IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 9, Issue 3 Ser. XII (May - June 2020), PP 14-21
www.iosrjournals.org

Classified Guilds in Avifaunal Community within Indian Deciduous Forests: A case study of Tadoba Andheri Tiger Reserve.

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Abstract
*Tadoba Andheri Tiger Reserve (henceforth, TATR) is one of the 50 Project Tiger areas of India. Even thoughsporadic documentations of its Avifaunal diversity have been recordedin recent years, but a thorough meticulous and scientific documentation of its Avifaunal community based on food and habitat is lacking. We have documented the feeding preferences of the avian communityof TATR in the context of habitat diversity. According to the availability of food, total **95 species** of birds were studied in the study area that belonged to 43 families. The studied avian species were divided into **8**basic habitats-**aquatic**, **aquatic-terrestrial**, **terrestrial**, **arboreal**, **arboreal-terrestrial**, **aerial, aerial-arboreal** and**aerial-terrestrial**. The species thus obtained based on the 8 different habitat niches were then broken down on the based on their feeding preferences. The aquatic niche included**7** feeding guilds [14.89%] whereasaquatic-terrestrialconsisted of **5** feeding guilds[10.64%], the terrestrial niche included **9** feeding guilds [19.15%], the arboreal and the arboreal-terrestrial included **9**[19.15%] and **10**[21.28%] feeding guilds respectively while birds of aerial adaptation were divided into 3 categories-aerial, aerial-arboreal andaerial-terrestrialthat included **1**[2.12%], **4**[8.51%] and **2**[4.26%]feeding guilds respectively. The bark-prober was included within the aerial-arboreal habitat.*

Keywords:** **TATR, Avifauna, Feeding Guild, Habitat

Date of Submission: 12-06-2020 Date of Acceptance: 29-06-2020

I. Introduction:

Tadoba-Andhari tiger reserve (TATR) is located in Chandrapur district of Maharashtra state, India. Total area of TATR is 625.40 sq. km. which covers some hilly and mostly flat terrain with mixed dry deciduous forest dominated by bamboo. TATR is an important tiger reserve of central India. It is a Protected Area under The Indian Wildlife (Protection) Act, 1972, whereby legal protection has been provided for the conservation of the habitat and its animal and plant diversity [1]. It has been declared as a National Park in 1995 and got reputation of first National Park of Maharashtra. In 1995 also it got status of a Tiger Reserve. In 2010 more 1375 sq. km. area as buffer forest is included in this which made this a vast landscape for superb ecosystem.

The TATR forest is dominated by *Tectonagrandis, Diospyros melanoxylon,* and *Terminalia elliptica,* and patchily fragmented with thorny bushes and trees like *Acacia leucophloea*and *A. nilotica*. Its topography also supports diverse habitats, including open canopy grasslands, stony grasslands along the small hillocks, semi-deciduous riparian forest, perennial- and seasonal streams, wetlands, and agricultural lands. TATR also harbours a wide range of faunal diversity including charismatic species like tiger *Panthera tigris*, leopard *P. pardus*, Indian wild dog *Cuonalpinus,* sloth bear *Melursusursinus;* ungulates like sambar *Rusa unicolor*, spotted deer *Axis axis*, barking deer *Muntiacusmuntjak*, nilgai *Boselaphustragocamelus*, four-horned Antelope *Tetracerusquadricornis;* and lesser-known mammals like the Indian fox *Vulpes benghalensis*, rusty spotted cat *Prionailurusrubiginosus,* honey badger *Mellivoracapensis,* small Indian civet *Viverriculaindica, etc.,* (Authors' personal observations).

Birds are one of the most diverse and predominant forms of life on Earth, occupying almost all kinds of habitats and biomes. Earlier studies of the avifauna of this region exist: A preliminary checklist of birds prepared by Forest Department, Chandrapur, in 2003 (available at the education centre of TATR). The feeding guilds in a bird community are described by the way species obtain food, the types of food taken, the foraging substrates exploited and the heights at which different species forage. These data help to compare communities

within and between habitats [2]and also to assess the health of the ecosystem and management needs for the conservation of species and ecosystem. The present study while producing a detailed checklist of birds family-wise available in the National Park is mainly focused on preparing a guild classification of birds by analyzing the foraging information obtained.

II. Material And Methods:

1.Study Area

TATR lies in Chandrapur District of Vidarbha region in eastern Maharashtra (India), and has vegetation that falls under to the classification: 5A-CI-1B Southern tropical dry deciduous forest [1]. The total area of TATR is presently 1727.59 sq km out of which 625.82 sq km is designated as the critical tiger habitat (core area), and 1101.77sq km as the buffer area.

