International Journal of Zoology Studies
ISSN: 2455-7269
Impact Factor: RJIF 5.14
www.zoologyjournals.com
Volume 3; Issue 2; March 2018; Page No. 41-45

Birds of Dhauladhar range of western Himalayas in northern India: A checklist

[*] Arjun Saklani, Tannu Shree, Suneet Nathani
School of Environment & Natural Resources, Doon University, Dehradun, Uttarakhand, India

Abstract
Avian communities assume a vital part of the human culture and have incredible monetary and natural implications. Their decent variety and plenitude go about as an organic pointer of any environment wellbeing and process. The present examination was carried out in the Dhauladhar wildlife sanctuary in Kangra region in the Himachal Pradesh. Distinctive habitat types bordering to the territory was Biling, Rajkunda, Swad, Loler, Rasoi, Dinnasore area and Palachak. Information were gathered through direct observation in the field and recognizable proof was done through standard field guides amid the winter season (January) 2018. An aggregate of 102 Birds varieties having a place with 36 families were recorded amid the review with the most extreme number of species having a place with Muscicapidae (18 species) and took after by family Phasianidae and Corvidae (8 species). The outcome would be useful to comprehend the living space working in the region and, administration and preservation arranging in coming years.

Keywords: avifauna, Dhauladhar wildlife sanctuary, habitat, Himachal, Kangra

1. Introduction
The avians are of great monetary significance in human beings, as they assume a critical part in controlling the number of inhabitants in insects and pests and furthermore help in seed dispersal [1]. Flying creatures are key markers for evaluating the status of biological system quality [2, 3] and their assemblage structure is influenced by changes in the environment either because of natural or anthropogenic unsettling influences [4-6]. The adjustment in vegetation composition affects birds regarding their sustenance, water and cover and its degree which subsequently influence the decent variety, abundance and appropriation of birds [3, 7]. Birds demonstrate an immediate reaction to various vegetation structure [8] and their decent variety increments with the nature of vegetation creation. In addition, bird community structure additionally influences the vegetation structure as vast quantities of tree species are reliant on the seed dispersal administrations provided by frugivorous [9, 10].
Himachal Pradesh has a special significance when we study various pheasants and forest birds. There are mainly six different types of forest that shows the existence of Western Himalayan species. In these forest we find some species which under the category of critical populaces [2]. Himachal has seven species which are globally threatened. We find two vulture and two eagle species in abundance. But Cheer Pheasant and Western Tragopan have restricted range, in the sense of altitude and habitat. The Wood Snipe *Gallinago nemoricola* delegated Vulnerable additionally had a wide dispersion in the Himalayas in light of old shooting records [4]. Just a couple of late records are accessible after the restriction of sport-hunting in India. It is accounted for just from Dhauladhar wild life sanctury, however, is probably going to be found in numerous more territories.
Avifaunal diversity has been declining during last few years. This is happening because of regular mass destruction of natural habitat. To protect the avifauna it is essential to understand the declining trend and hence a detailed study of ecology is important [11]. Being a high biodiverse region, Himachal Pradesh has more than 45% of the bird species that is found in India [4]. It consists several habitat where a variety of birds can be spotted. Among these bird rich areas, Dhauladhar wildlife sanctuary (DWS) has significance in their conservation including conservation of other wildlife species. The DWS is located in in Kangra district in the Himachal Pradesh with its different habitat types adjoining to area was Bir, Biling, Rajkunda and Swad and this survey was done in winter when there is snow cover in sanctuary so birds come to lower area for food and all. The present study was conducted to explore avian diversity in an adjoining area of DWS, with aims to understand the species composition during winter season (January) 2018. Present study aims to give further information about relative abundance, habitat and other observations of birds.

2. Methods and Materials
Study area and their details are described in Table 1.There is famous wildlife sanctuary in the Kangra (Himachal Pradesh) widely known as Dhauladhar Wildlife Sanctuary which is located between $32^0$11'30'' North latitude and $76^0$44' 30''E Longitude to $32^0$03'48'' North latitude and $76^0$54'45'' E Longitude [12, 13]. Its total geographical area extend over 982.86km2 in Western Himalayas in Northern India [14]. This wildlife Sanctuary is located in an area of high altitude forests. The area is not yet exactly defined, but to be demarcated between Nurpur and Jogindernagar, in Himachal Pradesh. Oak and Rhododendron forests are interspersed with grassy slopes and meadows in this DWS. During a greater time of the year DWS is covered in snow. Deodar Cedrus deodara is prevailing

in the lower compasses of Dhauladhar, while beneath 1,600 m pine trees are planted in abundance. Different parts of this zone have great cases of Oak woods.

