

# Status of Wetland and Terrestrial Birds In and Around Campus C.V.A.S Navania, Udaipur, Rajasthan – India

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**Abstract-** The study started with an aim of concoct a Checklist of birds in and around College of Veterinary and Animal Science, Navania Vallabh Nagar – Udaipur (24° 39' 15.2"N & 74° 01' 26.8"E) and also to know about their distribution and activity within the campus. The spell of the study was one year from June 2015 to June 2016 to spot presence of birds during summer as well as in winter. Total 116 species were identified belonging to 45 families, there were 36 species (31%) of birds which can be considered as common followed by 28 very common ones (24%). 38 species (33%) were encountered occasional whereas 14 species (12%) were rare. The number of species observed in winter were more in comparison to summer due to migratory species (35 species). The study shows the presence of some bird species of global importance categorized in IUCN Red Data List including: White rumped vulture, Egyptian vulture, Sarus crane, Painted stork, Black necked stork, Black headed ibis, Black tailed godwit. The Favourable ecological conditions like wetland, roosting places, food, shrubs and undisturbed area were chief reasons of attracting various birds.

**Index Terms-** Birds, Navania, wetland, winter, ecological conditions.

## I. INTRODUCTION

Birds are the indicators of good environment of the particular region. Udaipur is known as 'Lake City' of India, is famous for its sparkling, shimmering lakes and water bodies. The lakes of Udaipur provides shelter and food for over 110 aquatic avifaunal species [1]. In a wetland, water and vegetation are the two major factors influencing the abundance of the ducks and other water fowls [2] and thus wide varieties of birds use wetland habitat either throughout their life or during certain part of their life [3]. This was the first scientific effort to study bird fauna of this campus, understanding the essentials and favourable conditions of different species leads us to make conservation strategy. Birds are one of the common fauna of all habitat types because their diversity and abundance can reflect ecological trends in other biodiversity, [4].

## II. STUDY SITE

College of Veterinary and Animal Science, is positioned 45 km apart from the Udaipur City, Rajasthan - India, at (24° 39' 15.2"N & 74° 01' 26.8"E) five Km downwards from the NH 76 (National Highway). The study was conducted in and around campus, including four water bodies also: CVAS Pond, Jorji ka

kheda Pond, Vallabh Nagar Dam and Bhatewar Lake. The first two ponds lies inside the campus and remaining two are near to the campus area. As the whole area and water bodies are away from the main city, so it provides almost undisturbed circumstances to birds.

## III. METHODOLOGY

The duration of study or bird watching was one year, from June 2015 to June 2016. The whole data was collected by regular observation and bird watching through means of walking on fixed routes. Almost all possible places were thoroughly searched for birds and birds were identified with the help of colored field guide [5], [6], [7], and [8]. The maximum number of birds both terrestrial and wetland were observed during the morning (6:00 am to 9:00 am) and evening (5:00 pm to 7:00 pm) hours. In most of occasions the wetlands were surveyed during the day hours. The birds were identified through naked eyes and by the aid of binoculars (10 x 50) and digital camera was used to capture the pictures of birds. Birds seen were identified and recorded along with status, abundance and checklist were prepared. Based on the frequency of field observation, abundance of birds was categorized as Very Common (VC), Common (C) Occasional (O) and Rare (RR). The status of birds was alienated into two classes, Residential (R) and Migratory (M).

## IV. RESULT

During present study, 116 species of birds were observed in and around C.V.A.S Campus Navania, Udaipur, during one year study. The whole finding of species are indicated in the Table form. During our study we captured a number of pictures of birds, from which some are presented in the colored plates. The Pictures number 1, 2, 3 and 4 are Sarus crane, Asian openbill, Erasiun Spoonbill and Purple moorhen respectively. Analysis of data revealed that out of 116 bird species, 81 bird species were residential (inhabitant throughout the year), 35 bird species were found to be migratory. A total of 28 species comes under the very common (VC) category including Egyptian vulture, White throated kingfisher, Indian pond heron, Ashy prinia, Black winged stilt and Brahminy starling etc., the common (C) category includes 36 species: Eurasian collard dove, Indian roller, Small blue kingfisher, Black drongo, Common sandpiper etc., Occasional (O) includes 38 species: Knob billed duck, Ruddy shelduck, Asian openbill, Zitting cisticola, Eurasian spoonbill and Common hoopoe etc., and the last category Rare (RR) includes 14 species: White tailed lapwing, Painted stork,

