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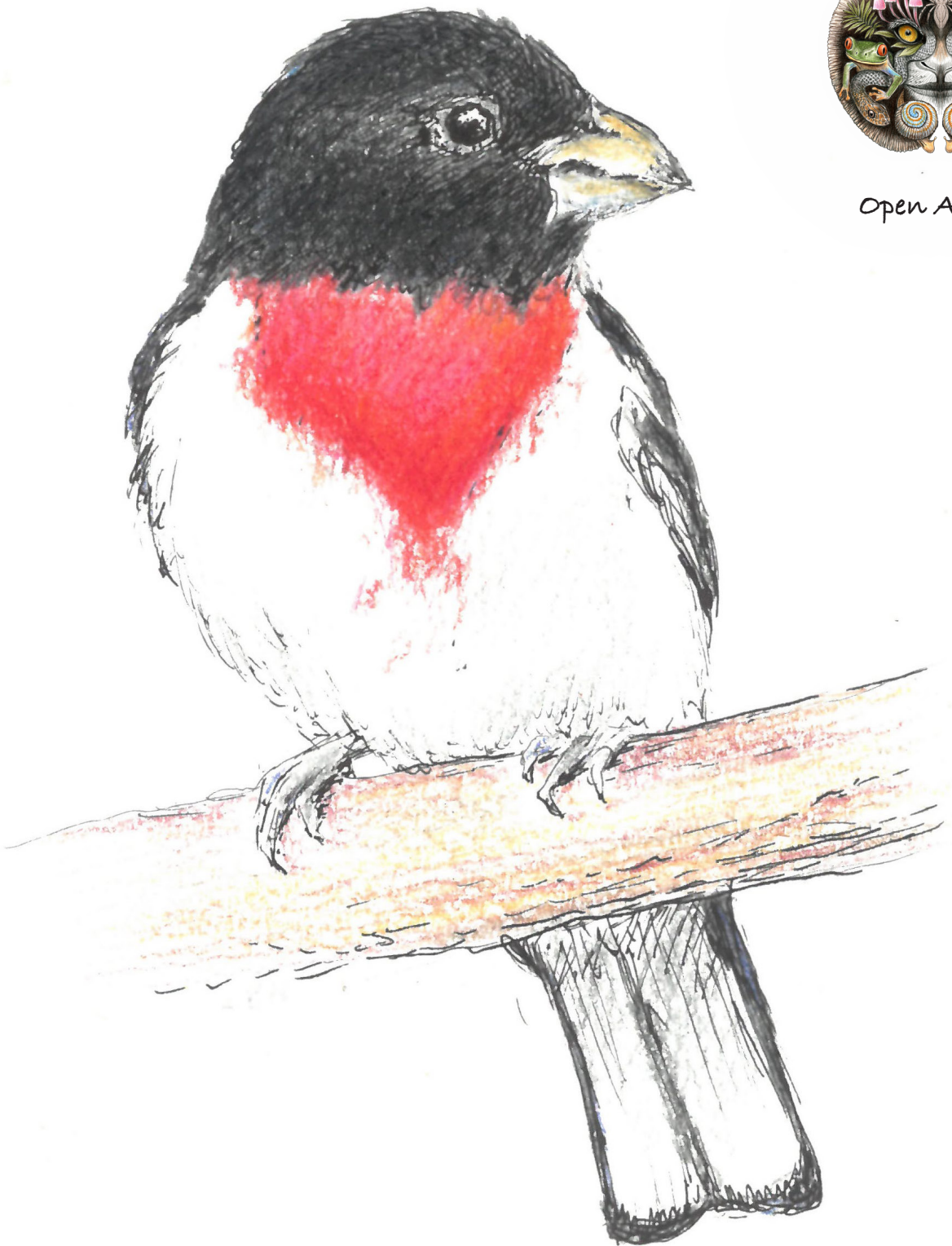
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Cover: Rose-breasted Grosbeak *Pheucticus ludovicianus*, pen & ink with colour pencil. © Lucille Betti-Nash.