3. Methodology

The study was conducted in different habitat types as mention in table 1 in January 2018 in DWS. All the data were gathered during the single visit to (Biling, Raj kunda, Swad, Loler, Rasoi, Dinnasore Area and Palachak) of DWS during (winter) 2018. On an average 3-4 days were spent in the collection of data from each site. The observations were taken amid the morning (7.00-11.00 hrs) and afternoon times (15.00-17.00 hrs) for adequate daylight. The relative plenitude of bird species was evaluated based on the recurrence of sightings and number of birds seen. The birds were watched with the help of binocular (Skywalk Bushnell 8x40 Power view) and photographs were taken for help in recognizable proof by a DSLR camera (Nikon Coolpix P900 83x optical zoom).For the purpose of identification of birds we referred the work of Grimmett *et al*. [2] along with the work of Kazierczak [3]. For nomenclature and classification we again referred Grimmett *et al*. [2].

4. Results and Discussion

A total of 102 species belonging to 36 families were recorded during the study period as described in figure 1 and Table 2. Some of photos were taken during visit from various site of DWS which were depicted in different photos e.g. Jungle Owlet (*Glaucidium radiatum*) in figure 2 photo taken from forest near Swad rest house, Great Barbet (*Psilopogon virens*) in figure 3 photo taken in Bir forest, White-throated kingfisher (*Halcyon smyrnensis*) in figure 4 photo taken in Bajinath and Eurasian Sparrowhawk (*Accipiter nisus*) in figure 5 photo taken from Raj Kunnda forest. The vegetation structure and its surrounding habitat types always have a great influence on avian diversity and community structure [2, 3, 6, 7, 9, 10], current study will help to understand avian diversity in the future study . We clearly observed the influence of DWS, on the avian diversity in Kangra district, as the area is situated in its close proximity. However, continuous change in land use pattern and habitat disturbances in the region have been observed at a rapid rate over the years.

5. Conclusion

The surrounding areas of the DWS support a variety of avifaunal species which is due to a great influence of diverse habitat types in and around the sanctuary. However, to better understand the influence on diversity and distribution of avian fauna in this region, further studies needed to be conducted for a longer period across various seasons. A detailed investigation on bird assemblage would be important for management and conservation action to be initiated in the region.

6. Acknowledgments

I am obliged to Divisional forest officer of Hamirpur wildlife division Mr. Krishna Kumar for this opportunity to explore the landscape of Dhauladhar wildlife sanctuary and for providing the facilities during the assessment. I am also thankful to Mr. Suresh Thakur and Vishal Jamwal (Forest Guard) for the field assistances during the survey, data collection and Citation of birds. I want to thank Himachal Pradesh forest department for support and permission as well as my colleague Sourav for the literature and support

Table 1: Study Area and their details during survey

Study Area	Inside the Sanctuary (latitude and longitude)	Outside the Sanctuary (latitude and longitude)
Biling		32.03 76.44
Raj kunda		32.05 76.45
Swad		32.05 76.51
Loler		32.08 76.51
Rasoi		32.07 76.45
Bir		32.02 76.43
Dinnasore Area	32.05 76.53	
Palachak	32.08 76.45	

Table 2: Checklist of avifauna recorded during the study in Dhauladhar Range

Name of species	Scientific name	Family	Concern
Oriental White-eye	*Zosterops palpebrosus*	Zosteropidae	Least Concern
Whiskered Yuhina	*Yuhina flavicollis*	Zosteropidae	Least Concern
Eurasian hoopoe	*Upupa epops*	Upupidae	Least Concern
White-collared Blackbird	*Turdus albocinctus*	Turdidae	Least Concern
Grey-winged Blackbird	*Turdus boulboul*	Turdidae	Least Concern
Chestnut Thrush	*Turdus rubrocanus*	Turdidae	Least Concern
Plain-backed Thrush	*Zoothera mollissima*	Turdidae	Least Concern
Winter Wren	*Troglodytes hiemalis*	Troglodytidae	Least Concern
Black-chinned Babbler	*Cyanoderma pyrrhops*	Timaliidae	Least Concern
Common Myna	*Acridotheres tristis*	Sturnidae	Least Concern
Jungle owlet	*Glaucidium radiatum*	Strigidae	Least Concern
Yellow-bellied Fairy-fantail	*Chelidorhynx hypoxanthus*	Stenostiridae	Least Concern
Grey-headed Canary-flycatcher	*Culicicapa ceylonensis*	Stenostiridae	Least Concern
White-tailed Nuthatch	*Sitta himalayensis*	Sittidae	Least Concern
White-cheeked Nuthatch	*Sitta leucopsis*	Sittidae	Least Concern
Wallcreeper	*Tichodroma muraria*	Sittidae	Least Concern

