

Diversity of avifauna in Tilari conservation reserve of Dodamarg Sindhudurg district, Maharashtra

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Abstract: Tilari conservation reserve of Dodamarg region of Sindhudurg district of Maharashtra in the northern western ghats region experiencing extreme climate conditions and harbour diverse avifauna. The river Tilari originate from picks of western ghats in east and emptied in Arabian sea at west region. Forest of Tilari conservation reserve includes semi evergreen and tropical moist deciduous forests. The total area of this forest reserve is 29.53 sq.km. Tilari connects the Radhanagari and Amboli wildlife corridor in north to the Bhimgad Sanctuary of Karnataka and Mhadei wildlife sanctuary of Goa in the south. The study was undertaken to observe the bird diversity in the region from January to December all seasons. In the present study 165 bird species have recorded belonging to 50 families. Family Alcedinidae, family Cuculidae, family Strigidae, family Accipitridae, family Ardeidae, Family Monarchidae, family Pycnonotidae, family Motacillidae are dominant in this area. Endangered and endemic species recorded in semi evergreen forest indicating their conservation significance.

Key Words- Conservation reserve, western ghats, diversity, avifauna, endangered, endemic

INTRODUCTION

Tilari conservation reserve of Dodamarg region of Sindhudurg district of Maharashtra in the northern western ghats region experiencing extreme climate conditions and harbour diverse avifauna. The river Tilari originate from picks of western ghats in East and emptied in Arabian sea at west region. Forest of Tilari conservation reserve includes semi evergreen and tropical moist deciduous forests. The total area of this forest reserve is 29.53 sq.km. Tilari connects the Radhanagari and Amboli wildlife corridor in north to

the Bhimgad sanctuary of Karnataka and Mhadei wildlife sanctuary of Goa in the south.

Dr. Salim Ali had reported 1260 species in India. According to recent estimates, there are 1347 species of birds all over India. Of them, approximately 82 species have been listed as threatened in the IUCN Red List of Threatened Animals (IUCN 2006).

In the region of Sahyadri ranges, called as Western Ghats, over 350 species of birds have been recorded overall by different researchers. It has been considered as a bird endemic area by Birdlife International.

Bird life in Sindhudurg district represents almost 414 different bird species distributed throughout the district. The diversity has been distributed all over the district in different geographical habitats like cultivations, forests, grasslands, open arid lands, mangrove thickets along estuaries, coastal lines etc.

Birds are the most ecologically sensitive animals and all over the world, the bird life is coming in a great threats due to several manmade reasons. The major reason producing a serious threat to avifaunal life is Rapid destruction of the habitats. The other reason is 'Poaching' for meat and feathers. In addition to that, birds are highly sensitive to chemicals and toxins. Exposure to such chemicals usually proves fatal for them. They can fall fatally sick either by inhaling them, or eating them or their diffusion through their skin. In Sindhudurg, use of pesticides and

insecticides is a usual matter as much land is under fruit plant cultivations like Mango and Cashew.

MATERIAL AND METHODS

a) Study area:

The area selected for the present study is Tilari conservation reserve of Dodamarg taluka in Sindhudurg district of Maharashtra state. It is located 81 KM from district headquarters in Oros. The present study is to explore the existing diversity of birds in Tilari conservation reserve. It is located in both the side of Tilari river. Tilari river originates in Sahyadri hills and flowing west towards Arabian sea. The villages like Hewale, Bambarde, Ambeli, Ghatiwade, Babarwadi having rich diversity of avifauna.

b) Methodology:

The methodology for the avifaunal study as follows

1] The selected area was visited at a regular interval of 8 days as well as according to the time available during vacations and on regular days.

2] The observations were done by using capable binoculars of Olympus 10 x 50 capacity

3] Identification of the birds observed in the study area during the study period has been done by using proper reputed identification keys and handbook of Birds.

4] Photography was done by using digital camera D 7500 and Lens 500 mm. The observations were made mainly during the early mornings or in the evenings. During the studies, avian species diversity was given prime importance rather than the relevant population density.

D] Observations:

1] Overall 165 species of birds were observed during the study belonging to total 50 families. Tilari conservation reserve is significantly rich in avifauna and well distributed all over the Tilari river study area.

