RESEARCH ARTICLE

STATUS, SURVEY AND CONSERVATION PERSPECTIVES OF AVIFAUNA FROM ARID ZONE OF JATH TAHSIL (M.S.), INDIA

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Author affiliation:	ABSTRACT:		
Raje Ramrao	So, for no scientific data is available for the avifauna of this		
Mahavidyalaya, Jath.	area. It has become necessary to carry out basic scientific work on		
Dist. Sangli. (M. S.) India.	avifauna of this drought prone area. The present study is focused to		
Affiliated to Shivaji	find out avian diversity, impact on environment and its conservation.		
University Kolhapur	This will contribute to the biodiversity and ecological studies, as well		
*E-mail:	as management programs. There are about 41 different families, 15		
jadhavvijay6583@gmail.	orders, and 80 species of birds were recorded from different areas of		
<u>com</u>	Jath Tahsil. Out of these 57 species were residential, 07 were		
	residential migratory, 15 were winter migratory, and single species		
© Copyright: 2024 This	was summer migratory.		
is an open access article	KEYWORDS: Avian Diversity, Ecology, Jath.		
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INTRODUCTION:

Sangli District is located in the Western part of Maharashtra State having 8522 Sq. Km. geographical area. This district is situated between 16° 4 to 17° 1 North latitude and 73° 43 to 75° 00 East longitude. The district is divided into two major regions viz., a Western area along the Krishna River basin with an abundant water supply and an arid region with a drought-prone zone along the Eastern part. The arid region includes Kadegaon, Khanapur, Atpadi, Tasgaon, Jath, and Kavathe-Mahankal Tahsil and the Eastern part of Miraj Tahsil. The average rainfall is about 620 mm per year due to South-West Monsoon. The average temperature of this area ranges from 13° C to 45°C.

Jath is one of the Tahsil in Sangli District. It is situated between 16° 4 to 17° 1 North latitude and 73° 43 to 75° 00 East longitude. This area is very suitable for several local and migratory birds. Birds are warm-blooded vertebrates able to survive in greater climatic extremes than other animals, but nowadays the drastic environmental changes through various anthropogenic activities.

MATERIALS AND METHODS:

Study Area

Sangli District is located in the Western part of Maharashtra State having 8522 Sq. Km. geographical area. This district is situated between 16° 4 to 17° 1 North latitude and 73° 43 to 75° 00 East longitude. The district is divided into two major regions viz., the Western area along the Krishna River basin with an abundant water supply, and the arid region includes a drought-prone zone along the Eastern part. The arid region includes Kadegaon, Khanapur, Atpadi, Tasgaon, Jath, and Kavathe-Mahankal Tahsil and the Eastern part of Miraj Tahsil. The average rainfall is about 620 mm per year due to South-West Monsoon. The average temperature of this area ranges from 13° C to 45°C.

Jath is one of the Tahsil in Sangli District. It is situated between 16° 4 to 17° 1 North latitude and 73° 43 to 75° 00 East longitude. This area is very much suitable for several local as well as migratory birds. Birds are warm-blooded vertebrates able to survive in greater climatic extremes than other animals, but now a day's the drastic change in the environment through various anthropogenic activities.

Different habitats are selected for observation and identification of avian diversity like Birnal and Tippehalli wetlands, Ambabai Temple, and Jath City.

METHODOLOGY:

The present study avian diversity identified at the spots as per guidelines given by Ali and Ripley (1996), Ali (2002), Chitampelli (2002) by using binoculars and digital camera for photography. The present study is based on observation, identification, common name, scientific name, migratory behavior. The different spots for different habitats will be visited for regular survey and identification of birds. The visits be done in morning (6am-10am) and evening (4 to 6-30pm) hours.

RESULTS AND DISCUSSION:

The observed birds are listed in the table No.1 on the basis of their common name, scientific name, total count, nature of abundances and migratory behaviour.

Jath and its surrounding area is an important site for migratory as well as local birds. The present study from Tippehalli, Pratapur and Birnal reseviors recorded 57 residential, 15 winter migratory, 7 residential migratory and single summer migratory species of birds. The tocal bird species diversity is 80 in number.

