

A Preliminary survey of birds in Pench Tiger Reserve, Madhya Pradesh, India

Abstract

A preliminary survey of bird species and habitat in the Karmajhiri Range, Pench Tiger Reserve was conducted during March 2014 - May 2014. The aim of this study was assessment of avian population by addressing some ecological status such as faunal type, phenological traits, trophic status, occurrence and protection status of birds species. 221 species of birds were recorded from study area. Out of 26 order in India 16 order of birds were presented in and around Pench Tiger Reserve (PTR) which comprises 61 families. PTR provides habitat for three critically endangered species, namely **White-rumped Vulture (*Gyps bengalensis* Gmelin, 1788)**, **Red-headed Vulture (*Sarcogyps calvus* Scopoli, 1786)** and **Indian Vulture (*Gyps indicus* Scopoli, 1786)**. Regarding species protected by Berne convention 34 species are listed in Appendix 2 (strictly protected fauna) and only one are represented in Appendix 3 (Protected fauna) House Sparrow ***Passer domesticus* Linnaeus, 1758**. Based on the AEWA (African-European Migratory Waterbird Agreement) bird list, 18 bird species are noted in the study area. The dominance of Oriental faunal type provide information on the relationship of the surveyed avifauna to the biogeographical zones. We were recorded 28 biome restricted bird species. This assessment also supports and justifies its classification as an Important Bird Area "IBA" because of the importance and abundance of avian species. Its provide shelter and hosts to birds. To conserve birds species in tropical deciduous forest in PTR, it will be necessary to preserve large areas of contiguous forest and monitor the effect of Habitat fragmentation and other development activities in and around forest area will have impact on their foraging, breeding and subsequently their population. These scientific findings will help to evaluate the effectiveness of legislation and policies for bird protection and will under in future conservation action for birds and their habitats.

Key Words : habitat diversity, habitat type, IBA, threatened species, biogeographical zone

Introduction

India lies within the oriental region and it is one of the 17 mega-biodiverse countries in the world (**Anonymous 2002; Caillaux and Riz 2002**). With its varied climate and terrain and characterized by at least 10 distinct biogeographical region (**Rodgers and Panwar 1988**), India support a huge variety of forest types and harbour three global terrestrial biodiversity hotspots (**Singh and Kushwaha 2008**). The forest cover was estimated to be 29.36% of total geographical area of India (**Reddy et al.2015**). **Champion and Seth (1968)** have classified Indian forest based on physiognomy and climate. The predominant forest types of India are

tropical dry deciduous and tropical moist deciduous. Of the total forest cover, tropical dry deciduous forests occupy an area of 2,17,713 sq km (34.80%) followed by 2,07,649 sq km (33.19%) under tropical moist deciduous forests, 48,295 sq km (7.72%) under tropical semi evergreen forests and 47,192 sq km (7.54%) under tropical wet evergreen forests (**Reddy et al.2015**).

The 11,121 species of birds occur all over the world included 742 “new species”, with 46 parrots, 36 hummingbirds and 26 owls. (**Birdlife International 2018**), while the bird species from the Indian Subcontinent is 1383, that from within the geographical boundaries of India is 1306 (**Praveen et al.2018**). Of these, 72 species of birds are endemic to India, constituting about 5.5% of the country’s bird diversity. Taxonomically, the Indian avifauna covers 26 orders, 111 families, and 492 genera (**Praveen et al.2018**). However, two families, Asiatic Barbets Megalaimidae and Leafbirds Irenidae, occur in the Oriental region, the rest of the bird families are found in other biogeographical regions of the world too. The Oriental region is also the centre of radiation for many bird groups such as the Pheasants, Laughing thrushes, Drongos, Leafbirds, Pittas, Parrotbills, and Flowerpeckers (**Rahmani et al.2016**).

Being a physical part of Asia, India is least limited by geographical barriers, thus it has acted as a centre of dispersal of species, and has also received species from the Palaearctic, Ethiopian, Indo-Chinese and Indo-Malayan subregions. But the dominant groups of birds in India belong to what is sometimes called the ‘Indo-Chinese’ fauna, the birds adapted to life in the warm, moist tropical Southeast Asia, birds primarily of jungle or heavy forests (**Ali & Ripley 1987**). The geographical ramifications of south-east Asia, the tangled patterns of mountain chains, river drainage systems, and a long period of stable climate seem to have been ideal for the evolution of a wide array of avian species (**Ali & Ripley 1987**).

In India there are 467 Important Bird and Biodiversity Area (**Islam and Rahmani 2004**). The IBA serve as conservation areas for protection of birds at the global, regional or subregional level (**Birdlife International 2018**). The presence of tropical forest and habitat diversity maintain the biodiversity of Pench Tiger Reserve (PTR) and should be regarded as Important Bird and Biodiversity Area. This is probably because PTR contain a range of habitat such as tropical dry and moist deciduous forest, wetland, reservoirs, grassland and scrubland making it excellent indicator of biodiversity richness. Its lies in Biome 11(Indo-Malayan tropical dry zone) thus represent distribution for many biome-restricted birds (**Rahmani et al. 2016**). Birdlife International (undated) identified 59 species in Biome-11. In PTR 30 biome-restricted bird species have been seen (**Pasha et al.2004**). Besides the biome- restricted

species it's also hold significant numbers of more globally threatened bird species. It provide ecologically and biologically significant area which has huge potential for breeding and migratory birds, arrives in the reserve every year especially at the onset of winter and stay in different location of the reserve until the onset of summer compared to other surrounding areas.

Material and Methods

Study Area

According to the biogeographic classification of **Rodger and Panwar (1988)** the study area falls under 6E biogeographic province of the Deccan peninsula. Pench Tiger Reserve (PTR) (21°50'42"N latitude, 79°27'47"E longitude), lies in southwest Madhya Pradesh (Fig. 1). The reserve is located in the southern slopes of satpura hills in Seoni and Chhindwara district of Madhya Pradesh. The total area of the reserve is 768.302 sq km in Seoni and Chhindwara district. The 292.857 sq km area of the tiger reserve managed as core area. Pench Tiger Reserve derived its name from the river Pench that flow through the reserve in a north south direction covering length of 24 km (**Areendran 2007**).

The terrain is gently undulating and is dissected by a number of seasonal stream and nullahs. The altitude of the reserve ranges from 350 to 650 m (**Areendran2007**). Climatically the area has four seasons summer (March- June), Monsoon (July- August), Post-Monsoon (September- October) and Winter (November – February). The annual range of temperature varied from as low as -2°C in peak winter to as high as 49°C in peak summer (**Areendran 2007**). The vegetation of the area comprises two broad categories such as Tropical Dry Deciduous and Tropical Moist Deciduous forest type (**Champion and Seth 1968**). These forest types, for the present study were further sub divided as follows:

- Teak dominant forest
- Miscellaneous forest
- Bamboo forest
- Grassland
- Scrubland

Data Collection

Data were collected by Fixed-Radius Circular Point Count method and Mackinnon's methods (MacKinnon and Phillips, 1993). During the field work all birds species seen were recorded in six different habitats types and identified using Grimmett et al. (1999). The points were randomly established with a minimum interval of 200 - 300 m. We recorded the number of individuals of each species detected in a Fixed- Radius circular plot of 30 meters for 20 minutes observation period at each 180 points. Observation were done in the morning (06:00-11:0) and in the afternoon (15:00- 17:00).

