



ORIGINAL RESEARCH PAPER

Environmental Science

AVIFAUNAL DIVERSITY OF NIHARI TAWI RIVER IN DISTRICT RAJOURI, JAMMU AND KASHMIR UT, INDIA

KEY WORDS: Nihari Tawi, Aquatic, Ecological, Avifauna, Siot (J&K).

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ABSTRACT

An avifaunal survey was conducted at river Nihari Tawi, district Rajouri in Jammu and Kashmir for one and half year, starting from November 2015 to April 2017. The study reveals a rich avian diversity and a total of 122 species of birds belonging to 50 families were identified. As the water of the Nihari Tawi rich in dissolved oxygen and supports variety of aquatic fishes makes it suitable for birds and attracts many migratory birds in the particular region during the winters. Continuous monitoring of the avifaunal diversity is required to evaluate the ecological status of the birds and their habitats. Birds plays an important role in maintaining the ecological balance. Due to increase in urbanization and various anthropogenic activities, diversity and distribution of bird's species is on declining trend all over the globe. Therefore, it is our prime concern to conserve the avifaunal diversity for maintaining the nature's balance.

INTRODUCTION

Avifaunal diversity is one of the most essential ecological indicators to evaluate the quality of habitats. Now a days, diversity of bird's species has been decreasing due to various anthropogenic activities, rapid increase in urbanization and random destruction of natural habitats by cutting nesting trees and using plants for commercial use of woods and lands. Thus, many species of birds may be forced to make their habitat in the urban areas and urge them to breed there. Birds are found throughout the world, at approximately all altitudes and in nearly every climate. Understanding the diversity and structure of bird communities is essential to delineate the importance of regional or local landscapes for avian conservation. Moreover, seasonal monitoring is very important to trace the dynamic movement of birds in various habitats. Water birds have attracted the attention of the public and researchers because of their beauty, abundance, visibility and social behavior, as well as for their recreational and economic importance. Recently, water birds have become of interest as indicators of water quality and as parameters of restoration success and regional biodiversity.

Birds may be influenced by various geographical conditions (Karr, 1976). Water bodies such as wetlands, ponds, lakes, etc. are important conservation site due to rich biodiversity and are among the most productive ecosystems worldwide. They harbor many globally threatened species (Green, 1996; Petrie, 1998). Diverse wetland complex are of greatest value in providing habitat for aquatic bird species (Miller, 2003). The avifauna is important for the ecosystem as they play various roles as scavenger, pollinators and predators of insect pest (Padnavati, et. al., 2010)

During the last few decades considerable studies on avifaunal diversity from different water bodies of India have been carried out by researchers like Singh (1929), Ali (1932), Davidar (1985), Ghazi (1962), Mujumdar (1984), Ghosal (1995) and Wadatkar and Kasambe (2002).

Sohil and Sharma (2019) recorded 207 bird species belonging to 63 families in and around Jammu (J&K); Malik and Sheikh (2020) recorded 64 species of birds belonging to 34 families in Tehsil Gool, district Ramban (J&K).

STUDY AREA

District Rajouri is one of the 10 districts in Jammu division of Jammu and Kashmir (UT) and is divided into thirteen Tehsils (13). This stretch of Nihari Tawi lies between tehsil Siot and Kalakote situated at 33° 06 40.37 N to 33° 12 59.73 N latitude and 74° 22 30.73 E to 74° 29 46.25 E longitude with an elevation ranging from 500-1000 m a.m.s.l.

This river is fed by intermittent streams in form of *nallas* and *khads*. This area is surrounded by mixed pine forest and the scrubby hills.

MATERIALS AND METHODOLOGY

The study was conducted for a period of one and half year by using binocular, Nikon DSLR/ Canon EOS 700D camera, etc. which was later verified with the available literature on avian diversity such as Grimmer et. al., 1999; Salim Ali, 2002 and Grewal et. al., 2016.

Bird's identification is bit challenging process as they are very active/ energetic. Quick eye spotting is required in order to get a detail of the particular bird species. Recognition of birds is done by observing their movement, feeding habits, habitats, specific voice calls, shape, size, etc.

RESULTS AND DISCUSSION

There are total 122 bird species were identified belonging to 50 families during the study period from November 2015 to April 2017. The identified avian diversity is listed below in Table 1.

Table 1: List of Avifaunal diversity found in the study area

S. No.	Family	Scientific Name	Common Name
1	Accipitridae	<i>Milvus migrans</i>	black kite
2	Accipitridae	<i>Accipiter nisus</i>	eurasian sparrow hawk
3	Accipitridae	<i>Accipiter badius</i>	shikra
4	Accipitridae	<i>Buteo buteo</i>	common buzzard
5	Accipitridae	<i>Neophron percnopterus</i>	egyptian vulture
6	Accipitridae	<i>Pernis ptilorhynchus</i>	oriental honey buzzard
7	Accipitridae	<i>Gyps bengalensis</i>	white rumped vulture
8	Accipitridae	<i>Gyps himalayensis</i>	himalayan griffon
9	Accipitridae	<i>Elanus axillaris</i>	white shouldered kite
10	Alaudidae	<i>Galerida cristata</i>	crested lark
11	Alcedinidae	<i>Megaceryle lugubris</i>	crested kingfisher
12	Alcedinidae	<i>Halcyon smyrnensis</i>	white throated kingfisher
13	Apodidae	<i>Tachymarptis melba</i>	alpine swift
14	Ardeidae	<i>Ardeola grayii</i>	indian pond heron
15	Ardeidae	<i>Egretta garzetta</i>	little egret

