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DIVERSITY OF BIRDS IN SHREE SIDDHESHWAR VAN VIHAR, SOLAPUR, MAHARASHTRA, INDIA

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ABSTRACT:

The present article deals with diversity of avifauna of Shree Siddheshwar van vihar which is located at the outskirts of Solapur city. It is protected part of government of Maharashtra with rich flora and fauna. It is situated at 17° 40'39.4860" N and 75° 53'42.7020" E of Solapur. It is rich in thorny scrub and woody vegetation with grassland, therefore it attracts many bird species in all seasons. In the present study the diversity of avifauna is studied. The study was carried out during the period of July, 2020 to June 2021. Total 101 bird species belonging to 50 families were recorded during study period. The noticed birds are categorized as residential, local migratory, winter migratory and migratory. The diversity of birds varies from season to season. It attracts amazing number of birds because of sufficient water available in water bodies and plenty of food availability. Due to reserved forest area habit and habitat of birds is protected from human anthropological activities.



KEYWORDS: Avifauna; Diversity; Migratory; Reserved forest; Siddheshwar van vihar.

INTRODUCTION

The role of birds in ecosystem is very important. Due to birds the number of pests is controlled. Birds are good pollinators. Trees cannot move from place to place but birds can. Birds drop the seeds of fruits far away and these seeds grow into new trees. Birds help to forest grow. Birds play an important role in an ecosystem.

The number of birds reduced around the world. We know the little about the status of Indian Birds. Birdwatchers in India began to use eBird and they record list of birds on online platform. The eBird database contains 1333 bird species data from India. State of India's Birds (2020). About 1349 birds species have been recorded in Indian subcontinent. Some spots or area are recognized for their rich diversity in flora and fauna in the Solapur district. Siddheshwar van vihar is one of them. In Siddheshwar van vihar nearly 16% of the Indian avian species are observed. More than 50% birds of Solapur district are found in Shree Siddheshwar van vihar.

Shree Siddheshwar van vihar attracts many birds and also attracts a number of researchers and bird watchers. Several avian and ecological study camps *i.e.* in Shree Siddheshwar van vihar have been conducted. Ninad Shah (2018) prepared check list of birds in Siddheshwar van vihar. Bird watching

Camps are arranged by forest department on the occasion of birds week. Joshi *et al.*, (2021) studied avian diversity in forest, agricultural and water stream habitats of Dehradun. They recorded 231 species belonging to 54 families. The objective of present work is to study status and diversity of birds in selected study site *i.e.* Shree Siddheshwar van vihar.

MATERIALS AND METHODS:

MATERIALS:

Location of study site : Shree Siddheshwar van vihar



(www.googlemaps.com)

Shree Siddheshwar van vihar is a reserved forest with rich flora and fauna. The geographical location of Shree Siddheshwar van vihar is at 17° 40'39.4860" N and 75° 53'42.7020" E. The average rainfall 603.79 mm per annum. The temperature ranges between 14° C in winter and 42° C in summer. Van vihar development project begins in 1997 and completed in 2002. It is located adjoining to Solapur and 2 km from city, on outskirts, in Vijapur road area. Today it is popularly known as a 'Shree Siddheshwar van vihar'.

METHODS:

The survey was carried during year July, 2020 to June, 2021. Due to covid-19 pandemic, first, second wave of corona and lockdown declared by authorities regular visit had some limitations, Saha and Chohan (2021). The survey was conducted as per pandemic guideline and monthly visit on Sunday early in sun rising to 9 am and evening 5pm to sunset. Birds were observed using 10 X 50 Olympus binocular. Bird identification were done with the help of standard field guide Pande *et al.*, (2013) and Grimmett *et al.*, (2015). The photographs were taken by Nikon 5300 camera with zoom lence of 55mm to 200mm. To record the abundance of birds direct field observation and head count methods are used.

RESULTS AND DISCUSSION:

Table: 1. Bird species found in study site *i.e.* Shree Siddheshwar van vihar, Solapur.

