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Bird Diversity in Bhaludhunga: Exploring Avian Diversity in Eastern Mid-hills of Nepal

Naresh Shrestha^{1,2*}, Anusha Shrestha² and Krishna Prasad Bhusal³

¹ Red panda Network, Baluwatar, Kathmandu, Nepal
 ² Tribhuvan University, Institute of Forestry, Pokhara Campus, Nepal

KEYWORDS

ABSTRACT

Endemic bird Lower Mai Valley Forest MacKinnon's Listing Method, Restricted Range Species Birds are crucial to biodiversity and serve as an indicator of habitat quality, productivity and stability. This study documents the avian diversity in Bhaludhunga Community Forest and associated tea garden in Ilam, which is a part of the Mai Valley Forests Important Bird and Biodiversity Area. It addresses the limited research on avi-faunal diversity in eastern Nepal, particularly outside protected areas. MacKinnon's Listing method was used to collect the data following the existing trail transect walk in the study area. During the study period, a total of 132 bird species from 41 families of 10 orders were recorded. Order Passeriformes were the most dominant order with 102 species followed by Accipitriformes and Columbiformes. Muscicapidae was the most commonly represented family with 19 species followed by Phylloscopidae, and Pellorneidae. One globally endangered species, Steppe Eagle along with five nationally threatened species was recorded during the survey. Two Restricted Range Species from the Eastern Himalayas Endemic Bird Area Spiny Babbler and Yellow-vented Warbler were also recorded in the area. However, extensive survey in the different seasons is required for further exploration of bird community, which might play a crucial role in developing baseline information and implementing conservation implications.

INTRODUCTION

Bird diversity is a strong bio-indicator for ecosystem health and for overall biodiversity (Pakkala et al. 2014) and is also a reliable indicator of the quality, productivity and stability of the habitat (Vallecillo et al. 2016) since birds are sensitive to changes in environmental conditions (Bibi and Ali, 2013). Therefore, bird diversity is widely regarded as a crucial instrument for planning, monitoring, and identifying conservation actions related to biodiversity conservation (Kremen 1992, Bregman et al. 2014). They have occupied diverse habitat and foraging strategies (Naish 2014). Numerous resident and migratory bird species, including the endemic Spiny Babbler have made Nepal's diverse ecosystems their home (Inskipp et al. 2017). The strength of Nepal's biodiversity is reflected well with Nepal supporting about 9% of the world's known bird species among which 42 species are listed in the IUCN Red List of Globally Threatened (10 Critically Endangered, 8 Endangered and 24 Vulnerable), 34 Globally Near Threatened Species (DNPWC and BCN 2022, BirdLife International 2023). Of the total bird species, 100 are enlisted in various CITES appendices and 19% are nationally threatened (DNPWC and BCN 2022).

223 species of birds in the whole world are on the verge of extinction (BirdLife International 2023) due to natural as well as anthropogenic threats (Sarkar et al. 2009, BirdLife International 2023). Eastern Nepal's forests are unlike any other in the nation, which are at the risk of destruction and degradation (Acharva. 2011). Habitat degradation and fragmentation, urbanization, change in vegetation composition (Sarkar et al. 20009, Asefa et al. 2017, Girma et al. 2017), pollution, invasive alien species, climate change, illegal hunting and poaching (BirdLife International 2023) are identified as the major threats to birds. Within a comparatively limited area, there is a considerable range of habitat (forest) types and associated wildlife, spanning from diverse patterns of tropical forests to temperate forests. The majority of the forests are not part of the current national protected area network. Thus several avian species which are regionally endemic to Eastern Nepal, in need of conservation, are totally unprotected (Dodman 1989). Although eastern Nepal is rich in avi-faunal diversity, not many studies have been conducted. And if any studies have been done, they have been concentrated in the protected areas and only very few have been conducted in the forests outside the protected areas. Thus, most regions outside the protected areas in eastern Nepal remain unexplored. Therefore, the present study aimed to explore the wilderness and compile further information on the relative abundance and diversity of the bird species in one of the Community Forests and its associated tea garden of Ilam district to highlight the importance of protecting these diverse habitats from ongoing threats.

