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Preliminary Checklist of Avian Fauna of Poonch, Jammu and Kashmir

Fateh Mohammad,
Department of Zoology, SKC Government Degree College Poonch,
Jammu and Kashmir, india

Abstract - This paper presents a preliminary checklist of unique diversity of wild avian fauna of district Poonch; geographically it is a heterogeneous landscape having varied habitats and climatic divisions, located in mighty Pir Panjal range of Himalaya (Jammu & Kashmir), India. Owing to its varied altitudinal range & diversity of habitat, high mountains, steep terrain and low lying valleys, Poonch is home to great diversity of avian fauna. The present study is based on year-round study by various field trials of every nook & corner of Poonch. From 2012-2016 overall 189 bird species were identified from 13 orders and 52 families of wild birds of Poonch district.

Keywords - Avian Fauna, Conservation, Distribution, Status, Management, Endangered, Vulnerable, Poonch.

I. Introduction

Birds are an important component of global biodiversity. They act as key indicator for assessing the status of ecosystem health. Birds attract all of us with their behavior, colour, songs etc. The study of Avifauna diversity is an important ecological tool which is an important tool to evaluate different habitats both qualitatively and quantitatively. It also fulfills many ecological functions, which include disease regulation, biomass recycling, seed dispersal and pollination (Helm, 2002). Birds database is essential because of declining avian population dependent ecosystem, resulting in local and global extinction of birds. It also helps in measure to conserve avifauna by laws, policies and to have measure to conserve and to create conducive environment to support the regeneration of species in the interest of conservation. The large scale development works like road construction in the fragile Himalayan ecosystem, the noise of blasting & machinery along with large scale deforestation in the route of roads has badly damaged the natural ecosystem of birds. Birds are most sensitive to environment changes which has effected most of birds, cutting of old dead trees pose a threat to nesting site of birds like parrot, barbet, tits, etc which nests in the holes of old dead trees. The power transmission lines passing through forest area of Pir Panjal forest has another issue for migratory and resident birds.

The Jammu and Kashmir state is known for its bio-diversity and physical diversity, climatic conditions, high mountains, alpine lakes, other water bodies and low lying valleys at intersection of Palearctic and oriental region. Poonch is a smaller district lying in the lap of Pir Panjal range of lesser north western Himalayan region. This district is gifted with rich biodiversity of immense scientific research for global biodiversity infra-structure. It is a highly mountainous area with varied elevation, perennial rivers,

lakes & low lying valleys, and ectone zone between sub-tropical Jammu & temperate Kashmir region. It is home to beautiful pheasants and other birds like western tragopan, Monal pheasant, Cheer pheasant, Kaleej pheasant and Golden eagle, Chakur partridge, Himalayan Griffon, Egyptian Vulture etc.

The present study presents a checklist of avian diversity of this district which shall help to guide for conservation and management of precious avian fauna of this area.

II. Material and Methods.

Himalaya is youngest mountain system which is known for rich biological diversity. It contributes 10% of the world avian diversity. Poonch district lies in the western Himalaya & owing to vast geographical and climatic diversity it is rich in bird diversity and good number of bird breeds in Pir panjal range of lesser Himalaya, Poonch district is part of this mountainous, hilly region.

The present paper is the result of random surveys conducted in the district Poonch from 2012-2016 in the diverse habitat, like forest, water bodies at all altitudinal ranges. The walking tracts available in the area were walked in the morning and evening hours. Topography features such as elevation, slope, water bodies and human temporary and permanent settlements were marked with GPS. Random ad hoc surveys were carried out in all elevations along with visual encounter and road transect survey protocols. Distribution pattern along with abundance and threat faced by avian fauna from deforestation, habitat fragmentation, developmental road construction work, live stock grazing, hunting and poaching in different seasons were also listed out. For proper and authentic documentation, photographs of observed species were taken out using ultrazoom camera & telescope was used to observe behaviour and feeding habits. The local hunters provided some trophies of stuffed birds, claws, head with crown, feathers etc which proved the presence of birds and preference of hunters and poachers. The species were identified with the help of various field guides, diagnostic keys & avian identification apps.

