

Avifaunal Diversity along the Malaprabha River in Hebballi, Badami Taluk North Karnataka

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ABSTRACT: The present study aims to estimate the avifaunal diversity along the river Malaprabha at Hebballi, Badami taluk of Bagalkot District of Karnataka. A total of 30 species of birds were recorded. Highest number of birds were recorded during October, 2016 and minimum number was in February, 2017. Among the 12 orders observed, Passeriformes was dominant and it is represented with 10 families and total 12 species. As per the present status, 15 species of birds are resident, 12 species are resident and migrant, 3 species of birds are resident and winter migrant, and only 2 species of birds are winter migrants.

KEYWORDS: Avifauna, Species composition, Malaprabha river, Monthly variation

I. INTRODUCTION

Birds are ideal bio-indicators and useful models for studying a variety of environmental problems as they are very sensitive to the slightest of environmental changes and are important health indicators of the ecological conditions and productivity of an ecosystem [17]. Study of avifaunal diversity is an essential ecological tool which acts as an important indicator to evaluate different habitats both qualitatively and quantitatively [4]. They aid in the pollination of plant. By landing on a plant or sucking the nectar from a flower; and they moving to the next, a bird does the job usually associated with bees. Birds also have a good system for dispersal of seeds. The eat berries and then when they “dispose off” their waste, the berry seeds are disposed along with it. Bird faeces provide good fertilization for the seeds with which they are dropped, giving seeds optimum condition to grow. Diversity of avifauna is one of the most important ecological indicators to evaluate the quality of habitats. Now-a-days, avifaunal diversity has been decreasing due to destruction of natural habitats and human interference. Thus many species of birds may be forced to inhabit in the urban areas and constrain them to breed there [11]. Unfortunately global diversity of birds is decreasing incessantly primarily due to anthropogenic disturbances and climate change[6]. Birds are found in throughout the world, at approximately all altitudes and in nearly every climate. They are a natural way to control pests in gardens, on farms and other places. They aid in the pollination of plant. By landing on a plant or sucking the nectar from a flower; and they moving to the next, a bird does the job usually associated with bees. Birds also have a good system for dispersal of seeds. The eat berries and then when they “dispose off” their waste, the berry seeds are disposed along with it. Bird faeces provide good fertilization for the seeds with which they are dropped, giving seeds optimum condition to grow. Diversity of avifauna is one of the most important ecological indicators to evaluate the quality of habitats.

In Karnataka, most of the work is being concentrated on survey, distribution, diversity studies and status of avifauna which include studies on: diversity and abundance of water birds from Bangalore city lakes [20]. Avifauna of agro-ecosystems from maidan region of Davangere, Mysore[. Diversity studies in and around Shivamogga district[18,8]. Checklist of avifauna from Gudavi Bird Sanctuary[7]. Distribution and diversity of birds from Lakkavalli range forest of Bhadra wildlife sanctuary[10]. Bird diversity of Shimogga city[12]. Studies on bird diversity from Sharavathy landscape[2]. Diversity of wetland bird of mangroves from

Kundapura of Udupi District[24]. Observations on species composition, relative abundance and avian classification based on feeding guilds around Chandrapalli dam of Chincholi from Gulbarga region[13,14]. Studies on occurrence of terrestrial birds in Haveri and neighboring districts[4]. Diversity, richness and conservational threats of migratory

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wetland birds of Magadi Bird Sanctuary, Gadag district[22,15]. Except for a report on avifaunal status and diversity along Ghataprabha river[19], there are no studies on bird diversity along the rivers of North Karnataka.

Malaprabha is an important river in northern Karnataka; it is a tributary of river Krishna. Malaprabha originates at Kanakumbi village of Belgaum district and flows 300 kms eastwards and merges with river Krishna at Kudala Sangama in Bagalkot district. Since, there are no report on avifaunal studies along this River the present work was undertaken to study species composition, and monthly variations of birds at Hebballi village in Badami taluk of Baglkot district.

