

# Avifaunal Abundance of Lumding Forest Reserve Area, Assam, India

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## ABSTRACT

The solitary aim of our investigation was to explore the avian species richness in Lumding Forest Reserve area, Assam. The survey was cooperated by the team of Zoological Survey of India. After extended survey, 146 species of birds were spotted from Lumding Forest Reserve area, where birds from 17 different orders (Passeriformes, Columbiformes, Accipitriformes, Piciformes, Bucerotiformes, Gruiformes, Apodiformes, Coraciiformes, Trogoniformes, Cuculiformes, Galliformes, Ciconiiformes, Suliformes, Pelecaniformes, Strigiformes, Anseriformes, Charadriiformes) and 76 families were put down. The bird species thus obtained were compared with the IUCN Red list from where interesting cum astonishing facts were acquired. The IUCN Red list informed us that, 92.51% bird species spotted were under Least Concern category, where as 3.4% were Near Threatened, 2.72% were Vulnerable, 0.68% were Critically Endangered and Endangered. We considered ourselves successful for obtaining such astounded statistics about the avian species plentitude of Lumding Forest Reserve, which will provoke other researchers to come forward and explore more about this place.

**KEY WORDS:** LUMDING FOREST RESERVE AREA, BIRDS, BIODIVERSITY, IUCN.

## INTRODUCTION

Alike other animals, birds too are a remarkable part of ecosystem with amazing ecological values. They cover almost every corner of the planet. Globally there exists around 9000 species of birds of which india contributes 13% with 1300 species (Grimmett et al., 2000). Birds are watcher's delight, with their colorful appreance and melodious chirping, they not only increase the beauty of nature and provide intangible aesthetic enjoyment; they play many roles in ecosysytem (Watanuki et al.,2022).

There exists a strong interdependence between birds and other organisms of this universe. These warm blooded vertebrates help in pollination; birds like bulbul, parakeets help in seed dispersal; act as scavengers; helps in pest control in crop fields; manages wetland grazing species like snails, periwinkles; acts as proficient gardeners(Beal et al., 2021) .

Prior to their sensitiveness to habitat change, birds are considered as one of the most important indicators of environmental change (Pitera et al., 2021). They play significant role in controlling insect outbreak. Birds like

Barn Swallow helps in mosquito control by eating around 850 mosquitoes each day (Vinod et al., 2023).

Lumding is a railway town and a municipal board of Nagaon district. It is the regional divisional headquarter of North –Eastern Frontier Railway, a big important junction and famous for Barak Valley Express, Cachar Express, Hill Queen Express, Agartala-Lumding Express, etc., which passes through scenic routes (Pawar and Salunkhe, 2014). It is also famous for cultural and educational excellence.

Initiated in 1964, The International Union for Conservation of Nature's (IUCN) Red List of Threatened Species has become the most reliable source regarding conservation of floral and faunal species of the earth (Miskelly et al., 2019). It accords information regarding the population, habitat, threats and conservation initiatives that assists us to take necessary steps towards protection. The Red List is an indicator of the exact position of worlds biodiversity (Sauve et al., 2021). It helps to protect natural resources on which we are dependent for survival. Hence, during our investigation, we checked our findings in the Red List to assure their future existence and safety.

## MATERIAL AND METHODS

Lumding is a hilly landscape which is covered with dense reserve forest from all sides. Summers are burning here as

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well as winters can be chilling. Monsoon covers rainfall around 60-125mm. The only hill station of Assam i.e. Haflong is very closer to Lumding. Climate remaining favourable for agricultural practices (Arya and Rao, 2014).

Species density and diversity can be good indicators for measuring abundance of birds in any locality (Javed and Rahmani, 1993). Our survey was carried out from January,2016 to December,2018, where almost all the seasons were covered like Summer (March-June) and Winter (November-March).

For spotting, following methods were preferred, (1) point count method, (2) direct count method & (3) area search method.