Table -1 List of the birds in Tilari Conservation reserve

Sr.No	Common name of Bird	Scientific name
	FAMILY : PHASIANIDAE	
1	Grey Junglefowl	<i>Gallus sonneratti</i>
2	Red Spurfowl	<i>Galloperdix spadicea</i>
3	Jungle Bush Quail	<i>Perdica asiatica</i>
4	Indian Peafowl	<i>Pavo cristatus</i>
	FAMILY : MEGALAIMIDAE	
5	White Cheeked Barbet	<i>Psilopogon viridis</i>
6	Coppersmith Barbet	<i>Psilopogon haemacephala</i>
7	Malabar Barbet	<i>Psilopogon malabaricus</i>
	FAMILY : BUCEROTIDAE	
8	Indian Grey Hornbill	<i>Ocyrceros birostris</i>
9	Malabar Pied Hornbill	<i>Anthraceroceros coronatus</i>
10	Great Hornbill	<i>Bucerus bicornis</i>
11	Malabar Grey Hornbill	
	FAMILY : UPUPIDAE	
12	Eurasian Hoopoe	<i>Upupa epops</i>
	FAMILY : CORACIIDAE	
13	Indian Roller Coracias	<i>Coracias benghalensis</i>
14	European Roller	<i>garrulus</i>
	FAMILY : ALCEDINIDAE	
15	Common (Small Blue) Kingfisher	<i>Alcedo atthis</i>
16	White Throated (breasted) Kingfisher	<i>Halcyon smyrnensis</i>
17	Stork billed Kingfisher	<i>Halcyon capensis</i>
18	Pied Kingfisher	<i>Ceryle rudis</i>
19	Blue eared Kingfisher	<i>Alcedo meninting</i>

20	Oriental Dwarf Kingfisher	<i>Ceyx erithaca</i>
	FAMILY : MEROPIDAE	
21	Asian Green Bee-eater	<i>Merops orientalis</i>
22	Blue- bearded Bee eater	<i>Nyctyornis athertoni</i>
23	Chestnut headed Bee eater	<i>Merops leschenaulti</i>
	FAMILY : CUCULIDAE	
24	Pied Cuckoo	<i>Clamator jacobinus</i>
25	Common Hawk Cuckoo (Brain Fever)	<i>Hierococcyx varius</i>
26	Indian Cuckoo	<i>Cuculus micropterus</i>
27	Eurasian (Common) Cuckoo	<i>Cuculus canorus</i>
28	Lesser Cuckoo	<i>Cuculus poliocephalus</i>
29	Banded Bay Cuckoo	<i>Cacomantis sonneratii</i>
30	Drongo-Cuckoo	<i>Surniculus lugubris</i>
31	Asian Koel	<i>Eudynamys scolopacea</i>
32	Blue Faced Malkoha	<i>Phaenicophaeus viridirostris</i>
33	Greater Coucal	<i>Centropus sinensis</i>
	FAMILY : PSITTACIDAE	
34	Alexandrine Parakeet	<i>Psittacula eupatria</i>
35	Rose ringed Parakeet	<i>Psittacula krameri</i>
36	Plum-headed Parakeet	<i>Psittacula cyanocephala</i>
	FAMILY : APODIDAE	
37	Little Swift	<i>Apus affinis</i>
38	Asian Palm Swift	<i>Cypsiurus belasiensis</i>
	FAMILY : HEMIPROCNIIDAE	
39	Crested Tree Swift	<i>Hemiprocne coronata</i>
	FAMILY : TYTONIDAE	
40	Barn Owl	<i>Tyto Alba</i>
	FAMILY : STRIGIDAE	
41	Indian Scops Owl	<i>Otus bakkamoena</i>
42	Brown Fish- Owl	<i>Ketupa zeylonensis</i>
43	Brown Wood Owl	<i>Strix leptogrammica</i>
44	Spotted Owlet	<i>Athene brama</i>
45	Jungle Owlet	<i>Glaucidium radiatum</i>
46	Brown Hawk- Owl	<i>Ninox scutulata</i>
	FAMILY : CAPRIMULGIDAE	
47	Indian Nightjar (Indian Jungle)	<i>Caprimulgus indicus</i>
48	Savanna Nightjar	<i>Caprimulgus affinis</i>
	FAMILY : COLUMBIDAE	
49	Rock Pigeon	<i>Columba livia</i>
50	Yellow-footed Green Pigeon	<i>Treron (Phoenicopiterus)</i> <i>Chlorogaster</i>
51	Oriental Turtle Dove	<i>Streptopelia (Orientalis)</i> <i>erythrocephala</i>
52	Spotted Dove	<i>Streptopelia chinensis</i>
	Family : RALLIDAE	
53	White breasted Waterhen	<i>Amanrornis phoenicurus</i>
	FAMILY : CHARADRIIDAE	
54	Red-wattled Lapwing	<i>Vanellus indicus</i>
	FAMILY : LARIDAE - GULL, TERN	
55	River Tern	<i>Sterna aurantia</i>