II. MATERIALS AND METHODS

Study area

Hebballi is located in the Indian state of Karnataka at the Bagalkot district and Badami taluk. and lies at 160 19' ' North latitude and 750 505' and 750 05' East longitude. The average Precipitation is 676mm. The least rainfall occurs in January. The climate generally dry with minimum and maximum temperature varied between 22.9 and 29.3° C respectively Vegetation: Main crops are Sorghum, Wheat, Maize.

The checklist of birds at the Malaprabha River bank was made by sighting the birds with the help of Olympus binoculars (OLYMPUS 10 X 50 DPS I, Field.) and Canon 1200d with 55-225mm lens camera was used for photography. The field characteristic were noted down during the study. Birds sighted during the study period were categorized according to their status as residents (R), local migrants (LM) and winter migrant (WM). Based on regularly updated checklist the detailed census of birds was conducted by direct count method. The study was conducted at monthly intervals from September, 2016 to February, 2017 by scanning the Malaprabha River bank in Hebballi, taluk Badami by Line transect method. The morning hours 6:30 to 10:30 am and evening 4:00 to 7:00 pm, were utilized for the purpose. The birds are classified on the basis of "The Book of Indian birds" [2].

III. RESULTS AND DISCUSSION

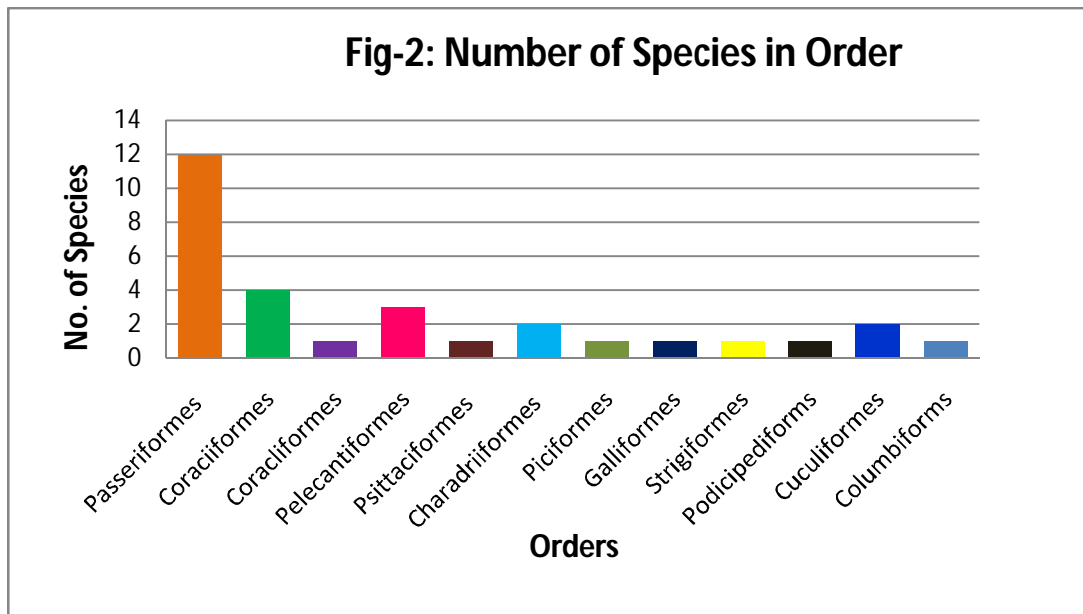
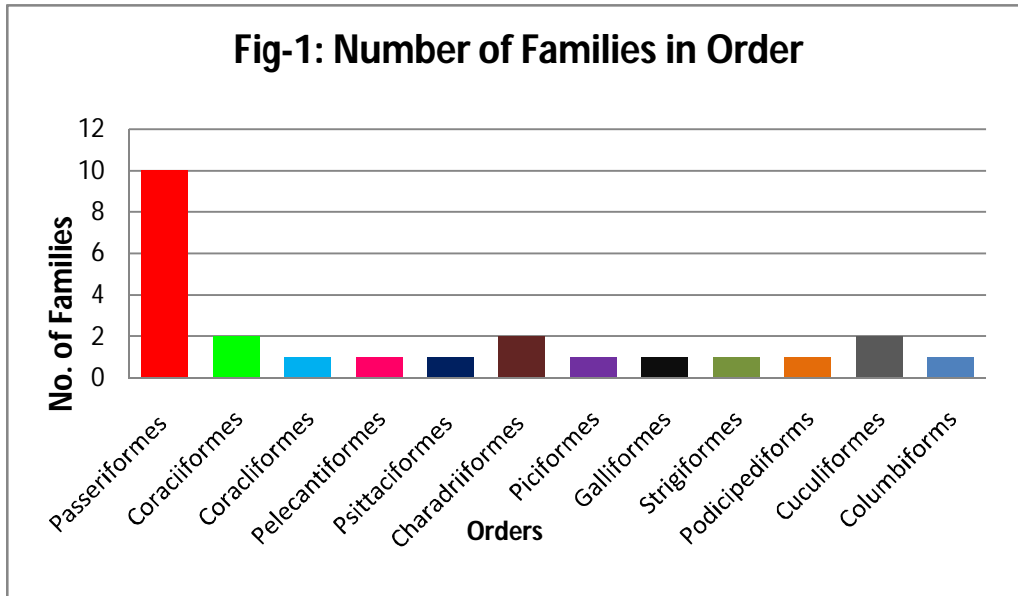
The monthly survey of birds was carried out in Malaprabha River bank at Hebballi from September, 2016 to February, 2017. A total of 30 species were spotted (Table 1). The monthly observation of birds for a period of six months is recorded (Table 2). During October, 2016, maximum of 28 species were observed and lowest with 12 species were observed in the month of December, 2016. Out of these birds observed at the site, some are resident local migratory which include Black Wagtail, Yellow Wagtail, Red vented Bulbul, Common Hill Myna, Indian Robin, Black Drongo, Long tailed Shrike, Black headed Munia, Purple rumped