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Avifaunal Diversity of Gautala Autramghat Wildlife Sanctuary and its Adjacent Areas, Maharashtra, India

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Abstract: The present study was aimed to observe and record the avifaunal diversity of Gautala Autramghat Wildlife Sanctuary and its adjacent areas, Maharashtra, India. This study was carried out during October 2021 to July 2022. 210 bird species belonging to 55 families and 17 orders were recorded during the study period. Out of these, 136 species were found Resident (R), 68 species Winter Migrant (WM), 4 species Breeding Migrant (BM) and 2 species were found Passage Migrant (PM). As per the IUCN population status 5 species were found Near Threatened (NT), 1 Critically Endangered (CR), 1 Vulnerable (VU) and 203 species were found Least Concern (LC). Order Passeriformes was found dominant with 25 families and 93 bird species followed by Ciconiiformes with 3 families and 19 bird species and Charadriiformes with 5 families and 18 bird species. This study will be useful for conservation and protection of avian fauna of the Gautala Autramghat Wildlife Sanctuary.

Keywords: Bird Diversity, Gautala Autramghat wildlife sanctuary, IUCN, Passeriformes, Ciconiiformes, Charadriiformes

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Introduction

The Protected areas, such as wildlife sanctuaries, national parks, and biodiversity reserves, are increasingly recognized as critical to supporting biodiversity and play a fundamental role in essential ecological functions, such as ecosystem services, climatic stabilization, carbon sequestration, groundwater recharge, nutrient retention, and natural disaster prevention (DeFries *et al.*, 2007). The Forest, shrub, and

agricultural patches are more important habitats for avian communities and these types of habitats attract more numbers of avian species due to good sources of food and nesting shelters (Singh *et al.*, 2019). Riverine and forest habitats attract many types of bird's species and approximately 23% of bird species utilize the river and forest habitat during their life cycle (Sinha *et al.*, 2019). Birds are one of the most common wildlife in urban areas

such as neighbourhoods and cities, and many bird populations have been declining as a result of landscape changes due to urban expansions (Strohbach *et al.*, 2009). Knowledge of the composition of bird communities is crucial to determine the ecology and health of the local ecosystems or regional landscapes (Nagya *et al.*, 2017).

Birds fulfil many ecological vital functions in their habitats. For instance, they are bioindicators of healthy ecosystems (Mistry *et al.*, 2008). More than 1300 species of birds are reported from the Indian Subcontinent, constituting approximately 10% of the world's birds as per the leading databases of birds of the world (Ebird, 2021; Avibase, 2021).

Gautala Autramghat Wildlife Sanctuary and its adjacent areas, Maharashtra, India, provides good shelter to a wide range of bird fauna. The present study is first attempt to observe and record the diversity with ecological status and IUCN population status of the avifauna of Gautala Autramghat Wildlife Sanctuary and its adjacent areas, Maharashtra, India.

Materials and Methods

Study Area:

Gautala Autramghat Wildlife Sanctuary is a reserved forest and protected area in Maharashtra state. It is also known as Gautala Abhayaranya. This sanctuary came into existence in 1986. Maharashtra Government declared this sanctuary as existing reserved forest area which is 72 km away from Aurangabad city. It is located in the Ajanta and Satmala hill ranges of Western Ghats in the proximity of Chalisgaon, Kannad and Aurangabad.

The name Gautala Wildlife Sanctuary is derived from the nearby village Gautala which is named on Gautama Rishi, one of the Maharishis of Vedic times. A small cave which was his residence exists still today. Sanctuary covers a total area of 26,061.19 hectares, (64,399 acres). This bowl shaped hilly terrain has a Reserved Forest Areas of 19706 ha in Aurangabad district and 6355.19 ha

in Jalgaon district. Table 1 and Figure 1 illustrate habitats selected for observation of birds in Gautala Autramghat Wildlife Sanctuary and its adjacent areas, Maharashtra, India.

The sanctuary presents an attractive panoramic view. Aurangabad, Kannad, Chalisgaon state Highway goes through this sanctuary. There are places like Pitalkhora caves and ancient temples of Patna Devi and Lord Shiva. Sparkling waterfalls like Kedarkund, Sita Khori and Dhawal Teerth are inside the sanctuary which attracts the people towards it.

The observations were made using the naked eyes and with binocular Nikon Aculon A211, 10x50. Binocular was utilized for close observation of birds. The images of birds were captured using the Nikon Coolpix B700 digital camera. The observation were recorded during October 2021 to July 2022. Regular field visits were made all through this period. Bird specimens were not collected, and the study was based on only observations and photographs, video and audio recordings. Due precautions were taken to avoid any harm to the birds and damage to their habitat. Most of the birds were identified in the field by consulting field Guides. The birds were allocated the migratory and threat status based on the ground records, Internet Birds database and other relevant literature (Ali, 2002; Grimmett *et al.*, 2011). IUCN Red List of Threatened Species Version 2022-1 were used for identification of birds.

Birds are categorised as Resident (R), Winter Migrant (WM), and Summer Migrant (SM) based on their ecological status. The avifauna was also categorised according to the IUCN status as LC=Least Concern species; NT=Near Threatened species; VU=Vulnerable species; T=Threatened species; EN=Endangered species; CR=Critically Endangered species and EX=Extinct species. In the present study, the majority of species were of LC status. According to IUCN norms no species from the EN and T category were found in the present study area. For enlisting, common English name and scientific names of Birds from the Indian

Table 1: Habitats selected for observation of birds in Gautala Autramghat Wildlife Sanctuary and its adjacent areas, Maharashtra, India

S. No.	Bird Habitat	Number of observation points	Coordinates
1.	Gautala	1	20°20'00" N 75°08'22" E
2.	Pitalkhora	1	20°18'46" N 74°50'36" E
3.	Kedarkund	1	20°18' 35" N 74°18'12" E
4.	Chandikawadi	1	20°18'43" N 74°55'26" E
5.	Malhargad	1	20°21'37" N 75°02'44" E
6.	Shivapur	1	20°22'08" N 75° 00'24" E
7.	Patana	1	20°21'16" N 74° 58'33" E
8.	Varthan	1	20°22'30" N 74° 58'13" E
9.	Rajdehare	1	20°19'20" N 74°52'15" E

