



Avian Fauna in Tumsar Tahsil of Bhandara District (MS)

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ABSTRACT

Random survey was carried during October 2016 to March 2017 in order to study the diversity of avian fauna in Tumsar tahsil of Bhandara district of Eastern Maharashtra (India). A total of 104 species of birds were observed belonging 16 order and 42 families. Order Passeriformes was the most dominant consisting of 20 families. Family Muscicapidae of this order was found to be dominant with 9 species. Out of 104 species of birds recorded in the present study, one species was observed as Endangered, two under Not Threatened and remaining 101 species were recorded under Least Concern category. Twenty one species (20.19%) were recorded as Migratory and remaining 83 bird species (79.80%) were reported as Residential.

KEYWORDS- Avian Fauna, Endangered Species, Migratory, Residential, Threatened and Tumsar tahsil.

INTRODUCTION

Avian fauna is one of the most important components of ecosystem and being sensitive to environmental change the birds act as key indicator for assessing the status of ecosystem health (Olechnowski, 2009). The diversity and richness of avian species in a community are totally depending on that habitat. The avian habitat is roughly divided into forest, scrub, grass land, fresh water bodies, sea shore and many species require a mixed type of habitat.

Birds are of great economic importance to the human society. They play an important role in controlling population of different insects and pests. They play the role of scavengers and pollinating agents and also help in dispersal of seeds of different vegetations. They are helpful and help to provide rich food for mankind and are known to man since ages (Nason, 1992). Birds are bipedal, egg laying warm blooded vertebrates with more than 9000 living species across the world. The Indian subcontinent contains about 1300 species all over 13% of the world birds (Grimmett *et al.*, 1998) and Maharashtra houses 43.67% (more than 500 species) of total Indian avifauna. The estimation of local densities of avifauna helps to understand the abundance of various species of other organisms. Avifaunal diversity all over the world has been decreasing due to the destruction of natural habitat and various anthropogenic activities.

There are many studies that have already been conducted on bird diversity in different habitat in Maharashtra such as Tadoba Andheri Tiger Reserve Chandrapur (Mahabal, 2006), Chaprala wild life sanctuary of district Gadchiroli (Chavhan *et al.*, 2012), Pohara-Malkhed reserve forest, Amravati (Wadalkar and Kasambe, 2002) and in and around Nanded city (Kulkarni *et al.*, 2005).

Although Tumsar is surrounded by dense forest, river, natural water bodies and rice fields

along with wide range climatic condition that provide diverse range of habitat, abundant variety of food, suitable resting place available throughout year for migratory as well as residential bird, no information was available on species diversity of birds in Tumsar tahsil. Therefore, the present scientific survey has been carried out to study avian fauna of Tumsar tahsil of Bhandara district in Maharashtra (India).

MATERIALS AND METHODS

Study area:

Tumsar is a city and municipal council in Bhandara district in Eastern Vidarbha of Maharashtra state. It covers an area of 802.50 km square. It is located at 21° 22' 50" N, 79° 44' 50" E in Eastern Maharashtra. It has an average elevation of 272 meters (892 feet). The weather is very well balanced in all seasons excluding summer, temperatures in summers is as high as 48 degrees Celsius and in winters as cool as 12 degrees Celsius. Tumsar is famous for large production of rice and therefore fondly known as 'Rice Bowl' of the state. Large area of this tahsil has been surrounded by dense forest, river (Vainganga), natural water bodies (many lakes) and rice fields along with wide range climatic conditions that provide diverse range of habitat for birds.

Methods (Data Collections):

In order to study the avian diversity of the birds, a general survey was carried out for six months at various locations (forests, water bodies, rice fields and in and around the Tumsar city) in the Tumsar tahsil of Bhandara district from October 2016 to March 2017. Birds were observed twice a day at morning time and evening time for three-four hours. The visits were made during early mornings and late evening, since activity of birds is at its peak during this time. A binocular (Olympus) was used for observation of the birds and images were captured with the help of a good quality digital Nikon camera without disturbing

their natural activities. For identification up to species level colour plates of Ali Ripsey (1996), and Grimmett *et al.* (2001) were used. After confirmation of identity of species, status and checklist were prepared.