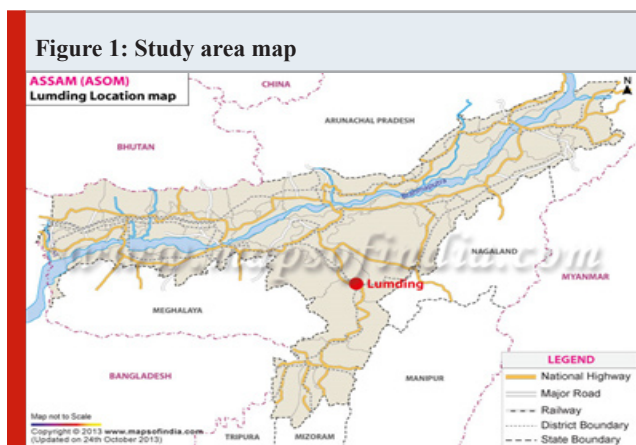
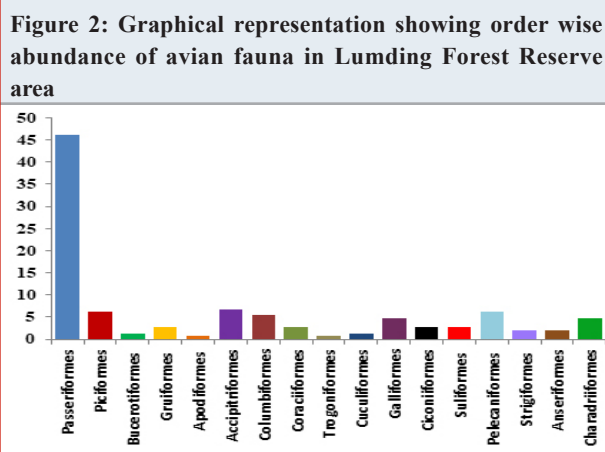


Figure 1: Study area map



Bird counting was performed from 5.00-8.00 am (morning) and 4.00-6.00 pm (evening). Various species of birds were observed during survey period. Observation was performed with the help of field binoculars (10x40). Pictures were captured with Digital Canon EOS 1300D, 18MP DSLR. Renowned Ornithologist Dr. Ghosh and his team from Zoological Survey of India, remained physically present and helped in species identification. Species identification was confirmed with the help of “Books of Birds of the Indian subcontinent” (Grimmett et al., 2000) and book of Salim Ali “The Book of Indian Birds”, Wikipedia and other resources.

## RESULT AND DISCUSSION

North-East India refers to the easternmost region of India consisting of contiguous seven sister states, Sikkim and parts of North Bengal (district of Darjeeling , Jalpaiguri and Kochbihar) (Javed and Rahmani, 1993). North East India is ethnically distinct from the other states of India, linguistically the region is distinguished by preponderance of Tibeto- Burman languages. Strong ethnic cultures that had escaped sanskritization effects permeate the region. The eight states from a special category is officially recognized (Peralta et al., 2020).

Figure 3: Graphical representation showing IUCN status of avian fauna spotted in Lumding Forest Reserve area

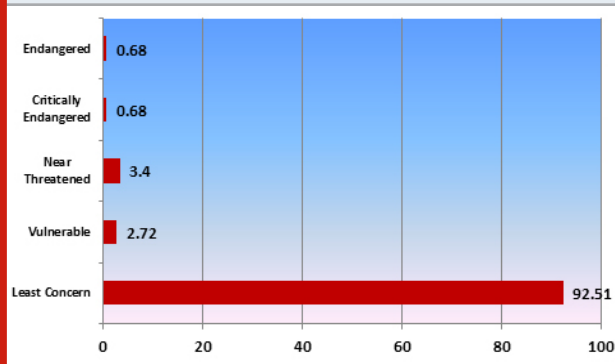


Figure 4: Pictures of some birds spotted from Lumding Forest Reserve area



**Figure 5: Pictures of some birds spotted from Lumding Forest Reserve area**



Lumding Reserve Forest is a compact large block of forest, measuring 252.9 sq. Kms and comparatively has less human disturbance. This forest gives shelter to a large variety of floral as well as faunal species (Arya and Rao, 2014). As the forest area of neighbouring Karbi Anglong district and N.C.Hills district are affected by shifting cultivation, the herbs of Asiatic Elephant takes shelter in Lumding Reserve Forest (Joshi and Shrivastava, 2012). The principal type of forest found in Lumding is degraded moist mixed deciduous forest type (Khan, Rao and Wani, 2012).

