

RESEARCH ARTICLE

Birds of Tipeswar wildlife Sanctuary, Maharashtra, India**Wanjari AJ¹, Pawar SS^{2*} and Patil KG³**¹Department of Zoology, S.M. Arts, Commerce, and Science College, Pandharkawada, India²Department of Biology, Institute of Forensic Science, Nagpur, India³Department of Zoology, Institute of Science, Nagpur, India*Corresponding Author Email: sspawar27@gmail.com**ABSTRACT**

The present study was made to estimate the avian fauna in terms of species richness and diversity and guild structure in forest habitats. The present investigation was carried out to study avian diversity with aspect to ecological condition. The study was carried out in Tipeswar wildlife Sanctuary, near Pandharkawada, district Yavatmal situated which is situated far southern corner of Maharashtra State, adjoining the Adilabad district of Andhra Pradesh. The study was undertaken during July-2011 to June 2013. A checklist of total 158 birds species belonging to 46 families was observed of which 129 were resident, 12 were local migrant and 17 were migrant. The favorable ecological conditions like availability of food, wetlands and roosting places were attracting the various birds.

KEYWORDS

Aves, Tipeswar wildlife Sanctuary, Checklist, Pandharkawada

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INTRODUCTION

Avian community is an important component of forest ecosystem. India has a numerous diversity of plants and animals both domesticated and wild in variety of habitats and ecosystems. Food, water, space and cover are four essential components required of a habitat (U.S. Fish and Wildlife Service, 2002). The diversity and richness of avian species in a community shows the diversity and richness of that habitat. Investigations on the bird communities of Western Ghats to plan for biodiversity friendly development are gaining significance (Pramod, 1995). Population studies have been traditionally used to monitor long term changes in avian to assess both habitat quality and the responses of birds to both natural and human caused environmental changes (Wiens, 1989). Understanding the needs and requirement of different species leads us to make conservation strategy. This was the first scientific attempt to study bird fauna of this sanctuary.

Study area:

The study was carried out in Tipeswar wildlife sanctuary which is situated in Patanbori and Parwa Ranges of the Pandharkawada Forest division of Yavatmal district in Vidharbha region of state Maharashtra. Tipeswar wildlife Sanctuary (TWS) is a "Green Oasis" in

the southern part of the Maharashtra state. The total area of TWS is 148.63 km². It is situated in geographical coordinates within the confines of 78°20'22" to 78°47'56" East (longitude) and 19°50'59" to 19°55'44" North (Latitude). It constitutes a compact patch of dense forest cover, having great value from the point of view of wildlife and bio-diversity conservation. The main portion of forests constitutes the dry Teak bearing forests bearing 60 percent of the total crop composition, so classified as Dry Teak Bearing forests (5A/C-ia).

MATERIALS AND METHODS

The bird survey was conducted according to a standard point count method. The data collected from the surveys were used to estimate density, diversity and relative abundance of bird species. The bird surveys were carried out using point count method from July 2011 to June 2013 for 2 years. I used a 25-m/50-m fixed-radius point count method to census the avifauna at each count station (Hutto et al. 1986). Surveys were conducted four days in a week, either from sunrise to 4 hours after sunrise or from 4 hours before sunset until sunset. Morning and evening counts was altered between sites. Each of the sites was surveyed daily depending on weather conditions. Birds seen were identified and recorded along the habitat type and status and checklist were prepared.

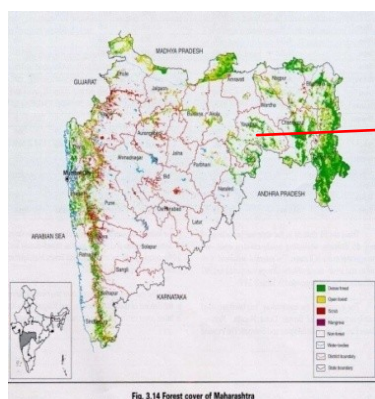


Fig:-Map of Study area

Materials used for study:

For each census, a map of the Tipeswar sanctuary and aerial photographs was used to identify sites. So that camera Nikon was used of 45x zoom and 12.6 megapixel. A Tape recorder was also utilized during each survey to record the particular calls, which were later analyzed and used to identify the species.

