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CHECKLIST OF AVIFAUNAL DIVERSITY AT SHIVAJI COLLEGE, CHIKHLI DIST: BULDHANA. MS

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ABSTRACT:
Shri Shivaji College is located at Prime location in town Chikhli. College has lush green campus of 18 acres. Aves play an important role in ecosystem as a part of food web and potential pollinator. It potentially detects aspects of any landscape condition that are not detected by the other animal groups commonly used as bio-indicator of the quality of the ecosystems. A study has been carried out to find the bird diversity of Shivaji College, Campus, Chikhli, Di: Buldhana, Maharashtra for the period from June 2021 to June 2022 Birds were observed all around the college campus. Birds were observed twice a day at morning time and evening time for two-three hours, with daily observation made. A total of 39 bird species belonging to 31 families and 14 orders were observed and recorded during the study period. The study also brought out seven types of feeding habits among the identified species. 27% birds are visitors and migratory whereas rest are residential birds. The study underlines the importance of green space around urban ecosystems as preferred habitats for bird populations. Avifauna plays significant role in the linking of food chain in ecological unit of nature.

Keywords:- Avifaunal diversity, Checklist, Habitat, Residential, Chikhli

INTRODUCTION :

Birds are bipedal, winged, colorful feathered, oviparous and homeotherms. Birds are important members of many ecosystems. They inhabit all the ecosystems present. Birds occupy many level of trophic web. They are among the best indicators of environmental changes. Globally around 10,906 extant species are recorded. According to eBird out of these India have 1367 recorded bird species with Maharashtra state having 568 species of birds recorded. Studies of avifaunal diversity is an essential ecological tool in the ecosystem. Birds are integral parts of food chain and food webs. They are important to the ecosystem in many ways they pollinate flowers, disperse seeds, helps in controlling agricultural pests and maintaining ecological health and they play a vital role in controlling pests, acting as pollinators, and maintaining island ecology.

Chikhli Dist. Buldhana has an average elevation of 606 meters (1988 feet). Chikhli has a moderate climate. The annual rainfall averages 800 mm. Most of the rainfall occurs in the monsoon season between June and September.Over the course of the year, the temperature typically varies from 12°C to 40°Cand is rarely below 8°C or above 41°C. Such type of geography and diverse climatic conditions are suitable for avifauna. Shri Shivaji College is located at prime place in town Chikhli. The College campus has lush green area of 18 acres. Campus has exotic and indigenous floral species which attracts several species of birds. A study has been carried out to find the bird diversity of Shri ShivajiCollege Campus, Chikhli Dist. Buldhana, Maharashtra for a period from June 2021 to June 2022.

MATERIAL AND METHODS :

Study Area:

College campus is located at 9727+7V7, MH SH 176, Gandhi Nagar, Chikhli, Dist. Buldhana of Maharashtra state, India. The area of college campus covers 18 acres. It includes college

buildings, sports ground, parking, garden, etc. College campus consist of diverse type of vegetation, garden which consist of variety of naturally grown trees, shrubs, herbs, grasses and plants species. Majority of plants are native to place and some are exotic which makes diverse habitat.

METHODOLOGY :

The survey was conducted for period of 12 months which is from June 2021 to June 2022 covering winters, summers, Monsoon (all three seasons). The survey was conducted twice a day in morning and evening for two to three hours as birds show maximum activities at this time respectively. The survey include daily observations. As birds depict maximum activities of foraging and roosting at morning, so observations made at 7 am to 10 am and at evening 4:30 to 5:30 pm. Moreover superficial sighting were carried out daily at prime locations of the campus.

Area Search

Now a days area search method is one of the technique used for survey of birds. The area search is a quantitative, habitats specific survey method. The method is used for diversity measurement ex. species richness, bird community composition and relative abundance; as well as providing simple avian-habitat relationship, natural history and reproductive information. This method is widely useful, suitable and applicable in most habitats. The method involves a time-constrained survey of a defined area, during which the observer records all birds seen or heard, differentiating those detected inside, outside, and flying over the search area. The birds were observed by sitting and standing from a hiding place (https://klamathbird.org/science/methods/area-search/).