Another method that is Mackinnon's method was also used to get a quick idea of the species richness and composition in an area. The study area was monitored at a regular speed and the species of birds encounter was recorded. Once a list of 10 species is completed, another list was prepared. No same species was recorded again in the same list. The study was conducted from March 2014 to May 2014.

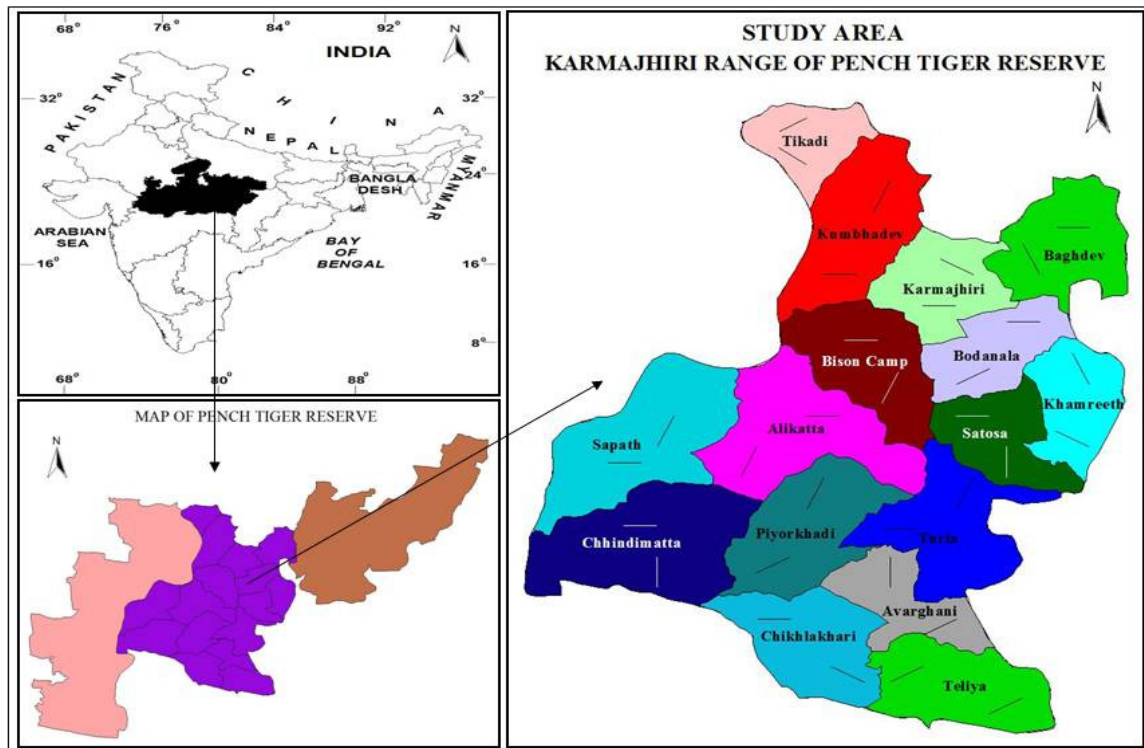


Fig 1: Map of PTR (Karmajhiri Range)

Result and discussion

Despite the limited area of this study, the surveyed avifauna is diverse. Order Passeriformes (51.58%) had highest numbers of species followed by Falconiformes (9.50%) (Table 5). It represents over a quarter of Madhya Pradesh birds (469 species cited by **Grimmett and Inskipp 2003**). There are 26 orders of the birds in India (**Praveen et al 2018**) out of these 16 orders of birds present in and around PTR which comprises 61 families in which 221 species of birds were recorded in and around PTR and covers more than half of the orders (61.54%) and families (54.96%) described in the country. We also recorded 28 biome- restricted species in study area (Appendix 2).

Protection status of birds

Following the IUCN Red List, 94.11% of all birds are of least concern (LC) while only one species namely **Green Warbler (Phylloscopus nitidus Sundevall, 1837)** has the “Data Deficient” status and another two have “Vulnerable” such as **Greater spotted Eagle (Aquila clanga Palas, 1811)** and **Eastern imperial Eagle (Aquila heliaca Savigny, 1809)** respectively (Table 1). Only three of 221 species (1.36% of all birds) are currently critically endangered. These are **White-rumped Vulture (Gyps benghalensis Gmelin, 1788)**, **Red-headed Vulture (Sarcogyps calvus Scopoli, 1786)** and **Indian Vulture (Gyps indicus Scopoli, 1786)**. Moreover **White-rumped Vulture (Gyps benghalensis Gmelin, 1788)**, **Indian Vulture (Gyps indicus Scopoli, 1786)** and **Indian Peafowl (Pavo cristatus Linnaeus, 1758)** are listed in Schedule 1 of Wildlife Protection Act 1972. Indian subcontinent birds are also protected under the CITES, Bonn Convention, Berne Convention, AEWA Agreement. It is the focus of close monitoring and targeted conservation action across most of its range. For, India is not a party to the Berne Convention and AEWA (African-European Migratory Waterbird agreement) but receives bird species which are listed in appendix 2 and 3. We recorded 35 species which are listed in Berne convention, out of these 33 are listed in Appendix 2 (strictly protected fauna) and only one are represented in Appendix 3 (Protected fauna) **Passer domesticus Linnaeus, 1758**. Unlike the IUCN Red List criteria, these species are listed as Least concern (Table 2). 26 species are listed in appendix 2 of the Convention of Washington (CITES), out of these 21 species belonging to the order of Falconiformes (Table 1).

Table 1- Summary of numbers of bird species within each category of threat.

Treaty & Convention on bird protection	Code	Passerines	Non-passerines	Total	%
Red list of IUCN					
Critically Endangered	CR	0	3	3	1.36
Vulnerable	VU	0	2	2	0.91
Near Threatened	NT	1	6	7	3.17
Least Concern	LC	114	94	208	94.11
Data Deficient	DD	1	0	1	0.46
Convention of Washington(CITES)					
Appendix 2	T2	0	26	26	11.77
Convention of Bonn					
Appendix 1	N1	0	2	2	0.91
Appendix 2	N2	22	20	42	18.56
Convention of Berne					
Appendix 2	E2	19	15	34	15.39
Appendix 3	E3	1	0	1	0.46
AEWA Agreement	A	0	18	18	8.15

Table 2 – Comparison of IUCN status of birds to Berne and AEWA status.