56	Whiskered Tern	<i>Chlidonias hybridus</i>
	FAMILY : ACCIPITRIDAE – RAPTORS	
57	Osprey	<i>Pandion haliaetus</i>
58	Black-winged (shouldered) Kite	<i>Elanus caeruleus</i>
59	Black Kite	<i>Milvus migrans</i>
60	Brahminy Kite	<i>Haliastur indus</i>
61	Crested Goshawk	<i>Accipiter trivirgatus</i>
62	Shikra	<i>Accipiter badius</i>
63	Egyptian Vulture	<i>Neophron percnopterus</i>
64	Changeable Hawk-Eagle	<i>Nisaetus cirrhatus</i>
65	Bonelli's Eagle	<i>Hieraaetus fasciatus</i>
66	Booted Eagle	<i>Hieraaetus Pennatus</i>
67	Tawny Eagle	<i>Aquila rapax</i>
68	Black Eagle	<i>Ictinaetus malayensis</i>
69	Pallid Harrier	<i>Circus macrourus</i>
70	Besra	<i>Accipiter virgatus</i>
71	Crested Serpent Eagle	<i>Spilornis cheela</i>
72	Oriental Honey Buzzard	<i>Pernis ptilorhynchus</i>
73	White-eyed Buzzard	<i>Butastur teesa</i>
	FAMILY : ANHINGIDAE	
74	Darter	<i>Anhinga melanogaster</i>
	FAMILY : PHALACROCORACIDAE	
75	Little Cormorant	<i>Phalacrocorax niger</i>
76	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>
	FAMILY : ARDEIDAE - EGRETS, Herons	
77	Little Egret	<i>Egretta garzetta</i>
78	Great (Large) Egret	<i>Ardea albus</i>
79	Intermediate (Median) Egret	<i>Ardea intermedia</i>
80	Cattle Egret	<i>Bubulcus ibis</i>
81	Grey Heron	<i>Ardea cinerea</i>
82	Purple Heron	<i>Ardea purpurea</i>
83	Little Heron (Striated)	<i>Butorides striatus</i>
83	Indian Pond Heron	<i>Ardeola grayii</i>
85	Black - Crowned Night Heron	<i>Nycticorax nycticorax</i>
86	Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>
	FAMILY : CICONIIDAE - STORKS	
87	Asian Openbill	<i>Anastomus oscitans</i>
88	Woolly- necked Stork	<i>Ciconia episcopus</i>
	FAMILY : PITTIDAEZ	
89	Indian pitta	<i>Pitta brachyura</i>
	FAMILY : IRENIDAE	
90	Jerdon's Leafbird	<i>Chloropsis cochinchinensis</i>
91	Golden Fronted Leafbird	<i>Chloropsis aurifrons</i>
	FAMILY : LANIIDAE	
92	Isabelline Shrike	<i>Lanius isabellinus</i>
93	Bay-backed Shrike	<i>Lanius vittatus</i>
94	Long - tailed Shrike	<i>Lanius Schach</i>
	FAMILY : CORVIDAE	
95	Rufous (Indian) Treepie	<i>Dendrocitta vagabunda</i>
96	House Crow	<i>Corvus splendens</i>