Lumding Reserve Forest is also habitat for a huge variety of medicinal plants like Sarpagandha, Basaka, Ahoi, Hilikha, etc. Among all the floral species Teak and Gamari are found to dominate in Lumding Reserve Forest (Javed and Rahmani, 1993). Among the climbers *Mikennia sp.* predominates where canopy is open and other climbers are *Bridelia sp.*, *Butea parviflora*, *discorea sp.*, *Clematis sp.* Himalayan black bear, Clouded Leopard, Crab eating mongoose, Slow loris, Assamese Macaque, Hoolock gibbon, Asiatic jackal, etc. comes under faunal diversity of Lumding. 146 species of birds were spotted from Lumding Forest Reserve area during our survey; Of which, 17 different avian orders including Passeriformes, Columbiformes, Accipitriformes, Piciformes, Bucerotiformes, Gruiformes, Apodiformes, Coraciiformes, Trogoniformes, Cuculiformes, Galliformes, Ciconiiformes, Suliformes, Pelecaniformes, Strigiformes, Anseriformes, Charadriiformes were detected.

**Figure 1. Checklist of avian fauna of Lumding Forest Reserve area**

SL NO.	ORDER	FAMILY	COMMON NAME	SCIENTIFIC NAME	Feeding habits*	IUCN Red List (2019-22) status**
1	Passeriformes	Pycnonotidae	Red vented bulbul	<i>Pycnonotus cafer</i>	Nectivorous, Frugivorous,	Least Concern
					Insectivorous, Palynivorous	
2		Campephagidae	Scarlet minivet <i>speciosus</i>	<i>Pericrocotus</i> Carnivorous	Insectivorous, Concern Ophiophagous	Least
3		Oriolidae	Black headed oriole	<i>Oriolus larvatus</i>	Frugivorous, Insectivorous	Least Concern
4			Indian Golden oriole	<i>Oriolus kundoo</i>	Frugivorous, Insectivorous, Nectivorous	Least Concern
5		Pittidae	Black crown pitta	<i>Erythropitta ussheri</i>	Carnivorous	Least Concern
6			Indian pitta	<i>Pitta brachyura</i>	Carnivorous, Insectivorous,	
7		Orididae	Maroon oriole	<i>Oriolus trailii</i>	Insectivorous, Nectivorous	Least Concern
8		Alaudidae	Eastern skylark (Oriental skylark)	<i>Alauda gulgula</i>	Granivorous	Least Concern

Table 1a

9	Dicruridae	Racket tailed drongo	<i>Dicrorus paradiseus</i>	Insectivorous, Nectivorous	Least Concern
10		Black drongo	<i>Dicrorus macrocercus</i>	Insectivorous,	Least Concern
11		Ashy drongo	<i>Dicrorus leucophaeus</i>	Insectivorous	Least Concern
12		Bronzed drongo	<i>Dicrurus aeneus</i>	Insectivorous	Least Concern
13	Nectariniidae	Nepal sunbird	<i>Aethopyga nipalensis</i>	Nectivorous	Least Concern
14	Sturnidae	Hill myna	<i>Gracula religiosa</i>	Omnivorous, Insectivorous,	Least Concern
15	Laniidae	White crowned shrike	<i>Eurocephalus anguitimens</i>	Frugivorous, Insectivorous,	Least Concern
16		Bull headed shrike	<i>Lanius bucephalus</i>	Carnivorous, Insectivorous,	Least Concern
17		Long tailed	<i>Larius collaris</i>	Carnivorous, Insectivorous ,	Least Concern
18	Leiothrichidae	Jungle babbler	<i>Argya striata</i>	fiscal shrike	Carnivorous
19	Pycnonotidae	Black headed bulbul	<i>Pycnonotus atriceps</i>	Insectivorous	Least Concern
20	Hirundinidae	Red rumped swallow	<i>Cecropis daurica</i>	Insectivorous, Frugivorous	Least Concern
21	Passeri	Fairy blue bird	<i>Irena puella</i>	Insectivorous, Nectivorous	Least Concern
22	Chloropseidae	Gold fronted leafbird	<i>Chloropsis aurifrons</i>	Omnivorous	Least Concern
23		Orange bellied leafbird	<i>Chloropsis hard wickii</i>	Insectivorous, Nectivorous	Least Concern
24	Pycnonotidae	Brown eared bulbul	<i>Hypsipetes amaurotis</i>	Insectivorous, Frugivorous, Nectivorous	Least Concern
25	Mectarinidae	Large browed wagtail	<i>Motacilla moderaspatisensis</i>	Insectivorous	Least Concern
26	Estrildidae	Spotted munia	<i>Lonchura punctulata</i>	Granivorous	Least Concern
27		Black headed munia	<i>Lonchura malacca</i>	Granivorous	Least Concern
28	Ploceidae	Baya weaver bird	<i>Ploceus philippinus</i>	Granivorous, Insectivorous	Least Concern
29	Dicruridae	Lesser racket tailed drongo	<i>Dicrurus remifer</i>	Insectivorous	Least Concern
30	Muscicapidae	White rumped	<i>Copsychus magpie</i>	Insectivorous , malabaricus	Least Concern Carnivorous
31	Sturnidae	Common myna	<i>Acridotheres tristis</i>	Insectivorous, Granivorous, Carnivorous, Omnivorous	Least Concern
32		White headed starling	<i>Sturnia erythropygia</i>	Insectivorous	Least Concern
33		Brahminy starling	<i>Sturnus pagodarum</i>	Omnivorous	Least Concern
34		Jungle myna	<i>Acridotheres fuscus</i>	Omnivorous	Least Concern
35		Indian Pied myna	<i>Gracupica contra</i>	Omnivorous	Least Concern
36	Motacilladae	Yellow wagtail	<i>Motacilla flava</i>	Insectivorous	Least Concern
37		Citrine wagtail	<i>Motacilla citriola</i>	Insectivorous	Least Concern
38	Turdidae	Common black bird	<i>Turdus merula</i>	Omnivorous	Least Concern
39	Vangidae	Indian wood shrike	<i>Tephrodornis pondicerianus</i>	Insectivorous	Least Concern



