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Research Article

AVIFAUNA DIVERSITY OF MALATWADI AND ITS VICINITY, CHANDGAD TASHIL, KOLHAPUR, SOUTHERN MAHARASHTRA

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ABSTRACT

Studies are carried out to record the avifauna diversity in Malatwadi and its adjacent area of Chandgad tashil in Kolhapur district of southern Maharashtra. Field work was carried out from January 2012 to October 2012. A total of 123 bird species were documented belonging to 18 orders, 58 families and 103 genera. Passeriformes alone represents 52% (64) of the total bird species followed by Ciconiformes (12) and Falconiformes (8). Ten orders represented by 6-2 bird species. Anseriformes, Podicipediformes, Caprimulgiformes, Apodiformes and Upupiformes consists one bird species each. Among the families Accipitridae consist maximum (7) number of bird species. Fourteen families represented by 5-3 bird species and rest of the families represent one or two bird species.

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INTRODUCTION

Indian subcontinent supports 1263 bird species (Praveen J. *et al.*, 2016). Prasad, (2003) documented 450 bird species from Western Maharashtra. Recently, Hiragond and Lokhande (2016) made attempt to document 174 bird species from Tillari forest in Chandgad tashil of Kolhapur district in southern Maharashtra. Since, there is no published report on avifauna of Malatwadi and nearby places in Chandgad tashil of Kolhapur, which is a border area of Karnataka and Maharashtra state. Hence, efforts were made to document the avifauna of Malatwadi and its adjacent area in Chandgad tashil.

Study area

Chandgad (15° 55' 60 N, 74° 23' 0 E) is located around 762 m above sea level and temperature ranging from 14.75 to 36.10° C. Since, Chandgad is a part of Western Ghats, rainy season extends up to September and witnesses heavy rainfall between 3000 to 5000 mm/year. Avifauna survey was made in Malatwadi (15°59'8"N 74°20'20"E) and its adjacent area (Figure 1) namely Kowad (15°59'57"N 74°22'32"E), Mangaon (15°56'27"N 74°19'35"E), Adakoor, Lakkikatti and Nittur (15°59'14"N 74°21'47"E) villages. The study area is traversed by Tamrapani River. Habitat consists of grassland, some hilly area, open land, temporary and permanent water bodies and agricultural land with rice (*Oryza sativa*) and sugarcane (*Saccharum officinarum*) as major crops. Study area consist

two small dams in Malatwadi and Lakkikatti stores 3 tmc and 5 tmc of water respectively used for drinking and irrigation purposes.

Vegetation

The trees like Mango (*Mangifera indica*), Tamarind (*Tamarindus indica*), Margosa (*Azadirachta indica*), Acacia (*Acacia longifolia*), Coconut (*Cocos nucifera*), Bamboo (*Bambusa vulgaris*) Ficus (*Ficus benghalensis* and *Ficus racemosa*), Ashok (*Polyalthia longifolia*), Teak (*Tectona grandis*) and xerophytic plants like Cactus (*Opuntia dillenii*), Aloe (*Aloe vera*), Calotropis (*Calotropis gigantea*) distributed in the study area. Maize (*Zea mays*), Ground nut (*Arachis hypogea*), Sunflower (*Helianthus annuus*), Millet finger (*Eleusine coracana*), Peas (*Pisum sativum*), Red gram (*Cajanus cajan*) are the common agricultural crops. *Cymbopogon gidarba* and *Cymbopogon martinii* are the grass varieties found in open lands and it is burnt during early summer every year.

METHODS

Study area was explored to record the avifauna by traveling on two wheeler vehicle as well as on foot during the peak activity of birds between 0630 to 1030 hrs and 1600 to 1830 hrs. Regular field visits were made on every 15 days to document the avifauna. Survey was made for 10 months from January 2012 to October 2012.