An avifaunal checklist of the Bani Wildlife Sanctuary, Jammu & Kashmir, India

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Abstract: Protected areas are important for biodiversity conservation as they offer suitable habitats and protection from anthropogenic activities that harm wildlife. Establishing additional protected areas such as National parks, Wildlife sanctuaries, and Biosphere reserves reduces the threat to a species compared to non-protected areas. Before designating an area as protected, it's crucial to identify which species are threatened and require urgent conservation efforts. The present study was undertaken in the Bani Wildlife Sanctuary, which falls in the western Himalayas, from March 2021 to February 2022 to compile an avifaunal checklist of the sanctuary. The checklist was created by conducting systematic field surveys and opportunistic bird sightings. A total of 135 bird species belonging to 45 families were recorded during the present study. The family Muscipidae, represented by 17 species, dominates the list. Our study confirmed that the Bani Wildlife Sanctuary supports a rich avifaunal community with three species Western Tragopan *Tragopan melanocephalus*, Cheer Pheasant *Catreus wallichi*, and Bearded Vulture *Gypus barbatus* classified as Threatened in the global Red List by the International Union for Conservation of Nature (IUCN).

Keywords: Biodiversity, bird inventory, conservation, Kathua, preliminary survey, protected areas, western Himalaya.

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INTRODUCTION

Birds form an important component of an ecosystem and hold a significant place because they are quite noticeable and immensely appreciated by humans (Mahmood et al. 2021). They have largely been considered as indicators in the conservation and monitoring of biodiversity (French 1999; Browder et al. 2002). Birds play an informational role in gaining public attention towards natural habitats. Their abundance and diversity in pristine habitats can serve as an indicator of the health status of that habitat (Collar & Andrew 1988; Piersma & Lindstrom 2004; Mahmood et al. 2021). Birds are very susceptible to habitat changes (Browder et al. 2002; Perrow & Davy 2002) and provide a gamut of important services in an ecosystem. They act as long-distance pollinators, scavengers, seed dispersers, and bio-control agents for various crop pests (Malik et al. 2023). Their high or low density is directly linked to the health status of an ecosystem (Loreau et al. 2001; Mahmood et al. 2021) and provides an early warning for climatic change (Pearce et al. 2015).

The Union Territory (UT) of Jammu & Kashmir is bestowed with fascinating avifaunal diversity, which is remarkable at higher altitudes, due to its distinct climatic conditions and unique physiography. This region is recognized for its significant avian diversity, harboring 28 Important Biodiversity Areas (IBAs) (Islam & Rahmani 2004; Rahmani et al. 2012; Sohil & Sharma 2019). As per the recent IUCN assessment, 32 species of birds have been included in different threatened categories of the IUCN Red List (Suhail et al. 2020).

The Indian avifaunal checklist recognizes a total of 1,317 bird species for India, which constitute about 12.5% of the world's avian species (Praveen et al. 2019; Praveen & Jayapal 2022). Birds of mountainous regions display a wide range of distributional patterns with some limited to lower elevation bands and others occupying higher altitudinal ranges (Price et al. 2011). Moreover, climatic variations, including temperature, moisture, and oxygen levels, play a significant role in determining species diversity, with mountainous regions experiencing greater turnover and variety at specific elevations, as observed by Graham et al. (2014).

In understanding the consequences of habitat degradation and climate change on a species and ecosystem, baseline data is necessary before initiating any conservation effort (Llanos et al. 2011). Bird surveys provide valuable information about basic and applied ecology and help designate conservation priority sites (Daniels et al. 1991; Peterson et al. 2000; Byju et al.

2023). Biodiversity inventories/checklists serve as crucial repositories for documenting species distribution, biogeography, and conservation status. Given the pivotal role of birds in conservation and environmental assessments, there's a pressing need to enhance our ecological understanding of how bird diversity patterns and avian community structures influence conservation decisions (Kati & Sekercioglu 2006). Against this backdrop, the current study was conducted in the newly established Bani Wildlife Sanctuary (hereafter BWS) to compile an avifaunal checklist for future research endeavors.

MATERIAL AND METHODS

Study area

The newly declared BWS is named after the major town Bani of District Kathua. The sanctuary spreads over an area of 99.67 km². The area is located between 32.758–32.889° N and 74.680–75.871° E with an altitude range of 1,960–4,000 m (Figure 1). The sanctuary experiences a temperate type of climate and is characterized by several habitat types: coniferous forest, mixed forest, oak forest, riparian forest, alpine scrub, alpine meadows, rocky mountains, and cultivated land. The prominent fauna of the sanctuary includes Himalayan Serow *Capricornis sumatraensis thar*, Himalayan Tahr *Hemitragus jemlahicus*, Himalayan Goral *Naemorhedus goral*, Kashmir Musk Deer *Moschus cupreus*, Leopard *Panthera pardus*, Black Bear *Ursus thibetanus*, and Himalayan Brown Bear *Ursus arctos isabellinus* (Quyoom et al. 2023).

