RESEARCH ARTICLE

Avifaunal diversity of Ghotnimbala lake near Bhadrawati, 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 (the skies) 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 Ghotnimbala lake near Bhadrawati town located in the Chandrapur district of Maharashtra State from October 2012 to Septmebr 2013 in which 55 species of birds were recorded of 13different orders and 37 families during the study. Among the recorded species 48 were resident, 06 were resident migrant and 1 is resident migrant common.

Key words- Avifauna, Ghotnimbala 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. Birds control pests in gardens, on farms, and aid in the pollinization of plants.

The Ghotnimbala lake is the principal local freshwater bodies situated east side and the area of this lake is spread over 60 acre, 7 km away from the Bhadrawati city, located in the Chandrapur district of Maharashtra state, India. It is situated at about 210 m. above mean sea level and is at 79°10'19.15" E longitude and 20°5'30.06" 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, 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 Ghotnimbala 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 Ghotnimbala 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 Ghotnimbala lake in the form of aquatic crustaceans, insects, molluscs etc. the lake always attracts a large number of birds throughout year.

MATERIALS 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. and Ripley, (1995); Grimmet *et al.,* (1999).

RESULTS 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 55 birds species belonging to 13 different orders and 37 families were recorded from the Ghotnimbala lake. Among the recorded species of birds, 21 species belongs to Passeriformes, 8 species belongs to Charadriformes, 6 species belongs to Ciconiformes, 6 species belongs to Coraciformes, 3 species belongs to Columbiformes and Galliformes, 2 species belongs to Anciriformes 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, Dicrudidae, Passeridae, Hirudinidae, Laniidae, Sylvidae, Campephagidae, Phalcrocoracidae, Passeridae, Motacillidae, Picidae, Cuculidae, Apodiae, Podicipedidae, Threskiornithidae, Pycnonotidae, Phalcrocoracidae, Recurvirostridae and Charadridae families each. Out of total 55 species, 48 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 (MP), Ali (1939) published a list of 278 species of birds from central India, Mujumdar (1984) studied the collection from Baster district (MP), Newton *et al.* (1986) have listed the birds of Kanha Tiger Reserve (MP), Ghosal (1995) have listed the birds of Kanha Tiger Reserve (MP), Wadatkar and Kasambe (2002) reported 171 species of birds at Pohara-Malkhed forest reservoir of Amravati district (MS), Yardi *et al.,* (2004) reported 64 species of birds in Salim Ali lake, Aurangabad (MS), Kedar and Patil (2005) recorded 60 birds species from Rishi lake Karanja (Lad) of Washim district (MS), Pawar *et al.* (2005) reported 74 species of birds in and around Yedshi lake, Mangrulpir, Washim district (MS), Kulkarni *et al.* (2005) reported 151 species of birds in and around Nanded city (MS), Kedar *et al,* (2008) recorded 74 species of birds in Rishi and Zedshi lake of Washim district (MS), Kanwate and Jadhao (2010) recorded 10 species of birds in Bhokar tahsil of Nanded district (MS), Kulkarni and Kanwate (2010) reported 62 species of birds of Jaldhara forest of Kinwat of Nanded district (MS), 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 (MS), Narwade and Fartade (2011) recorded 165 species of birds of Osmanabad district (MS), Rasal and Chavan (2011) reported 61 species of birds in local ecosystem of Aurangabad (MS), Kukade *et al.* (2011) recorded 68 birds species of Chhatri lake of Amravati district (MS), Harney, *et al,* (2012) recorded 37 species of birds from Kanhala pond of Bhadrawati, District Chandrapur (MS), Joshi and Shrivastava (2012) reported 64 species of birds in Tawa reservoir of Hoshangabad district (MP).