Table 1b

40		Motacillidae	Indian paddy field pipit	<i>Anthus rufulus</i>	Insectivorous	Least Concern	
41		Paridae	Great tit	<i>Parus major</i>	Insectivorous	Least Concern	
42		Alaudidae	Black lark	<i>Melanocorypha yeltoniensis</i>	Insectivorous	Least Concern	
43		Corvidae	Sand lark	<i>Alaudala raytal</i>	Insectivorous	Least Concern	
44			Jungle crow	<i>Corvus culminatus</i>	Frugivorous	Least Concern	
45			House crow	<i>Corvus splendens</i>	Omnivorous	Least Concern	
46		Monarchidae	Paradise flycatcher	<i>Terepsiphone paradisi</i>	Insectivorous	Least Concern	
47		Muscicapidae	Blue flycatcher	<i>Cyornis tickelliae</i>	Carnivorous	Least Concern	
48		Chloropseidae	Leaf bird	<i>Chloropsis flavipennis</i>	Insectivorous,	Vulnerable	
					Frugivorous, Nectivorous		
49		Laniidae	Brown shrike	<i>Lanius cristatus</i>	Insectivorous	Least Concern	
50		Muscicapidae	Shama bird	<i>Copsychus malabaricus</i>	Insectivorous,	Least Concern	
					Frugivorous		
51				Slaty backed forktail bird	<i>Enicurus schistaceus</i>	Carnivorous	Least Concern
52				Plumbeous redstart	<i>Rhyacornis fuliginosa</i>	Insectivorous,	Least Concern
						Carnivorous	
53		Leiothrichidae	Grey sibia	<i>Heterophasia gracilis</i>	Insectivorous,	Least Concern	
				Frugivorous			
54			Jungle babbler	<i>Turdoides striata</i>	Insectivorous,	Least Concern	
					Granivorous,		
					Nectivorous		
55			Common babbler	<i>Argya caudata</i>	Omnivorous	Least Concern	
56			White crowned shrike	<i>Eurocephalus ruppelli</i>	Carnivorous	Least Concern	
57	Psittaculidae	Alexandrine parakeet	<i>Psittacula eupatria</i>	Omnivorous	Near Threatened		
58	Laniidae	Red breasted parakeet	<i>Psittacula alexandri</i>	Frugivorous,	Near Threatened		
				Granivorous			
59	Pnoepygidae	Pygmy cupwing	<i>Pnoepyga pusilla</i>	Insectivorous	Least Concern		
60	Pellorneidae	Brown capped babbler	<i>Pellomeum fuscicapillus</i>	Insectivorous	Least Concern		
61			Marsh spotted babbler	<i>Pellomeum palustre</i>	Insectivorous	Vulnerable	
62	Paradoxornithidae	Grey headed	<i>Psittiparus gularis</i> parrot bill	Insectivorous	Least Concern		
63	Corvidae	Red whiskered bulbul	<i>Pycnonotus jocosus</i>	Insectivorous,	Least Concern		
				Frugivorous			
64			Black browed treepie	<i>Dendrocitta frontalis</i>	Carnivorous	Least Concern	
65	Passeridae	House sparrow	<i>Passer domesticus</i>	Insectivorous	Least Concern		
66			Tree sparrow	<i>Passer montanus</i>	Insectivorous	Least Concern	
67	Paridae	Oriental tit	<i>Parus minor</i>	Omnivorous,	Least Concern		
				Molluscivorous			
68	Anatidae	Pin tail duck	<i>Anas acuta</i>	Granivorous	Least Concern		
69	Piciformes	Megalaimidae	Large green barbet	<i>Psilopogon zeylanicus</i>	Frugivorous,	Least Concern	
					Insectivorous		
70			Coppersmith barbet	<i>Psilopogon haemacephalus</i>	Frugivorous	Least Concern	

