

RESEARCH ARTICLE

Avian Diversity and Its Conservation in West Chhindwara Region of Madhya Pradesh, India

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Manuscript details:	ABSTRACT
<p>Received: 01.08.2015 Accepted: 10.09.2015 Published : 10.10.2015</p> <p>Editor: Dr. Arvind Chavhan</p> <p>Cite this article as: Bagde Neelima (2015) Avian Diversity and Its Conservation in West Chhindwara Region of Madhya Pradesh, India, <i>Int. J. of Life Sciences</i>, 3(3): 210-218.</p> <p>Copyright: © 2015 Author(s), This is an open access article under the terms of the Creative Commons Attribution-Non-Commercial - No Derivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.</p>	<p>The present study was carried out in the West region of Chhindwara district of Madhya Pradesh (India) to document the diversity and utility of avian fauna. Many of the wild life species are gradually vanishing from our forest. The biological imbalance created due to disappearance of particular species which have put may problem. The national forest policy 1952 has laid special emphasis on preservation of wild animals. The inhabitants of the region are dependent up to a large extent on wild resources for their remedial needs. The region is rich in avifaunal diversity having 124 species belonging to 17 orders and 46 families. This study will be helpful in developing a comprehensive data base on the faunal resources to strengthen the care system in the area and in conserving the avifaunal resources for the prosperity of the region.</p> <p>Keywords: Avifauna, conservation, diversity, ecology, disappear.</p> <p>INTRODUCTION</p> <p>Diversity of avifauna is one of the most important ecological indicators to evaluate the quality of habitats. Birds are the key species in an ecosystem for maintaining the ecological balance, (Mariappan, 2013). Now-a-days, avifaunal diversity has been decreasing due to the destruction of natural habitats and human disturbances. Random destruction of natural habitats by cutting nesting trees and foraging plants for commercial use of woods and lands are the main factor responsible for narrow down in</p>

avian foraging habitat and their nesting sites. Thus, many species of birds may be forced to inhabit in the urban areas and constrain them to breed there. Birds are essential animal group of an ecosystem and maintain a trophic level. Therefore, detail study on avifauna and their ecology is important to protect them, (Sarkar et al., 2012).

Number of workers studied avifauna of Central India including Madhya Pradesh and Chhattisgarh. The comprehensive list of birds on Madhya Pradesh and Chhattisgarh published by (Chandra and Singh 2004), reported 488 and 197 species respectively. Jayapal et al. (2005) reported some significant records of birds from Central Highlands of Madhya Pradesh. Ghosh et al. (2008) published detailed account, reports altogether 449 species from Madhya Pradesh (including Chhattisgarh). Studies on behavior and breeding ecology of birds are well done by (Kotpal 1992; Ali 1996; Shruti 2008). Talmale et al., (2012) reported 173 bird species from Singhori Wildlife Sanctuary, Raisen District, Madhya Pradesh.

MATERIAL AND METHODS

Study Area

The West Chhindwara Division is situated between the parallels of latitude 21 Deg. 52' to 22 Deg. 42' north and between meridian of longitude 78 Deg. 14' 43" and 79 Deg. 01' 52" East. The Division is bounded on the North by protected forest of Hoshangabad and Narsighpur forest Division, reserve and protected forest of East, forest of South Chhindwara Div. on the southern side and protected forest of Betul district on the West. The total area of the Division is 175945.122 hectares. The tract of West Chhindwara Division is plain to undulating and maximum area is hilly and rugged. Main forests of this Div. are confined to ranges of Satpura hills and Chhindwara plateau. The western and north western part of the division is mostly hilly whereas eastern and

southern part is mostly plain. The shape of the division is like a big cleft which forms a deep a very narrow valley of Kanhan river which flows towards south and meet the plains of Nagpur. The highest place in the division is in Tamia range, protected forest block at 1211mt. attitude and the lowest place is in Jhirpa range, at 387 mt. attitude.