S.No	Species	IUCN Red List	Berne convention Appendices	AEWA
1	Anas strepera (Linnaeus, 1758)	Lc	-	A
2	Anas platyrhynchos (Linnaeus, 1758)	Lc	-	A
3	Aythya ferina (Linnaeus, 1758)	Lc	-	A
4	Tadorna ferruginea (Pallas, 1764)	Lc	E2	A
5	Ciconia episcopus (Boddaert, 1783)	Lc	-	A
6	Ardea cinerea (Linnaeus, 1758)	Lc	-	A
7	Ardea purpurea (Linnaeus, 1766)	Lc	E2	A
8	Mesophoyx intermedia (Wagler, 1827)	Lc	-	A
9	Egretta garzetta (Linnaeus, 1766)	Lc	E2	A
10	Bubulcus ibis (Linnaeus, 1758)	Lc	E2	A
11	Nycticorax nycticorax (Linnaeus, 1758)	Lc	E2	A
12	Falco tinnunculus (Linnaeus, 1758)	Lc	E2	-
13	Gallinule chloropus (Linnaeus, 1758)	-	-	A
14	Fulica atra (Linnaeus, 1758)	-	-	A
15	Glareola maldivarum (Forster,1795)	-	E2	
16	Gallinago gallinago (Linnaeus, 1758)	-	-	A
17	Tringa ochropus (Linnaeus, 1758)	Lc	E2	A
18	Actitis hypoleucos (Linnaeus, 1758)	Lc	E2	
19	Calidris minuta (Leisler, 1812)	Lc	E2	A
20	Calidris ferruginea (Pontoppidan, 1763)	Lc	E2	A
21	Sterna albifrons (J.E.Gray, 1831)	Lc	E2	A
22	Alcedo atthis (Linnaeus, 1758)	Lc	E2	-
23	Upupa epops (Linnaeus, 1758)	Lc	E2	-
24	Lanius cristatus (Linnaeus, 1758)	Lc	E2	-
25	Lanius meridionalis (Temminck, 1820)	Lc	E2	-
26	Calandrella brachydactyla (Leisler, 1814)	Lc	E2	-
27	Hirundo rustica (Linnaeus, 1758)	Lc	E2	-
28	Cercopis daurica (Laxmann, 1769)	Lc	E2	-
29	Delichan urbicum (Linnaeus, 1758)	Lc	E2	-
30	Pastor roseus (Linnaeus, 1758)	Lc	E2	-
31	Monticola solitaries (Linnaeus, 1758)	Lc	E2	-
32	Phoenicurus ochruros (S.G.Gmelin, 1774)	Lc	E2	-
33	Luscinia svecica (Linnaeus, 1758)	Lc	E2	-
34	Saxicola torquatus (Linnaeus, 1766)	Lc	E2	-
35	Passer domesticus (Linnaeus, 1758)	Lc	E3	-
36	Motacilla citreola (Tunstall, 1771)	Lc	E2	-
37	Motacilla falva (Linnaeus, 1758)	Lc	E2	-
38	Motacilla cinerea (Tunstall, 1771)	Lc	E2	-
39	Anthus campestris (Linnaeus, 1758)	Lc	E2	-
40	Anthus godlewskii (Taczanowski,	Lc	E2	-

	1876)			
41	Anthus richardi (Vieillot, 1818)	Lc	E2	-
42	Anthus hodgsoni (Richmond, 1907)	Lc	E2	-
43	Carpodacus erythrinus (Pallas, 1770)	Lc	E2	-
Total	43		35	18

Phenology and Biogeographical range of species

Current study was recorded less number of birds than other studies that was conducted in PTR because it is just a preliminary survey for the short period of time. We missed species that move regionally as well as intertropical migrants that sometimes occur in great abundance in forest habitat around. Secondly, the survey was done during the breeding season for many species, when habitat requirements typically become more restricted, and third we did not cover whole PTR, some forested patches known to be relatively rich in bird species, were excluded. Birds have biogeographical affinity to the oriental region according to the dominant faunal type with more than a quarter of all counted species (49.33%). It was followed by Oriental- Palearctic region (19.01%) then the Palearctic region (14.03%) then came to the Oriental- Holarctic region (0.46%) (Table 3). Resident birds were found to be maximum and distributed throughout the Oriental region with 86 birds species followed by Oriental- Palearctic region (exist in both biogeographical region) with 26 species of forest birds (Table 3). Passage migrant was best characterized by **Common House Martin (Delichan urbicum Linnaeus, 1758)** and belongs to Oriental-Palearctic region. Altogether Resident migrants (that is, birds that breed in one part of the area in one season and move to other parts within the state or country in a different season) such as **Mallard (Anas platyrhynchos Linnaeus, 1758)**, **Ruddy Shelduck (Tadorna ferruginea Pallas, 1764)**, **Asian Openbill (Anastromus oscitans Boddaert, 1783)**, **Grey Heron (Ardea cinerea Linnaeus, 1758)**, **Painted Stork (Mycteria leucocephala Pennant, 1769)** were winter migrants in this region constituting 54 (24.43%) of all birds species which conduct local seasonal movement and track available food resources. Of these, 17 bird species show their affinity to the Oriental region. It was followed by Palearctic with 12 birds species and Oriental- Palearctic region with 12 birds species respectively (Table 3). Whereas some species for example **Indian Cuckoo (Cuculus micropterus Gould, 1837)**, **Grey-bellied Cuckoo (Cacomantis passerines Vahl, 1797)** and **Indian Pitta (Pitta brachyuran Linnaeus, 1766)** were resident summer migrants with 3.61% of all birds species and fall under Oriental and Oriental- Palearctic biogeographical region. However a number of winter

visitor received from Palearctic region with 19 birds species to the study area for example **Eastern imperial Eagle (Aquila heliaca Savigny, 1809)**, **Steppe Eagle (Aquila nipalensis Hodgson, 1833)**, **Green Sandpiper (Tringa ochropus Linnaeus, 1758)**, **Red-headed Bunting (Emberiza burniceps Brandt, 1841)** and only one species **Gadwall (Anas strepera Linnaeus, 1758)** belongs to Oriental- Holarctic region. Only one species that is **Common swift (Apus apus Linnaeus, 1758)** was recorded as Summer visitor which fall under Palearctic–Ethiopian biogeographical range. Similarly **Common house Martin (Delichon urbicum Linnaeus, 1758)** was recorded as passage migrants and has Oriental- Palearctic biogeographical range. Resulting in the predominance of resident and resident migratory birds in the region indicates the ecological importance of this site (Table 4). It provides abundant food resources in both quality and quantity for a large variety of birds, particularly waterfowl that find it an ideal refuge to fatten during the winter (**Bensizerara et al. 2013**).

Table 3: Distribution of bird species by biogeographical range in and around PTR.

