

# A CHECKLIST OF AVIAN SPECIES IN NORTH EASTERN HILL UNIVERSITY CAMPUS, SHILLONG

**Abstract:** North Eastern Hill University Campus(25°36'36"N & 91°54'5"E), Shillong, is having a very good biodiversity with various types of flora and fauna. This paper focuses on the avian diversity present in campus. The birds were observed and recorded at various locations of the campus. Seventy six species of birds belonging to 34 families and 8 orders were recorded from Nov 2019 to Sept 2022. There were 65 resident and 11 migratory birds. The present study is focused on preparing the checklist of birds with their occurrence, status as well as to create awareness for their conservation.

**Keywords:** Birds, Checklist, Avian diversity, Nehu campus, Shillong

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## Introduction :

Northeast India is an overall hotspot of biodiversity and a regional area for birds (Stattersfield *et al.* 1998, Myers *et al.* 2000, Mittermeier 2005). Here, Pandit *et al.* (2007) states that "Continued declining of forests, habitat loss, urbanization are the major risks for avian biodiversity in North-east India", whereas Singh *et al.* (2012) states that, "Because of these threats on the biodiversity of NE India, it has remained poorly analyzed and much of its biodiversity has been lost without any record".

Here, Jules *et al.* (1997) states that, Urban biodiversity has received very little attention from conservation biologists as compared to natural and protected ecosystems", as followed by Vandermeer *et al.* (1997). Further, Jain *et al.* (2005) adds that, educational and defense premises are the hotspots for urban biodiversity. Although educational premises occupy less than 5% of the total urban area, such areas may harbor up to half the biodiversity of the urban biota (Jain, 2005).

North eastern hill university is an oldest and central university of Meghalaya, which is a multidisciplinary university offering an excellent research climate in all the fields, from natural sciences to life sciences and engineering. This central university is also known for its beautiful campus with lush green trees. Trees in and around the university campus have created a very good habitat and a source of attraction for many birds. The campus itself is located in a hilly area, surrounded by various types of avifaunal species.

North eastern hill university (25°36'36"N & 91°54'5"E) is situated in the city of Shillong in Meghalaya State, India. The study area is referred to as North Eastern Hill University Campus (NEHU), spreads in 1225 acres with all green and lavish nature, bounded with native and exotic varieties of plants. It covers a large area, including the main university campus, university hostels, as well as academics and research institutions. According to Wikipedia contributor, "It accommodates National Council of Science Museums (NCSM), Indira Gandhi National Open University (IGNOU), Indian Council of Social Science Research (ICSSR), Sports Authority of India (SAI) & The English & Foreign Language University (EFLU)".

The area experiences a temperature, ranges from 8°C-33°C in winter and summer respectively, and an average rainfall in the area is 1500-2000 mm. The distribution and occurrence of avifauna correlate well with the vegetation patterns of the area, which is of the great significance. The vegetation found in this area mainly consists of naturally grown shrubs and tree species, which is listed further. The study area supports a number of native as well as exotic floral species like *Camellia japonica*, West Indian Lantana, French hydrangea, etc. Different species of grown uptrees like *Ficus benghalensis*, *Ficus religiosa*, *Eucalyptus sp.*, *Mangifera indica*, *Delbergia Sisso*, *Elaeagnus latifolia*, *Corchorus olitorius*, *Caesalpinia pulcherrima*, *Pinus casia*, *Pyrus communis*, *Prunus persica*, *Alnus nepalensis*, *Parkia roxpurghii*, etc. and a variety of shrubs like *Lantana camara*, *Melastoma malabathricum*, etc. and grasses, provide nesting sites for many bird species as well, which visit here every year. A large number of tall trees and fruiting trees occur in this area, which attracts many birds. The surrounding area with a lot of trees, shrubs and grasses add to the diversity of bird habitat in the campus.

The present study is focused not only on preparing the checklist of birds, but also to find out their occurrence, status as well as to create awareness for their conservation. In addition, the study aims at providing the basic information of the avifauna for further studies related to campus biodiversity. It also provides a baseline data of bird diversity of the state. NEHU campus is the large green spot, where the birds can have roosting, foraging, feeding and nesting covers. Hence, the area should be wisely used without disturbing the activity of the birds to encourage occurrence of more number of species in the area.

