

A Preliminary Study on Avifauna Diversity And Distribution in Forest Area Jashpur, Chhattisgarh

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Abstract- This research study has been done in the forest area near sarudih tea garden in jashpur district Chhattisgarh. This study was conducted from Jun 2019 to Dec 2021. A total of 97 Avian species were recorded in different habitat during the study period. Among the species observed 38 Abundant species, 36 Uncommon species and 23 common Species were observed. At these study site 97 is species were recorded in different habitats and different season. Maximum 65 species diversity recorded in forest area and lowest 14 species in fallow land. The habitat of birds is also affected by the availability of food and season. Forest are the best habitat for birds. But due to human activities, forests and other habitat of birds are rapidly getting destroyed. Due to which the number of birds is decreasing. The highest number of abundant. Avian species were found in forest area. Apart from this, uncommon avian species were found in forest area. This research study provides basic information for studying birds in this area to help conserve their habitats in future.

Key Words: Avifauna, Abundant Species.

Introduction-

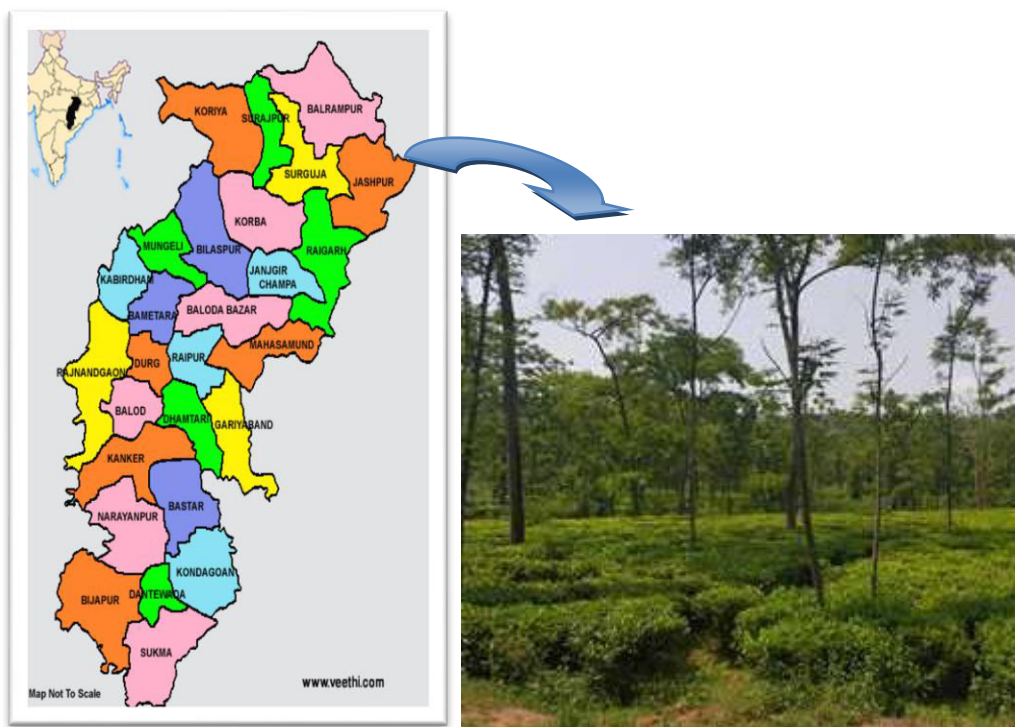
Avifaunal diversity forms an important component of natural ecosystem Manjunath and Joshi (2012). Birds are such vertebrate animals. Whose distribution is found in every part of the world. Due to their flying ability, they are found in every type of habitat and in every geographical area. Forest area are best habitats for birds. Birds thrive more in temperate and tropical forest. The quality of any ecosystem can be understood from the (presence) Occurrence and abundance of birds. The population of birds depends on climatic factors like rainfall temperature, relative humidity etc. due to various human activities and climate change, the number of birds is decreasing every year Roy et.al (2012). The abundance of birds also varies in different habitats. Birds habitat are rapidly being destroyed due to anthropogenic activities. Birds diversity is also declining due to the loss of bird habitats (Grewal B -2000)