16	Ardeidae	<i>Bubulcus ibis</i>	cattle egret
17	Ardeidae	<i>Ardea cinerea</i>	grey heron
18	Ardeidae	<i>Ardea purpurea</i>	purple heron
19	Bucerotidae	<i>Ocyrceros birostris</i>	Indian grey hornbill
20	Certhiidae	<i>Certhia himalayana</i>	bar tailed tree creeper
21	Cettidae	<i>Horornis fortipes</i>	brown flanked bush wabler
22	Charadriidae	<i>Vanellus malabaricus</i>	yellow wattled lapwing
23	Charadriidae	<i>Vanellus indicus</i>	red wattled lap wing
24	Cisticolidae	<i>Orthotomus sutorius</i>	common tailor bird
25	Cisticolidae	<i>Prinia socialis</i>	ashy prinia
26	Cisticolidae	<i>Prinia hodgsonii</i>	grey breasted prinia
27	Cisticolidae	<i>Prinia crinigera</i>	himalayan prinia
28	Columbidae	<i>Spilopelia chinensis</i>	spotted dove
29	Columbidae	<i>Streptopelia tranquebarica</i>	red collared dove
30	Columbidae	<i>Columba livia</i>	rock dove
31	Coraciidae	<i>Coracias benghalensis</i>	indian roller
32	Corvidae	<i>Corvus splendens</i>	house crow
33	Corvidae	<i>Corvus macrorhynchos</i>	large billed crow
34	Corvidae	<i>Corvus culminatus</i>	jungle crow
35	Corvidae	<i>Dendrocitta vagabunda</i>	rufous tree pie
36	Corvidae	<i>Dendrocitta formosae</i>	grey tree pie
37	Corvidae	<i>Garrulus lanceolatus</i>	black headed jay
38	Cuculidae	<i>Hierococcyx varius</i>	common hawk cuckoo
39	Cuculidae	<i>Cuculus canorus</i>	common cuckoo
40	Cuculidae	<i>Cuculus micropterus</i>	indian cuckoo
41	Cuculidae	<i>Taccocua leschenaultii</i>	sirkeer malkoha
42	Cuculidae	<i>Eudynamis scolopaceus</i>	asian koel
43	Cuculidae	<i>Centropus sinensis</i>	greater coucal
44	Dicruridae	<i>Dicrurus macrocercus</i>	black drongo
45	Dicruridae	<i>Dicrurus leucophaeus</i>	ashy drongo
46	Dicruridae	<i>Dicrurus hottentottus</i>	hair crested drongo
47	Emberizidae	<i>Emberiza lathami</i>	crested bunting
48	Emberizidae	<i>Emberiza stewarti</i>	white capped bunting
49	Estrildidae	<i>Lonchura punctulata</i>	scally breasted munia
50	Estrildidae	<i>Euodice malabarica</i>	indian silverbill
51	Estrildidae	<i>Lonchura punctulata</i>	scaly breasted munia
52	Falconidae	<i>Falco tinnunculus</i>	asian kestrel
53	Fringillidae	<i>Chloris spinoides</i>	yellow breasted greenfinch
54	Fringillidae	<i>Carpodacus erythrinus</i>	common rose finch
55	Hirundinidae	<i>Hirundo rustica</i>	barn swallow
56	Hirundinidae	<i>Riparia chinensis</i>	grey throated martin