Table.1. A summary of the Study Area

State	Maharashtra
District	Chandrapur, Gondia
Distance	140km. from Nagpur via Chimur
Arrival Information	**By Rail :-** Nearest Station is Chandrapur railway station on New Delhi-Chennai line. **By Road :-** Nearest Bus Stand is Sakoli, 22km. from the Sanctuary on the Nagpur-Calcutta National Highway **By Air :-** Nearest Airport is Shegaon, Nagpur, 122km. from the Sanctuary
Altitude	Ranges from 212.45m to 350.70m above the sea surface)
Latitude & Longitude	20°4'53" to 20°25'51" North 79°13'13" to 79°33'34" East
Total Area	625.40 sq.km
Climate	The area has a subtropical climate with three distinct seasons-summer, monsoon and winter. Climate is characterized by hot and prolonged summer months from March to June while winter is short and mild from December to February.
Temperature	Ranges from 3°C to 49.2°C. Maximum temperature recorded during May.
Rainfall	1175mm/year
Best time to visit	February to May
Soil Type	Hard stony type
Forest Type	Southern Tropical Dry Deciduous Forest with a great diversity of plant community.
Vegetation	The area is mostly undulating and hilly in north. The southern part of the TATR is mostly plain.
Range Offices	a) Tadoba b) Mohorli c) Kolsa
Entry Points	a) **Moharli**– 25 K.M. from Chandrapur b) **Navegaon**– 130 K.M. from Nagpur via Umred, Chimur, Khadsingi c) **Pangadi**– 25 K.M. from Sindewahi d) **Zari** – 30 K.M. from Chandrapur, Chichpalli
Rivers and Lakes	**Rivers:-**Erai and Andhari River. **Lakes:-**Nagzira lake, Chorkhamari lake, Bodalkasa lake, Rengepar lake, Murpar lake, Lendezari lake, Malutola lake, Thadezari lake, Balapur Lake, Badbadya lake etc.
Major Trees	Teak, Haldu, Jamun, Kawat, Mahua, Ain, Bhel, Bhor, Dhavda, Bija, Garari, Tinsa, Tendu, Surya, Bamboo etc.
Invertebrate Species Diversity	Large number of Arthropods.
Vertebrate Species Diversity [approximate estimation]	80 species of mammals 280 species of birds 30 species of reptiles 5 species of amphibians 23 species of fishes 100 species of butterflies 26 species of spiders
Sanctuary Closed	Tuesday of every week. 31st December, Holi, Dhulivandan, full moon days of April and May.

2. Study Team

The extensive data on the birds could be obtained as because study team wasbig enough. It included Dr.Malabika Bhattacharjee and Dr.Trijit Nandaas the faculty under the supervision ofwhom the 3rd year undergraduate students of Department of Zoology, Vivekananda College, Kolkata-700064, could ably compile the data. The students were initially dividedinto groups for more systematic accumulation of the data. Since each individual student contributed with utmost sincerity, hence all the names are incorporated here.

Table.2. The Study Team

Group-1	Group-2	Group-3	Group-4	Group-5
SayantaniChakrobarty	SohiniDas	Md. NazimulHoque	DrishikaJashu	JoysreeMallick

SomiaDas	Arunima Roy	Subhas Biswas	PreetishaGhosh	Swagata Basu
SrilekhaSen	DipanjanBhattacharya	DebrajBhattacharjee	AkilAnsari	Sangita Bhandary
MoumitaDas	Ananya Bhattacharya	MohijitPodder	Priyanka Mukherjee	MeghaChandrimaDas
AraniAcharjee	DebarpitaGupta	MonayemHossain	DebosmitaDas	SreyaPradhan
Tanisha Dutta	Sourav Halder	SaptadipMajhi	SuprioParbat	Priya Pal
RinikaHalder	SoumitaDas	Ranjit Shaw	RajibMondal	ProgatiNath
Riya Mondal	SayantiNaskar	Sourav Singha	Anupam Biswas	DebadritaSamajdar
		PritamDas	Madhurima Halder	

3. Binocular and Camera Models

Binocular-Birds were initially observed with the help of aOlympus 8 x 40 DPSI Field binocular

Camera-Photographs were taken with

1. Canon PowerShot SX420 IS, Canon PowerShot SX540, Canon 750d and Canon eos 1300d and
2. Sony DSC-W210, SonyDSLR Alpha-58
3. Nikon D5300