Table 1c

71		Picidae	Golden backed woodpecker	<i>Dinopium benghalense</i>	Insectivorous	Least Concern
72			Large golden backed woodpecker	<i>Chrysocolaptes guttacristatus</i>	Frugivorous, Insectivorous, Granivorous	Least Concern
73			Rufous piculet	<i>Sasia abnormis</i>	Insectivorous, Carnivorous	Least Concern
74			Darjeeling pied woodpecker	<i>Dendrocopos darjellensis</i>	Insectivorous	Least Concern
75			Heart spotted woodpecker	<i>Hemicircus canente</i>	Insectivorous	Least Concern
76			Large yellow fronted woodpecker	<i>Melanerpes flavifrons</i>	Insectivorous, Frugivorous	Least Concern
77			Rufous woodpecker	<i>Micropternus brachyurus</i>	Insectivorous, Frugivorous, Nectivorous	Least Concern
78	Bucerotiformes	Bucerotidae	Grey hornbill	<i>Ocyrceros birostris</i>	Granivorous	Least Concern
79		Upupidae	Hoopoe	<i>Upupa sp</i>	Insectivorous, Carnivorous	Least Concern
80	Gruiformes	Rallidae	Coot	<i>Fulica atra</i>	Omnivorous	Least Concern
81		Rallidae	Common moorhen	<i>Gallinula chloropus</i>	Omnivorous	Least Concern
82			Western swampen	<i>Porphyrio porphyrio</i>	Omnivorous	Least Concern
83		Ardeidae	Little egret	<i>Egretta garzetta</i>	Carnivorous	Least Concern
84	Apodiformes	Trochilidae	Ruby throated humming bird	<i>Archilochus colubris</i>	Insectivorous,	Least Concern
85	Accipitriformes	Accipitridae	Indian white rumped vulture	<i>Gyps bengalensis</i>	Carnivorous	Critically Endangered
86			Shikra (Indian shikra)	<i>Accipiter badius</i>	Insectivorous	Least Concern
87			Pariah kite	<i>Milvus migrans</i>	Carnivorous, Avivorous	Least Concern
88			Pied harrier	<i>Circus melanoleucos</i>	Insectivorous, Avivorous	Least Concern
89			Crested serpent eagle	<i>Spilornis cheela</i>	Insectivorous, Ophiophagous	Least Concern
90			Black winged kite	<i>Elanus caeruleus</i>	Insectivorous	Least Concern
91			Black eared baza	<i>Aviceda leuphotes</i>	Insectivorous	Least Concern
92			Changeable hawk eagle	<i>Nisaetus cirrhatus</i>	Avivorous	Least Concern
93			Crested serpent eagle	<i>Spilornis cheela</i>	Carnivorous, Avivorous, Carnivorous	Least Concern
94			White tailed eagle	<i>Haliaeetus albicilla</i>	Carnivorous	Least Concern
95	Columbiformes	Columbidae	Spotted dove	<i>Stiloopelia chinensis</i>	Frugivorous, Granivorous,	Least Concern
96			Ring necked dove	<i>Streptopelia capicola</i>	Insectivorous Frugivorous, Granivorous, Insectivorous	Least Concern
97			Emerald dove	<i>Chalcophaps indica</i>	Frugivorous	Least Concern