Black-tailed godwit and Red avadavat etc. We also separate out List.  
bird species of global importance categorized in IUCN Red Data

**Table: Representing the checklist of birds in and around C.V.A.S, Campus Navania – Udaipur.**

S. No.	Family	Scientific name	Name of Bird	Abundance	Status
1	Accipitridae	<i>Milvus migrans</i>	Black kite	VC	R
2		<i>Elanus caeruleus</i>	Black shouldered kite	C	R
3		<i>Haliastur Indus</i>	Brahminy kite	O	R
4		<i>Neophron percnopterus</i>	Egyptian vulture*	VC	R
5		<i>Accipiter badiusbadius</i>	Shikra	C	R
6		<i>Aquila nipalensis</i>	Steppe eagle	O	R
7		<i>Circus aeruginosus</i>	Western Marsh harrier	RR	M
8		<i>Gyps bengalensis</i>	White rumped vulture*	RR	M
9	Alcedinidae	<i>Cerylerudis</i>	Lesser pied kingfisher	O	R
10		<i>Alcedoatthis</i>	Small blue kingfisher	C	R
11		<i>Halcyon smyrnensis</i>	White throated kingfisher	VC	R
12	Anatidae	<i>Anser indicus</i>	Bar headed goose	O	M
13		<i>Aythyaferina</i>	Common pochard	O	M
14		<i>Anas crecca</i>	Common teal	O	M
15		<i>Anas Penelope</i>	Eurasian wigeon	O	M
16		<i>Anas strepera</i>	Gadwall	O	M
17		<i>Sarkidiornis melanotos</i>	Knob billed duck	O	M
18		<i>Anas platyrhynchos</i>	Mallard	O	M
19		<i>Anas acuta</i>	Northern pintail	C	M
20		<i>Anas clypeata</i>	Northern shoveler	C	M
21		<i>Tadorna ferruginea</i>	Ruddy shelduck	O	M
22		<i>Aythya fuligula</i>	Tufted Pochard	O	M
23	<a href="#">Apodidae</a>	<i>Apusapus</i>	<a href="#">Common swift</a>	VC	R
24	Ardeidae	<i>Bubulcus ibis</i>	Cattle egret	VC	R
25		<i>Ergetta alba</i>	Greater egret	C	R
26		<i>Ardea cinerea</i>	Grey heron	C	R
27		<i>Ardeolagrayii</i>	Indian pond heron	VC	R
28		<i>Mesophoyx intermedia</i>	Intermediate egret	C	R
29		<i>Egretta garzetta</i>	Little egret	C	R
30		<i>Ardea purpurea</i>	Purple heron	C	R
31	Bucerotidae	<i>Ocyrceros birostris</i>	Indian grey hornbill	O	R
32	Burhinidae	<i>Burhinus oedicnemus</i>	Eurasian thick knee	C	R
33		<i>Esacus recurvirostris</i>	Great thick knee	C	R
34	Campephagidae	<i>Pericrocotus cinnamomeus</i>	Small minivet	RR	M
35	Charadriidae	<i>Charadrius dubius</i>	Common ringed plover	RR	R
36		<i>Vanellus indicus</i>	Red wattaled lapwing	VC	R
37		<i>Vanellus leucurus</i>	White tailed lapwing	RR	M
38	Ciconiidae	<i>Anastomus oscitans</i>	Asian openbill	O	R
39		<i>Ephippiorhynchus asiaticus</i>	Black necked stork*	O	R
40		<i>Mycteria leucocephala</i>	Painted stork*	RR	R
41		<i>Ciconia episcopus</i>	Woolly-necked Stork	RR	M
42	Cisticolidae	<i>Prinias socialis</i>	Ashy prinia	VC	R
43		<i>Prinia inornata</i>	Plain prinia	C	R
44		<i>Cisticola juncidis</i>	Zitting cisticola	O	R
45	Columbidae	<i>Columba livia</i>	Common rock Pigeon	VC	R
46		<i>Streptopelia decaocto</i>	Eurasian collard dove	C	R
47		<i>Streptopelia senegalensis</i>	Laughing dove	C	R
48		<i>Strepopelia chinensis</i>	Spotted dove	O	R
49	Corvidae	<i>Corvus macrorhynchos</i>	Eastern jungle crow	VC	R
50		<i>Corvus splendens</i>	House crow	VC	R