Chestnut-headed Tesia	*Cettia castaneocoronata*	Scotocercidae	Least Concern
White-throated Fantail	*Rhipidura albicollis*	Rhipiduridae	Least Concern
White-browed Fantail	*Rhipidura aureola*	Rhipiduridae	Least Concern
Himalayan Bulbul	*Pycnonotus leucogenys*	Pycnonotidae	Least Concern
Red-vented Bulbul	*Pycnonotus cafer*	Pycnonotidae	Least Concern
Black Bulbul	*Hypsipetes leucocephalus*	Pycnonotidae	Least Concern
Rose-ringed Parakeet	*Psittacula krameri*	Psittacidae	Least Concern
Speckled Piculet	*Picumnus innominatus*	Picidae	Least Concern
Fulvous-breasted Woodpecker	*Dendrocopos macei*	Picidae	Least Concern
Scaly-bellied Woodpecker	*Picus squamatus*	Picidae	Least Concern
Snow partridge	*Lerwa lerwa*	Phasianidae	Least Concern
Himalayan snowcock	*Tetraogallus himalayensis*	Phasianidae	Least Concern
Chukar partridge	*Alectoris chukar*	Phasianidae	Least Concern
Western Tragopan	*Tragopan melanocephalus*	Phasianidae	Vulnerable
Himalayan mona	*Lophophorus impejanus)*	Phasianidae	Least Concern
Koklas Pheasant	*Pucrasia macrolopha*	Phasianidae	Least Concern
Kalij Pheasant	*Lophura leucomelanos*	Phasianidae	Least Concern
House Sparrow	*Passer domesticus*	Passeridae	Least Concern
Russet Sparrow	*Passer cinnamomeus*	Passeridae	Least Concern
Black-crested tit	*Periparus ater melanolophus*	Paridae	Not recognized
Great Tit	*Parus major Linnaeus*	Paridae	Least Concern
Green-backed Tit	*Parus monticolus*	Paridae	Least Concern
Black-lored Tit	*Machlolophus xanthogenys*	Paridae	Least Concern
Yellow-browed Tit	*Sylviparus modestus*	Paridae	Least Concern
Rufous-naped Tit	*Periparus rufonuchalis*	Paridae	Least Concern
Eurasian Golden Oriole	*Oriolus oriolus*	Oriolidae	Least Concern
Chestnut-bellied Rock-thrush	*Monticola rufiventris*	Muscicapidae	Least Concern
Rufous-gorgeted Flycatcher	*Ficedula strophiata*	Muscicapidae	Least Concern
Ultramarine Flycatcher	*Ficedula superciliaris*	Muscicapidae	Least Concern
Slaty-blue Flycatcher	*Ficedula tricolor*	Muscicapidae	Least Concern
Verditer Flycatcher	*Eumyias thalassinus*	Muscicapidae	Least Concern
Rufous-bellied Niltava	*Niltava sundara*	Muscicapidae	Least Concern
Orange-flanked Bush-robin	*Tarsiger cyanurus*	Muscicapidae	Least Concern
Golden Bush-robin	*Tarsiger chrysaeus*	Muscicapidae	Least Concern
Blue-capped Redstart	*Phoenicurus coeruleocephala*	Muscicapidae	Least Concern
Black Redstart	*Phoenicurus ochruros*	Muscicapidae	Least Concern
White-capped Water-redstart	*Phoenicurus leucocephalus*	Muscicapidae	Least Concern
Plumbeous Water-redstart	*Phoenicurus fuliginosus*	Muscicapidae	Least Concern
Little Forktail	*Enicurus scouleri*	Muscicapidae	Least Concern
Spotted Forktail	*Enicurus maculates*	Muscicapidae	Least Concern
Common Stonechat	*Saxicola torquatus*	Muscicapidae	Least Concern
Grey Bushchat	*Saxicola ferreus*	Muscicapidae	Least Concern
Chestnut-bellied Rock-thrush	*Monticola rufiventris*	Muscicapidae	Least Concern
Blue Whistling-thrush	*Myophonus caeruleus*	Muscicapidae	Least Concern
White Wagtail	*Motacilla alba*	Motacillidae	Least Concern
Great Barbet	*Psilopogon virens*	Megalaimidae	Least Concern
Rufous Sibia	*Heterophasia capistrata*	Leiotrichidae	Least Concern
Streaked Laughingthrush	*Trochalopteron lineatum*	Leiotrichidae	Least Concern
Chestnut-crowned Laughingthrush	*Trochalopteron erythrocephalum*	Leiotrichidae	Least Concern
Variegated Laughingthrush	*Trochalopteron variegatum*	Leiotrichidae	Least Concern
Bar-throated Minla	*Chrysominla strigula*	Leiotrichidae	Least Concern
Pink-browed Rosefinch	*Carpodacus rodochroa*	Fringillidae	Least Concern
Yellow-breasted Greenfinch	*Chloris spinoides*	Fringillidae	Least Concern
Plain Mountain-finch	*Leucosticte nemoricola*	Fringillidae	Least Concern
Common Rosefinch	*Carpodacus erythrinus*	Fringillidae	Least Concern
Red-headed Bullfinch	*Pyrrhula erythrocephala*	Fringillidae	Least Concern
Black-and-yellow Grosbeak	*Mycerobas icterioides*	Fringillidae	Least Concern
Common kestre	*Falco tinnunculus*	Falconidae	Least Concern
Eurasian Hobby	*Falco Subbuteo*	Falconidae	Least Concern
Scaly-breasted Munia	*Lonchura punctulata*	Estrildidae	Least Concern
Rock Bunting	*Emberiza cia*	Emberizidae	Least Concern
Black Drongo	*Dicrurus macrocercus*	Dicruridae	Least Concern
Fire-breasted Flowerpecker	*Dicaeum ignipectus*	Dicaeidae	Least Concern
Common cuckoo	*Cuculus canorus*	Cuculidae	Least Concern
Oriental Cuckoo	*Cuculus saturates*	Cuculidae	Least Concern
Black-throated jay	*Cyanolyca pumelo*	Corvidae	Least Concern
Yellow-billed blue magpie	*Urocissa flavirostris*	Corvidae	Least Concern