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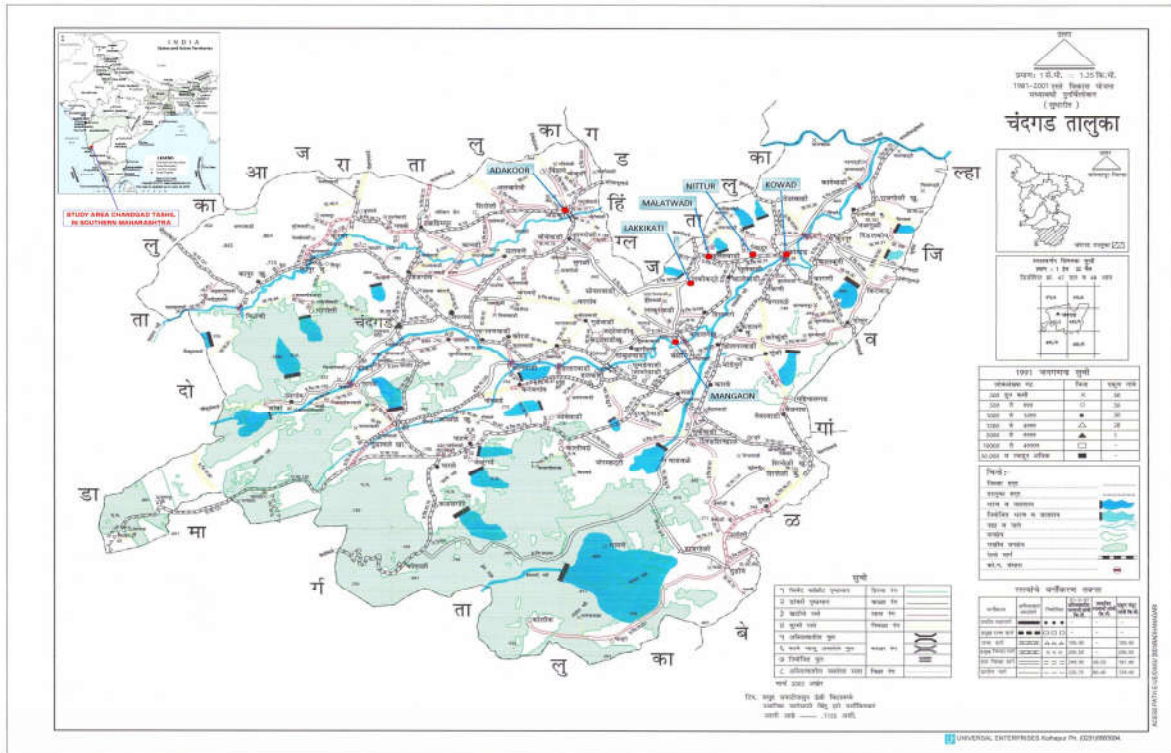


Figure 1 showing the study area in Chandgad Tashil of Kolhapur district in southern Maharashtra

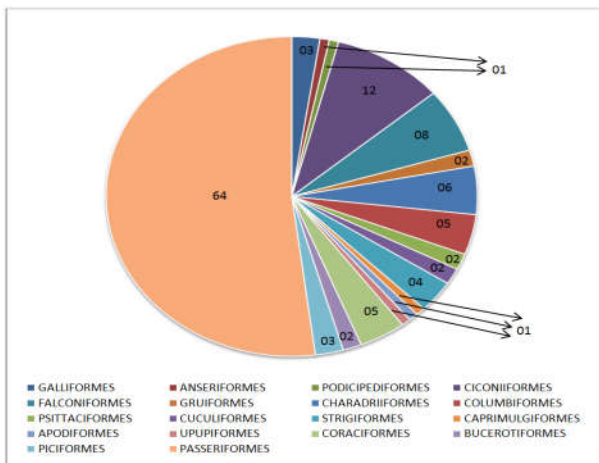


Figure 2 showing the number of bird species represented by each order in Malatwadi and its Vicinity

Direct observations were made to record the birds in grasslands, agricultural fields, near human habitation, along the roads and surrounding the water bodies in different parts of the study area. The birds were observed by using 10 x 50 X Olympus binoculars and identified using field guides by Ali, (2002), Kazmierczak, (2000) and Grimmett et al., (1998, 2011). The Common and scientific names of birds are followed after Grimmett et al., (2011). Only the confirmed species were added to the checklist. IUCN status of birds was assessed by using IUCN Red List of Threatened Species, (2016), Wikipedia, (2004) and Bird life international, (2016).