MATERIALS AND METHODS

Study area

The Bhaludhunga Community Forest (26°55'21.92"N, 87°55'12.97"E) and Tea (26°54'52.71"N. Estate of Ilam 87°55'29.66"E) are located in Ilam Municipality ward no. 6 in Ilam district, which is about 2 km North-East of Ilam Bazar (Figure 1). It lies in the Mid-hill region within the Mai Valley Forests Important Bird and Biodiversity Area (IBA) of Nepal (Baral and Inskipp 2005). The summer season in Ilam is mildly warm which fogs up during monsoon while the winter is cold and mostly clear. Bhaludhunga Community Forest occupies an area of 14 hectare ranging from 1125 m to 1383 m altitude from the sea level. The forest lies within the Lower Mai Valley Forest area surrounded by settlements on the North, South and East and on the West, there lies a sub-tropical broadleaved forest that joins a river named Puwakhola. The forest is mainly dominated by Chilaune (Schima wallichii) and Katus (Castanopsis indica) with small patch of Juniper (Juniperus indica) towards the Northern region of the forest (Inskipp et al. 2022). There are also several Simal (Bombax ceiba) trees scattered around the forest which serve as roosting, foraging and nesting habitat for most of the birds in the area. The tea estate lying close to the forest provides a different habitat type for several species creating microclimate below the canopy of densely planted tea plants. Also, the scattered trees around the tea plantations create a favourable roosting site for several bird species. There are several Siris (Albezia procera) and Chilaune trees scattered around tea bushes.

Bird survey

Bird survey was carried out for a total of 20 days in February, March and April 2021 in order to record the seasonal variation of birds from winter to summer by using Mackinnon's species richness method, walking through the trail transects, as described by Bibby et al. (2000). The same transects were followed during the survey where the birds that were seen or heard (song/call) were recorded from 6:30 to 10:30 hrs when birds are active. During the transect walk, a series of sub-lists were compiled where the first 10 species encountered (sighting and calls heard) were listed. Once 10 species were identified and listed, a new list was started. Great effort was taken during the survey to ensure that the same species did not appear more than once in a single list, but the species could be listed again in lists that followed. The number of new species in list two that were not included in list one was extracted to create the total species list, and this process was repeated for all the lists that were recorded for the area. A species richness curve, that measures the species diversity, was created by graphing the cumulative sum of species recorded versus the total number of lists made.

Wing 8×42 binoculars and Birds of Nepal book of Grimmett et al. (2016) were used as field guide to identify the bird species. Expert consultations were also done to identify some calls of the birds.



Figure 1: Map of study area showing the trail transect used for the study

RESULTS

Bird diversity and richness

During the study period, 4064 individuals of 132 bird species were recorded, representing 10 orders and 41 families (Annex I). With 102 species in 31 families, the Passeriformes order was the most prevalent, followed by the Accipitriformes (6 species) and Columbiformes (3 species). (Figure 2). Likewise, with 19 species, the Muscicapidae family was the most frequently represented, followed by the Phylloscopidae (16 species), Pellorneidae (6 species), and Picidae (6 species each) (Figure 3). During the survey, five individuals of the Spiny Babbler (Acanthoptila nipalensis), the endemic bird of Nepal were recorded.



Figure 2: Species composition by orders



Figure 3: Species composition by family

A total of 215 lists comprising 10 species in each list were prepared during the study period. New species got added to each list. A cumulative sum of newly added species in each list was calculated and a graph was drawn (Figure 3). As the figure illustrates, the number of new bird species observation was high up to list no. 7, which then started to gradually decrease till list no. 25. After list no. 26, the observation of new species was not that common; only one or two new species were added after every second or third list or even more (Figure 4). The most common species among the birds was Yellow-bellied Fairy-fantail (Chelidorhynx hypoxanthus), which occurred in 129 out of 215 lists followed by Large-billed Crow (Corvus macrorhynchos) (n=115) and Greyhooded Warbler (Phylloscopus xanthoschistos) (n=111).



Figure 4: MacKinnon's species richness curve

Abundance of recorded species

The abundance category showed that uncommon birds accounted for just over 43% of the total (57 species) followed by frequent, common and abundant with 34.85% (46 species), 18.94% (25 species) and 3.03% (4 species) respectively as shown in Table 1.

