NOTES ON NATURAL HISTORY

Preliminary Survey on Avifauna Diversity of Krantiguru Shyamji Krishna Verma University Campus, Kachchh, Gujarat

Akshit R. Suthar*, Mrugesh Trivedi, Suhash Vyas

Earth and Environmental Department, Krantiguru Shyamji
Krishna Verma Kachchh University, Bhuj Kachchh-Gujarat,
India

Study Area: Bhuj-Kachchh, Gujrat, India

Coordinated: 23°12'50.09" N and 69°39'16.34" E

Key words: Residents birds, Rare sight, Kutch India

Introduction:

Avian fauna is considered as important indicators of a country's environmental health (Collar & Andrew, 1988). Earlier the list of birds of this district was also tabulated by Lester (1904), Ali (1938; 1945), Ripley (1948), Himmatsinhji (1959) and Maharao, 1968).

The proposed site covers approximately an area of 1.5 Sq. km and is surrounded by BSF (Border Security Force) Campus. Thus it could be stated that this campus is well protected and holding healthy biodiversity. Three major and popular birding areas of Bhuj city; the Tapkeswari hill, Hamirshar Lake and Bhujjiya hill are very nearer to this campus. On the present survey we tried to prepare a checklist of the avifaunal diversity of Krantiguru Shyamji Krishna Verma (KSKV) university campus, which we feel will provide a baseline information for future in-depth studies.

Survey:

Field surveys were conducted for a period of 9 months starting from May 2015 up to January 2016 which covered all the major seasons; Summer (May – June), Monsoon (July- October) and Winter (November – January). On the site map we overlaid 150 X 150 meters grid and each grid was surveyed through random transect (41 transects). To know the distribution patterns the transects were led in various available habitats in the campus viz., open grassland, Scattered bushes area, plantation and garden area, the tree *Prosopis juliflora* dominated area, construction area and barren area.

Field surveys were conducted for a period of 9 months starting from May 2015 up to January 2016 which covered all the major seasons; Summer (May – June), Monsoon (July- October) and Winter (November – January). On the site map we overlaid 150 X 150 meters grid and each grid was surveyed through random transect (41 transects) according to habitat. All the observations were taken mainly from 0600hr (or sunrise) to 1200hr and 0300hr to 0630hr (sunset). Additional observations were also taken between the 1200hr and 0300hr time. The area was accessed by walking. Further, opportunistic observations

were also added to the list, so as not to miss any species during the survey period. The observations were carried out with a pair of binoculars (Nikon 10x50), transects were made out with GPS, and Photos were taken by Sony Alpha 37 with 300 mm lens and Sony DSC-H300. Feeding guilds were classified as per direct observations and available literature (Ali & Ripley, 1983). Birds were identified using field guide books (Ali & Ripley, 1983; Grimmett *et al.*, 1998).

Sighting records:

A total 42 species were recorded from the surveyed campus, belonging to 11 orders and 27 families (Table-1).

Familywise maximum species were recorded as follows: Cisticolidae-3 spp.; Columbidae-3 spp.; and Hirundinidae - 3 spp.; (Fig-1).

Figure: -1, Family wise species richness

Feeding Guild: the study of avian feeding guilds is important for understanding the complexity of ecosystem structure and for providing updated information of each type of habitat in the ecosystem (Azman *et al.*, 2011).

Five feeding guilds were identified from the surveyed area. Amongst 42 species, 24 were insectivorous (57%), 8 were omnivorous (19%), 4 were grainivorous (10%), 3 species of frugivorous (7%) and carnivorous (7%). According to Clergeau *et al.* (1998) insectivorous birds are more sensitive to quality of the environments. Less frugivorous were noted due to less availability of fruiting trees (Reynaud & Thioulouse, 2000) as the area is mainly dominated by the *Prosopis juliflora*.

*Corresponding Author: akshitsuthar@gmail.com

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Migratory status: out of 42 species, 36 were Resident (86%), 4 were Migratory (9%) and 2 were Resident/Migratory (2%). Amongst them, most of the migratory bird species are insectivores species and again the same could be due to the presence of enough grassland in the campus which gives feeding grounds for the migratory species of birds. The *Salvadora* and *Zizyphus* species of trees provides food for the Rosy starling which is also migratory species.