Data collection

The present study was conducted from March 2021 to February 2022. Systematic field surveys were conducted early in the morning before 0800 h and late evening after 0500 h aligning with birds' most active periods, as highlighted by Thakur (2010). Field binoculars (Nikon 10 × 50) and digital cameras (Nikon D-500 24 MP with 200–500 mm lens) were used for observation and capturing bird photographs. Birds were identified using established field guides of Ali & Ripley (1987), and Grimmett et al. (2016), in addition to consulting avian experts, birding groups/clubs, and verified Facebook groups, as suggested by Sharma et al. (2018). The threatened status of birds provided in the checklist is as per the IUCN Red List (IUCN 2022) and the birds were categorized as A – Abundant (sighted more than 30 times), C – Common (sighted up to less than 15 times), O

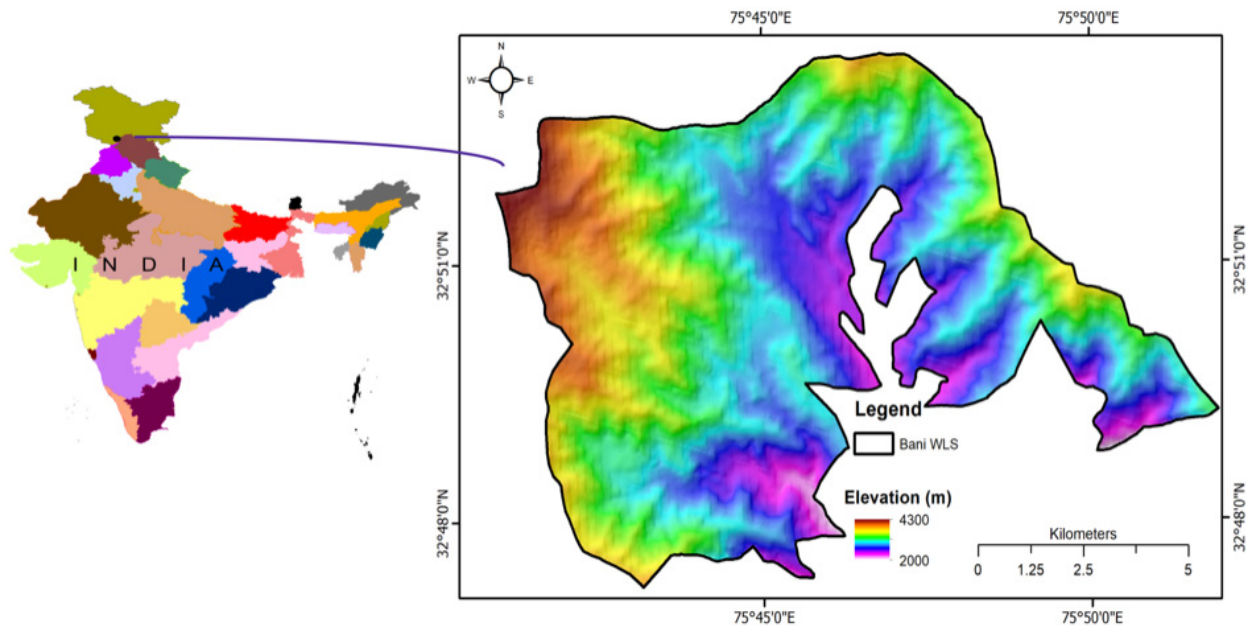


Figure 1. Location map of the study area.

– Occasional (sighted less than 10), and R – rare (sighted less than 5 times) following (MacKinnon & Philips 1993; Thakur 2008) with slight modification.

RESULTS

The avifaunal checklist of BWS documented 135 bird species from 45 families. The Muscicapidae family had the highest representation with 17 species, followed by Fringillidae with 11 species. Accipitridae, Columbidae, and Leiothrichidae each had seven species, while Corvidae, Paridae, Phasianidae, and Picidae each had six species. Among the recorded species, 36 were abundant, 40 were common, 33 were occasional, and 26 were rare (Table 1).