Table 1: Table showing the abundance status of birds

Category	Abundance	Scale	Species
	Score		
< 0.1	1	Rare	0
0.1 - 2.0	2	Uncommon	57
2.1 - 10.0	3	Frequent	46
10.1-40.0	4	Common	25
> 40.0	5	Abundant	4

Status of recorded species

One globally endangered--Steppe Eagle (Aquila nipalensis)--and five nationally threatened--Himalavan Vulture (Gvps himalayensis), White-browed Piculet (Sasia ochracea), Steppe Eagle, Yellow-bellied Warbler (Abroscopus superciliaris), and Yellow-vented Warbler (Phylloscopus cantator)--were recorded. Out of the five nationally threatened species, one species was Critically Endangered, one Endangered and three species were Vulnerable (Table 2). Ten species were listed in Appendix II of CITES and one in Appendix III. Two restricted range Species were also recorded during the survey: Spiny Babbler (endemic to Nepal) and Yellow-vented Warbler, both of which are part of the Eastern Himalayas Endemic Bird Area.

S.N.	English Name	Scientific Name	National Status	Global Status	CITES
1	Kalij Pheasant	Lophura leucomelanos			III
2	Brown Boobook	Ninox scutulata			II
3	Asian Barred Owlet	Glaucidium cuculoides			II
4	Indian Scops Owl	Otus bakkamoena			II
5	Crested Serpent-eagle	Spilornis cheela			II
6	Himalayan Griffon	Gyps himalayensis	VU	NT	II
7	Steppe Eagle	Aquila nipalensis	VU	EN	II
8	Shikra	Accipiter badius			II
9	White-browed Piculet	Sasia ochracea	CR	LC	NE
10	Common Kestrel	Falco tinnunculus			II
11	Slaty-headed Parakeet	Psittacula himalayana			II
12	Plum-headed Parakeet	Psittacula cyanocephala			II
13	Yellow-bellied Warbler	Abroscopus superciliaris	VU	LC	NE
14	Yellow-vented Warbler	Phylloscopus cantator	EN	LC	NE
<i>Note: LC: Least Concerned; NT: Near Threatened; VU: Vulnerable; CR: Critically Endangered; NE: Not Evaluated</i> (<i>DNPWC</i> & <i>BCN</i> 2022)					

Table 1: Conservation concern species recorded in Bhaludhunga Community Forest (CF) and adjoining tea garden

DISCUSSION

It is crucial to understand the species composition of birds from unprotected habitats in order to assess environmental conditions and develop long-term, practical plans for avian conservation and management (Kiros et al. 2018, Bhusal et al. The study reported that 2020). the Bhaludhunga Community Forest and the neighboring tea garden region were home to 132 different species of birds, representing 10 orders and 41 families. This study suggests the area has high bird diversity, i.e., 14.89% of the total avian species that are recorded in Nepal, i.e., 886 (DNPWC and BCN 2018). With increased sampling effort, the species richness curve nearly hit an asymptote that indicates the possibility of finding a few more species similar to the finding of Chettri et al. (2018). Diverse species are supported by a positive correlation between species richness and heterogeneous habitat (Basnet et al.

2016). The area consists of heterogeneous habitat, including forests and bushy, with varying altitudes and distinctive topographic characteristics. The diverse range of habitats present in this area may account for the notable abundance of bird species found there (Berg 1997). A similar study was done by Basnet and Sapkota (2006) in Lower Mai Valley, where a total of 153 bird species were observed. In addition, bird survey was done in the area adjacent to Bhaludhunga Community Forest, i.e., Seti Devi Forest Area, where a total of 115 bird species were observed in 2021 (Queen Ilam, unpublished data). Similarly, in 2022, a survey conducted in the lower Mai Valley Forest Important Bird and Biodiversity Area documented a total of 256 different bird species (Inskipp et al. 2022).

