AVIAN DIVERSITY OF BOR WILDLIFE SANCTUARY, MAHARASHTRA (INDIA)

S.N. Bansod¹ and R.S. Virani²

¹Vinayak Vidnyan Mahavidyalaya, Nandgaon Kh, Dist. Amravati (Corresponding Auther) ²Shivramji Moghe College, Pandharkawda, Dist. Yavatmal, (M.S.) India.

ABSTRACT

The Bor Wildlife Sanctuary derives its name from the Bordharan Dam and Bor River. It is situated both in Nagpur and Wardha districts of Maharashtra State. Avian population in Bor Wildlife sanctuary has a central role in ecosystem functioning and ecosystem services, economic benefits. To study the diversity, survey of avifauna recorded by weekly visit in duration from July 2018 to June 2019. Total 210 bird species belonging to 12 orders and 71 families were observed, by categorization of occurrence 1 rare, 18 uncommon and 191common. Total diversity categories cording to IUCN status 1 vulnerable, 7 near threaten and 202 are least concern. According to distribution of species diversity, indicates that the habitat is much more healthy and supportive to the inhabitance of the avifauna. Forest birds, water birds and waders are good in numbers.

Keywords: Avifauna, Bor Wildlife Sancuary, Diversity, etc.

Introduction

The Bor Wildlife Sanctuary derives its name from the Bordharan Dam on Bor River. It is situated both in Nagpur and Wardha districts of Maharashtra State. It constitutes a compact patch of dense forest cover, having immense value and potential for nature interpretation and bio-diversity conservation, in this region. It is a home of many species of central region.

Birds are a group of warm-blooded vertebrates with feathers, toothless jaws, stiff eggs, high metabolic rate, four chambered heart, and a strong but light skeleton. Reptiles have many characteristics of birds. Like reptiles, birds are vertebrates. The legs and feet of birds are covered by thick scales covering the bodies of reptiles (Yonezawa T. et. al., 2017).

Avian population have a central role in ecosystem functioning and ecosystem services, economic benefits like seed dispersal, pollination and re-colonization and restoration of disturbed ecosystem (Sekercioglu C. H., 2006).

The Indian subcontinent is very rich in biodiversity. India hosts 1340 species (13 %), of birds out of the total 9000 bird species that are found in the world. Ali and Ripley (1987) considered 176 species endemic to the Indian subcontinent. Grasslands, Wetlands and wetland associated habitat provide appropriate dwelling places for these organisms. Out of 1340 species of the Indian subcontinent more than 577 species have been reported from Maharashtra State. In Vidarbha, a total of 417

species have been reported and overall Amravati district has 392 birds, species (Anon 2009, Kasambe 2016, Wadatkar et al., 2016). P., 2013 Studied the Distribution within Different Habitats of Karnala Bird Sanctuary, Maharashtra. This study was designed not only to document species richness of this small forest but also to find out distribution patterns of these birds along various microhabitats along the forest. Results obtained in study showed total of 144 species belonging to 46 bird comprising of 16 orders throughout the study period. Results found during study suggest that different habitats of KBS are characteristically different from one another in terms of species distribution both horizontal as well as vertical. Results from study put an emphasis on habitat wise conservation of forest rather than forest as a whole is a key to better forest management. Wetlands are precious abode and support systems of varied faunal taxa. Shorebirds called waders are one of the important indicators of richness of the wetlands. Waders are become increasingly intolerant of even slight ecosystem disturbance (Virani et. al., 2015). Waders, called shorebirds which share several physical characteristics such as long, thin, agile legs and toes; long, sharply pointed tips, distinct curves or spatulate bills; Long necks; elaborate plumes during the breeding season, that help distinguish them as a specific type of bird. Most of the species eat small invertebrates picked out of mud or exposed soil. Around 210 species belongs to different families are described (Ericson et al., 2003; Paton et al., 2003; Thomas et al., 2004a, b; van Tuinen et al., 2004; Paton & Baker, 2006),

Material and Method Area

Total area of Bor Wildlife Sanctuary is 61.10 Sq.km. It is situated in geographical coordinates within the confines of 78^0 37' 36" to 78^0 47' 41" East (longitude) and 20^0 57' 02" to 21^0 01' 02" North (Latitude). The entire area of the sanctuary has been classified into Core Zone of 55.93 Sq.km, Eco-tourism zone of 5.21 Sq.km and Buffer zone of 90.10 Sq.km of area. It constitutes large waterbody, a compact patch of dense forest cover, having great value from the point of view of wildlife and biodiversity conservation.

Survey

The bird survey was conducted according to a standard point count method. The data collected from the surveys were used to estimate, diversity and relative abundance of bird species. Surveys were conducted on two

days of weekend, either from sunrise to 3 hours after sunrise or from 3 hours before sunset until sunset. Morning and evening counts was altered between sites. Each of the sites was survey in survey duration. Birds seen were identified and recorded along the habitat type and status and checklist were prepared.

Survey of birds diversity recorded by weekly visit in duration from July 2018 to June 2019. Binocular (Nikon 10x40) and camera (Nikon Coolpix P510 and D700, 150-500 Sigma lens) was used for bird watching and to photograph them. Bird diversity is categorized into widespread resident, widespread winter visitor, local resident, seasonal resident, widespread resident and winter visitor, local resident and winter visitor, seasonal winter visitor and is classified on the basis of "The Book of Indian Birds" (Ali,1996) and "Pocket Guides of Birds of the Indian Subcontinent" (Grimmet and 2010). Diversity of waders Inskipp, taxonomically classified and categorized on threaten scale by using latest IUCN Red list.