In some occasions, birds' calls were also noted. All identifications were based according to Grimmett*et al.* (1998)[3]and Ali, S (2002)[4]

4. Basic Feeding Guilds used for the study

The 95 different species of birds observed in different locations of the forest, croplands, near human settlements andaquatic habitations were initially grouped on the basis of their habitat niche-***aquatic***, ***aquatic-terrestrial***, ***terrestrial***, ***arboreal***, ***arboreal-terrestrial***, ***aerial, aerial-arboreal*** and***aerial-terrestrial***. Each habitat was then dealt separately and the food habits were again observed. Basically, while collecting the data the food preferences the following broad categorization was initially done.

a) **Insectivorous** refers to birds that primarily eat insects,
b) **Pytophagous** includes herbivorous, granivorous, nectarivorous and frugivorous groups of birds.
c) **Carnivore** means birds prey on available animal food,
d) **Omnivorous** refers to birds that feed on various animal and plant meters.
e) **Bark prober's** means the activity of birds, like wood search and bark tear for food finding.

The proportion of birds in each category was then systematically segregated keeping in mind the habitat in which they occupied.The number of feeding guilds werethus finally identified

III. Result And Discussion

According to the availability of food, total 95 species of the birds were subjected at the study area that belonged to 43 families. The studied avian species were divided into 8basic habitats-***aquatic***, ***aquatic-terrestrial***, ***terrestrial***, ***arboreal***, ***arboreal-terrestrial***, ***aerial, aerial-arboreal*** and***aerial-terrestrial***. The species thus obtained based on the 8 different habitat niches were then broken down on the based on their feeding preferences**Figure.1**. The *aquatic* niche included 7 feeding guilds [14.89%] whereas*aquatic-terrestrial*consisted of 5 feeding guilds[10.64%], the terrestrial niche included 9 feeding guilds [19.15%], the arboreal and the arboreal-terrestrial included 9 [19.15%] and 10 [21.28%] feeding guilds respectively while birds of aerial adaptation were divided into 3 categories- *aerial, aerial-arboreal* and*aerial-terrestrial*that included 1[2.12%], 4 [8.51%] and 2[4.26%]feeding guilds respectively. The bark-prober was included within the *aerial-arboreal* habitat.

The 8-habitat niche that were predominantly observed were again further broken down on the basis of the feeding habits of birds. **Table 3** and **Figure.2** reflects in total the 47 feeding guilds that was observed after extensive survey of the study area.

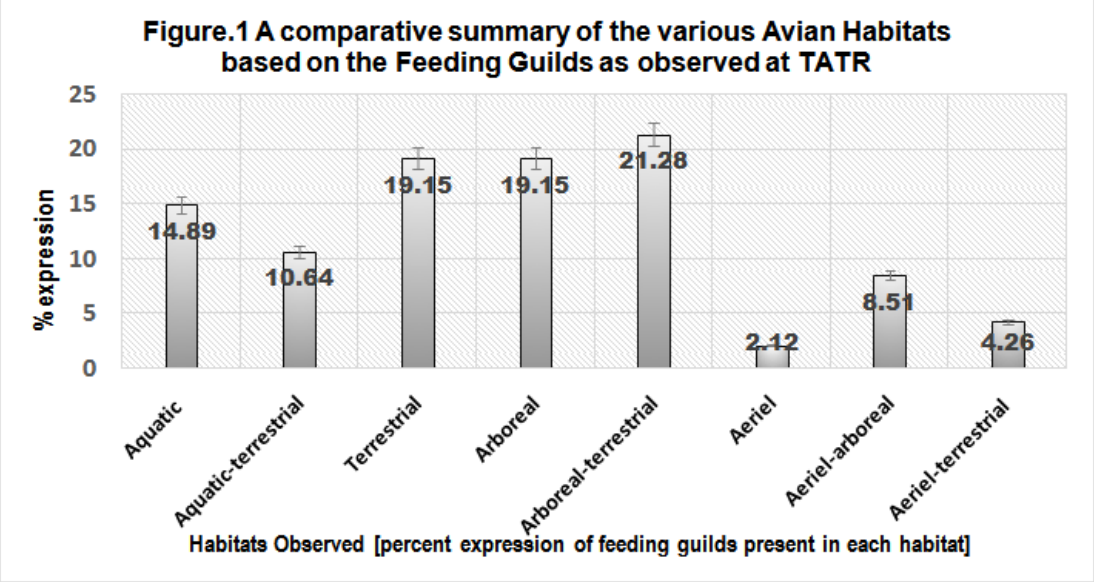


Table.3. The different feeding guilds observed and the percent expression of each guild.