For watching, counting and identifying birds, Binocular (10x50), telescope (25-40x), Notebook, Pen, pencil, Compass, Observation sheet, metal or wooden stakes, permanent Marker, Flagging Tape, Handheld GPS, Guide book of birds of Indian continents, Birds of south India etc were used.

Identification and Classification:

For identification and field diagnosis of birds, colored plates of Ali and Ripley (1974), Ali (1996), Grimmett et al. (1998), Grewal et al. (2002) were used. Classification of birds was made in accordance with Inskipp et al (1996).

RESULTS AND DISCUSSION

A total of 158 species of birds were observed and recorded during the course of study while sampling (Appendix I). Out of them, Number of birds species recorded in each habitat were different as resident birds

species were 129, local migratory were 12, migratory were 17 species. It was observed that out of 158 species, 96 found were common, 30 were occasionally seen and 32 were uncommon. 44 Families represent the 158 species with corvidae comprising more bird species following Passeridae and accipitridae. This includes total 8984 detection of birds in the study year 2011 and 9478 detection of birds in the study year 2012. Birds such as lapwings and larks were found using wetland habitat extensively for nesting in their breeding season (Narwade et al. in press). The presence of birds in large quantity is seen by species like green bee-eater, black drongo, parakeet, crested serpent eagle, sparrow hawk and dove. Vultures were found commonly in this Sanctuary.

The record of 158 species of birds during the dry and wet seasons shows the diversity is very high. The occurrence of winter birds in the area indicates that the area is important for migratory birds. The rich and high vegetation might be providing heterogeneous and suitable site for nesting, roosting and foraging of bird. The most important threats to the birds are the spread of agriculture which is main reason behind degradation and conversion of bird population affecting globally of 87% of threatened bird species. Some birds have become locally extinct. The possible reason for this decline is the loss of habitat due to conversion to plantation.

Table 1: Order wise status and feeding guilds of birds in TWS.

Sr.No	Scientific Name	Common Name	Occurrence	Status
	Order-Ciciniormes			
	Family:Podicipedidae			
1.	Podiceps ruficollis	Little Grabe	C	R
	Family:Phalacrocoracidae			
2.	Phalacrocorax niger	Little Cormorant	C	R
3.	Phalacrocorax carbo	Great Cormorant	O	LM
	Family:Ardeida			
4.	Ardea purpurea	Purple Heron	O	R
5.	Ardeola grayii	Pond Heron	C	R
6.	Bubulcus ibis	Cattle Egret	C	R
7.	Ardea alba	Larger Egret	O	LM
8.	Egretta intermedia	Medium Egret	C	R

