



RESEARCH ARTICLE

Diversity of Birds at Deekshabhoomi during Dusshera Festival

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INTRODUCTION

From the geographical point of view, Deekshabhoomi is located between latitude - 21.1281° N and Longitude - 79.0669° E. The region also serves as a sacred place. The area is rich in birds diversity because of different types of Plants . More Plantation will lead into increase in number of birds visiting Deekshabhoomi . The impregnability of certain trees in these area seriously need some sort of protection and plantation as this factor itself offers some hope for survival of many species.

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Objective of Research:-

The present study deals with the diversity of birds during the Dusshera period found within the study area of Deekshabhoomi concentrating the following objectives under consideration.

- To prepare preliminary checklist of the birds .
- To find out the dominant species of the study area.
- To add a preliminary note on how to increase their periodical visits .
- Conservation strategies.

Materials & Methodology:-

The area of Deekshabhoomi is bounded by different kinds of plants. The minimum temperature during Dusshera period is 32⁰ C and an average maximum temperature is 37⁰ C .Average

Rainfall is about 73 mm and the Humidity recorded is about 72%. Survey was carried out at different spots within the premises.

Taxonomic Study:-

Field notes, photographs and observations of birds were taken for the period of about 1 month. Nocturnal birds were also observed during this specific period and were recorded along with date & location.

Other factors noted include the time of the day and night using the 24 hour clock. The relative abundance of the individual bird in locality when recorded was categorized as "very rare" (VR) or "rare" (R), when recorded occasionally they were recorded as "uncommon" (UC). If reported frequently, they were recorded as

03.

"Common" (C) & when recorded regularly they were reported as "very common" (VC).

All the birds were captured by Canon 1200D, 18 megapixel camera. Lens used for the photography is Telescopic lenses (55mm-250mm). The diameter of the lens & the camera aperture is 58mm.

Results & Discussion:-

A total different birds of 64 species, 61 genus, 37 family were recorded during the period of September- October 2014. (Table 2) out of which 12 were found to be very rare. 10 found to be very dominant. The dominant bird recorded in this study area in terms of number of individuals were Laughing dove, Common Myna, Green Bee Eater, Parakeet, Rock Pigeon etc.

Significance of study area:-

Availability of 64 different birds in a short span of about 1 month is the clear evidence of good habitat quality of Deekshabhoomi premises. This can also be attributed to the increase in the numbers of pilgrims which increases the food availability for the birds.

Thus the study of area comprises of suitable habitat that are essential & needful for the birds survival.

Conservation Strategies:-

Birds are protected by number of biodiversity acts.

- Wildlife Protection Act, 1972.
- Forest Conservation Act, 1980.
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- The Prevention of Cruelty to Animals Acts, 1960
- Biological Diversity Act, 2002.
- Biological Diversity Rules, 2004

The act is divided into number of schedules and list of animals for protecting. The area faces immense pressure with increasing pilgrims and negligence of plantation. Necessary action should be taken for plantation, so that the population of birds increases in this area.

TABLE 01: Dominant trees and shrubs of Deekshabhoomi area:

Sr.No.	Botanical name	Common name
1.	<i>Polyalthia longifolia</i>	Ashoka
2.	<i>Azadirachta indica</i>	Neem

3.	<i>Eucalyptus globules</i>	Tasmanian blue gum
4.	<i>Ficus religiosa</i>	Pippala tree
5.	<i>Delonix regia</i>	Gulmohar
6.	<i>Alstonia scholaris</i>	Blackboard tree
7.	<i>Moringa oleifera</i>	Drumstick tree
8.	<i>Ixora coccinea</i>	Jungle flame
9,	<u><i>Holoptelea integrifolia</i></u>	Indian Elm
10.	<i>Dietes bilcolor</i>	Morea

TABLE 02: Checklist of birds recorded in the premises:

Sr. No.	Common Name	Zoological name	Preferred food	Relative abundance
01.	Common Myna	<i>Acridotheres tristis</i>	Invertrebrates, Fruits, Lizards.	VC
02.	Laughing Dove	<i>Streptopelia senegalensis</i>	Grains, seeds, small insects.	VC
=03.	Common Tailorbird	<i>Orthotomus sutorius</i>	Insects, larvae, small fruits and berries.	C
04.	Rock Pigeon	<i>Columba livia</i>	Seeds, insects	VC
05.	House Sparrow	<i>Passer domesticus</i>	Seeds, insects, larvae, small fruits.	C
06.	House Crow	<i>Corvus splendens</i>	Rubbish, debris, sewage.	C
07.	Rose Ringed Parakeet	<i>Psittacula krameri</i>	Seeds, berries, flowers' nectar.	VC
08.	Jungle Babbler	<i>Turdoides striata</i>	insects, grains, nectar and berries	VC
09.	Common Iora	<i>Aegithina tiphia</i>	Insects, spiders, fruit, berries, nectar.	R
10.	Red Vented Bulbul	<i>Pycnonotus cafer</i>	Fruits, petals, nectar, insects.	VC
11.	Koel	<i>Eudynamys scolopacea</i>	Insects & Caterpillars	C
12.	Purple Sunbird	<i>Cinnyris asiaticus</i>	Nectar, small berries, insects.	C
13.	Shikra	<i>Accipiter badius</i>	Lizards, geckos, small birds.	C

14.	House Swift	<i>Apus nipalensis</i>	Insects	VC
15.	Black Kite	<i>Milvus migrans</i>	Rodents, Birds, Bats.	R
16.	Brown rock chat	<i>Cercomela fusca</i>	Insects.	C
17.	Coppersmith Barbet	<i>Megalaima haemacephala</i>	Figs, berries, insects.	C
18.	Ashy Prinia	<i>Prinia socialis</i>	Insects & Flower Nectar	VC
19.	Indian Silverbill	<i>Lonchura malabarica</i>	grass seeds,	R
20.	Spotted Owlet	<i>Glaucidium perlatum</i>	bats, toads, small snakes, rodents, mollusks.	R
21.	Oriental Magpie Robin	<i>Copsychus saularis</i>	Insects, nectar, small lizards	C
22.	Golden Oriole	<i>Oriolus oriolus</i>	Fruits, insects, nectar.	VR
23.	Scaly Breasted Munia	<i>Lonchucra punctulata</i>	Seeds, small berries.	R
24.	Green Bee eater	<i>Merops orientalis</i>	Hymenoptera, bugs, termites, beetles.	VC
25.	Asian Pied Starling	<i>Gracupica contra</i>	Insects & Grains	R
26.	Brahminy Starling	<i>Sturnia pagodarum</i>	Insects, fruit, berries and nectar.	C
27.	Crow Pheasant	<i>Centropus sinensis</i>	Large insects, small vertebrates	R
28.	Black Drongo	<i>Dicrurus macrocercus</i>	Insects, Small Reptiles, Bats	VC
29.	Indian Robin	<i>Saxicoloides fulicatus</i>	Insects	C
30.	Black Shouldered Kite	<i>Elanus axillaris</i>	Mice, grasshoppers, small reptiles	R
31.	Common Kestrel	<i>Falco tinnunculus</i>	Small mammals, lizard, insects	C
32.	Red Rumped Swallow	<i>Cecropis daurica</i>	Insects	VR
33.	Black Redstart	<i>Phoenicurus ochruros</i>	Invertebrates, barriers, fruits & seeds	R
34.	Red Wattled Lapwing	<i>Vanellus indicus</i>	Insects, snails, other invertebrates.	R
35.	White Throated Kingfisher	<i>Halcyon smyrnensis</i>	Insects, frogs, lizards, small rodents.	C
36.	White Browed Wagtail	<i>Motacilla maderaspatensis</i>	Insects, small worms, seeds	C
37.	Yellow Wagtail	<i>Motacilla flava</i>	Insects.	UC
38.	White Wagtail	<i>Motacilla alba</i>	Invertebrates, insects.	C
39.	Black Rumped Flameback	<i>Dinopium benghalense</i>	Ants, termites, caterpillars, figs & berries.	VR
40.	Verditer Flycatcher	<i>Eumyias thalassinus</i>	Insects	VR
41.	White Throated Fantail	<i>Rhipidura aureola</i>	Insects	VR
42.	Plum headed Parakeet	<i>Psittacula cyanocephala</i>	Fruits, grains, nectar	VR
43.	Rufous Treepie	<i>Dendrocitta vagabunda</i>	Insects & larvae, small invertebrates.	R
44.	Yellow footed green pigeon	<i>Treepie</i> 10.	Fruits, (<i>Ficus</i>)	UC
45.	Purple Rumped Sunbird	<i>Leptocoma leynouca</i>	Nectar	C
46.	Red Avadavat	<i>Amandava amandava</i>	Grass seeds, insects	VR