III. Study Area

District Poonch is border district having its boundary with LOC. Some of its area is in Pakistan occupied Kashmir. The district has a population of 4.75 lakh (2011 Census), it consists of six tehsils, 11 blocks & 173 villages spreading over an area of 1674 sq.km. (1.14 lac (Ha)). It is mountainous hilly district located on the southern slope of Pir Panjal range of Lesser Himalayas. It is bounded on the north by Baramullah and Budgam districts of Kashmir. On the north and Northwest lies (POK) & district Rajouri is on its South. The average rainfall in the district is 1200mm-1400mm with 56-73 average rainy days. The temperature ranges from 5°C in winter to 39°C during summer. The altitude varies from 800-4750m above the sea level. The area under Poonch's Mendhar Tehsil largely fall under sub-tropical region and Surankote and Mandi tehsils are fully temperate with most area under snow in winter. Set amidst majestic snow-capped mountains, dotted with lovely alpine lakes and meandering streams. The forests of Poonch district has wide variety of plants which is one of the major contributing factors for the richness of bird species. It has coniferous, oak and pine forests along with mixed vegetation of shrubs and herbs. Poonch district occupies a pivotal position in J&K owing to its vast forest cover which comprises 58.81% of total area of the district. The vegetation usually comprises chir, pine, broad leaved deciduous forest, high altitude coniferous forests, scrub forest interspersed with frequent grassland patches & agriculture croplands owing to diversity of ecosystem Poonch is rich in avifauna, owing to good forest cover and alpine peaks a good number of resident and summer visitor birds are found here, some of which are highly endangered and need immediate protection. The preliminary checklist of which is presented here along with IUCN status. human temporary and permanent settlements were marked with GPS. Random ad hoc surveys were carried out in all elevations along with visual encounter and road transect survey protocols. Distribution pattern along with abundance and threat faced by avian fauna from deforestation, habitat fragmentation, developmental road construction work, live stock grazing, hunting and poaching in different seasons were also listed out. For proper and authentic

documentation, photographs of observed species were taken out using ultra zoom camera & telescope was used to observe behavior and feeding habits. The local hunters provided some trophies of stuffed birds, claws, head with crown, feathers etc which proved the presence of birds and preference of hunters and poachers. The species were identified with the help of various field guides, diagnostic keys & avian identification apps.

Table 1.

S. no.	Common name	Scientific name	IUCN status
Family Phasianidae (partridges and pheasants)			
001	Chukar Partridge	<i>Alectoris chukar</i>	LC
002	Black Francolin	<i>Francolinus francolinus</i>	LC
003	Western Tragopan	<i>Tragopan melanocephalus</i>	VU
004	Himalayan Monal	<i>Lophophorus impejanus</i>	LC
005	Cheer Pheasant	<i>Catreus wallichii</i>	VU
006	Kalij Pheasant	<i>Lophura leucomelanos</i>	LC
007	Koklass Pheasant	<i>Pucrasia macrolopha</i>	LC
Anatidae (ducks, geese & swans)			LC
008	Common Teal	<i>Anas crecca</i>	LC
009	Mallard	<i>Anas platyrhynchos</i>	LC
010	Little Grebe	<i>Tachybaptus ruficollis</i>	LC
Ardeidae (bitterns, herons, & egrets)			
012	Cattle Egret	<i>Bubulcus ibis</i>	LC
013	Grey Heron	<i>Ardea cinerea</i>	LC
014	Indian Pond-Heron	<i>Ardeola grayii</i>	LC
015	Black Crowned Night Heron	<i>Nycticorax nycticorax</i>	LC
016	Little Bittern	<i>Ixobrychus minutus</i>	LC
Phalacrocoracidae (cormorants)			LC
017	Little Cormorant	<i>Phalacrocorax niger</i>	LC
018	Great Cormorant	<i>Phalacrocorax carbo</i>	LC
Accipitridae (hawks, kites, and eagles)			
019	Black-eared Kite	<i>Milvus lineatus</i>	LC

020	Black Kite	<i>Milvus migrans</i>	LC
021	Besra	<i>Accipiter virgatus</i>	LC
022	Shikra	<i>Accipterbadius</i>	LC
023	White-eyed Buzzard	<i>Butasturteesa</i>	LC
024	Eurasian Sparrowhawk	<i>Accipiternisus</i>	LC