Table 1: continued...				
Sr.No	Scientific Name	Common Name	Occurrence	Status
9.	<i>Egretta garzetta</i>	Little Egret	C	R
10.	Family:Anhingidae <i>Anhinga melanogaster</i>	Darter	O	R
11.	Family:Ciconiidae <i>Anastomus oscitans</i>	Asian Openbill Stork	O	LM
12.	<i>Anastomus leucocephala</i>	Painted Stork	O	LM
13.	<i>Ciconia episcopus</i>	Wooly-necked Stork	C	R
14.	Family:Phoenicopteridae <i>Pseudibis papillosa</i>	Black Ibis	Un	R
	Family:Pteroclididae <i>Pterocles indicus indicus</i>	Painted Sandgrouse	Un	R
16.	Family-Scolopacidae <i>Tringa ocropus</i>	Wood Sandpiper	C	M
17.	<i>Tringa hypoleucos</i>	Common Sandpiper	C	M
18.	<i>Gallinago gallinago</i>	Common Snipe	Un	R
19.	<i>Tringa tetanus</i>	Common Red Shank	O	M
20.	Family:Jacanidae <i>Metopidius indicus</i>	Bronzewinged Jacana	C	R
21.	Family:Charadriidae <i>Himantopus himantopus</i>	Blackwinged Stilt	O	LM
22..	<i>Charadrius dubius</i>	Little Ringed Plover	C	R
23..	<i>Vanellus indicus</i>	Yellow-wattled Lapwing	C	R
24.	<i>Vanellus indicus</i>	Red-Wattled Lapwing	C	R
25.	Family-Laridae <i>Larus brunicephalus</i>	Brown-headed Gull	C	R
26.	<i>Sterna aurantia</i>	River Tern	C	RM
27.	Family:Accipitridae <i>Elanus caeruleus</i>	Black-Winged Kite	C	R
28.	<i>Milvus migrans govinda</i>	Pariah Kite	C	R
29.	<i>Aquila rapax vindhiana</i>	Twany Eagle	O	R
30.	<i>Spilornis cheela</i>	Crested serpent Eagle	C	R
31.	<i>Circus macrorus</i>	Pallied Harriar	Un	W
32.	<i>Accipiter badius</i>	Shikra	C	R
33.	<i>Gyps bengalensis</i>	White rumped Vulture	O	R
34.	<i>Haliatur indus</i>	Brahminy Kite	O	LM
35.	Family-Glareolida <i>Cursorius coromandelicus</i>	Indian Courser	O	LM
36.	Family-Faconidae <i>Falco tinnunculus</i>	Common Indian Kastrel	O	M
37.	<i>Falco cicquera</i>	Red- nacked (Headed) Falcon	Un	R
38.	Order-Galliformes Family:Phasianidae <i>Francolinus pictus</i>	Painted Partridge	O	R
39.	<i>Coturnix coromandelica</i>	Rain Quail	C	R
40.	<i>Perdica asiatica</i>	Jungle Bush Quail	C	R
41.	<i>Pavo cristatus</i>	Common Indian Peafowl	C	R
42.	<i>Francolinus pondicerianus</i>	Grey Partridge	C	R
43.	<i>Cotumix cotumix</i>	Common Quail	O	R
44.	<i>Tumix suscitator</i>	Barred Button Quail	C	R
45.	Order-Anseriformes Family:Anatidae <i>Dendrocygna javanica</i>	Lesser Whistling Teal	C	R
46.	<i>Anas crecca</i>	Common Teal	Un	W
47.	<i>Anas acuta</i>	Northern Pintail	C	W
48.	<i>Anas poecilorhyncha</i>	Spot-bill duck	C	R
49.	<i>Aythya ferina</i>	Common Pochard	O	W
50.	Order-Piciformes Family:Picidae <i>Dinopium benghalense</i>	Lesser Golden-backed Woodpecker	O	W
51.	<i>Dendrocopos nanus</i>	Brown-Capped Pigmy Woodpecker	O	R
52.	<i>Dendrocopos mahrattensis</i>	Yellow-fronted Pied-Woodpecker	C	R
53.	<i>Chrysocolaptes festivus</i>	White napped Woodpecker	O	R

Table 1: Continued...