The study was taken up in the west division of Chhindwara range. The survey work was conducted during the period of 2013 to 2014. Observations were recorded on habit, habitat, soil details of association and other peculiarities. Primary and secondary data were collected. Primary data was collected by field study and secondary data was collected by forest office of west division of Chhindwara. Avifaunal photographs were identified by standard literature, Ali (2012).

RESULTS AND DISCUSSION

The present paper includes 124 species of birds belonging to 17 Orders, 46 families. A list of 124 bird species (Table 1) reported from West Chhindwara Division shown that order Passeriformes is very rich with 45 species and Coraciiformes and Ciconiiformes with 10 and 10 species Anseriformes with 9, Charadriiformes with 8, Falconiformes with 8 Galliformes with 8 species respectively (Table-1, Fig.-2). Most of bird fauna are resident or local migratory to forest of West Chhindwara Division. Abundance of birds show that 45 species are very common (VC), 34 are common, 30 are not rare and 15 are rarely observed to West Chhindwara Division area.

We found that higher bird diversity in forest land than other habitats, which is due to the presence of diversity of herbs, shrubs, grasses and trees in forest land which provided a place for nesting and breeding for different trophic levels of birds. Different season of the year in particular locality not only influence the different types of vegetation but also other biodiversity like animals, birds, insects, fishes, and

microorganisms, particularly birds are sensitive to seasonal changes, because of their breeding and nesting behaviour heavily depends upon climatic factors of the locality (Huston and Huston, 1994). Therefore, some birds are

migrating within the geographical region and even from continent to continents for their breeding and nesting (Berthold, 2001). Thus, the birds distribution and their population trends in different seasons of the year.

Table 1: Bird diversity in west Chhindwara Region of M.P., India

S.No	English name	Scientific name	Local name	Family/ Class
1	White wagtail	<i>Motacilla alba</i>	Dhovan	Motacillidae
2	Indian ring dove	<i>Streptopelia decaocta</i>	Fakta	Collumbidae
3	Pied hornbill	<i>Anthracoceros coronatus</i>	Ghanchuri	Bucerotidae/VC