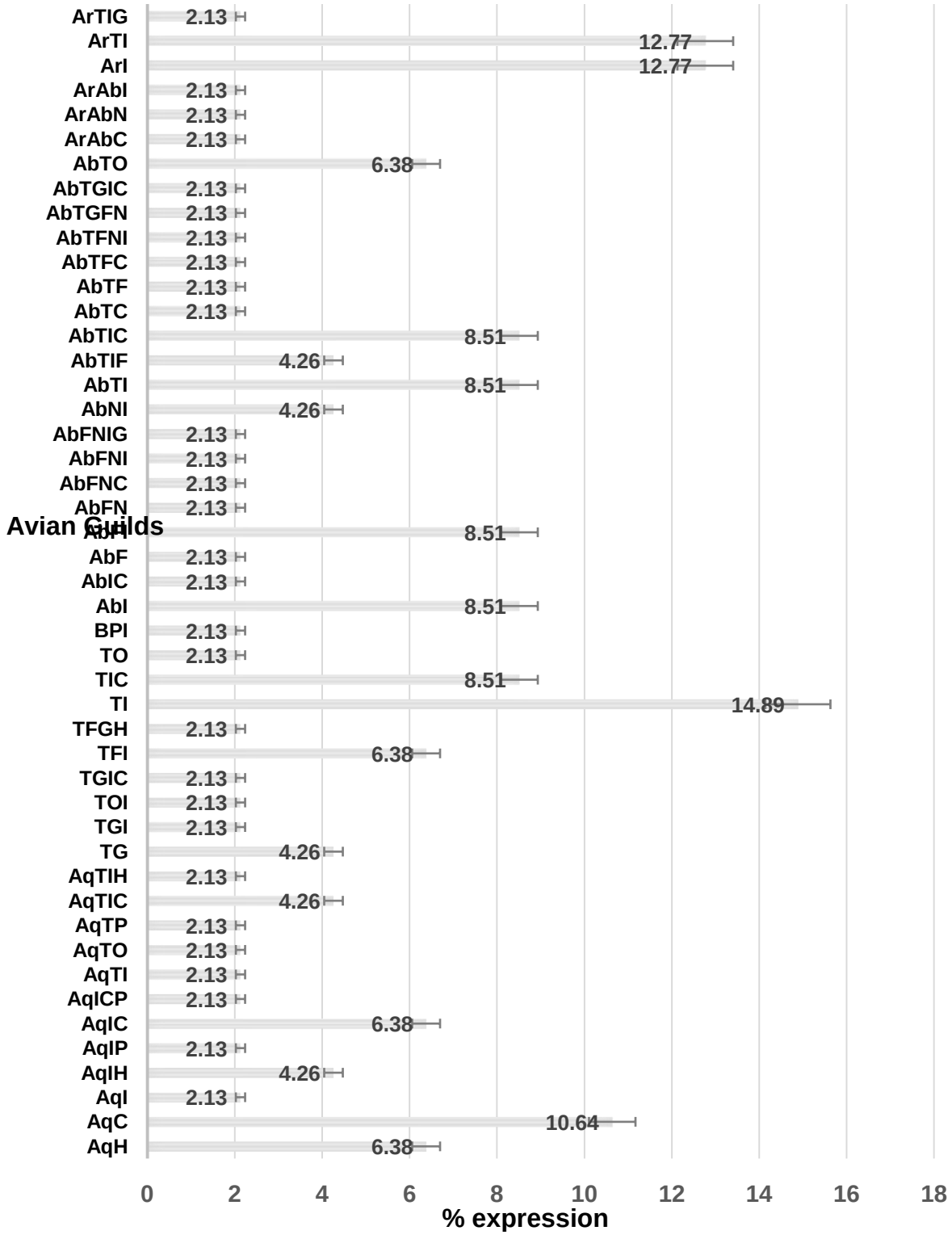
Sl. No.	Feeding guild	Abbrev. Used	No. of species	% expression
1.	Aquatic Herbivore	**AqH**	3	6.38
2.	Aquatic Carnivore	**AqC**	5	10.64
3.	Aquatic Insectivore	**AqI**	1	2.13
4.	Aquatic Insectivore Herbivore	**AqIH**	2	4.26
5.	Aquatic Insectivore Piscivore	**AqIP**	1	2.13
6.	Aquatic Insectivore-Carnivore	**AqIC**	3	6.38
7.	Aquatic Insectivore-Carnivore Piscivore	**AqICP**	1	2.13
8.	Aquatic-Terrestrial Insectivore	**AqTI**	1	2.13
9.	Aquatic-Terrestrial Omnivore	**AqTO**	1	2.13
10.	Aquatic-Terrestrial Piscivore	**AqTP**	1	2.13
11.	Aquatic-Terrestrial Insectivore Carnivore	**AqTIC**	2	4.26
12.	Aquatic-Terrestrial Insectivore Herbivore	**AqTIH**	1	2.13
13.	Terrestrial Granivore	**TG**	2	4.26
14.	Terrestrial Granivore Insectivore	**TGI**	1	2.13
15.	Terrestrial Omnivore Insectivores	**TOI**	1	2.13
16.	Terrestrial Granivore Insectivore Carnivore	**TGIC**	1	2.13
17.	Terrestrial Frugivore Insectivore	**TFI**	3	6.38
18.	Terrestrial Frugivore Granivore Herbivore	**TFGH**	1	2.13
19.	Terrestrial Insectivore	**TI**	7	14.89
20.	Terrestrial Insectivore Carnivore	**TIC**	4	8.51
21.	Terrestrial Omnivore	**TO**	1	2.13
22.	Bark Probing Insectivore	**BPI**	1	2.13
23.	Arboreal Insectivore	**AbI**	4	8.51
24.	Arboreal Insectivore Carnivore	**AbIC**	1	2.13
25.	Arboreal Frugivore	**AbF**	1	2.13
26.	Arboreal Frugivore Insectivore	**AbFI**	4	8.51
27.	Arboreal Frugivore Nectarivore	**AbFN**	1	2.13
28.	Arboreal Frugivore Nectarivore Carnivore	**AbFNC**	1	2.13
29.	Arboreal Frugivore Nectarivore Insectivore	**AbFNI**	1	2.13
30.	Arboreal Frugivore Nectarivore Insectivore Granivore	**AbFNIG**	1	2.13
31.	Arboreal Nectarivore-Insectivore	**AbNI**	2	4.26
32.	Arboreal-Terrestrial Insectivore	**AbTI**	4	8.51
33.	Arboreal-Terrestrial Insectivore Frugivore	**AbTIF**	2	4.26
34.	Arboreal-Terrestrial Insectivore Carnivore	**AbTIC**	4	8.51
35.	Arboreal-Terrestrial Carnivore	**AbTC**	1	2.13
36.	Arboreal-Terrestrial Frugivore	**AbTF**	1	2.13
37.	Arboreal-Terrestrial Frugivore- Carnivore	**AbTFC**	1	2.13
38.	Arboreal-Terrestrial Frugivore-Nectarivore-Insectivore	**AbTFNI**	1	2.13
39.	Arboreal-Terrestrial Granivore-Frugivore-Nectarivore	**AbTGFN**	1	2.13
40.	Arboreal-Terrestrial Granivore-Insectivore-Carnivore	**AbTGIC**	1	2.13
41.	Arboreal-Terrestrial Omnivore	**AbTO**	3	6.38