During our investigation we have also recorded 2 species as stray records viz. Brown – headed Gull and Caspian Tern. The most common migratory species are found in marshy area. They are black winged stilt, green shank, little stint, Ruff, Common Teal, and other species. During study period there is no observed globally threatened species or nearly threatened species of birds.

The status and composition of avifauna from different spots is residential common birds are found in more number and near about 71% of total diversity of birds, 19% winter migratory

birds second large numbers are found, 09% residential migratory birds and 01 % summer migratory birds are found throughout the study period.



The order wise distribution of avifauna from this arid zone are Passeriformes is largest family and about 32 species are found out of total 80 species, Charadriiformes is 12 species, Pelecaniformes is 08 species, Columbiformes, Cuculiformes and Coraciiformes found 04 species, Gruiformes 03 species, Anseriformes, Accipitriformes, Galliformes, Bucerotiformes, and Piciformes found 02 species, Psittaciformes, Strigiformes, Caprimuliformes found single species.



Similar work also done by Pawar et al., (2005) 60 species of birds from Rashi Lake Karanja of Washim district (M.S). Kulkarni et al., (2006) recorded 93 bird species from Shikhachwadi reservoir of Nanded district (M.S). Wanjari P.D. (2012) recorded 72 bird species from Nagpur city. Kedar et al., (2009) reported 74 species from Rishi and Zedshi lake of Washim district. Tuljapurkar et al., (2013) reported 297 bird species from Sangli district. Chavan and Dhamani (2014) reported 76 species from Chaprala wild life santurary Gadchiroli Maharashtra. Patil S.S. (2015) reported 44 bird species from Tasgaon tahsil (M.S). Wanjari H. V. (2016) reported 41 species of aquatic bird from Ekburji reservoir Washim (M.S). Kadam and Avadesh (2017) reported 41 bird species from Bordi region west coast of india. Jadhav et al., (2018) reported 66 species from Nanda village pond Bhokar tahsil Nanded (M.S). Deshmukh and Rudey (2019) reported 105 bird species in preliminary survey from agroforest ecosystem Dev talav Nagbhid Maharashtra. Siva and Neelanarayanan (2021) reported 102 bird species from Tasgaon tahsil Sangli Maharashtra.

Sr. No.	Common Name	Scientific Name	Order	Family	Status
1.	Little Cormorant	Phalacrocorax niger	Pelecaniformes	Phalacrocorac idae	R
2.	Grey Heron	Ardea cinerea	Pelecaniformes	Ardeidae	R
3.	Indian Pond Heron	Ardeola grayii	Pelecaniformes	Ardeidae	R
4.	Cattle Egret	Bubulcus ibis	Pelecaniformes	Ardeidae	R
5.	Large Egret	Ardea alba	Pelecaniformes	Ardeidae	RM
6.	Smaller Egret	Egretta intermedia	Pelecaniformes	Ardeidae	WM
7.	Little Egret	Egretta garzetta	Pelecaniformes	Ardeidae	R
8.	Black Ibis	Pseudibis papillosa	Pelecaniformes	Threskiornithidae	R
9.	Common Teal	Anas crecca	Anseriformes	Anatidae	WM
10.	Spot -billed duck	Anas poecilorhyncha	Anseriformes	Anatidae	R
11.	Black Kite	Milvus migrans	Accipitriformes	Accipitridae	R
12.	Brahminy Kite	Haliastur indus	Accipitriformes	Accipitridae	R
13.	Common Quail	Coturnix coturnix	Galliformes	Phasianidae	R
14.	Indian Peafowl	Pavo cristatus	Galliformes	Phasianidae	R
15.	Indian/Common Moorhen	Gallinula chloropus	Gruiformes	Rallidae	R
16.	White Breasted Waterhen	Amaurornis phoenicurus	Gruiformes	Rallidae	R
17.	Purple Moorhen	Porphyrio porphyrio	Gruiformes	Rallidae	R
18.	Black - Winged Stilt	Himantopus himantopus	Charadriiformes	Recurvirostridae	WM
19.	Red Wattled Lapwing	Vanellus indicus	Charadriiformes	Charadriidae	R
20.	Yellow Wattled Lapwing	Vanellus malbaricus	Charadriiformes	Charadriidae	RM
21.	Little Ringed plover	Charadrius dubius	Charadriiformes	Charadriidae	RM
22.	Common Redshank	Tringa totanus	Charadriiformes	Scolopacidae	WM
23.	Marsh Sandpiper	Tringa stagnatilis	Charadriiformes	Scolopacidae	WM
24.	Common Greenshank	Tringa nebularia	Charadriiformes	Scolopacidae	WM
25.	Common Sandpiper	Tringa hypoleucos	Charadriiformes	Scolopacidae	RM
26.	Pintail Snipe	Gallinago stenura	Charadriiformes	Scolopacidae	WM