Table 1: Birds species in Ghotnimbala Lake

Sr. No.	Order/Family	Scientific Name	Common Name	Habit
1.	Ciconiformes Ardeidae	*Aredeola grayii*	Indian Pond Heron	R
2.	Ciconiformes Ardeidae	*Casmerodius albus*	Large Egret	RM
3.	Podicipediformes Podicipedidae	*Tachybaptus ruficollius*	Little Grebe	R
4.	Ciconiformes Ardeidae	*Bubulcus ibis*	Cattle Egret	R
5.	Ciconiformes Scolopacidae	Gallinage gallinago	Common Snipe	R
6.	Ciconiformes Threskiornithidae	*Pseudibis papillosa*	Black Ibis	RM
7.	Ciconiformes Ardeidae	Egretta garzetta	Little Egret	R
8.	Anciriformes Anatidae	Nettapus coromandelianus	Cotton Teal	R
9.	Anciriformes Anatidae	*Anas poecilorhyncha*	Spot Bill Duck	RM
10.	Galliformes Gruidae	*Amauromis phoenicurus*	White-Breasted Water Hen	R
11.	Galliformes Gruidae	*Porphyrio porphyrio*	Purple Moorhen	R
12.	Galliformes Gruidae	*Fulica atra*	Common Coot	RM
13.	Pelecaniformes Phalcrocoracidae	*Phalacrocorax niger*	Little Cormorant	RM
14.	Charadriformes Recurvirostridae	*Himantopus himantopus*	Black Winged Stilt	R
15.	Charadriformes Scolopacidae	*Actitis hypoleucos*	Common Sandpiper	RM
16.	Charadriformes Scolopacidae	Tringa nebularia	Common Greenshank	R
17.	Charadriformes Scolopacidae	Tringa ochropus	Green Sandpiper	R
18.	Charadriformes Charadridae	*Vanellus indicus*	Red wattled Lapwing	R
19.	Charadriformes Scolopacidae	Tringa totanus	Common Redshank	R
20.	Charadriformes Scolopacidae	Limosa limosa	Black Tailed Godwit	R
21.	Charadriformes Scolopacidae	Philomachus pugnax	Ruff	R
22.	Columbiformes Columbidae	*Stigmatopelia senegalensis*	Little Brown Dove	R
23.	Coraciformes Coraciidae	*Coracias benghalensis*	Indian Roller	R
24.	Columbiformes Columbidae	Columba livia	Rock (Blue) Pigeon	R
25.	Columbiformes Columbidae	Streptopelia chinensis	Spotted Dove	R
26.	Psittaciformes Psittacidae	*Psittacula krameri*	Rose Ringed Parakeet	R
27.	Psittaciformes Cuculidae	*Eudynamys scolopaceus*	Asian Koel	R
28.	Psittaciformes Cuculidae	*Centropus sinensis*	Greater Coucul	R
29.	Psittaciformes Psittacidae	Psittacula cyanocephala	Plum Headed Parakeet	R
30.	Coraciformes Alcedinidae	*Alcedo atthis*	Small Blue Kingfisher	R
31.	Coraciformes Alcedinidae	*Halycon smyrnesis*	White Breasted Kingfisher	R
32.	Coraciformes Meropidae	*Merops orientalis*	Small Green Bee Eater	R
33.	Coraciformes Upupidae	*Upupa epops*	Common Hoopoe	R
34.	Coracifomes Alcedinidae	Ceryle rudis	Pied Kingfisher	R
35.	Passeriformes Lanidae	*Lanius schach*	Rufousbacked Shrike	R
36.	Passeriformes Dicrudidae	*Dicrurus macrocercus*	Black Drongo	R
37.	Passeriformes Sturnidae	*Acridotheres tristis*	Common Myna	R
38.	Passeriformes Muscicapidae	*Saxicolodies fulicatus*	Indian Robin	R
39.	Passeriformes Pycnonotidae	*Pycnonotus cafer*	Red Vented Bulbul	R
40.	Passeriformes Muscicapidae	*Turdoides striat*	Jungal Babbler	R

Sr. No.	Order/Family	Scientific Name	Common Name	Habit
41.	Passeriformes Passeridae	*Hydrophasianus chirurgus*	Pheasant Tailed Jacana	R
42.	Passeriformes Hirudinidae	*Hirundo rustica*	Common Swallow	RMC
43.	Passeriformes Laniidae	Lanius vittatus	Bay Backed Shrike	R
44.	Passeriformes Corvidae	Corvus splendens	House Crow	R
45.	Passeriformes Sturnidae	Sturnus contra	Pied Myna	R
46.	Passeriformes Corvidae	Corvus macrorhynchos	Jungal Crow	R
47.	Passeriformes Sylvidae	Chrysomma sinense	Yellow Eyed Babbler	R
48.	Passeriformes Muscicapidae	Saxicola caprata	Pied Bushchat	R
49.	Passeriformes Campephagidae	Tephrodornis pondicerianus	Common Woodshrike	R
50.	Passeriformes Passeridae	Anthus rufulus	Paddyfield Pipit	R
51.	Passeriformes Motacillidae	Motacill maderaspatensis	White Browed Wagtail	R
52.	Piciformes Picidae	Dendrocopus mahrattensis	Yellow-Crowned Woodpecker	R
53.	Cuculiformes Cuculidae	Cuculus canorus	Common Cuckoo	R
54.	Apodiformes Apodiae	Apus affinis	House swift	R
55.	Pelecaniformes Phalcrocoracidae	Phalacrocorax fusicollis	Indian Cormorant	R

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), Harney, *et al.* (2013) recorded 37 species of birds from Kanhala pond with preference to feeding habits of Bhadrawati, District Chandrapur (MS) and Natarajan Mariappan *et al*. (2013) recorded 92 species of birds from Different Habitats of Agricultural Ecosystem of Pollachi (Tamilnadu).

The birds present in and around the Ghotnimbala lake are affected by many factors such as organic pollution, distribution by human activities and lack of maintenance of lake, yet the avifauna of Ghotnimbala 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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