# 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 astouned 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

Article Information: \*Corresponding Author: jashodeb@gmail.com Received 15/04/2023 Accepted after revision 25/06/2023 Published: June 2023 Pp- 91-99

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Available at: https://bbrc.in/ DOI: http://dx.doi.org/10.21786/bbrc/16.2.5

MATERIAL AND METHODS

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

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.

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.

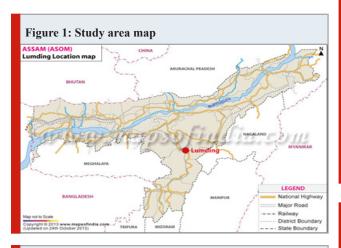
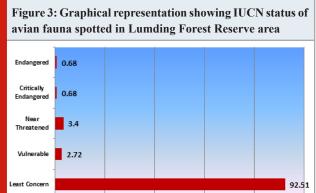


Figure 2: Graphical representation showing order wise abundance of avian fauna in Lumding Forest Reserve area 50 45 40 35 30 25 20 15 10 lrogoniformes Cuculiformes Strigiformes Coraciiformes Ciconiiformes

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 peroid. Observation was performed with the help of field binoculars (10x40). Pictures were captured with Digital Canon EOS 1300D, 18MP DSLR. Renouned 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).



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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, disoscorea 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	Pycnonotus cafer	Nectivorous, Frugivorous, Insectivorous, Palynivorous	Least Concern		
2		Campephagidae	Scarlet minivet speciosus	Pericrocotus Carnivorous	Insectivorous, Concern Ophiophagous	Least		
3		Oriolidae	Black headed oriole	Oriolus larvatus	Frugivorous, Insectivorous	Least Concern		
4			Indian Golden oriole	Oriolus kundoo	Frugivorous, Insectivorous, Nectivorous	Least Concern		
5 6		Pittidae	Black crown pitta Indian pitta	Erythropitta ussheri Pitta brachyura	Carnivorous, Insectivorous,	Least Concern Least Concern		
7		Orididae	Maroon oriole	Oriolus traillii	Insectivorous, Nectivorous	Least Concern		
8		Alaudidae	Eastern skylark (Oriental skylark)	Alauda gulgula	Granivorous	Least Concern		

## Table 1a

Table 1		I I			
9	Dicruridae	Racket tailed	Dicrorus paradiseus	Insectivorous,	Least
		drongo	,	Nectivorous	Concern
10		Black drongo	Dicrorus macrocercus	Insectivorous,	Least Concern
11		Ashy drongo	Dicrorus leucophaeus		Least Concern
12		Bronzed drongo	Dicrurus aeneus	Insectivorous	Least Concern
13	Nectariniidae	Nepal sunbird	Aethopyga nipalensis	Nectivorous	Least Concern
14	Sturnidae	Hill myna	Gracula religiosa	Omnivorous,	Least
1.	Starmane		Gracula religiosa	Insectivorous,	Concern
				Frugivorous	Concern
15	Laniidae	White crowned	Eurocephalus	Insectivorous,	Least Concern
15	Lumidae	shrike	anguitimens	Carnivorous	Least Concern
16		Bull headed shrike	Lanius bucephalus	Insectivorous,	Least Concern
10		Bull fleaded stillike	Lanius oucephaius	Carnivorous	Least Collectii
17		Long tailed	Larius collaris	Insectivorous,	Least Concern
1 /		Long taned		msectivorous,	
10	T : /1 : 1:1	т 1 1 111	fiscal shrike	т	Carnivorous
18	Leiothrichidae	Jungle babbler	Argya striata	Insectivorous	Least Concern
19	Pycnonotidae	Black headed bulbul	Pycnonotus atriceps	Insectivorous,	Least Concern
				Frugivorous	
20	Hirundinidae	Red rumped swallow	Cecropis daurica	Insectivorous	Least Concern
21	Passeri	Fairy blue bird	Irena puella	Insectivorous,	
				Nectivorous	Least Concern
22	Chloropseidae	Gold fronted leafbird	Chroropsis aurifrons	Omnivorous	Least Concern
23		Orange bellied	Chloropsis	Insectivorous,	Least Concern
		leafbird	hard wickii	Nectivorous	
24	Pycnonotidae	Brown eared bulbul	Hypsipetes amaurotis	Insectivorous,	Least Concern
				Frugivorous,	
				Nectivorous	
25	Mectarinidae	Large browed	Motacilla	Insectivorous	Least Concern
		wagtail	moderaspatensis		
26	Estrildidae	Spotted munia	Lonchura punctulata	Granivorous	Least Concern
27		Black headed munia	Lonchura malacca	Granivorous	Least Concern
28	Ploceidae	Baya weaver bird	Ploceus philippinus	Granivorous,	Least Concern
				Insectivorous	
29	Dicruridae	Lesser racket	Dicrurus remifer	Insectivorous	Least Concern
		tailed drongo			
30	Muscicapidae	White rumped	Copsychus	Insectivorous,	Least Concern
		·	magpie	malabaricus	Carnivorous
31	Sturnidae	Common myna	Acridotheres tristis	Insectivorous,	Least Concern
				Granivorous,	
				Carnivorous,	
				Omnivorous	
32		White headed starling	Sturnia erythropygia	Insectivorous	Least Concern
33		Brahminy starling	Sturnus pagodarum	Omnivorous	Least Concern
34		Jungle myna	Acridotheres fuscus	Omnivorous	Least Concern
35		Indian Pied myna	Gracupica contra	Omnivorous	Least Concern
36	Motacilladae	Yellow wagtail	Motacilla flava	Insectivorous	Least Concern
	iviotaciliadae		-		
37	T 1' 1	Citrine wagtail	Motacilla citriola	Insectivorous	Least Concern
38	Turdidae	Common black bird	Turdus merula	Omnivorous	Least Concern
39	Vangidae	Indian wood shrike	Tephrodornis	Insectivorous	Least Concern
			pondicerianus		