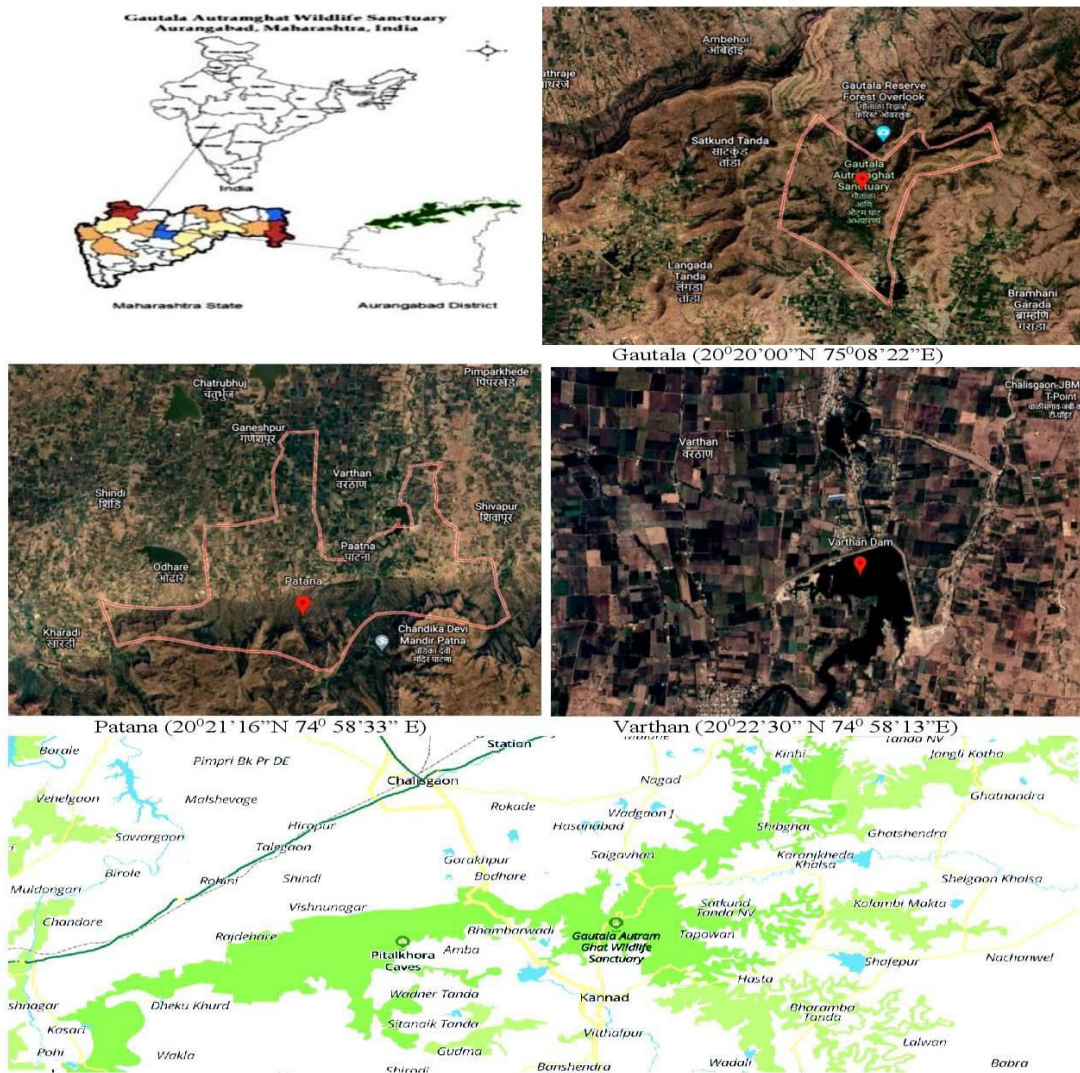


Fig. 1: Location and study site maps of Gautala Autramghat Wildlife Sanctuary and its adjacent areas, Maharashtra, India.

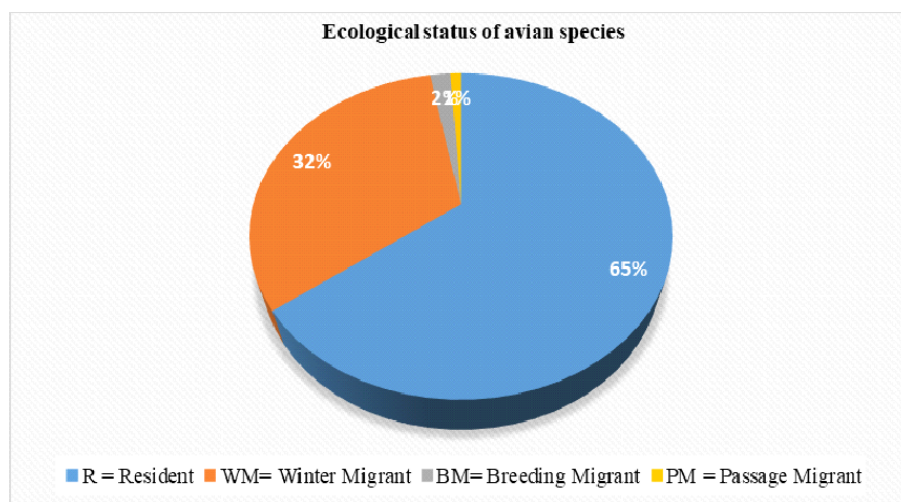


Fig. 2: Ecological status of bird species of Gautala Autramghat Wildlife Sanctuary and its adjacent areas, Maharashtra, India.

Subcontinent (Mankadan and Pittie, 2004) were used.

Results and Discussion

In the present study a total of 210 species belonging to the 17 orders and 55 families were observed. Out of these 136 species were found Resident (R), 68 species Winter Migrant (WM), 4 species Breeding Migrant (BM) and 2 species was found Passage Migrant (PM). (Table 2; Photoplates I-IV). The percentage of Resident (65%), Winter Migrant (32%), Breeding Migrant (2%), and Passage Migrant (1%) species were found (Fig. 2).

The maximum number of bird species were recorded from order Passeriformes which found dominant with 25 families and 93 bird species followed by, Ciconiformes with 3 families and 19 bird species and Charadriiformes with 5 families and 18 bird species (Figs. 3, 4).

As per the IUCN population status 5 species were found Near Threatened (NT), 1 Critically Endangered (CR), 1 Vulnerable (VU) and 203 species were found Least Concern (LC). During observation of bird species photographs were taken in their habitats (Table 1).

