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DIVERSITY OF AVIFAUNA IN AND AROUND CHALBARDI (RAI) LAKE NEAR BHADRAWATI, DISTRICT CHANDRAPUR (M.S.), INDIA

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Abstract

The present investigation was carried out to document the avifauna in and around the Chalbardi (Rai) lake near Bhadrawati town located in the Chandrapur district of Maharashtra State from Oct. 2012 to Sep. 2013 in which 65 species of birds were recorded of 15 different orders and 40 families during the study. Among the recorded species 54 were residential, 10 were residential migratory and 1 is residential migratory common.

Key words: Avifauna, Chalbardi (Rai) lake, avifaunal diversity.

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INTRODUCTION

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.

Birds serve as one of the best environmental indicators. Their presence anywhere speaks volumes of the environment as to whether all is well or there is something amiss. The presence of birds also shows the biological importance or going technical, the biodiversity significance of an area.

The Chalbardi lake is the principal local freshwater bodies situated east side, 9 km away from the Bhadrawati city, located in the Chandrapur district of Maharashtra state, India. It is situated at about 216 m. above mean sea level and is at 79˚11'21.2" E longitude and 20˚5'33.8" N latitude. The water of this pond 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), Ali (1932), Kannon (1980), Davidar (1985), Jhingram (1988), Ghazi (1962), Mujumdar (1984), Newton *et al.*, (1986), Ghosal (1995), Kulkarni *et al.*, (2005), Yardi *et al.*, (2004) and Wadatkar and Kasambe (2002). However very little information is available about avifauna of centre India. This work has therefore undertaken of document the avifauna of water bodies located in Chalbardi (Rai) village near the town Bhadrawati 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 Chalbardi lake is harbors a number of aquatic weeds in the submerged as well as floating state on which thrive a large number of organisms. The bank of this reservoir is infested with weed *Ipomea aquatica* which provide suitable resting place for the birds. Apart from this, lakes periphery is covered with bushes and trees which provide suitable habitat for many birds.

Due to abundant food available throughout the year in Chalbardi 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 Oct. 2012 to Sep. 2013. 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 7 PM) and identification of species was done with the help of standard literature of Woodcock (1980), Ali, S. and Ripley, S.D. (1995) and Grimmet *et al.*, (1999).

RESULT AND DISCUSSION

During the present investigation, a total of 65 birds species belonging to 15 different orders and 40 families were recorded from the Chalbardi lake. Among the recorded species of birds, 22 species belongs to Passeriformes, 9 species belongs to Charadriformes, 8 species belongs to Ciconiformes, 6 species belongs to Coraciformes, 4 species belongs to Psittaciformes, Columbiformes and Galliformes, 2 species belongs to Anciriformes and one species belongs to Podicipediformes, Passeridae, Pelecaniformes, Apodiformes, Cuculiformes, Piciformes and Pelecaniformes each.

Among the recorded species of birds 7 species belongs to Scolopacidae families, 5 species belongs to Columbidae, 4 species belongs to Ardeidae and Sturnidae families and 3 species belongs to Gruidae family, 2 species belongs to Corvidae, Muscicapidae, Ciconidae, Anatidae, Psittacidae, Cuculidae, Alcedinidae and Muscicapidae families and 1 species belongs to Meropidae, Coraciidae, Upupidae, Alcedinidae, Lanidae, Dicrudidae, Passeridae, Hirudinidae, Laniidae, Sylvidae, Campephagidae, Phalcrocoracidae, Passeridae, Motacillidae, Estrildidae, Picidae, Cuculidae, Apodiae, Podicipedidae, Threskiornithidae, Scolopacidae, Pycnonotidae, Phasinidae, Phalcrocoracidae, Recurvirostridae and Charadridae families each. Out of total 65 species, 56 were resident, 08 were resident migrant and 1 is resident migrant common.

Similar findings were recorded by Osmaston (1922) studied 135 species of birds from Pachmari (M.P.), Ali (1939, 1940) published a list of 278 species of birds from central India, 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.), Wadatkar 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.), Kulkarni and Kanwate (2010) 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.), Harney, *et al.,* (2012) recorded 37 species of birds from Kanhala pond of Bhadrawati, District Chandrapur (M.S.), Joshi and K. 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.)

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

Table 1 Birds species in Chalbardi Lake

Sr. No.	Order/Family	Scientific name	Common name	Habit
1.	Podicipediformes Podicipedidae	*Tachybaptus ruficollius*	Little Grebe	R
2.	Ciconiformes Ardeidae	*Aredeola grayii*	Indian Pond Heron	R
3.	Ciconiformes Ardeidae	*Bubulcus ibis*	Cattle Egret	R
4.	Ciconiformes Ardeidae	*Casmerodius albus*	Large Egret	RM
5.	Ciconiformes Ciconidae	*Anastomus osciatans*	Asian Open Bill Stork	RM
6.	Ciconiformes Threskiornithidae	*Pseudibis papillosa*	Black Ibis	RM
7.	Ciconiformes Scolopacidae	*Gallinage gallinago*	Common Snipe	R
8.	Ciconiformes Ciconiidae	*Mycteria leucocephala*	Painted Stork	RM
9.	Ciconiformes Ardeidae	*Egretta garzetta*	Little Egret	R
10.	Anciriformes Anatidae	*Anas poecilorhyncha*	Spot Bill Duck	RM
11.	Anciriformes Anatidae	*Nettapus coromandelianus*	Cotton Teal	R
12.	Galliformes Phasinidae	*Fracolinus pondicerianus*	Grey Francolin	R
13.	Galliformes Gruidae	*Amauromis phoenicurus*	White-Breasted Water Hen	R
14.	Galliformes Gruidae	*Porphyrio porphyrio*	Purple Moorhen	R
15.	Galliformes Gruidae	*Fulica atra*	Common Coot	RM
16.	Pelecaniformes Phalcrocoracidae	*Phalacrocorax niger*	Little Cormorant	RM
17.	Charadriformes Recurvirostridae	*Himantopus himantopus*	Black Winged Stilt	R
18.	Charadriformes Charadridae	*Vanellus indicus*	Red wattled Lapwing	R
19.	Charadriformes Scolopacidae	*Actitis hypoleucos*	Common Sandpiper	RM
20.	Charadriformes Scolopacidae	*Tringa nebularia*	Common Greenshank	R