DISCUSSION

Monitoring the diversity and population status of indicator species is crucial for assessing ecosystem health, identifying conservation priorities, and guiding decision-making in conservation efforts (McComb et al. 2010; Fitzpatrick & Rodewald 2016). Birds are used as monitoring targets because they inhabit a vast array of environments and fill various ecological niches within those environments (Kahl et al. 2021). The ecological significance of birds is unparalleled. They are useful as

pollinators, and seed dispersers and act as indicators of the health of an ecosystem (Klein et al. 2007). Among all the faunal species, birds stand at the top in gaining human attention towards natural habitats. Of the total 555 species of birds known from the State of Jammu and Kashmir (Suhail et al. 2020), 135 (24.3%) were reported from the BWS during the present study. This number is much higher than that of the nearby Manali Sanctuary of Himachal Pradesh (81 species) and the Overa-Aru Sanctuary of Kashmir (70 species) (Price et al. 2003). Such a good number could be attributed to the diverse habitats and tree species that provide suitable environments for these birds to live and breed.

Singh et al. (1990) compiled an initial inventory of 100 bird species from the Gamgul Siyabehi Wildlife Sanctuary (GSWS) and reported the presence of four notable pheasant species: Western Tragopan, Cheer Pheasant, Himalayan Monal, and Koklass Pheasant. The GSWS is situated to the north-east of the BWS and falls within an area designated as an Endemic Bird Area (EBA) (Stattersfield et al. 1998). As per BirdLife International's classification, the BWS and its environs should be classified within Biome 7 (Sino-Himalayan Temperate Forest), given the altitudinal range of 1,800–3,600 m of the sanctuary which falls within this biome's criteria. Despite having an area of only around 100 km², the sanctuary's significant altitudinal variation and diverse habitats make it a critical conservation site for globally threatened pheasants and numerous high-altitude forest birds.

Table 1. Avifaunal checklist of the Bani Wildlife Sanctuary.

Sno	Species	Common name	IUCN status	Status	Habitat
Passeriformes: Aegithalidae					
1.	<i>Aegithalos concinnus</i>	Black-throated Tit	LC	O	MF, OF, AS
2.	<i>Aegithalos niveogularis</i>	White-throated Tit	LC	O	OF, MF, CL
Campephagidae					
3.	<i>Pericrocotus ethologus</i>	Long-tailed Minivet	LC	C	OF, MF, CL
Certhiidae					
4.	<i>Certhia himalayana</i>	Bar-tailed Treecreeper	LC	A	OF, RF
Cinclidae					
5.	<i>Cinclus pallasii</i>	Brown Dipper	LC	R	RF, AM
Cisticolidae					
6.	<i>Prinia crinigera</i>	Himalayan Prinia	LC	C	MF, CF
Corvidae					
7.	<i>Corvus macrorhynchos</i>	Large-billed Crow	LC	A	MF, OF, CL
8.	<i>Garrulus glandarius</i>	Eurasian Jay	LC	C	MF
9.	<i>Garrulus lanceolatus</i>	Black-headed Jay	LC	C	MF, CL
10.	<i>Pyrrhocorax graculus</i>	Alpine Chough	LC	O	OF, AS, AM
11.	<i>Urocissa flavirostris</i>	Yellow-billed Blue Magpie	LC	A	MF, CL, CF
12.	<i>Corvus corax</i>	Common Raven	LC	O	CL
Dicruridae					
13.	<i>Dicrurus leucophaeus</i>	Ashy Drongo	LC	C	CL, CF
Emberizidae					
14.	<i>Emberiza cia</i>	Rock Bunting	LC	A	CL, OF
15.	<i>Emberiza fucata</i>	Chestnut-eared Bunting	LC	O	MF, CF
16.	<i>Emberiza lathami</i>	Crested Bunting	LC	O	OF, MF, AM
Estrildidae					
17.	<i>Lonchura punctulate</i>	Scaly-breasted Munia	LC	C	CL
Fringillidae					
18.	<i>Carduelis carduelis</i>	European Goldfinch	LC	C	CL,
19.	<i>Carpodacus erythrinus</i>	Common Rosefinch	LC	O	CL, CF
20.	<i>Carpodacus rodochroa</i>	Pink-browed Rosefinch	LC	O	MF,
21.	<i>Fringilla coelebs</i>	Common Chaffinch	LC	C	MF, OF, RF
22.	<i>Carpodacus thura</i>	White-browed Rosefinch	LC	O	CL, RF
23.	<i>Chloris spinoides</i>	Yellow-breasted Green Finch	LC	C	CL
24.	<i>Fringilla montifringilla</i>	Brambling	LC	A	MF
25.	<i>Leucosticte nemoricola</i>	Plain Mountain Finch	LC	A	MF, OF, RF
26.	<i>Serinus pusillus</i>	Fire-fronted Serin	LC	O	CL
27.	<i>Mycerobas carnipes</i>	White-winged Grosbeak	LC	R	OF, AS
28.	<i>Mycerobas icteroides</i>	Black and Yellow Grosbeak	LC	R	OF, AS
Hirundinidae					
29.	<i>Cecropis daurica</i>	Red-rumped Swallow	LC	C	CL
30.	<i>Hirundo rustica</i>	Barn Swallow	LC	C	CL
Laniidae					
31.	<i>Lanius schach</i>	Long-tailed Shrike	LC	A	AS
Leiothrichidae					
32.	<i>Actinodura strigula</i>	Chestnut-tailed Minla	LC	R	CL, MF