The forest of Gautala Autramghat Wildlife Sanctuary provides an ideal habitats to a variety of

birds and animals. The area has dry deciduous forest with small tree growth. Anajn, Khair, Dhawada are the major tree species present in this area. Hills tops have sparse vegetation. Slopes are covered with *Euphorbia* species. River valleys provides moist zone tree species like Arjun and Chandan, valleys have got diversified vegetation. Grass land at hill tops, good growth grasses on plane areas. Diversified vegetation scattered intermittently supports for faunal diversity. Particularly it is good for resident as well as migratory birds.

On the basis of observation of present study it is established that the Gautala Autramghat Wildlife Sanctuary is having good bird diversity. During winter the maximum birds have been observed due to easy availability of food and shelter for migratory birds. Bar Headed Geese were also recorded. The presence of Near Threatened, Critically Endangered (CR) and Vulnerable (VU) category species makes it a vital area for biological diversity.

Conclusion

The present study of Avifaunal diversity of Gautala Autramghat Wildlife Sanctuary and its adjacent areas, Maharashtra, India provided suitable habitat sites with abundant food to the resident

Table 2: Avifaunal diversity of Gautala Autramghat Wildlife Sanctuary and its adjacent areas, Maharashtra, India

S. No.	Order and Family	Common Name	Scientific Name	Ecological Status	IUCN Population Status
1.	Podicipediformes				
	1.Podicipedidae				
		1. Little Grebe	<i>Tachybaptus ruficollis</i> (Pallas, 1764)	R	LC
2.	Ciconiformes				
	2. Ardeidae				
		2. Indian Pond Heron	<i>Ardeola grayii</i> (Sykes, 1832)	R	LC
		3. Grey Heron	<i>Ardea cinerea</i> (Linnaeus, 1758)	WM	LC
		4. Median Egret	<i>Mesophoyx intermedia</i> (Wagler, 1829)	R	LC
		5. Large Egret	<i>Casmerodius albus</i> (Linnaeus, 1758)	R	LC
		6. Little Egret	<i>Egretta garzetta</i> (Linnaeus, 1766)	R	LC
		7. Cattle Egret	<i>Bubulcus ibis</i> (Linnaeus, 1758)	R	LC
		8. Purple Heron	<i>Ardea purpurea</i> (Linnaeus, 1766)	WM	LC
		9. Night Heron	<i>Nycticorax nycticorax</i> (Linnaeus, 1758)	R	LC
		10. Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i> (Gmelin, 1789)	R	LC
		11. Black bittern	<i>Ixobrychus flavicollis</i> (Latham, 1790)	R	LC
	3. Ciconidae				
		12. Asian Open bill/ Asian Open bill Stork	<i>Anastomus oscitans</i> (Boddaert, 1783)	WM	LC
		13. Black Stork.	<i>Ciconia nigra</i> (Linnaeus, 1758)	WM	NT
		14. Painted Stork	<i>Mycteria leucocephala</i> (Pennant, 1769)	WM	NT
		15. White Necked/Woolly Stork	<i>Ciconia episcopus</i> (Boddaert, 1783)	WM	LC
		16. Black Necked Stork	<i>Ephippiorhynchus asiaticus</i> (Linn.,1790)	WM	LC
	4. Threskiornithidae				
		17. Indian Black Ibis	<i>Pseudibis papillosa</i> (Temminck, 1824)	WM	LC
		18. Black Headed Ibis	<i>Threskiornis melanocephalus</i> (Latham, 1790)	WM	NT
		19. Glossy Ibis	<i>Plegadis falcinellus</i> (Linnaeus, 1766)	WM	LC
		20. Eurasian Spoonbill	<i>Platalea leucorodia</i> (Linnaeus, 1758)	WM	LC
3.	Ansariformes				
	5. Anatidae				
		21. Bar-headed goose	<i>Anser indicus</i> (Latham, 1790)	WM	LC
		22. Northern Pintail	<i>Anas acuta</i> (Linnaeus, 1758)	WM	LC
		23. Eurasian teal	<i>Anas crecca</i> (Linnaeus, 1758)	WM	LC
		24. Lesser whistling duck	<i>Dendrocygna javanica</i> (Horsfield, 1821)	WM	LC
		25. Gadwall	<i>Mareca strepera</i> (Linnaeus, 1758)	WM	LC
		26. Tufted duck	<i>Aythya fuligula</i> (Linnaeus, 1758)	WM	LC
		27. Ruddy- Shelduck	<i>Tadorna ferruginea</i> (Pallas, 1764)	WM	LC
		28. Spot Billed Duck	<i>Anas poicillorhyncha</i> (Forster J.R.,1781)	WM	LC
		29. Red Crested Pochard	<i>Netta rufina</i> (Pallas, 1773)	WM	LC
		30. Northern Shoveller	<i>Anas clypeata</i> (Linnaeus, 1758)	WM	LC
		31. Garganey	<i>Spatula querquedula</i> (Linnaeus, 1758)	WM	LC