Material and Method –

Study Site –

Jashpur district is located in the north east part of Chhattisgarh. It has an average altitude from 2500 to 3500 meters above sea level, the district is geographically situated between 17° 41' N to 24° 5' N latitude and 80° 15' E to 84° 26' E longitude. From geographical point of view the district can be divided into 2 parts upper part and lower part. The upper part of the Jashpur

district has dense vegetation compared to the lower part. The study was conducted in the forest area near a tea plantation located at a distance of about 10 km, from district head quarter in the upper part. The forest has temperate and sub-tropical types of vegetation. The main vegetation found in this region are Sal (*Shorea robusta*), Mango (*Mangifera indica*), Black Plum (*Syzygium cumini*) and different types of shrubs including Dhataki (*Woodfordia fruticosa*), Putus (*Lantana*), Nirgundo (*Vitex Nirgundo*), herbs like Kalmegh Bhuineem (*Andrographis paniculata*), Black Tulsi (*Ocimum basilicum*), Lemon grass and different types of grasses.



Map showing the location of Jashpur district, Study site

Method-

This research study was conducted from Jun 2019 to Dec 2021. Observed of birds was done with naked eye and binocular. Binocular Olympus 40x8 used for this observation used with Nikon camera for photography. Birds survey was conducted at the time when birds are most active i.e from 06.00 AM to 09.00 AM and from 04.00 to 6.00 PM. Field visits have been conducted weekly. Bird species identification was done by Salim Ali's field guide book "birds of india".

Result –

This table show the distribution and abundance of the species in different habitats.

Table No 1.Avian species distribution in different habitat

Sn.	Common name	Scientific name	Forest	Shurb	Grass land	Agriculture	Wetland	Fallow land	Abundance Status
1	Plum-headed Parakeet	Psittacula cyanocephala	+	+	-	-	-	-	A
2	Rose-ringed Parakeet	Psittacula krameri	+	+	-	-	-	-	A
3	Plain Parakeet	Brotogeris tirica	+	+	-	-	-	-	A
4	Jungle Owlet	Glaucidium radiatum	+	-	-	-	-	-	C
5	Forest Owlet	Heteroglaux	+	-	-	-	-	-	UC
6	Barn Owlet	Tyto albo	+	-	-	-	-	-	UC
7	Spotted Owlet	Athene brama	+	-	-	-	-	-	UC
8	Indian Eagle owl	Bubo bengalensis	+	+	-	-	-	-	UC
9	Black-winged Kite	Elanus caeruleus	+	+	-	-	-	+	UC
10	White-eyed Buzzard	Butastur teesa	+	+	-	+	-	+	UC
11	Great egret	Ardea alba	-	-	-	+	+	-	A
12	Indian Pond-Heron	Ardeola grayii	-	-	-	+	+	-	A
13	Little Egret	Egretta garzetta	-	-	-	+	+	-	A
14	Red-naped Ibis	Pseudibis papillosa	-	-	-	+	+	-	C
15	Cattle Egret	Bubulcus ibis	+	-	-	+	+	-	A
16	Striated Heron	Butorides striata	-	-	-	+	+	-	A
17	Black crowned	Nycticorax	-	-	-	+	+	-	UC

	night heron								
18	Little Cormorant	Microcarbo niger	-	-	-	-	+	-	A
19	Common snipe	Gallinago gallinago	-	-	-	+	+	-	UC
20	Red-wattled Lapwing	Vanellus indicus	-	+	+	+	+	-	A
21	Greter painted-snipe	Rostratula benghalensis	-	-	-	+	+	-	UC
22	Green Sandpiper	Tringa ochropus	-	-	-	+	+	-	UC
23	Jacobin Cuckoo	Clamator jacobinus	+	-	-	-	-	-	C
24	Asian Koel	Eudynamys scolopaceus	+	-	+	+		+	C
25	Lesser Cuckooshrike	Coccyus poliocephalus	+	+	-	-	-	-	C
26	Common Hawk-Cuckoo	Hierococcyx varius	+	+	-	-	-	-	C
27	Indian Cuckoo	Cuculus micropterus	+	+	+	-	-	-	C
28	Common Cuckoo	Cuculus canorus	+	+	-	-	-	-	C
29	Greater Coucal	Centropus sinensis	+	+	+	+	-	+	A
30	Banded Bay Cuckoo	Cacomantis sonneratii	+	+	-	-	-	-	C
31	Himalayan Cuckoo	Cuculus saturatus	+	-	-	-	-	-	UC
32	Eurasian Hoopoe	Upupa epops	+	-	-	-	-	-	UC
33	Long-tailed Shrike	Lanius schach	+		+	+	-	-	C
34	Oriental White-eye	Zosterops palpebrosus	+	+	-	-	-	-	C
35	Ashy	Artamus	+	+	-	-	-	-	A