RESULTS AND DISCUSSION

During the above said survey we recorded a total of 123 bird species representing 18 orders, 58 families and 103 genera (Table 1).

Out of 58 families Accipitridae consist maximum (7) number of bird species. Muscicapidae, Ardeidae, Colombidae, Timaliidae and Motacillidae represents 5 species each; Strigidae and Campephagidae consists 4 species each; Phasianidae, Ciconiidae, Charadriidae, Corvidae, Hirundinidae, Cistcolidae and Sturnidae represents 3 species each. Rest of the families represents two/one bird species. The detailed family wise number of bird species recorded is listed in table 2.

Passeriformes order represents maximum (64) number of bird species followed by Ciconiiformes (12), Falconiformes (8) and Charadriiformes (6); Columbiformes and Coraciformes represents 5 bird species each; Strigiformes consists 4 bird species; Galliformes and Piciformes consists 3 bird species each; Psittaciformes, Cuculiformes, Gruiformes and Bucerotiformes represent 2 bird species each. The least (1) number of bird species represented by order Anseriformes, Podicipediformes, Caprimulgiformes, Apodiformes and Upupiformes. The order wise number of bird species recorded is represented in figure 2. In present observations Black-headed Ibis, Painted Stork, River Tern and Malabar Pied Hornbill are near threatened species. For Southern Coucal *Centropus parroti* and Indian Blackbird *Turdus simillimus* IUCN assessment is not available. Rest all the birds are least concerned. Present study reveals that, the habitat of study area representing large number of fruiting trees, vegetable crops, and different agricultural plants supporting large number of Passeriformes. Some more observations are needed to prepare complete checklist of birds and to record their migratory status.

Table 1 Showing avifauna checklist of Malatwadi and its vicinity in Chandgad

Sl. No.	Order/Family/ Common Name	Scientific Name	IUCN Status
1. Order GALLIFORMES			
1. Phasianidae			
1	Indian Peafowl	<i>Pavo cristatus</i>	Least Concern
2	Red Spurfowl	<i>Galloperdix spadicea</i>	Least Concern
3	Jungle Bush Quail	<i>Perdica asiatica</i>	Least Concern
2. Order ANSERIFORMES -			
2. Anatidae			
4	Indian Spot-billed Duck	<i>Anas poecilorhyncha</i>	Least Concern
3. Order PODICIPEDIFORMES			
3. Podicipedidae			
5	Little Grebe	<i>Tachybaptus ruficollis</i>	Least Concern
4. Order CICONIFORMES			
4. Threskiornithidae			
6	Red-naped Ibis	<i>Pseudibis papillosa</i>	Least Concern
7	Black-headed Ibis	<i>Threskiornis melanocephalus</i>	Near Threatened
5. Ciconiidae			
8	Woolly-necked Stork	<i>Ciconia episcopus</i>	Least Concern
9	Painted Stork	<i>Mycteria leucocephala</i>	Near Threatened
10	Asian Openbill	<i>Anastomus oscitans</i>	Least Concern
6. Ardeidae			
11	Indian Pond Heron	<i>Ardeola grayii</i>	Least Concern
12	Cattle Egret	<i>Bubulcus ibis</i>	Least Concern
13	Great Egret	<i>Casmerodius albus</i>	Least Concern
14	Little Egret	<i>Egretta garzetta</i>	Least Concern
15	Purple Heron	<i>Ardea purpurea</i>	Least Concern
7. Phalacrocoracidae			
16	Little Cormorant	<i>Phalacrocorax niger</i>	Least Concern
17	Great Cormorant	<i>Phalacrocorax carbo</i>	Least Concern
5. Order FALCONIFORMES			
8. Falconidae			
18	Common Kestrel	<i>Falco tinnunculus</i>	Least Concern
9. Accipitridae			
19	Brahminy Kite	<i>Haliastur indus</i>	Least Concern
20	Black Kite	<i>Milvus migrans</i>	Least Concern
21	Black-winged Kite	<i>Elanus caeruleus</i>	Least Concern
22	Crested Serpent Eagle	<i>Spilornis cheela</i>	Least Concern
23	White-eyed Buzzard	<i>Butastur teesa</i>	Least Concern
24	Shikra	<i>Accipiter badius</i>	Least Concern
25	Crested Hawk Eagle	<i>Nisaetus cirrhatus</i>	Least Concern
6. Order GRUIFORMES -			
10. Rallidae			
26	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	Least Concern
27	Purple Swampphen	<i>Porphyrio porphyrio</i>	Least Concern
7. Order CHARADRIIFORMES -			
11. Scolopacidae			
28	Common Sandpiper	<i>Actitis hypoleucos</i>	Least Concern
29	Wood Sandpiper	<i>Tringa glareola</i>	Least Concern
12. Charadriidae			
30	Red-wattled Lapwing	<i>Vanellus indicus</i>	Least Concern
31	Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>	Least Concern
32	Little Ringed Plover	<i>Charadrius dubius</i>	Least Concern
13. Laridae			
33	River Tern	<i>Sterna aurantia</i>	Near Threatened
8. Order COLUMBIFORMES			
14. Columbidae			
34	Common Pigeon	<i>Columba livia</i>	Least Concern
35	Spotted Dove	<i>Stigmatopelia chinensis</i>	Least Concern
36	Laughing Dove	<i>Stigmatopelia senegalensis</i>	Least Concern
37	Eurasian Collared Dove	<i>Streptopelia decaocto</i>	Least Concern
38	Yellow-footed Green Pigeon	<i>Treron phoenicopterus</i>	Least Concern
9. Order PSITTACIFORMES			
15. Psittacidae			
39	Rose-ringed Parakeet	<i>Psittacula krameri</i>	Least Concern
40	Plum-headed Parakeet	<i>Psittacula cyanocephala</i>	Least Concern
10. Order CUCULIFORMES			