**Materials and Methods:** The birds were observed and recorded at various locations of the entire campus. Sightings of different bird species were carried out **using random sampling method** thrice a week during all the months of the year to encounter maximum number of birds in the area. Studies were made between **(Nov 2019 to Sept 2022)** twice a day during morning hours (05:30 to 09:50 hours) and late afternoons (16:00 to 18:30 hours). Moreover, occasional sightings were also carried out every day at the main spots during the morning and evening hours. The identification of birds and their occurrence were noted using a 10×50 binocular and photos were taken using camera. All species recorded in the paper only after confirming from the field guide, (Grimmett *et al.*, 1999).

### **Results & Discussion:**

In total, 76 species of birds belonging to 34 families and 8 orders were recorded during the field visits mentioned in **Table-1**. During the studies, it was found that the occurrence of avifauna was significantly varied according to the vegetation patterns and anthropogenic pressures. Birds are sensitive to local landscape and changes in vegetation patterns can affect the population of birds in the area (Sauvot *et al.*, 1998; Savard *et al.*, 1999). Any kind of developmental activities in the future can adversely affect the avifauna diversity recorded during the studies.

Here, Patvarthan *et al.* (2000) have identified educational and defense premises as hotspots for urban biodiversity. Here N. K. Jain *et al.* (2005) add that, Gujarat University has 85 species of birds belonging to 40 families; which is comparable to any small reserve forest. He further says, that the low diversity may be due to constant human activities within and around the Gujarat University Campus. Here Patvarthan *et al.*, 2000 further adds that, “Although educational premises occupy less than 5% of the total urban area, such areas may harbour up to half the biodiversity of the urban biota

Such a rare green spot should be managed well to attract more bird species and make the premises favourable for various birds.

**Conclusion:**

North eastern hill university campus is rich in terms of avian diversity. Infrastructure development around the campus and inside the campus will definitely have an adverse impact on the avian diversity count. Frequent monitoring of the species recorded will help in monitoring and understanding the threats. Frequent record of the species will also help further instudying habitat studies including Nesting, roosting and Foraging. The data will also help in policy decisions related to conservation of avian diversity in the campus.

**Table:-1** Checklist of Birds found in North Eastern Hill University Campus

Taxa	Common Name	Status
<b>Order: Anseriformes</b>		
<b>Family: Anatidae</b>		
<i>Anas platyrhynchos</i>	Mallard	WV
<b>Order: Columbiformes</b>		
<b>Family: Columbidae</b>		
<i>Treron phoenicopterus</i>	Yellow-footed Green-Pigeon	R
<i>Treron apicauda</i>	Pin-tailed Green-Pigeon	R
<b>Order: Cuculiformes:</b>		
<b>Family: Cuculidae</b>		
<i>Hierococyx varius</i>	Common Hawk-Cuckoo	R
<i>Cuculus saturatus</i>	Himalayan Cuckoo	SV
<b>Order: Caprimulgiformes</b>		
<b>Family: Apodidae</b>		
<i>Apus acuticauda</i>	Dark-rumped Swift	R
<i>Apus nipalensis</i>	House Swift	R
<b>Order: Accipitriformes</b>		
<b>Family: Accipitridae</b>		
<i>Spilornis cheela</i>	Crested Serpent-Eagle	R
<i>Milvus migrans</i>	Black Kite	A
<b>Order: Strigiformes</b>		
<b>Family: Tytonidae</b>		
<i>Tyto alba</i>	Barn Owl	R
<b>Family: : Strigidae</b>		
<i>Otus sunia</i>	Oriental Scops-Owl	R
<i>Athene brama</i>	Spotted Owlet	R
<b>Order: Piciformes</b>		
<b>Family: Megalaimidae</b>		
<i>Megalaima haemacephalus</i>	Coppersmith Barbet	R
<i>Megalaima virens</i>	Great Barbet	R

<i>Megalaima franklinii</i>	Golden-throated Barbet	R
<i>Megalaima asiaticus</i>	Blue-throated Barbet	R

**Family: Picidae**

<i>Dendrocopos canicapillus</i>	Grey-capped Pygmy Woodpecker	R
<i>Blythipicus pyrrhotis</i>	Bay Woodpecker	R
<i>Micropternus brachyurus</i>	Rufous Woodpecker	R
<i>Picus canus</i>	Gray-headed Woodpecker	R

**Order: Passeriformes**

**Family: Eurylaimidae**

<i>Psarisomus dalhousiae</i>	Long-tailed Broadbill	R
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**Family: Campephagidae**

<i>Pericrocotus brevirostris</i>	Short-billed Minivet	R
<i>Pericrocotus ethologus</i>	Long-tailed Minivet	R
<i>Pericrocotus roseus</i>	Rosy Minivet	R
<i>Coracina melaschistos</i>	Black-winged Cuckooshrike	R