4	Large pied wagtail	<i>Motacilla maderaspatensis</i>	Khanjan	Motacillidae
5	Collard bushchat	<i>Saxicola tarqnata</i>	Kharpida	Turdinae
6	Blue winged teal	<i>Anus querquedula</i>	Khera	Anatidae
7	House swift	<i>Apus affinis</i>	Babilo batasi	Apodidae/VC
8	Stone curlew	<i>Burhinus oediconemus</i>	Barsiri	Burhinidae
9	Weaver bird	<i>Ploceus philippinus</i>	Baya	Ploceidae/VC
10	Alpine swift	<i>Apus melba</i>	Bada batasi	Apodidae
11	Large egret	<i>Egretta alba</i>	Bada bagla	Ardeidae/VC
12	Blue cheeked bee eater	<i>Merops superciliosus</i>	Patringa	Meropidae/VC
13	Blue tailed bee eater	<i>Merops philipinus</i>	Bada patringa	Meropidae/VC
14	Redvented bulbul	<i>Pycnonotus cafer</i>	Bulbul	Pycnontidae/VC
15	Small minivet	<i>Pericrocotus cinnamomus</i>	Bulal chasm saheli	Campephagidae
16	Common quail	<i>Coturnix coturnix</i>	Bater	Phasiamidae
17	Common crane	<i>Grus grus</i>	Saras	Cruidae/VC
18	Black headed myna	<i>Sturnus pogodarum</i>	Brahman myna	Sturnidae/VC
19	Chestnut ballied nuthatch	<i>Sitta castanea</i>	Kthphodia	Sittidae
20	Velvet fronted nuthatch	<i>Sitta frontalis</i>	Kthphodawa	Sittidae/VC
21	Golden backed woodpecker	<i>Dinopium bengalensis</i>	Kthphoda	Picidae/VC
22	Yellow froned pied woodpecker	<i>Picooides manrattensis</i>	Kthphoda	Picidae/VC
23	Heart spotted woodpecker	<i>Hemicircu sconente</i>	Kthphoda	Picidae/VC
24	Blue rock pigeon	<i>Columba livia</i>	Kabutar	Collumbidae*/VC
25	Black winged kite	<i>Elanus caeruleus</i>	Kapasi	Accipitridae/VC
26	Large cuckoo	<i>Coradina novacholladiae</i>	Kasaya	Campephagidae
27	Kestrel	<i>Falcotinnunculus</i>	Korutiya	Accipitridae
28	Koel	<i>Eudynamys scolopaceae</i>	Koyal	Cuculidae/VC
29	Black capped kingfisher	<i>Haleyan Pileata</i>	Korila	Alcedinidae
30	House crow	<i>Corvus splendens</i>	Kaua	Covidae/VC
31	Pied bushchat	<i>Saxicola caprata</i>	Kala pidida	Turdinae
32	Black partridge	<i>Francolinus francolinus</i>	Kala titar	Phasiamidae
33	Brown partridge	<i>Francolinus pictus</i>	Bhura titar	Phasiamidae
34	White eyed pochard	<i>Arthya nyrola</i>	Kurachia	Anatidae
35	Commonteal	<i>Anus crecea</i>	Kera	Anatidae
36	Rufaus backer shrike	<i>Lanius schach</i>	Kagla latora	Lamidae*/VC
37	Moorhen	<i>Pirphyrio parphyrio</i>	Kalim	Rallidae/VC
38	Indian robin	<i>Saxicolides falicata</i>	Kalchuri	Turdinae/VC