51		<i>Dendrocitta vagabunda</i>	Rufous treepie	VC	R
52	Coraciidae	<i>Coracias benghalensis</i>	Indian roller	C	R
53	Cuculidae	<i>Eudynamys scolopacea</i>	Asian koel	VC	R
54		<i>Centropus sinensis</i>	Greater coucal	C	R
55	Diguridae	<i>Dicrurus macrocercus</i>	Black drongo	C	R
56	Estrildidae	<i>Amandava amandava</i>	Red avadavat	RR	M
57	Gruidae	<i>Grus grus</i>	Common crane	RR	M
58		<i>Grus Antigone</i>	Sarus crane*	C	R
59	Hirundinidae	<i>Hirundo concolor</i>	Dusky Martin	VC	R
60		<i>Hirundo smithii</i>	Wire-tailed swallow	VC	R
61	<a href="#">Leiothrichidae</a>	<i>Turdoides caudatus</i>	Common babbler	C	R
62		<i>Turdoides striata</i>	<a href="#">Jungle babbler</a>	VC	R
63		<i>Chrysomma sinense</i>	Yellow eyed babbler	C	R
64	Meropidae	<i>Merops orientalis</i>	Green bee-eater	VC	R
65	Motacillidae	<i>Motacilla alba</i>	White wagtail	O	M
66	Muscicapidae	<i>Saxicola torquatus</i>	Common stonechat	O	R
67		<i>Saxicoloides fulicola</i>	Indian black robin	C	R
68		<i>Copsychus saularis</i>	Oriental magpie robin	C	R
69		<i>Saxicola caprata</i>	Pied bushchat	O	M
70	Nectariniidae	<i>Nectarinia asiatica</i>	Purple sunbird	VC	R
71	Paridae	<i>Parus major</i>	Great tit	C	R
72	Pelecanidae	<i>Pelecanus onocrotalus</i>	Great white pelican	RR	M
73	Phalacrocoracidae	<i>Phalacrocorax carbo</i>	Great cormorant	O	R
74		<i>Phalacrocorax nigar</i>	Little cormorant	C	R
75	Phasianidae	<i>Francolinus pondicerianus</i>	Grey francolin	C	R
76		<i>Pavo cristatus</i>	Indian peafowl	VC	R
77		<i>Francolinus pictus</i>	Painted francolin	C	R
78	Phoenicopteridae	<i>Phoenicopterus roseus</i>	Greater flamingo	O	M
79	Ploceidae	<i>Ploceus philippinus</i>	Baya weaver	RR	R
80	Psittacidae	<i>Psittacula eupatria</i>	Alexandrine parakeet	O	R
81		<i>Psittacula cyanocephala</i>	Plum headed parakeet	VC	R
82		<i>Psittacula krameri</i>	Rose-ringed Parakeet	RR	R
83	Passeridae	<i>Passer domesticus</i>	House sparrow	VC	R
84	Pycnonotidae	<i>Pycnonotus cafer</i>	Red vented bulbul	VC	R
85	Rallidae	<i>Gallinula chloropus</i>	Common moorhen	VC	R
86		<i>Fulica atra</i>	Eurasian coot	C	M
87		<i>Porphyrio porphyria</i>	Purple swamp hen	C	R
88	Rhipiduridae	<i>Rhipidura aureola</i>	White-browed Fantail	O	R
89	Recurvirostridae	<i>Himantopus himantopus</i>	Black winged stilt	VC	R
90	<a href="#">Rostratulidae</a>	<i>Rostratula benghalensis</i>	<a href="#">Greater painted-snipe</a>	C	M
91		<i>Charadrius alexandrines</i>	Kentish plover	O	M
92		<i>Charadrius dubius</i>	Little ringed plover	O	M
93	Scolopacidae	<i>Limosa limosa</i>	Black-tailed godwit*	RR	M
94		<i>Gallinago gallinago</i>	Common snipe	O	R
95		<i>Actitis hypoleucos</i>	Common sandpiper	O	M
96		<i>Tringa ochropus</i>	Green sandpiper	O	M
97		<i>Lymnocyptes minimus</i>	Jack snipe	O	M
98		<i>Gallinago stenura</i>	Pintail snipe	O	M
99		<i>Philomachus pugnax</i>	Ruff	O	M
100		<i>Tringa erythropus</i>	Spotted redshank	O	M
101		<i>Tringa glareola</i>	Wood sandpiper	O	M
102	Sternidae	<i>Sterna aurantia</i>	River tern	VC	R
103	Strigidae	<i>Tyto alba</i>	Barn owl	O	R
104		<i>Glaucidium radiatum</i>	Jungle owlet	C	R
105		<i>Athene brama</i>	Spotted owlet	C	R
106	Sturnidae	<i>Grawpila Contra</i>	Asian pied starling	C	R