Red-billed Blue Magpie	*Urocissa erythroryncha*	Corvidae	Least Concern
Red-billed Chough	*Pyrrhocorax pyrrhocorax*	Corvidae	Least Concern
Yellow-billed Chough	*Pyrrhocorax graculus*	Corvidae	Least Concern
Large-billed Crow	*Corvus macrorhynchos*	Corvidae	Least Concern
Common Raven	*Corvus corax*	Corvidae	Least Concern
Oriental turtle dove	*Streptopelia orientalis*	Columbidae	Least Concern
Eurasian collared dove	*Streptopelia decaocto*	Columbidae	Least Concern
Snow Pigeon	*Columba leuconota*	Columbidae	Least Concern
Brown Dipper	*Cinclus pallasii*	Cinclidae	Least Concern
Bar-tailed Treecreeper	*Certhia himalayana*	Certhiidae	Least Concern
Long-tailed Minivet	*Pericrocotus ethologus*	Campephagidae	Least Concern
Scarlet Minivet	*Pericrocotus flammeus*	Campephagidae	Least Concern
Crested kingfisher	*Megaceryle lugubris*	Alcedinidae	Least Concern
white-throated kingfisher	*Halcyon smyrnensis*	Alcedinidae	Least Concern
Bearded Vulture, Lammergeyer	*Gypaetus barbatus*	Accipitridae	Near Threatened
Himalayan Griffon	*Gyps himalayensis*	Accipitridae	Near Threatened
Griffon vulture	*Gyps fulvus*	Accipitridae	Least Concern
Common buzzard	*Buteo buteo*	Accipitridae	Least Concern
Eurasian Sparrowhawk	*Accipiter nisus*	Accipitridae	Least Concern