Table 1: Continued...

S.No	English name	Scientific name	Local name	Family/ Class
39	Mahalot	<i>Dendrocitta vagabunda</i>	Mahalat	Covidae
40	Coucal	<i>Centropus sinensis</i>	Mokha	Cuculidae/VC
41	Common pea fowl	<i>Pavo cristatus</i>	Mor	Phasiamidae/VC
42	Common myna	<i>Acridotheres tristis</i>	Myna	Sturnidae/VC
43	Pied kingfisher	<i>Ceryle rudis</i>	Kilkila	Alcenididae
44	White breasted kingfisher	<i>Halcyon smyrnensis</i>	Kilkila	Alcenididae
45	Little egret	<i>Egretta garzetta</i>	Kilchia	Ardeidae/VC
46	Pheasant tailed jacana	<i>Hydrophasianus chirurgus</i>	Pihua	Jacanidae
47	Yellow wagtail	<i>Motacilla glava</i>	Pilakh	Motacillidae
48	Grey wagtail	<i>Motacilla capica</i>		Motacillidae
49	Pied crested cuckoo	<i>Clamator jacobinus</i>	Papiha/Chatak	Cuculidae
50	Gray headed myna	<i>Sturonus malabaricus</i>	Pavai	Sturnidae
51	Green bee eater	<i>Merops orientalis</i>	Patinga	Meropidae/VC
52	Crested bunbing	<i>Melophus lathami</i>	Pathar chitra	Emberizidae
53	Little cormorant	<i>Phalacrocora xnizer</i>	Pankaua	Phalacrocoracidae
54	Shoveller	<i>Anus clypeata</i>	Panao tilari	Anatidae
55	Large Indian parakeet	<i>Psittacula eupatria</i>	Ram tota	Psittacidae/VC
56	Grey lit	<i>Parus major</i>	Ram gangara	Paridae
57	Yellow checked lit	<i>Parus xanthogenys</i>	Ram gangara	Paridae
58	King vulture	<i>Torgas calvus</i>	Rajighha	Accipitridae
59	Purple sun bird	<i>Nectarinia asiatica</i>	Shakar khora	Nectarinidae
60	Tickell's blue flycatcher	<i>Muscicapatickel ling</i>	Shama	Muscicapidae
61	Shama	<i>Copsychus malabaricus</i>	Shama	Muscicapidae
62	Blue headed rock thrust	<i>Monticola cinclorhynchus</i>	Shama	Muscicapidae
63	White throated ground thrust	<i>Zoothera citrina</i>	Shama	Muscicapidae
	Crested hawk eagle	<i>Spizaetus cirrhatus</i>	Shahbaj	Accipitridae
64	Iora	<i>Aegithina tiphia</i>	Shanbiji	Irenidae
65	Lesser whistling teal	<i>Dendrocygna javanica</i>	Silhi	Anatidae
66	Sarus crane	<i>Grus antigone</i>	Sarus	Cruidae
67	Slaty headed scimitar bulbular	<i>Pomatorhinus schisticeps</i>	Sat bahan	Muscicapidae
68	Jungal babblar	<i>Turdoides striatus</i>	Sat bhai	Muscicapidae
69	Quaker babblar	<i>Alcippe poioicephale</i>	Sat bhai	Muscicapidae
70	Brahmini duck	<i>Tadorna ferruginea</i>	Surkhab	Anatidae
71	Red shank	<i>Tringa totanus</i>	Surma	Charadriidae
72	Black ibis	<i>Pseudibis papillosa</i>	Kala buja	Threskiornithidae*
73	White scavenger vulture	<i>Neophron perencoprerus</i>	Safed gidhdh	Accipitridae
74	Grey partridge	<i>Francolinus pondicerianus</i>	Safed titar	Phasiamidae
75	Paradise flycatcher	<i>Terpsiphone paradisi</i>	Sun bulbul dudhraj	Muscicapidae
76	Black napped blue flycatcher	<i>Monarcha azurea azurea</i>	Sun bulbul dudhraj	Muscicapidae
77	Crested serpent eagle	<i>Spilornis cheela</i>	Dogracheel	Accipitridae*/VC
78	Owl	<i>Bubo bubo</i>	Ullu	Strigidae/VC
79	Painted stork	<i>Ibis leucocephalus</i>	Janghil/Dokh	Ciconidas
80	Red spur fowl	<i>Galloperdix spondica</i>	Jangli murgi	Phasiamidae