		32. Cotton/Pigmy Goose	<i>Netapus coromandalianus</i> (Gmelin J. F., 1789)	WM	LC
		33. Marbled teal	<i>Marmaronetta angustirostris</i> (Pennant, 1789)	R	LC
		34. Common Pochard	<i>Aythya farina</i> (Linnaeus, 1758)	WM	LC
4. Falconiformes					
	6. Accipitridae				
		35. Black Shouldered Kite	<i>Elanus caeruleus</i> (Desfontaines, 1789)	R	LC
		36. Brahminy kite	<i>Haliastur indus</i> (Boddaert, 1783)	R	LC
		37. Black Kite	<i>Malvus migrans</i> (Boddaert, 1783)	R	LC
		38. Crested Serpent Eagle	<i>Spilomis cheela</i> (Latham, 1790)	R	LC
		39. Common Buzzard	<i>Buteo buteo</i> (Linnaeus, 1758)	WM	LC
		40. Indian Long-billed Vulture	<i>Gyps indicus</i> (Scopoli, 1786)	R	CR
		41. Besra Sparrow Hawk	<i>Accipiter virgatus</i> (Temminck, 1822)	R	LC
		42. White Eyed Buzzard	<i>Bulastur teesa</i> (Franklin, 1831)	WM	LC
		43. Shikra	<i>Accipiter badius</i> (Gmelin, 1788)	R	LC
	7. Falconidae				
		44. Common Kestrel	<i>Falco tinnunculus</i> (Linnaeus, 1758)	R	LC
		45. Peregrine Falcon	<i>Falco peregrinus</i> (Tunstall, 1771)	R	LC
5. Gruiformes					
	8. Phasianidae				
		46. Indian Peafowl	<i>Pavo cristatus</i> (Linnaeus, 1758)	R	LC
		47. Grey Francolin	<i>Francolinus pondicerianus</i> (Linnaeus, 1766)	R	LC
		48. Painted Francolin	<i>Francolinus pictus</i> (Jardine & Selby, 1828)	R	LC
		49. Common Quail	<i>Coturnix coturnix</i> (Linnaeus, 1758)	WM	LC
		50. Rain quail or Black-breasted quail	<i>Coturnix coromandelica</i> (Gmelin, 1789)	R	LC
		51. Jungle Bush Quail	<i>Perdica asiatica</i> (Latham, 1790)	R	LC
		52. Common buttonquail/ Small Buttonquail	<i>Tuonix sylvaticus</i> (Desfontaines, 1789)	R	LC
		53. Rock Bush Quail	<i>Perdieuia argoondah</i> (Sykes, 1832)	R	LC
	9. Rallidae				
		54. Purple Moorhen	<i>Porphyrio porphyrio</i> (Linnaeus, 1758)	R	LC
		55. Common Moorhen	<i>Gallinula chloropus</i> (Linnaeus, 1758)	R	LC
		56. Common Coot	<i>Fulica atra</i> (Linnaeus, 1758)	R	LC
		57. White Breasted Water hen	<i>Amauromis phoenicurus</i> (Pennant, 1769)	R	LC
	10. Anhingidae				
		58. Darter	<i>Anhinga melanogaster</i> (Pennant, 1769)	WM	NT
6. Pelecaniformes					
	11. Phalacrocoracidae				
		59. Greater Cormorant	<i>Phalacrocorax carbo</i> (Vieillot, 1817)	WM	LC
		60. Indian Cormorant	<i>Phalacrocorax fuscicollis</i> (Stephans, 1826)	R	LC
		61. Little Cormorant	<i>Phalacrocorax niger</i> (Vieillot, 1817)	R	LC
7. Charadriiformes					
	12. Recurvirostridae				
		62. Black Winged Stilt	<i>Himantopus himantopus</i> (Linnaeus, 1758)	WM	LC
	13. Charadriidae				

		63. Little ringed plover	<i>Charadrius dubius</i> (Scopoli, 1786)	WM	LC
		64. Red Wattled Lapwing	<i>Venellus indicus</i> (Linnaeus, 1758)	R	LC
		65. Yellow Wattled Lapwing	<i>Venellus mulbaricus</i> (Linnaeus, 1758)	R	LC
	14. Glareolidae				
		66. Small Indian pratincole	<i>Glareola lactea</i> (Temminck, 1820)	R	LC
		67. Oriental pratincole	<i>Glareola maldivarum</i> (Forster, 1795)	BM	LC
	15. Scolopacidae				
		68. Common Sandpiper	<i>Actitis hypoleucos</i> (Linnaeus, 1758)	WM	LC
		69. Wood Sandpiper	<i>Tringa glareola</i> (Linnaeus, 1758)	WM	LC
		70. Curlew Sandpiper	<i>Calidris ferruginea</i> (Pontoppidan, 1763)	WM	LC
		71. Terek sandpiper	<i>Xenopus cinereus</i> (Guldenstadt, 1774)	WM	LC
		72. Marsh Sandpiper	<i>Tringa stagnalis</i> (Bechstain, 1803)	WM	LC
		73. Little Stint	<i>Calidris minuta</i> (Leisler, 1812)	WM	LC
		74. Common Snipe	<i>Gallinago gallinago</i> (Linnaeus, 1758)	WM	LC
		75. Common Greenshank	<i>Tringa nebularia</i> (Gunnerus, 1767)	WM	LC
	16. Sternidae				
		76. Indian river tern	<i>Sterna aurantia</i> (J.E. Gray, 1831)	WM	NT
		77. Common Tern	<i>Sterna hirundo</i> (Linnaeus, 1758)	WM	LC
		78. Little Tern	<i>Sterna albifrons</i> (Pallas, 1764)	WM	LC
		79. Whiskered tern	<i>Chlidonias hybrid</i> (Pallas, 1811)	R	LC
8.	Columbiformes				
	17. Columbidae				
		80. Laughing Dove	<i>Streptopelia senegalensis</i> (Linnaeus, 1766)	R	LC
		81. Spotted Dove	<i>Streptopelia chinensis</i> (Scopoli, 1786)	R	LC
		82. Rock Pigeon	<i>Columba livia</i> (J. F. Gmelin, 1789)	R	LC
		83. Eurasian Collared Dove	<i>Streptopelia decaocto</i> (Frisvaldszky, 1838)	R	LC
		84. Yellow legged green Pigeon	<i>Treron phoenicoptera</i> (Latham, 1790)	R	LC
		85. Oriental turtle Dove	<i>Streptopelia orientalis</i> (Latham, 1790)	R	LC
		86. Red Collared-Dove	<i>Streptopelia tranquebarica</i> (Hermann, 1804)	R	LC
9.	Psittaciformes				
	18. Psittacidae				
		87. Rose Ringed Parakeet	<i>Psittacula krameri</i> (Scopoli, 1769)	R	LC
		88. Blossom Headed parakeet	<i>Psittacula roseate</i> (Biswas, 1952)	R	LC
		89. Plum-headed parakeet	<i>Psittacula cyanocephala</i> (Linnaeus, 1766)	R	LC
10.	Cuculiformes				
	19. Cuculidae				
		90. Greater Coucal	<i>Centropus sinensis</i> (Stephens, 1815)	R	LC
		91. Common Cuckoo	<i>Cuculus canorus</i> (Linnaeus, 1758)	R	LC
		92. Asian koel	<i>Eudynamis scolopacea</i> (Linnaeus, 1758)	R	LC
		93. Pied crested Cuckoo / Jacobin Cuckoo	<i>Clamator jacobinus</i> (Boddaert, 1783)	BM	LC
		94. Grey-bellied Cuckoo	<i>Cacomantis passerinus</i> (Vahl, 1797)	R	LC
		95. Common Hawk-Cuckoo	<i>Hierococcyx varius</i> (Vahl, 1797)	BM	LC
11.	Strigiformes				
	20. Strigidae				
		96. Spotted Owlet	<i>Athene brama</i> (Temminck, 1821)	R	LC

