Disturbances on the Living of Avifauna of Singada Talav of Tirora in Gondia District, Maharashtra

Santosh D. Puri
Department of Biology, Adarsh Vidyalaya and K. Mahavidyalaya, Amgaon. Dist. – Gondia (M.S.) 441902, India

Abstract

Singada Talav is located at Tirora in Gondia district of Maharashtra State, India. The present study based on six months visiting survey from March-2014 to August-2014.The status of the bird species as per anthropogenic activities were focused. The present investigation reveals that, twenty four species of birds were recorded in short study period. Data is collected from the Singada Talav of Tirora by systematically visited on varying days of the months at varying time. Out of twenty four species, 13 species in August and 09 species in July were observed in the most abundant quantity. The abundance of the most of the species of birds is decreased specially in the month of April, May and June due to the less availability of water, drying of vegetation around the Talav and disturbances in the living of birds by the anthropogenic activities. The species count is less because of the natural and man made disturbances. The natural disturbances such as seasonal variations, less rainfall, etc. and man made disturbances such as festivals, washing, bathing, fishing processes, construction works, pollution, etc.

KEYWORDS: Disturbances, Avifauna, Singada talav**,** Tirora.

INTRODUCTION

Every water body is full of richness of waterbirds especially the Ducks and other species near and around it. In India, small water bodies are a distinctive feature which provides important feeding and nesting areas for a wide range of water birds (Grimmett *et al*., 2001). The birds are valuable as scavengers near to the pond ecosystem which are useful to make clean environment. Also the birds are very important in the food chains in the ecosystem and are aesthetic beauty of the Nature. A large proportion of normal food of bird consists of insects and fishes, especially in the pond ecosystem (Kachare *et al.*, 2011). Wetlands and waterbirds are inseparable elements and support a rich array of waterbird communities (Grimmett and Inskipp, 2007). Now a days the pond ecosystems are disturbing naturally due to less rainfall or artificially due to the anthropogenic activities and sewage wastes. Ethically and morally we have no authority as human being for our comfort to create unsafe environment to other species of nature that have equal right to live with nature in peace as much as human race (Kachare *et al.*, 2011). Directly or indirectly the pond ecosystem and the living of the birds are affecting due to the anthropogenic activities.

As per data, 209 species of birds are recorded in and around Gondia district (Chitampalli, 2010). Out of these, some species locally visits to the Singada talav at Tirora. The total human population of Tirora as per census 2011, is 25181 (http://www.censusindia.gov.in/pca/pca.aspx). The main business of the town is Rice Mills and Grain Trading. Also Adani Thermal Power Plant (3300 MW) is located at 3 km away from Tirora (http://en.wikipedia.org/wiki/Tirora). The present population of the waterbirds and the visiting birds are very important to maintain dynamics of the

pray predator system of the water bodies. But increasing anthropogenic activities and irregular raining results into the shrinkage of the talav and hence it is necessary to keep watch on local resident and migratory birds of these important habitats and monitor them for the sustainable management (Virani, 2012). Since no earlier reports are available, hence, present study is launched to investigate the status and the threats of the avifaunal diversity of the Singada Talav of Tirora in Gondia district, Maharashtra State, India.

MATERIALS AND METHODS

Study Area: A water body in Tirora city (21°24′26″N79°55′57″E21.4072084°N 79.932575°E) called as Singada Talav is selected on the base of relative amount of anthropogenic activities and the bird diversity for the data collection in Gondia district of Maharashtra State, India.

Methodology: Diversity and density of birds from the Singada Talav located at Tirora were recorded by weekly visit for six months from March-2014 to August-2014. A survey for observation and counting of the birds were carried out near study area in the day time depending on the conditions (Namgail *et al*., 2009) by using binoculars and camera. Especially, the activity of birds are usually more during the morning and evening hours, hence the selected time for taking reading was 6.30 am to 9.00 am and 5.00 pm to 6.30 pm. Waterbird population was enumerated by point count and direct counting methods (Colin *et al.*, 1992). The relative abundance of birds was estimated and their monthly fluctuation was recorded and is classified on the basis of “The Book of Indian Birds” (Ali, 1996). Also for identification and confirmation of the species of birds, Keys suggested by Ali, S. (2002), A Field Guide (Ranjit, *et al*., 2011), "Birds of the Indian Subcontinent" by Inskipp and Grimmett (2011) are adopted.

RESULT AND DISCUSSION

The results are as follows and shown in Table-1 and Table-2:

Total twenty four species of birds were observed during study period of six months from March-2014 to August-2014. Out of twenty four species, 13 species in August and 09 species in July were observed in the most abundant quantity. 07 species in March, 02 species in April, 01 species each in May and June, 10 species in July and 10 species in August were observed in abundant quantity. 12 species in March, 17 species in April, 04 species in May, 09 species in June, 04 species in July and 01 species in August were observed in less abundant quantity. 05 species each in March and April, 19 species in May and 14 species in June were observed rarely.