Faunal Type (Symbol)	R	RMW	RMS	WV	SV	P	E	Total	%
Cosmopolitan(C)	8	2	-	-	-	-	-	10	4.53
Holarctic(H)	-	4	-	-	-	-	-	4	1.81
Oriental(O)	86	17	4	-	-	-	2	109	49.33
Palearctic(P)	-	12	-	19	-	-	-	31	14.03
Old World(OW)	7	5	-	-	-	-	-	12	5.43
Oriental Palearctic(OP)	26	12	4	-	-	1	-	42	19.01
Oriental Ethiopian(OE)	6	1	-	-	-	-	-	7	3.17
Oriental Holarctic(OH)	-	-	-	1	-	-	-	1	0.46
Oriental Australasian Palearctic(OAP)	1	1	-	-	-	-	-	2	0.91
Oriental Australasian Ethiopian(OAE)	1	1	-	-	-	-	-	2	0.91
Palearctic Ethiopian(PE)	-	-	-	-	1	-	-	1	0.46
Total	135	54	8	20	1	1	2	221	100

Abbreviation

R = Resident, RMW= Resident Migratory In Winter, RMS = Resident Migratory In Summer, WV = Winter Visitor, SV = Summer Visitor, P = Passage Migrants, E = Endemic

Table 4-Phenology of Birds in and around PTR.

Phenology	Passerine	Non-Passerine	Total	%
Resident	62	73	135	61.08
Endemic	0	2	2	0.90
Resident Migratory In Winter	35	19	54	24.43
Resident Migratory In Summer	5	3	8	3.61
Summer Visitor	0	1	1	0.45
Winter Visitor	13	7	20	9.04
Passage Migrant	1	0	1	0.45
Total	116	105	221	100

Trophic status of species

Among foraging group, the majority of species were polyphagous followed by invertebrates-feeder, dominated by order passeriformes (Table 5). The invertebrate feeders also provides information on the health of habitats which offer an abundant biomass of insect species which represent the food of choice for many passerines and of aquatic invertebrates that feed waterfowl (**Chenchouni, 2007; Martensen et al., 2008**). In addition the increase in leaf cover may have provided an additional food resource to invertebrates and therefore a food source for foraging invertebrates- feeders. Beside the invertebrates feeder polyphagous such as **chestnut shouldered Petronia (Gymnoris xanthocollis Brunton, 1838), Grey breasted Prinia (Prinia hodgsonii Blyth, 1844) Red-vented Bulbul (Pycnonotus cafer Linnaeus, 1766), Oriental white Eye (Zosterops palpebrosus Temminck, 1824)** etc. probably increased due to an increase in both invertebrates and fruit abundance in the forest. These fruits are produced by canopy trees such as **Ficus benghalensis, Butea monosperma, Syzygium cumini, Diospyros melanoxylon, Grewia tilifolia** etc and also attracting gregarious frugivores such as **Plum headed Parakeet (Psiitacula cynocephali Linnaeus, 1766)** and **Brown-headed Barbet (Megalaima zeylanica Gmelin, 1788)**. Many of these species are also able to diet-switch in response to seasonal abundance in either fruit, flowers or invertebrates has been recorded in forest elsewhere For example many frugivores also incorporate invertebrates in their diet, because fruits are low in protein and lipids (**Fogden 1972**), and the properties of insects in the diet varies between season such as **Yellow-footed green pigeon (Treron phoenicopterus Latham, 1790)** has a mixed diet of fruit and

invertebrates during breeding season. Meanwhile if ground foraging granivores like **Common Rosefinch (Carpodacus erythrinus Pallas, 1770)**, **Crested Bunting (Melophus lathami Gray, 1831)** and other birds, such as **Red Avadavat (Amandava amandava Linnaeus, 1758)** and do not have access to them, individuals will most likely leave the forest to where these resources are more accessible (**Pearson 1971**). because of dense herbaceous layer, leaf litter and forbs cover acts as barrier to ground foraging birds, which reducing visibility of food resources such as fallen petals of flowers from trees like **Madhuca indica**, **Erythina** spp. Etc. Therefore vegetation cover has both direct and indirect effects on the distribution of foraging birds. The present study was a short tem study in a small area karmajhiri region. To monitor the factors influencing the geographical ranges of birds and relationship between breeding and wintering areas and between abundance and distribution is needed long term study to collect the seasonal data in different years in all the three ranges.

Table 5: Summary of trophic status of bird species in different orders

Orders	Trophic status							Total	%
	Pp	Cv	Cr	G	Pisci/In nv	Inv	F		
Galliformes	6	-	-	-	-	-	-	6	2.72
Anseriformes	5	-	-	-	-	-	-	5	2.27
Ciconiformes	3	-	6	-	5	-	-	14	6.34
Pelecaniformes	-	-	-	-	3	-	-	3	1.36
Falconiformes	-	3	18	-	-	-	-	21	9.50
Gruiformes	4	-	-	-	-	-	-	4	1.80
Charadriiformes	6	-	-	-	5	3	-	14	6.34
Columbiformes	4	-	-	-	-	-	1	5	2.27
Psiitaciformes	-	-	-	-	-	-	3	3	1.36
Cuculiformes	2	-	-	-	-	4	-	6	2.72
Strigiformes	-	-	3	-	-	-	-	3	1.36
Caprimulgiformes	-	-	-	-	-	1	-	1	0.46
Apodiformes	-	-	-	-	-	5	-	5	2.27

Coraciformes	4	-	-	-	4	2	-	10	4.53
Piciformes	7	-	-	-	-	-	-	7	3.17
Passeriformes	42	-	4	6	-	62	-	114	51.58
Total	83	3	31	6	17	77	4	221	100

Abbreviation

Pp= Polyphagous, Cv= Carriion feeder, Cr= Carnivores, G= Granivores, Pesci/Inv= Piscivores/invertebrates, Inv= Invertebrates, F= Frugivores.

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Appendix 1: List of birds recorded from Pench Tiger Reserve, MP India

Order	Family	Scientific Name	Trophic Status	Phenology of Species	Faunal Type	Protection Status	Habitat
Galliformes	Phasianidae	Francolinus pondicerianus (Gmelin, 1789)	Pp	R	OP	Lc	1
		Perdica asiatica (Latham, 1790)	Pp	R	O	Lc	1
		Galloperdix spadicea (Gmelin, 1789)	Pp	E	O	Lc	1
		Galloperdix lunulata (Valenciennes, 1825)	Pp	E	O	Lc	1
		Gallus gallus (Linnaeus, 1758)	Pp	R	O	Lc	1
		Pavo cristatus (Linnaeus, 1758)	Pp	R	O	Lc	1, 2
Anseriformes	Anatidae	Nettapus coromandelianus (Gmelin, 1789)	Pp	R	OP	Lc	1,3
		Anas strepera (Linnaeus, 1758)	Pp	WV	OH	Lc, N2, A	1,3
		Anas platyrhynchos (Linnaeus, 1758)	Pp	RMW	H	Lc, N2, A	1,3
		Aythya ferina (Linnaeus, 1758)	Pp	WV	P	Lc, N2, A	1,3
		Tadorna ferruginea (Pallas, 1764)	Pp	RMW	P	Lc, N2, A,E2	1,3
Ciconiiformes	Ciconiidae	Mycteria leucocephala (Pennant, 1769)	Cr	RMW	O	NT	1,3