## Table 1b

Motacilladae	Table 1	·U					
Alaudidae Black lark yeloniensis  Sand lark Alaudidar riylad Insectivorous Least Concern yeloniensis  Corvidae Jungle crow Corvus culminatus Frugivorous Least Concern House crow Corvus culminatus Prugivorous Least Concern Pragivorous Desert Concern Corvus plenders Omnivorous Least Concern Chloropscidae Blue flycatcher Cyvrnis tickelliae Carnivorous Least Concern Chloropscidae Leaf bird Chloropsis flavipeonis Insectivorous Least Concern Chloropscidae Deservation Chloropsis flavipeonis Insectivorous Least Concern Chloropscidae Shama bird Copsychus Insectivorous Least Concern Prugivorous Deservation De	40		Motacilladae	Indian paddy field pipit	Anthus rufulus	Insectivorous	Least Concern
Sand lark   Alaudalar avyal   Least Concern	41		Paridae	Great tit	Parus major	Insectivorous	Least Concern
Sand lark	42		Alaudidae	Black lark	Melanocorypha	Insectivorous	Least Concern
Corvidae   House crow   Corvus splendens   Least Concern   House crow   Corvus splendens   Least Concern   Least Concern   Muscicapidae   Blue flycatcher   Cypriis tickelliae   Camivorous   Least Concern					yeltoniensis		
House crow   Corvus splendens   Omnivorous   Least Concern	43			Sand lark	Alaudala raytal	Insectivorous	Least Concern
Monarchidae   Paradisc flycatcher   Terepsiphone paradisi   Insectivorous   Least Concern	44		Corvidae	Jungle crow	Corvus culminatus	Frugivorous	Least Concern
Muscicapidae   Blue flycatcher   Cyornis tickelliae   Carnivorous   Least Concern	45			House crow	Corvus splendens	Omnivorous	Least Concern
Chloropseidae   Leaf bird   Chloropsis flavipenmis   Insectivorous   Frugivorous   Nectivorous	46		Monarchidae	Paradise flycatcher	Terepsiphone paradisi	Insectivorous	Least Concern
Laniidae Brown shrike Lanius cristatus Insectivorous Least Concern Muscicapidae Shama bird Copsychus Insectivorous Least Concern Muscicapidae Shama bird Copsychus Insectivorous Least Concern Muscicapidae Shama bird Copsychus Insectivorous Least Concern Frugivorous Frugivorous Carnivorous Least Concern Frugivorous Carnivorous Least Concern Frugivorous Insectivorous Least Concern Frugivorous Insectivorous Least Concern Frugivorous Insectivorous Least Concern Frugivorous Insectivorous Insectivoro	47		Muscicapidae	Blue flycatcher	Cyornis tickelliae	Carnivorous	Least Concern
Laniidae   Brown shrike   Lanius cristatus   Nectivorous   Least Concern	48		Chloropseidae	Leaf bird	Chloropsis flavipennis	Insectivorous,	Vulnerable
Laniidae   Brown shrike   Lanius cristatus   Insectivorous   Least Concern						Frugivorous,	
Muscicapidae   Shama bird   Copsychus malabaricus   Frugivorous   Least Concern						Nectivorous	
Slaty backed   Enicurus   Camivorous   Least Concern	49		Laniidae	Brown shrike	Lanius cristatus	Insectivorous	Least Concern
Slaty backed forktail bird   Schistaceus   Plumbeous redstart   Prugivorous   Least Concern   Pumbeous redstart   Prugivorous   Prugivo	50		Muscicapidae	Shama bird	Copsychus	Insectivorous,	Least Concern
Forktail bird   Schistaceus   Plumbeous redstart   Rhyacornis   Insectivorous, Carnivorous   Least Concern   Frugivorous   Insectivorous, Oranivorous   Least Concern   Frugivorous   Insectivorous, Oranivorous   Prugivorous   Insectivorous, Oranivorous   Prugivorous   Insectivorous, Oranivorous   Prugivorous   Insectivorous   Near Threatened   Prugivorous   Prugivorous   Near Threatened   Prugivorous   Prugivorous   Near Threatened   Prugivorous   Prugivorous   Prugivorous   Near Threatened   Prugivorous					malabaricus	Frugivorous	
Plumbeous redstart   Rhyacornis fuliginosa   Carnivorous   Least Concern	51			Slaty backed	Enicurus	Carnivorous	Least Concern
Leiothrichidae   Grey sibia   Heterophasia gracilis   Insectivorous   Least Concern				forktail bird	schistaceus		
Leiothrichidae   Grey sibia   Heterophasia gracilis   Frugivorous   Least Concern	52			Plumbeous redstart	Rhyacornis	Insectivorous,	Least Concern
