



Research Paper

Avifaunal diversity of moharli lake near Chandrapur, Maharashtra, India

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Abstract: There are numerous species of bird found in a wide variety of habitats all around the world. Birds are one of the most thriving groups of animals on the planet as they generally have their habitat to themselves. Birds are essential animal group of an ecosystem and maintain a trophic level. Therefore, detail study on avifauna and their ecology is important to protect them. The present investigation was carried out to document the avifauna in and around the Moharli lake located 25 km North to Chandrapur of Maharashtra State and the study is from January 2012 to December 2012 in which 95 species of birds were recorded of 13 different orders and 37 families during the study. Among the recorded species 48 were resident, 06 were resident migrant and one is resident migrant common.

Keywords: Avifauna, Moharli lake, avifaunal diversity.

INTRODUCTION

Diversity of avifauna is one of the most important ecological indicators to evaluate the quality of habitats. Now-a-days,

avifaunal diversity has been decreasing due to the destruction of natural habitats and human disturbances. Random destruction of natural habitats by cutting nesting trees and foraging plants for commercial use of woods and lands are the main factor responsible for narrow down in avian foraging habitat and their nesting sites. Thus, many species of birds may be forced to inhabit in the urban areas and constrain them to breed there.

Birds are found throughout the world, at approximately all altitudes and in nearly every climate. They are a natural way to control pests in gardens, on farms, and other places. They aid in the pollinization of plants. By landing on a plant or sucking the nectar from a flower, and then moving on to the next, a bird does the job usually associated with bees. Birds also have a good system for spreading seeds. They eat berries and then when they "dispose of" their waste, the berry seeds are disposed along with it. Bird feces provide good fertilization for the seeds with which they are dropped, giving seeds very good conditions with which to grow.

The Moharli lake is the principal freshwater bodies situated east side of Moharli village and the area of this lake is spread over near about 290 acre, 25 km away from the Chandrapur city, located in the Chandrapur district of Maharashtra state, India. It is situated at about 712 m. above mean sea level and is at 79°20'36.55" E longitude and 20°11'15.39" N latitude. The water of this lake is primary used for washing, bathing and fishing activities.

During the last few decades considerable studies on avifauna diversity from different freshwater bodies of India have been carried out by researchers like, Osmatston (1922), Singh (1929), Kannon (1980), Jhingram (1988), Ghazi (1962), Mujumdar (1984), Newton *et al.*, (1986), Ghosal (1995), Kulkarni *et al.*, (2005), Yardi *et al.*, (2004) Wadatkar and Kasambe (2002) and Dubey 2014. However very little information is available about avifauna of centre India. This work has therefore undertaken of document the avifauna of lake located in Moharli village near the Chandrapur city which lies in the central region of the country.

The lake harbor a large number of fauna which attract the birds shown that the entire lake basin is highly productive and conductive to all kinds of birds. The Moharli lake is harbors a number of aquatic weeds in the submerged as well as floating state on which thrive a large number of organisms. Due to abundant food available throughout the year in Moharli lake in the form of aquatic crustaceans, insects, molluscs etc. the lake always attracts a large number of birds throughout year.

MATERIAL AND METHODS

The present work was carried out from January 2012 to December 2014. The observation were carried out by using a field binocular (7x25x magnification) during the

morning (6 to 10 AM) and in the evening (4 to 6 PM) and identification of species was done with the help of standard literature of Woodcock (1980), Ali and Ripley (1995) and Grimmet *et al.*, (1999).

RESULT AND DISCUSSION

Results of this study are valuable, as they serve as baseline information in the development of measures and strategies that will safeguard the wetland from destruction. Likewise, results of this study will also enable us to be aware of the ecological condition of our environment, as birds are important ecological indicators responsive to changes in the environment.

During the present investigation, a total of 95 birds species belonging to 13 different orders and 37 families were recorded from the Moharli lake. Among the recorded species of birds, 21 species belongs to Passeriformes, 8 species belongs to Charadriiformes, 6 species belongs to Ciconiformes, 6 species belongs to Coraciiformes, 3 species belongs to Columbiformes and Galliformes, 2 species belongs to Anseriformes and one species belongs to Podicipediformes, Pelecaniformes, Apodiformes, Cuculiformes, Piciformes and Pelecaniformes each.