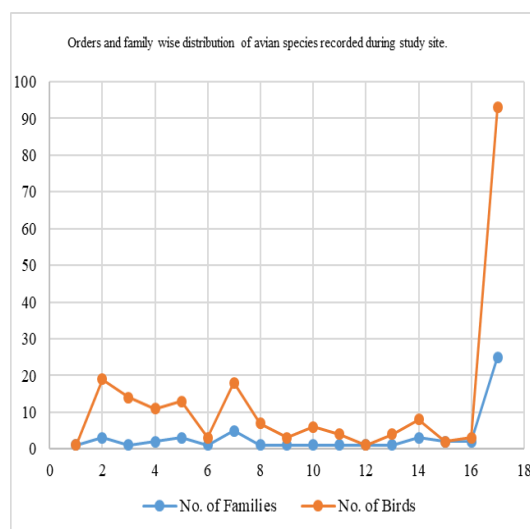
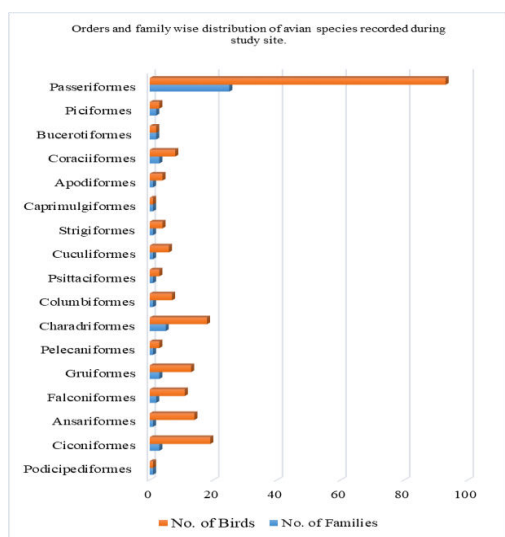
		97. Jungle owlet, or barred Jungle owlet	<i>Glaucidium radiatum</i> (Tickell, 1833)	R	LC
		98. Barn owl	<i>Tyto alba</i> (Scopoli, 1769)	WM	LC
		99. Brown Fish-Owl	<i>Ketupa zeylonensis</i> (Gmelin, 1788)	R	LC
12.	Caprimulgiformes				
	21. Caprimulgidae				
		100. Indian Nightjar	<i>Caprimulgus asiaticus</i> (Latham, 1790)	R	LC
13.	Apodiformes				
	22. Apodidae				
		101. Little Swift/house swift	<i>Apus affinis</i> (J. E. Grey, 1830)	R	LC
		102. Common Swift	<i>Apus apus</i> (Linnaeus, 1758)	R	LC
		103. Asian palm swift	<i>Cypsiurus balasensis</i> (J. E. Gray, 1829)	R	LC
		104. White Collared Swift	<i>Streptoprocne zonaris</i> (Shaw, 1796)	PM	LC
14.	Coraciiformes				
	23. Alcedinidae				
		105. Lesser Pied Kingfisher	<i>Ceryle rudis</i> (Linnaeus, 1758)	R	LC
		106. Common Kingfisher	<i>Alcedo atthis</i> (Linnaeus, 1758)	R	LC
		107. Blue eared Kingfisher	<i>Alcedo meninting</i> (Horsfield, 1821)	R	LC
		108. Whit Breasted Kingfisher	<i>Halcyon smyrnensis</i> (Linnaeus, 1758)	R	LC
	24. Meropidae				
		109. Little Green Bee eater	<i>Merops orientalis</i> (Latham, 1801)	R	LC
		110. Blue-tailed Bee eater	<i>Merops philippinus</i> (Linnaeus, 1766)	BM	LC
	25. Coraciidae				
		111. Indian Roller	<i>Coracias benghalensis</i> (Linnaeus, 1758)	R	LC
		112. European Roller	<i>Coracias garrulus</i> (Linnaeus, 1758)	PM	LC
15.	Bucerotiformes				
	26. Upupidae				
		113. Eurasian hoopoe	<i>Upupa epops</i> (Linnaeus, 1758)	R	LC
	27. Bucerotidae				
		114. Indian Grey Hornbill	<i>Ocyrceros birostris</i> (Scopoli, 1786)	R	LC
16.	Piciformes				
	28. Megalaimidae				
		115. Coppersmith Barbet	<i>Psilopogon haemacephalus</i> (Statius Müller, 1776)	R	LC
	29. Picidae				
		116. White napped woodpecker	<i>Chrysocolaptes festive</i> (Boddaert, 1783)	R	LC
		117. Yellow crowned woodpecker	<i>Leiopicus mahrattensis</i> (Bonaparte, 1854)	R	LC
17.	Passeriformes				
	30. Alaudidae				
		118. Greater short toed Lark	<i>Calandrella brachydactyla</i> (Leisler, 1814)	R	LC
		119. Ashy crown sparrow Lark	<i>Eremopteryx grisea</i> (Scopoli, 1786)	WM	LC
		120. Eurasian sky lark	<i>Alauda arvensis</i> (Linnaeus, 1758)	WM	LC
		121. Indian Red-winged Bush-lark	<i>Mirafra erythroptera</i> (Blyth, 1845)	R	LC
		122. Singing Bush-lark	<i>Mirafra cantillans</i> (Blyth, 1845)	R	LC
		123. Greater short toed Lark	<i>Calandrella brachydactyla</i> (Leisler, 1814)	R	LC
		124. Rufous tailed Finch lark	<i>Ammomanes phoenicura</i> (Franklin, 1831)	R	LC