RESULTS AND DISCUSSION

In the present study, a total of 104 species of bird belonging to 16 order and 42 families were recorded during survey period of six months (October 2016 to March 2017) in Tumsar tahsil of Bhandara district of Eastern Maharashtra. Order Passeriformes was found to be the most dominant order containing 20 families and 57 species followed by Order Charadriiformes (5 families), Coraciiformes (3 families), Gruiformes (2 families) and remaining 12 order represented by single family each. Of the 104 recorded bird species, the highest number of species belonged to family Muscicapidae (9 species), followed by Ardeidae and Sturnidae (6 species each), Hirudinidae (5 species), Accipitridae, Columbidae, Cuculidae, Phasianidae, Cisticolidae, Estrildidae, Leiothrichidae, and Motacillidae (4 species each), Charadriidae, Alcedinidae, Nectariniidae, and Psittacidae (3 species each), Rallidae, Alaudidae, Campephagidae, Corvidae, Dicruidae, Laniidae, Passeridae and Phalacrocoracidae (2 species each) whereas remaining 18 families were found to be represented by single bird species each. (The common and scientific names, order, family, and status and family wise abundance of bird species have been given in Table 1 and Fig. 1). Pawar (2011) recorded 56 species of birds from 11 orders, 29 families, and 46 genera from the

mangroves of Uran coast of Mumbai, Maharashtra and Chilke (2012) recorded 58 species of birds belonging to 9 order and 29 families from Bamanwada Lake of Rajura, district Chandrapur. Of the recorded bird species (104), 65 species were observed as common, 21 species as occasional and 18 species were recorded as rare species. *Myophonus blighi* was recorded as endangered, *Prinia burnesii* and *Psittacula eupatria* were recorded under not threaten and remaining bird species come under least concern category.

The avifaunal diversity of Tumsar tahsil comprises of 83 (79.80 %) species residents and 21 (20.19 %) migrants (winter and summer migrants) (Fig. 2). Migratory bird species recorded during present survey are Black-Winged Stilt, Wood Sandpiper, Purple Heron, Green Bee-eater, Asian Koel, Common Indian Kestrel, Common Crane, Blue throat, Thrush Nightingale, Common Stone Chat, Chestnut-Tailed Starling, Striated Swallow, Sand Martin, Bran Swallow, White Wagtail, Western Yellow Wagtail, Richards Pipit, Red-backed Shrike, Blyths Reed Warbler, Eurasian Golden Oriole and Great Cormorant. Wanjari *et al.* (2013) identified 158 birds' species belonging to 46 families, of which 129 were resident, 12 local migrant and 17 were migrants where as Aggarwal *et al.* (2015) observed 106 species belonging 52 families during a period of nine months from the Indian Institute of Forest Management (IIFM), Bhopal, which 27 species were recorded as winter visitor.

Table-1 List of bird species recorded in Tumsar Tahsil of Bhandara District

Order	Family	Scientific Name	Common Name	Status	Conservation Status	Frequency /Abundance
1. Accipitriformes	1. Accipitridae	1. <i>Accipiter soloensis</i>	Horsfields Goshawk	R	LC	O
		2. <i>Accipiter badius</i>	Shikra	R	LC	C
		3. <i>Elanus caeruleus</i>	Black Shoulder Kite	R	LC	C
		4. <i>Milvus migrans</i>	Black Kite	R	LC	C
2. Bucerotiformes	2. Bucerotidae	5. <i>Ocyrceros birostris</i>	Indian Grey Horn bill	R	LC	O
3. Charadriiforme	3. Charadriidae	6. <i>Charadrius dubius</i>	Little Ringed Plover	R	LC	O
		7. <i>Vanellus malarbaricus</i>	Yellow-wattled Lapwing	R	LC	C
		8. <i>Vanellus indicus</i>	Red-wattled Lapwing	R	LC	C
	4. Jacanidae	9. <i>Metopidius indicus</i>	Bronze-Winged Jacana	R	LC	O
	5. Recurvirostridae	10. <i>Himantopus himantopus</i>	Black-Winged Stilt	M	LC	Ra