Sr No.	Common name	Scientific Name	Family	Status
1.	Black winged kite	<i>Elanus caeruleus</i>	Accipitridae	R
2.	Brahmini kite	<i>Haliastur indus</i>		LM
3.	Marsh harrier	<i>Circus spilonotus</i>		M
4.	Black kite	<i>Milvus migrans</i>		R
5.	Shikra	<i>Accipiter badius</i>		R
6.	Ashy crowned sparrow lark	<i>Ermopterix griseus</i>	Alaudidae	R
7.	Common kingfisher	<i>Alcedo atthis</i>	Alcedinidae	R
8.	White throated kingfisher	<i>Halcyon smyrnensis</i>		R
9.	Pied kingfisher	<i>Ceryle rudis</i>		R

10.	Common pochard	<i>Aythya ferina</i>	Anatidae	M
11.	Gadwal	<i>Mareka strepera</i>		M
12.	Indian spotbilled duck	<i>Anas poecilorhyncha</i>		R
13.	Little swift	<i>Apus affinis</i>	Apodidae	R
14.	Grey heron	<i>Ardea cinerea</i>	Ardeidae	LM
15.	Purple heron	<i>Ardea perpureo</i>		R
16.	Large egret	<i>Egretta alba</i>		R
17.	Intermediate egret	<i>Egretta ibtermedia</i>		R
18.	Little egret	<i>Egretta garzetta</i>		R
19.	Indian pond heron	<i>Ardeola grayii</i>		R
20.	Indian grey hornbill	<i>Ocyrceros birostris</i>	Bucerotidae	LM
21.	Small minivet	<i>Pericrocotus cinamomeus</i>	Campephagidae	R
22.	Indian nightjar	<i>Camprimulgus asiaticus</i>	Caprimulgidae	R
23.	Yellow wattled lapwing	<i>Vanellus malbaricus</i>	Charadriidae	R
24.	Red wattled lapwing	<i>Vanellus indicus</i>		R
25.	Painted stork	<i>Mycteria leucocephala</i>	Ciconiidae	R
26.	Wooly necked stork	<i>Ciconia episcopus</i>		R
27.	Plain prinia	<i>Prinia inornata</i>	Cisticolidae	R
28.	Ashy prinia	<i>Prinia socialis</i>		R
29.	Common tailor bird	<i>Orthotomus sutorius</i>		R
30.	Indian roller	<i>Coracias benghalensis</i>	Coraciidae	LM
31.	Rock pigeon	<i>Columbia livia</i>	Columbidae	R
32.	Eurasian collared dove	<i>Streptopelia decaocto</i>		R
33.	Laughing dove	<i>Spilopelia senegalensis</i>		R
34.	Indian jungle crow	<i>Corvus culminates</i>	Corvidae	R
35.	House crow	<i>Corvus splendens</i>		R
36.	Jacobin cuckoo	<i>Clamator jacobinus</i>	Cuculidae	LM
37.	Indian cuckoo	<i>Cuculus micropterus</i>		R
38.	Common hawk cuckoo	<i>Hierococcyx varius</i>		M
39.	Asian koel	<i>Eudynamys scolopaceus</i>		R
40.	Greater coucal	<i>Cebtropus parroti</i>		R
41.	Black drongo	<i>Dicrurus macrocercus</i>	Dicruridae	R
42.	Ashy drongo	<i>Dicrurus leucocephaeus</i>		LM
43.	Grey necked bunting	<i>Emberiza buchanani</i>	Emberizidae	M
44.	Black headed Bunting	<i>Emberiza bruniceps</i>		M
45.	Red avadavat	<i>Amanadava amandava</i>	Estrididae	R
46.	Indian silverbill	<i>Euodice malbarica</i>		R
47.	Scaly breasted munia	<i>Lonchura punctulata</i>		R
48.	Common kestrel	<i>Falco tinnunculus</i>	Falconidae	R
49.	Eurasian hobby	<i>Falco subbuteo</i>		LM
50.	Indian courser	<i>Cursorius coromandelicus</i>	Glareolidae	R
51.	Wire tailed swallow	<i>Hirundo smithii</i>	Hirudinidae	R
52.	Red rumped swallow	<i>Cecropis daurica</i>		R
53.	Pheasant tailed jacana	<i>Hydrophasianus chirurgus</i>	Jacanidae	R
54.	Bronze winged jacana	<i>Metopidius indicus</i>		R
55.	Bay backed shrike	<i>Lanius vittatus</i>	Lanidae	R
56.	Long tailed shrike	<i>Lanius schach</i>		R
57.	Large grey babbler	<i>Turdoides malcolmi</i>	Leiothricidae	R
58.	Jungle babbler	<i>Turdoides striata</i>		R