Section of the content of the cont					fuliginosa	Carnivorous	
Jungle babbler  Jungle babbler  Jungle babbler  Jungle babbler  Turdoides striata  Granivorous, Nectivorous  Common babbler  Argya caudata  Omnivorous  Least Concern  White crowned shrike  Furocephalus  ruppelli  Laniidae  Pesittaculidae  Laniidae  Red breasted parakeet  Psittacula alexandri  Frugivorous, Granivorous  Near Threatened  Pringivorous, Granivorous  Pellomeum  Pellomeum  Pellomeum palustre babbler  Paradoxornithidae  Grey headed  Paradoxornithidae  Corvidae  Red whiskered bulbul  Pycnonotus jocosus  Insectivorous  Least Concern  Frugivorous, Granivorous  Least Concern  Insectivorous  Least Concern  Sulfaria gularis parrot bill  Corvidae  Red whiskered bulbul  Pycnonotus jocosus  Insectivorous  Least Concern  Frugivorous  Least Concern  Paridae  Paridae  Oriental tit  Parus minor  Omnivorous, Least Concern  Molluscivorous  Least Concern  Molluscivorous  Least Concern  Paridae  Pin tail duck  Anas acuta  Granivorous  Least Concern  Frugivorous  Least Concern  Paridae  Paridae  Pin tail duck  Anas acuta  Granivorous  Least Concern  Frugivorous  Least Concern  Paridae  Paridae  Pin tail duck  Anas acuta  Granivorous  Least Concern  Molluscivorous  Least Concern  Molluscivorous  Least Concern  Frugivorous  Least Concern  Paridae  Paridae  Pin tail duck  Anas acuta  Granivorous  Least Concern  Molluscivorous  Least Concern  Molluscivorous  Least Concern  Molluscivorous  Least Concern  Frugivorous,  Least Concern  Frugivorous  Least Concern  Molluscivorous  Least Concern  Frugivorous  Least Concern  Frugivorous,  Least Concern  Least Concern  Least Concern  Frugivorous  Least Concern  Frugivorous  Least Concern  Frugivorous  Least Concern  Frugivorous  Least Concern  Least Concern	53		Leiothrichidae	Grey sibia	Heterophasia	Insectivorous,	Least Concern
Common babbler   Argya caudata   Omnivorous   Least Concern					gracilis	Frugivorous	
Common babbler   Argya caudata   Omnivorous   Least Concern	54			Jungle babbler	Turdoides striata	Insectivorous,	Least Concern
Common babbler   Argya caudata   Omnivorous   Least Concern						Granivorous,	
White crowned shrike   Eurocephalus ruppelli   Carnivorous   Least Concern						Nectivorous	
Psittaculidae   Psittaculiae   Psi	55			Common babbler	Argya caudata	Omnivorous	Least Concern
Psittaculidae   Alexandrine parakeet   Psittacula eupatria   Omnivorous   Near Threatened	56			White crowned shrike	Eurocephalus	Carnivorous	Least Concern
Laniidae   Red breasted parakeet   Psittacula alexandri   Frugivorous,   Near Threatened   Granivorous					ruppelli		
Pnoepygidae Pygmy cupwing Pnoepyga pusilla Insectivorous Least Concern Pellorneidae Brown capped Pellomeum Insectivorous Least Concern  Marsh spotted babbler fuscocapillus Insectivorous Vulnerable Paradoxornithidae Grey headed Psittiparus gularis parrot bill Corvidae Red whiskered bulbul Pycnonotus jocosus Insectivorous Least Concern  Black browed treepic Dendrocitta frontalis Carnivorous Least Concern  Passeridae House sparrow Passer domesticus Insectivorous Least Concern  Tree sparrow Passer montanus Insectivorous Least Concern  Paridae Oriental tit Parus minor Omnivorous Least Concern  Molluscivorous Least Concern  Molluscivorous Least Concern  Prugivorous Least Concern  Paridae Pin tail duck Anas acuta Granivorous Least Concern  Molluscivorous Least Concern	57		Psittaculidae	Alexandrine parakeet	Psittacula eupatria	Omnivorous	Near Threatened
Pnoepygidae   Pygmy cupwing   Pnoepyga pusilla   Insectivorous   Least Concern	58		Laniidae	Red breasted parakeet	Psittacula alexandri	Frugivorous,	Near Threatened
Pellorneidae   Brown capped   Pellomeum   Insectivorous   Least Concern						Granivorous	
Black browed treepie   Dendrocitta frontalis   Carnivorous   Least Concern	59		Pnoepygidae	Pygmy cupwing		Insectivorous	Least Concern