Among the 42 bird species globally classified as threatened and the 167 categorized as nationally threatened in Nepal (DNPWC and BCN 2022), the survey identified one globally threatened species and five nationally threatened species, which signifies the importance of the site. The existence of restricted-range species indicates that the Mai Valley IBA in eastern Nepal provides habitat for nationally threatened breeding species (Joshi et al. 2022). Globally, the risk of extinction of birds is on the rise (White and Bennet 2015). In the study area, pollution and growing human settlement were the main risks to avifauna corresponding to the finding of Dangaura et al. (2020). Deforestation is still one of the threats to birds in the lower Mai Valley Forests but large tracts highquality forest with old trees and thick undergrowth were noted by Inskipp et al. (2022) in the lower temperate and subtropical zones. Some locals were also found killing birds for consumption using catapults as stated by Inskipp et al. (2022) where hunting is described as one of the significant threats to birds in the Mai Valley Forest. One of the very common residential bird species, Large-billed Crow was found dead due to electrocution in the study area.

In order to make the tea organic, the authority stopped management using pesticides in the tea garden. This has helped increase the bird assemblage in the area because insectivorous birds eat pests on the tea plants, and they act as important biocontrol agents in tea gardens and other farming environments that are maintained organically (Sinu 2011). But, the increase in the flow of people and lack of enough large trees in the area has negatively hampered the avian diversity of the area. This study demonstrated the enormous potential for organically managed tea plantations to support and preserve avian diversity as suggested by Chettri et al. (2018).

A study on forest management practice in the mid-hills of Nepal by Neupane et al. (2022) found that community-managed forests just like Bhaludhunga CF supported greater bird diversity compared to protected forests managed by the government. A similar study conducted in Eastern Nepal by Joshi et al. (2022) also illustrate that contiguous forest support higher bird diversity compared to isolated ones. And, Bhaludhunga having its boundary adjacent to Setidevi Community Forest towards the western side provides continuous habitat type thus supporting higher assemblage of birds. These findings suggest that a combination of forest management practices. environmental variables, and climatic factors play a crucial role in promoting avian diversity in subtropical forests of Nepal. Conservation efforts should focus on maintaining the ecological integrity of these ecosystems and managing the land effectively to promote avian diversity.

This study illustrates, a part of lower Mai Valley Forest IBA significantly holds the population of globally and nationally threatened species and has high avian diversity. The sub-tropical forest area associated with adjacent forest and tea garden creates favourable environment to a number of birds. However, more studies are needed to explore the seasonal variability. distribution pattern of bird species, habitat suitability of the species and associated other wildlife. There are efforts being taken in order to initiate the culture of bird watching in Ilam and developing bird tourism in the area, but the lack of experts in the field has hindered the process. This has resulted in a lack of guidance for local enthusiasts, hampering their ability to effectively engage in bird watching and related activities.

CONCLUSION

This research indicates that the Bhaludhunga Forest and its neighboring Tea Garden provide a habitat for a variety of bird species, a topic that warrants further comprehensive investigation. The study recorded 132 bird species belonging to 41 families under 10 orders.

Additional in-depth scientific research and consistent bird monitoring are necessary to

gather further insights into species diversity and potential threats.

Given the substantial potential for birdcentric ecotourism in the region, suitable policies can facilitate the implementation of such activities. The present research suggests increasing awareness regarding the significance of conserving both birds and their habitats in Ilam.

Furthermore, comprehensive year-round studies on avifauna are still lacking in the Mai Valley IBA. To successfully implement conservation efforts in the area, it is imperative to conduct research examining the factors affecting species distribution and behavior, along with studying the ecology of endangered bird species, in order to inform appropriate conservation strategies.

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S.N.	Common Name	Scientific Name	Local Name	
Gallif	ormes			
Phasia	anidae			
1	Kalij Pheasant	Lophura leucomelanos	कालिज	
Colur	nbiformes			
Colur	nbidae			
2	Rock Dove	Columba livia	मलेवा	
3	Oriental Turtle-dove	Streptopelia orientalis	तामे ढुकुर	
4	Western Spotted Dove	Spilopelia suratensis	कुर्ले ढुकुर	
Capri	mulgiformes			
Apod	idae			
5	House Swift	Apus nipalensis	फिरफिरे घरगौँथली	
Cucul	iformes			
Cucul	idae			
6	Greater Coucal	Centropus sinensis	ढोडे गोकुल	
7	Western Koel	Eudynamys scolopaceus	कोइली	
8	Large Hawk-cuckoo	Hierococcyx sparverioides	पहाडी बीउ कुहियो	
Strigiformes				
Strigidae				
9	Brown Boobook	Ninox scutulata	कालपोचक	
10	Asian Barred Owlet	Glaucidium cuculoides	ठूलो डुन्डुल	
11	Indian Scops-owl	Otus bakkamoena	उलुक	
Accipitriformes				
Accipitridae				
12	Crested Serpent-eagle	Spilornis cheela	काकाकुल	