Most abundance of the species of birds were seen in the month of July and August only. In the month of March and April, maximum species of birds were seen in less abundant quantity. Most of the species of birds were occurred in rare quantity in the month of May and June.

Conclusion:

The abundance of the most of the species of birds is decreased especially in the month of April, May and June due to the less availability of water, unavailability of green vegetation, disturbances by fishermen for catching fishes and washing of cloths, live stocks and vehicles in the talav. Also the abundance of some of the species of birds is decreased in July and August too due to the disturbances of washing of cloths,

nirmalya visarjan, Kanhaya (Shrikrushna) visarjan and Gauri visarjan in the talav. The crowd of the people at the time of visarjan disturbs the living of the birds in and around the talav. Also there is disturbance directly or indirectly due to the grazing animals near the talav. Only some of the species of birds were found in maximum quantity in July and August due to the availability of sufficient water in the talav and green vegetation around it. The search is continued and hope the number will be increased in future.

Recommendation:

Disturbing the green vegetation and construction of the buildings near the talav should be prohibited. Washing of live stocks and vehicles in the talav should be banned. Special tanks should be prepared for Kanhaya visarjan, Ganpati visarjan and Gauri visarjan during the festivals. Local fast growing trees should be planted, they attract the birds. Unwanted and unneeded human activities especially open defecation near the talav should be banned. Fishermen only allowed during noon time for catching fishes and should be banned at morning and evening time. The grazing animals only allowed for drinking the water for short time and not for grazing near the talav.

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Table-1: Monthwise Data of Observed Species of Birds

Months	Number of Species Observed Out of 24 Species			
	Most Abundant (+++)	Abundant (++)	Less Abundant (+)	Rare (-)
1) March-2014	00	07	12	05
2) April-2014	00	02	17	05
3) May-2014	00	01	04	19
4) June-2014	00	01	09	14
5) July-2014	09	10	04	00
6) August-2014	13	10	01	00

Sr. No.	Common Name	Scientific Name	Monthwise Abundance of Bird Species in Talav in six months of 2014					
			Mar	Apr	May	Jun	Jul	Aug
1	Spot-Billed Duck	Anas poecilorhyncha	++	+	+	-	+++	+++
2	Common Shel Duck	Tadorna tadorna	+	+	-	-	+++	+++
3	Bar-Headed Goose	Anser indicus	+	+	-	+	+++	++
4	Greylag Goose	Anser anser	+	+	-	-	+++	++
5	Comb Duck	Sarkidiornis melanotos	-	-	-	+	++	+++
6	White-Winged Duck	Cairina scutulata	++	+	+	+	+++	+++
7	Mallard	Anas platyrhynchos	-	-	-	+	++	+++
8	Gadwall	Anas strepera	-	-	-	+	+	+++
9	Lesser Whisteling-Duck	Dendrocygna javanica	-	-	-	+	+	+++
10	Large Whisteling-Duck	Dendrocygna bicolor	-	-	-	+	++	++
11	Sarus Crane	Grus antigone	+	+	-	-	+	+
12	Demoiselle Crane	Grus virgo	+	+	-	-	++	++
13	Grey Heron	Ardea cinerea	+	+	-	-	+++	++
14	Large Egret	Casmerodius albus	+	+	-	-	++	++
15	Great White Pelican	Pelecanus onocrotalus	+	+	+	+	+++	+++
16	Indian Pond-Heron	Ardeola grayii	+	+	-	-	+++	+++
17	Red-Wattled Lapwing	Vanellus indicus	+	+	-	-	+	++
18	Yellow-Wattled Lapwing	Vanellus malabaricus	+	+	-	-	++	++
19	Indian Robin	Saxicoloides fulicata	+	+	-	-	++	++
20	Rose-Ringed Parakeet	Psittacula krameri	++	+	-	-	++	++
21	Common Cuckoo	Cuculus canorus	++	+	-	-	++	++

22	Asian Koel (Female)	Eudynamys scolopacea	++	+	-	-	++	+++
23	House Sparrow	Passer domesticus	++	++	+	+	+++	+++
24	House Crow	Corvus splendens	++	++	++	++	+++	+++

Table-2: Names and Abundance of Bird Species in Talav

(Most abundant: +++, Abundant: ++, Less abundant: + and Rare: -)

Figures and Photographs:

Fig. 1: Tirora Map

Fig. 2: Satellite map of Singada Talav Tirora

Fig. 3: A photograph of Singada Talav of Tirora

Fig. 4 : Avifauna of Singada Talav at Tirora

Fig. 5: Cloth Washing in Talav

Fig. 6: Fishermen catching Fishes

Fig. 7: Grazing Animals and Construction of buildings disturbing Ecosystem of Birds

Fig. 8: Gauri Visarjan

Fig. 9: Nirmalya Visarjan