RESEARCH ARTICLE

Avifaunal Diversity of Malguzari Lake at Zaliya near Amgaon in Gondia district (M.S.) India

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ABSTRACT

The Malguzari Lake is located at Zaliya having rich aquatic vegetation and harbors several kinds of birds. The present study deals with the avifaunal diversity of Malguzari Lake at Zaliya near Amgaon in Gondia district of Maharashtra. The survey was conducted twice in a month from October 2014 to May 2015 during the day time depending on the light conditions. The twenty seven species were recorded belonging to 08 different orders and 11 families during the study period. Out of 27 recorded species, 13 were residents, 10 were resident migrants and 04 were migrants. The abundance status also recorded, maximum species were sighted during the winter season followed by summer season.

Keywords: Avifauna, diversity, Malguzari lake, status.

INTRODUCTION

Birds are often common denizen of the ecosystems and they have been considered as an indicator species of inhabited areas (Blair, 1999). Birds are excellent model organisms for understanding key issues in ecology, animal behaviour, evolutionary biology and conservation (Urfi, 2011). Birds, nearly everyone enjoys the beauty of their forms and coloring, the vivacity of their movement, the buoyancy of their flight and sweetness of their songs.

Birds which are ecologically dependent on wetlands are known as waterbirds. They play a significant role in human lives culturally, socially, scientifically and as a food resource (Kumar *et al.* 2003). Waterbirds are important components of most of the wetland ecosystems as they occupy several trophic levels in the food web of wetland nutrient cycles (Rajashekara and

Venkatesha, 2010). Freshwater lakes one of the important types of wetlands, play a vital role in the economics of their respective regions, especially with reference to agriculture, fishing, livestock maintenance and drinking water facilities of the adjacent areas.

The geographic location of a wetland may determine how and when birds will use it or use adjacent habitat (Manikannan, 2011). The shallow open water and marshy area supports a variety of aquatic and semi aquatic vegetation that provides an adequate food spectrum and good habitation for the living of the wetland birds (Arya *et al.* 2014). The density of avifauna at Navegaon National Park, Maharashtra was found to be maximum in winter as the count increased because of the arrival of winter migrants. Grazing of cattle is one of the reasons for the damage caused to the feeding and breeding grounds of the birds at Navegaon National Park, Maharashtra (Chinchkhede and Kedar, 2013). Local people used the wetlands for various purposes for their livelihood, fishing being most common activity. Anthropogenic factors cause the degradation of wetland ecosystem which leads to the destruction of habitat of waterbirds (Manakadan *et al.* 2011).

The waterbirds of Malguzari lake at Zaliya in Gondia district are important bioindicators of lake ecosystems which should be protected to conserve the biodiversity and environment. The present study is not carried out for only to prepare the checklist of birds, but to find out their occurrence and to create the awareness for their conservation. Therefore this work has undertaken to document the avifaunal diversity of Malguzari lake located at Zaliya near Amgaon town in the central region of India.

MATERIAL AND METHODS

Study Area

The Malguzari lake is located at Zalia (21°21'32.7" N and 80°25'31.2"E), 6.1 km away from Amgaon town in Gondia district, Maharashtra State, India (https://www.google.co.in/maps/place/Zaliya,+Maharashtra).

The Malguzari lake is the principal local freshwater body and the area of this lake is spread over 50 acre. The lake has rich potential of flora and fauna. The population of Zaliya is 1691 as per census 2011, and the water of this lake is primarily used for washing, bathing, fishing activities and for irrigation purposes.

Survey of the site

The study was conducted during October 2014 to May 2015 aims to examine the avifauna from study area. The observation of the birds was carried out by using field binocular (10×50 magnification) depending on the light conditions during the day time (Namgail *et al.* 2009). The bird population was estimated by direct count method twice in a month as described and employed by (Bibby *et al.* 2000; Urfi *et al.* 2005). After detection, specimen was photographed by camera and identified with the help of keys and methods suggested by Ali (2002), Grimmett *et al*. (2011) and Manakadan *et al.* (2011).

RESULTS AND DISCUSSION

During the present investigation, 27 species of birds were recorded belonging to 08 orders and 11 families. Among the recorded species of birds, 01 species belongs to orders podicipediformes and coraciiformes each, 02 species belongs to pelecaniformes, charadriiformes and Passeri formes each, 03 species belongs to gruiformes, 07 species belongs to anseriformes, and 09 species belongs to ciconiiformes order.

