NOTES ON NATURAL HISTORY

Three Years Avifaunal Record from the Campus of State Forest Research Institute of Chhattisgarh, Raipur, India

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Study Area: Raipur, Chhattisgarh, India...
Coordinated: 21° 17' 27.9" N; 81° 43' 40.7" E

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Introduction:

The bird population is an indication of environmental changes as they respond fast to threats and changing environment conditions (Barov, 2011). The bioindicators of a different kind of environments like urbanization and industrialization disturb the avian habitats (Mohan & Gaur, 2008, Gupta & Singh, 2003). India accounts for 12 percent of the total number of bird species in the world, amounting to 10,135, among the 1306 species. Taxonomically, the bird population in the country is divided into 26 orders, 111 families, and 492 genera. Of these 72 species are endemic to India, constituting about 5.5% of the country's bird diversity (Praveen *et al.*, 2018).

We tabulated the bird diversity in SFRTI campus which provide a well-organized niche for almost every kind of birds. There is no previous is available in such an organized undisturbed niche of Raipur like SFRTI. The place is spread over 63 ha area, and about 5 ha of the area is spaced for artificial seasonal wetland and rest of the area is planted by different experimental plots of trees like *Acacia nilotica*, *Acacia catechu*, *Azadirachta indica*, *Phyllanthus emblica*, *Dalbergia sissoo*, *Terminalia arjuna*, *Bamboosa species*, *Santalum album*, *Eucalyptus species*, *Cleistanthus collinus* and *Tectona grandis* etc. Teak (*Tectona grandis*) is the dominant species of campus.

Our observations:

We tabulated birds in between Jan. 2013 to Dec. 2016 by direct visual count. The Observations were made in the morning between 6:00 to 9:00 am and evening between 5:00 to 6:30 pm. Birds were sighted using binocular (8×40) and Canon 550D camera with 75-300 mm lens on the spot identification using field guide Grimmet *et al.* 2013. Breeding birds' nest were also considered in our study area and subsequently, this information was used to establish the status of resident species of the area. Finally, the relative percentages of the number of species to the respective family were calculated. During the study period

of 2013 and 2014, our wetland site was surrounded by tall grasses and other shrub species which provided a protection boundary to wetland the human disturbance was also negligible there. But in the year 2015 the wetland area was reconstructed so due to heavy machine operation and their sound most of the species which were coming regularly during Monsoon season for breeding like Black Crown night heron (*Nycticorax nycticorax*), Lesser whistling duck (*Dendrocygna javanica*), & Purple heron (*Ardea purpurea*) etc. not visited in study site and unfortunately in the same year rainfall was also low. Further, the surrounding areas of the newly built wetland cleaned by creating the ground fire which also decreased the population of apparent birds. In the following year 2016, the rainfall was satisfactory as compared to its preceding year which ultimately increased the occurrences of monsoon population of birds from 58 to 90. The avian diversity could be regained by taking proper measures around the wetland (Chandra *et al.*, 2014). From a conservation point of view, till date, the urban biodiversity for avian species has been given very little attention as compared to the natural and protected ecosystem (Jule 1997, Vandermeer 1997). Patvardhan *et al.* (2000) have identified educational and defense premises that occupy less than 5% of the total urban area and are the hotspot for the urban biodiversity. The main aim of this study was to make comprehensive baseline information on the bird species for the future as well as to create awareness for their conservation. Rare and endangered species of birds, including migratory birds, were included in Schedule-I of the Wild Life (Protection) Act, 1972 thereby according to the highest degree of protection. During our study period, a total of 107 avifauna species belonging to 46 families and 18 orders were recorded. The highest species were recorded in family Ardeidae (10), Anatidae (9), Motacillidae (6), Accipitridae (5) and Muscicapidae (5) respectively. Shannon-Wiener

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diversity index (H'), is highest (3.53) in 2016 and lowest (3.26) in 2013. Species richness was highest in 2016 and lowest in 2015.