Sunbird, Pied Bushchat, Indian Golden Oriole, Minivet, White throated Kingfisher, Common Kingfisher, Pied Kingfisher, Green bee-eater, Indian Roller, Cattle Egret, Indian Pond Heron, Great Blue Heron, Rose ringed Parakeet, Stilt, Red wattled Lapwing, Woodpecker, Indian Peacock, Owl, Little Grebe, Asian Koel, Great Coucal. One is local migrant it includes Spotted Dove. Among the 12 orders observed, Passeriformes are represented by 10 families and total 12 species. Coraciformes are represented by 2 families with 4 species. Charadriiformes and Cuculiformes represented by 2 families and 2 species each. Pelecaniformes with 1 family and 3 species. Coraciformes, Psittaciforms, Piciformes, Galliformes, Strigiformes, Podicipediforms and Columbiforms are represented by 1 family and 1 species of birds each. The order Passeriformes represented with more number of species compare to other orders. According to the present abundance, 12 species of birds are very common, 13 species of birds are common, and 5 species of birds are rarely seen. As per the present status, 15 species of birds are resident, 12 species of birds are resident and migrant, 3 species of birds are resident and winter migrant, and only 2 species of birds are winter migrants. The population of many granivorous farmland birds have been linked with decline in survival outside the breeding season, probably caused by a lack of food in winter [23,16]. There is a real need to gain a better understanding of the winter ecology, habitat preferences and foraging behaviour of many of these species. Some researcher's reported that bird species richness, density and frequency decreases due to intensive agricultural practices[9,25]. The study documents the avifaunal diversity along the Malaprabha River at Hebballi. The area provides some potential habitats for the birds. The area is active in the agricultural activities.

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Table No. 1: Systematic lists with abundance and status of avifauna of Malaprabha River bank at Hebballi.