	6. Glareolidae	11. <i>Cursorius coromandelicus</i>	Indian courser	R	LC	Ra
	7. Scolopacidae	12. <i>Tringa glareola</i>	Wood Sandpiper	M	LC	Ra
4. Ciciniiformes	8. Ardeidae	13. <i>Ardeola grayii</i>	Indian Pond Heron	R	LC	C
		14. <i>Ardea purpurea</i>	Purple Heron	WM	LC	O
		15. <i>Ardea sumatrana</i>	Great Billed Heron	R	LC	Ra
		16. <i>Bubulcus ibis</i>	Cattle Egret	R	LC	C
		17. <i>Egretta garzetta</i>	Little Egret	R	LC	C
		18. <i>Egretta intermedia</i>	Medium Egret	R	LC	O
5. Columbiformes	9. Columbidae	19. <i>Columbalivia</i>	Indian Rock Pigeon	R	LC	C
		20. <i>Streptopelia decaocto</i>	Indian Ring Dove	R	LC	C
		21. <i>Streptopelia chinensis</i>	Spotted Dove	R	LC	C
		22. <i>Streptopelia senegalensis</i>	Laughing Dove	R	LC	C
6. Coraciiformes	10. Alcedinidae	23. <i>Alcedo atthis</i>	Common Kingfisher	R	LC	O
		24. <i>Ceryle rudis</i>	Pied Kingfisher	R	LC	Ra
		25. <i>Halcyon smymensis</i>	White breasted Kingfisher	R	LC	C
	11. Coraciidae	26. <i>Coracias benghalensis</i>	Indian Roller	R	LC	C
	12. Meropidae	27. <i>Merops philippinus</i>	Green Bee-eater	M	LC	C
7. Cuculiformes	13. Cuculidae	28. <i>Cuculus micropterus</i>	Indian Cuckoo	R	LC	C
		29. <i>Centropus sinensis</i>	Crow Pheasant	R	LC	C
		30. <i>Centropus chlororhynchus</i>	Ceylon Coucal	R	LC	C
		31. <i>Eudynamys scolopacea</i>	Asian Koe l	SM	LC	C
8. Falconiformes	14. Falconidae	32. <i>Falco tinnuculus</i>	Common Indian Kastrel	M	LC	O
9. Galliformes	15. Phasianidae	33. <i>Gallus gallus</i>	Red Jungle Fowl	R	LC	C
		34. <i>Gallus lafayetii</i>	Sri Lanka Jungle Fowl	R	LC	C
		35. <i>Gallus sonneratii</i>	Grey Jungle Fowl	R	LC	C
		36. <i>Pavo cristatus</i>	Common Indian Peafowl	R	LC	O
10. Gruiformes	16. Gruidae	37. <i>Grus grus</i>	Common Crane	M	LC	Ra
	17. Rallidae	38. <i>Amanornis phoenicurus</i>	White breasted waterhen	R	LC	C
		39. <i>Gallinula chloropus</i>	Common Moorhen	R	LC	C
11. Passeriformes	18. Muscipidae	40. <i>Ceromela fusca</i>	Brown Rock Chat	R	LC	C
		41. <i>Copsychus saularis</i>	Oriental magpie Robin	R	LC	C
		42. <i>Copsychus malabaricus</i>	White Rumped Chat	R	LC	C
		43. <i>Luscinia svecica</i>	Blue throat	WM	LC	Ra
		44. <i>Luscinia luscinia</i>	Thrush Nightingale	M	LC	Ra