Table -1: Birds seen during the year 2013 to 2016 in SFRTI campus

Order: Accipitriformes, **Family:** Accipitridae
Milvus migrans, *Elanus caeruleus*, *Accipiter badius*, *Pernis ptilorhynchus*¹, *Butastur teesa*¹

Order: Anseriformes, **Family:** Anatidae
Anas poecilorhyncha, *Dendrocygna javanica*, *Nettapus coromandelianus*², *Anas Penelope*¹, *Anas strepera*¹, *Anas querquedula*¹, *Anas acuta*¹, *Netta rufina*¹, *Aythya fulingula*¹

Order: Bucerotiformes, **Family:** Bucerotidae, & Upupidae
*Ocyrceros birostris*³, *Upupa epops*²

Order: Caprimulgiformes, **Family:** Caprimulgidae
Caprimulgus asiaticus

Order: Charadriiformes, **Family:** Scolopacidae, Charadriidae
Actitis hypoleucos, *Venellus indicus*, *Vanellus malabaricus*, *Tringa stagnatilis*², *Charadrius dubius*¹

Order: Ciconiiformes, **Family:** Ciconiidae
Anastomus oscitans

Order: Columbiformes, **Family:** Columbidae
Streptopelia Senegalensis, *Streptopelia orientalis*, *Columba livia*, *Streptopelia chinensis*²

Order: Coraciiformes, **Family:** Meropidae, Coraciidae, Alcedinidae
Merops orientalis, *Coracias benghalensis*, *Alcedo atthis*, *Ceryle rudis*, *Halcyon smyrnensis*

Order: Cuculiformes, **Family:** Cuculidae
Eudynamis scolopacea, *Hierococcyx varius*, *Centropus (sinensis) parroti*, *Clamator jacobinus*¹

Order: Galliformes, **Family:** Phasianidae
Francolinus pondicerianus

Order: Gruiformes, **Family:** Acrocephalidae, Aegithinidae, Alaudidae, Cisticolidae, Corvidae, Dicaeidae, Dicruridae, Estrildidae, Hirundinidae, Laniidae, Leiothrichidae, Monarchidae, Motacillidae, Muscicapidae, Nectariniidae, Oriolidae, Passeridae, Phylloscopidae, Ploceidae, Pycnonotidae, Rhipiduridae, Sturnidae, Vangidae
Eremopterix grisea, *Prinia socialis*, *Prinia inornata*, *Dendrocitta vagabunda*, *Corvus splendens*, *Corvus culminatus*, *Dicaeum erythrorhynchus*, *Prinia inornata*, *Dendrocitta vagabunda*, *Corvus splendens*, *Corvus culminatus*, *Dicaeum erythrorhynchus*, *Hirundo rustica*, *Turdoides striatus*, *Terpsiphone paradisi*, *Motacilla cinerea*, *Anthus rufulus*, *Motacilla maderaspatensis*, *Motacilla flava*, *Anthus rufulus*, *Saxicoloides fulicola*, *Nectarinia asiatica*, *Passer domesticus*, *Pycnonotus cafer*, *Oriolus oriolus*, *Grewpila Contra*, *Temenuchus pogodarum*, *Acrilotheres tristis*, *Cecropis daurica*³, *Phoenicurus ochruros*³, *Ploceus philippinus*³, *Phylloscopus trochiloides*², *Phylloscopus griseolus*², *Ficedula parva*², *Motacilla alba*², *Hirundo smithii*², *Lanius vittatus*², *Lonchura striata*², *Amaurornis phoenicurus*², *Tephrodornis pondicerianus*¹, *Rhipidura aureola*¹, *Petronia xanthocollis*¹, *Ficedula albicilla*¹, *Cyornis tickelliae*¹, *Anthus hodgsoni*¹, *Dicrurus leucophaeus*¹, *Orthotomus sutorius*¹, *Prinia sylvatica*¹, *Mirafra erythroptera*¹, *Iduna caligata*¹, *Aegithina tiphia*¹

Order: Pelecaniformes, **Fam.:** Ardeidae, Threskiornithidae
Nycticorax nycticorax, *Bubulcus cromandus*, *Ardeola grayii*, *Ergetta garzetta*, *Ardea purpurea*, *Dupetor flavicollis*³, *Ergetta alba*³, *Ixobrychus minutus*², *Ixobrychus sinensis*¹, *Egretta intermedia*¹, *Threskiornis melanocephalus*¹

Order: Piciformes, **Family:** Megalaimidae
Psilopogon haemacephalus

Order: Podicipediformes, **Family:** Podicipedidae
*Tachybaptus ruficollis*³

Order: Psittaciformes, **Fam.:** Psittaculidae
*Psittacula cyanocephala*², *Psittacula krameri*²

Order: Strigiformes, **Family:** Tytonidae, Strigidae
*Bubo bengalensis*², *Tyto alba*, *Athene brama*¹

Order: Suliformes, **Family:** Phalacrocoracidae
Phalacrocorax nigar, *Phalacrocorax carbo*²

¹Seen only for one year; ²Seen only for two year; ³Seen only for three year (species without superscript seen in all the four years)

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Threatened species:
T. melanocephalus
viewed in year 2014

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