Among the recorded species of birds 7 species belongs to Scolopacidae families, 4 species belongs to Columbidae and Ardeidae families and 3 species belongs to Gruidae family, 2 species belongs to Sturnidae, Muscicapidae, Anatidae, Psittacidae, Cuculidae, Alcedinidae and Muscicapidae families and 1 species belongs to Corvidae, Meropidae, Coraciidae, Upupidae, Alcedinidae, Lanidae, Dicrodidae, Passeridae, Hirudinidae, Laniidae, Sylviidae, Campephagidae, Phalacrocoracidae, Passeridae, Motacillidae, Picidae, Cuculidae, Apodidae, Podicipedidae,

Threskiornithidae, Pycnonotidae, Phalacrocoracidae, Recurvirostridae and Charadriidae families each. Out of total 55 species, 47 were resident, 06 were resident migrant and 1 is resident migrant common. Depending on different scientific classifications, as of today there are over 9000 birds species and more than 1250 in India, with almost 150 having become extinct after the arrival of Humans. 25 to 30 avian orders are recognized depending on the taxonomists. According to Osmaston (1922) studied 135 species of birds from Pachmari (M. P.), Mujumdar (1984) studied the collection from Baster district (M. P.), 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.), Wadtkar and Kasambe (2002) reported 171 species of birds at Pohara-Malkhed forest reservoir of Amravati district (M. S.), Yardi *et al.*, (2004) reported 64 species of birds in Salim Ali lake, Aurangabad (M. S.), Kedar and Patil (2005) recorded 60 birds species from Rishi lake Karanja (Lad) of Washim district (M. S.), Pawar *et al.*, (2005) reported 74 species of birds in and around Yedshi lake, Mangrulpir, Washim district (M. S.), Kulkarni *et al.*, (2005) reported 151 species of birds in and around Nanded city (M. S.), Kulkarni and Kanwate (2006) reported 18 species of birds in Dongarkhed irrigation of Hingoli district. (M. S.), Kulkarni *et al.*, (2006) reported 93 species of birds from Shikhachwadi reservoir of Nanded district (M. S.), Kedar *et al.*, (2008) recorded 74 species of birds in Rishi and Zedshi lake of Washim district (M. S.), Kanwate and Jadhao (2010) recorded 10 species of birds in Bhokar tahsil of Nanded district (M. S.), reported 62 species of birds of Jaldhara forest of Kinwat of Nanded district (M. S.), Thakor *et al.*, (2010) reported 104 species of birds from two reservoirs of Khed district,

Gujrat, India. Kurhade (2010) reported 208 species of birds in Jaikwadi reservoirs near Ahmadnagar (M. S.), Narwade and Fartade (2011) recorded 165 species of birds of Osmanabad district (M. S.), Rasal and Chavan (2011) reported 61 species of birds in local ecosystem of Aurangabad (M. S.), Kukade *et al.*, (2011) recorded 68 birds species of Chhatri lake of Amravati district (M. S.), Joshi and Shrivastava (2012) reported 64 species of birds in Tawa reservoir of Hoshangabad district (M. P.), Hippargi *et al.*, (2012) recorded 65 species of birds in a highly fragmented grassland patch near Solapur, Maharashtra and Patel *et al.*, (2012) recorded 70 species of birds of Mahi canal site of Nadiad (Gujrat state), Harney, *et al.*, (2013) recorded 37 species of birds from Kanhala pond with preference to feeding habits of Bhadrawati, District Chandrapur (M. S.) and Natarajan Mariappan *et al.*, (2013) recorded 92 species of birds from Different Habitats of Agricultural Ecosystem of Pollachi (T. N.). Dubey, 2014 reported 73 Birds species belonging to twenty eight families were reported in and around Chhatapur District (M. P.)

The birds present in and around the Moharli lake are affected by many factors such as organic pollution, distribution by human activities and lack of maintenance of lake and construction activities, yet the avifauna of Moharli lake is diverse. Keeping in view the varied avifauna recorded, steps should be taken to do proper maintenance and beautification of the lakes.

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Table: Birds species in Moharli Lake

S.N.	Order/Family	Scientific name	Common name	Habit
1.	Podicipediformes/Podicipedidae	<i>Tachybaptus ruficollis</i>	Little Grebe	R
2.	Ciconiformes/Ardeidae	<i>Ardea cinerea</i>	Grey Heron	RM
3.	Ciconiformes/Ardeidae	<i>Ardeola grayii</i>	Indian Pond Heron	R
4.	Ciconiformes/Ardeidae	<i>Bubulcus ibis</i>	Cattle Egret	RM
5.	Ciconiformes/Ardeidae	<i>Casmerodius albus</i>	Large Egret	RM
6.	Ciconiformes/Ciconidae	<i>Anastomus osciatans</i>	Asian Open Bill Stork	R