Annex I: Avian Checklist of Bhaludhunga CF and adjoining Tea Garden Area

13	Himalayan Griffon	Gyps himalayensis	हिमाली गिद्ध
14	Changeable Hawk-eagle	Nisaetus cirrhatus	शदलचील
15	Black Eagle	Ictinaetus malaiensis	द्रोणक चील
16	Steppe Eagle	Aquila nipalensis	गोमायु महाचील
17	Shikra	Accipiter badius	গিকা
Picifo	ormes		
Mega	alaimidae		
18	Great Barbet	Psilopogon virens	न्याउली
19	Blue-throated Barbet	Psilopogon asiaticus	कुथुर्के
Picid	ae		
20	White-browed Piculet	Sasia ochracea	ससिया
21	Speckled Piculet	Picumnus innominatus	थोप्ले ससिया
22	Greater Flameback	Chrysocolaptes	गर्दनथोप्ले लाहाँचे
		guttacristatus	
23	Greater Yellownape	Chrysophlegma flavinucha	ठूलो सुनजुरे काठफोर
24	Lesser Yellownape	Picus chlorolophus	सुनजुरे काठफोर
25	Black-naped Woodpecker	Picus guerini	कालोगर्दने काठफोर
26	Fulvous-breasted	Dendrocopos macei	काष्ठकुट
Caria	Woodpecker		
Falco	midae		
27	Common Kestrel	Falco tinnunculus	बौंद्राद
27 Deitta	common Result		
Peitta	acidae		
28	Slaty haadad Barakaat	Deittacula himalayana	कर्रा समा
20	Dlum haadad Darakaat	Psittacula avanceenhala	रदँसी समा
29	Pluin-neaded Parakeet	Psillacula cyanocephala	ुइरता सुगा
50 D	Rose-filiged Parakeet	P sillacula krameri	कण्ठ सुगा
Passe			
Eury			
31	Long-tailed Broadbill	Psarisomus dalhousiae	ाषत्रकुट
Virec	onidae		
32	White-browed Shrike- babbler	Pteruthius aeralatus	लालपखं भद्राईभ्याकुर
33	White-bellied Erpornis	Erpornis zantholeuca	सेतोपेटे जुरेचरा
Camp	pephagidae		
34	Long-tailed Minivet	Pericrocotus ethologus	लामपुछ्रे रानीचरी
35	Scarlet Minivet	Pericrocotus flammeus	रानीचरी
36	Black-winged Cuckooshrike	Lalage melaschistos	कालो विरहीचरी
Vang	jidae		

37	Bar-winged Flycatcher- shrike	Hemipus picatus	आसकोटे चरी	
Aegit	hinidae			
38	Common Iora	Aegithina tiphia	सुसेलाीचरी	
Rhipi	duridae			
39	White-throated Fantail	Rhipidura albicollis	नक्कले मारुनीचरी	
Dicru	ıridae			
40	Black Drongo	Dicrurus macrocercus	कालो चिवे	
41	Ashy Drongo	Dicrurus leucophaeus	ध्वाँसे चिवे	
42	Hair-crested Drongo	Dicrurus hottentottus	केशराज चिवे	
Lanii	dae			
43	Grey-backed Shrike	Lanius tephronotus	हिकालीी भद्राई	
Corvi	idae			
44	Rufous Treepie	Dendrocitta vagabunda	कोकले	
45	Grey Treepie	Dendrocitta formosae	पहाडी कोकले	
46	Red-billed Blue Magpie	Urocissa erythroryncha	स्यालपोथरी लामपुछ्रे	
47	Common Green Magpie	Cissa chinensis	हरियो लामपुछ्रे	
48	House Crow	Corvus splendens	घर काग	
49	Large-billed Crow	Corvus macrorhynchos	कालो काग	
Stend	ostiridae			
50	Yellow-bellied Fairy-fantail	Chelidorhynx hypoxanthus	पहेंलो कारुनीचरी	
51	Grey-headed Canary- flycatcher	Culicicapa ceylonensis	चञ्चले अर्जुनक	
Parid	ae			
52	Green-backed Tit	Parus monticolus	हरियो चिचिलकोटे	
53	Great Tit	Parus major	चिचिलकोटे	
54	Black-lored Tit	Machlolophus xanthogenys	पाण्डु चिचिलकोटे	
Cistic	colidae			
55	Striated Prinia	Prinia crinigera	सुया घाँसेफिस्टो	
56	Grey-breasted Prinia	Prinia hodgsonii	फुस्रेछाती घाँसेफिस्टो	
57	Common Tailorbird	Orthotomus sutorius	पातसिउने फिस्टो	
Acrocephalidae				
58	Blyth's Reed-warbler	Acrocephalus dumetorum	ट्याकट्याके	
Pnoepygidae				
59	Scaly-breasted Cupwing	Pnoepyga albiventer	कत्ले डिकुरेभ्याकुर	
Hirundinidae				
60	Nepal House Martin	Delichon nipalense	नेपाल भीरगौंथली	
61	Barn Swallow	Hirundo rustica	घर गौंथली	
62	Red-rumped Swallow	Cecropis daurica	गेरुकटी गौंथली	