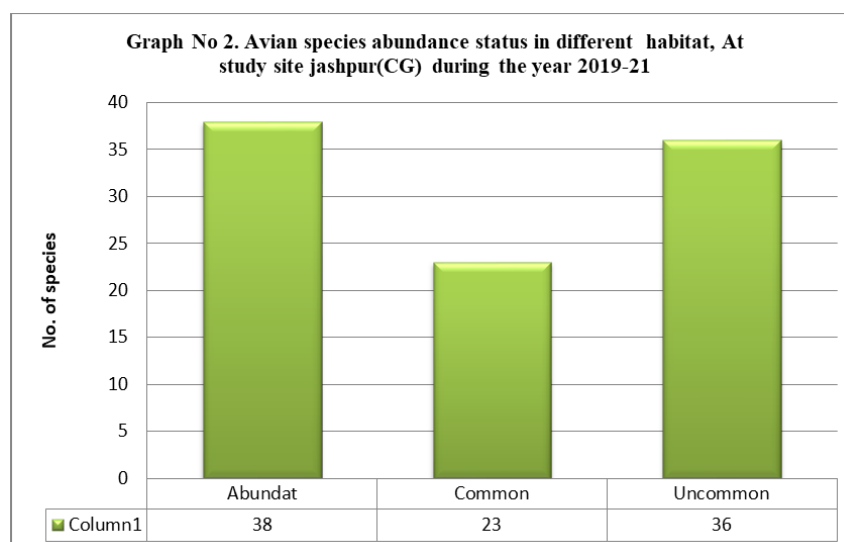
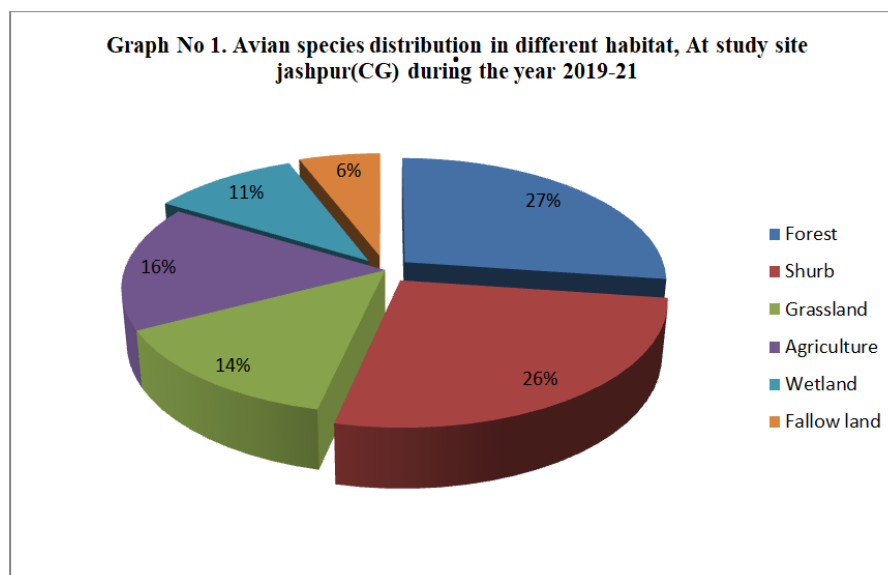
	Woodswallow	fuscus							
36	Black Redstart	Phoenicurus ochruros	+	+	+	-	-	-	A
37	Pied Bushchat	Saxicola caprata	+	+	-	-	-	-	A
38	Blue-Capped Red Start	Phoenicurus coeruleocephala		+	-	+	-	-	A
39	Indian Robin	Copsychus fulicatus	+	-	+	+	-	-	C
40	Indian black loret tit	Machlolophus xanthogenys	-	+	-	-	-	+	C
41	Scarlet Minivet	Pericrocotus speciosus	+	+	-	-	-	-	C
42	Large Cuckooshrike	Coracina macei	+	-	-	-	-	-	C
43	Small Minivet	Pericrocotus cinnamomeus	+	+	-	-	-	-	C
44	Sunda Minivet	Pericrocotus miniatus	+	+	-	-	-	-	C
45	White-bellied Cuckooshrike	Coracina papuensis	+		-	-	-	-	UC
46	Orange Minivet	Pericrocotus flammeus	+	+	-	-	-	-	C
47	Rufous Treepie	Dendrocitta vagabunda		+	-	-	-	-	C
48	Crow	Corvus splendens	+	+	+	-	-	+	C
49	Large-billed Crow	Corvus macrorhynchos	+	+	+	-	-	+	C
50	Indian Golden Oriole	Oriolus kundoo	+	+	-	-	-	-	C
51	Common	Acridotheres	+	+	+	+	+	+	A