Among the recorded species of birds, 01 species belongs to families podicipedidae, jacanidae, charadriidae and coraciidae each, 02 species belongs to families phalacrocoracidae, ciconiidae, threskiornithidae and sturnidae each, 03 species belongs to family rallidae, 05 species belongs to ardeidae family, 07 species belongs to anatidae

Table 1: List of Bird species of Malguzari Lake at Zaliya

Sr. No.	Scientific Names	Common Names	Residential Status	Abundance Status
Order 1: Podicipediformes				
Family 1: Podicipedidae				
1	Tachybaptus ruficollis	Little Grebe	R	C
Order 2: Pelecaniformes				
Family 2: Phalacrocoracidae				
2	Phalacrocorax fuscicollis	Indian Shag (Indian Cormorant)	RM	U
3	Phalacrocorax niger	Little Cormorant	RM	C
Order 3: Ciconiiformes				
Family 3: Ardeidae				
4	Casmerodius albus	Large Egret (Great Egret)	RM	U
5	Mesophoyx intermedia	Median Egret (Intermediate Egret)	RM	U
6	Egretta garzetta	Little Egret	RM	C
7	Bubulcus ibis	Cattle Egret	RM	C
8	Ardeola grayii	Indian Pond Heron	R	C
Family 4: Ciconiidae				
9	Mycteria leucocephala	Painted Stork	RM	U
10	Anastomus oscitans	Asian Openbill Stork	R	U
Family 5: Threskiornithidae				
11	Pseudibis papillosa	Red-naped Ibis (Black Ibis)	R	U
12	Threskiornis melanocephalus	Oriental-white Ibis (Black-headed Ibis)	R	U
Order 4: Anseriformes				
Family 6: Anatidae				
13	Tadorna ferruginea	Ruddy Shelduck (Brahminy Shelduck)	RM	U
14	Dendrocygna javanica	Lesser Whistling Duck	R	U
15	Anas acuta	Northern Pintail	M	C
16	Anas crecca	Common Teal	M	C
17	Aythya ferina	Common Pochard	M	Ra
18	Netta rufina	Red-crested Pochard	M	A
19	Nettapus coromandelianus	Cotton Pygmy-Goose (Cotton Teal)	R	A
Order 5: Gruiformes				
Family 7: Rallidae				
20	Gallinula chloropus	Common Moorhen	RM	C
21	Fulica atra	Common Coot (Eurasian Coot)	RM	A
22	Porphyrio porphyrio	Purple Swamphen	R	C
Order 6: Charadriiformes				
Family 8: Jacanidae				
23	Metopidius indicus	Bronze-winged Jacana	R	Ra
Family 9: Charadriidae				
24	Vanellus indicus	Red-wattled Lapwing	R	C
Order 7: Coraciiformes				
Family 10: Coraciidae				
25	Coracias benghalensis	Indian Roller	R	C
Order 8: Passeriformes				
Family 11: Sturnidae				
26	Gracupica contra	Asian Pied Starling	R	C
27	Acridotheres tristis	Common Myna	R	C

Residential Status: R - Resident, RM - Resident Migrant, M - Migrant
Abundance Status: A - Abundant, C - Common, U - Uncommon, Ra – Rare