Marsh spotted babbler   Pellomeum palustre   Insectivorous   Vulnerable	60		Pellorneidae	Brown capped	Pellomeum	Insectivorous	Least Concern
Black browed treepie   Dendrocitta frontalis   Carnivorous   Least Concern							
Paradoxornithidae   Grey headed   Psittiparus gularis parrot bill	61			_	Pellomeum palustre	Insectivorous	Vulnerable
Corvidae Red whiskered bulbul Pycnonotus jocosus Insectivorous, Least Concern    Frugivorous	62		Paradoxornithidae		Psittinarus oularis	Insectivorous	Least Concern
Black browed treepie Dendrocitta frontalis Carnivorous Least Concern  Passeridae House sparrow Passer domesticus Insectivorous Least Concern  Tree sparrow Passer montanus Insectivorous Least Concern  Paridae Oriental tit Parus minor Omnivorous, Molluscivorous  Anatidae Pin tail duck Anas acuta Granivorous Least Concern  Piciformes Megalaimidae Large green barbet Psilopogon Frugivorous, Least Concern  Coppersmith barbet Psilopogon Frugivorous Least Concern	02		Turudonormimudo	Grey neuded		mocentorous	Ecust Concern
Black browed treepie Dendrocitta frontalis Carnivorous Least Concern  Passeridae House sparrow Passer domesticus Insectivorous Least Concern  Tree sparrow Passer montanus Insectivorous Least Concern  Paridae Oriental tit Parus minor Omnivorous, Molluscivorous  Anatidae Pin tail duck Anas acuta Granivorous Least Concern  Piciformes Megalaimidae Large green barbet Psilopogon Frugivorous, Least Concern  Coppersmith barbet Psilopogon Frugivorous Least Concern  Tree sparrow Passer montanus Insectivorous  Least Concern  Least Concern  Least Concern  Least Concern  Least Concern  Least Concern	63		Corvidae	Red whiskered bulbul	Pycnonotus jocosus		Least Concern
Passeridae House sparrow Passer domesticus Insectivorous Least Concern Tree sparrow Passer montanus Insectivorous Least Concern Paridae Oriental tit Parus minor Omnivorous, Least Concern Molluscivorous Anatidae Pin tail duck Anas acuta Granivorous Least Concern Piciformes Megalaimidae Large green barbet Psilopogon Frugivorous, Least Concern  Coppersmith barbet Psilopogon Frugivorous Least Concern							
Tree sparrow Passer montanus Insectivorous Least Concern Paridae Oriental tit Parus minor Omnivorous, Molluscivorous Anatidae Pin tail duck Anas acuta Granivorous Least Concern Piciformes Megalaimidae Large green barbet Psilopogon Frugivorous, Least Concern Coppersmith barbet Psilopogon Frugivorous Least Concern Coppersmith barbet Psilopogon Frugivorous Least Concern							
Paridae Oriental tit Parus minor Omnivorous, Molluscivorous  Anatidae Pin tail duck Anas acuta Granivorous Least Concern  Piciformes Megalaimidae Large green barbet Psilopogon Frugivorous, Least Concern  Coppersmith barbet Psilopogon Frugivorous Least Concern  Coppersmith barbet Psilopogon Frugivorous Least Concern	65		Passeridae				
68 Anatidae Pin tail duck Anas acuta Granivorous Least Concern 69 Piciformes Megalaimidae Large green barbet Psilopogon Frugivorous, Coppersmith barbet Psilopogon Frugivorous Least Concern Coppersmith barbet Psilopogon Frugivorous Least Concern							
68 Anatidae Pin tail duck Anas acuta Granivorous Least Concern 69 Piciformes Megalaimidae Large green barbet Psilopogon Frugivorous,  Coppersmith barbet Psilopogon Frugivorous Least Concern  Coppersmith barbet Psilopogon Frugivorous Least Concern	67		Paridae	Oriental tit	Parus minor		
69 Piciformes Megalaimidae Large green barbet Psilopogon Frugivorous, Least Concern  70 Coppersmith barbet Psilopogon Frugivorous Least Concern							
70   Zeylanicus Insectivorous   Coppersmith barbet   Psilopogon   Frugivorous   Least Concern							
70 Coppersmith barbet Psilopogon Frugivorous Least Concern	69	Piciformes	Megalaimidae	Large green barbet		-	Least Concern
haemacephalus	70			Coppersmith barbet		Frugivorous	Least Concern
					haemacephalus		