Observation

Total 217 bird species were observed in the duration of July 2018 to June 2019 as listed below-

Sr. No.	Order	Family	Species Common Name	Scientific Name	Occur rence	IUCN Status
1.	Galliformes	Phasianidae	Grey Francolin	Francolinus pondicerianus	С	LC
2.			Painted Francolin	Francolinus pictus	С	LC
3.			Rain Quail	Coturnix coromandelica	С	LC
4.			Jungle Bush-quail	Perdicula asiatica	С	LC
5.			Rock Bush-quail	Perdicula argoondah	С	LC
6.			Grey Junglefowl	Gallus sonneratti	С	LC
7.			Indian Peafowl	Pavo cristatus	С	LC
8.		Turnicidae	Barred Buttonquail	Turnix suscitator	С	LC
9.	Anseriformes	Dendrocygndiae	Lesser Whistling-duck	Dendrocygna javanica	С	LC
10.		Anatidae	Northern Pintail	Anas acuta	С	LC
11.			Common Teal	Anas crecca	С	LC
12.			Indian Spot-billed Duck	Anas poecilorhyncha	С	LC
13.			Gadwall	Anas strepera	С	LC
14.			Garganey	Anas querquedula	С	LC
15.			Northern Shoveler	Anas clypeata	C	LC
16.			Ruddy Shelduck	Tadorna ferruginea	С	LC
17.			Red-crested Pochard	Netta rufina	С	LC
18.			Common Pochard	Aythya ferina	С	LC

19.			Cotton Pigmy-goose	Nettapus coromandelianus	С	LC
20.	Piciformes	Picidae	Eurasian Wryneck	Jynx torquilla	С	LC
21.			Yellow-crowned Woodpecker	Dendrocopos mahrattensis	С	LC
22.			Brown-capped Pigmy Woodpecker	Dendrocopos nanus	С	LC
23.				Chrysocolaptes festivus	С	LC
24.				Dinopium javanense	С	LC
25.			Lesser Yellow-nape Woodpecker	Picus chlorolophus	С	LC
26.		Megalaimidae	Coppersmith Barbet	Megalaima haemacephala	C	LC
27.	Bucerotiformes	Bucerotidae	Indian Grey Hornbill	Ocyceros birostris	UC	LC
28.	Upepiformes	Upupidae	Common Hoopoe	Upupa epops	C	LC
29.	Coraciiformes	Coraciidae	Indian Roller	Coracias benghalensis	С	LC
30.		Alcedinidae	Common Kingfisher	Alcedo atthis	С	LC
31.		Halcyonidae	White Throated Kingfisher	Halcyon smyrnensis	С	LC
32.		Cerylidae	Pied Kingfisher	Ceryle rudis	С	LC
33.		Meropidae	Green Bee-eater	Merops orientalis	С	LC
34.	Cuculiformes	Cuculidae		Clamator jacobinus	C	LC
35.				Hierococcyx varius	C	LC
36.			Grey-bellied Cuckoo	Cacomantis passerinus	C	LC
37.				Eudynamys scolopacea	C	LC
38.			Sirkeer Malkoha	Taccocua (Phaenicophaeus leschenaultii)	C	LC
39.		Centropodidae	Southern Coucal	Centropus (sinensis)Parroti	С	LC
40.		Psittacidae	Alexandrine Parakeet	Psittacula eupatria	С	NT
41.			Rose-ringed Parakeet	Psittacula krameri	С	LC
42.			Plum-headed Parakeet	Psittacula cyanocephala	С	LC
43.	Apodiformes	Apodidae	Little Swift	Apus affinis	С	LC
44.	_	Hemiprocnidae	Crested Tree-swift	Hemiprocne coronata	UC	LC
45.	Strigiformes	Tytonidae	Barn Owl	Tyto alba	С	LC
46.			Indian Eagle Owl	Bubo bubo	С	LC
47.			Spotted Owlet	Athene brama	С	LC
48.			Jungle Owlet	Glaucidium radiatum	UC	LC
49.		Caprimulgidae	Jungle Nightjar	Caprimulgus indicus	UC	LC
50.			Savanna Nightjar	Caprimulgus affinis	UC	LC
51.	Columbiformes	Columbidae	Rock Pigeon	Columba livia	С	LC
52.			•	Treron Phoenicopterus	С	LC
53.			Eurasian Collared-Dove	Streptopelia decaocto	С	LC
54.			Red Collared-Dove	Streptopelia tranquebarica	C	LC
55.			Spotted Dove	Streptopelia chinensis	C	LC
56.			-	Streptopelia senegalensis	C	LC
57.		Rallidae		Amanrornis phoenicurus	С	LC
58.			Purple Swamphen	Porphyrio porphyrio	C	LC
5 9.			Common Coot	Fulica atra	C	LC
60.	Ciconiiformes	Pteroclidae	Painted Sandgrouse	Pterocles indicus	C	LC
61.		Scolopacidae	Black-tailed Godwit	Limosa limosa	C	NT
62.		1		Gallinago gallinago	C	LC
63.			Common Greenshank	Tringa nebularia	C	LC
64.			<u> </u>	Tringa glareola	UC	LC
65.				Actitis hypoleucos	UC	LC
05.			Common Sandpiper	ricinis nyponeucos		LC