107		<i>Acridotheres ginginianus</i>	<a href="#">Bank myna</a>	C	R
108		<i>Sturnia pagodarum</i>	Brahminy starling	VC	R
109		<i>Acridotheres tristis</i>	Common myna	C	R
110		<i>Pastor roseus</i>	<a href="#">Rosy starling</a>	VC	R
111	Threskiornithidae	<i>Plegadis falcinellus</i>	Glossy ibis	O	M
112		<i>Threskiornis melanocephalus</i>	Black headed ibis*	VC	R
113		<i>Platalea leucorodia</i>	Eurasian spoonbill	O	R
114		<i>Pseudibis papillosa</i>	Red naped ibis	C	R
115	Turdinae	<i>Zoothera critruea</i>	Orange headed thrush	RR	R
116	Upupidae	<i>Upupa epops</i>	Common hoopoe	O	R

**Note: Very Common (VC), Common (C), Occasional (O), Residential (R) and Migratory (M)**

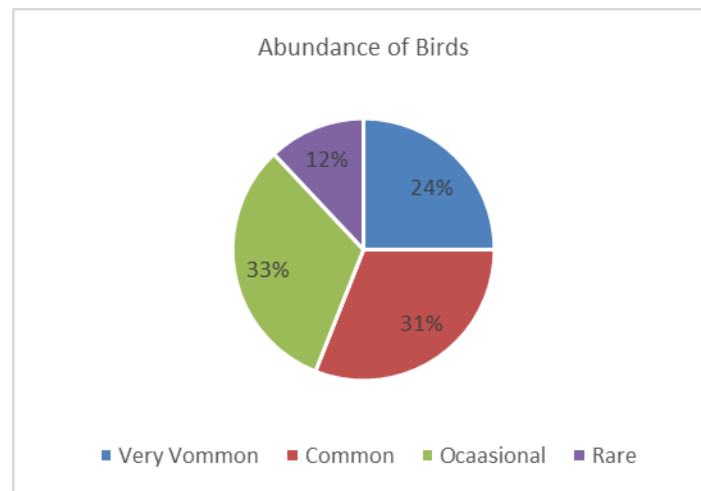
Astrix (\*) denoted bird species of global importance categorized in IUCN Red Data List:

Critically Endangered : White rumped vulture

Endangered : Egyptian vulture

Vulnerable : Sarus crane

Near Threatened : Painted stork, Black necked stork, Black headed ibis, Black tailed godwit



## V. CONCLUSION

Migration of the birds is a natural process in which birds fly from thousands of KM to find best ecological habitat. The presence of 35 migratory birds in and around CAVS Navania campus, indicates that it is one of the best habitat for migratory birds. Highly shallow muddier water bodies of CVAS Pond which is present at most of the periphery of water bodies preferred by the waders. The presence of carcass in college dumping area is a good source for the raptors. Due to tropical line the insects are more in the area so it attracts the insectivore birds. The availability of bushes and shrubs makes it best habitat too for the perching birds.

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Picture A. [Google Map picture showing the CVAS Campus Area (Orange) and CVAS pond (Red)]



Picture No. 1 (Sarus Crane), 2 (Asian Openbill) 3 (Eurasian Spoonbill) and 4 (Purple Moorhen).