97	Large-billed (Jungle) Crow	<i>Corvus macrorhynchos</i>
	FAMILY : ORIOLIDAE	
98	Indian Golden Oriole	<i>Oriolus kundoo</i>
99	Black-hooded Oriole	<i>Oriolus xanthornus</i>
	FAMILY : CAMPEPHAGIDAE	
100	Large Cuckoo-Shrike	<i>Coracina macei</i>
101	Black headed Cuckoo-Shrike	<i>Coracina melanoptera</i>
102	Small Minivet	<i>Pericrocotus cinnamomeus</i>
103	Orange minivet	<i>Pericrocotus flammeus</i>
	FAMILY : VANGIDAE	
104	Black Winged Cuckoo-Shrike	<i>Hemipus picatus</i>
105	Bar-winged Flycatcher-Shrike	<i>Hemipus picatus</i>
	FAMILY : DICRURIDAE	
106	Black Drongo	<i>Dicrurus macrocercus</i>
107	Ashy Drongo	<i>Dicrurus leucophaeus</i>
108	White-bellied Drongo	<i>Dicrurus caerulescens</i>
109	Greater Racket-tailed Drongo	<i>Dicrurus paradiseus</i>
	FAMILY : MONARCHIDAE	
110	Blue-capped Rock Thrush	<i>Monticola cinclorhynchus</i>
111	Malabar Whistling Thrush	<i>Myophonus horsfieldii</i>
112	Tickell's Blue Flycatcher	<i>Cyornis tickelliae</i>
113	Verditer Flycatcher	<i>Eumyis thalassina</i>
114	Pied Bush Chat	<i>Saxicola caprata</i>
115	White-bellied Blue Flycatcher	<i>Cyornis pallidipes</i>
116	Black-naped Monarch	<i>Hypothymis azurea</i>
117	Oriental Magpie	<i>RobinCopsychus saularis</i>
118	Indian Robin	<i>Saxicoloides fulicata</i>
	FAMILY : TURDIDAE	
119	Orange-headed Thrush	<i>Zoothera citrina</i>
120	Indian Blackbird	<i>Turdus merula nigropileus</i>
	FAMILY : STURNIDAE	
121	Common Myna	<i>Acridotheres tristis</i>
122	Jungle Myna	<i>Acridotheres fuscus</i>
	FAMILY : SITTIDAE	
123	Velvet - fronted Nuthatch	<i>Sitta frontalis</i>
	FAMILY : PARIDAE	
124	Indian Yellow Tit	<i>Machlolophus aplonotus</i>
	FAMILY : HIRUNDINIDAE	
125	Wire-tailed Swallow	<i>Hirundo smithii</i>
126	Red-rumped Swallow	<i>Hirundo daurica</i>
	FAMILY : PYCNONOTIDAE	
127	Red -whiskered Bulbul	<i>Pycnonotus jocosus</i>
128	Red -vented Bulbul	<i>Pycnonotus cafer</i>
129	White-browed Bulbul	<i>Pycnonotus luteolus</i>
130	Grey headed bulbul	<i>Microtarsus priocephalus</i>
131	Flame throated Bulbul	<i>Rubigulagularis</i>
132	Yellow browed Bulbul	<i>Acritillas indica</i>
	FAMILY : CISTICOLIDAE	
133	Ashy Prinia	<i>Prinia socialis</i>
134	Plain Prinia	<i>Prinia inornata</i>