Curlew Sandpiper Calldris ferruginea C	66.		Little Stint	Calidris minuta	C	LC
Marsh Sandpiper Pringa stagnantilis C LC	67.		Temminck's Stint	Calidris temminckii	С	LC
Donnin Calidris alpina UC LC	68.		Curlew Sandpiper	Calidris ferruginea	С	NT
Dunlin Calidris alpina UC LC	69.		Marsh Sandpiper	Tringa stagnatilis	С	LC
Rostratulidae Greater Painted Snipe Rostratula benghalensis C C Jacanidae Pheasant-tailed Jacana Hydrophasiamus chirurgus C C C C C Rostratulidae Rostratulidae Rostratulidae C C C C C C C C Rostratulidae Rostratulidae Rostratulidae C C C C C C C C C	70.				UC	LC
Pheasant-tailed Jacana Hydrophasianus chirurgus C LC	71.	Rostratulidae		-		
Bronze-winged Jacana Metopidius indicus C LC	72.	Jacanidae		_		
Burhinidae Indian Thick-knee Burhinus (oedicnemus) indicus C LC	73.		Bronze-winged Jacana		С	LC
Great Thick-knee	74.	Burhinidae		-		LC
Charadriidae Black-winged Stilt Himantopus himantopus C LC	75.			,		
Little Ringed Plover Charadrius dubius C LC		Charadriidae		Himantopus himantopus		
Rentish Plover Charadrius alexandrinus C LC		Charachitaac				
Vellow-wattled Lapwing Vanellus malabaricus C LC			_			
Red-wattled Lapwing Vanellus indicus C LC	L					
81. Glareolidae Indian Courser Cursorius coromandelicus C LC 82. Small Pratincole Glareola lactea C LC 83. Collard Pratincole Glareola pratincola UC LC 84. Black-headed Gull Larus ridibundus C LC 85. River Tern Sterna aurantia C NT 86. Little Tern Sterna aurantia C NT 87. Pandionidae Osprey Pandion haliaetus C LC 88. Accipitridae Black-shouldered Kite Elamus caeruleus C LC 88. Accipitridae Black-shouldered Kite Elamus caeruleus C LC 89. Shikra Accipitridae Black-shouldered Kite Elamus caeruleus C LC 89. Shikra Accipitridae Black-shouldered Kite Milvus migrans C LC 89. Shikra Accipitridae Hawk-cagle Nsaetus cirrhatus C LC 90. Shikra Hervaed Hawk-cagle Hervaetus G LC 91. Changeable Hawk-cagle Hieraeatus fasciatus C LC 92. Bonelli's Eagle Hieraeatus fasciatus C LC 93. Western Marsh Harrier Circus aeruginosus UC LC 94. Short-toed Snake Eagle Gircaetus gallicus C LC 95. Crested Serpent Eagle Spilornis cheela C LC 96. Oriental Honcy Buzzard Pernis prilorhyncus C LC 97. White-eyed Buzzard Butastur teesa C LC 98. Falconidae Common Kestrel Falco innunculus C LC 99. Podicipedidae Little Grebe Tachybaptus ruficollis C LC 100. Anhingidae Darter Anhinga melanogaster C NT 101. Phalacrocoracidae Little Grobe Tachybaptus ruficollis C LC 102. Indian Cormorant Phalacrocorax niger C LC 103. Great Cormorant Phalacrocorax niger C LC 104. Ardeidae Little Egret Expett Gaseroratus C LC 105. Great Egret Casmerodius albus C LC 106. Intermediate Egret Mesophoyx intermedia C LC 107. Cattle Egret Bubulcus bis C LC 108. Great Egret Casmerodius albus C LC 109. Purple Heron Ardea purpurea C LC 101. Circus aeraedus C LC 101. Intermediate Egret Mesophoyx intermedia C LC 109. Purple Heron Ardea cinerea C LC 109. Purple	80.			I .		
Small Pratincole Glareola lactea C LC	81.	Glareolidae				
Collard Pratincole Glareola pratincola UC LC			Small Pratincole			
Black-headed Gull Larus ridibundus C LC						
River Term Sterna aurantia C NT				•		
Best						
Pandionidae Osprey Pandion haliaetus C LC	L			I .		
88. Accipitridae Black-shouldered Kite Elanus caeruleus C LC 89. Black Kite Milvus migrans C LC 90. Shikra Accipiter badius C LC 91. Changeable Hawk-eagle Nacetus cirrhatus C LC 92. Bonelli's Eagle Hieracetus fasciatus C LC 93. Western Marsh Harrier Circus caruginosus UC LC 94. Short-toed Snake Eagle Circaetus gallicus C LC 95. Crested Serpent Eagle Spilornis cheela C LC 96. Oriental Honey Buzzard Pernis ptilorhyncus C LC 97. White-eyed Buzzard Butastur teesa C LC 98. Falconidae Common Kestrel Falco tinnunculus C LC 99. Podicipedidae Little Grebe Tachybaptus ruficollis C LC 100. Anhingidae Darter Anhinga melanogaster C NT 101. Phalacrocoracidae Little Cormorant Phalacrocorax niger C LC 102. Indian Cormorant Phalacrocorax fuscicollis C LC 103. Great Cormorant Phalacrocorax fuscicollis C LC 104. Ardeidae Little Egret Egreta garzetta C LC 105. Great Egret Casmerodius albus C LC 106. Intermediate Egret Mesophoyx intermedia C LC 107. Cattle Egret Bubulcus ibis C LC 108. Grey Heron Ardea purpurea C LC 109. Purple Heron Ardea purpurea C LC 111. Indian Pond Heron Ardeala grayii C LC 111. Black-Crowned Night-heron Nycticorax notato C LC 111. Cinnamon Bittern Ixobrychus cinnumomeus C LC 111. Euclide Pained Black-Crowned Night-heron Nycticorax notato C LC 111. Euclide Pained Shork Threskiornis melanocephalus C LC 111. Euclide Pained Shork Myeteria leucocophalus C LC 111. Euclide Pained Shork Myeteria leucocophalus C LC 111. Euclide Pained Stork Myeteria leucocophalus C LC 111. Euclide Pained Stork Myeteria leucocophalus C LC 111. Asian Openbill Anastomus oscitans C LC 110. Woolly-necked Stork Ciconia episcopus C VU		Pandionidae		Ü		
Black Kite Milvus migrams C LC			4			
Shikra Accipiter badius C LC		recipitridae				
Changeable Hawk-eagle Nsaetus cirrhatus C LC	L			Ÿ		
Bonelli's Eagle Hieraaetus fasciatus C LC				*		
Western Marsh Harrier Circus aeruginosus UC LC	L					
Short-toed Snake Eagle Circaetus gallicus C LC Crested Serpent Eagle Spilornis cheela C LC Crested Serpent Buzzard Butastur teesa C LC Crested Server Anhinga melanogaster C LC Cres						
Crested Serpent Eagle Spilornis cheela C LC						
Oriental Honey Buzzard Pernis ptilorhyncus C LC						
White-eyed Buzzard Butastur teesa C LC						
Falconidae Common Kestrel Falco tinnunculus C LC			•			
Podicipedidae Little Grebe Tachybaptus ruficollis C LC		Falconidae				_
Anhingidae Darter Anhinga melanogaster C NT						