47.	Oriental White Eye	<i>Zosterops palpebrosus</i>	Insects, flower nectar, berries	R
48.	Oriental Honey Buzzard	<i>Pernis ptilorhyncus</i>	larvae of social bees and wasps, bits of comb and honey.	VR
49.	Grey Hornbill	<i>Ocyrceros birostris</i>	Fruits, insects , scorpions, small birds, and reptile	R
50.	Collard scops owl	<i>Otus bakkamoena</i>	Insects, Mice, small birds, Lizards	VR
51.	Roller Bird	<i>Coracias benghalensis</i>	Insects, arachnids, small reptiles ,small snakes and amphibians.	UC
52.	Long tailed shrike	<i>Lanius schach</i>	Large insects, small mammals, fruits	VR
53.	Eurasian collared Dove	<i>Streptopelia decaocto</i>	Seeds, some birds, insects	R
54.	Common Hawk Cuckoo	<i>Cuculus canorus</i>	Insects, hairy caterpillars	VR
55.	Indian Pita	<i>Pitta brachyuran</i>	Insects and small invertebrates	R
56.	Rufous Tailed Lark	<i>Ammomanes phoenicura</i>	seeds, grain and insects	R
57.	Small Minivet	<i>Pericrocotus cinnamomeus</i>	Insects, nectar	C
58.	Pied Bushchat	<i>Saxicola caprata</i>	Insects	R
59.	Yellow Crowned Woodpecker	<i>Leiopicus mahrattensis</i>	Insects, figs, fruits and flower nectar	R
60.	Booted warbler	<i>Iduna caligata</i>	Insects	R
61.	Sulphur- Bellied Warbler	<i>Phylloscopus griseolus</i>	Insects	R
62.	Ultramarine Flycatcher	<i>Ficedula superciliari</i>	Insects	VR
63.	Lesser Whitethroat	<i>Sylvia curruca</i>	Insects, berries of fruits	R
64.	Yellow – eyed Babbler	<i>Chrysomma sinense</i>	Insects	C

TABLE 03: Name of families and Number of Genus:

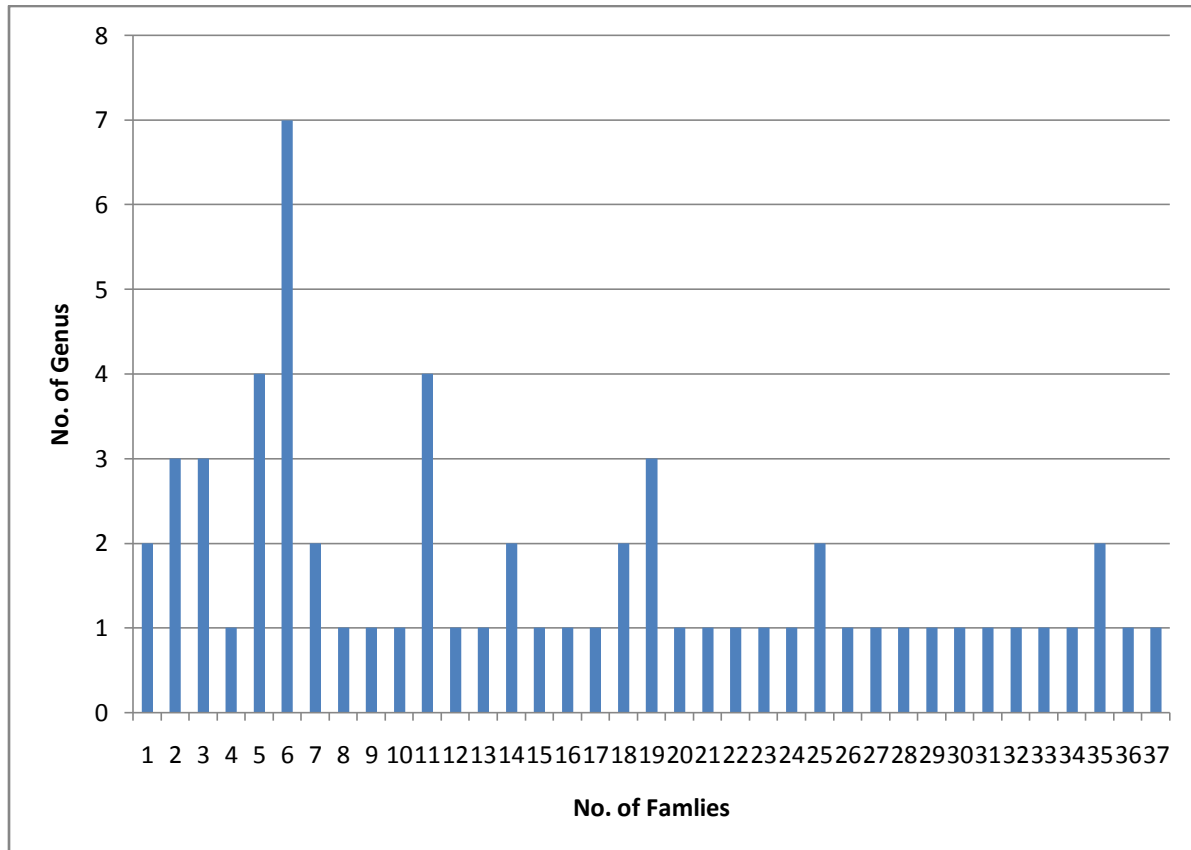
<u>Sr No.</u>	<u>Families</u>	<u>Genus</u>
1.	Cisticolidae	2
2.	Cuculidae	3
3.	Sturnidae	3
4.	Dicruridae	1
5.	Accipitridae	4
6.	Muscicapidae	7
7.	Picidae	2
8.	Aegithinidae	1
9.	Falconidae	1
10.	Megalaimedae	1

11.	Columbidae	4
12.	Oriolidae	1
13.	Meropidae	1
14.	Corvidae	2
15.	Passeridae	1
16.	Apodidae	1
17.	Bucerotidae	1
18.	Stirigidae	2
19.	Estrildidae	3
20.	Leiothrichidae	1
21.	Laniidae	1
22.	Zosteropidae	1
23.	Motacillidae	1
24.	Psittaculidae	1
25.	Nectariniidae	2
26.	Hirudinidae	1
27.	Pycnonotidae	1
28.	Charadridae	1
29.	Coraciidae	1
30.	Campephagidae	1
31.	Rhipiduridae	1
32.	Helcyonidae	1
33.	Pittidae	1
34.	Alcedinidae	1
35.	Sylviidae	2
36.	Acrocephalidae	1
37.	Phylloscopidae	1
	Total	64

MAP OF STUDY AREA:-



Table No. 04: With reference to the table no.03:



Conclusion:-

Bird watching is an amazing experience. It gives information about different types of birds. It helps in understanding their behavior and food habit. It makes us understand how birds are important for Ecosystem. The diversity and abundance of 64 birds showed that all these birds are fairly distributed throughout premises. The association between birds and plants is always highly specific. These birds collect their food from the plants and thus also increase pollination which is a crucial link in the survival of ecosystem and is one of the factor that needs to be well understood to develop appropriate strategies for conservation of biodiversity. The authority should implement policies that increase the participation of pilgrims in conservation of plants.

Future prospect:-

This is the first scientific documentation on the record of birds visiting Deekshabhoomi during the Dushera period when the number of pilgrims is in abundance. From the present study, the basic information of bird diversity and abundance patterns can be used for further ecological assessment & comparative research. The present study will help in adopting necessary conservative measures

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& support plantation in the study area.

Authors Contribution:-

Mr. Shantanu Nagpure and Mr. Tilak Dhoble carried out the photographic sessions and Miss. Amrin Kausar Zade recorded the data time to time. Dr. Archana Meshram analyzed the results and arranged the research work systematically.

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