Table 1. continued

S. no.	Common name	Scientific name	IUCN status
025			
026	Common Buzzard	<i>Buteo buteo</i>	LC
027	Long-legged Buzzard	<i>Buteo rufinus</i>	LC
028	Upland Buzzard	<i>Buteo hemilasius</i>	LC
029	Bonelli's Eagle	<i>Hieraaetus fasciatus</i>	LC
030	Steppe Eagle	<i>Aquila nipalensis</i>	LC
031	Golden Eagle	<i>Aquila chrysaetos</i>	LC
032	White-rumped Vulture	<i>Gyps bengalensis</i>	CR
033	Himalayan Vulture	<i>Gyps himalayensis</i>	LC
034	Egyptian Vulture	<i>Neophron percnopterus</i>	EN
035	Bearded Vulture	<i>Gypaetus barbatus</i>	EN
Falconidae (falcons)			
036	Common Kestrel	<i>Falco tinnunculus</i>	LC
037	Peregrine Falcon	<i>Falco peregrinus</i>	LC
Rallidae (crakes, rails)			
038	White-breasted Waterhen	<i>Amauornisphoenicurus</i>	LC
039	Common Moorhen	<i>Gallinula chloropus</i>	LC
Gruidae (cranes)			
040	Common Crane	<i>Grus grus</i>	LC
041	Red-wattled Lapwing	<i>Vanellus indicus</i>	LC
042	Common Ringed Plover	<i>Charadrius hiaticula</i>	LC
Jacanidae (Jacanas)			

043	Pheasant-tailed Jacana	Hydrophasianus chirurgus	LC
044	Green Sandpiper	Tringa ochropus	LC
045	Common Sandpiper	Actitis hypoleucos	LC
046	Small Pratincole	Glareola laceta	LC
Columbidae (pigeons and doves)			
047	Common Pigeon	Columba livia	LC
048	Snow Pigeon	Columba leuconota	LC

Table 1. continued

S. no.	Common name	Scientific name	IUCN status
049	Common Woodpigeon	Columba palumbus	LC
050	Red Collared-dove	Streptopelia tranquebarica	LC
051	Spotted Dove	Streptopeliachinensis	LC
052	Eurasian Collared-dove	Streptopelia decaocto	LC
053	Wedge-tailed Green-pigeon	Treron sphenura	LC
Psittacidae (parrots and parakeets)			
054	Slaty-headed Parakeet	Psittacula himalayana	LC
056	Plum-headed Parakeet	Psittacula cyanocephala	LC
057	Rose-ringed Parakeet	Psittacula krameri	LC
058	Alexandrine Parakeet	Psittacula eupatria	LC
Cuculidae (cuckoos)			
059	Asian Koel	Eudynamysscolopacea	LC
060	Indian Cuckoo	Cuculus micropterus	LC
061	Common Hawk-cuckoo	Hierococcyx varius	LC
062	Sirkeer Malkoha	Phaenicophaeus leschenaultii	LC
063	Greater Coucal	Centropus sinensis	LC
Strigidae (owls)			
064	Indian Scops Owl	Otus bakkamoena	LC
065	Asian Barred Owlet	Glaucidium cuculoides	LC
Coraciidae (rollers)			

066	Eurasian Roller	Coracias garrulus	LC
067	Indian Roller	Coracias benghalensis	LC
Alcedinidae (kingfishers)			
068	White-throated Kingfisher	Halcyon smyrnensis	LC
069	Crested Kingfisher	Megaceryle lugubris	LC
070	Pied Kingfisher	Ceryle rudis	LC
071	Common Kingfisher	Alcedo atthis	LC
Upupidae (hoopoe)			
072	Common Hoopoe	Upupa epops	LC

Table 1. continued

S. no.	Common name	Scientific name	IUCN status
Megalaimidae (barbets)			
073	Great Barbet	Megalaima virens	LC
074	Blue-throated Barbet	Megalaima asiatica	LC
Picidae (woodpeckers)			
075	Eurasian Wryneck	Jynx torquilla	LC
076	Speckled Piculet	Picumnus innominatus	LC
077	Brown-fronted Woodpecker	Dendrocopos auriceps	LC
078	Himalayan Woodpecker	Dendrocopos himalayensis	LC
079	Scaly-bellied Woodpecker	Picus squamatus	LC
080	Lesser Yellownape	Picus chlorolophus	LC
Campephagidae (cuckooshrikes and minivets)			
081	Long-tailed Minivet	Pericrocotus ethologus	LC
Laniidae (shrikes)			
082	Long-tailed Shrike	Lanius schach	LC
083	Bay-backed Shrike	Lanius vittatus	LC
Oriolidae (orioles)			
084	Golden Oriole	Oriolus oriolus	LC
Dicuridae (Drongos)			