Sno	Species	Common name	IUCN status	Status	Habitat
33.	<i>Heterophasia capistrata</i>	Rufous Sibia	LC	A	MF, OF
34.	<i>Trochalopteron variegatum</i>	Variiegated Laughing Thrush	LC	A	CL, CF, RF
35.	<i>Trochalopteron lineatum</i>	Streaked Laughing Thrush	LC	A	CL, CF
36.	<i>Trochalopteron erythrocephalum</i>	Chestnut-crowned Laughing Thrush	LC	R	MF
37.	<i>Pterorhinus albogularis</i>	White-throated Laughing Thrush	LC	O	MF, RF
38.	<i>Garrulax leucolophus</i>	White-crested Laughing Thrush	LC	O	CL
Monarchidae					
39.	<i>Terpsiphone paradisi</i>	Indian Paradise Flycatcher	LC	C	CL, CF
Motacillidae					
40.	<i>Motacilla alba</i>	White Wagtail	LC	C	RF
41.	<i>Motacilla cinerea</i>	Grey Wagtail	LC	C	RF
42.	<i>Motacilla citreola</i>	Citrine Wagtail	LC	C	RF
43.	<i>Motacilla flava</i>	Yellow Wagtail	LC	A	RF
44.	<i>Anthus hodgsoni</i>	Olive-backed Pipit	LC	O	AM, AS
45.	<i>Anthus roseatus</i>	Rosy Pipit	LC	O	AM
Muscicapidae					
46.	<i>Chaimarrornis leucocephalus</i>	White-capped Redstart	LC	A	RF
47.	<i>Phoenicurus frontalis</i>	Blue-fronted Redstart	LC	O	RF
48.	<i>Phoenicurus coeruleocephala</i>	Blue-capped Redstart	LC	A	RF
49.	<i>Rhyornis fuliginosa</i>	Plumbeous Water Redstart	LC	A	RF
50.	<i>Tarsiger rufilatus</i>	Himalayan Bluetail	LC	A	MF
51.	<i>Muscicapa sibirica</i>	Dark-sided Flycatcher	LC	A	MF, CF
52.	<i>Eumyias thalassinus</i>	Verditer Flycatcher	LC	A	CL, CF
53.	<i>Ficedula superciliaris</i>	Ultramarine Flycatcher	LC	A	CF
54.	<i>Myophonus caeruleus</i>	Blue Whistling Thrush	LC	A	MF, CF, CL, RF
55.	<i>Saxicola ferreus</i>	Grey Bushchat	LC	C	CL, MF
56.	<i>Saxicola maurus</i>	Siberian Stonechat	LC	C	CL, MF
57.	<i>Saxicola torquatus</i>	Common Stonechat	LC	C	CF, OF
58.	<i>Enicurus scouleri</i>	Little Forktail	LC	C	RF
59.	<i>Enicurus maculatus</i>	Spotted Forktail	LC	O	RF
60.	<i>Monticola rufiventris</i>	Chestnut-bellied Rockthrush	LC	R	MF, CF
61.	<i>Monticola cinclorhyncha</i>	Blue-capped Rock Thrush	LC	C	MF, CF
62.	<i>Monticola solitarius</i>	Blue Rock Thrush	LC	C	CF
Nectariniidae					
63.	<i>Aethopyga siparaja</i>	Crimson Sunbird	LC	O	CL
Oriolidae					
64.	<i>Oriolus kundoo</i>	Indian Golden Oriole	LC	O	CF
Paridae					
65.	<i>Parus cinereus</i>	Cinereous Tit	LC	O	MF, OF
66.	<i>Parus monticolus</i>	Green-backed Tit	LC	R	MF, OF
67.	<i>Machlolophus xanthogenys</i>	Himalayan Black Lored Tit	LC	R	CF, MF
68.	<i>Periparus ater</i>	Coal Tit	LC	C	MF, CL
69.	<i>Periparus melanolophus</i>	Spot-winged Tit	LC	C	CF
70.	<i>Periparus rubidiventris</i>	Rufous-vented Tit	LC	C	MF, CF
Passeridae					
71.	<i>Gymnoris xanthocollis</i>	Yellow-throated Sparrow	LC	R	CL