Sl. No	Scientific Name	Common Name	Abundance	Status
1	<i>Motacilla grandis</i>	Black Wagtail	+++	R & M
2	<i>Motacila flava</i>	Yellow Wagtail	++	R & M
3	<i>Pycnonotus cafer</i>	Red vented Bulbul	++	R & M
4	<i>Graculareligiosa</i>	Common hill Myna	++	R & M
5	<i>Copsychus fulicatus</i>	Indian Robin	++	R
6	<i>Dicrurus macrocercus</i>	Black Drongo	+++	R
7	<i>Lanius schach</i>	Long tailed Shrike	++	R & WM
8	<i>Lonnchura malacca</i>	Black headed Munia	++	R & M
9	<i>Leptocoma zeylonica</i>	Purple rumped Sunbird	+	R
10	<i>Saxicola caprata</i>	Pied Bushchat	++	R
11	<i>Oriolus hundo</i>	Indian Golden Oriole	++	R & WM
12	<i>Paricrocotus cannamomeus</i>	Minivet	+	R
13	<i>Halcyon amyrnensis</i>	White throated Kingfisher	+++	R
14	<i>Alcedo atthis</i>	Common Kingfisher	+++	R & WM
15	<i>Ceryle rudis</i>	Pied Kingfisher	++	R
16	<i>Merops orientalis</i>	Bee-eater	+++	R & M
17	<i>Caraclias benghalensis</i>	Indian Roller	+++	R
18	<i>Bubulcus ibis</i>	Cattle Egret	+++	R & M
19	<i>Ardeoa grayii</i>	Indian Pond Heron	+++	R
20	<i>Ardeidae herodias</i>	Great blue Heron	+	WM
21	<i>Psittacula krameri</i>	Rose ringed Parakeet	+++	R
22	<i>Himantopus leucocephalus</i>	Stilt	+++	R
23	<i>Vanellus idicus</i>	Red wattled Lapwing	++	R & M
24	<i>Drycopus pileatus</i>	Woodpecker	++	R & M
25	<i>Pavo cristatus</i>	Indian Peacock	++	R
26	<i>Bubo bengalensis</i>	Owl	+	R
27	<i>Tachybaptus ruficollis</i>	Little Grebe	+	WM
28	<i>Eudynamys scolopaceus</i>	Asian Koel	++	R
29	<i>Centropus sinensis</i>	Greater Coucal	+++	R
30	<i>Streptopelia chinensis</i>	Spotted Dove	+++	R & M

Note: Abundance is depicted by “+++”- Very common, “++”- common, “+”-Rare.

Status is depicted by “R”- Resident, “M”-migrant, “WM”-Winter migrant.

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Table No. 2: Monthly occurrence of avifauna in Malaprabha River bank at Hebballi.

Sl. No	Birds Name	Sept,16	Oct,16	Nov,16	Dec,16	Jan,17	Feb,17
1	Black Wagtail	-	+++	++	++	+	+
2	Yellow Wagtail	++	+	++	-	++	-
3	Red vented Bulbul	-	++	+	+	+	-
4	Common hill Myna	-	+	-	+	-	-
5	Indian Robin	-	++	-	+	++	-
6	Black Drongo	+++	+++	+++	+++	+++	++
7	Long tailed Shrike	+	++	++	+	+	+
8	Black headed Munia	+	++	-	+	-	+
9	Purple rumped Sunbird	-	-	-	-	+	-
10	Pied Bushchat	+	+	-	-	-	-
11	Indian Golden Oriole	-	++	-	-	+	-
12	Minivet	-	++	-	-	+	+
13	White throated Kingfisher	+	++	+	++	-	+
14	Common Kingfisher	-	++	-	++	-	-
15	Pied Kingfisher	+	-	-	-	+	-
16	Bee-eater	++	++	+++	++	+	++
17	Indian Roller	-	-	-	+	-	++
18	Cattle Egret	++	+++	++	++	+	+
19	Indian pond Heron	-	+	-	+	-	-
20	Great blue Heron	-	+	-	-	+	-
21	Rose ringed Parakeet	-	+++	++	++	-	-
22	Stilt	++	+	-	-	+	+
23	Red wattled Lapwing	-	+++	-	-	-	-
24	Woodpecker	-	+	-	-	-	-
25	Indian Peacock	-	+	-	-	++	-
26	Owl	-	+	-	-	-	-
27	Little Grebe	-	++	-	-	-	-
28	Asian Koel	-	++	-	-	+	-
29	Greater Coucal	-	++	+	++	+	+
30	Spotted Dove	+	++	-	-	-	-

Note: '+' – Rare; '++' – Common; '+++' – Very Common; '-' Not Found.

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