		Anastromus oscitans (Boddaert, 1783)	Cr	RMW	O	Lc	1,2,3
		Ciconia episcopus (Boddaert, 1783)	Cr	R	OE	Lc, A	1,3
	Threskiornithidae	Threskiornis melanocephalus (Latham, 1790)	Pp	R	O	NT	1,3
		Pseudibis papillosa (Temminck, 1824)	Pp	R	O	Lc	2,3
	Ardeidae	Ardea cinerea (Linnaeus, 1758)	Cr	RMW	OW	Lc, A	1,3
		Ardea purpurea (Linnaeus, 1766)	Cr	RMW	OW	Lc, A, E2	1,3
		Mesophoyx intermedia (Wagler, 1827)	Pisci/Inv	RMW	OE	Lc,A	1, 2,3
		Egretta garzetta (Linnaeus, 1766)	Cr	R	C	Lc, A, E2	1, 2,3
		Bubulcus ibis (Linnaeus, 1758)	Pisci/Inv	RMW	C	Lc, A, E2	1, 2,3
		Ardeola grayii (Sykes, 1832)	Pisci/Inv	R	OP	Lc	1, 2,3
		Butorides striata (Linnaeus, 1758)	Pisci/Inv	R	C	Lc	1,3
		Nycticorax nycticorax Linnaeus, 1758)	Pp	R	C	Lc, A, E2	2,3

Ciconiiformes	Ardeidae	Ixobrychus cinnamomeus (Gmelin, 1789)	Pisci/Inv	RMW	OP	Lc	2,3
Pelecaniformes	Phalacrocoracidae	Phalacrocorax fuscicollis (Stephens, 1826)	Pisci/Inv	RMW	O	Lc	1,3
		Microcarbo niger (Vieillot, 1817)	Pisci/Inv	RMW	O	Lc	1,2,3
	Anhingidae	Anhinga melanogaster (Pennant, 1769)	Pisci/Inv	RMW	OEA	Lc	1,3
Falconiformes	Accipitridae	Pernis ptilorhynchus (Temminck, 1821)	Cr	R	OP	Lc, T2, N2	1, 2
		Milvus migrans (Boddaert, 1783)	Cr	R	C	Lc, T2, N2	2
		Elanus caeruleus (Desfontaines, 1789)	Cr	R	C	Lc, T2,	2
		Ichthyophaga ichthyophaga (Horsfield, 1821)	Cr	R	O	NT, T2	1,2
		Gyps benghalensis (Gmelin, 1788)	Cv	R	O	CR, T2	1
		Sarcogyps calvus (Scopoli, 1786)	Cv	R	O	CR, T2	1
		Circaetus gallicus (Gmelin, 1788)	Cr	R	OP	Lc, T2, N2	1, 2
		Gyps indicus (Scopoli, 1786)	Cv	R	O	CR, T2	1
		Spilornis cheela (Latham, 1790)	Cr	R	O	Lc, T2	1, 2
		Accipiter badius (Gmelin, 1788)	Cr	R	OW	Lc, T2, N2	1, 2

		Accipiter virgatus (Temminck, 1822)	Cr	R	OP	Lc, T2, N2	2
		Butastur teesa (Franklin, 1831)	Cr	R	O	Lc, T2	1,2
		Aquila clanga (Pallas, 1811)	Cr	RMW	P	VU, T2, N1, N2	1
		Aquila rapax (Temminck, 1828)	Cr	R	OE	Lc, T2, N2	1
		Aquila nipalensis (Hodgson, 1833)	Cr	WV	P	Lc, T2, N2	1
		Aquila heliaca (Savigny, 1809)	Cr	WV	P	VU, T2, N1, N2	1
		Aquila fasciatus (Vieillot, 1822)	Cr	R	OP	Lc, T2,	1
		Aquila pennata (Gmelin, 1788)	Cr	RMW	OP	Lc, T2	1
		Nisaetus cirrhatus (Gmelin, 1788)	Cr	R	OP	Lc, T2	1
Falconiformes	Accipitridae	Nisaetus nipalensis (Hodgson, 1836)	Cr	R	OP	Lc, T2	1
	Falconidae	Falco tinnunculus (Linnaeus, 1758)	Cr	RMW	OW	Lc, T2, N2, E2	1

Gruiformes	Rallia	Amaurornis akool (Sykes, 1832)	Pp	R	O	Lc,	2,3
		Amaurornis phoenicurus (Pennant, 1769)	Pp	R	O	Lc	2,3
		Gallinule chloropus Linnaeus, 1758)	Pp	RMW	C	Lc, A	2,3
		Fulica atra (Linnaeus, 1758)	Pp	RMW	OPA	Lc, A	2,3
Charadriiformes	Charadriidae	Vanellus duvaucelli (Lesson, 1826)	Inv	R	O	NT	1,3
		Vanellus malabaricus (Boddaert, 1783)	Inv	R	O	Lc	2,3
		Vanellus indicus (Boddaert, 1783)	Inv	R	OP	Lc, N2	1, 2,3
	Glareolidae	Glareola maldivarum (Forster, 1795)	Inv	R	OP	Lc, E2	1,3
	Rostratulidae	Rostratula benghalensis (Linnaeus, 1758)	Pp	R	C	Lc	2,3
	Scolopacidae	Gallinago gallinago (Linnaeus, 1758)	Pp	RMW	H	Lc, N2, A	2,3
		Tringa ochropus (Linnaeus, 1758)	Pp	WV	P	Lc,N2, A, E2	2,3
		Actitis hypoleuc (Linnaeus, 1758)	Pp	RMW	P	Lc, E2	2,3
		Calidris minuta (Leisler, 1812)	Pp	WV	P	Lc,N2, A, E2	2,3
		Calidris ferruginea (Pontoppidon, 1763)	Pp	WV	P	Lc,N2, A, E2	2,3
	Sternidae	Sterna aurantia (J. E. Gray, 1831)	Pisci/Inv	R	O	NT	1,2,3

		Sterna albifrons (Pallas, 1764)	Pisci/Inv	R	OW	Lc, N2, A, E2	1,3
Columbiformes	Columbidae	Streptopelia decocta (Friveldszky, 1838)	Pp	R	OP	Lc	1,2
		Streptopelia tranquebarica (Hermann, 1804)	Pp	R	OP	Lc	1
		Strigmatopelia senegalensis (Linnaeus, 1766)	Pp	R	O	Lc	2
		Strigmatopelia chinensis (Scopoli, 1768)	Pp	R	OE	Lc	1,2