## Table 1c

Table 1						
71		Picidae	Golden backed woodpecker	Dinopium benghalense	Insectivorous	Least Concern
72			•	Classical	F	Least Concern
12			Large golden backed	Chrysocolaptes	Frugivorous, Insectivorous,	Least Concern
				guttacristatus	Granivorous	
72			woodpecker	Cili-		It C
73			Rufous piculet	Sasia abnormis	Insectivorous,	Least Concern
7.4			D : 1: : 1	D 1	Carnivorous	T
74			Darjeeling pied	Dendrocopos	Insectivorous	Least Concern
			woodpecker	darjellensis		
75			Heart spotted	Hemicircus	Insectivorous	Least Concern
			woodpecker	canente		
76			Large yellow	Melanerpes flavifrons	Insectivorous,	Least Concern
			fronted woodpecker		Frugivorous	
77			Rufous woodpecker	Micropternus	Insectivorous,	Least Concern
				brachyurus	Frugivorous,	
					Nectivorous	
78	Bucerotiformes	Bucerotidae	Grey hornbill	Ocyceros birostris	Granivorous	Least Concern
79		Upupidae	Ноорое	Upupa sp	Insectivorous,	Least Concern
					Carnivorous	
80	Gruiformes	Rallidae	Coot	Fulica atra	Omnivorous	Least Concern
81		Rallidae	Common moorhen	Gallinula chloropus	Omnivorous	Least Concern
82			Western swamphen	Porphyrio porphyrio	Omnivorous	Least Concern
83		Ardeidae	Little egret	Egretta garzetta	Carnivorous	Least Concern
84	Apodiformes	Trochilidae	Ruby throated	Archilochus colubris	Insectivorous,	Least Concern
	_		humming bird			
85	Accipitriformes	Accipitridae	Indian white	Gyps bengalensis	Carnivorous	Critically
		•	rumped vulture			Endangered
86			Shikra (Indian shikra)	Accipiter badius	Insectivorous	Least Concern
87			Pariah kite	Milvus migrans	Carnivorous,	Least Concern
					Avivorous	
88			Pied harrier	Circus melanoleucos	Insectivorous,	Least Concern
					Avivorous	
89			Crested serpent eagle	Spilornis cheela	Insectivorous,	Least Concern
			greaten serpent engre	Spirot till etteeta	Ophiophagous	20000 0000000
90			Black winged kite	Elanus caeruleus	Insectivorous	Least Concern
91			Black eared baza	Aviceda leuphotes	Insectivorous	Least Concern
92			Changeable hawk eagle	Nisaetus cirrhatus	Avivorous	Least Concern
93			Crested serpent eagle	Spilornis cheela	Carnivorous,	Least Concern
			Stested scrpetit eagle	Sphornis cheetu	Avivorous,	Least Concern
					Carnivorous	1
94			White tailed eagle	Haliaeetus albicilla	Carnivorous	Least Concern
95	Columbiformes	Columbidae	Spotted dove	Stiloopelia chinensis		
93	Columbinormes	Columbidae	sponed dove	sinoopena chinensis	Frugivorous, Granivorous,	Least Concern
06			D:1 11	C4	Insectivorous	I C
96			Ring necked dove	Streptopelia capicola	Frugivorous,	Least Concern
					Granivorous,	
0.7			P 111	Cl. 1	Insectivorous	T
97			Emerald dove	Chalcophaps indica	Frugivorous	Least Concern

## Table 1d

98			Red turtle dove	Streptopelia	Granivorous,	Least Concern
				tranque baricha		
99			Green imperial pigeon	Ducula aenea	Granivorous	Near Threatened