Phalacrocoracidae Little Cormorant Phalacrocorax niger C LC					_	
Indian Cormorant					C	_
Great Cormorant Phalacrocorax carbo C LC 104. Ardeidae Little Egret Egretta garzetta C LC 105. Great Egret Casmerodius albus C LC 106. Intermediate Egret Mesophoyx intermedia C LC 107. Cattle Egret Bubulcus ibis C LC 108. Grey Heron Ardea cinerea C LC 109. Purple Heron Ardea purpurea C LC 110. Striated Heron Butorides striatus C LC 111. Indian Pond Heron Ardeola grayii C LC 112. Black-Crowned Night-heron Nycticorax nycticorax C LC 113. Cinnamon Bittern Lxobrychus cinnamomeus C LC 114. Yellow Bittern Lxobrychus cinnamomeus C LC 115. Threskiornithidae Black-headed Ibis Threskiornis melanocephalus C LC 116. Red-naped Ibis Pseudibis papillosa C LC 117. Eurasian Spoonbill Platalea leucorodia C LC 118. Ciconiidae Painted Stork Myeteria leucocephala C NT 119. Asian Openbill Anastomus oscitans C VU				Ŭ		
Ardeidae				3		
Great Egret Casmerodius albus C LC Intermediate Egret Mesophoyx intermedia C LC Intermediate Egret Mesophoyx intermedia C LC Intermediate Egret Bubulcus ibis C LC Intermediate Egret Bu		Ardeidae	Little Egret			
Intermediate Egret Mesophoyx intermedia C LC 107. Cattle Egret Bubulcus ibis C LC 108. Grey Heron Ardea cinerea C LC 109. Purple Heron Ardea purpurea C LC 110. Striated Heron Butorides striatus C LC 111. Indian Pond Heron Ardeola grayii C LC 112. Black-Crowned Night-heron Nycticorax nycticorax C LC 113. Cinnamon Bittern Ixobrychus cinnamomeus C LC 114. Yellow Bittern Ixobrychus sinensis C LC 115. Threskiornithidae Black-headed Ibis Threskiornis melanocephalus C LC 116. Red-naped Ibis Pseudibis papillosa C LC 117. Eurasian Spoonbill Platalea leucorodia C LC 118. Ciconiidae Painted Stork Myeteria leucocephala C NT 119. Asian Openbill Anastomus oscitans C LC 120. Woolly-necked Stork Ciconia episcopus C VU	105.					
Cattle Egret Bubulcus ibis C LC 108. Grey Heron Ardea cinerea C LC 109. Purple Heron Ardea purpurea C LC 110. Striated Heron Butorides striatus C LC 111. Indian Pond Heron Ardeola grayii C LC 112. Black-Crowned Night-heron Nycticorax nycticorax C LC 113. Cinnamon Bittern Ixobrychus cinnamomeus C LC 114. Yellow Bittern Ixobrychus sinensis C LC 115. Threskiornithidae Black-headed Ibis Threskiornis melanocephalus C LC 116. Red-naped Ibis Pseudibis papillosa C LC 117. Eurasian Spoonbill Platalea leucorodia C LC 118. Ciconiidae Painted Stork Myeteria leucocephala C NT 119. Asian Openbill Anastomus oscitans C LC 120. Woolly-necked Stork Ciconia episcopus C VU	106.			Mesophoyx intermedia		LC
Grey Heron Ardea cinerea C LC	107.		,			LC
Purple Heron Ardea purpurea C LC	108.		Grey Heron	Ardea cinerea		LC
110.Striated HeronButorides striatusCLC111.Indian Pond HeronArdeola grayiiCLC112.Black-Crowned Night-heronNycticorax nycticoraxCLC113.Cinnamon BitternIxobrychus cinnamomeusCLC114.Yellow BitternIxobrychus sinensisCLC115.ThreskiornithidaeBlack-headed IbisThreskiornis melanocephalusCLC116.Red-naped IbisPseudibis papillosaCLC117.Eurasian SpoonbillPlatalea leucorodiaCLC118.CiconiidaePainted StorkMyeteria leucocephalaCNT119.Asian OpenbillAnastomus oscitansCLC120.Woolly-necked StorkCiconia episcopusCVU	109.			Ardea purpurea		LC
Black-Crowned Night-heron Nycticorax nycticorax C LC	110.			Butorides striatus	С	LC
Cinnamon Bittern Ixobrychus cinnamomeus C LC 114. Yellow Bittern Ixobrychus sinensis C LC 115. Threskiornithidae Black-headed Ibis Threskiornis melanocephalus C LC 116. Red-naped Ibis Pseudibis papillosa C LC 117. Eurasian Spoonbill Platalea leucorodia C LC 118. Ciconiidae Painted Stork Myeteria leucocephala C NT 119. Asian Openbill Anastomus oscitans C LC 120. Woolly-necked Stork Ciconia episcopus C VU	111.		Indian Pond Heron	Ardeola grayii	С	LC
114.Yellow BitternIxobrychus sinensisCLC115.ThreskiornithidaeBlack-headed IbisThreskiornis melanocephalusCLC116.Red-naped IbisPseudibis papillosaCLC117.Eurasian SpoonbillPlatalea leucorodiaCLC118.CiconiidaePainted StorkMyeteria leucocephalaCNT119.Asian OpenbillAnastomus oscitansCLC120.Woolly-necked StorkCiconia episcopusCVU	112.		Black-Crowned Night-heron	Ü		
115. Threskiornithidae Black-headed Ibis Threskiornis melanocephalus C LC 116. Red-naped Ibis Pseudibis papillosa C LC 117. Eurasian Spoonbill Platalea leucorodia C LC 118. Ciconiidae Painted Stork Myeteria leucocephala C NT 119. Asian Openbill Anastomus oscitans C LC 120. Woolly-necked Stork Ciconia episcopus C VU	113.			Ixobrychus cinnamomeus		LC
115. Threskiornithidae Black-headed Ibis Threskiornis melanocephalus C LC 116. Red-naped Ibis Pseudibis papillosa C LC 117. Eurasian Spoonbill Platalea leucorodia C LC 118. Ciconiidae Painted Stork Myeteria leucocephala C NT 119. Asian Openbill Anastomus oscitans C LC 120. Woolly-necked Stork Ciconia episcopus C VU	114.		Yellow Bittern	Ixobrychus sinensis		LC
117. Eurasian Spoonbill Platalea leucorodia C LC 118. Ciconiidae Painted Stork Myeteria leucocephala C NT 119. Asian Openbill Anastomus oscitans C LC 120. Woolly-necked Stork Ciconia episcopus C VU	115.	Threskiornithidae			С	LC
117. Eurasian Spoonbill Platalea leucorodia C LC 118. Ciconiidae Painted Stork Myeteria leucocephala C NT 119. Asian Openbill Anastomus oscitans C LC 120. Woolly-necked Stork Ciconia episcopus C VU	116.		Red-naped Ibis	Pseudibis papillosa		LC
119. Asian Openbill Anastomus oscitans C LC 120. Woolly-necked Stork Ciconia episcopus C VU	117.			Platalea leucorodia		LC
120. Woolly-necked Stork Ciconia episcopus C VU	118.	Ciconiidae	Painted Stork	Myeteria leucocephala		NT
	119.			Anastomus oscitans	C	LC
	120.		Woolly-necked Stork	Ciconia episcopus	C	VU
	121. Passeriformes	Pittidae		Pitta brachyura	UC	LC