Table 1: Check List of Birds in	n Arid Zone of Jath Tahsil
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27.	Little Stint	Calidris minuta	Charadriiformes	Scolopacidae	WM
28.	Brown-headed Gull	Larus brunnicephalus	Charadriiformes	Laridae	WM
29.	Caspian Tern	Hydroprogne caspia	Charadriiformes	Laridae	WM
30.	Rock Pigeon	Columba livia	Columbiformes	Columbidae	R
31.	Eurasian Collared Dove	Streptopelia decaocto	Columbiformes	Columbidae	RM
32.	Red Collared Dove	Streptopelia tranquebarica	Columbiformes	Columbidae	R
33.	Laughing Dove	Streptopelia senegalensis	Columbiformes	Columbidae	R
34.	Rose Ringed Parakeet	Psittacula krameri	Psittaciformes	Psittaculidae	R
35.	Pied Cuckoo	Clamator jacobinus	Cuculiformes	Cuculidae	SM
36.	Common-Hawk Cuckoo	Hierococcyx varius	Cuculiformes	Cuculidae	R
37.	Asian Koel	Eudynamys scolopacea	Cuculiformes	Cuculidae	R
38.	Greater Coucal	Centropus sinensis	Cuculiformes	Cuculidae	R
39.	Spotted Owlet	Athene brama	Strigiformes	Strigidae	R
40.	House Swift	Apus nipalensis	Caprimuliformes	Apodidae	R
41.	Pied Kingfisher	Ceryle rudies	Coraciiformes	Alcedinidae	R
42.	Common Kingfisher	Alcedo atthis	Coraciiformes	Alcedinidae	R
43.	White-Throated Kingfisher	Halcyon smyrnensis	Coraciiformes	Alcedinidae	R
44.	Green Bee eater	Merops orientalis	Coraciiformes	Meropidae	RM
45.	Common Hoopoe	Upupa epops	Bucerotiformes	Upupidae	RM
46.	Indian Grey Hornbill	Tockus/ Ocyceros birostris	Bucerotiformes	Bucerotidae	R
47.	Coppersmith Barbet	Megalaima haemacephala	Piciformes	Ramphastidae	R
48.	Yellow-crowned Woodpecker	Leiopicus mahrattensis	Piciformes	Picidae	R
49.	Wiretailed Swallow	Hirundo smithii	Passeriformes	Hirundinidae	R
50.	Red Rumped Swallow	Hirundo daurica	Passeriformes	Hirundinidae	R
51.	Rufous Backed Shrike	Lanius schach	Passeriformes	Laniidae	R
52.	Golden Oriole	Oriolus oriolus	Passeriformes	Oriolidae	R
53.	Black Drongo	Dicrurus adsimilis	Passeriformes	Dicruridae	R
54.	Chestnut-Tailed Starling	Sturnus malbaricus	Passeriformes	Strinidae	R