Columbiformes	Columbidae	Treron phoenicopterus (Latham, 1790)	F	R	O	Lc	1,2
Psiitaciformes	Psittacidae	Psiitacula eupatria (Linnaeus, 1766)	F	R	OE	Lc, T2	1
		Psittacula krameri (Scopoli, 1769)	F	R	O	Lc	1,2
		Psittacula cynocephali (Linnaeus, 1766)	F	R	O	Lc, T2	1,2
Cuculiformes	Cuculidae	Hieroccyx varius (Vahl, 1797)	Inv	R	O	Lc	1, 2
		Cuculus micropterus (Gould, 1837)	Inv	RMS	OP	Lc	1, 2
		Cacomantis passerines (Vahl, 1797)	Inv	RMS	O	Lc	1
		Surniculus lugubris (Horsfield, 1821)	Inv	R	O	Lc	1
		Eudynamys scolopaceus (Linnaeus, 1758)	Pp	R	OPA	Lc	1,2
		Centropus parroti (Stephens, 1815)	Pp	R	O	Lc	1,2
Strigiformes	Tytonidae	Tyto alba (Scopoli, 1769)	Cr	R	C	Lc	1
	Strigidae	Outs bakkamoena (Pennant, 1769)	Cr	R	O	Lc, T2	1
		Glucidium	Cr	R	O	Lc, T2	1,2

		radiatum (Tickell, 1833)					
Caprimulgiformes	Caprimulgidae	Caprimulgus asiaticus (Latham, 1790)	Inv	R	O	Lc	1
Apodiformes	Hemiprocnidae	Hemiprocne coronate (Tickell, 1833)	Inv	R	O	Lc	1
	Apodidae	Zoonavena sylvatica (Tickell, 1846)	Inv	R	O	Lc	1
		Cypsiurus balasiensis (J.E. Gray, 1829)	Inv	R	O	Lc	1
		Apus affinis (J.E. Gray, 1830)	Inv	R	OW	Lc	1
		Apus apus (Linnaeus, 1758)	Inv	SV	PE	Lc	1
Coraciiformes	Coraciidae	Coracias benghalensis (Linnaeus, 1758)	Pp	R	OP	Lc	1,2
	Alcedinidae	Ceryle rudis (Linnaeus, 1758)	Pisci/Inv	R	OW	Lc	1
		Alcedo atthis (Linnaeus, 1758)	Pisci/Inv	R	OP	Lc, E2	1
		Pelargopsis capensis (Linnaeus, 1766)	Pisci/Inv	R	O	Lc	2
		Halcyon smyrnensis (Linnaeus, 1758)	Pisci/Inv	R	OP	Lc	1,2
	Meropidae	Merops orientalis (Latham, 1801)	Inv	R	OE	Lc	1,2
		Merops philippinus (Linnaeus, 1766)	Inv	RMS	O	Lc	2
Coraciiformes	Upupidae	Upupa epops (Linnaeus, 1758)	Pp	R	OW	Lc, E2	2
	Bucerotidae	Ocyrceros birostris	Pp	R	O	Lc	1,2

		(Scopoli, 1786)					
		Anthracoseros coronatus (Boddaert, 1783)	Pp	R	O	NT, T2	1,2
Piciformes	Megalamidae	Megalaima zeylanica (Gmelin, 1788)	Pp	R	O	Lc	1,2
		Megalaima haemacephala (Stadius Muller, 1776)	Pp	R	O	Lc	1,2
	Picidae	Dendrocopos nanus (Vigors, 1832)	Pp	R	O	Lc	1
		Dendrocopos mahrattensis (Latham, 1801)	Pp	R	O	Lc	1
		Dinopium benghalensis (Linnaeus, 1758)	Pp	R	O	Lc	1,2
		Chrysocolaptes festivus (Boddaert, 1883)	Pp	R	O	Lc	1,2
	Picus xanthopygaeus (Gray & Gray, 1847)	Pp	R	O	Lc	1	
Passeriformes	Pittidae	Pitta brachyuran (Lanneus, 1866)	Inv	RMS	OP	Lc	1
	Tephrodornithidae	Tephrodornis pondicerianus (Gmelin, 1789)	Inv	R	O	Lc	1,2
	Aegithinidae	Aegithina tiphia (Linnaeus, 1758)	Inv	R	O	Lc	1,2
		Aegithina nigrolutea (Marshall, 1876)	Inv	R	O	Lc	2

	Campephagidae	Coracina macei (Lesson, 1830)	Pp	R	O	Lc	1,2
		Coracina melanoptera (Ruppell, 1839)	Pp	RMS	O	Lc	1
		Pericrocotus roseus (Vieillot, 1818)	Inv	R	O	Lc	1
		Pericrocotus cinnamomeus (Linnaeus, 1766)	Inv	R	O	Lc	1,2
		Pericrocotus erythropygius (Jerdon, 1840)	Inv	R	O	Lc	1
		Pericrocotus ethologus (Bangs & Phillips, 1914)	Inv	R	O	Lc	1
	Laniidae	Lanius cristatus (Linnaeus, 1758)	Cr	WV	P	Lc, E2	2
		Lanius vittatus (Valenciennes, 1826)	Cr	R	OP	Lc	2
		Lanius schac (Linnaeus, 1758)	Cr	R	OP	Lc	1,2
Passeriformes	Lanidae	Lanius meridionalis (Temminck, 1820)	Cr	RMW	OW	Lc, E2	2
	Oriolidae	Oriolus kundoo (Sykes, 1832)	Pp	RMS	OP	Lc	1,2
		Oriolus xanthornus (Linnaeus, 1758)	Pp	R	O	Lc	1,2
	Dicruridae	Dicrurus macrocercus (Vieillot, 1817)	Pp	R	OP	Lc	1,2

		Dicrurus leucophaeus (Vieillot, 1817)	Inv	RMW	OP	Lc	2
		Dicrurus caeruleus (Linnaeus, 1758)	Inv	R	O	Lc	1,2
		Dicrurus paradiseus (Linnaeus, 1766)	Pp	R	O	Lc	1,2
	Rhipiduridae	Rhipidura aureola (Lesson, 1830)	Inv	R	O	Lc	1
	Monarchidae	Hypothymis azurea (Boddaert, 1783)	Inv	R	O	Lc	1,2
		Terpsiphone paradise (Linnaeus, 1758)	Inv	RMS	OP	Lc	1,2
	Corvidae	Corvus splendens (Vieillot, 1817)	Pp	R	O	Lc	2
		Corvus culminates (Skyles, 1832)	Pp	R	OP	Lc	1,2
		Dendrocitta vagabunda (Latham, 1790)	Pp	R	O	Lc	1,2
	Paridae	Parus major (Linnaeus, 1758)	Pp	R	OP	Lc	1,2
	Remizidae	Cephalopyrus flammiceps (Burton, 1836)	Pp	RMW	O	Lc	1
	Alaudidae	Mirafra cantillans (Blyth, 1845)	Pp	R	OE	Lc	2
		Eremopterix griseus (Scopoli, 1786)	Pp	R	O	Lc	2

