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Study on bird diversity in Malayatoor and Iringole Kavu, Perumbavoor, Ernakulam District

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Abstract

The study on Bird Diversity in Malayatoor and Iringole Kavu, Perumbavoor was conducted from January 2018 to December 2018. 47 species of birds were observed at Iringole Kavu and 31 species were spotted at Malayatoor. Among these 23 species were found in both places. Commonly occurring birds at both places were White – Throated Barbet, Black-rumped flameback, Red Whiskered Bulbul, Common Myna, Shikre, Black Drongo, House crow, Racket Tailed Drongo, Asian Koel etc. Availability of rich food, favourable climatic condition and suitable breeding places etc... attract many birds to these areas. Habitat destruction is the most important threat of the birds living here. The uniqueness of the sacred grove, food availability and the presence of pond in Iringole Kavu are the reason for its rich bird fauna diversity. Sacred groves act as an abode for many rare, endemic, endangered species and economically important plants of fruit bearing and medicinal properties. Malayatoor was a place with large number of birds in the past, but due to the presence of quarries large number of trees were cut down which resulted in the decrease of birds in this area. Bird diversity in Iringole Kavu is greater than that at Malayatoor. Flood was also not affected the bird diversity of these two sampling sites.

Keywords: Malayatoor, Iringole Kavu, Perubavoor, Bird diversity, Monthly distribution, Bird species

Introduction

Birds are one of the major indicators of climatic change. They are highly migratory in behavior also. The impact of flood was less when compared to other faunal groups due to aerial behavior of the birds and preferred nesting places. There are altogether about 8650 species of living birds in the world today. In India about 1200 species of birds, representing 75 Families and 20 orders is present¹. Bird Diversity in Western Ghats of Kerala have been conducted and significant result of these surveys was in identifying the relative conservation value of these forest areas in protecting endemic and threatened avian fauna².

The riparian zones of Meenachil River basin of Kerala were surveyed during January 2009 to December 2015. A total of 92 bird species belonging to 36 families in 15 orders were recorded. 85% of the birds recorded were resident forms and 15% were migrants³.

Materials and Methods

The study was conducted from January 2018 to December 2018 at Malayatoor and Iringole Kavu. The observation of birds in the field was done with the help of Binocular and Photos were taken with a Canon DSLR Camera. Malayatoor is a fringe area to the idamalayar forest range and is rich bio-diverse hotspot. Malayatoor is a village in aluva taluk near angamaly in the north eastern corner of ernakulam district in the state of kerala in south india. Iringole Kavu is a miniature forest which is located in Perumbavoor of Ernakulum District, Kerala. It is a sacred grove. Varieties of birds present here make this place an attractive zone.

After spotting the bird, it was carefully observed without disturbing them. The time selected for bird watching was before 8am in the morning and after 5 pm in the evening as the birds are more active at these time. Bird watching was done for once in a month. The identification of birds was done by both sight and sound. Spot identification

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was carried out by the use of field guides.

Results and Discussion

During the study period 31 species of birds were identified from Malayattoor (Table, 1) and 47 species from Iringole Kavau (Table, 2). A total of 78 species of birds were identified from both the study areas among which 23 were common.

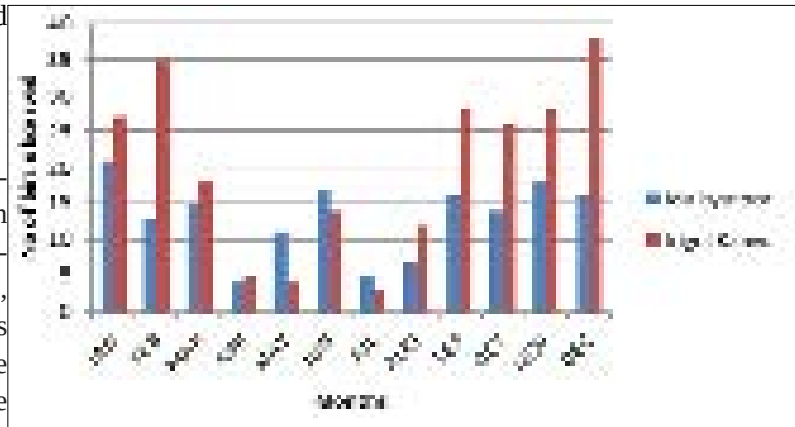


Fig.1. Graph showing monthly distribution of birds

Maximum number of species were observed during January, November and December at Malayattoor and minimum number in April, July and August. Maximum number of birds were spotted in the month of November, December and February at Iringole Kavau and minimum number in April, May, July and August (Fig. 1).