42.	Aerial-Arboreal Carnivore	**ArAbC**	1	2.13
43.	Aerial-Arboreal Nectarivore	**ArAbN**	1	2.13
44.	Aerial-Arboreal Insectivore	**ArAbI**	1	2.13
45.	Aerial Insectivore	**ArI**	6	12.77
46.	Aerial-Terrestrial Insectivore	**ArTI**	6	12.77
47.	Aerial-Terrestrial Insectivore Granivore	**ArTIG**	1	2.13

The highest number of birds belonged to the feeding guild *terrestrial-insectivore* [14.89%] followed the 2 feeding guilds *aerial-insectivore* [12.77%] and *aerial-terrestrial insectivore* [12.77%]. Amongst the aquatic birds, the feeding guild by *aquatic carnivore* [10.64%] topped the list. The 5 feeding guilds- *terrestrial insectivorecarnivore*, arboreal *insectivore*, *arboreal frugivore insectivore*, *arboreal-terrestrial insectivore*, *arboreal-terrestrial insectivore carnivore* occupied the same status in the trophic niche each reflecting 8.51%.*Aquatic herbivore*, *aquatic insectivore-carnivore*, *terrestrial frugivore insectivore*, *arboreal-terrestrial omnivore* were the 4 next prevalent guilds and also occupied the same status viz.6.38%The 5 feeding guilds - *aquatic insectivore herbivore*, *aquatic-terrestrial insectivore carnivore*, *terrestrial granivore*, *arboreal nectarivore-insectivore*, *arboreal-terrestrial insectivore frugivore*also occupied the same status-4.26%. There were 29 unique feeding guilds as reflected in **Table 3** and **Figure.2** which occupied only 2.13% each.