	125. Common Crested Lark	<i>Galerida cristata</i> (Linnaeus, 1758)	WM	LC
	126. Sykes's lark/Tawny lark	<i>Galerida deva</i> (Sykes, 1832)	R	LC
	127. Oriental skylark	<i>Alauda gulgula</i> (Franklin, 1831)	R	LC
31. Hirundinidae				
	128. Wire-tailed Swallow	<i>Hirundo smithii</i> (Leach, 1818)	WM	LC
	129. Common/Barn swallow	<i>Hirundo rustica</i> (Linnaeus, 1758)	R	LC
	130. Pacific Swallow	<i>Hirundo tahitica</i> (Gmelin, 1789)	WM	LC
	131. Red-rumped Swallow	<i>Cecropis daurica</i> (Laxmann, 1769)	R	LC
	132. Dusky Crag-Martin	<i>Ptyonoprogne concolor</i> (Sykes, 1832)	R	LC
	133. Streak throated Swallow	<i>Petrochelidon fluvicola</i> (Blyth, 1855)	R	LC
32. Dicruridae				
	134. Black Drongo	<i>Dicrurus macrocercus</i> (Vieillot, 1817)	R	LC
	135. Crow Billed Drongo	<i>Dicrurus annectans</i> (Hodgson, 1836)	R	LC
	136. Ashy Drongo	<i>Dierurus feucophaeus</i> (Vieillot, 1817)	WM	LC
	137. White Bellied Drongo	<i>Dicrurus caerulescens</i> (Linnaeus, 1758)	R	LC
33. Aegithinidae				
	138. Common Lora	<i>Aegithina tiphia</i> (Linnaeus, 1758)	R	LC
34. Laniidae				
	139. Great Grey Shrike	<i>Lanius excubitor</i> (Linnaeus, 1758)	WM	LC
	140. Bayback Shrike	<i>Lanius vittatus</i> (Valenciennes, 1826)	R	LC
	141. Long tailed/ Rufous-back rike	<i>Lanius schach</i> (Linnaeus, 1758)	R	LC
35. Sturnidae				
	142. Brahminy Starling	<i>Sturnia pagodarum</i> (J. F. Gmelin, 1789)	R	LC
	143. Common Myna	<i>Acridotheres tristis</i> (Linnaeus, 1766)	R	LC
	144. Asian Pied Starling	<i>Sturnia pagodarum</i> (J. F. Gmelin, 1789)	R	LC
	145. Rosy starling	<i>Pastor roseus</i> (Linnaeus, 1758)	WM	LC
36. Corvidae				
	146. Jungle Crow/ large billed crow	<i>Corvus macrorhynchos</i> (Wagler, 1827)	R	LC
	147. House Crow	<i>Corvus splendens</i> (Vieillot, 1817)	R	LC
	148. Indian/ Rufous Treepie	<i>Dendrocitta vagabunda</i> (Latham, 1790)	R	LC
37. Pycnonotidae				
	149. Red-Vented Bulbul	<i>Pycnonotus cafer</i> (Linnaeus, 1766)	R	LC
	150. Black headed bulbul	<i>Pycnonotus atriceps</i> (Temminck, 1822)	R	LC
38. Timaliidae				
	151. Jungle Babbler	<i>Turdoides striatus</i> (Dumont de Sainte Croix, 1823)	R	LC
	152. Large Grey Babbler	<i>Turdoides malcolmi</i> (Sykes, 1832)	R	LC
	153. Yellow Eyed Babbler	<i>Chrysomma sinense</i> (Gmelin, 1789)	R	LC
	154. Common Babbler	<i>Argya caudate</i> (Dumont, 1823)	R	LC
39. Tyrannidae				
	155. Little pied Flycatcher	<i>Ficedula westermanni</i> (Sharpe, 1888)	R	LC
	156. Asian Brown Flycatcher	<i>Muscicapa dauurica</i> (Pallas, 1811)	R	LC
	157. Rufus fronted Prinia	<i>Prinia buchanani</i> (Blyth, 1844)	R	LC
	158. Common Tailor Bird	<i>Orthotomus sutorius</i> (Pennant, 1769)	R	LC
	159. Tawny-bellied babbler/Rufous-bellied	<i>Dumetia hypertythra</i> (Franklin, 1831)	R	LC

		babbler			
		160. Paddy-field Warbler	<i>Acrocephalus Agricola</i> (Jerdon, 1845)	WM	LC
		161. Greenish Warbler	<i>Phylloscopus trochiloides</i> (Sunevall, 1837)	WM	LC
		162. Clamorous reed warbler	<i>Acrocephalus stentoreus</i> (Hemprich & Ehrenberg, 1833)	R	LC
	40. Sylviidae				
		163. Ashy Wren Prinia	<i>Prinia socialis</i> (Sykes, 1832)	R	LC
		164. Plain Prinia	<i>Prinia inornata</i> (Sykes, 1832)	R	LC
		165. Grey-breasted Prinia	<i>Prinia hodgsonii</i> (Blyth, 1844)	R	LC
		166. Jungle Prinia	<i>Prinia sylvatica</i> (Jerdon, 1840)	R	LC
		167. Zitting Cisticola	<i>Cisticola juncidis</i> (Rafinesque, 1810)	R	LC
		168. lesser whitethroat	<i>Curruca curruca</i> (Linnaeus, 1758)	WM	LC
	41. Turdinae				
		169. Oriental Magpie Robin	<i>Copsychus saularis</i> (Linnaeus, 1758)	R	LC
		170. Indian Robin	<i>Saxicoloides fulicata</i> (Linnaeus, 1776)	R	LC
		171. Pied Bushchat	<i>Saxicola caprata</i> (Linnaeus, 1766)	R	LC
	42. Parida				
		172. Great Tit	<i>Parus major</i> (Linnaeus, 1758)	R	LC
		173. White Napped Tit	<i>Parus nuchalis</i> (Jerdon, 1845)	R	VU
	43. Motacillidae				
		174. Western Yellow wagtail	<i>Motacilla flava</i> (Linnaeus, 1758)	WM	LC
		175. White Wagtail	<i>Motacilla alba</i> (Linnaeus, 1758)	WM	LC
		176. White browed wagtail	<i>Motacilla aderspatensis</i> (J. F., Gmelin, 1789)	R	LC
		177. Forest wagtail	<i>Dendronanthus indicus</i> (Gmelin, 1789)	R	LC
		178. Paddy Field Pipit	<i>Anthus rufulus</i> (Vieillot, 1818)	WM	LC
		179. Olive Backed Pipit	<i>Anthus hodgsoni</i> (Richmond, 1909)	WM	LC
		180. Tree Pipit	<i>Anthus trivialis</i> (Linnaeus, 1758)	WM	LC
		181. Grey Wagtail	<i>Motacilla cinerea</i> (Tunstall, 1771)	WM	LC
		182. Citrine wagtail	<i>Motacilla citreola</i> (Pallas, 1776)	WM	LC
	44. Nectariniidae				
		183. Crimson Sunbird	<i>Nectarina minima</i> (Sykes, 1832)	R	LC
		184. Purple Rumped sunbird	<i>Leptocoma zeylonica</i> (Linnaeus, 1766)	R	LC
	45. Zosteropidae				
		185. Indian white-eye	<i>Zosterops palpebrosus</i> (Temminck, 1824)	R	LC
	46. Passeridae				
		186. House Sparrow	<i>Passer domesticus</i> (Linnaeus, 1758)	R	LC
	47. Emberizidae				
		187. Black-headed bunting	<i>Emberiza melanocephala</i> (Scopoli, 1769)	WM	LC
		188. Red-headed bunting	<i>Emberiza bruniceps</i> (Brandt, 1841)	WM	LC
		189. Crested Bunting	<i>Emberiza lathami</i> (Gray, 1831)	R	LC
	48. Ploceidae				
		190. Streaked Weaver	<i>Ploceus manyar</i> (Horsfield, 1821)	R	LC
		191. Baya weaver	<i>Ploceus philippinus</i> (Linnaeus, 1766)	R	LC
	49. Estrildidae				
		192. Chestnut Munia/ black headed Munia	<i>Lonchura atricapilla</i> (Vieillot, 1807)	R	LC
		193. Indian silver bill/ White throated Munia	<i>Lonchura malabarica</i> (Linnaeus, 1758)	R	LC