59.	Yellow eyed babbler	<i>Chrysomma sinense</i>		R
60.	Coppersmith barbet	<i>Psilopogon haemacephalus</i>	Megalaimidae	R
61.	Green bee-eater	<i>Merops orientalis</i>	Meropidae	R
62.	Forest wagtail	<i>Dendronanthus indicus</i>	Motacillidae	M
63.	Western yellow wagtail	<i>Motacilla flava</i>		WM
64.	Grey wagtail	<i>Motacilla cinerea</i>		M
65.	Tree pipit	<i>Anthus trivialis</i>		LM
66.	Indian robin	<i>Saxicoloides fulicatus</i>	Muscicapidae	R
67.	Oriental magpie robin	<i>Copsychus saularis</i>		R
68.	Black redstart	<i>Phoenicurus ochruros</i>		LM
69.	Pied bush chat	<i>Saxicola maurus</i>		R
70.	Purple rumped sunbird	<i>Leptocoma zeylonica</i>	Nectarinidae	R
71.	Purple sunbird	<i>Cynniris asiaticus</i>		R
72.	Indian golden oriole	<i>Oriolus kundoo</i>	Oriolidae	R
73.	House sparrow	<i>Passer domesticus</i>	Passeridae	R
74.	Great cormorant	<i>Phalacrocorax carbo</i>	Phalacrocoracidae	R
75.	Little cormorant	<i>Microcarbo niger</i>		R
76.	Grey francolin	<i>Francolinus pondicerianus</i>	Phasianidae	R
77.	Indian peafowl	<i>Pavo cristatus</i>		R
78.	Yellowcrowned woodpecker	<i>Leiopicus mahrattensis</i>	Picidae	R
79.	Eurasian wryneck	<i>Jynx torquilla</i>		M
80.	Baya weaver	<i>Ploceus philippinus</i>	Ploceidae	R
81.	Indian pitta	<i>Pitta brachyuran</i>	Pittidae	R
82.	Little grebe	<i>Tachybaptus ruficollis</i>	Podicipedidae	R
83.	Rose ringed parakeet	<i>Psittacula krameri</i>	Psittacidae	R
84.	Plum headed parakeet	<i>Psittacula cyanocephala</i>		R
85.	Red vented bulbul	<i>Pycnonotus cafer</i>	Pycnonotidae	R
86.	Indian moorhen	<i>Gallinula chloropus</i>	Rallidae	R
87.	Eurasian coot	<i>Fulica atra</i>		R
88.	Black winged stilt	<i>Himantopus himantopus</i>	Recurvirostridae	R
89.	White spotted fantail	<i>Rhipidura albicollis</i>	Rhipiduridae	R
90.	Wood sandpiper	<i>Tringa glareola</i>	Scolopacidae	M
91.	Common sandpiper	<i>Actitis hypoleucos</i>		M
92.	Spotted owlet	<i>Athene brama</i>	Strigidae	R
93.	Common myna	<i>Acridotheres tristis</i>		R
94.	Brahmany starling	<i>Sturnia pagodarum</i>		R
95.	Common woodshrike	<i>Tephrodornis pondicerianus</i>	Tephrodornithidae	R
96.	Black headed ibis	<i>Threskiornis melanocephalus</i>	Threskiornithidae	R
97.	Glossy Ibis	<i>Plegadis falcinellus</i>		R
98.	Eurasian spoonbill	<i>Platalea leucorodia</i>		R
99.	Orange headed thrush	<i>Geokichla citrine</i>	Turdidae	LM
100.	Common hoopoe	<i>Upupa epops</i>	Upupidae	LM
101.	Oriental white eye	<i>Zosterops palpebrosus</i>	Zosteropidae	R
Total	Species = 101		Families = 50	R = 78 WM=1 LM=11 M=11