Sightings were carried out with visual observations, photographs, morphological characters were noted down in sheet. The birds were on long distance present on buildings, trees, sides on trails were observed using Nikon binocular (A211 16 x 50) and Nikon Coolpix1000 camera. Data was gathered through transect walk throughout the college campus for the opportunistic sightings of birds.

Techniques for Bird Identification

Identifying a bird can be a challenging one. Birds are active, energetic animals. Quick eye spotting is required in order to get possible detail in short span of time. The techniques were used for identifying the birds are-

Birds were recognized by fixing sight, eye on them. Daily and continuous observations were noted regarding their shapes & sizes, calls, feeding habits and movements. Their specific calls and songs were also recorded and identified. Their beak size, shape, distinctive strips and patterns of color including crown strips, eye arcs or rings, were observed and noted.

Wing shapes while flying, color patterns, and markings on bird body during the stationary stage or flying stage were noted. Leg length and color were also noted in each observation. Observations were confirmed with the help of eBird. Observed birds were also identified and confirmed using scientific literature and field guides (Ali and Ripley 1996, Richard Grimmett *et al* 1999).

Birds observed during the study were categorized into residential (R), migratory (M), and visitors (V). The status of the bird were noted as per their abundance in the campus. IUCN status were noted as per available at electronic media(IUCN 2020). The birds those nest are observed in the campus noted as residential(R), Who were seen in winter noted as migratory and whose were observed sometimes recorded as visitors. The present study follow the taxonomy of Perveen *et al*(2020).

DISCUSSION :

At the present study total of 39 bird species belonging to 26 families and 14 orders were observed and recorded during the study period. It shows diversity of avian fauna at Shivaji Campus which is located in rush. It is recorded that majority of the species belonging to the Passeriformis(19) Cuculiformes (03) Columbiformes(03). Rest of the individual species is of individual order.

RESULT :

In the present study, total 39 species of birds belonging to 31 families and 14 orders were observed and recorded during the study period representing diverse bird community in Shri Shivaji College Chikhli Dist. Buldhana. The study also bought out 07 types of feeding habitats among the identified species.05% birds are visitors and migratory, 18 % birds are visitors whereas rest 77% are residential birds. Out of all the species reported, a total of 38 species are least Concerned and remaining one falls under Near Threatened (*Psittaculaeupatria)* category of IUCN. The diverse habitat of Shri Shivaji college Chikhli Dist. Buldhana campus holds a variety of avifaunal diversities and varies according to vegetation pattern and human disturbance. College Campus has some large and old trees which are home of many important species. Such type of bird diversity in urban area indicates that College Campus has undisturbed habitat at some locations as well as these species are well adapted to urban life beside human colonization.

CONCLUSION :

The study underlines that the importance of green space around urban ecosystem as preferred habitats for bird populations. Avifauna plays significant role in the linking of food chain in ecological unit of nature. The study suggest that species of birds occupy different locations in college campus and therefore precautionary measures should be taken for the conservation point of view. Further occurrence and co-existence of bird community in the study areas were also largely dependent on availability of food resources such as water bodies or insect in their habitats. The study also encourages the regular reporting of avifaunal diversity of the campus and surrounding. Bird species abundance not only adds aesthetic value to human life but also good indicators of biological richness.

Conflict of Interests

There are no Conflict of Interests

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Table: Checklist of Avifaunal Diversity at Shri Shivaji College, Chikhli Dist. Buldhana