Table 1d

98			Red turtle dove	<i>Streptopelia tranque baricha</i>	Granivorous,	Least Concern
99			Green imperial pigeon	<i>Ducula aenea</i>	Granivorous	Near Threatened
100			Rock pigeon	<i>Columba livia</i>	Granivorous, Frugivorous, Insectivorous	Least Concern
101			Imperial pigeon	<i>Dacula</i> sp	Frugivorous	Least Concern
102			Spotted dove	<i>Spoilopelia chinensis</i>	Insectivorous	Least Concern
103	Coraciiformes	Meropidae	Chestnut headed bee eater	<i>Merops leschenaulti</i>	Insectivorous	Least Concern
104			Green bee eater	<i>Merops orientalis</i>	Insectivorous , Carnivorous	Least Concern
105		Alcedinidae	White breasted kingfisher	<i>Halcyon smyrnensis</i>	Insectivorous, Carnivorous	Least Concern
106			Common kingfisher	<i>Alcedo anthis bengalensis</i>	Carnivorous, Insectivorous, Piscivorous	Least Concern
107	Trogoniformes	Trogonidae	Red headed trogon	<i>Harpactes erythrocephalus</i>	Insectivorous	Least Concern
108	Cuculiformes	Cuculidae	Crow pheasant	<i>Centropus sinensis</i>	Carnivorous	Least Concern
109	Galliformes	Phasianidae	Asian koel	<i>Eudynamis scolopaceus</i>	Omnivorous	Least Concern
110			Black francolin	<i>Francolinus francolinus</i>	Insectivorous	Least Concern
111			Grey partridge	<i>Perdix perdix</i>	Insectivorous, Granivorous	Least Concern
112			Jungle bush quail	<i>Perdica asiatica</i>	Frugivorous, Granivorous	Least Concern
113			Red jungle fowl	<i>Gallus gallus</i>	Frugivorous	Least Concern
114			Kalij pheasant	<i>Lophura leucomelanos</i>	Omnivorous	Least Concern
115		Dicacidae	Plain coloured flower pecker	<i>Diacacum minullum</i>	Frugivorous, Nectivorous	Least Concern
116		Pycnorotidae	Black bulbul	<i>Hypsipetes leucocephalus</i>	Insectivorous, Granivorous	Least Concern
117	Ciconiiformes	Ciconiidae	Greater adjutant	<i>Leptoptilos dubius</i>	Omnivorous, Carnivorous	Endangered
118			Lesser adjutant	<i>Leptoptilos javanicus</i>	Omnivorous, Carnivorous, Piscivorous	Vulnerable
119			Black necked stork	<i>Ephippiorhynchus asiaticus</i>	Carnivorous	Near Threatened
120			Scaly breasted stork	<i>Anastomus oscitans</i>	Carnivorous, Molluscivorous	Least Concern
121	Suliformes	Phalacrocoracidae	Little cormorant	<i>Microcarbo niger</i>	Carnivorous	Least Concern
122			Large cormorant	<i>Phalacrocorax carbo</i>	Carnivorous	Least Concern
123			Indian cormorant	<i>Phalacrocorax fuscicollis</i>	Carnivorous	Least Concern
124		Anhingidae	Darter	<i>Anhinga</i> sp	Piscivorous	Near threatened
125	Pelecaniformes	Ardeidae	Great egret	<i>Ardea alba</i>	Carnivorous	Least Concern
126			Medium egret	<i>Ardea intermedia</i>	Carnivorous	Least Concern
127			Cattle egret	<i>Bubulcus ibis</i>	Carnivorous	Least Concern

Table 1e

128			Yellow bittern	<i>Ixobrychus sinensis</i>	Carnivorous	Least Concern
129			Chinese pond heron	<i>Ardeola bacchus</i>	Carnivorous	Least Concern
130			Indian pond heron	<i>Ardeola grayii</i>	Carnivorous	Least Concern
131			Night heron	<i>Nycticorax nyctanassa</i>	Insectivorous, Avivorous,	Least Concern
132			Bittern	<i>Botaurus stephens</i>	Piscivorous Carnivorous	Least Concern
133			Tiger heron	<i>Tigrisoma lineatum</i>	Carnivorous	Least Concern
134	Strigiformes	Strigidae	Jungle owlet	<i>Glaucidium radiatum</i>	Insectivorous	Least Concern
135			Brown fish owl	<i>Ketupa zeylonensis</i>	Piscivorous	Least Concern
136		Tytonidae	Barn owl	<i>Tyto alba</i>	Carnivorous	Least Concern
137	Anseriformes	Anatidae	Common pochard	<i>Aythya ferina</i>	Molluscivorous, Insectivorous	Vulnerable
138			Lesser whistling duck	<i>Dendrocygna javanica</i>	Gregarious	Least Concern
139			Brahminy duck	<i>Tadorna ferruginea</i>	Omnivorous	Least Concern
140	Charadriiformes	jacanidae	Pheasant tailed jacana	<i>Hydrophasianus</i>	Insectivorous,	Least Concern
141					<i>chirurgus</i>	Molluscivorous
142		Charadriidae	Bronze winged jacana	<i>Metopidius indicus</i>	Insectivorous	Least Concern
143			Red wattled lapwing	<i>Vanellus indicus</i>	Insectivorous,	Least Concern
144					Granivorous, Molluscivorous	
145		Laridae	Spur winged lapwing	<i>Vanellus spinosus</i>	Insectivorous	Least Concern
146			River tern	<i>Sterna aurantia</i>	Insectivorous, Piscivorous	Vulnerable
147			Indian robin	<i>Saxicoloides fulicatus</i>	Insectivorous	Least Concern
148		Scolopacidae	Long toed stint	<i>Calidris subminuta</i>	Insectivorous, Molluscivorous, Granivorous	Least Concern