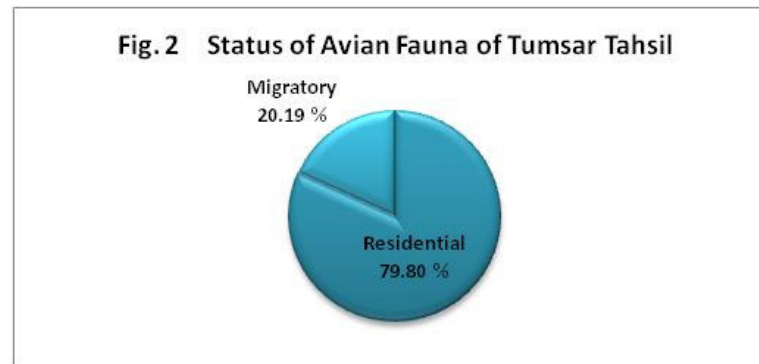
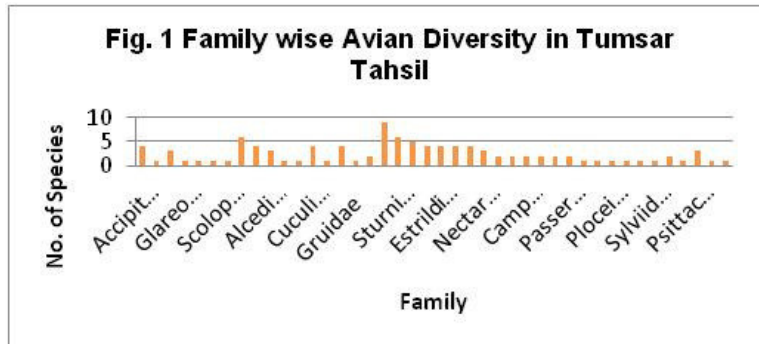
		45. <i>Myophonus blythi</i>	Shri Lanka Whistling	R	E	Ra
		46. <i>Saxicoloides fulicata</i>	Indian Robin	R	LC	C
		47. <i>Saxicola torquata</i>	Common Stone Chat	M	LC	Ra
		48. <i>Saxicola caprata</i>	Pied Bush Chat	R	LC	C
	19. Sturnidae	49. <i>Acridotheres tristis</i>	Common Myna	R	LC	C
		50. <i>Acridotheres fuscus</i>	Jungle Myna	R	LC	C
		51. <i>Acridotheres ginginianus</i>	Bank Myna	R	LC	C
		52. <i>Sturnus contra</i>	Asian Pied Starling	R	LC	C
		53. <i>Sturnus pagodarum</i>	Brahminy Starling	R	LC	C
		54. <i>Sturnus malabaricus</i>	Chestnut-Tailed Starling	M	LC	O
	20. Hirundinidae	55. <i>Hirundo daurica</i>	Striated Swallow	M	LC	O
		56. <i>Hirundo smithii</i>	Wire-tailed Swallow	R	LC	Ra
		57. <i>Hirundo concolor</i>	Dusky Crag Martin	R	LC	C
		58. <i>Riparia riparia</i>	Sand Martin	M	LC	Ra
		59. <i>Hirundo rustica</i>	Bran Swallow	M	LC	O
	21. Cisticolidae	60. <i>Prinia socialis</i>	Ashy Prinia	R	LC	C
		61. <i>Prinia inornata</i>	Plain Prinia	R	LC	C
		62. <i>Prinia burnesii</i>	Rufous-Vented Prinia	R	NT	Ra
		63. <i>Prinia criniger</i>	Striated Prinia	R	LC	C
	22. Estrildidae	64. <i>Lonchura malbarica</i>	White Throated Munia	R	LC	C
		65. <i>Lonchura punctulata</i>	Scaly Breasted Munia	R	LC	C
		66. <i>Lonchura malacca</i>	Black headed Munia	R	LC	C
		67. <i>Amandava amandava</i>	Red Munia	R	LC	C
	23. Leiothrichidae	68. <i>Turdoides caudates</i>	Common Babbler	R	LC	C
		69. <i>Pellorneum tickelli</i>	Buff-Breasted Babbler	R	LC	O
		70. <i>Turdoides striatus</i>	Jungle Babbler	R	LC	C
		71. <i>Turdoides malcolmi</i>	Large Grey Babbler	R	LC	C
	24. Motacillidae	72. <i>Motacilla alba</i>	White Wagtail	WM	LC	O
		73. <i>Motacilla flava</i>	Western Yellow Wagtail	WM	LC	Ra
		74. <i>Anthus rufulus</i>	Paddy Field Pipit	R	LC	C
		75. <i>Anthus richardi</i>	Richards Pipit	WM	LC	C
	25. Nectariniidae	76. <i>Nectarinia asiatica</i>	Purple Sunbird	R	LC	C
		77. <i>Nectarinia calcostetha</i>	Copper Throated Sunbird	R	LC	O