16. Cuculidae			
41	Asian Koel	<i>Eudynamis scolopaceus</i>	Least Concern
42	Southern Coucal	<i>Centropus parroti</i>	-
11. Order STRIGIFORMES			
17. Strigidae			
43	Brown Fish Owl	<i>Ketupa zeylonensis</i>	Least Concern
44	Mottled Wood Owl	<i>Strix ocellata</i>	Least Concern
45	Jungle Owlet	<i>Glaucidium radiatum</i>	Least Concern
46	Barn Owl	<i>Tyto alba</i>	Least Concern
12. Order CAPRIMULGIFORMES			
18. Caprimulgidae			
47	Savanna Nightjar	<i>Caprimulgus affinis</i>	Least Concern
13. Order APODIFORMES			
19. Apodidae			
48	Asian Palm Swift	<i>Cypsiurus balasiensis</i>	Least Concern
14. Order UPUPIFORMES			
20. Upupidae			
49	Common Hoopoe	<i>Upupa epops</i>	Least Concern
15. Order CORACIFORMES			
21. Coraciidae			
50	Indian Roller	<i>Coracias benghalensis</i>	Least Concern
22. Alcedinidae			
51	Common Kingfisher	<i>Alcedo atthis</i>	Least Concern
23. Halcyonidae			
52	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	Least Concern
24. Cerylidae			
53	Pied Kingfisher	<i>Ceryle rudis</i>	Least Concern
25. Meropidae			
54	Green Bee-eater	<i>Merops orientalis</i>	Least Concern
16. Order BUCEROTIFORMES			
26. Bucerotidae			
55	Indian Grey Hornbill	<i>Ocyrceros birostris</i>	Least Concern
56	Malabar Pied Hornbill	<i>Anthracoceros coronatus</i>	Near Threatened
17. Order PICIFORMES			
27. Picidae			
57	Yellow-crowned Woodpecker	<i>Dendrocopos mahrattensis</i>	Least Concern
28. Ramphastidae			
58	White-cheeked Barbet	<i>Megalaima viridis</i>	Least Concern
59	Coppersmith Barbet	<i>Megalaima haemacephala</i>	Least Concern
18. Order PASSERIFORMES			
29. Prionopidae			
60	Common Woodshrike	<i>Tephrodornis pondicerianus</i>	Least Concern
30. Pittidae			
61	Indian Pitta	<i>Pitta brachyura</i>	Least Concern
31. Aegithinidae			
62	Common Iora	<i>Aegithina tiphia</i>	Least Concern
32. Campephagidae			
63	Orange Minivet	<i>Pericrocotus flammeus</i>	Least Concern
64	Small Minivet	<i>Pericrocotus cinnamomeus</i>	Least Concern
65	Large Cuckooshrike	<i>Coracina macei</i>	Least Concern
66	Black-headed Cuckooshrike	<i>Coracina melanoptera</i>	Least Concern
33. Lanidae			
67	Long-tailed Shrike	<i>Lanius schach</i>	Least Concern
68	Bay-backed Shrike	<i>Lanius vittatus</i>	Least Concern
34. Dicruridae			
69	Black Drongo	<i>Dicrurus macrocercus</i>	Least Concern
70	White-bellied Drongo	<i>Dicrurus caeruleus</i>	Least Concern
35. Oriolidae			
71	Indian Golden Oriole	<i>Oriolus kundoo</i>	Least Concern
36. Rhipiduridae			
72	White-browed Fantail	<i>Rhipidura aureola</i>	Least Concern
37. Monarchidae			
73	Asian Paradise-flycatcher	<i>Terpsiphona paradisi</i>	Least Concern
38. Corvidae			
74	House Crow	<i>Corvus splendens</i>	Least Concern
75	Indian Jungle Crow	<i>Corvus culminatus</i>	Least Concern
76	Rufous Treepie	<i>Dendrociitta vagabunda</i>	Least Concern
39. Paridae			
77	Great Tit	<i>Parus major</i>	Least Concern