63	Asian Plain Martin	Riparia chinensis	भित्तेगौंथली
Pycne	onotidae		
64	Black Bulbul	Hypsipetes leucocephalus	बाखे जुरेली
65	Black-crested Bulbul	Pycnonotus flaviventris	कालोकल्की पहेंलोजुरेली
66	Himalayan Bulbul	Pycnonotus leucogenys	जुल्फे जुरेली
67	Red-vented Bulbul	Pycnonotus cafer	जुरेली
Phyll	oscopidae		
68	Hume's Leaf-warbler	Phylloscopus humei	चञ्चले फिस्टो
69	Lemon-rumped Leaf- warbler	Phylloscopus chloronotus	पीतकटी फिस्टो
70	Buff-barred Warbler	Phylloscopus pulcher	सुन्तलेरेखी फिस्टो
71	Ashy-throated Warbler	Phylloscopus maculipennis	फुस्रोकण्ठे फिस्टो
72	Tickell's Leaf-warbler	Phylloscopus affinis	पीतोदर फिस्टो
73	Green-crowned Warbler	Phylloscopus burkii	सुनचश्मे फिस्टो
74	Whistler's Warbler	Phylloscopus whistleri	सुसेली फिस्टो
75	Chestnut-crowned Warbler	Phylloscopus castaniceps	रातोटाउके फिस्टो
76	Greenish Warbler	Phylloscopus trochiloides	जीवल फिस्टो
77	Yellow-vented Warbler	Phylloscopus cantator	पीतनिर्गम फिस्टो
78	Blyth's Leaf-warbler	Phylloscopus reguloides	तालुधर्के फिस्टो
79	Western Crowned Leaf- warbler	Phylloscopus occipitalis	ठूलो तालुधर्क फिस्टो
80	Grey-hooded Warbler	Phylloscopus xanthoschistos	तुमुलकारी फिस्टो
81	Yellow-bellied Warbler	Abroscopus superciliaris	पहेंलोपेटे फिस्टो
82	Brownish-flanked Bush- warbler	Horornis fortipes	खैरोकोखे भाडीफिस्टो
83	Aberrant Bush-warbler	Horornis flavolivaceus	पीतहरित भाडीफिस्टो
Sylvi	idae		
84	Lesser Whitethroat	Sylvia curruca	श्वेतकण्ठ फिस्टो
Zoste	ropidae		
85	Whiskered Yuhina	Yuhina flavicollis	जुंगे जुरेचरा
86	Oriental White-eye	Zosterops palpebrosus	कांकीर
Tima	liidae		
87	White-browed Scimitar- babbler	Pomatorhinus schisticeps	फुस्रोटाउके पाल्कोटे
88	Rusty-cheeked Scimitar- babbler	Erythrogenys erythrogenys	पाल्कोटे
89	Grey-throated Babbler	Stachyris nigriceps	फुस्रोकण्ठे वनभ्याकुर
Pello	rneidae		
90	Puff-throated Babbler	Pellorneum ruficeps	थोप्ले भ्याकुर
91	Spiny Babbler	Acanthoptila nipalensis	काँडे भ्याकुर