**Family: Vireonidae**

<i>Pteruthius xanathochlorus</i>	Green Shrike-Babbler	R
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**Family: Oriolidae**

<i>Oriolus xanthornus</i>	Black-hooded Oriole	R
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**Family: Vangidae**

<i>Tephrodornis virgatus</i>	Large Woodshrike	R
<i>Hemipus picatus</i>	Bar-winged Flycatcher-shrike	SM

**Family: Dicuridae**

<i>Dicrurus macrocercus</i>	Black Drongo	R
<i>Dicrurus leucophaeus</i>	Ashy Drongo	SM
<i>Dicrurus remifer</i>	Lesser Racket-tailed Drongo	R

**Family: Laniidae**

<i>Lanius cristatus</i>	Brown Shrike	R
<i>Lanius tephronotus</i>	Gray-backed Shrike	LM

**Family: Corvidae**

<i>Dendrocitta formosae</i>	Gray Treepie	R
<i>Corvus macrorhynchos</i>	Large-billed Crow	R

**Family: Paridae**

<i>Sylviparus modestus</i>	Yellow-browed Tit	R
<i>Parus monticolus</i>	Green-backed Tit	R
<i>Parus cinereus</i>	Cinereous Tit	R

**Family: Cisticolidae**

<i>Orthotomus sutorius</i>	Common Tailorbird	R
<i>Prinia atrogularis</i>	Black-throated Prinia	R
<i>Prinia hodgsonii</i>	Gray-breasted Prinia	R
<i>Prinia socialis</i>	Ashy Prinia	R

**Family: Pycnonotidae**

<i>Spizixos canifrons</i>	Crested Finchbill	R
<i>Pycnonotus cafer</i>	Red-vented Bulbul	R
<i>Alophoixus flaveolus</i>	White-throated Bulbul	R
<i>Hypsipetes leucocephalus</i>	Black Bulbul	R
<i>Ixos mcclllandii</i>	Mountain Bulbul	R

**Family: Phylloscopidae**

<i>Phylloscopus inornatus</i>	Yellow-browed Warbler	WV
<i>Phylloscopus affinis</i>	Tickell's Leaf Warbler	WV
<i>Phylloscopus reguloides</i>	Blyth's Leaf Warbler	WV

**Family: Cettiidae**

<i>Cettia flavolivacea</i>	Aberrant Bush Warbler	R
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**Family: Aegithalidae**

<i>Aegithalos iouschistos</i>	Black-browed Tit	R
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**Family: Sylviidae**

<i>Fulvetta vinipectus</i>	White-browed Fulvetta	R
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**Family: Leiothrichidae**

<i>Malacias gracilis</i>	Grey Sibia	R
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**Family: Sturnidae**

<i>Acridotheres tristis</i>	Common Myna	R
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**Family: Muscicapidae**

<i>Copsychus saularis</i>	Oriental Magpie-Robin	R
<i>Eumyias thalassinus</i>	Verditer Flycatcher	SV

**Family: Muscicapidae**

<i>Ficedula strophciata</i>	Rufous-gorgeted Flycatcher	SV
<i>Monticola solitarius</i>	Blue Rock-Thrush	R
<i>Saxicola ferreus</i>	Gray Bushchat	R

**Family: Dicaeidae**

<i>Dicaeum agile</i>	Thick-billed Flowerpecker	R
<i>Dicaeum minullum</i>	Plain Flowerpecker	R
<i>Dicaeum ignipectus</i>	Fire-breasted Flowerpecker	R

**Family: Nectariniidae**

<i>Cinnyris asiaticus</i>	Purple Sunbird	R
<i>Aethopyga nipalensis</i>	Green-tailed Sunbird	R
<i>Arachnothera longirostra</i>	Little Spiderhunter	R
<i>Arachnothera magna</i>	Streaked Spiderhunter	R

**Family: Chloropseidae**

<i>Chloropsis cochinchinensis</i>	Blue-winged Leafbird	R
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**Family: Estrildidae**

<i>Lonchura punctulata</i>	Scaly-breasted Munia	R
<i>Lonchura atricapilla</i>	Chestnut Munia	R

<i>Amandava amandava</i>	Red Avadavat	R
<b>Family: Passeridae</b>		
<i>Passer domesticus</i>	House Sparrow	R
<i>Passer rutilans</i>	Russet Sparrow	R
<i>Passer montanus</i>	Eurasian Tree Sparrow	R
<b>Family: Motacillidae</b>		
<i>Motacilla alba</i>	White Wagtail	WV

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A= Abundant, WV =winter visitor, LM = Local Migrant, SV = Summer Visitor, R = Residents

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