100			Rock pigeon	Columba livia	Granivorous,	Least Concern
					Frugivorous,	
					Insectivorous	
101		1	Imperial pigeon	Dacula sp	Frugivorous	Least Concern
102		†	Spotted dove	Spoilopelia chinenois	Insectivorous	Least Concern
103	Coraciiformes	Meropidae	Chestnut headed	Merops leschenaulti	Insectivorous	Least Concern
100			bee eater	interops reserventum	111500111010	
104			Green bee eater	Merops orientalis	Insectivorous,	Least Concern
101			Green dee cater	merops or tentans	Carnivorous	Least Concern
105		Alcedinidae	White breasted	Halcyon smyrnensis	Insectivorous,	Least Concern
103		Aiccumdae	kingfisher	Traicyon smyrnensis	Carnivorous	Least Concern
106				41 1 41:		T. A.C.
106			Common kingfisher	Alcedo anthis	Carnivorous,	Least Concern
				bengalensis	Insectivorous,	
					Piscivorous	
107	Trogoniformes	Trogonidae	Red headed trogon	Harpactes erythrocephalus	Insectivorous	Least Concern
108	Cuculiformes	Cuculidae	Crow pheasant	Centropus sinensis	Carnivorous	Least Concern
109			Asian koel	Eudynamys scolopaceus	Omnivorous	Least Concern
110	Galliformes	Phasianidae	Black francolin	Francolinus francolinus	Insectivorous	Least Concern
111			Grey partridge	Perdix perdix	Insectivorous,	Least Concern
			Grey paramage	1 c. a.a. p c. a.a.	Granivorous	
112			Jungle bush quail	Perdicula asiatica	Frugivorous,	Least Concern
112			Jungie Jusii quan	1 cratetta astattea	Granivorous	Least Concern
113			Red jungle fowl	Gallus gallus	Frugivorous	Least Concern
113			Kalij pheasant	Lophura leucomelanos	Omnivorous	Least Concern
115		Dicacidae	Plain coloured	Diacacum		
113		Dicacidae			Frugivorous, Nectivorous	Least Concern
116		D (1)	flower pecker	minullum		T C
116		Pycnorotidae	Black bulbul	Hypsipetes	Insectivorous,	Least Concern
				leucocephalus	Granivorous	
117	Ciconiiformes	Ciconiidae	Greater adjutant	Leptoptilos dubius	Omnivorous,	Endangered
					Carnivorous	
118			Lesser adjutant	Leptoptilos javanicus	Omnivorous,	Vulnerable
					Carnivorous,	
					Piscivorous	
119			Black necked stork	Ephippiorhynctus asiaticus	Carnivorous	Near Threatened
120			Scaly breasted stork	Anastomus	Carnivorous,	Least Concern
120			Scary breasted stork		Molluscivorous	Least Collectif
121	Suliformes	Dhalases some -: 1.	Little some	oscitans Migrogarbo vigar		Loost Com
121	Sumormes	Phalacrocoracidae	Little cormorant	Microcarbo niger	Carnivorous	Least Concern
122			Large cormorant	Phalacrocorax carbo	Carnivorous	Least Concern
123			Indian cormorant	Phalacrocorax	Carnivorous	Least Concern
	,		_	fusicollis		
124		Anhingidae	Darter	Anhinga sp	Piscivorous	Near threatened
125	Pelecaniformes	Ardeidae	Great egret	Ardea alba	Carnivorous	Least Concern
126			Medium egret	Ardea intermedia	Carnivorous	Least Concern
127			Cattle erget	Bubulcus ibis	Carnivorous	Least Concern