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55.	Brahminy Starling	Sturnus pagedarum	Passeriformes	Strinidae	R
56.	Rosy starling	Sturunus roseus	Passeriformes	Strinidae	WM
57.	Common Myna	Acridotheres tristis	Passeriformes	Strinidae	R
58.	House Crow	Corvus splendens	Passeriformes	Corvidae	R
59.	Large-Billed Crow	Corvus macrorhychas	Passeriformes	Corvidae	R
60.	Common Iora	Aegithina tiphia	Passeriformes	Aegithinidae	R
61.	Red Vented Bulbul	Picnonotus cafer	Passeriformes	Pycnonotidae	R
62.	Large Grey Babler	Turdoides malcolmi	Passeriformes	Leiothrichidae	R
63.	Yellow Eyed Babler	Chrysomma sinense	Passeriformes	Leiothrichidae	R
64.	White Throated Fantail	Rhipidura albicollis	Passeriformes	Rhipiduridae	R
65.	Tailor Bird	Orthotomus sutorius	Passeriformes	Cisticolidae	R
66.	Oriental magpie Robin	Copsychus saularis	Passeriformes	Muscicapidae	R
67.	Black Redstart	Phoenicurus ochruros	Passeriformes	Muscicapidae	WM
68.	Pied Bushchat	Saxicola caprata	Passeriformes	Muscicapidae	R
69.	Indian Robin	Saxicoloides fulicata	Passeriformes	Muscicapidae	R
70.	Great Tit	Parus major	Passeriformes	Paridae	R
71.	Tree Pipit	Anthus trivialis	Passeriformes	Motacillidae	WM
72.	Yellow Wagtail	Motacilla flava	Passeriformes	Motacillidae	WM
73.	White Wagtail	Motacilla alba	Passeriformes	Motacillidae	WM
74.	White-Browed wagtail	Motacilla maderaspatensis	Passeriformes	Motacillidae	R
75.	Purple Rumped Sunbirds	Nectorinia zeylonica	Passeriformes	Nectariniidae	R
76.	Purple Sunbirds	Nectorinia asiatica	Passeriformes	Nectariniidae	R
77.	White Eye	Zosterops palpebrosa	Passeriformes	Zosteropidae	R
78.	House Sparrow	Passer domesticus	Passeriformes	Passeridae	R
79.	Baya Weaver	Ploceus phillippinus	Passeriformes	Ploceidae	R
80.	Scaly-Breasted Munia	Lonchura punctulata	Passeriformes	Estrilidae	R

R: Resident, SM: Summer Migratory, WM: Winter Migratory, Residential Migratory

Photo plate: 1 Birds in Arid Zone of Jath Tahsil



Merops orientalis





Phalacrocorax niger



Picnonotus cafer



Ardeola grayii



Lonchura punctulate

Dicrurus adsimilis



Ploceus phillippinus



Halcyon smyrnensis



Streptopelia senegalensis



Egretta garzetta



Sturnus pagedarum

Recommended suitable measures for their better management, protection and conservation of avifauna.

The following action plan is proposed for the better management, protection and conservation of avifauna.

- Anthropogenic factors are the root causes for wetland degradation and habitat destruction of water birds. Therefore, conservation education and awareness programmes are essential for local farmers, students and fishing community to the pond.
- The area is required to be stopped appropriately to check the illegal hunting to prevent further population loss of birds.
- Studies on vegetation have revealed that intensive biomass extraction (mainly through grazing and fuel wood collection) is leading to changes in vegetation structure and composition of the forest. These changes in forest structure are leading to changes in bird species composition. To provide specific lands and area for grazing of animal and aware to local people.
- Agricultural areas in India probably experience the most heavy and indiscriminate use of pesticides leading to direct and indirect mortality of predatory and frugivorous birds. To educate the local community by organizing various programmes such as workshop, seminar, students' tours, etc.
- Local people should be made aware of the importance of wetlands, waterfowl and other common birds. Without the involvement of common people of this region conservation of the wetlands will not be successful.
- Control and management of accidental fires in the forest, during early summer has some adverse effect on the forest dwelling species.
- Measurement of water chemistry should be done on a regular basis to allow long-term monitoring of changes in nutrient levels and other parameters.

This suggest that the providing natural habitat, availability of food, water, climatic conditions and surrounding vegetation to increase number of bird species and save the future problem

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