		Ammomanes phoenicura (Franklin, 1831)	Pp	R	O	Lc	2
		Calandrella brachydactyla (Leisler, 1814)	Pp	WV	P	Lc, E2	2
	Pycnonotidae	Pycnonotus cafer (Linnaeus, 1766)	Pp	R	O	Lc	1,2
	Hirundinidae	Riparia paludicola (Vieillot, 1817)	Inv	R	OP	Lc	2
		Ptyonoprogne concolor (Sykes, 1832)	Inv	R	O	Lc	2
		Hirundo rustica (Linnaeus, 1858)	Inv	RMW	H	Lc, E2	2
		Hirundo smithii (Leach, 1818)	Inv	R	OW	Lc	2
		Cercopis daurica (Laxmann, 1769)	Inv	R	OW	Lc, E2	2
		Hirundo fluvicola (Blyth, 1855)	Inv	R	O	Lc	2
Passeriformes	Hirundinidae	Delichan urbicum (Linnaeus, 1858)	Inv	P	OP	Lc, E2	2
	Sylviidae	Acrocephalus agricola (Jerdon, 1845)	Inv	RMW	P	Lc, N2	1,2
		Acrocephalus dumetorum (Blyth, 1849)	Inv	RMW	P	Lc, N2	1,2
		Acrocephalus stentoreus (Hemprich & Ehrenberg, 1833)	Inv	RMW	OP	Lc, N2	2

		Iduna caligata (Lichtenstein, 1823)	Inv	RMW	P	Lc	1
		Iduna rama (Sykes, 1832)	Inv	RMW	P	Lc	1
		Phylloscopus collybita (Vieillot, 1717)	Inv	WV	P	Lc, N2	1
		Phylloscopus fuscatus (Blyth, 1842)	Inv	WV	P	Lc, N2	1,2

Passeriformes	Sylviidae	Phylloscopus fuligiventer (Hodgson, 1845)	Inv	RMW	O	Lc	2	
		Phylloscopus affinis (Tickell, 1837)	Inv	RMW	O	Lc	1,2	
		Phylloscopus griseolus (Blyth, 1847)	Inv	RMW	OP	Lc, N2	1,2	
		Phylloscopus humei (Brooks, 1878)	Inv	RMW	OP	Lc	1	
		Phylloscopus trochiloides (Sundevall, 1837)	Inv	RMW	OP	Lc	1,2	
		Phylloscopus nitidus (Blyth, 1843)	Inv	RMW	P	DD, N2	1	
		Phylloscopus magnirostris (Blyth, 1843)	Inv	RMW	O	Lc, N2	1,2	
		Phylloscopus reguloides (Blyth, 1842)	Inv	RMW	O	Lc, N2	1	
		Phylloscopus tytleri (Brooks, 1872)	Inv	RMW	O	NT, N2	2	
		Sylvia curruca (Linnaeus, 1758)	Inv	WV	P	Lc, N2	1	
		Sylvia althaea (Hume, 1878)	Inv	RMW	OP	Lc, N2	1	
		Cisticolidae	Orthotomus sutorius (Pennant, 1769)	Pp	R	O	Lc	1,2
			Cisticola juncidis (Rafinesque, 1810)	Inv	R	OAE	Lc	2
	Prinia buchanania (Blyth, 1844)		Inv	R	O	Lc	2	
	Prinia hodgsonii (Blyth, 1844)		Inv	R	O	Lc	1	
	Prinia sylvatica (Jerdon, 1840)		Inv	R	O	Lc	1,2	

Passeriformes		Prinia socialis (Skyles, 1832)	Inv	R	O	Lc	1,2
		Prinia inornata (Skyles, 1832)	Inv	R	O	Lc	1,2
	Timaliidae	Turdoides malcolmi (Skyles, 1832)	Pp	R	O	Lc	1
		Turdoides striata (Dumont, 1823)	Pp	R	O	Lc	1,2
		Chrysomma sinense (Gmelin, 1789)	Pp	R	O	Lc	1
	Zosteropidae	Zosterops palpebrosus (Temminck, 1824)	Pp	R	OP	Lc	1,2
	Sittidae	Sitta castanea (Lesson, 1830)	Pp	R	O	Lc	1
	Sturnidae	Acridotherus tristis (Linnaeus, 1766)	Pp	R	OP	Lc	1,2
		Gracupica contra (Linnaeus, 1758)	Pp	R	O	Lc	2
		Sturnia malabarica (Gmelin, 1789)	Pp	R	O	Lc	1,2
		Sturnia pagodarum (Gmelin, 1789)	Pp	R	O	Lc	1,2
		Pastor roseus (Linnaeus, 1758)	Pp	WV	P	Lc, E2	2
	Turdidae	Monticola solitaries (Linnaeus, 1758)	Pp	RMW	P	Lc, N2, E2	1
		Zoothera citrine (Latham, 1790)	Pp	R	O	Lc	1,2
		Zoothera mollissima (Blyth, 1842)	Pp	RMW	O	Lc, N2	1
		Turdus unicolor	Pp	RMW	O	Lc, N2	1,2

		(Tickell, 1833)					
		Turdus simillimus (Jerdon, 1839)	Pp	RMS	O	Lc	1
Muscicapidae		Phoenicurus ochruros (S.G.Gmelin, 1774)	Inv	RMW	OP	Lc, N2, E2	2
		Muscicapa daurica (Pallas, 1811)	Inv	RMW	OP	Lc, N2	1,2
		Muscicapa muttui (Layard, 1854)	Inv	RMW	O	Lc, N2	1
		Ficedula parva (Bechstein, 1792)	Inv	WV	P	Lc, N2	1,2
		Ficedula superciliaris (Jerdon, 1840)	Inv	RMW	O	Lc, N2	1
		Cyornis tickelliae (Blyth, 1843)	Inv	RMW	O	Lc	1,2
		Luscinia svecica (Linnaeus, 1758)	Inv	RMW	H	Lc, E2	1,2
		Copsychus saularis (Linnaeus, 1758)	Inv	R	O	Lc	1,2
		Saxicoloides fulicata (Linnaeus, 1766)	Pp	R	O	Lc	2
		Oenanthes fusca (Blyth, 1851)	Inv	R	O	Lc	2
		Saxicola torquatus (Linnaeus, 1766)	Inv	RMW	OW	Lc, N2, E2	2
Chloropseidae		Chloropsis jerdoni (Blyth, 1844)	F	R	O	Lc	1,2
		Chloropsis aurifrons (Temminck, 1829)	F	R	O	Lc	1,2
Dicaeidea		Dicaeum agile	Pp	R	O	Lc	1,2

		(Tickell,1833)					
Passeriformes	Pale-billed Flowerpecker	Dicaeum erythrorhychos (Latham,1790)	Pp	R	O	Lc	1,2
	Nectariniidae	Cinnyris asiaticus (Latham,1790)	N	R	O	Lc	1,2
	Passeridae	Passer domesticus (Linnaeus, 1758)	Pp	R	C	Lc, E3	2
		Gymnoris xanthocollis (Burton, 1838)	Pp	R	OP	Lc	1,2
	Estrildidae	Amandava amandava (Linnaeus, 1758)	G	R	O	Lc	1
		Lonchura punctulata (Linnaeus, 1758)	G	R	O	Lc	2
		Lonchura malabarica (Linnaeus, 1758)	G	R	O	Lc	2
	Motacillidae	Dendronanthus indicus (Gmelin, 1789)	Inv	WV	P	Lc	1
		Motacilla alba (Linnaeus, 1758)	Inv	RMW	OP	Lc	2
		Motacilla maderaspatensis (Gmelin, 1789)	Inv	R	O	Lc	1,2
		Motacilla citreola (Pallas 1776)	Inv	RMW	P	Lc, E2	2
		Motacilla falva (Linnaeus, 1758)	Inv	RMW	P	Lc, E2	1,2