Table 1e

1 abic 1						
128			Yellow bittern	Ixobrychus sinensis	Carnivorous	Least Concern
129			Chinese pond heron	Ardeola bacchus	Carnivorous	Least Concern
130			Indian pond heron	Ardeola grayii	Carnivorous	Least Concern
131			Night heron	Nycticorax	Insectivorous,	Least Concern
				nyctanassa	Avivorous,	
				-	Piscivorous	
132			Bittern	Botaurus stephens	Carnivorous	Least Concern
133			Tiger heron	Tigrisoma lineatum	Carnivorous	Least Concern
134	Strigiformes	Strigidae	Jungle owlet	Glaucidium radiatum	Insectivorous	Least Concern
135			Brown fish owl	Ketupa zeylonensis	Piscivorous	Least Concern
136		Tytonidae	Barn owl	Tyto alba	Carnivorous	Least Concern
137	Anseriformes	Anatidae	Common pochard	Aythya ferina	Molluscivorous,	Vulnerable
					Insectivorous	
138			Lesser whistling duck	Dendrocygna	Gregarious	Least Concern
				javanica		
139			Brahminy duck	Tadorma ferruginea	Omnivorous	Least Concern
140	Charadriiformes	jacanidae	Pheasant tailed jacana	Hydrophasianus	Insectivorous,	Least Concern
					chirurgus	Molluscivorous
141			Bronze winged jacana	Metopidius indicus	Insectivorous	Least Concern
142		Charadriidae	Red wattled lapwing	Vanellus indicus	Insectivorous,	Least Concern
					Granivorous,	
					Molluscivorous	
143			Spur winged lapwing	Vanellus spinosus	Insectivorous	Least Concern
144		Laridae	River tern	Sterna aurantia	Insectivorous,	Vulnerable
					Piscivorous	
145			Indian robin	Saxicoloides fulicatus	Insectivorous	Least Concern
146		Scolopacidae	Long toed stint	Calidris	Insectivorous,	Least Concern
				subminuta	Molluscivorous,	
					Granivorous	

<sup>\*</sup>Piscivorous: fish eater birds; Palynivorousbirds: pollen eater birds; Nectivorous: necter 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.

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 Limding are Least Concern indicating their sufficient existance, 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.

<sup>\*\*</sup>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 endangeredment 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.

#### **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 servive for long.

#### ACKNOWLEDGEMENTS

Authors are greatful to Dr. Ghosh (Ornithologist) and his team from Zoological Survey of India, for their full hearted cooperation, involvement and remaining physically present during the investigation period and helping in identification of birds.

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