085	Black Drongo	Dicrurus macrocerus	LC
086	Ashy Drongo	Dicrurus leucophaeus	LC
Rhipiduridae (fantails)			
087	White-browed Fantail	Rhipidura aureola	LC
Monarchidae (monarch flycatchers)			
088	Asian paradise flycatcher	Terpsiphone paradisi	LC
Corvidae (Jays, magpies and crows)			
089	Eurasian Jackdaw	Corvus monedula)	LC
090	House Crow	Corvus splendens	LC
091	Indian Jungle Crow	Corvus leuillantii	LC
092	Large-billed Crow	Corvus macrorhynchos	LC
093	Northern Raven	Corvus corax	LC

Table 1. continued

S. no.	Common name	Scientific name	IUCN status
094	Eurasian Magpie	Pica pica	LC
095	Black-headed Jay	Garrulus lanceolatus	LC
096	Rufous Treepie	Dendrocittavagabunda	LC
097	Grey Treepie	Dendrocitta formosae	LC
Stenostiridae (fantail, canary flycatcher)			
098	Grey-headed Canary Flycatcher	Culicicapa ceylonensis	LC
Paridae (tits)			
099	Coal Tit	Periparus ater	LC
100	Grey-crested Tit	Lophophanes dichrous	LC
101	Cinereous Tit	Parus cinereous	LC
Aludidae (larks)			
102	Crested Lark	Galerida cristata	LC
Pycnonotidae (bulbuls)			
103	Red-vented Bulbul	Pycnonotus cafer	LC
104	Himalayan Bulbul	Pycnonotusleucogenys	LC
105	Black Bulbul	Hypsipetes leucocephalus	LC

Hirundinidae (swallows and martins)			
106	Eurasian Crag Martin	<i>Hirundo rupestris</i>	LC
107	Asian House Martin	<i>Delichon dasypus</i>	LC
108	Barn Swallow	<i>Hirundo rustica</i>	LC
109	Red-rumped Swallow	<i>Hirundo daurica</i>	LC
110	Wire-tailed Swallow	<i>Hirundo smithii</i>	LC
Cisticolidae (prinias and tailorbirds)			
111	Ashy Prinia	<i>Prinia socialis</i>	LC
112	Jungle Prinia	<i>Prinia sylvatica</i>	LC
113	Zitting Cisticola	<i>Cisticola juncidis</i>	LC
114	Striated Prinia	<i>Prinia crinigera</i>	LC
115	Common Tailorbird	<i>Orthotomus sutorius</i>	LC
Cettiidae (bush warblers)			
116	Brownish-flanked Bush Warbler	<i>Cettia fortipes</i>	LC

Table 1. continued

S.no.	Common name	Scientific name	IUCN status
Acrocephalidae (reedwarblers)			
117	Paddyfield Warbler	<i>Acrocephalus agricola</i>	LC
Phylloscopidae (leaf warblers)			
118	Common Chiffchaff	<i>Phylloscopus collybita</i>	LC
119	Mountain Chiffchaff	<i>Phylloscopus sindianus</i>	LC
120	Greenish Warbler	<i>Phylloscopus trochiloides</i>	LC
121	Western Crowned Warbler	<i>Phylloscopus occipitalis</i>	LC
122	Lemon-rumped Warbler	<i>Phylloscopus chloronotus</i>	LC
123	Grey-hooded Warbler	<i>Phylloscopus xanthoschistos</i>	LC
124	White-browed Tit Warbler	<i>Leptopoeile sophiae</i>	LC
125	Streaked Laughingthrush	<i>Garrulax lineatus</i>	LC
126	Variegated Laughingthrush	<i>Garrulax variegatus</i>)	LC
127	Common Babbler	<i>Turdoides caudatus</i>	LC
128	Jungle Babbler	<i>Turdoides striatus</i>	LC