		78. <i>Nectarinia zeylonica</i>	Purple rumped Sunbird	R	LC	C
	26. Alaudidae	79. <i>Mirafra erythroptera</i>	Indian Bush Lark	R	LC	C
		80. <i>Ammomanes phoenicurus</i>	Rufous-Tailed Lark	R	LC	O
	27. Campephagidae	81. <i>Coracina Macei</i>	Large Cuckoo-Shrike	R	LC	O
		82. <i>Tephrodornis pondicerianus</i>	Common Wood Shrike	R	LC	Ra
	28. Corvidae	83. <i>Corvus macrohynchos</i>	Jungle crow	R	LC	C
		84. <i>Corvus splendens</i>	House Crow	R	LC	C
	29. Dicuridae	85. <i>Dicurus macrocercus</i>	Black Drongo	R	LC	C
		86. <i>Dicurus leucophaeus</i>	Ashy Drongo	R	LC	Ra
	30. Laniidae	87. <i>Lanius collurio</i>	Red-backed Shrike	M	LC	C
		88. <i>Lanius schach</i>	Long-tailed Shrike	R	LC	C
	31. Passeridae	89. <i>Passer domesticus</i>	House Sparrow	R	LC	C
		90. <i>Petronia xanthocollis</i>	Yellow throated Sparrow	R	LC	O
	32. Acrocephalidae	91. <i>Acrocephalus bistrigiceps</i>	Blyths Reed Warbler	M	LC	C
	33. Oriolidae	92. <i>Oriolus oriolus</i>	Eurasian Golden Oriole	SM	LC	O
	34. Ploceidae	93. <i>Ploceus philippinus</i>	Baya weaver	R	LC	C
	35. Prunellidae	94. <i>Prunella rubeculoides</i>	Robin Accetor	R	LC	Ra
	36. Pycnonotidae	95. <i>Pycnonotus cafer</i>	Red-vented Bulbul	R	LC	C
	37. Sylviidae	96. <i>Chrysomma sinense</i>	Yellow Eye Babbler	R	LC	C
12. Peleconiformes	38. Phalacrocoracidae	97. <i>Phalacrocorax niger</i>	Little Cormorant	R	LC	C
		98. <i>Phalacrocorax carbo</i>	Great Cormorant	M	LC	O
13. Piciformes	39. Capitonidae	99. <i>Megalaima haemacephala</i>	Coppersmith Barbet	R	LC	C
14. Psittaciformes	40. Psittacidae	100. <i>Psittacula cyanocephala</i>	Blossom Headed Parakeet	R	LC	O
		101. <i>Psittacula eupatria</i>	Alexanderin e Parakeet	R	NT	O
		102. <i>Psittacula krameri</i>	Rose Ring Parakeet	R	LC	C
15. Strigiformes	41. Strigidae	103. <i>Athene brama</i>	Spotted owl	R	LC	C
16. Upipiformes	42. Upupidae	104. <i>Upupa epops</i>	Common Hoopoe	R	LC	C

Status: R- Residential, M- Migratory, WM- Winter Migratory, SM- Summer Migratory.

Conservation Status: LC- Least Concern, NT- Not Threatened, E- Endangered.

Frequency/Abundance: C- Common, O- Occasional, Ra- Rare.



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