Among the identified species, Indian paradise flycatcher and brown breasted flycatcher is a winter visitors. Black hooded oriole shows migratory movement while White throated ground thrush, Crested serpent eagle, Brahminy kite shows local migration by monsoon and when food, water and habitat variations occur. During the study period birds belong to 25 families were identified and maximum bird diversity were identified in Cuculidae and Columbidae family. Bird diversity in Iringole Kavau was greater than Malayattoor and might be due to the richness of thick forest and might have facilitated the feeding and reproduction of birds. Uniqueness of the sacred grove, food availability and presence of pond may be the reason for its rich bird faunal diversity. Sacred groves act as an abode for many rare, endemic, endangered species and economically important plants of fruit bearing and medicinal properties. Apart from conserving biological diversity, this sacred grove that is situated in the middle of the human habitation are responsible for conserving water table of the soil. This is evident from the perennial nature of ponds, wells and tanks, which are situated in the nearby areas of the sacred groves⁴.

Eyebrowed Thrush' (*Turdus Obscurus*), locally named 'Purikapullu' was spotted at Iringole Kavau, near Perumbavoor and the bird, which entered the Kerala checklist as 519th bird⁵.

The seasonal variation, availability of food, water, suitable breeding places, favourable climatic conditions and undisturbed habitat affects the abundance and distribution of birds. Most of the birds are resident common birds and a very few ones show local migratory movements. Habitat destruction is the most important treat of the birds living here.

The study area falls under humid montane climate having rainfall during the long rainy season from June to October and the shorter rainy season occurring from March to April. The significant variation in the abundance of migratory bird species between the dry and wet seasons could be due to seasonal movement patterns, local and regional habitat changes, large-scale population changes and climatic conditions.

Human induced disturbance can have a significant negative effect on breeding success by causing nest abandonment and increased predation. Outside the breeding season, recreation (particularly power boating, sailing and coarse fishing on Wetlands) reduces the habitat choices of birds⁶.

Commonly occurring birds in both of the places were White – throated kingfisher, White-cheeked barbet, Black rumped flameback, Red whiskered bulbul, Common myna, Shikre, Black drongo, House crow, Racket tailed drongo and Asian koel.

Table. 1 Birds identified from Malayatoor during the study period

SL. No	COMMON NAME	LOCAL NAME	SCIENTIFIC NAME
1	Little Cormorant	Cheria Neerkakka	<i>Microcarbo niger</i>
2	Cattle egret	Kalimundi	<i>Bubulcus ibis</i>
3	Purple heron	Chayamundi	<i>Ardea purpurea</i>
4	Great egret	Perumundi	<i>Ardea alba</i>
5	Indian pond heron	Kulakokku	<i>Ardeola grayii</i>
6	Crested serpent eagle	Chuttiparunthu	<i>Spilornis cheela</i>
7	Shikra	Shikra	<i>Accipiter badius</i>
8	Brahminy kite	Krishnaparunthu	<i>Haliastur indus</i>
9	White breasted waterhen	Kulakozhi	<i>Amaurornis phoenicurus</i>
10	Red wattled lapwing	ChekkanniThithirri	<i>Vanellus indicus</i>
11	Rock pigeon	Ambalpravu	<i>Columba livia</i>
12	Spotted dove	Aripravu	<i>Spilopelia chinensis</i>
13	Greater coucal	Chempothu	<i>Centropus sinensis</i>
14	Asian koel	Karingkuyil	<i>Eudynamys scolopaceus</i>
15	Common kingfisher	CheriaMeenkothi	<i>Alcedo atthis</i>
16	Green bee- eater	Naattuvelithatha	<i>Merops orientalis</i>
17	White cheeked Barbet	Chinnakutturavan	<i>Megalaima viridis</i>
18	Black drongo	Anaranchi	<i>Dicrurus macrocercus</i>
19	Rufous treepie	Olanjali	<i>Dendrocitta vagabunda</i>
20	House crow	Pena Kakka	<i>Corvus splendens</i>
21	Red vented bulbul	Naatubulbul	<i>Pycnonotus cafer</i>
22	Red-whiskered bulbul	Erattathalachi	<i>Pycnonotus jocosus</i>
23	Common tailorbird	Thunnaran	<i>Orthotomus sutorius</i>
24	Jungle babbler	Kariyilakili	<i>Turdoides striata</i>
25	Indian robin	Kalmannathi	<i>Saxicoloides fulicatus</i>
26	Common myna	Naatumyna	<i>Acridotheres tristis</i>
27	Jungle myna	Kinnarimyna	<i>Acridotheres fuscus</i>
28	House sparrow	Angadikuruvi	<i>Passer domesticus</i>
29	White-rumped munia	Aatakkarupan	<i>Lonchura striata</i>
30	Black -rumped flameback	Nattumaramkothi	<i>Dinopium benghalense</i>
31	Malabar Starling	Garudancharakili	<i>Sturnia blythii</i>

Seasonality affects food and cover availability of bird population, which in turn affects breeding success and ultimately survival of the bird species⁷. The seasonal variation in the amount of rainfall, temperature, spatial and temporal microhabitat conditions are known to affect the availability of various food items for birds.