78	Indian Yellow Tit	<i>Parus aplonotus</i>	Least Concern
	1.	Hirundinidae	
79	Wire-tailed Swallow	<i>Hirundo smithii</i>	Least Concern
80	Red-rumped Swallow	<i>Cecropis daurica</i>	Least Concern
81	Streak-throated Swallow	<i>Petrochelidon fluvicola</i>	Least Concern
	2.	Alaudidae	
82	Malabar Lark	<i>Galerida malabarica</i>	Least Concern
83	Oriental Skylark	<i>Alauda gulgula</i>	Least Concern
	3.	Pycnonotidae	
84	Red-vented Bulbul	<i>Pycnonotus cafer</i>	Least Concern
85	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	Least Concern
	4.	Cistcolidae	
86	Ashy Prinia	<i>Prinia socialis</i>	Least Concern
87	Grey-breasted Prinia	<i>Prinia hodgsonii</i>	Least Concern
88	Plain Prinia	<i>Prinia inornata</i>	Least Concern
	5.	Sylviidae	
89	Common Tailorbird	<i>Orthotomus sutorius</i>	Least Concern
	6.	Timaliidae	
90	Yellow-eyed Babbler	<i>Chrysomma sinense</i>	Least Concern
91	Jungle Babbler	<i>Turdoides striata</i>	Least Concern
92	Indian Scimitar Babbler	<i>Pomatorhinus horsfieldii</i>	Least Concern
93	Tawny-bellied Babbler	<i>Dumetia hyperythra</i>	Least Concern
94	Puff-throated Babbler	<i>Pellorneum ruficeps</i>	Least Concern
	7.	Zosteropidae	
95	Oriental White-eye	<i>Zosterops palpebrosus</i>	Least Concern
	8.	Sturnidae	
96	Brahminy Starling	<i>Sturnia pagodarum</i>	Least Concern
97	Common Myna	<i>Acridotheres tristis</i>	Least Concern
98	Jungle Myna	<i>Acridotheres fuscus</i>	Least Concern
	9.	Turdidae	
99	Indian Blackbird	<i>Turdus simillimus</i>	-
100	Blue Rock Thrush	<i>Monticola solitarius</i>	Least Concern
	10.	Muscicapidae	
101	Oriental Magpie Robin	<i>Copsychus saularis</i>	Least Concern
102	Indian Robin	<i>Saxicoloides fulicatus</i>	Least Concern
103	Pied Bushchat	<i>Saxicola caprata</i>	Least Concern
104	Tickell's Blue Flycatcher	<i>Cyornis tickelliae</i>	Least Concern
105	Ultramarine Flycatcher	<i>Ficedula superciliiaris</i>	Least Concern
	11.	Irenidae	
106	Jerdon's Leafbird	<i>Chloropsis jerdoni</i>	Least Concern
	12.	Dicaeidae	
107	Thick-billed Flowerpecker	<i>Dicaeum agile</i>	Least Concern
		<i>Dicaeum erythrorhynchos</i>	
108	Pale-billed Flowerpecker		Least Concern
	13.	Nectariniidae	
109	Purple-rumped Sunbird	<i>Leptocoma zeylonica</i>	Least Concern
110	Purple Sunbird	<i>Cinnyris asiaticus</i>	Least Concern
	14.	Passeridae	
111	House Sparrow	<i>Passer domesticus</i>	Least Concern
112	Chestnut-shouldered Petronia	<i>Gymnoris xanthocollis</i>	Least Concern
	15.	Ploceidae	
113	Baya Weaver	<i>Ploceus philippinus</i>	Least Concern
114	Indian Silverbill	<i>Euodice malabarica</i>	Least Concern
	16.	Estrildidae	
115	Scaly-breasted Munia	<i>Lonchura punctulata</i>	Least Concern
116	Black-headed Munia	<i>Lonchura malacca</i>	Least Concern
	17.	Motacillidae	
117	Grey Wagtail	<i>Motacilla cinerea</i>	Least Concern
118	Yellow Wagtail	<i>Motacilla flava</i>	Least Concern
119	White Wagtail	<i>Motacilla alba</i>	Least Concern
		<i>Motacilla maderaspatensis</i>	
120	White-browed Wagtail		Least Concern
121	Paddyfield Pipit	<i>Anthus rufulus</i>	Least Concern
	18.	Fringillidae	
122	Common Rosefinch	<i>Carpodacus erythrinus</i>	Least Concern
	19.	Emberizidae	
123	Black-headed Bunting	<i>Emberiza melanocephala</i>	Least Concern