Table-1: Birds recorded in KSKV Kachchh University campus

Sr.	Local Name /Scientific name	MS*	FG**
1	Black Shouldered kite/ <i>Elanus axillaris</i>	R	C
2	Shikra/ <i>Accipiter badius</i>	R	C
3	Common Hoopoe/ <i>Upupa epops</i>	R/M	I
4	White breasted kingfisher/ <i>Halcyon smyrnensis</i>	R	O
5	Red wattled lapwing/ <i>Vanellus indicus</i>	R	I
6	Yellow wattled lapwing/ <i>Vanellus malabaricus</i>	R	I
7	Blue rock pigeon/ <i>Columba livia</i>	R	G
8	Eurasian collared dove/ <i>Streptopelia decaocto</i>	R	G
9	Laughing Dove/ <i>Streptopelia senegalensis</i>	R	G
10	European Roller/ <i>Coracias garrulus</i>	M	I
11	Indian roller/ <i>Caracias benghalensis</i>	R	I
12	Green Bee-eater/ <i>Merops orientalis</i>	R	I
13	Asian koel/ <i>Eudynamis scolopaceus</i>	R	O
14	Greater coucal/ <i>Centropus sinensis</i>	R	O
15	Grey francolin/ <i>Francolinus pondicerianus</i>	R	I
16	Marshall's lora/ <i>Aegithina nigrolutea</i>	R	I
17	Ashy-crowned Sparrow-Lark/ <i>Eremopterix griseus</i>	R	I
18	Crested Lark/ <i>Galerida cristata</i>	R	I
19	Plain Prinia/ <i>Prinia inornata</i>	R	I
20	House crow/ <i>Corvus splendens</i>	R	O
21	Large-billed Crow/ <i>Corvus macrorhynchos</i>	R	O
22	Black drongo/ <i>Dicrurus macrocercus</i>	R	I
23	Indian Silverbill/ <i>Lonchura malabarica</i>	R	G
24	Dusky Crag Martin/ <i>Hirundo concolor</i>	R	I
25	Red-rumped Swallow/ <i>Hirundo daurica</i>	R	I
26	Wire tailed swallow/ <i>Hirundo smithii</i>	R	I
27	Padyfield Pipit/ <i>Anthus rufus</i>	R	I
28	White wagtail/ <i>Motacilla alba</i>	M	I
29	Purple sunbird/ <i>Nectarinia asiatica</i>	R	F
30	House sparrow/ <i>Passer domesticus</i>	R	I
31	Red vented bulbul/ <i>Pycnonotus cafer</i>	R	F
32	White eared bulbul/ <i>Pycnonotus leucotis</i>	R	F
33	Common myna/ <i>Acridotheres tristis</i>	R	O
34	Rosy starling/ <i>Sturnus roseus</i>	M	O
35	Lesser Whitethroat/ <i>Sylvia curruca</i>	M	I
36	Common tailorbird/ <i>Orthotomus sutorius</i>	R	I
37	Common babbler/ <i>Turdoides caudata</i>	R	I
38	Indian robin/ <i>Saxicoloides fulicatus</i>	R	I
39	Cattle egret/ <i>Bubulcus ibis</i>	R	O
40	Black ibis/ <i>Pseudibia papillosa</i>	R	I
41	Glossy ibis/ <i>Plegadis falcinellus</i>	R/M	I
42	Spotted owl/ <i>Athene brama</i>	R	C

*Migratory Status; **Feeding Guild

R=Resident, M=Migratory, R/M=Resident Migratory, LC=Least Concerned, C=Carnivorous, F=Fuigivorous, G=Granivorous, I=Insectivorous, O=Omnivorous.

The highest bird diversity in this small 1.5 Sq. Km area is due to more diversity of fruiting, flowering and thorny plant species, which provides more choice for the food as well as nesting and breeding sites.

Future directions:

- Habitat improvement through the plantation of indigenous tree species and fruiting and flowering plants.
- Regular monitoring of faunal and floral diversity of the campus.
- Displaying charts in the campus area indicating the existing identification of the common birds and tree.
- Organizing regular birding workshop, field visits and events to promote the campus biodiversity and sensitise the students towards biodiversity conservation.

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