Based on species sensitivity to their habitat, these could alter the diversity, abundance and

distribution of birds in an area. Particularly it has been revealed that the processes acting in breeding and wintering grounds determine both the patterns of habitat occupancy and seasonal abundance in migratory bird species⁸. Tropical and subtropical countries witness a certain type of seasonal migration of birds. On the other hand, the spatial distributions of food and cover requirement of bird species is determined mainly by the vegetation

Table.2. Birds identified from Iringole Kavu during the study period

Sl. No	COMMON NAME	LOCAL NAME	SCIENTIFIC NAME
1	White-cheeked barbet	Chinnakutturavan	<i>Psilopogon viridis</i>
2	Coppersmith barbet	Chembukotti	<i>Megalaima haemacephala</i>
3	Plum-headed parakeet	Poonthatha	<i>Psittacula cyanocephala</i>
4	Black-hooded oriole	Manjagaruppan	<i>Oriolus xanthornus</i>
5	Orange headed thrush	Chenthalayankaatupullu	<i>Geokichla citrina</i>
6	Spotted dove	Aripravu	<i>Spilopelia chinensis</i>
7	Black –rumped flameback	Nattumaramkothi	<i>Dinopium benghalense</i>
8	Greater racket-tailed drongo	Kadumuzhakki	<i>Dicrurus paradiseus</i>
9	Vernal hanging parrot	Thathachinnan	<i>Loriculus vernalis</i>
10	Oriental magpie robin	Mannathipullu	<i>Copsychus saularis</i>
11	Bronzed drongo	Lalithakakka	<i>Dicrurus aeneus</i>
12	Indian-paradise flycatcher	Nagamohan	<i>Terpsiphone paradise</i>
13	Asian emerald dove	Omanapravu	<i>Chalcophaps indica</i>
14	Jungle owlet	Chembannathu	<i>Glaucidium radiatum</i>
15	White-throated kingfisher	Meenkothichathan	<i>Halcyon smyrnensis</i>
16	Indian pitta	Kavi	<i>Pitta brachyura</i>
17	Black drongo	Anaranchi	<i>Dicrurus macrocercus</i>
18	Rose-ringed parakeet	Mothirathatha	<i>Psittacula krameri</i>
19	Blue-tailed bee-eater	Veliyavelithathaa	<i>Merops philippinus</i>
20	Ashy woodswallow	Enakathevan	<i>Artamus fuscus</i>
21	Purple sunbird	Karuppanthenkili	<i>Cinnyris asiaticus</i>
22	Common cuckoo	Pekuyil	<i>Cuculus canorus</i>
23	Red spurfowl	Chembanmullankozhi	<i>Galloperdix spadicea</i>
24	Purple rumped sunbird	Manjathenkili	<i>Leptocoma zeylonica</i>
25	Greater coucal	Chempothu	<i>Centropus sinensis</i>
26	Great egret	Perumundi	<i>Ardea alba</i>
27	Common kingfisher	Cherameenkothi	<i>Alcedo atthis</i>
28	Emerald Dove	Green dove	<i>Chalcophaps indica</i>
29	Rufous Treepie	Olanjali	<i>Dendrocitta vagabunda</i>
30	Asian koel	Karingkuyil	<i>Eudynamis scolopaceus</i>
31	Green bee- eater	Naattuvelithatha	<i>Merops orientalis</i>
32	Rock pегion	Ambalapravu	<i>Columba livia</i>
33	Jungle babbler	Kariyilakili	<i>Turdoides striata</i>
34	Indian robin	Kalmanathi	<i>Saxicoloides fulicatus</i>
35	Common myna	Naatu myna	<i>Acridotheres tristis</i>
36	Jungle Myna	Kinnarimyna	<i>Acridotheres fuscus</i>
37	House Crow	Pena Kakka	<i>Corvus splendens</i>
38	Red vented bulbul	Naatubulbul	<i>Pycnonotus cafer</i>
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42	Shikra	Shikra	<i>Accipiter badius</i>
43	Brahminy kite	Krishnaparunthu	<i>Haliaeetus indus</i>
44	Cattle egret	Kalimundi	<i>Bubulcus ibis</i>
45	Indian pond heron	Kulakokku	<i>Ardeola grayii</i>
46	Yellow billed babbler	Poothakiri	<i>Turdoides affinis</i>
47	Jungle Crow	Balikakka	<i>Corvus macrorhynchos</i>

structure and composition that is correlated with abundance and habitat use.

Conclusion

Iringole Kavau is noted for its rich bird diversity and should be considered as a sensitive ecosystem and there is an urgency to conduct periodic surveys which are needed to reveal the actual biodiversity

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of both the areas and action plan should be taken against habitat destruction.

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