\***Piscivorous:** fish eater birds; Palynivorousbirds: pollen eater birds; Nectivorous: nectar eater birds; Ophiophagous: snake eater birds; Mucivorous: mucus eater birds; Molluscivorous: mollusce eater birds; Granivorous: grain eater birds; Frugivorous: fruit eater birds; Carnivorous: meat eater birds; Avivorous: bird eater birds.

\*\*Extinct in the wild (EW) - Known only to survive in captivity; Extinct (EX) - No known individuals remaining; Critically Endangered (CR) - Extremely high risk of extinction in the wild; Endangered (EN) - High risk of extinction in the wild; Vulnerable (VU) - High risk of endangerment in the wild; Near Threatened (NT) - Likely to become endangered soon; Least Concern (LC) - Lowest risk. Does not qualify for a more at risk category; Data Deficient (DD) - Not enough data to assess its risk of extinction; Not Evaluated (NE) - Has not yet ben evaluated against the criteria.

Noticably, Passeriformes showed highest species frequency with 46.25% abundance which was followed by Accipitriformes (6.8%), Piciformes and Pelecaniformes(6.12%) ;Columbiformes(5.44%); Galliformes and Charadriiformes(4.76%); Gruiformes, Coraciiformes, Suliformes, Ciconiiformes(2.72%); Strigiformes, Anseriformes(2.04%); Cuculiformes, Bucerotiformes (1.36%); Trogoniformes, Apodiformes (0.68%). Under 17 spotted orders, total 76 families were recorded. Passeriformes came out with maximum number of families (44).

The IUCN status of avian species richness of Lumding revealed that 92.51% birds of Lumding are Least Concern indicating their sufficient existence, where as 3.4% are Near Threatened, 2.72% are Vulnerable, 0.68% are Critically Endangered and Endangered. Birds like River tern, Common pochard, Lesser adjutant, Greater adjutant, Indian white rumped vulture, Marsh spotted babbler, Black necked stork, Alexandrine parakeet, Darter which were found under Critically Endangered, Near Threatened, Vulnerable and Endangered category of IUCN demands our attention to work for their conservation and protection from becoming extinct.



## CONCLUSION

Its extremely worrying that the number of Critically Endangered birds on the IUCN Red List continues to increase, despite successful conservation initiatives around the world”, says Simin Stuart, Chair of IUCN’s Species Survival Commission. Hence, it becomes immense important to work for the safety and security of birds at global level. Although our work was very small but we expect that it will motivate other researchers to work in this field so that rare species of birds can survive for long.

