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 (Rajashekara 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.

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 Passeriiformes 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 pelecaniformes, charadriiformes and Passeriiformes each, 03 species belongs to gruiformes, 07 species belongs to anseriformes, and 09 species belongs to ciconiiformes order.

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

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Scientific Names</th>
<th>Common Names</th>
<th>Residential Status</th>
<th>Abundance Status</th>
</tr>
</thead>
</table>
| 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       | Mesophoyx intermedia      | Median Egret (Intermediate Egret) | RM                 | U                |
  5       | Eretta garzetta           | Little Egret                      | RM                 | C                |
  6       | Bubulcus ibis             | Cattle Egret                      | RM                 | C                |
  7       | Mesophoyx intermedia      | Median Egret (Intermediate Egret) | RM                 | U                |
  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 melanoleptus | 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 porphyro        | 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 bengalensis      | 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
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 tahlil 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.
REFERENCES


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