Sno	Species	Common name	IUCN status	Status	Habitat
72.	<i>Passer rutilans</i>	Russet Sparrow	LC	A	CL
73.	<i>Passer domesticus</i>	House Sparrow	LC	A	CL
Phylloscopidae					
74.	<i>Phylloscopushumei</i>	Hume's Leaf Warbler	LC	C	CL, CF
75.	<i>Phylloscopus nitidus</i>	Green Warbler	LC	C	CF, OF
76.	<i>Phylloscopus xanthoschistos</i>	Grey-hooded Warbler	LC	A	MF, OF
Prunellidae					
77.	<i>Prunella himalayana</i>	Altai Accentor	LC	C	MF, OF
78.	<i>Prunella strophciata</i>	Rufous-breasted Accentor	LC	C	MF, OF
Pycnonotidae					
79.	<i>Hypsipetes leucocephalus</i>	Black Bulbul	LC	C	CL, CF
80.	<i>Pycnonotus leucogenys</i>	Himalayan Bulbul	LC	A	CL
Rhipiduridae					
81.	<i>Rhipidura albicollis</i>	White-throated Fantail	LC	R	RF
Sittidae					
82.	<i>Sitta cinnamoventris</i>	Chestnut-bellied Nuthatch	LC	C	CF, MF
83.	<i>Sitta himalayensis</i>	White-bellied Nuthatch	LC	A	CF
Sturnidae					
84.	<i>Acridotheres tristis</i>	Common Myna	LC	A	CL
85.	<i>Acridotheres fuscus</i>	Jungle Myna	LC	C	CL, CF
Stenostiridae					
86.	<i>Culicicapa ceylonensis</i>	Grey-headed Canary Flycatcher	LC	O	MF
Timaliidae					
87.	<i>Cyanoderma pyrrhops</i>	Black-chinned Babbler	LC	R	CL
Tichodromidae					
88.	<i>Tichodroma muraria</i>	Wallcreeper	LC	R	RF, RM
Troglodytidae					
89.	<i>Troglodytes hiemalis</i>	Winter Wren	LC	R	RF
Turdidae					
90.	<i>Turdus atrogularis</i>	Black-throated Thrush	LC	O	MF
91.	<i>Turdus viscivorus</i>	Mistle Thrush	LC	O	MF, OF
92.	<i>Turdus rubrocanus</i>	Chestnut Thrush	LC	R	CF
93.	<i>Turdus boulboul</i>	Gray-winged Blackbird	LC	O	CF
Vireonidae					
94.	<i>Pteruthius aeralatus</i>	White-browed Shrike Babbler	LC	R	CF
Zosteropidae					
95.	<i>Yuhina flavicollis</i>	Whiskered Yuhina	LC	R	MF, CF
96.	<i>Zosterops palpebrosus</i>	Indian White Eye	LC	C	MF
Columbiformes: Columbidae					
97.	<i>Columba leuconota</i>	Snow Pigeon	LC	A	RM, OF,
98.	<i>Sterptopeli adcaocto</i>	Eurasian Collared Dove	LC	O	MF, CL
99.	<i>Streptopeli aturtur</i>	Oriental Turtle Dove	LC	O	MF, OF
100.	<i>Spilopelia chinensis</i>	Spotted Dove	LC	C	CL, CF
101.	<i>Columba livia</i>	Rock Pigeon	LC	A	CL, CF
102.	<i>Treron phoenicopterus</i>	Yellow-footed Green Pigeon	LC	R	CL
103.	<i>Treron sphenurus</i>	Wedge-tailed Green Pigeon	LC	R	CL, CF