129	Red-billed Leiothrix	Leiothrix lutea	LC
130	Rufous Sibia	Heterophasiacapistrata	LC
Zosteropidae (white-eyes)			
131	Oriental White-eye	Zosterops palpebrosus	LC
Troglodytidae (wren)			
132	Eurasian Wren	Troglodytestroglodytes	LC
Sittidae (nuthatches)			
133	Kashmir Nuthatch	Sitta cashmirensis	LC
134	Chesnut-bellied Nuthatch	Sitta cinnmoventris	LC
Timalidae (babblers)			
Trichodromidae (wallcreeper)			
135	Wallcreeper	Tichodroma muraria	LC
certhiidae			
136	Bar-tailed Trecreeper	Certhia himalayana	LC
Sturnidae (starlings and mynas)			
137	Brahminy Starling	Sturnia pagodarum	LC

Table 1. continued

S.no	Common name	Scientific name	IUCN status
138	Asian Pied Starling	Gracupica contra	LC
139	Bank Myna	Acridotheres ginginianus	LC
140	Common Myna	Acridotheres tristis	LC
141	Jungle Myna	Acridotheres fuscus	LC
Turdidae (thrushes)			
142	Blue Whistling-thrush	Myiophonus caeruleus	LC
143	Tickell's Thrush	Turdus unicolor	LC
144	Grey-winged Blackbird	Turdus boulboul	LC
Muscicapidae (flycatchers)			
145	Himalayan Bluetail	Tarsiger rufilatus	LC
146	Indian Blue Robin	<i>Luscinia brunnea</i>	LC
147	Bluethroat	<i>Lusciniasvecica</i>	LC

148	Oriental Magpie-Robin	<i>Copsychus saularis</i>	LC
149	Indian Robin	<i>Saxicoloides fulicatus</i>	LC
150	Brown Rock-chat	<i>Cercomelafusca</i>	LC
151	Little Forktail	<i>Enicurus scouleri</i>	LC
152	Spotted Forktail	<i>Enicurus maculatus</i>	LC
153	Eversmann's Redstart	<i>Phoenicurus erythronota</i>	LC
154	Plumbeous Water-redstart	<i>Rhyacornis fuliginosa</i>	LC
155	White-capped Redstart	<i>Chaimarrornis leucocephalus</i>	LC
156	Pied Bushchat	<i>Saxicolacaprata</i>	LC
157	Common Stonechat	<i>Saxicola torquatus</i>	LC
158	Dark-sided Flycatcher	<i>Muscicapasibirica</i>	LC
159	Ultramarine Flycatcher	<i>Ficedula superciliaris</i>	LC
160	Verditer Flycatcher	<i>Eumyias thalassinus</i>	LC
Cinclidae (dippers)			
161	Brown Dipper	<i>Cinclus pallasi</i>	LC
Nectariniidae (sunbirds and spiderhunters)			
162	Purple Sunbird	<i>Cinnyris asiaticus</i>	LC

Table 1. continued

S.no	Common name	Scientificname	IUCN status
163	House Sparrow	<i>Passer domesticus</i>	LC
164	Russet Sparrow	<i>Passer rutilans</i>	LC
Ploceidae (weavers)			
165	Baya Weaver	<i>Ploceus philippinus</i>	LC
Estrildidae (avadavats and munias)			
166	Indian Silverbill	<i>Euodice malabarica</i>	LC
167	Scaly-breasted Munia	<i>Lonchura punctulata</i>	LC
Prunellidae (accentors)			
168	Black-throated	<i>Prunella atrogularis</i>	LC