Sr.No	Scientific Name	Common Name	Occurrence	Status
54.	Family:Megalaimidae Megalaima haemacephala	Coppersmith Barbet	C	R
55.	Megalaima viridis	Small Green Barbet	C	R
56.	Megalaima zeylanica	Brown-headed Barbet	Un	R
57.	Order-Bucerotiformes Family:Bucerotidae Ocyrceros birostris	Indian Grey Hornbill	C	R
58.	Order-Coraciformes Family:Coraciidae Coracias benghalensia	Indian Roller	C	R
59.	Family-Alcedinidae Alcedo atthis	Common Kingfisher	C	R
60.	Halcyon smymensis	White breasted Kingfisher	C	R
61.	Ceryle rudis	Lesser Pied Kingfisher	C	R
62.	Family-Meropidae Merops philippinus	Green Bee-eater	C	R
63.	Order-Cuculiformes Family-Cuculidae Clamator jacobinus	Pied Cuckoo	Un	BM
64.	Hierococccyx varius	Common Hawk	C	R
65.	Cuculus micropterus	Indian Cuckoo	C	R
66.	eudynamy scolopacea	Asian Koel	C	R
67.	Phaenicophaeus leschenaultii	Sirkeer Malkoha (Cuckoo)	Un	R
68.	Family-Centropodidae Centropus sinensis	Crow-Pheasant	O	R
69.	amily-Psittacidae Psittacula krameri	Rose-ringed Parakeet	C	R
70.	Psittacula cyanocephala	Plum-headed Parakeet	C	R
71.	Psitacula eupatria	Alexadrine Parakeet	O	R
72.	Order-Apodiformes Family-Apodidae Apus affinis	Little (House)Swift	C	R
73.	Cypsiurus belasiensis	Asian palm Swift	C	R
74.	Order-Strigiformes Family-Strigidae Otus bakkamoena	Collared scops-Owl	Un	R
75.	Bubo bubo	Eurasian Eagle-Owl	O	R
76.	Athene brama	Spotted Owlet	C	R
77.	Heteroglaux blewitti	Forest Owlet	Un	R
78.	Family-Caprimulgidae Caprimulgus asiaticus	Indian LongTailed Nightjar	Un	R
79.	Caprimulgus indicus	Grey (Indian Jungle)Nightjar	O	R
80.	Order-Columbiformes Family-Columbidae Columba livia	Indian Rock Pgeon	C	R
81..	Treron phoenicoptera	Yellow footed Green pigeon	C	R
82.	Streptopelia decaocto	Eurasian Collard-Dove	C	R
83.	Streptopelia chinensis	Spotted Dove	C	R
84.	Streptopelia senegalensis	Laughing Dove	C	R
85.	Streptopelia tranquebarica	Red Collared-Dove	C	R
86.	Streptopelia orientalis	Oriental Turtle Dove	C	R
87.	Order-Gruiformes Family-Rallidae Amanrorris phoenicurus	White breasted Waterhen	C	R
88.	Fulica atra	Common Coot	Un	MR
89.	Order-Passeriformes Family-Pittidae Pitta brachyura	Indian Pitta	Un	LM
90.	Family-Laniidae Lanius vittatus	Bay-backed Shrike	C	R
91.	Lanius schach	Long-tailed Shrike	C	R
92.	Lanius meridionalis	Southern Grey Shrike	O	R
93.	Family-Corvidae Corvus splendens	House Crow	C	R
94.	Corvus macrorhynchus	Jungle Crow	C	R
95.	Oriolus xanthomus	Black-hooded Oriole	O	R
96.	Oriolus oriolus	Eurasian Golden Oriole	C	R