Table 1: Continued...

S.No	English name	Scientific name	Local name	Family/ Class
81	Crimsonbreasted barbot coppersmith	<i>Negalaima haemacephla</i>	Chhota basantha	Capitonidae
82	Estern golden plover	<i>Pluvialis dominica</i>	Chhota batan	Charadriidae
83	Comman king fisher	<i>Alcedo atthis</i>	Chhota kilkila	Alcedinidae/VC
84	Tufted duck	<i>Anthya fukugula</i>	Dubaru	Anatidae
85	Magpie robin	<i>Copsychus saularis</i>	Daiya	Muscicapidae*/VC
86	White spotted flycatcher	<i>Rhipidura albicolis</i>	Chakdil	Muscicapidae
87	White browed fentail flycatcher	<i>Rhipidura aureola</i>	Chakdil	Muscicapidae
88	Fontail snipe	<i>Capelle gelliango</i>	Chaha	Charadriidae
89	Common pariah kite	<i>Milvus migrans</i>	Cheel	Accipitridae/VC
90	Common hornbill	<i>Tocus birostris</i>	Chalotra	Bucerotidae
91	Ashy wren warbler	<i>Prinia socialis</i>	Futki	Muscicapidae
92	Tickellus flower peaker	<i>Dicaeum erythrarthynchas</i>	Fulchuki	Dicaeidae
93	Fire breasted flower peaker	<i>Dicaeum ignipectus</i>	Fulchuki	Dicaeidae
94	Rose ringed parakeet	<i>Psittacula krameri</i>	Tota	Psittacidae
95	Indian whiskered tern	<i>Chilonias hybrida</i>	Tehri kurri	Laridae
96	Ashy shallow shrike	<i>Artamus fusus</i>	Tagaria babel	Dicuidae
97	Red Jungle fowl	<i>Gallus gallus</i>	Jangli murgi	Phasiidae
98	Jangle crow	<i>Corvus macrorhynchus</i>	Jangli kua	Corvidae/VC
99	Jangle myna	<i>Acridotheres fuscus</i>	Jangli mayna	Sturnidae/VC
100	Spotted owlet	<i>Athena brama</i>	Jangli chaughad	Strigidae*/VC
101.	Purpie moorhen	<i>Gallinula chloropus</i>	Jal murgi	Rallidae/VC
102.	Nukta ducker comb duck	<i>Sarkidiornis melanoros</i>	Nakta	Anatidae
103	Black headed munia	<i>Lonchura malacca</i>	Nakal nar	Ploceidae/VC
104	Indian roller blue joy	<i>Coracias benghalensis</i>	Nilkanth	Coraciidae/VC
105	Indian pitta	<i>Pitta brachyura</i>	Navrang	Pittiidae/VC
106	Paddy bird pond heron	<i>Ardeola grayii</i>	Andha bagla	Ardeidae*/VC
107	Grey heron	<i>Ardea cinerea</i>	Anjan	Ardeidae
108	Pied starling	<i>Sturnus contra</i>	black myna	Sturnidae*/VC
109	Rufus tailed finch lark	<i>Ammomanes phoenicurus</i>	Aagiya	Alaudidae
110	Tawny eagle	<i>Aquila refax</i>	Okab	Accipitridae
111	Painted snipe	<i>Rostratula benghalensis</i>	Ohadra	Rostratuliridae
112	Blossom headed parakeet	<i>Psittacula cynocephala</i>	Tuiya tota	Psittacidae/VC
113	Cattle egret	<i>Bubulcus ibis</i>	Gay bagla	Ardeidae*/VC
114	Open bull stork	<i>Anostomus oscitans</i>	Godhila	Ciconidae
115	House sparrow	<i>Passer domestica</i>	Goraiya	Ploceidae/VC
116	Cottontail	<i>Nettapus coromon delianus</i>	Gurguri pandubbi	Anatidae
117	Black winged stilts	<i>Himantopus himantopus</i>	Gajpin	Recurvirostridae
118	White neck stork	<i>Ciconia episcopus</i>	Galgal	Ciconidae
119	White stork	<i>Ciconia ciconia</i>	Galgal	Ciconidae
120	Jangle bush quail	<i>Perdicula asiatica</i>	Lawa	Phasiidae/VC
121	Red crested pochard	<i>Netta rufina</i>	Losir	Anatidae
122	Red mania	<i>Estrilda amandava</i>	Lal munia	Ploceidae/VC
123	Indian Clift swallow	<i>Hirundo fluvicola</i>	Lesra	Hirundinidae
124	Wire tailed swallow	<i>Hirundo smithii</i>	Lesra	Hirundinidae



Asian pied starling (*Sturnus contra*)



Spotted owl (*Athene brama*)



Black ibis (*Pseudibis papillosa*)*



Blue Rock pigeon (*Columba livia*)*



Megpai robin (*Copsychus saularis*)*



Rufous backed shrike (*Lanius schach*)*



Red wattled lapwing (*Venellus indicus*)*



Cattle egret (*Bubulcus ibis*)*



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Pond heron (*Ardeola grayii*)*