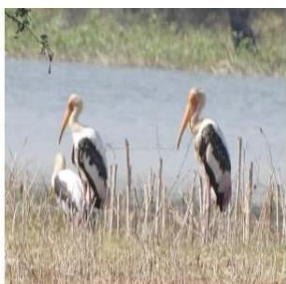
	194. Scaly Breasted Munia	<i>Lonchura punctulata</i> (Linnaeus., 1758)	R	LC
	195. Black Throated Munia	<i>Lonchura kelaarti</i> (Jerdon, 1863)	R	LC
	196. Red Munia/Avadavat	<i>Amandava amandava</i> (Linnaeus, 1758)	WM	LC
50. Muscicapidae				
	197. Black redstart	<i>Phoenicurus ochruros rufiventris</i> (S. G. Gmelin, 1774)	WM	LC
	198. Tickell's Blue Flycatcher	<i>Cyornis tickelliae</i> (Blyth, 1843)	R	LC
	199. Brown rock chat	<i>Oenanthe fusca</i> (Blyth, 1851)	R	LC
	200. Siberian stone chat /Asian stonechat	<i>Saxicola maurus</i> (Pallas, 1773)	R	LC
	201. Red-breasted flycatcher	<i>Ficedula parva</i> (Bechstein, 1792)	WM	LC
51. Acrocephalidae				
	202. Blyth's reed warbler	<i>Acrocephalus dumetorum</i> (Blyth, 1849)	WM	LC
52. Rhipiduridae				
	203. Spot-breasted Fantail	<i>Rhipidura albogularis</i> (Lesson, 1831)	R	LC
	204. white-browed fantail	<i>Rhipidura aureola</i> (Lesson, 1830)	R	LC
53. Cisticolidae				
	205. Common Tailorbird	<i>Orthotomus sutorius</i> (Pennant, 1769)	R	LC
54. Campephagidae				
	206. Small minivet	<i>Pericrocotus cinnamomeus</i> (Linnaeus, 1766)	R	LC
	207. Rosy minivet	<i>Pericrotus roseus</i> (Vieillot, 1618)	WM	LC
	208. Bar winged Flycatcher Shrike	<i>Hemipus picatus</i> (Sykes, 1832)	R	LC
	209. Common Wood Shrike	<i>Tephrodornis pondicerianus</i> (J. F.Gmelin, 1789)	R	LC
55. Pittidae				
	210. Indian pitta	<i>Pitta brachyuran</i> (Linnaeus, 1766)	R	LC

Ecological rating and status: R = Resident, WM= Winter Migrant, BM= Breeding Migrant, PM = Passage Migrant. IUCN Status = International Union for Conservation of Nature: CR = Critically Endangered, EN = Endangered, VU= Vulnerable, NT = Near Threatened, LC= Least Concern



Figs 3, 4: Order and family wise bird species recorded in the Gautala Autramghat Wildlife Sanctuary and its adjacent areas, Maharashtra, India.

Photoplate-I



Painted Stork
Mycteria leucocephala



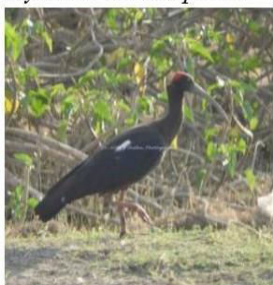
Bar-headed goose
Anser indicus



Darter
Anhinga melanogaster



Grey Heron
Ardea cinere



Red-naped Ibis
Pseudibis papillosa



Indian river tern
Sterna aurantia



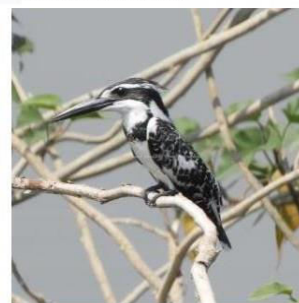
Common Sandpiper
Actitis hypoleucos



Eurasian teal
Anas crecca



Asian Open bill Stork
Anastomus oscitans



Lesser Pied Kingfisher
Ceryle rudis



Red Crested Pochard
Netta rufina



Small Indian pratincole
Glareola lacteal



Black Winged Stilt
Himantopus himantopus



Little Egret
Egretta garzett



Indian Spot Billed Duck
Anas poicillorhyncha



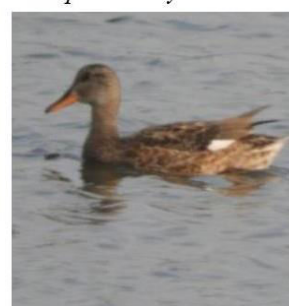
Common Coot
Fulica atra



Black Headed Ibis
Threskiornis melanocephalus



Black Stork
Ciconia nigra

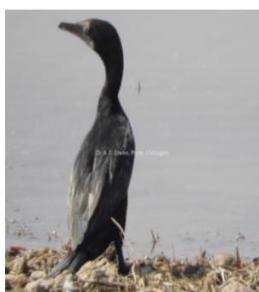


Gadwall
Mareca strepera



Northern Pintail
Anas acuta

Photoplate-II



Little Cormorant
Phalacrocorax niger



Common Kingfisher
Alcedo atthis



Indian Pond Heron
Ardeola grayii



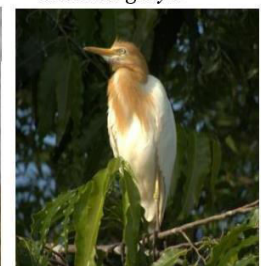
Blyth's reed warble
Acrocephalus dumetorum