Long-tailed Shrike	122	Laniidae	Day harded Chailes	T main maid man	С	T.C.
Grey-backed Shrike Lanius rephrenotus C C C	122.	Laniidae	Bay-backed Shrike	Lanius vittatus		LC
Brown Shrike			<u> </u>			
126. Vangidae Common Woodshrike Tephrodomis pondiceriamus C LC			·			
127. Corvidae Rufos Treepie Dendrocitia vagabunda C LC		V7				
House Crow Corsus splendens C LC						
Large-billed Crow Corsus macrorhynchos C LC		Corvidae				
Oriolidae Burasian Golden Oriole Oriolus oriolus C LC						
Campephagidae Black headed Cuckoo- Coracina melanoptera Campethagidae Small Minivet Pericrocotus cinnamomeus Campethagidae Small Minivet Pericrocotus cinnamomeus Campethagidae Camp		0 : 1:1				
shrike Small Minivet Pericrocotus cinnamomeus C LC 133. White-bellied Minivet Pericrocotus cryntropygius R LC 134. Dicruridae Black Drongo Dicrurus macrocercus C LC 135. White-bellied Drongo Dicrurus macrocercus C LC 136. Rhipiduridae White-bellied Drongo Dicrurus macrocercus C LC 137. White-bellied Drongo Dicrurus caerulescens C LC 138. Aegithinidae White-bellied Drongo Dicrurus caerulescens C LC 139. Turdidae White-bowed Fantail Rhipidura albicollis C LC 139. Turdidae Orange-headed Thrush Zoothera citrina C LC 139. Turdidae Orange-headed Thrush Zoothera citrina C LC 140. Monarchidae Black-naped Blue Monarch Hypothymis azurea C LC 141. Assian Paradise-Plycatcher Terpsiphone paradisi C LC 142. Muscicapidae Asian Brown Flycatcher Terpsiphone paradisi C LC 143. Bluchroat Luscinia Swicciae C LC 144. Oriental Magpie Robin Copsychus saularis C LC 144. Oriental Magpie Robin Copsychus saularis C LC 145. Black Redstart Phoenicurus ochruros C LC 146. Black Redstart Phoenicurus ochruros C LC 147. Siberian Stonechat Saxicola caprata C LC 148. Pied Bush Chat Saxicola caprata C LC 148. Pied Bush Chat Saxicola caprata C LC 149. Brown Rock Chat Cercomela fixea C LC 150. Muscicapidae Blue Rock Thrush Monitoola solitarius C LC 151. Red-throated Flycatcher Ficedula parva C LC 152. Red-throated Flycatcher Ficedula parva C LC 153. Tickel's Blue Flycatcher Ficedula parva C LC 154. Sturnidae Brahminy Starling Surmus pagodarum C LC 155. Rosy Starling Surmus pagodarum C LC 156. Asian Pied Starling Surmus contra C LC 157. Chestnut-tailed Starling Surmus contra C LC 158. Common Myna Acridotheres ristis C LC 159. Paridae Great Tit Parus major C LC 150. Minimal Parinia Martin Riperia paludicola C LC 151. Black-lored Tit Parus sauthogenys C LC 151. Black-lored Tit Parus major C LC 156. Wire-tailed Swallow Hirundo smithii C LC 157. Chestnut-tailed Sullow Hirundo smithii C LC 158. Parina Parinia Martin Riperia paludicola C LC 159. Paridae Great Tit Parus major C LC 150. White-browed Bulbul Pycnonous sufer C LC 151. Ashy Prinia Prinia lordnai				1		
White-bellied Minivet Pericrocotus erythropygius R LC	131.	Campephagidae		-Coracina melanoptera	C	LC
White-bellied Minivet Pericrocotus erythropygius R LC	132.		Small Minivet	Pericrocotus cinnamomeus	С	LC
Dicruridae Black Drongo Dicrurus macrocercus C LC			White-bellied Minivet			
White-bellied Drongo Dicrurus caerulescens C LC		Dicruridae		1 110		
136. Rhipiduridae White-spotted Fantail Rhipidura albicollis C LC			•			
White-browed Fantail Rhipidura aureola C LC		Phiniduridae				
138. Aegithinidae Common Iora Aegithina tiphia C LC		Kilipiduridac		4		
Turdidae Orange-headed Thrush Zoothera citrina C LC		Aggithinidag				
140. Monarchidae Black-naped Blue Monarch Hypothymis azurea C LC 141. Asian Paradise-Flycatcher Terpsiphone paradisi C LC 142. Muscicapidae Asian Brown Flycatcher Muscicapa dauurica C LC 143. Oriental Magpie Robin Copsychus saularis C LC 144. Oriental Magpie Robin Copsychus saularis C LC 145. Indian Robin Saxicolaes fulicata C LC 146. Black Redstart Phoenicurus ochruros C LC 147. Siberian Stonechat Saxicola maurus C LC 148. Pied Bush Chat Saxicola caprata C LC 149. Brown Rock Chat Cercomela fusca C LC 150. Muscicapidae Blue Rock Thrush Monitcola solitarius C LC 151. Red-breasted Flycatcher Ficedula parva C LC 152. Red-broated Flycatcher Ficedula albicilla UC LC 153. Tickell's Blue Flycatcher Ficedula albicilla UC LC 154. Sturnidae Brahminy Starling Sturnus pagodarum C LC 155. Rosy Starling Sturnus roseus C LC 157. Chestnut-tailed Starling Sturnus contra C LC 158. Common Myna Acridothere stristis C LC 159. Paridae Great Tit Parus major C LC 160. Black-lored Tit Parus major C LC 161. Hirundinidae Dusky Crag Martin Hirundo concolor C LC 162. Plain Martin Riperia paludicola C LC 163. Common House Martin Delichon urbicum UC LC 164. Barn Swallow Hirundo daurica C LC 165. Wire-tailed Swallow Hirundo daurica C LC 166. Red-rumped Swallow Hirundo daurica C LC 167. Streak-throated Swallow Hirundo daurica C LC 168. Pycnonotidae Red-vented Bulbul Pycnonotus lateolus C LC 169. White-browed Bulbul Pycnonotus lateolus C LC 170. Cisticolidae Ziting Cisticola Cisticola juncidis C LC 171. Jungle Prinia Prinia socialis C LC 172. Ashy Prinia Prinia formata C LC 173. Pain Prinia Prinia formata C LC 174. Grey-breasted Prinia						
141. Asian Paradise-Flycatcher Asian Paradise-Flycatcher Asian Brown Flycatcher Asian Strown Flycatcher Asiacola maurus C LC LC LC LC LC LC LC						
142. Muscicapidae Asian Brown Flycatcher Muscicapa danurica C LC 143. Bluethroat Luscinia svecica C LC 144. Oriental Magpie Robin Copsychus saularis C LC 145. Indian Robin Saxicoloides fulicata C LC 146. Black Redstart Phoenicurus ochruros C LC 147. Siberian Stonechat Saxicola caprata C LC 148. Pied Bush Chat Saxicola caprata C LC 149. Brown Rock Chat Cercomela fusca C LC 149. Brown Rock Chat Cercomela fusca C LC 150. Muscicapidae Blue Rock Thrush Monicola solitarius C LC 151. Red-breasted Flycatcher Ficedula parva C LC 152. Red-throated Flycatcher Ficedula albicilla UC LC 153. Tickell's Blue Flycatcher Ficedula parva C LC 154. Sturnidae Brahminy Starling Sturnus pagodarum C LC 155. Rosy Starling Sturnus pagodarum C LC 156. Asian Pied Starling Sturnus pagodarum C LC 157. Chestnut-tailed Starling Sturnus roseus C LC 158. Common Myna Acridotheres tristis C LC 159. Paridae Great Tit Parus manifogenys C LC 160. Black-lored Tit Parus manifogenys C LC 161. Hirundinidae Dusky Crag Martin Hirundo concolor C LC 162. Plain Martin Riperia paludicola C LC 163. Common House Martin Pinia of murbicum UC LC 164. Barn Swallow Hirundo smithi C LC 165. Wire-tailed Swallow Hirundo smithi C LC 166. Red-rumped Swallow Hirundo smithi C LC 167. Streak-throated Swallow Hirundo smithi C LC 168. Pycnonotidae Red-vented Bulbul Pycnonorus tateolus C LC 169. White-browed Bulbul Pycnonorus tateolus C LC 170. Cisticolidae Zitting Cisticola Cisticola juncidis C LC 171. Jungle Prinia Prinia sorcalis C LC 172. Ashy Prinia Prinia incornata C LC 175. Costeropidae Oriental White-eye Zosterops palpebrosus C LC 176. Zosteropidae Oriental Wh		Monarchidae				
Bluethroat Luscinia svecica C LC 144.		Marainaridae	·			