The ***aquatic habitat*** consisted of **3** unique feeding guilds-*aquatic insectivore*, *aquatic insectivore piscivore*and*aquatic insectivore-carnivore piscivore*while the ***aquatic-terrestrial*** habitat consisted of **4** unique feeding guilds-*aquatic-terrestrial insectivore*, *aquatic-terrestrial omnivore*, *aquatic-terrestrial piscivore*and*aquatic-terrestrial insectivore herbivore*.The ***terrestrial*** habitat consisted of **5**unique feeding guilds-*terrestrial granivore insectivore*, *terrestrial omnivore insectivores*, *terrestrialgranivore insectivore carnivore*, *terrestrial frugivore granivore herbivore*and*terrestrial omnivore*.The ***arboreal*** habitat consisted of **6** unique feeding guilds-*arboreal insectivore carnivore*, *arboreal frugivore*, *arboreal frugivore nectarivore*, *arboreal frugivore nectarivore carnivore*, *arboreal frugivore nectarivore insectivore*and *arboreal frugivore nectarivore insectivore granivore*.The ***arboreal-terrestrial***habitat also consisted of **6** unique feeding guilds-*arboreal-terrestrial carnivore*,*arboreal-terrestrial frugivore*,*arboreal-terrestrial frugivore-carnivore*,*arboreal-terrestrial frugivore-nectarivore-insectivore*,*arboreal-terrestrial granivore-frugivore-nectarivore*and*arboreal-terrestrial granivore-insectivore-carnivore*.The ***aerial-arboreal***habitat consisted of **4** unique feeding guilds-*bark probing insectivore*, *aerial-arboreal carnivore*,*aerial-arboreal nectarivore*and*aerial-arboreal insectivore*while the***aerial-terrestrial***habitat consisted of **1**unique feeding guild-*aerial-terrestrial insectivore granivore*.

Figure.2. A summary of the percent expression of the various Avian Feeding Guild as observed in TATR



The95 species of birds that **were** observed at TATR belonged to 43 families. The most prevalent families observed in TATR were- Phasianidae, Anatidae, Picidae, Columbidae,Accipitridae, Ardeidae, and

Muscicapidae.**Table.4** summarizes the 95 species that were observed at Tadoba with respect to the food habit, residential status and IUCN status.

Table 4: Feeding guilds of 95 species of Birds belonging to 43 families as observed at TATR