	Myna	tristis							
52	Brahminy Starling	Sturnia pagodarum	+	+	+	-	-	-	A
53	Asian Pied Starling	Gracupica contra	+	+	+	+	+	+	A
54	House Sparrow	Passer domesticus	+	+	+	+	+	+	A
55	Red-vented Bulbul	Pycnonotus cafer	+	+	+	+	+	+	A
56	Oriental Magpie-Robin	Copsychus saularis	+	+	+	+	+	+	C
57	Jungle Babbler	Argya striata	+	+	-	-	-	-	A
58	Common Woodshrike	Tephrodornis Pondicerianus	+	+	+	-	-	-	C
59	Large Woodshrike	Tephrodornis virgatus	+	-	-	-	-	-	C
60	Western Yellow Wagtail	Motacilla flava	+	-	-	+	-	-	UC
61	Richard's Pipit	Anthus richardi	-	+	-	+	-	-	UC
62	Berthelot's Pipit	Anthus berthelotii	+	+	-	+	-	-	A
63	Tree Pipit	Anthus Trivialis	-	+	-	+	-	-	A
64	Paddy Field Pipit	Anthus rufulus	-	+	+	+	-	-	C
65	Tawny Pipit	Anthus campestris	-	+	+	+	-	-	C
66	Black Drongo	Dicrurus macrocercus	+	+	+	+	-	+	A
67	Purple Sunbird	Cinnyris asiaticus	+	+	+	-	-	-	A
68	Ashy Prinia	Prinia socialis	+	+	-	-	-	-	A

69	Rufous-Fronted Prinia	Prinia buehneri	+	-	-	-	-	-	A
70	White Spotted Fantail	Rhipidura albogularis	+	-	-	-	-	-	UC
71	Little Pied Flycatcher	Muscicapida e	+	-	-	+	-	-	A
72	Ashy Drongo	Dicrurus leucophaeus	+	+	+	+	+	+	C
73	Thick billed flowerpecker	Dicaeun agile	+	+	-	-	-	-	C
74	Chestnut-tailed Starling	Sturnia malabarica	+	+	+	-	-	-	C
75	Willow Warbler	Phylloscopus trochilus	+	+		-	+	-	C
76	Brown Shrike	Lanius cristatus	+	+	-	-	-	-	UC
77	Sakhalin leaf warbler	Phylloscopus borealoides	-	+	+	-	-	-	C
78	Scaly breasted munia	Lonchura punctulata	-	+	+	-	-	-	C
79	Common tailorbird	Orthotomus sutorius	+	+	-	-	-	-	C
80	Chestnut Headed bee Eater	Merops leschenaultia	+	+	+	-	-	-	C
81	Green Bee-eater	Merops orientalis	+	+	-	-	-	-	C
82	White-throated Kingfisher	Halcyon smyrnensis	-	-	-	+	+	-	C
83	Indian Roller	Coracias benghalensis	-	-	+	+	-	-	C
84	Rainbow Bee-eater	Merops ornatus	+	+	-	-	-	-	C
85	Laughing	Spilopelia	-	+	+	+	-	-	A