144. Oriental Magpie Robin Copsychus saularis C LC 145. Indian Robin Saxicoloides fulicata C LC 146. Black Redstart Phoenicurus ochruros C LC 147. Siberian Stonechat Saxicola maurus C LC 148. Pied Bush Chat Saxicola caprata C LC 149. Brown Rock Chat Cercomela fusca C LC 149. Muscicapidae Blue Rock Thrush Monticola solitarius C LC 150. Muscicapidae Blue Rock Thrush Monticola solitarius C LC 151. Red-breasted Flycatcher Ficedula parva C LC 152. Red-throated Flycatcher Ficedula albicilla UC LC 153. Tickell's Blue Flycatcher Cyornis tickelliae C LC 154. Sturnidae Brahminy Starling Sturnus pagodarum C LC 155. Rosy Starling Sturnus roseus C LC 156. Asian Pied Starling Sturnus roseus C LC 157. Chestnut-tailed Starling Sturnus contra C LC 157. Chestnut-tailed Starling Sturnia (malabarica) blythii UC LC 158. Common Myna Acridotheres tristis C LC 159. Paridae Great Tit Parus major C LC 160. Black-lored Tit Parus major C LC 161. Hirundinidae Dusky Crag Martin Hirundo concolor C LC 162. Plain Martin Riperia paludicola C LC 163. Common House Martin Delichon urbicum UC LC 164. Barn Swallow Hirundo smithii C LC 165. Wire-tailed Swallow Hirundo smithii C LC 166. Red-rumped Swallow Hirundo fuvicola UC LC 167. Streak-throated Swallow Hirundo fuvicola UC LC 168. Pycnonotidae Red-vented Bulbul Pycnonotus cafer C LC 169. White-browed Bulbul Pycnonotus lucolus C LC 170. Cisticolidae Zitting Cisticola Cisticola juncidis C LC 171. Jungle Prinia Prinia socialis C LC 172. Asby Prinia Prinia hodgsonii C LC 173. Plain Prinia Prinia hodgsonii C LC 175. Costeropidae Oriental White-eye Zosterops palpebrosus C LC 176. Zosteropidae O		Muscicapidae	•	-		
Indian Robin Saxicoloides fulicata C LC Ide						
Black Redstart Phoenicurus ochruros C LC 147. Siberian Stonechat Saxicola maurus C LC 148. Pied Bush Chat Saxicola caprata C LC 149. Brown Rock Chat Cercomela fusca C LC 150. Muscicapidae Blue Rock Thrush Monticola solitarius C LC 151. Red-breasted Flycatcher Ficedula parva C LC 152. Red-throated Flycatcher Ficedula albicilla UC LC 153. Tickell's Blue Flycatcher Ficedula albicilla UC LC 154. Sturnidae Brahminy Starling Sturnus pagodarum C LC 155. Rosy Starling Sturnus pagodarum C LC 156. Asian Pied Starling Sturnus contra C LC 157. Chestmut-tailed Starling Sturnus contra C LC 158. Common Myna Acridotheres tristis C LC 159. Paridae Great Tit Parus major C LC 160. Black-lored Tit Parus manior C LC 161. Hirundinidae Dusky Crag Martin Hirundo concolor C LC 162. Plain Martin Riperia paludicola C LC 163. Common House Martin Delichon urbicum UC LC 164. Barn Swallow Hirundo mithii C LC 165. Wire-tailed Swallow Hirundo fluvicola UC LC 166. Red-rumped Swallow Hirundo smithii C LC 167. Streak-throated Swallow Hirundo fluvicola UC LC 168. Pycnonotidae Red-vented Bulbul Pycnonotus lateolus C LC 170. Cisticolidae Zitting Cisticola Cisticola juncidis C LC 171. Jungle Prinia Prinia inormata C LC 172. Ashy Prinia Prinia inormata C LC 173. Plain Prinia Prinia inormata C LC 176. Zosteropidae Oriental White-eye Zosterops palpebrosus C LC 177. Zosteropidae Oriental White-eye Zosterops palpebrosus C LC 178. La 150. LC 161. LC 16				·		
Siberian Stonechat Saxicola maurus C LC 148.						
Pied Bush Chat Saxicola caprata C LC						
Brown Rock Chat Cercomela fusca C LC						
Muscicapidae Blue Rock Thrush Monticola solitarius C LC				*		
Red-breasted Flycatcher Ficedula parva C LC				v		
Red-throated Flycatcher Ficedula albicilla UC LC 153.		Muscicapidae				
Tickell's Blue Flycatcher Cyornis tickelliae C LC LC LC LC LS Sturnidae Brahminy Starling Sturnus pagodarum C LC LC LS LS Rosy Starling Sturnus roseus C LC LS L			•			
Sturnidae Brahminy Starling Sturnus pagodarum C LC			ž – – – – – – – – – – – – – – – – – – –			
Rosy Starling Sturnus roseus C LC				Cyornis tickelliae		
Asian Pied Starling Chestnut-tailed Starling Sturnus contra C LC 157. Chestnut-tailed Starling Sturnia (malabarica) blythii UC LC 158. Common Myna Acridotheres tristis C LC 159. Paridae Great Tit Parus major C LC 160. Black-lored Tit Parus xanthogenys C LC 161. Hirundinidae Dusky Crag Martin Hirundo concolor C LC 162. Plain Martin Riperia paludicola C LC 163. Common House Martin Delichon urbicum UC LC 164. Barn Swallow Hirundo rustica C LC 165. Wire-tailed Swallow Hirundo smithii C LC 166. Red-rumped Swallow Hirundo fluvicola C LC 167. Streak-throated Swallow Hirundo fluvicola UC LC 168. Pycnonotidae Red-vented Bulbul Pycnonotus cafer C LC 170. Cisticolidae Zitting Cisticola Zitting Cisticola Prinia sylvatica C LC 171. Jungle Prinia Prinia socialis C LC 172. Ashy Prinia Prinia inornata C LC 174. Grey-breasted Prinia Prinia hodgsonii C LC 175. Common Tailorbird Oriental White-eye Zosterops palpebrosus C LC	154.	Sturnidae	Brahminy Starling	Sturnus pagodarum	C	LC
Chestnut-tailed Starling Sturnia (malabarica) blythii UC LC	155.		Rosy Starling	Sturnus roseus	С	LC
Chestnut-tailed Starling Sturnia (malabarica) blythii UC LC	156.		Asian Pied Starling	Sturnus contra	С	LC
Common Myna Acridotheres tristis C LC						
Paridae Great Tit Parus major C LC				· · · · · · · · · · · · · · · · · · ·		_
Black-lored Tit Parus xanthogenys C LC		Paridae	•	<u> </u>		
Plain Martin Riperia paludicola C LC	160.	ruruuc				
Plain Martin Riperia paludicola C LC	161.	Hirundinidae	Dusky Crag Martin	Hirundo concolor	С	LC
Common House Martin Delichon urbicum UC LC						
Barn Swallow Hirundo rustica C LC				1 1		
Wire-tailed Swallow Hirundo smithii C LC						
Red-rumped Swallow Hirundo daurica C LC						
Streak-throated Swallow Hirundo fluvicola UC LC						
168.PycnonotidaeRed-vented BulbulPycnonotus caferCLC169.White-browed BulbulPycnonotus luteolusCLC170.CisticolidaeZitting CisticolaCisticola juncidisCLC171.Jungle PriniaPrinia sylvaticaCLC172.Ashy PriniaPrinia socialisCLC173.Plain PriniaPrinia inornataCLC174.Grey-breasted PriniaPrinia hodgsoniiCLC175.Common TailorbirdOrthobomus sutoriusCLC176.ZosteropidaeOriental White-eyeZosterops palpebrosusCLC			*			
White-browed Bulbul Pycnonotus luteolus C LC Cisticolidae Zitting Cisticola Cisticola juncidis C LC Jungle Prinia Prinia sylvatica C LC Ashy Prinia Prinia socialis C LC Plain Prinia Prinia inornata C LC Plain Prinia Prinia hodgsonii C LC Grey-breasted Prinia Prinia hodgsonii C LC Common Tailorbird Orthobomus sutorius C LC Zosteropidae Oriental White-eye Zosterops palpebrosus C LC		D (2.1		v		
170.CisticolidaeZitting CisticolaCisticola juncidisCLC171.Jungle PriniaPrinia sylvaticaCLC172.Ashy PriniaPrinia socialisCLC173.Plain PriniaPrinia inornataCLC174.Grey-breasted PriniaPrinia hodgsoniiCLC175.Common TailorbirdOrthobomus sutoriusCLC176.ZosteropidaeOriental White-eyeZosterops palpebrosusCLC		Pycnonotidae		· ·		
Jungle Prinia Prinia sylvatica C LC 172. Ashy Prinia Prinia socialis C LC 173. Plain Prinia Prinia inornata C LC 174. Grey-breasted Prinia Prinia hodgsonii C LC 175. Common Tailorbird Orthobomus sutorius C LC 176. Zosteropidae Oriental White-eye Zosterops palpebrosus C LC		Class at a				
172.Ashy PriniaPrinia socialisCLC173.Plain PriniaPrinia inornataCLC174.Grey-breasted PriniaPrinia hodgsoniiCLC175.Common TailorbirdOrthobomus sutoriusCLC176.ZosteropidaeOriental White-eyeZosterops palpebrosusCLC		Cisticolidae	-			
173.Plain PriniaPrinia inornataCLC174.Grey-breasted PriniaPrinia hodgsoniiCLC175.Common TailorbirdOrthobomus sutoriusCLC176.ZosteropidaeOriental White-eyeZosterops palpebrosusCLC				•		
174.Grey-breasted PriniaPrinia hodgsoniiCLC175.Common TailorbirdOrthobomus sutoriusCLC176.ZosteropidaeOriental White-eyeZosterops palpebrosusCLC			•	1		
175. Common Tailorbird Orthobomus sutorius C LC 176. Zosteropidae Oriental White-eye Zosterops palpebrosus C LC				<u> </u>		
176. Zosteropidae Oriental White-eye Zosterops palpebrosus C LC	174.					
177. Acrocephalidae Booted Warbler Hippolais caligata UC LC	176.		Oriental White-eye	Zosterops palpebrosus		
	177.	Acrocephalidae	Booted Warbler	Hippolais caligata	UC	LC