Painted serpent eagle (*Spilornis cheel*)*

Table 2: Number of birds belonging to Order/Family

S. No.	Order	Family	No. of Birds
1	Charadriiformes	Jacaniidae	1
		Rostratulidae	1
		Charadriidae	3
		Recurvirostridae	1
		Burhinidae	1
		Laridae	1 (8)
2	Columbiformes	Columbidae	2 (2)
3	Psittaciformes	Psittacidae	2 (2)
4	Ciconiiformes	Ciconidae	4
		Ardeidae	5
		Threskiornithidae	1 (10)
5	Anseriformes	Anatidae	9 (9)
6	Falconiformes	Accipitridae	8 (8)
7	Galliformes	Phasianidae	8 (8)
8	Gruiformes	Rallidae	2 (2)
9	Cuculiformes	Cuculidae	3 (3)
10	Passeriformes	Hirundinidae	2
		Alaudidae	1
		Motacillidae	4
		Campephagidae	2
		Pycnonotidae	1
		Irenidae	1
		Laniidae	1
		Sturnidae	5
		Corvidae	3
		Dicruridae	1
		Plcedae	4
		Emberizidae	1
		Nectarinidae	1
		Paridae	2
		Muscicapidae	13
		Turdinae,	3 (45)
11	Piciformes	Capitonidae	1
		Picidae,	3
		Sittidae, Pittidae	2+1 (7)
12	Coraciiformes	Meropidae	3
		Coracidae	1
		Alcedinidae	4
		Bucerotidae	2 (10)
13	Strigiformes	Strigidae	2 (2)
14	Dicaeidae	Dicaeidae	3 (3)
15	Gruiformes	Gruidae	2 (2)
16	Phalacaniiformes	Phalacrocoracidae	1 (1)
17	Apodiformes	Apodidae	2 (2)

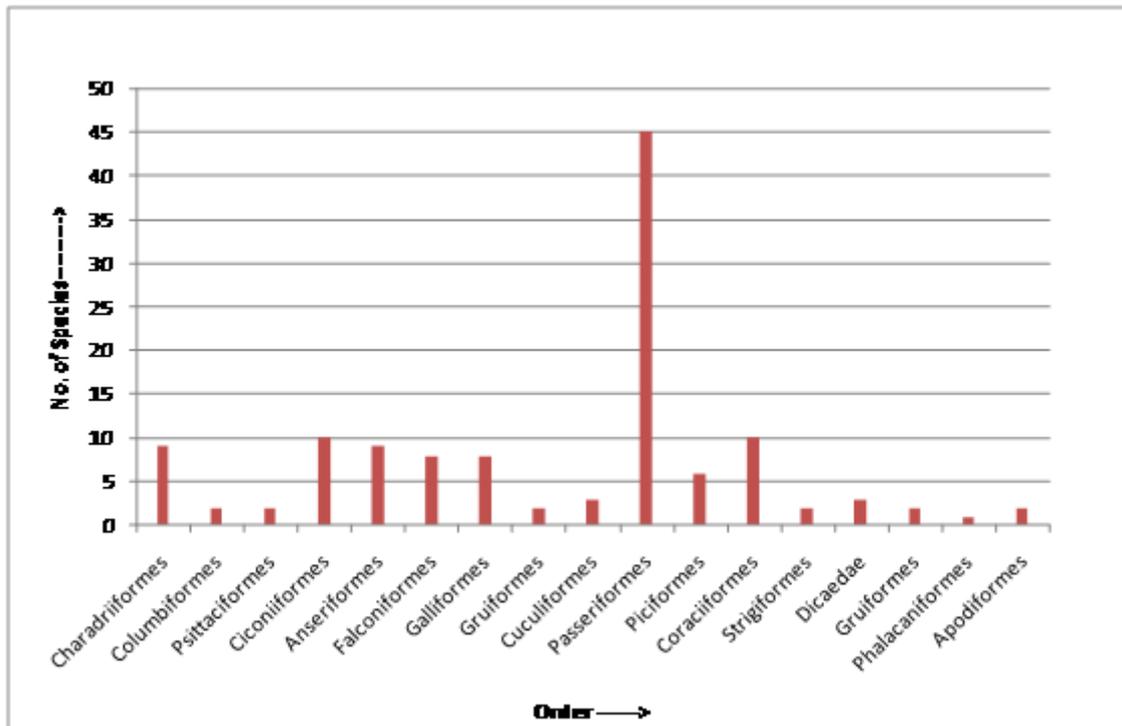


Fig. 1: Order wise bird diversity in West Division of Chhindwara M. P., India

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