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SEASONAL DIVERSITY OF BIRDS IN SIDDHESHWAR LAKE, SOLAPUR (M.S.)

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ABSTRACT :

The present survey of avifaunal diversity carried during year January 2016 to Decemebr 2016 at Siddheshwar lake, Solapur. Wetlands are considered as source of water for irrigation, agriculture, domestic and industrial use. They also recharge the ground water and protect the agricultural land from floods. The Present survey carried to study seasonal diversity of aquatic birds from one of the most important aquatic reservoir in Solapur. Birds are key indicators of health of wetland. In our study we found 39 bird species belonging to 25 families. The abundance and diversity of birds varies from season to season. Mostly the birds get attracted to wetlands especially in marshy places in search of food and nesting. In the present investigation we found maximum abundance of birds in winter followed by summer and monsoon respectively.

KEYWORDS : *Wetland, Diversity, Birds, Season, Siddheshwar lake.*

INTRODUCTION

Birds are major units of environment. They play key role in ecology. They are useful to mankind in various ways. Because of global warming and human interference their population is declining. The major cause of decline number of bird species is due to habitat degradation, introduction of predators, constriction of river channels and their interrelationship between these factors (Hughy'1985). The birds are commonly considered as indicator species of that vicinity (Blair, 1999). The different studies have examined the anthropogenic impact, habitat loss, agricultural practices on birds. (Huges *et al*.,2002). Wetlands are fragile and productive ecosystems on which number of anthropogenic activities affecting that results decline water bird population and habitat utilization(Sharma and Saini Minakshi, 2012). Prasad (2003) surveyed the avifauna of Solapur District and reported checklist of birds. The biomonetering of avifauna is carried at Hipparga lake (Darekar and Kumbhar, 2017). Devkar *et al.,(2016)* studied seasonal fluctuation of birds in Jawalgaon wetland Taluka Barshi District Solapur of Maharashtra State and found 62 bird species out of which 31 residential, 5 visitors and 26 migratory.

MATERIAL AND METHODS.

Material:

Study site: Siddheshwar Lake

(www.googlemaps.com)

The Siddheshwar lake is situated at N'1740.431- E'7554.271 in heart of Solapur city. The catchment area of lake is around 30 hectares (75 acres). It based on two ecological ponds with a average depth of 2-11 meters. Domestic species of fishes are reared in this lake for recreation of devotees. The Siddheshwar lake and the temple along with the fort at western bank which attract a large number of birds of Solapur city and neighboring area for its unique ecological identity. The temple situated as an island within the large lake measures about 36 acres in area. The lake was developed by Shri Siddheshwar in 1180 A.D. Today it is popularly known as a 'Tirthkshetra'.

METHODS:

The survey was carried during year 2016 January to 2016 December. The survey was conducted every week on Sunday early in sunrising to 9am and evening 4.30 to sunset. Birds were observed using 10x50 binocular Olympus and identified with the help of standard field guide (Grimmett 2015). The photographs were taken by Nikon 5300D camera. To record the abundance of birds head count and direct field observational methods are used.

RESULT AND DISCUSSION :

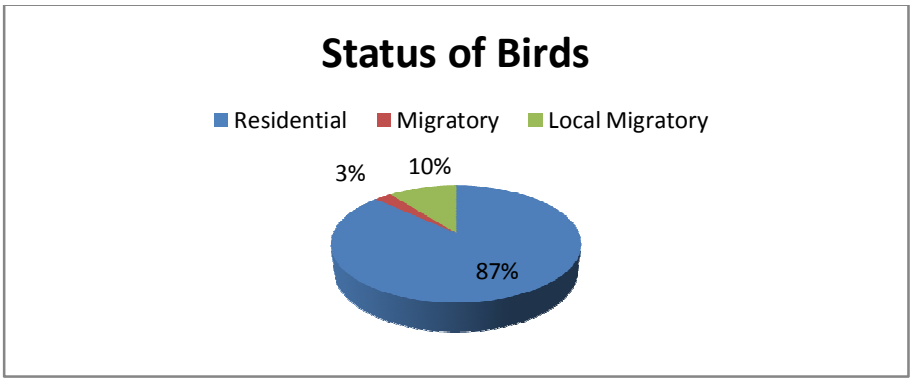
Table: 1
Checklist of avifauna of Siddheshwar Lake during year January 2016- December 2016.

S.N	Family		Species name	Status	Season
1	Podicipedidae	1	*Podiceps ruficollis* (Little greb)	R	All
2	Phalacrocoracidae	2	*Phalacrocorax niger*(Little cormorant)	R	All
3	Ardeidae	3	*.Ardea cinerea* (Grey heron)	R	Summer
		4	*Ardeola grayii (*Pond heron)	R	All
		5	*.Bubulcus ibis* (Cattle egret)	R	All
		6	*Nycticorax nycticorax* (Night heron)	R	All
		7	*Egretta garzetta* (Little egret)	R	All