178.		Blyth's Reed Warbler	Acrocephalus dumetorum	C	LC
179.		Paddyfield Warbler	Acrocephalus agricola	С	LC
180.		Clamorous Reed Warbler	Acrocephalus stentoreus	UC	LC
181.	Phylloscopidae	Common Chiffchaff	Phylloscopus collybita	C	LC
182.		Sulpher-bellied Warbler	Phylloscopus griseolus	С	LC
183.	Sylviidae	Lesser Whitethroat	Sylvia curruca	С	LC
184.	Timaliidae	Tawny-bellied Babbler	Dumetia hyperythra	С	LC
185.	Paradoxornithidae	Yellow-eyed Babbler	Chrysomma sinense	C	LC
186.	Leothrichidae	Common Babbler	Turdoides caudatus	С	LC
187.		Large Grey Babbler	Turdoides malcolmi	C	LC
188.		Jungle Babbler	Turdoides striatus	С	LC
189.	Alaudidae	Singing Bushlark	Mirafra cantillans	С	LC
190.		Ashy-crowned Sparrov Lark	v Eremopterix grisea	С	LC
191.		Rufous-tailed Lark	Ammomanes phoenicurus	С	LC
192.		Sykes's Lark	Galerida deva	С	LC
193.	Nectariniidae	Purple-rumped Sunbird	Nectarinia zeylonica	С	LC
194.		Purple Sunbird	Nectarinia asiatica	С	LC
195.	Motacillidae	White Wagtail	Motacilla alba	С	LC
196.		White-browed Wagtail	Motacilla maderaspatensis	С	LC
197.		Grey Wagtail	Motacilla cinerea	С	LC
198.		Yellow Wagtail	Motacilla flava	С	LC
199.		Paddyfield Pipit	Anthus rufulus	C	LC
200.		Tawny Pipit	Anthus campestris	С	LC
201.	Passeridae	House Sparrow	Passer domesticus	С	LC
202.		Chestnut-shouldered Petronia	Petronia xanthocollis	С	LC
203.	Ploceidae	Baya Weaver	Ploceus philippinus	С	LC
204.	Estrildidae	Red Avadavat	Amandava amandava	С	LC
205.		Indian Silverbill	Lonchura malabarica	С	LC
206.		Black-headed Munia	Lonchura malacca	С	LC
207.		Scaly-breasted Munia	Lonchura punctulata	С	LC
208.	Fringillidae	Common Rosefinch	Carpodacus erythrinus	С	LC
209.	Emberizidae	Crested Bunting	Melophus lathami	UC	LC
210.		Red-headed Bunting	Emberiza bruniceps	С	LC