Sno	Species	Common name	IUCN status	Status	Habitat
Galliformes: Phasianidae					
104.	<i>Lophura leucomelanos</i>	Kalij Pheasant	LC	R	MF, CF, AS
105.	<i>Pucrasia macrolopha</i>	Koklass Pheasant	LC	R	MF, OF, AS
106.	<i>Lophophorus impejanus</i>	Himalayan Monal	LC	O	MF, OF
107.	<i>Tragopan melanocephalus</i>	Western Tragopan	VU	R	OF, AS
108.	<i>Catreus wallachii</i>	Cheer Pheasant	VU	R	CF, MF
109.	<i>Francolinus francolinus</i>	Black Francolin	LC	R	CL
Psittaculiformes: Psittaculidae					
110.	<i>Psittacula himalayana</i>	Slaty-headed Parakeet	LC	A	CL
111.	<i>Psittacula krameri</i>	Rose-ringed Parakeet	LC	C	CL
Cuculiformes: Cuculidae					
112.	<i>Clamator jacobinus</i>	Pied Cuckoo	LC	R	CF, MF
113.	<i>Cuculus canorus</i>	Common Cuckoo	LC	C	CL, MF
114.	<i>Eudynamis scolopaceus</i>	Asian Koel	LC	O	MF
Falconiformes: Accipitridae					
115.	<i>Accipiter badius</i>	Shikra	LC	O	MF, CL
116.	<i>Buteo refectus</i>	Himalayan Buzzard	LC	C	CL, MF
117.	<i>Buteo buteo</i>	Common Buzzard	LC	C	OF, MF, CV
118.	<i>Gypaetus barbatus</i>	Bearded Vulture	NT	O	MF, OF, AM
119.	<i>Gyps himalayensis</i>	Himalayan Griffon	LC	A	MF, RF, OF
120.	<i>Milvus migrans</i>	Black Kite	LC	C	CL, CF
121.	<i>Nisaetus nipalensis</i>	Mountain Hawk Eagle	NT	O	CF, MF
Falconidae					
122.	<i>Falco tinnunculus</i>	Common Kestrel	LC	A	CL, MF, OF
Strigiformes: Strigidae					
123.	<i>Glaucidium cuculoides</i>	Asian Barred Owlet	LC	R	CF, OF
Coraciiformes: Alcedinidae					
124.	<i>Alcedo atthis</i>	Common Kingfisher	LC	C	RF
125.	<i>Halcyon smyrensis</i>	White-throated Kingfisher	LC	O	RF
126.	<i>Megaceryle lugubris</i>	Crested Kingfisher	LC	C	RF
Piciformes: Picidae					
127.	<i>Dendrocopos auriceps</i>	Brown-fronted Woodpecker	LC	A	CL
128.	<i>Dendrocopos himalayensis</i>	Himalayan Woodpecker	LC	A	CF, CL
129.	<i>Picus canus</i>	Grey-headed Woodpecker	LC	A	CF, CL
130.	<i>Picus squamatus</i>	Scaly-bellied Woodpecker	LC	A	CL
131.	<i>Picus chlorolophus</i>	Lesser Yellow Nape	LC	R	MF
132.	<i>Picumnus innominatus</i>	Speckled Piculet	LC	O	OF, MF
Megalaimidae					
133.	<i>Megalaima virens</i>	Great Barbet	LC	A	CL
Bucerotiformes: Upupidae					
134.	<i>Upupa epops</i>	Common Hoopoe	LC	A	CL
Charadriiformes: Scolopacidae					
135.	<i>Actitis hypoleucos</i>	Common Sandpiper	LC	O	RF

LC—Least Concern | NT—Near Threatened | VU—Vulnerable | C—Common | F—Frequent | O—Occasional | R—Rare | CF—Coniferous forest | MF—Mixed forest | OF—Oak forest | CL—Cultivated land | RF—Riparian forest | AS—Alpine scrub | AM—Alpine meadow | RM—Rocky mountain.

