum</i>	Brahminy Starling	R
36	Passeriformes Hirudinidae	<i>Hirundorustica</i>	Common Swallow	R
37	Passeriformes Corvidae	<i>Corvusmacrorhynchos</i>	Jungal Crow	R
38	Passeriformes Motacillinae	<i>Motacilla alba</i>	White Wagtail	WV
39	Passeriformes Motacillinae	<i>Motacillacinerea</i>	Grey Wagtail	WV
40	Passeriformes Sturnidae	<i>Sturnus contra</i>	Pied Myna	R
41	Passeriformes Corvidae	<i>Corvussplendens</i>	House Crow	R
42	Pelecaniformes Phalacrocoracidae	<i>Phalacrocoraxniger</i>	Little Cormorant	R
43	Pelecaniformes Phalacrocoracidae	<i>Phalacrocoraxfuscicollis</i>	Indian Cormorant	R
44	Psittaciformes Cuculidae	<i>Eudynamysscolopaceus</i>	Asian Koel	R
45	Psittaciformes Cuculidae	<i>Centropussinensis</i>	Greater Coucul	R

R= Residential

WV=Winter Visitor

RM= Residential Migratory

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