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## REFERENCES

- Ainsworth, G.B., Fitzsimons, J.A., Weston, M.A. and Garnett, S.D. (2018). The culture of bird conservation: Australian stakeholder values regarding iconic, flagship and rare birds. *Biodiversity Conservation*, 27(2), 345-363.
- Arya, M., Rao, R.J. (2014). Avifaunal occurrence and distribution of wetland birds in Sakhya Sagar and Madhav lakes in Madhav National Park, Shivpuri, India. *Journal of Environmental Biology*, 35:703-708.
- Balasure, S., S. Dutta and Vyas, V. (2012). Avian diversity in Barna wetland in Narmada Basin in Central India. *Journal of Research in Biology*, 2(5):460-468.
- Beal, M., Dias, M.P., Phillips, R.A., Opper, S., Hazin, C., Pearmin, E.J., Cayrt, P. (2021). Global political responsibility for the conservation of albatrosses and large petrels. *Sci. Adv.*, 27, eabd7225.
- Borray- Escalante, N.A., Mazzoni, D., Ortega-Segalerva, A., Arroyo, L., Morera-Pujol, V., Gonzalez-Solis, J., Senar, J.C. (2020). Diet assessments as a tool to control invasive species: Comparison between Monk and Rose-ringed parakeets with stable isotopes. *J. Urban Ecol.*, 6, juaa005.
- Colin J, Bibby Nell, D. (1992). *Birds census techniques*. Academic press limited, London.
- Core Team. R. (2020). *A Language and Environment for Statistical Computing*, R. Foundation for Statistical Computing: Vienna, Austria.
- Gill, F. and Wright, M. (2006). *Birds of World: Recommended English Names*. Princeton NI: Princeton University Press, Version 2.2 generated on 2009-08-25.
- Grimmett, R., I., Inskipp, C. And Inskipp, T., (1998). *Birds of the Kotzebue south region, Alaska Jr. Columbia. Natural History of the Cook Inlet Region, Alaska*. 21:1-87.
- Grimmett, R., Inskipp, C. and Inskipp, T. (2000). *The pocket Guide to the Birds of Indian Subcontinent*. Oxford University Press, Delhi.
- Hernandez-Brito, D., Carrete, M., Blanco, G., Romero-Vidal, P., Senar, J.C., Mori, E., White, T.H., Luna, A. and Tella, J.L. (2021) *The Role of Monk Parakeets as Nest-Site Facilitators in Their Native and Invaded Areas*. *Biology*, 10, 683.
- ISSG. *Myiopsita monachus* (Monk Parakeet). *Global Invasive Species Database (GISD)*. Available online :<http://www.issg.org/database>.
- Javed, S. and Rahmani, A.R. (1993). Conservation of the avifauna of Dudhwa national Park, India. *Forktail*. 14:57-66.
- Joshi, P. and Shrivastava, V.K. (2012). Avifaunal diversity of Tawa Reservoir and its surrounding areas of Hoshangabad District (MP). *International Journal of Plant, Animal and Environmental Sciences*, 2(1): 46-51.
- Khan, A.K., Rao, R.J. and Wani, R.A. (2012). Studies on bird diversity of Overa-aru Wildlife Sanctuary of Jammu and Kashmir, India. *Journal of Threatened Taxa*. 4(13): 3228-3232.
- Miskelly, C.M., Gilad, D., Taylor, G.A., Tennyson, A.J., Waugh, S.M. (2019). A review of the distribution and size of gadfly petrel (*Pterodroma* spp.) colonies throughout New Zealand. *Tuhinga*, 30, 93-173.
- Pawar, S.K. and Salunkhe, P.S. (2014). The migratory birds in and around Pandharpur city with special reference to Takali (Padmavati) Lake, Pandharpur, Dist. Solapur (M.S.) *Avishkar-Solapur University journal*, Vol. 3. pp-38-44.
- Pitera, A.M., Branch, C.L., Sonnenberg, B.R., Benedict, L.M., Kozlovsky, D.Y. and Pravosudov, V.V. (2021). Reproduction is affected by individual breeding experience but not pair longevity in a socially monogamous bird. *Behav. Ecol. Sociobiol.*
- Peralta-Sanchez, J.M., Colmenero, J., Redondo-Sanchez, S., Ontanilla, J. And Soler, M. (2020). Females are more determinant than males in reproductive performance in the house sparrow *Passer domesticus*. *J. Avian Biol.*
- Sauve, D., Carmantier, A., Hatch, S.A., Friesen, V.L. (2021) Environmental conditions variably affect growth across the breeding season in a subarctic seabird. *Oecologia*, 1-12.
- Senar, J.C., Domenech, J., Arroyo, L., Torre, I.; Gordo, D. (2019). An evaluation of monk parakeets damage to crops in the metropolitan area of Barcelona. *Anim. Biodivers. Conserv.*, 39, 141-145.
- Vinod Shankar, R., Bhavanarayeni, U.R.S., Bayani, R, A. and Kunte. K. (2023). *Indian Birds in The IUCN Red List*. In Satose, Bayani, R, A., Ramachandran, V., Roy, P. and Kunte, K. (chief editors). *Birds of India*, v.2.17.
- Watanuki, Y., Yamamoto, M., Okado, J., Ito, M., Sydeman, W. (2022). Seabird reproductive responses to changing climate and prey communities are mediated by prey packaging. *Mar. Ecol. Prog. Ser.*, 683, 179-194.