Sl. No.	Family	Common Name	Scientific Name	Feeding guild	Status	IUCN Status
1	Phasianidae	Jungle Bush Quail	*Perdiculaasiatica*	**TGI**	R	LC
2		Red Spur Fowl	*Galloperdixspadicea*	**TOI**	R	LC
3		Grey Jungle Fowl	*Gallussonneratti*	**TFI**	R	LC
4		Indian Peafowl	*Pavocristatus*	**TO**	R	LC
5	Anatidae	Lesser Whistling Duck	*Dendrocygnajavanica*	**AqH**	R	LC
6		Ruddy Shelduck	*Tadornaferruginea*	**AqTO**	WM	LC
7		Cotton Pygmy Goose	*Nettapuscoromandelianus*	**AqTIH**	WM	LC
8		Gadwall	*Anas strepera*	**AqH**	WM	LC
9		Northern Pintail	*Anas acuta*	**AqIH**	WM	LC
10		Tufted Duck	*Aythyafuligula*	**AqIH**	WM	LC
11	Picidae	Rufous Woodpecker	*Celeusbrachyurus*	**TI**	R	LC
12		Brown Capped Pygmy Woodpecker	*Dendrocoposnanus*	**TI**	R	LC
13		Black RumpedFlameback	*Dinopiumbenghalense*	**BPI**	R	LC
14	Ramphastidae	Coppersmith Barbet	*Megalaimahaemacephala*	**TFI**	R	LC
15	Bucerotidae	Indian Grey Hornbill	*Ocycerosbirostris*	**TIC**	R	LC
16	Upupidae	Common Hoopoe	*Upupa epops*	**TI**	R	LC
17	Coraciidae	Indian Roller	*Coracias benghalensis*	**TIC**	R	LC
18	Alcedinidae	White Throated Kingfisher	*Halcyon smyrnensis*	**TIC**	R	LC
19		Pied Kingfisher	*Cerylerudis*	**AqC**	R	LC
20	Meropidae	Green Bee Eater	*Meropsorientalis*	**ArI**	R	LC
21		Chestnut Headed Bee Eater	*Meropsleschenaulti*	**ArI**	R	LC
22	Cuculidae	Common Hawk Cuckoo	*Hierococcyxvarius*	**TFI**	R	LC
23		Greater Coucal	*Centropussinensis*	**AbTIC**	R	LC
24	Psittaculiodae	Alexandrine Parakeet	*Psittaculaeupatria*	**AbTFC**	R	LC
25		Rose-Ringed Parakeet	*Psittaculakrameri*	**AbTGFN**	R	LC
26		Plum-Headed Parakeet	*Psittaculacyanocephala*	**ABFN**	R	LC
27	Apodidae	House Swift	*Apus affinis*	**ArI**	R	LC
28	Strigidae	Collared Scops Owls	*Ottusbakkamoena*	**ArI**	R	LC
29	Caprimulgidae	Savanna Nightjar	*Caprimulgusaffinis*	**ArI**	R	LC
30	Columbidae	Oriental Turtle Dove	*Streptopeliaorientalis*	**TG**	WM	LC
31		Spotted Dove	*Stigmatopeliachinensis*	**TG**	R	LC
32		Emerald Dove	*Chalcophapsindica*	**TFGH**	R	LC
33		Yellow Footed Green Pigeon	*Treronphoenicopterus*	**AbF**	R	LC
34	Rallidae	Purple Swamphen	*Porrphyrioporphyrio*	**AqC**	R	LC
35		Common Moorhen	*Gallinulachloropus*	**AqH**	R	LC
36	Scolopacidae	Common Sandpiper	*Actitishypoleucos*	**AqI**	WM	LC
37	Burhinidae	Eurasian Thick Knee	*Burhinusoedicnemus*	**TI**	R	LC
38	Jacanidae	Bronze-Winged Jacana	*Metopidius indicus*	**TI**	R	LC
39	Charadriidae	Yellow Wattled Lapwing	*Vanellusmalarbaricus*	**TI**	R	LC
40		Red Wattled Lapwing	*Vanellus indicus*	**AqTI**	R	LC
41	Accipitridae	Black Shouldered Kite	*Elanus caeruleus*	**AbTIC**	R	LC
42		Black Kite	*Milvus migrans*	**AbTIC**	R	LC
43		Grey-Headed Fish Eagle	*Ichthyophagaichthyaetus*	**AqTP**	R	LC
44		Crested Serpent Eagle	*Spilornischeela*	**ArAbC**	R	LC
45		Shikra	*Accipiter badius*	**AbTIC**	R	LC
46		Oriental Honey Buzzard	*Pernisptilorhynchus*	**ArI**	R	LC
47		White-Eyed Buzzard	*Butasturteesa*	**AbIC**	R	LC
48		Crested Hawk Eagle	*Spizaetuscirrhatus*	**AbTC**	R	LC
49	Podicipedidae	Little Grebe	*Tachybaptusruficolis*	**AqIP**	R	LC
50	Phalacrocoracidae	Little Cormorant	*Phalacrocoraxniger*	**AqC**	WM	LC
51	Ardeidae	Little Egret	*Egrettagarzetta*	**AqIC**	R	LC
52		Cattle Egret	*Bubulus ibis*	**TIC**	WM	LC
53		Indian Pond Heron	*Ardeolagrayii*	**AqIC**	R	LC
54		Grey Heron	*Ardeacinerea*	**AqC**	WM	LC
55		Purple Heron	*Ardeapurpurea*	**AqC**	R	LC
56		Yellow Bittern	*Ixobrychussinensis*	**AqICP**	R	LC
57	Threskiornithidae	Black Headed Ibis	*Threskiornismelanocephalus*	**AqIC**	WM	NT
58		Black Ibis	*Pseudibispapillosa*	**TGIC**	WM	LC
59		Eurasian Spoonbill	*Platalealeucordia*	**AqTIC**	WM	LC
60	Ciconiidae	Asian Openbill	*Anastomusoscitans*	**AqTIC**	R	LC
61	Corvidae	Rufous Treepie	*Dendrocittavagabunda*	**AbFNC**	R	LC
62		House Crow	*Corvussplendens*	**AbTO**	R	LC