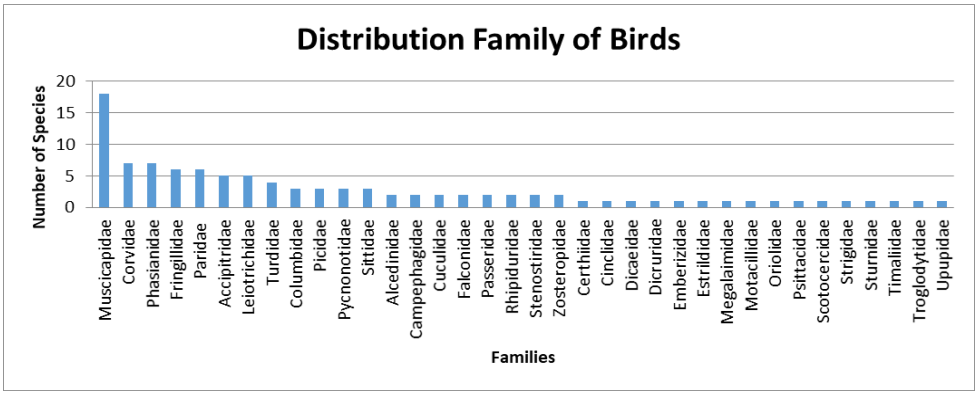

Fig 1: 36 Family distribution of Birds in DWS

Fig 2: Jungle Owlet **(***Glaucidium radiatum*)

Fig 3: Great Barbet **(***Psilopogon virens*)

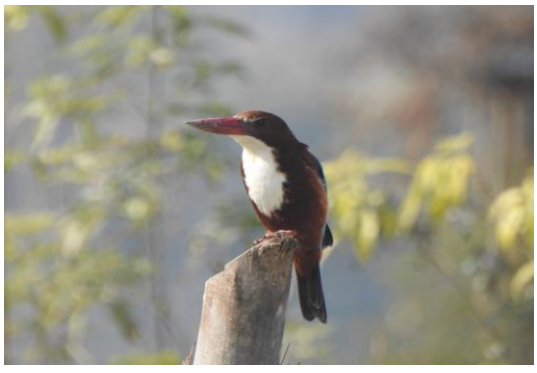

Fig 4: White-throated kingfisher, (*Halcyon smyrnensis*)

Fig 5: Eurasian Sparrowhawk (*Accipiter nisus*)

7. References

1. Bird Life International, Birds help us understand the natural world. Birds are very useful indicators for other kinds of biodiversity. Available on, http://www.birdlife.org/datazone/sowb/introduction/INTRO2/http://www.birdlife.org/datazone/sowb/casestudy/79, Accessed, (2015)
2. Grimmett R, Inskipp C, Inskipp T. Birds of the Indian Subcontinent: India, Pakistan, Sri Lanka, Nepal, Bhutan, Bangladesh and the Maldives. Bloomsbury Publishing, 2013.
3. Kazmierczak K, Van Perlo B. A Field Guide to the Birds of the India, Srilanka, Pakistan, Nepal, Bhutan, Bangladesh and the Maldives. Om Book Service, New Delhi, 2000.
4. Ali S, Ripley SD. Handbook of Birds of India and Pakistan, together with those of Bangladesh, Nepal, Bhutan and Srilanka, 10 Vols. Oxford University Press, New Delhi, 1968-1999.
5. Singh S, Kothari A, Pande P. (Eds.), Directory of National Parks and Sanctuaries in Himachal Pradesh: Management Status and Profiles. Indian Institute of Public administration, Environmental Studies Division, New Delhi, 1990.
6. Grimmett R, Inskipp T. Birds of Northern India. Oxford University Press, New Delhi, 2003.
7. Besten Den JW. Birds of Kangra. Moonpeak Publisher, Dharamsala, Himachal Pradesh, 2004.
8. Mahabal A, Patil SR. Aves. Fauna of Western Himalaya. 2005; 275-339.
9. Thakur ML, Mattu VK. Birds of Himachal Pradesh, India. Lambert Academic Publishing GmbH and Co., Saarbrucken, Germany, 2012.
10. Singh D. Birds Recorded during a Study in Himachal Pradesh. Renu Publishers, New Delhi, 2015.
11. Jones AE. A list of birds found in the Simla hills 1908-1918. J. Bombay Nat. Hist. Soc. 1919; 26:601-620.
12. Bose AK, Curson J, Jarman N. Report on birds in some national parks and other areas of special interest in India and Nepal’88-’89. Unpublished report, 1989.
13. Knox AG, Walters MP. Extinct and endangered birds in the collections of the Natural History Museum. London: British Ornithologists’ Club, 1994.
14. Mahabal A. Bird survey in Siwalik Himalaya of Himachal Pradesh, Pavo, 1996; 34:7-16.