7.	Ciconiformes/Ciconidae	<i>Ephippiorhyrchos asiaticus</i>	Black Necked Stork	M
8.	Ciconiformes/Threskiornithidae	<i>Pseudibis papillosa</i>	Black Ibis	RM
9.	Ciconiformes/Scolopacidae	Gallinago gallinago	Common Snipe	R
10.	Ciconiformes/Ardeidae	Mesophoyx intermedia	Intermediate Egret	R
11.	Ciconiformes/Ciconiidae	Mycteria leucocephala	Painted Stork	M
12.	Ciconiformes/Ardeidae	Egretta garzetta	Little Egret	R
13.	Anciriformes/Anatidae	<i>Anas poecilorhyncha</i>	Spot Bill Duck	RM
14.	Anciriformes/Anatidae	Nettapus coromandelianus	Cotton Teal	RM
15.	Falconiformes/Anatidae	<i>Elanus caeruleus</i>	Black Winged Kite	R
16.	Falconiformes/Anatidae	<i>Milvus migrans</i>	Black Kite	R
17.	Galliformes/Phasinidae	<i>Fracolinus pondicerianus</i>	Grey Francolin	R
18.	Galliformes/Gruidae	<i>Amauromis phoenicurus</i>	White-Breasted Water Hen	R
19.	Galliformes/Gruidae	<i>Porphyrio porphyrio</i>	Purple Moorhen	R
20.	Galliformes/Gruidae	<i>Fulica atra</i>	Common Coot	RM
21.	Pelecaniformes/Phalacrocoracidae	<i>Phalacrocorax niger</i>	Little Cormorant	RM
22.	Charadriiformes/Recurvirostridae	<i>Himantopus himantopus</i>	Black Winged Stilt	R
23.	Charadriiformes/Charadriidae	<i>Vanellus indicus</i>	Red wattled Lapwing	R
24.	Charadriiformes/Scolopacidae	<i>Actitis hypoleucos</i>	Common Sandpiper	RM
25.	Charadriiformes/Glareolidae	Cursorius coromandelicus	Indian Courser	R
26.	Charadriiformes/Scolopacidae	Tringa nebularia	Common Greenshank	RM

27.	Charadriiformes/Scolopacidae	<i>Tringa ochropus</i>	Green Sandpiper	RM
28.	Charadriiformes/Scolopacidae	<i>Tringa glareola</i>	Wood Sandpiper	R
29.	Charadriiformes/Scolopacidae	<i>Tringa totanus</i>	Common/Redshank	RM
30.	Charadriiformes/Scolopacidae	<i>Limosa limosa</i>	Black Tailed Godwit	RM
31.	Charadriiformes/Charadriidae	<i>Charadrius dubius</i>	Little Ringed Plover	R
32.	Charadriiformes/Scolopacidae	<i>Philomachus pugnax</i>	Ruff	R
33.	Charadriiformes/Scolopacidae	<i>Gallinago stenura</i>	Pintail Snipe	
34.	Columbiformes/Columbidae	<i>Stigmatopelia senegalensis</i>	Little Brown Dove	R
35.	Columbiformes/Columbidae	<i>Treron phoenicopterus</i>	Yellow Footed Green Pigeon	R
36.	Columbiformes/Columbidae	<i>Columba livia</i>	Rock (Blue) Pigeon	
37.	Columbiformes/Columbidae	<i>Streptopelia decaocto</i>	Eurasian Collared (Indian Ring) Dove	R
38.	Columbiformes/Columbidae	<i>Streptopelia chinensis</i>	Spotted Dove	R
39.	Psittaciformes/Psittacidae	<i>Psittacula krameri</i>	Rose Ringed Parakeet	R
40.	Psittaciformes/Cuculidae	<i>Eudynamis scolopaceus</i>	Asian Koel	R
41.	Psittaciformes/Cuculidae	<i>Centropus sinensis</i>	Greater Coucul	R
42.	Psittaciformes/Psittacidae	<i>Psittacula cyanocephala</i>	Plum Headed Parakeet	R
43.	Coraciiformes/Alcedinidae	<i>Alcedo atthis</i>	Small Blue Kingfisher	RM
44.	Coraciiformes/Alcedinidae	<i>Halycon smyrnesis</i>	White Breasted Kingfisher	R