	Dove	senegalensis							
86	Spotted Dove	Spilopelia chinensis	-	+	+	+	-	-	A
87	Dove	Collumdaliva	-	+	+	+	+	-	A
88	Common Wood pigeon	Columba Palumbus	-	+	+	+	-	-	A
89	Red Collared dove	Streptopelia tranquebarica	-	+	+	+	-	-	A
90	Coppersmith Barbet	Megalaima haemacephalus	+	+	+	-	-	-	A
91	Yellow-Crowned Wood Pecker	Leiopicus mahrattensis	+	-	-	-	-	-	UC
92	Brown-headed Barbet	Megalaima zeylanica	+	+	+	-	-	-	A
93	Asian openbill stork	Anastomus oscitans	-	-	-	-	+	-	UC
94	common Moorhen	Gallinula chloropus	-	-	-	-	+	-	A
95	White – breasted waterhen	Amaurornis phoenicurus	-	-	-	+	+	-	A
96	Gray Francolin	Francolinus pondicerianus	-	+	-		-	-	UC
97	Red Jungle fowl	Gallus gallus	-	+	-	-	-	-	UC

A -Abundant,	C- Common,	UC- Uncommon,
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The reported avian species' habitat status is listed in Table No.1 & Graph no.1, displays the relative percentage of avifaunal species with various habitat types and Graph No.2 displays abundant status of bird. Birds choose their habitat based on the availability of food, water and nesting Space. Selection of habitat may be influenced by the presence of other avifauna. The occurrence of many avian fauna in one habitat. Many bird species live in mixed flocks, and they Compete for the resources present there. birds use a number of microhabitats depending on the resources. Available in a habitat. The habitats in which birds were originate in the Selected areas are as follows.

Forest- Most of the site selected for the study in forest area. Which includes tall trees, Shrub herbs and Various Kinds of grass. There is abundance of trees in the forest area. In this location, the highest quantity of bird species were recorded. Mostly recorded species kite, Plum-headed Parakeet, Rose-ringed Parakeet, Plain Parakeet, Ashy Woodswallow, Greater Coucal, etc.

Shrub- Areas near the edge of forests where there is abundance of shrub. Species like pigeons and Sunbird were seen in abundance in this habitat. Mostly abundance species Common Myna, Asian Pied Starling, Spotted Dove, Dove, Common Wood pigeon etc.

Grassland- The flat areas in the middle and the edge of the forest where the number of Shrub and long trees is less. There is abundance of various kinds of greensward in this area. In this habitat mostly saw Species like myna, Common Starling, Indian Robin, Greater Coucal etc.

Agriculture – There is a agricultural land in the middle of the forest area and along the edges of the forest area. Where manily maize and paddy are cultivated according to season. The main bird recorded in this habitat are sparrow, Indian Robin, Indian Pond-Heron, Little Egret, Common Myna, Asian Pied Starling etc.

Wetland – There are small sources of water here. Due to which the field around the forest remain wet even in summer. Such areas have been included under wetland. The presence of mostly migratory birds were recorded in this area. The main species found in this habitat is the Cattle Egret, Striated Heron, White –breasted waterhen etc.

Fallow land – Populated area adjoining forest where most of the land is dry and fallow land. The presence of common residential birds were recorded in this habitat. The main species found here are red vented bulbul, Crow, Koel, House sparrow etc.

Discussion:-

In this research study the highest species diversity was found in forest areas. A maximum of 65 species were observed here. 63 species were observed in the shrub habitat. 39 species in the agriculture area, 33 species in grassland , 25 species wetland and he least number of 14 species were recorded in fallow land. The habitat of birds is also affected by the availability of food and season. Forest are the best habitat for birds. But due to human activities, forests and other habitat of birds are rapidly getting destroyed. Due to which the number of birds in decreasing. The highest number of abundant. Avian species were found in forest area. Apart from this, uncommon avian species were found in forest area. This research study provides basic information for studying birds in this area to help conserve their habitats in future.

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