135	Grey-breasted Prinia	<i>Prinia hodgsonii</i>
136	Blyth's Reed Warbler	<i>Acrocephalus dumetorum</i>
	FAMILY : ACROCEPHALIDAE	
137	Greenish Warbler	<i>Phylloscopus trochiloides</i>
	FAMILY : PHYLLOSCOPHIDAE	
138	Western Crowned Leaf Warbler	<i>Phylloscopus occipitalis</i>
139	Common Chiff chaff	<i>Phylloscopus collybita</i>
140	Puff-throated (Spotted) Babbler	<i>Pellorneum ruficeps</i>
141	Common Tailor Bird	<i>Orthobomus sutorius</i>
	FAMILY : CISTICOLIDAE	
142	Tawny-bellied Babbler	<i>Dumetia hyperythra</i>
	FAMILY : TIMALIIDAE	
143	Yellow-eyed Babbler	<i>Chrysomma sinense</i>
144	Indian Scimitar Babbler	<i>Promatorhinus horsfieldii</i>
145	Jungle Babbler	<i>Turdoides striatus</i>
	FAMILY : LEIOTHRICHIDAE	
146	Brown-cheeked Fulvetta	<i>Alcippe poiocephala</i>
147	Thick-billed Flowerpecker	<i>Dicaeum agile</i>
	FAMILY : DICAEDIDAE	
148	Purple-rumped Sunbird	<i>Nectarinia zeylonica</i>
	FAMILY : NECTARINIDAE	
149	Purple Sunbird	<i>Nectarinia asiatica</i>
150	White Wagtail	<i>Motacilla alba</i>
	FAMILY : MOTACILLIDAE	
151	White or Masked Wagtail	<i>Motacilla (alba) personata</i>
152	White browed Wagtail	<i>Motacilla maderaspatensis</i>
153	Citrine Wagtail	<i>Motacilla citreola</i>
154	Grey Wagtail	<i>Motacilla cinerea</i>
155	Yellow Wagtail	<i>Motacilla flava</i>
156	Forest Wagtail	<i>Dendronanthus indicus</i>
157	Paddyfield pipit	<i>Anthus rufulus</i>
158	House Sparrow	<i>Passer domesticus</i>
	FAMILY : PASSERIDAE	
159	Chestnut-shouldered Petronia	<i>Petronia xanthocollis</i>
160	Baya Weaver	<i>Ploceus philippinus</i>
161	Red Avadavat (Munia)	<i>Amandava amandava</i>
	FAMILY : ESTRILIDAE	
162	White-rumped Munia	<i>Lonchura striata</i>
163	Black-headed Munia	<i>Lonchura malacca</i>
164	Scaly-breasted (Spotted) Munia	<i>Lonchura punctulata</i>
	FAMILY -TROGONIDAE	
165	Malabar Trogon	<i>Harpactes faciatus</i>

RESULT AND CONCLUSION

In present study 165 species of birds have recorded belonging to 50 families in that 14 species of birds are endemic to Western Ghats. Family Alcedinidae 6 species of kingfishers, family Cuculidae, 10 Species of cuckoos, family Strigidae, 6 species of Owls, family Accipitridae 17 species of raptors, family

Aardeidae 12 species of egrets, family Monarchidae 8 species of flycatchers and robins, family Pycnonotidae 6 species of bulbuls, family Motacillidae 8 species of wagtails are dominant in this area. 12 endemic species recorded in semievergreen forest indicating their conservation significance.

Present study indicates that there is a greater bird diversity seen in Tilari conservation reserve. The conservation of birds has direct impact from two major factors. The impact of habitat loss in nearby private area which is connect with conservation reserve forest. On the other hand climate change may have implication on distribution and habitat change of birds.

REFERENCES

- [1] Ali Salim: "The Book of Indian Birds", BNHS, 13th Reprint - 2002
- [2] Grimmet Richard & Inskipp Carol and Inskipp Tim: "Pocket Guide to Birds of Indian Subcontinent", Oxford University Press, Reprint 2007.
- [3] Rahmani Asad R., Kasambe Raju, Narwade Sujit, Patil Pramod and Khan Noor I. - Threatened birds of Maharashtra; Bombay Natural History Society [BNHS], 2014.
- [4] Jamble M. N.: "Survey of the Avifauna of the Sindhudurga District in Maharashtra in relation to the Biology of Some important Bird Species.", Ph. D. Thesis, University of Mumbai – Year 2010.
- [5] Himanshu S. Pelel, Pratyush P., Mahapatra and Hemanth K Sathu, .Birds of Hadagarh wildlife sanctuary, Odisha, India, World Journal of Zoology (3): 221-225.
- [6] Barve,S., and Warriar, R.,2013. Bird diversity of the Sharavathy landscape , Karnataka, Indian birds 8(3):57-61.
- [7] V.Satose,Vikrant Chourasiya, Rakesh Deulkar and S.Menon 2018, Avian fauna of Ambolighats Sindhudurg District, Maharashtra State , IndiaJournal of Threatened Taxa10(13) 12805-12816