45.	Coraciformes /Meropidae	<i>Merops orientalis</i>	Small Green Bee Eater	R
46.	Coraciformes /Coraciidae	<i>Coracias benghalensis</i>	Indian Roller	RM
47.	Coraciformes /Upupidae	<i>Upupa epops</i>	Common Hoopoe	RM
48.	Coraciformes/Bucerotidae	<i>Ocyeros birostris</i>	Indian Grey Hornbill	R
49.	Coraciformes/Alcedinidae	<i>Ceryle rudis</i>	Pied Kingfisher	R
50.	Passeriformes/Lanidae	<i>Lanius schach</i>	Rufousbacked Shrike	R
51.	Passeriformes/Dicruididae	<i>Dicrurus macrocerus</i>	Black Drongo	R
52.	Passeriformes/Sturnidae	<i>Acridotheres tristis</i>	Common Myna	R
53.	Passeriformes/Sturnidae	<i>Sturnia pagodarum</i>	Brahminy Starling	R
54.	Passeriformes/Pycnonotidae	<i>Pycnonotus cafer</i>	Red Vented Bulbul	R
55.	Passeriformes/Muscicapidae	<i>Turdoides striat</i>	Jungal Babbler	R
56.	Passeriformes/Muscicapidae	<i>Saxicolodius fulicatus</i>	Indian Robin	R
57.	Passeriformes/Nectarinidae	<i>Cinnyris asiaticus</i>	Purple Sunbird	R
58.	Passeriformes/Passeridae	<i>Hydrophasianus chirurgus</i>	Pheasant Tailed Jacana	R
59.	Passeriformes/Hirudinidae	<i>Hirundo rustica</i>	Common Swallow	RMC
60.	Passeriformes/Laniidae	<i>Lanius vittatus</i>	Bay Backed Shrike	
61.	Passeriformes/Sturnidae	<i>Sturnus pagodarum</i>	Brahminy Myna	R
62.	Passeriformes/Sturnidae	<i>Sturnus contra</i>	Pied Myna	R
63.	Passeriformes/Corvidae	<i>Corvus splendens</i>	House Crow	R
64.	Passeriformes/Corvidae	<i>Corvus macrorhynchos</i>	Jungal Crow	R
65.	Passeriformes/Sylviidae	<i>Chrysomma sinense</i>	Yellow Eyed Babbler	

66.	Passeriformes/Muscicapidae	Culicicapa ceylonensis	Grey Headed Canary Flycatcher	
67.	Passeriformes/Muscicapidae	Terpsiphone paradisi	Asian Paradise Flycatcher	
68.	Passeriformes/Muscicapidae	Copsychus saularis	Oriental Magpie Robin	R
69.	Passeriformes/Campephagidae	Tephrodornis pondicerianus	Common Woodshrike	R
70.	Passeriformes/Muscicapidae	Saxicola caprata	Pied Bushchat	R
71.	Passeriformes/Cisticolidae	Prinia socialis	Ashy Prinia	R
72.	Passeriformes/Campephagidae	Pericrocotus cinnaeus	Small Minivet	R
73.	Passeriformes/Zosteropidae	Zosterops palpebrosus	Oriental White Eye	R
74.	Passeriformes/Cisticolidae	Orthotomus sutorus	Common Tailorbird	R
75.	Passeriformes/Passeridae	Anthus rufulus	Paddy field Pipit	R
76.	Passeriformes/Alaudidae	Ereopterix grisea	Ashy Crowned Sparrow Lark	R
77.	Passeriformes/Motacillidae	Motacill maderaspatensis	White Browed Wagtail	R
78.	Passeriformes/Estrildidae	Amandava amandava	Red Aavadavat	R
79.	Passeriformes/Estrildidae	Lonchura malabarica	Indian Silverbill	R
80.	Galconiformes/Phasianidae	Pavo cristatus	Indian Peafowl	R
81.	Piciformes/Picidae	Dendrocopus mahrattensis	Yellow-Crowned Woodpecker	
82.	Piciformes/Picidae	Dinopium	Black Rumped	

		benghalense	Flameback	
83.	Cuculiformes/Cuculidae	Clamator jacobinus	Pied Cuckoo	R
84.	Cuculiformes /Cuculidae	Cuculus canorus	Common Cuckoo	R
85.	Cuculiformes /Cuculidae	Centropus parroti	Southern Coucal	
86.	Strigiformes Strigidae	Otus bakkamoena	Collared Scops Owl	R
87.	Strigiformes Strigidae	Athene brama	Spotted Owlet	R
88.	Apodiformes/Apodiae	Apus affinis	House swift	R
89.	Caprimulgiformes /Strigidae	Caprimulgus asiaticus	Indian Nightjar	R
90.	Pelecaniformes/Phalacrocoracidae	Phalacrocorax fuscicollis	Indian Cormorant	R
91.	Motacillidae/Oriolidae	Oriolus oriolus	Eurasian Golden Oriole	R
92.	Passeridae/Corvidae	Dendrocitta vagabunda	Rufous (Indian) Treepie	R
93.	Passeridae/Passerinae	Passer domesticus	House Sparrow	R
94.	Passeridae/Ploceinae	Ploceus philippinus	Baya Weaver	R
95.	Rhipiduridae /Rhipiduridae	Rhipidura aureola	White Browed Fantail	