Table 2 Showing family wise number of bird species recorded in Malatwadi and its vicinity

Sl. No.	Name of the Family	Number of bird species recorded	Sl. No.	Name of the Family	Number of bird species recorded
1	Phasianidae	3	30	Pittidae	1
2	Anatidae	1	31	Aegithinidae	1
3	Podicipedidae	1	32	Campephagidae	4
4	Threskiornithidae	2	33	Lanidae	2
5	Ciconiidae	3	34	Dicruridae	2
6	Ardeidae	5	35	Oriolidae	1
7	Phalacrocoracidae	2	36	Rhipiduridae	1
8	Falconidae	1	37	Monarchidae	1
9	Accipitridae	7	38	Corvidae	3
10	Rallidae	2	39	Paridae	2
11	Scolopacidae	2	40	Hirundinidae	3
12	Charadriidae	3	41	Alaudidae	2
13	Laridae	1	42	Pycnonotidae	2
14	Colombidae	5	43	Cistcolidae	3
15	Psittacidae	2	44	Sylviidae	1
16	Cuculidae	2	45	Timaliidae	5
17	Strigidae	4	46	Zosteropidae	1
18	Caprimulgidae	1	47	Sturnidae	3
19	Apodidae	1	48	Turdidae	2
20	Upupidae	1	49	Muscicapidae	5
21	Coraciidae	1	50	Irenidae	1
22	Alcedinidae	1	51	Dicaeidae	2
23	Halcyonidae	1	52	Nectariniidae	2
24	Cerylidae	1	53	Passeridae	2
25	Meropidae	1	54	Ploceidae	2
26	Bucerotidae	2	55	Estrildidae	2
27	Picidae	1	56	Motacillidae	5
28	Ramphastidae	2	57	Fringillidae	1
29	Prionopidae	1	58	Emberizidae	1
				Total	123

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