63		Large-Billed Crow	*Corvusmacrorhynchos*	**AbTO**	R	LC
64	Oriolidae	Eurasian Golden Oriole	*Oriolusoriolus*	**AbFI**	R	LC
65		Black Hooded Oriole	*Oriolusxanthornus*	**AbFI**	R	LC
66	Campephagidae	Large Cuckoo Shrike	*Coracinamacei*	**ArAbI**	R	LC
67	Dicruridae	Black Drongo	*Dicrurusmacrocercus*	**AbNI**	R	LC
68		White-Bellied Drongo	*Dicruruscaerulescens*	**AbNI**	R	LC
69		Greater Racket-Tailed Drongo	*Dicrurusparadiseus*	**AbFI**	R	LC
70	Monarchidae	Black Naped Monarch	*Hypothymisazurea*	**AbI**	R	LC
71		Asian Paradise Flycatcher	*Terpsiphone paradise*	**AbI**	SM	LC
72	Aegithinidae	Common Iora	*Aegithinatiphia*	**AbI**	R	LC
73	Turdidae	Orange Headed Thrush	*Zootheracitrine*	**AbTIF**	R	LC
74	Muscicapidae	Ultramarine Flycatcher	*Ficedulasuperciliaris*	**ArTI**	WM	LC
75		Tickell's Blue Flycatcher	*Cyornistickelliae*	**ArTI**	WM	LC
76		Oriental Magpie Robin	*Copsychussaularis*	**AbTI**	R	LC
77		White-RumpedShama	*Copsychusmalabaricus*	**AbTI**	R	LC
78		Indian Robin	*Saxicoloidesfulicatus*	**TI**	R	LC
79		Black Redstart	*Phoenicurusochruros*	**AbTI**	WM	LC
80	Sturnidae	Brahminy Starling	*Sturnus pagodarum*	**AbFI**	R	LC
81		Rosy Starling	*Sturnus roseus*	**AbFNIG**	WM	LC
82		Asian Pied Starling	*Sturnus contra*	**AbTIF**	R	LC
83		Common Myna	*Acridotherestristis*	**AbTO**	R	LC
84	Hirundinidae	Wire-Tailed Swallow	*Hirundosmithii*	**ArTI**	R	LC
85		Red Rumped Swallow	*Hirundodaurica*	**ArTI**	WM	LC
86	Pycnonotidae	Red Whiskered Bulbul	*Pycnonotusjocosus*	**AbTF**	R	LC
87		Red Vented Bulbul	*Pycnonotuscafer*	**AbTFNI**	R	LC
88	Zosteropidae	Oriental White Eye	*Zosteropspalpebrosus*	**AbFNI**	R	LC
89	Sylviidae	Common Tailorbird	*Orthotomussutorius*	**AbI**	R	LC
90	Timaliidae	Jungle Babbler	*Turdoidesstriatus*	**AbTGIC**	R	LC
91	Alaudidae	Rufous Tailed Lark	*Ammomanesphoenicurus*	**AbTI**	R	LC
92	Nectariniidae	Purple Sunbird	*Nectarinaasiatica*	**ArAbN**	R	LC
93	Motacillidae	White-Browed Wagtail	*Motacillamaderaspatensis*	**ArTI**	R	LC
94		Grey Wagtail	*Motacillacinerea*	**ArTIG**	WM	LC
95		Paddy-field Pipit	*Anthusrufulus*	**ArTI**	R	LC

Key to Table.4:

Local Status

R Resident
WM Winter Migrant
SM Summer Migrant

IUCN Status

LC Least Concern

IV. Conclusion

The findings of the present study underline the importance of Educational Excursionsto study habitatfor birds. Prey availability, abundance, distribution, and vegetation structure, interact to create unique "*foraging patterns and opportunities*"which vary among bird species. The forest ecosystem and croplands of TATRhighly supported a plethora feeding habits such asherbivore, carnivore, insectivore, granivore, frugivore, nectarivore and bark-probing. The water bodies were supportive to differentaquatic guilds like as herbivore, carnivore and insectivore.The present list ofbird species of TATRas observed and documented in the paper is exhaustive but not conclusive. Future exploration needs to be continued to update thechecklist obtained during this work. Moreover, the feeding diversity reflects the habitat diversity of the avifauna and vice versa in the context of biodiversity.

Acknowledgement

The authors would like to express their sincere gratitude to the non-teaching staff Sri Kapil Misra for his unstinted support while conducting the exhaustive survey.

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