Table 1. continued

	Accentor		
Motacillidae (wagtails and pipits)			
169	Yellow Wagtail	<i>Motacilla.flava</i>	LC
170	Grey Wagtail	<i>Motacilla. cinerea</i>	LC
171	Citrine Wagtail	<i>Motacilla.citreola</i>	LC
172	White Wagtail	<i>Motacilla. alba</i>	LC
173	Tree Pipit	<i>Anthus trivialis</i>	LC
174	Red-throated Pipit	<i>Anthus cervinus</i>	LC
175	Rosy Pipit	<i>Anthus roseatus</i>	LC
176	Water Pipit	<i>Anthus spinoletta</i>	LC
177	Paddyfield Pipit	<i>Anthus rufulus</i>	LC
178	Tawny Pipit	<i>Anthus campestris</i>	LC
179	Long-billed Pipit	<i>Anthus similis</i>	LC
180	Upland Pipit	<i>Anthus sylvanus</i>	LC
Fringillidae (finches)			
181	Brambling	<i>Fringilla montifringilla</i>	LC
182	Yellow-breasted Greenfinch	<i>Carduelis spinoides</i>	LC
183	Common Rosefinch	<i>Carpodacus erythrinus</i>	LC
184	Pink-browed Rosefinch	<i>Carpodacus rodochroa</i>	LC
185	Black-and-yellow Grosbeak	<i>Mycerobas icterioides</i>	LC
Emberizidae (buntings)			
186	Crested Bunting	<i>Melophus lathami</i>	LC
187	White-capped Bunting	<i>Emberiza stewarti</i>	LC
188	Rock Bunting	<i>Emberiza cia</i>	LC
189	Pine Bunting	<i>Emberiza leucocephalos</i>	LC

IV. Discussions

During the present study 189 species of birds were identified from 13 orders and 52 families. A large number of birds are migratory and some are vagrant passage visitor. Owing to diversity of habitat from alpine pastures, above tree line, alpine shrubs and high-altitude coniferous forest, along with marsh lands, lake and Perennial River and streams. The district is rich in diversity of habitats and diversity of birds.

District Poonch is represented by seven species of pheasants, the magnificent game birds, of which Cheer Pheasant and Western Tragopan fall in vulnerable category of IUCN status. The pheasants are subjected to hunting and poaching and their numbers are declining day by day. Cheer pheasant is now locally unavailable in areas which previously had good number of this bird. Western Tragopan is locally extinct in most of the forest because of deforestation, hunting and fragmentation of its habitat. This bird shows local altitudinal migration when snow cover high mountains it comes close to human habitation where it is subjected to hunting by experienced hunters who have knowledge of its behavior. Monal Pheasant and Koklas pheasant also face the same problem. Khaleej Pheasant is well adapted to human made changes and this bird is found from high altitude coniferous forest to cultivated lands and can be found in all habitats it is most common Pheasant of Poonch, can be found in close vicinity of

Poonch town. Chakur Partridge is locally extinct in most areas of Poonch but still can be found in some areas. Other game birds of this district are common Teal, Mallard, Pigeon Dove etc but these are not much favorite of hunters.

Line of control (LOC) makes boundary with Pakistan occupied Kashmir and much part of LOC passes through forest. The use of gun fire is prohibited in these forest patches since avian wild-fauna use this forest as safe haven. The pheasants like Cheer Pheasant, Koklass and Western Tragopan along with Chakur partridge are found in good number along LOC because hunters have no access to these areas. Poonch river is home to good number of birds along with its tributaries and large basin, Common Teal, Mallard, Little and Great Cormorants, Little Grebe, Egrets and Herons are found in good numbers in this river. The river basin provide refuge to Common Moorhen, White Breasted Waterhen and large number of migratory birds in winter. Golden Eagle is largest resident bird of prey in high altitude where as Steppe Eagle visits low lying areas in winter from November to April, Bonelli's eagle is vagrant in these areas. A good number of other birds of prey are found in all habitats of Poonch district.

Owing to high mountain cliffs vultures are in comparatively good numbers, Himalayan Vulture, Egyptian Vulture, Bearded Vulture have and can be found easily in mountain cliffs. Poonch is home to large number of passerine birds which don't have any direct threat but deforestation, disturbance by road construction and electric lines is a matter of great concern.

Parrot, Crows and Barbet stand in conflict with human beings as they attack fruit plants and maize crops, so they are sometimes killed and trapped. Birds like Falcons and Buzzards attack domestic pigeon and chicken and they face human wildlife conflict and conflict always cause damage to the birds. The research work on avifauna of Pir Panjal range of mountains is very scanty as this area remained in the grip of terrorism and military operations, many researcher could not document the flora and fauna of this area. The present study while documenting the avifauna is likely to create interest for further research in this area which is of great importance to chalkout programmes for conservation of avifauna of this area.

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