Birds contribute most to the chordate diversity of the UT of Jammu and Kashmir (Hilaluddin 1997). The newly created BWS supports an interestingly rich avifauna. Most of our sightings were observed in spring and summer and less in autumn and winter. These seasonal fluctuations in bird sightings occur due to changes in weather conditions and alterations in food productivity and habitat quality (Loiselle & Blake 1991; Norris & Marra 2007). A total of five species of Himalayan Pheasants were recorded during the current study. These include Western Tragopan *Tragopan melanocephalus*, Cheer Pheasant *Catreus wallichii*, Himalayan Monal *Lophophorus impejanus*, Koklass *Pucrasia macrolopha* and Kalij Pheasant *Lophura leucocomelanos*. The Kalij Pheasant is typically found at lower elevations and has recently been declared as the union territory bird of Jammu and Kashmir (Lone et al. 2024). Among the 135 bird species recorded in the sanctuary, three have been Red Listed by the IUCN: the Western Tragopan and Cheer Pheasant, both categorized as 'Vulnerable,' and the Bearded Vulture classified as 'Near Threatened' (IUCN 2022).

The sanctuary is currently facing widespread ecological degradation that may severely affect its avian population. This deterioration is primarily due to an increase in human settlement, the expansion of roads from Bani to Bhaderwah, and illegal activities such as the extraction of medicinal herbs, fuelwood, and timber, which collectively threaten the delicate ecosystem balance of the Bani Valley. Moreover, the surge in tourism in the Sarthal area, coupled with the practice of pilgrimages to higher elevations at various times of the year, places significant strain on both the flora and avian species, mirroring the ecological challenges observed across the Himalayan region (Chetri et al. 2001; Acharya et al. 2011; Sharma et al. 2018). Compounding these issues are the nomadic communities from Punjab and the Kathua plains, whose seasonal migrations lead to the unsustainable extraction of indigenous trees like oaks, firs, rhododendrons, and junipers for fuelwood and the construction or maintenance of temporary shelters known as Dhokes. All these activities negatively impact the biodiversity of the sanctuary.

CONCLUSION

Due to the ongoing surge in human activities, the sanctuary has been under severe pressure. Hunting, overexploitation of resources, and habitat disturbances not only strip the region of its native vegetation but may

also endanger the bird's survival by eradicating their feeding, roosting, and critical breeding grounds. Poaching of Himalayan Pheasants, especially during winters, is of paramount concern. The rich bird community along with some notable mammalian species such as Himalayan Serow, Himalayan Tahr, Kashmir Musk Deer, and Brown Bear underscores the importance of this area for biodiversity conservation. Besides, the sanctuary is a treasure of important medicinal plants. We recommend elaborate scientific studies to be carried out on the bird community of the sanctuary and a stringent monitoring and conservation plan to be undertaken for the long-term sustainability of the sanctuary.

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Images 1–20. 1–Bearded Vulture *Gypaetus barbatus* | 2–Himalayan Griffon *Gyps himalayensis* | 3–Common Buzzard *Buteo buteo* | 4–Common Kestrel *Falco tinnunculus* | 5–Asian Barred Owlet *Glaucidium cuculoides* | 6–Kalij Pheasant *Lophura leucomelanos* | 7–Cheer Pheasant *Catreus wallichii* | 8–Himalayan Monal *Lophophorus impejanus* | 9–Snow Pigeon *Columba leuconota* | 10–Rufous Breasted Accentor *Prunella strophciata* | 11–Himalayan Woodpecker *Dendrocopos himalayensis* | 12–Grey Headed Woodpecker *Picus canus* | 13–Bar-tailed Tree Creeper *Certhia himalayana* | 14–Rufous Sibia *Heterophasia capistrata* | 15–Wallcreeper *Tichodroma muraria* | 16–Common Hoopoe *Upupa epops* | 17–Oriental Turtle Dove *Streptopelia aturtur* | 18–Eurasian Collared Dove *Sterptopeli adecaacto* | 19–Plain Mountain Finch *Leucosticte nemoricola* | 20–Coal Tit *Periparus ater*. ©Wasim Sajad Malik and Arif Nabi Lone.

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