Key to abbreviation : Suffix as per status :

R : Resident, WM : Winter Migratory, LM : Local Migratory, M : Migratory.

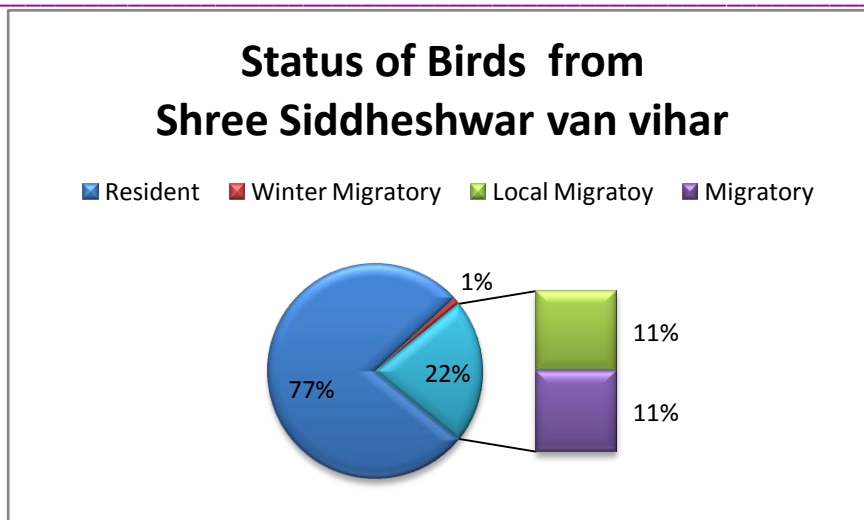


Figure: 1. Status of Birds.

The survey was carried out to study the avian diversity in Shree Siddheshwar van vihar. The study was carried for the period of 12 months (July 2020 to June 2021) including all three seasons *i.e.* monsoon, winter and summer. Bird species were categorized as resident (R), local migratory (LM), winter migratory (WM) and migratory (M). Total 101 species of birds which are belonging 50 families have been recorded from the study site (Table: 1). Maximum bird species reported from family Ardeidae. In total 101 bird species 77% were resident, 1% were winter migratory, 11% local migratory and 11% were migratory (Fig: 1). A small water body which is located in the study area attracts the aquatic birds. The bird diversity shows richness of biodiversity in given ecosystem.



(a) (b)
 Figure: 2. Study site Shree Siddheshwar van vihar Solapur :
 (a) Site map; (b) Guidelines for visitors.

CONCLUSION:

Total 101 bird species from belonging to 50 families have been recorded from Shree Siddheshwar van vihar during the period of 12 months (July, 2020 to June, 2021). The number of number of bird species were recorded in all seasons in the study period. It can be concluded that the selected site has ampleness of food, which is enough safe habitat for resident, miratory, terrestrial and aquatic bird species. The thorny scrub and woody vegetation, two waterholes (1 natural, 1 man made) provide safe place for nesting and roosting. Plenty of food and good shelter in the study area with undisturbed habitat may be the vital reasons for the attraction of avifauna in the van vihar.

In spite of increasing morning walk visitors, authorities should encourage college students, school students, researchers and bird watchers by arranging bird watching camps and aware them about nature in eco-education centre. It can be concluded that the maximum number of bird species were resident. This indicates resident birds are observed in van vihar in all seasons. Migratory birds visiting the van vihar in winter season. This site is paradise of birds and in future it will become an arising "Bird Sanctuary".

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