Sr. No.	Order	Family	Common Name	*Scientific Name*	□□□ □□ □□□	Status	Feeding Habits	IUCN
1	Bucerotiformes	Bucerotidae	Indian grey hornbill	*Ocycerosbirostris*	□□□□ □□□□	R	Omnivorous	LC
2		Upupidae	Hoopoe	*Upupaepops*	□□□ □□□	R	Insectivorous	LC
3	Cuculiformes	Cuculidae	Asian koel	*Eudynamysscolopaceus*	□□□□ □	R	Frugivorous	LC
4			Greater coucal	*Centropussinensis*	□□□ □□□□ □	R	Carnivorous	LC
5			Common hawk cuckoo	*Hierococcyxvarius*	□□□ □□	V & M	Insectivorous	LC
6	Accipitriformes	Accipitridae	Shikra	*Accipiter badius*	□□□□ □□	R	Carnivorous	LC
7	Strigiformes	Strigidae	Spotted owlet	*Athenebrama*	□□□□ □□	R	Insectivorous	LC
8	Columbiformes	Columbidae	Blue rock pigeon	*Columba livia*	□□□□ □	R	Granivorous	LC
9			Laughing dove	*Stigmatopeliachinensis*	□□□□	R	Granivorous	LC
10			Eurasian collared dove	*Streptopelia decaocto*	□□□□ □□□□	R	Granivorous	LC
11	Coraciiformes	Meropidae	Green bee eater	*Meropsorientalis*	□□□□ □□□□	M & V	Insectivorous	LC
12	Piciformes	Megalaimidae	Coppersmith barbet	*Megalaimahaemacephala*	□□□□ □	R	Frugivorous	LC
13	Passeriformes	Muscicapidae	Indian Robin	Saxicoloides fulicatus	□□□□	V	Insectivorous	LC
14		Pycnonotidae	Red vented bulbul	*Pycnonotuscafer*	□□□ □□□	R	Omnivorous	LC
15		Aegithinidae	Common iora	*Aegithinatiphia*	□□□□	R	Insectivorous	LC
16		Paridae	Cinereous tit	*Parus major*	□□□□ □□□□ □□	R	Insectivorous	LC
17		Estrildidae	Indian silverbill	*Euodicemalabarica*	□□□ □□□□ □□	R	Granivorous	LC
18		Passeridae	House sparrow	*Passer domesticus*	□□□ □□	R	Granivorous	LC
19		Corvidae	House crow	*Corvussplendens*	□□□ □□	R	Omnivorous	LC
20			Indian Jungle Crow	*Corvusculminatus*	□□□ □□□ □□	R	Omnivorous	LC
21		Zosteropidae	Oriental white eye	*Zosteropspalpebrosus*	□□□ □□□□ □□	R	Omnivorous	LC
22		Nectariniidae	Purple sunbird	*Cinnyrisasiaticus*	□□□ □□□	R	Necterivorous	LC
23			Purple ramped sunbird	*Leptocoma zeylonica*	□□□□ □□□□ □□	R	Necterivorous	LC
24		Sturnidae	Common myna	*Acridotherestristis*	□□ □□□ □□	R	Omnivorous	LC

25		Cisticolidae	Ashy prinia	*Priniasocialis*	□□□ □□□□	R	Insectivorous	LC
26			Common tailor bird	*Orthotomussutorius*	□□□ □□	R	Insectivorous	LC
27		Muscicapidae	Brown rock chat	*Cercomelafusca*	□□□	R	Insectivorous	LC
28		Alaudidae	Indian bush lark	*Mirafraerythroptera*	□□□□ □	R	Granivorous	LC
29		Motacillidae	White browed wagtail	*Motacillamaderaspatensis*	□□□ □□□□ □□	R	Insectivorous	LC
30		Dicruridae	Black Drongo	*Dicrurus macrocercus*	□□□ □□□	R	Insectivorous	LC
31		Campephagidae	Small minivet	*Pericrocotus cinnamomeus*	□□□□ □	V	Insectivorous	LC
32	Psittaciformes	Psittaculidae	Rose ringed parakeet	*Psittaculakrameri*	□□□□	V	Frugivorous	LC
33			Alexandrine parakeet	*Psittaculaeupatria*	□□□ □□□□	V	Frugivorous	NT
34	Apodiformes	Apodidae	Little swift	*Apusaffinis*	□□□□ □□	R	Insectivorous	LC
35	Pelecaniformes	Ardeidae	Pond heron	*Ardeolagrayii*	□□□ □□	V	Carnivorous	LC
36	Coraciiformes	Alcedinidae	White throated kingfisher	*Halcyon smyrnensis*	□□□□ □□	R	Carnivorous	LC
37		Coraciidae	Indian roller	*Coracias benghalensis*	□□□ □□□ □□□ □□□	V	Carnivorous	LC
38	Pelecaniformes	Ardeidae	Cattle egret	*Bubulcus ibis*	□□□□ □□□	V	Carnivorous	LC
39	Charadriiformis	Charadriidae	yellow-wattled lapwing	*Vanellus malabaricus*	□□□ □□	R	Carnivorous	LC

(R-Residential at campus; V- Visitor to campus; M- Migratory; LC- Least Concern; NT- Near Threatened)