57	Hirundinidae	<i>Petrochelidon fluvicola</i>	streak throated swallow
58	Laniidae	<i>Lanius schach</i>	long tailed shrike
59	Leiothrichidae	<i>Leiothrix lutea</i>	red billed leiothorix
60	Leiothrichidae	<i>Argya caudata</i>	common babbler
61	Leiothrichidae	<i>Trochalopteron lineatum</i>	streaked laughingthrush
62	Leiothrichidae	<i>Turdoides striata</i>	jungle babbler
63	Megalaimidae	<i>Psilopogon haemacephalus</i>	coppersmith barbat
64	Megalaimidae	<i>Psilopogon asiaticus</i>	blue throated barbet
65	Megalaimidae	<i>Psilopogon virens</i>	great barbet
66	Meropidae	<i>Merops orientalis</i>	green bee eater
67	Monarchidae	<i>Terpsiphone paradisi</i>	Indian paradise flycatcher
68	Motacillidae	<i>Motacilla maderaspatensis</i>	white browed wagtail
69	Motacillidae	<i>Motacilla citreola</i>	citrine wag tail
70	Motacillidae	<i>Motacilla cinerea</i>	grey wagtail
71	Muscicapidae	<i>Rhyacornis fuliginosa</i>	plumbeous water redstart
72	Muscicapidae	<i>Myophonus caeruleus</i>	blue whistling thrush
73	Muscicapidae	<i>Calliope pectoralis</i>	himalayan ruby throat
74	Muscicapidae	<i>Eumyias thalassinus</i>	verditer flycatcher
75	Muscicapidae	<i>Copsychus saularis</i>	oriental magpie robin
76	Muscicapidae	<i>Saxicoloides fulicatus</i>	indian robin
77	Muscicapidae	<i>Chaimarrornis leucocephalus</i>	white capped redstart
78	Muscicapidae	<i>Saxicola caprata</i>	pied bushchat
79	Muscicapidae	<i>Oenanthe fusca</i>	brown rock chat
80	Muscicapidae	<i>Ficedula tricolor</i>	slaty blue flycatcher
81	Muscicapidae	<i>Monticola solitarius</i>	blue rock thrush
82	Nectariniidae	<i>Aethopyga siparaja</i>	crimson sun bird
83	Nectariniidae	<i>Cinnyris asiaticus</i>	purple sun bird
84	Paradoxornithidae	<i>Chrysomma sinense</i>	yellow eyed babbler
85	Paridae	<i>Parus cinereus</i>	cinereous tit
86	Passeridae	<i>Passer domesticus</i>	house sparrow
87	Passeridae	<i>Passer cinnamomeus</i>	russet sparrow
88	Pellorneidae	<i>Pellorneum ruficeps</i>	puff throated babbler
89	Phalacrocoracidae	<i>Phalacrocorax fuscicollis</i>	indian cormorant
90	Phasianidae	<i>Ortygornis pondicerianus</i>	grey francolin
91	Phasianidae	<i>Gallus gallus</i>	red jungle fowl
92	Phasianidae	<i>Lophura leucomelanos</i>	kalij pheasant
93	Phasianidae	<i>Pavo cristatus</i>	Indian Peafowl
94	Phylloscopidae	<i>Phylloscopus xanthoschistos</i>	grey hooded warbler
95	Phylloscopidae	<i>Phylloscopus humei</i>	humes leaf wabler
96	Phylloscopidae	<i>Phylloscopus collybita</i>	common chiffchaff
97	Picidae	<i>Dendrocopos nanus</i>	brown capped pygmy woodpecker
98	Picidae	<i>Dendrocopos macei</i>	fulvous breasted woodpecker

99	Picidae	<i>Leopicus auriceps</i>	brown fronted wood pecker
100	Picidae	<i>Dinopium benghalense</i>	flameback wood pecker
101	Psittacidae	<i>Psittacula cyanocephala</i>	plum headed parakeet
102	Psittaculidae	<i>Psittacula finschii</i>	grey headed parakeet
103	Psittaculidae	<i>Psittacula eupatria</i>	alexandrine parakeet
104	Psittaculidae	<i>Psittacula krameri</i>	rose ringed parakeet
105	Pycnonotidae	<i>Pycnonotus cafer</i>	red vented bulbul
106	Pycnonotidae	<i>Pycnonotus goiavier</i>	yellow vented bulbul
107	Rallidae	<i>Zapornia akool</i>	brown crane (jal kukdi)
108	Rallidae	<i>Amauornis phoenicurus</i>	white-breasted waterhen
109	Rhipiduridae	<i>Rhipidura albicollis</i>	white throated fantail
110	Scolopacidae	<i>Tringa ochropus</i>	green sandpiper
111	Sittidae	<i>Sitta cinnamoventris</i>	chestnut bellied nuthatch
112	Stenostiridae	<i>Culicicapa ceylonensis</i>	grey headed canary flycatcher
113	Strigidae	<i>Glaucidium cuculoides</i>	asian barred owl
114	Sturnidae	<i>Acridotheres ginginianus</i>	bank myna
115	Sturnidae	<i>Acridotheres fuscus</i>	jungle myna
116	Sturnidae	<i>Sturnia pagodarum</i>	brahminy starling
117	Sturnidae	<i>Acridotheres tristis</i>	common myna
118	Timaliidae	<i>Erythrogonys erythrogonys</i>	rusty cheeked scimitar babbler
119	Troglodytidae	<i>Troglodytes troglodytes</i>	eurasian wren
120	Turdidae	<i>Turdus atrogularis</i>	black throated thrush
121	Upupidae	<i>Upupa epops</i>	eurasian hoopoe
122	Zosteropidae	<i>Zosterops palpebrosus</i>	oriental white eye

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CONCLUSION

It is concluded from the present study that the stretch along the Nihari Tawi River in District Rajouri has rich avifaunal diversity. There is also wide variety of plant and tree species which are present in the entire stretch of the study area may act as a suitable habitat for the avian diversity. Presently, this area is not much studied in view of avifaunal diversity and this study may highlighted the scope of avifaunal studies and helpful in conserving and maintaining the ecological balance. Further, it will plays a significant role in biodiversity documentation at the regional level, besides feeding into policy-making in the country.

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