		8	*Ardea purpurea* (Purple heron)	LM	Winter
4	Ciconiidae	9	*Mycteria leucocephala* (Painted stork)	R	All
5	Threskiornithidae	10	*Threskiornis melanocephalus* (Black headed ibis)	R	All
6	Accipitridae	11	*Elanus caeruleus* (Black winged Kite)	R	All
		12	*Milvus migrans*(Black kite)	R	All
7	Rallidae	13	*Amaurornis phoenicurus* (White breasted waterhen)	R	All
		14	*Porphyrio porphyrio* (Purple moorhen)	R	All
		15	*Gallinula chloropus* (Common moorhen)	R	All
		16	*Fulica atra* (Eurasian coot)	R	All
8	Dicruridae	17	*Dicrurus adsimilis* (Common drongo)	R	All
9	Recurvirostridae	18	*Himantopus himantopus* (Black winged stilt)	LM	Summer
10	Charadriidae	19	*Vanellus indicus* (Red wattled lapwing)	R	Summer
11	Laridae	20	*Sterna aurantia* (River tern)	M	Summer
12	Pteroclididae	21	*Pterocles exustus* (Chestnut bellied sandgrouse)	R	All
13	Columbidae	22	*Columba livia* (Rock pigeon)	R	All
14	Psittacidae	23	*Psittacula cynocephala* (Plum headed parakeet)	R	All
		24	*Psittacula krameri* (Rose ringed parakeet)	R	All
15	Cuculidae	25	*Clamator jacobinus* (Jacobin cuckoo)	LM	Monsoon
		26	*Cuculus micropterus* (Indian cuckoo)	LM	Monsoon
16	Alcedinidae	27	*Ceryle rudis* (Pied kingfisher)	R	All
		28	*Halcyon smyrnensis* (White throated kingfisher)	R	All
		29	*Alcedo ethis* (Common kingfisher)	R	All
17	Meropidae	30	*Merops orientalis* (Green bee- eater)	R	All
18	Bucerotidae	31	*Tockus birostris* (Indian grey hornbill)	LM	Winter
19	Megalamidae	32	*Megalaima haemacephala* (Coppersmith barbet)	R	All
20	Pycnonotidae	33	*Pycnonotus cafer* (Red vented bulbul)	R	All
21	Nectariniidae	34	*Nectarinia asiatica* (Purple sunbird)	R	All
		35	*Nectarinia zeylonica* (Purple rumped sunbird)	R	All
22	Passeridae	36	*Passer domesticus* (House sparrow)	R	All
23	Plocidae	37	*Sturnus pagodarum* (Brahminy starling)	R	All
24	Sturnidae	38	*Acridotheres tristis* (Common myna)	R	All
25	Corvidae	39	*Corvus splendens* (House crow)	R	All
	Total Families=25		**Species =39**	**R = 33 M = 1 LM=5**	

R: Resident, M: Migratory, LM: Local Migratory

The Abundance and status of migratory birds from Siddeswar lake of Solpaur is represented in a photoplate No.1 and table No 1. during January 2016 to Dec 2016. From our study depending upon ecological conditions and food abundance in different seasons, different bird species recorded from Siddheshwar lake. The avifaunal diversity of this water reservoir is a indiactor which shows richness of biodiversity in given ecosystem. More number of bird species means ample availability of nutrients for flora and fauna. In our study we found 39 bird species belonging to 25 families were recorded. The maximum bird species reported from family Ardeidae. In total 39 bird species 87 percent were residential, 3 percent migratory and 10 percent local migratory. The migratory birds are reported maximum in winter.



CONCLUSION:

The study site is located in crowdy region of temple where devotees makes rush in all season. In such situation also rich avifauna is reported. The waterbody should be protected for pleasant stay of variety of birds. The immursion of idols of Lord Ganapati during festival should be avoided in this lake. The water should be protected from pollution.

REFERENCE:

1. Anil B. Devkar, P.S.Talwad and K.R.Rao (2016), Study of seasonal fluctuations of birds in jawalgaon wetland, Tal- Barshi, Dist-Solapur: A Conservational Approach.Indian streams Research Journal Volume - 6.pp1-6.
2. Blair, R.B,(1999), Birds and butterflies along an urban gradient:Surrogate taxa for assessing biodiversity? Eco Appl.,9,164-170.
3. Darekar P.V and Kumbhar A.C (2017), Physicochemical properties of Ekrukh lake and biomonetering of Avifaunaa, Thesis submitted to Solapur university Solapur.
4. Grimmett,R., Inskipp,T.and Inskipp, C.(2015), Birds of Indian Subcontinet.Christopher Helm,London 1-384
5. Hughes J.B. Daily G.C. & Ehrlich P.R.(2002), Conservation of tropical forest birds in Countyside hatitats.Ecology.
6. Hughey, K.F.D, (1985). Hydrological factors influencing the ecology of riverbed breeding birds on the plains' reaches of Canterbury's braided rivers. Unpublished Ph.D. Thesis, University of Canterbury, Christchurch.
7. Prasad, A.(2003), Annotated checklist of Birds of Western Maharashtra. Buceros8(2&3):174
8. Sharma, K.K and Saini Minakshi,(2012), Impact of antropogenic pressure on utilization by the waterbirds in Gharana Wetland (reserve), Jammu (J & K, India), international journal of environmental sciences, 2 (4), 2050-2061.
9. www.googlemaps.com