Sr. No.	Order/Family	Scientific name	Common name	Habit
21.	Charadriformes Scolopacidae	*Tringa ochropus*	Green Sandpiper	R
22.	Charadriiformes Scolopacidae	*Tringa glareola*	Wood Sandpiper	R
23.	Charadriformes Scolopacidae	*Tringa totanus*	Common Redshank	R
24.	Charadriformes Scolopacidae	*Limosa limosa*	Black Tailed Godwit	R
25.	Charadriformes Scolopacidae	*Philomachus pugnax*	Ruff	R
26.	Columbiformes Columbidae	*Stigmatopelia senegalensis*	Little Brown Dove	R
27.	Columbiformes Columbidae	*Treron phoenicopterus*	Yellow Footed Green Pigeon	R
28.	Columbiformes Columbidae	*Columba livia*	Rock (Blue) Pigeon	R
29.	Columbiformes Columbidae	*Streptopelia chinensis*	Spotted Dove	R
30.	Psittaciformes Psittacidae	*Psittacula krameri*	Rose Ringed Parakeet	R
31.	Psittaciformes Cuculidae	*Eudynamys scolopaceus*	Asian Koel	R
32.	Psittaciformes Cuculidae	*Centropus sinensis*	Greater Coucul	R
33.	Psittaciformes Psittacidae	*Psittacula cyanocephala*	Plum Headed Parakeet	R
34.	Coraciformes Alcedinidae	*Alcedo atthis*	Small Blue Kingfisher	R
35.	Coraciformes Alcedinidae	*Halycon smyrnesis*	White Breasted Kingfisher	R
36.	Coraciformes Meropidae	*Merops orientalis*	Small Green Bee Eater	R
37.	Coraciformes Coraciidae	*Coracias benghalensis*	Indian Roller	R
38.	Coraciformes Upupidae	*Upupa epops*	Common Hoopoe	R
39.	Coracifomes Alcedinidae	*Ceryle rudis*	Pied Kingfisher	R
40.	Passeriformes Lanidae	*Lanius schach*	Rufousbacked Shrike	R
41.	Passeriformes Dicrudidae	*Dicrurus macrocercus*	Black Drongo	R

Sr. No.	Order/Family	Scientific name	Common name	Habit
42.	Passeriformes Sturnidae	*Acridotheres tristis*	Common Myna	R
43.	Passeriformes Sturnidae	*Sturnia pagodarum*	Brahminy Starling	R
44.	Passeriformes Pycnonotidae	*Pycnonotus cafer*	Red Vented Bulbul	R
45.	Passeriformes Muscicapidae	*Turdoides striat*	Jungal Babbler	R
46.	Passeriformes Muscicapidae	*Saxicolodies fulicatus*	Indian Robin	R
47.	Passeriformes Passeridae	*Hydrophasianus chirurgus*	Pheasant Tailed Jacana	R
48.	Passeriformes Hirudinidae	*Hirundo rustica*	Common Swallow	RMC
49.	Passeriformes Laniidae	*Lanius vittatus*	Bay Backed Shrike	R
50.	Passeriformes Sturnidae	*Sturnus pagodarum*	Brahminy Myna	R
51.	Passeriformes Sturnidae	*Sturnus contra*	Pied Myna	R
52.	Passeriformes Corvidae	*Corvus splendens*	House Crow	R
53.	Passeriformes Corvidae	*Corvus macrorhynchos*	Jungal Crow	R
54.	Passeriformes Sylvidae	*Chrysomma sinense*	Yellow Eyed Babbler	R
55.	Passeriformes Muscicapidae	*Copsychus saularis*	Oriental Magpie Robin	R
56.	Passeriformes Campephagidae	*Tephrodornis pondicerianus*	Common Woodshrike	R
57.	Passeriformes Muscicapidae	*Saxicola caprata*	Pied Bushchat	R
58.	Passeriformes Passeridae	*Anthus rufulus*	Paddyfield Pipit	R
59.	Passeriformes Motacillidae	*Motacill maderaspatensis*	White Browed Wagtail	R
60.	Passeriformes Estrildidae	*Amandava amandava*	Red Aavadavat	R
61.	Piciformes Picidae	*Dendrocopus mahrattensis*	Yellow-Crowned Woodpecker	R
62.	Cuculiformes Cuculidae	*Cuculus canorus*	Common Cuckoo	R

Sr. No.	Order/Family	Scientific name	Common name	Habit
63.	Apodiformes Apodiae	*Apus affinis*	House swift	R
64.	Pelecaniformes Phalcrocoracidae	*Phalacrocorax fusicollis*	Indian Cormorant	R
65.	Passeridae Corvidae	*Dendrocitta vagabunda*	Rufous (Indian) Treepie	R

R = Resident M = Migrant
RM = Resident Migratory RMC = Resident Migrant Common

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