Table 1: continued...				
Sr.No	Scientific Name	Common Name	Occurrence	Status
97.	<i>Pericrocotus cinnamomeus</i>	Small Minivet	C	R
98.	<i>Pericrocotus flammeus</i>	Scarlet Minivet	O	R
99.	<i>Coracina Melanoptera</i>	Black headed Cuckoo-Shrike	Un	R
100.	<i>Coracina macei</i>	Large Cuckoo-Shrike	Un	R
101.	<i>Dicrurus macrocercus</i>	Black Drongo	C	R
102.	<i>Dicrurus paradiseus</i>	Greater Racket-tailed Drongo	Un	R
103.	<i>Rhipidura aureola</i>	White-Browed Fantail	C	R
104.	<i>Rhipidura albicollis</i>	White-throated Fantail	Un	R
105.	<i>Dendrocitta vagabunda</i>	Indian (Rufous) Treepie	C	R
106.	<i>Terpsiphone paradise</i>	Asian Paradise-Flycatcher	C	R
107.	<i>Aegithina tiphia</i>	Commo Lora	Un	R
108.	<i>Tephrodomis pondicerianus</i>	Common Woodshrike	C	R
109.	Family-Muscicapidae <i>Turdus merula nigropileus</i>	Eurasian Blackbird	C	R
110.	<i>Cyornis tickelliae</i>	Tickell's Blue Flycatcher	Un	LM
111.	<i>Eumyis thalassina</i>	Verditer Flycatcher	O	M
112.	<i>Luscinia svecica</i>	Blue throat	C	M
113.	<i>Copsychus saularis</i>	Oriental Magpie Robin	C	R
114.	<i>Saxicoloides fulicata</i>	Indian Robin	C	R
115.	<i>Phoenicurus ochruros</i>	Black Redstart	Un	M
116.	<i>Saxicola torquata</i>	Common Stonechat	Un	M
117.	<i>Saxicola caprata</i>	Pied Bush Chat	C	R
118.	Family-Sturnidae <i>Sturnus roseus</i>	Rosy Starling	C	M
119.	<i>Sturnus contra</i>	Asian Pied Starling	C	R
120.	<i>Sturnus pagodaarum</i>	Brahminy Starling	C	R
121.	<i>Acridotheres tristis</i>	Common Myna	C	R
122.	<i>Acridotheres fuscus</i>	Jungle Myna	C	R
123.	<i>Acridotheres ginginianus</i>	Bank Myna	O	R
124.	Family-Paridae <i>Parus major</i>	Great Tit	C	R
125.	Family-Hirundinidae <i>Hirundo rustica</i>	Dusky Crag Martin	C	R
126.	<i>Hirundo smithii</i>	Wire tailed Swallow	C	R
127.	<i>Hirundo daurica</i>	Red-rumped Swallow	C	R
128.	Family-pycnonotidae <i>Pycnonotus cafer</i>	Red-Vented Bulbul	C	R
129.	<i>Pycnonotus luteolus</i>	White-browed Bulbul	Un	R
130.	<i>Pycnonotus jocosus</i>	Red-whiskered Bulbul	Un	R
131.	Family-Cisticolidae <i>Prinia socialis</i>	Ashy Prinia	C	R
132.	<i>Prinia inornata</i>	Plain Prinia	C	R
133.	Family-Sylviidae <i>Chrysomma sinense</i>	Yellow-eyed Babbler	C	R
134.	<i>Turdoides caudatus</i>	Common Babbler	C	R
135.	<i>Turdoides malcolmi</i>	Large Grey Babbler	C	R
136.	<i>Turdoides striatus</i>	Jungle Babbler	C	R
137.	<i>Acrocephalus dumetorum</i>	Blyth's Reed Warbler	C	R
138.	<i>Orthobornus sutorius</i>	Common Tailor bird	O	R
139.	Family-Alanidae <i>Mirafra erythroptera</i>	Indian Bush Lark	C	R
140.	<i>Ammomanes phoenicurus</i>	Rufous-tailed Lark	Un	LM
141.	<i>Eremopterix grisea</i>	Ashy-crowned Sparrow Lark	C	R
142.	<i>Galerida cristata</i>	Crested Lark	O	R
143.	<i>Nectarinia asiatica</i>	Purple Sunbird	C	R
144.	<i>Nectarinia zeylonica</i>	Purple-rumped Sunbird	Un	R
145.	Family-Passeridae <i>Motacilla alba</i>	White Wagtail	C	M
146.	<i>Motacilla maderaspatensis</i>	Large pied Wagtail	C	R
147.	<i>Motacilla caspica</i>	Grey Wagtail	Un	M
148.	<i>Anthus rufulus</i>	Paddy Field Pipit	C	LM
149.	<i>Passer domesticus</i>	House Sparrow	C	R
150.	<i>Petronia xanthocollis</i>	Yellowthroated Sparrow	O	R
151.	<i>Ploceus phillippinus</i>	Baya Weaver	C	BM
152.	<i>Lonchura malabarica</i>	White throated Munia	C	R
153.	<i>Amandava a0andaa</i>	Red Munia	C	R

154.	Lonchura punctulata	Spotted Munia	C	R
155.	Lonchura striata	White backed Munia	C	R
156.	Anthus hodgsoni	Indian Tree pipit	C	R
157.	Family-Fringillidae Melophus latham	Crested Bunting	Un	R
158.	Order-Upepiformes Family-Upupidae Upapa epops	Common Hoopoe	Un	R
Occurrence-C-Common, O-Occasional, Un-Uncommon. Status:-R-Resident, M-Migratory, W-winter Migrant, LM-Local Migrant, BR-Breeding Migrant.				

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