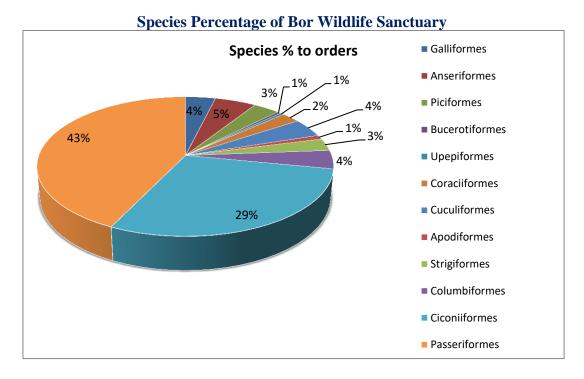
Abbreviations: C- Common, UC- Uncommon, V- Vagrant, R- Rare. LC- Least Concern, NT-Near threatened, VU- Vulnerable

Result and Discussion

Total 210 bird species belonging to 12 orders and 71 families were observed, by categorization of occurence 1 rare, 18 uncommon and 191common. Total diversity categories cording to IUCN status 1 vulnerable, 7 near threaten and 202 are least concern.

Avifauna distributes in Order Galliformes with 2 families and 8 species, Anseriformes 2 families 11 species, Piciformes 2 families 7

species, Bucerotiformes 1 families 1 species, Upepiformes families1 species, 1 Coraciiformes 5 species, families 5 3 9 Cuculiformes families species, Apodiformes 2 families 2 species, Strigiformes 2 families 6 species, Columbiformes 2 families 9 species, Ciconiiformes 16 families 61 species families 90 species Passeriformes 33 According to distribution of species diversity, indicates that the habitat is much more healthy and supportive to the inhabitance of the avifauna. Forest birds, water birds and waders are good in numbers.



References

- Ali, S. and Ripley, S. D. (1987). The compact handbook of the birds of India and Pakistan together with those of Bangladesh, Nepal, Bhutan and Sri Lanka. 2nd edition. Delhi: Oxford University Press
- 2. Anon, (2009). Checklist of Birds Vidarbha region of Maharashtra. VNHS Center, Nagpur. Bibby, C., B.N. Burges and D.A. Hill (1992): Birds census techniques. Academic press, London.
- 3. Ericson, P. G. P.; Envall, I.; Irestedt, M. & Norman, J. A. (2003): Inter-familial relationships of the shorebirds (Aves:Charadriiformes) based on nuclear DNAsequence data.BMC Evol. Biol. 3:16.
- 4. Joshi Pranoti J., Ninad B. Raut, Chinmay Khanolkar and Pankaj Kumar (2013), Avifaunal Distribution within Different Habitats of Karnala Bird Sanctuary, Maharashtra, National Conference on Biodiversity: Status and Challenges in Conservation 'FAVEO' 2013.
- Kasambe. R. (2016). Standard Marathi names of Birds found in Maharashtra. Bombay Natural History Society and

- Maharashtra Pakshimitra Sanghatana PP. 24
- Paton, Tara A. & Baker, Allan J. (2006): Sequences from 14 mitochondrial genes provide a well-supported phylogeny of the Charadriiform birds congruent with the nuclear RAG-1 tree. Molecular Phylogenetics and Evolution 39(3): 657– 667.
- 7. Sekercioglu, C. H., (2006). "Ecological significance of bird populations and their contribution to ecosystem services." *Journal of Ornithology*, 147(2), 217-226.
- 8. Virani Ramzan S. and Bansod Subodh N. (2015): Study of waders diversity from selected water bodies of Yavatmal District in Central India. Golden Research Thoughts Volume-4 Issue-8
- 9. Wadatkar, J.S., Kasambe, R., Wagh G., Abhang, N. & Morey, K. (2016). Checklist of Birds of Amravati District, Maharashtra WECS Amravati. PP.1-22
- 10. Yonezawa, T, et al. (2017). Phylogenomics and Morphology of Extinct Paleognaths Reveal the Origin and Evolution of the Ratites. Current Biology. 27 (1): 68–77.