92	Jungle Babbler	Turdoides striata	बगाले भ्याकुर
93	White-crested	Garrulax leucolophus	हिउँजुरे तोरीगाँडा
04	Laughingthrush	Ustanophasia sanistrata	मिनिया
94	Ruious Sibia	Minteriophasia capisiraia	
95	Red-tailed Minia	Minia ignotincta	ભાભપુચ્છ,
96	Blue-winged Minla	Siva cyanouroptera	नालपख मिन्ला
Sittida	ae	<u> </u>	<u>`</u>
97	Chestnut-bellied Nuthatch	Sitta cinnamoventris	कटुस महा
98	Velvet-fronted Nuthatch	Sitta frontalis	मखमला महा
Sturni	idae		
99	Chestnut-tailed Starling	Sturnia malabarica	फुस्रोटाउके सारों
100	Common Myna	Acridotheres tristis	डाङ्ग्रे रुपी
Turdi	dae		
101	Long-tailed Thrush	Zoothera dixoni	लामपुच्छ्रे चाँचर
102	Scaly Thrush	Zoothera dauma	गोब्रे चाँचर
103	Orange-headed Thrush	Geokichla citrina	सुन्तले चाँचर
Musc	icapidae		
104	Oriental Magpie-robin	Copsychus saularis	धोबिनी चरा
105	Rufous-bellied Niltava	Niltava sundara	सुन्दर नीलतभा
106	Small Niltava	Niltava macgrigoriae	सानो नीलतभा
107	Large Niltava	Niltava grandis	ठूलो नीलतभा
108	Verditer Flycatcher	Eumyias thalassinus	नीलतुथो अर्जुनक
109	Blue-throated Blue- flycatcher	Cyornis rubeculoides	नीलकण्ठे अर्जुनक
110	Himalayan Bush-robin	Tarsiger rufilatus	सुन्तलाकोखे रबिन
111	Blue Whistling-thrush	Myophonus caeruleus	- कल्चौंडे
112	Snowy-browed Flycatcher	Ficedula hyperythra	सेतोआँखीभौं अर्जुनक
113	Rufous-gorgeted Flycatcher	Ficedula strophiata	सेतोटिके अर्जुनक
114	Little Pied Flycatcher	Ficedula westermanni	श्यामश्वेत अर्जुनक
115	Red-throated Flycatcher	Ficedula albicilla	लालकण्ठे अर्जुनक
116	Red-breasted Flycatcher	Ficedula parva	लालवक्ष अर्जुनक
117	Blue-fronted Redstart	Phoenicurus frontalis	
118	Black Redstart	Phoenicurus ochruros	ध्याप्ची खञ्जरी
119	Blue-capped Rock-thrush	Monticola cinclorhyncha	सानो हजारा चाँचर
120	Chestnut-hellied Rock-	Monticola rufiventris	हजारा चाँचर
120	thrush	110111100111 11j1101111 15	~
121	Grey Bushchat	Saxicola ferreus	हिमाली भ्याप्सी
122	Common Stonechat	Saxicola torquatus	भोकभोक भ्याप्सी
Chlor	opseidae		

123	Orange-bellied Leafbird	Chloropsis hardwickii	स्वर्णोदर हरितचरी		
Dicae	idae				
124	Fire-breasted Flowerpecker	Dicaeum ignipectus	अग्निवक्ष पुष्पकोकिल		
Necta	riniidae				
125	Fire-tailed Sunbird	Aethopyga ignicauda	लामपुच्छ्रे बुङ्गेचरा		
126	Green-tailed Sunbird	Aethopyga nipalensis	नेपाल बेुङ्गेचरा		
127	Crimson Sunbird	Aethopyga siparaja	सिपराजा बुङ्गेचरा		
Estrildidae					
128	White-rumped Munia	Lonchura striata	सेतोढाडे मुनियाँ		
Passe	Passeridae				
129	House Sparrow	Passer domesticus	घर भँगेरा		
130	Eurasian Tree Sparrow	Passer montanus	रुख भँगेरा		
Motacillidae					
131	Olive-backed Pipit	Anthus hodgsoni	रुख चुइयाँ		
132	White Wagtail	Motacilla alba	फुस्रो टिकटिके		