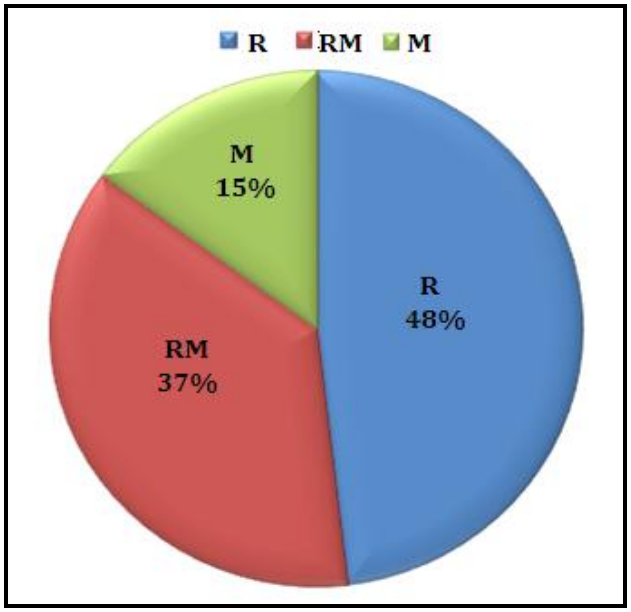

Fig. 1: Residential status of Bird species

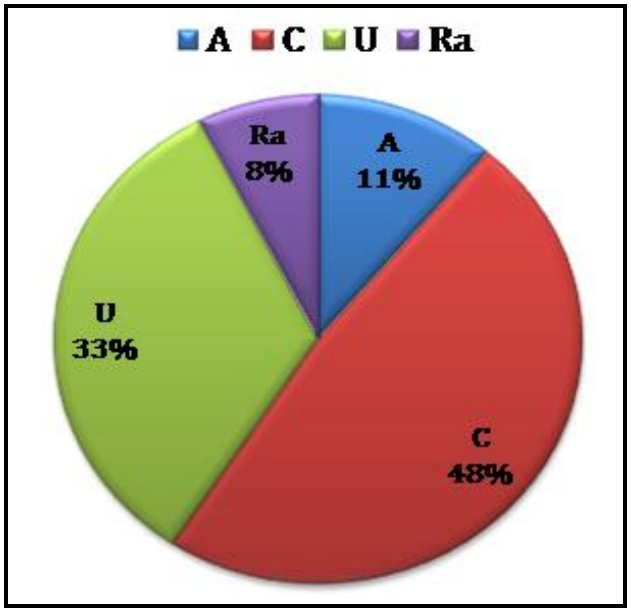

Fig. 2: Abundance status of Bird species

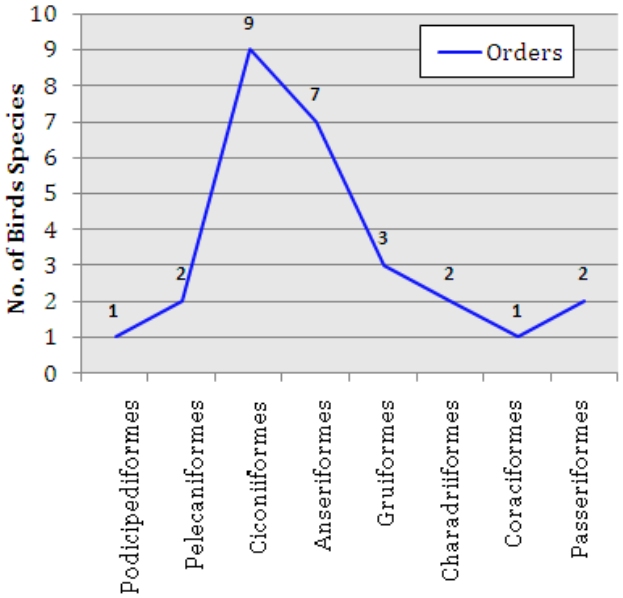

Fig. 3: Order wise status of Bird species

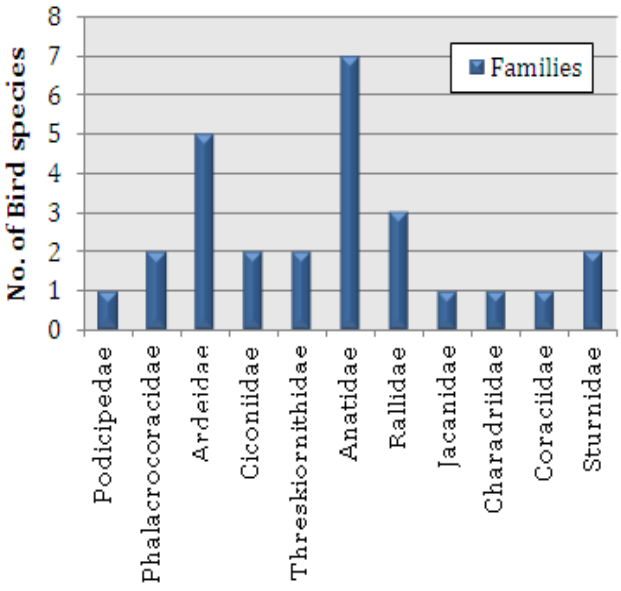

Fig.. 4: Family wise status of Bird species

Fig. 5: A view of Malguzari Lake at Zaliya

Fig. 6: Common Coot (Eurasian Coot)

Fig. 7: Little Cormorant

Fig. 8: Purple Swamphen

Fig. 9: Red-crested Pochard

family. Out of 27 species, 13 were residents (48%), 10 were resident migrants (37%) and 04 were migratory (15%) bird species. The abundance status also recorded, out of 27 species, 11% were abundant, 48% common, 33% uncommon and 08% were rare species. The maximum species were recorded during winter season followed by summer.

Many researchers from Maharashtra such as Yardi *et al.* (2004) reported 64 species from Salim Ali lake Aurangabad, Pawar *et al.* (2005) reported 74 species in and around Yedshi lake Mangrulpir of Washim district, Kulkarni *et al.* (2005) reported 151 species in and around Nanded city, Kasambe and Wadatkar (2007) recorded 78 species from Pohara-Malkhed forest reservoir of Amravati district, Kedar *et al.* (2008) recorded 74 species from two freshwater lakes of Washim district. Kanwate and Jadhao (2010) recorded 10 species in Bhokar tahsil of Nanded district, Kulkarni and Kanwate (2010) reported 62 species from Jaldhara forest of Kinwat of Nanded district, Kukade *et al.* (2011) recorded 68 species from Chhatri lake of Amravati district, Hippargi *et al.* (2012) reported 65 species in a highly fragmented grassland patch near Solapur, Joshi (2012) reported 28 species from Rajura, Godada and Dhanora lakes of Buldhana district, Harney (2014) reported 55 species around the Ghotnimbala lake near Bhadrawati as well as 37 species from Kanhala pond Harney *et al*. (2013) with preference to feeding habits of Bhadrawati in Chandrapur district. Bhandarkar and Paliwal (2014) reported total 52 water birds species from Shrungarbandh Lake, Gondia District.

CONCLUSION

Avifaunal diversity of the Malguzari lake at Zaliya confirm the lake as suitable habitat for the residential and some migratory birds. But the birds present in and around the lake are affected by anthropogenic disturbances like washing clothes, direct bathing in lake, washing livestocks, immersing of idols, fishing practices and pollution due to spraying of insecticides on rice crop in nearby area. Yet the avifauna of the Malguzari lake at Zaliya is diverse; keeping in view the varied avifauna recorded, steps should be taken to do proper maintenance and conservation of the lake.

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