		Motacilla cinerea (Tunstall, 1771)	Inv	RMW	P	Lc, E2	2
		Motacilla tschutschensis (JF Gmelin, 1789)	Inv	WV	P	Lc	2
		Anthus campestris (Linnaeus, 1758)	Pp	WV	P	Lc, E2	2
		Anthus godlewskii (Taczanowski, 1876)	Pp	WV	P	Lc, E2	2
		Anthus richardi (Vieillot 1818)	Pp	WV	P	Lc, E2	1,2
		Anthus hodgsoni (Richmond 1907)	Pp	RMW	OP	Lc, E2	1
		Anthus rufulus (Vieillot 1818)	Pp	R	O	Lc	2
	Emberizidae	Emberiza burniceps (Brandt, 1841)	G	WV	P	Lc	2

Passeriformes	Emberizidae	Melophus lathami (Gray, 1831)	G	R	O	Lc	2
	Fringillidae	Carpodacus erythrinus (Pallas, 1770)	G	RMW	OP	Lc, E2	2

Abbreviation

<p>Protection Status Codes;</p> <ul style="list-style-type: none"> • IUCN Convention <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;"></td> <td style="text-align: right;">Berne</td> </tr> <tr> <td>Critically Endangered-CR</td> <td style="text-align: right;">Appendix 2- E2</td> </tr> <tr> <td>Vulnerable- VU</td> <td style="text-align: right;">Appendix 3- E3</td> </tr> <tr> <td>Near Threatened- NT</td> <td style="text-align: right;">AEWA- A</td> </tr> <tr> <td>Least Concern- Lc</td> <td></td> </tr> <tr> <td>Data Deficient- DD</td> <td></td> </tr> </table> • CITIES <ul style="list-style-type: none"> Appendix 2- T2 • Bonn Convention <ul style="list-style-type: none"> Appendix 1- N1 Appendix 2-N2 		Berne	Critically Endangered-CR	Appendix 2- E2	Vulnerable- VU	Appendix 3- E3	Near Threatened- NT	AEWA- A	Least Concern- Lc		Data Deficient- DD		<p>Faunal Type Codes;</p> <p>Oriental- O</p> <p>Palaearctic-P</p> <p>Holarctic-H</p> <p>Old World-OW</p> <p>Oriental-Palaearctic-OP</p> <p>Oriental-Holarctic-OH</p> <p>Oriental-Australasian-Ethiopian-OAE</p> <p>Oriental-Australasian-Palaearctic-OAP</p> <p>Palaearctic-Ethiopian-PE</p> <p>Cosmopolitan- C</p>	<p>Trophic Status Codes;</p> <p>Carnivores- Cr</p> <p>Carrion feeder- Cv</p> <p>Frugivores- F</p> <p>Invertebrates feeder- Inv</p> <p>Piscivores/ Invertebrates feeder- Pesci/ Inv</p> <p>Polyphagous-Pp</p> <p>Granivores -G</p>	<p>Phenology Codes;</p> <p>Resident- R</p> <p>Winter Visitor-WV</p> <p>Summer Visitor-SV</p> <p>Resident Migratory In Summer-RMS</p> <p>Resident Migratory In Winter-RMW</p> <p>Passage Migrant- P</p> <p>Habitat</p> <ol style="list-style-type: none"> 4. Forest 5. Countryside 6. Wetland
	Berne														
Critically Endangered-CR	Appendix 2- E2														
Vulnerable- VU	Appendix 3- E3														
Near Threatened- NT	AEWA- A														
Least Concern- Lc															
Data Deficient- DD															

Appendix 2: List of Biome-restricted birds recorded from Pench Tiger Reserve, MP India

S.No.	Species Name	Scientific Name
1	Red-napped Ibis	<i>Pseudibis papillosa</i> (Temminck, 1824)
2	White-rumped Vulture	<i>Gyps bengalensis</i> (Gmelin, 1788)
3	Indian Vulture	<i>Gyps indicus</i> (Scopoli, 1786)
4	Red-headed Vulture	<i>Sarcogyps calvus</i> (Scopoli, 1786)
5	White-eyed Buzzard	<i>Butastur teesa</i> (Franklin, 1831)
6	Jungle Bush-quail	<i>Perdica asiatica</i> (Latham, 1790)
7	Painted Spurfowl	<i>Galloperdix lunulata</i> (Valenciennes, 1825)
8	Indian Peafowl	<i>Pavo cristatus</i> (Linnaeus, 1758)
9	Yellow-wattled Lapwing	<i>Vanellus malabaricus</i> (Boddaert, 1783)
10	Yellow-footed Green-pigeon	<i>Treron phoenicoptera</i> (Latham, 1790)
11	Plum-headed Parakeet	<i>Psittacula cyanocephala</i> (Linnaeus, 1766)
12	Indian Nightjar	<i>Caprimulgus asiaticus</i> (Latham, 1790)
13	Indian Grey Hornbill	<i>Ocyrceros birostris</i> (Scopoli, 1786)
14	Brown-headed Barbet	<i>Megalaima zeylanica</i> (Gmelin, 1788)
15	Lessar Goldenback	<i>Dinopium benghalense</i> (Linnaeus, 1758)
16	Ashy-crowned Sparrow-lark	<i>Eremopterix griseus</i> (Scopoli, 1786)
17	Common Woodshrike	<i>Tephrodornis pondicerianus</i> (Gmelin, 1789)
18	Black-headed Cuckooshrike	<i>Coracina melanoptera</i> , (Ruppell, 1839)
19	Small Minivet	<i>Pericrocotus cinnamomeus</i> (Linnaeus, 1766)
20	Indian Robin	<i>Saxicoloides fulicata</i> (Linnaeus, 1766)
21	Large Grey Babbler	<i>Turdoides malcolmi</i> (Sykes, 1832)
22	Jungle Babbler	<i>Turdoides striatus</i> (Dumont, 1823)
23	Ashy Prinia	<i>Prinia socialis</i> (Sykes, 1832)
24	Jungle Prinia	<i>Prinia sylvatica</i> (Jerdon, 1840)
25	White-browed Fantail	<i>Rhipidura aureola</i> (Lesson, 1830)
26	Chestnut-tailed Starling	<i>Sturnus malabaricus</i> (Gmelin,

		1789)
27	Brahminy Starling	Sturnus pagodarum (Gmelin, 1789)
28	White-bellied Drongo	Dicrurus caerulescens (Linnaeus, 1758)