Tufted duck
Aythya fuligula



Ruddy- Shelduck
Tadorna ferruginea



Cattle Egret
Bubulcus ibi



Indian Cormorant
Phalacrocorax fuscicollis



White Breasted Waterhen
Amauromis phoenicurus



Lesser whistling duck
Dendrocygna ja vanica



Crimson Sunbird
Nectarina minima



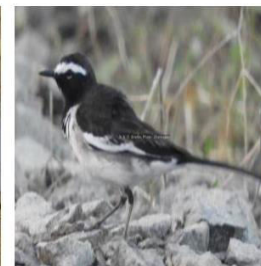
Little ringed plover
Charadrius dubius



Median Egret
Mesophoyx intermedia



Red Wattled Lapwing
Venellus indicus



White browed wagtail
Motacilla aderaspatensis



Paddy Field Pipit
Anthus rufulus



Grey Wagtail
Motacilla cinerea



Citrine wagtail
Motacilla citreola



White Wagtail
Motacilla alba



Whit Breasted Kingfisher
Halcyon smyrnensis

Photoplate-III



Wire-tailed Swallow
Hirundo smithii



Yellow Eyed Babbler
Chrysomma sinense



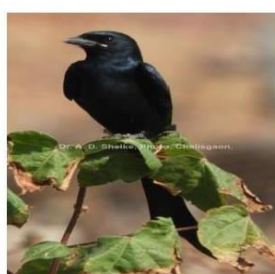
Plum-headed parakeet
Psittacula cyanocephala



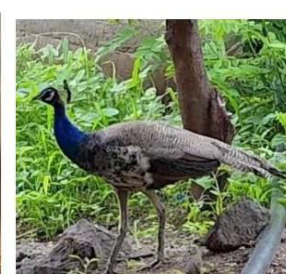
Laughing Dove
Streptopelia senegalensis



Ashy Wren Prinia
Prinia socialis



Black Drongo
Dicrurus macrocercus



Indian Peafowl
Pavo cristatus



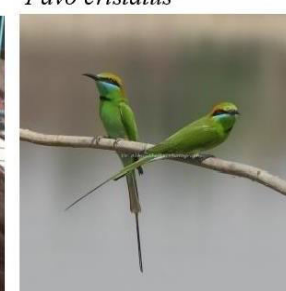
White Bellied Drongo
Dicrurus caeruleus



Black Shouldered Kite
Elanus caeruleus



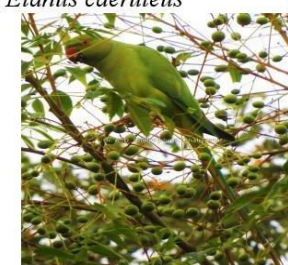
Shikra
Accipiter badius



Little Green Bee eater
Merops orientalis



Common Tailor Bird
Orthotomus sutorius



Rose Ringed Parakeet
Psittacula krameri



Indian Robin
Saxicoloides fulicata



Brown rock chat
Oenanthe fusca



Eurasian Collared Dove
Streptopelia decaocto



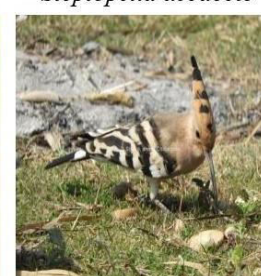
Oriental Magpie Robin
Copsychus saularis



Indian Roller
Coracias benghalensis



Indain/Rufous Treepie
Dendrocitta vagabunda



Eurasian hoopoe
Upupa epops

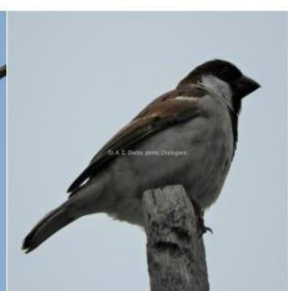
Photoplate-IV



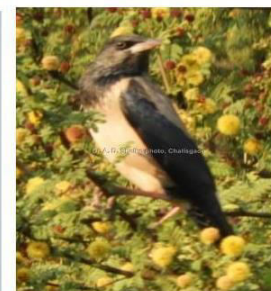
Grey-bellied Cuckoo
Eudynamys scolopaceus



Rock Pigeon
Columba livia



House Sparrow
Passer domesticus



Rosy starling
Pastor roseus



House Crow
Corvus splendens



Scaly Breasted Munia
Lonchura punctulata



Asian koel
Eudynamys scolopaceus



Jungle Babbler
Turdoides striatus



Barn swallow
Hirundo rustica



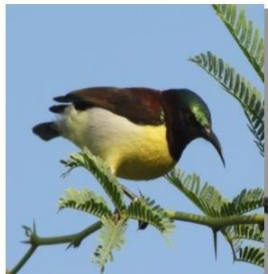
White-browed fantail
Rhipidura aureola



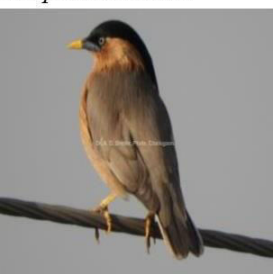
Ashy crown sparrow Lark
Eremopteryx grisea



Indian Grey Hornbill
Ocyrceros birostris



Purple Rumped sunbird
Leptocoma zeylonica



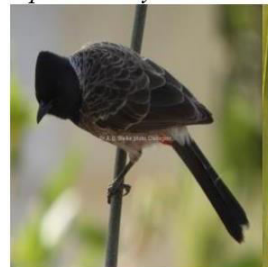
Brahminy Starling
Sturnia pagodarum



Indian silverbill
Lonchura malabarica



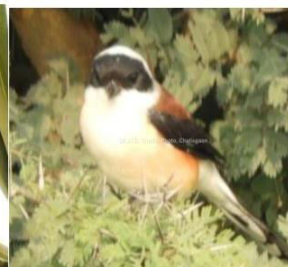
Black redstart
Phoenicurus ochruros rufiventris



Red-Vented Bulbul
Pycnonotus cafer



Common Myna
Acridotheres tristis



Bayback Shrike
Lanius vittatus



Greater Coucal
Centropus sinensis

and migratory birds. This sanctuary is associated with prehistoric and early historic religious practices. In this sanctuary there are ancient temples like Patana Devi temple and Lord Shiva Temple as well as places like Pitalkhora caves, lakes and sparkling waterfalls like Kedarkund, Sita Khori and Dhawal Teerth, all are beautiful spots which attracts the lot of people towards it. The influence of human activities will change the habitats inside and around the present study area. If manmade activities will continues in future the bird population of this area may decline. Hence, there is requirement to create awareness among the peoples about the conservation and protection of habitats of this sanctuary.

Acknowledgements

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