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RESEARCH ARTICLE

A PRELIMINARY SURVEY ON DIVERSITY OF AVIFAUNA IN KATWA, PURBA BURDWAN, WEST BENGAL, INDIA

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Abstract

Birds are used as 'bio-indicator' due to their sensitivity to minor environmental changes. A survey was done from July 2022 to February 2023 to study the avifaunal diversity of Katwa. A total of 67 bird species were recorded during the study period. The species were categorized in three namely common resident (CR), not common resident (NCR) and migratory (M) of which 40 are common resident, 24 are not common resident and 3 are migratory. The found common birds species were house crow, common myna, red vented bulbul, house sparrow, spotted dove, asian koel, little ringed plover etc. Among the not common resident avifauna were Long-legged Buzzard, Cotton teal, Pied-cuckoo, Grey Wagtail, yellow Wagtail, White Wagtail etc. and the three migratory birds were Common Pochard, Red-crested Pochard and Northern Pintail. Katwa and adjoining Ajay Baadh has wide variety of trees, wetland, grassland and agricultural land which is the major contributing factor for the rich avifaunal diversity found during the short study period. This is a preliminary effort for documentation of the avifauna, but more studies and suitable conservation strategies are required in the study area.

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Introduction:-

Birds are widespread in different ecosystems and perform varied functional roles. Aves is an evolutionary advance class of Chordates. Different functional roles played by the class Aves are pollination of flowers and dispersal of seeds, integration between food chain and food web, sanitation of environment and controlling of pest population (Pejchara et al., 2008; Garcia et al., 2020; Holmberg, 2021). According to Ranjit and Asif (2020), the avifauna of India comprises 1369 species, 83 of which are endemic, 2 of which are extinct and 212 of which are critically endangered. Different factors like urbanization, human interference, pollution, overhunting, predation, inter and intra specific competition, habitat loss etc. are responsible for the avifaunal biodiversity loss (Moore et al., 2008; Edison et al., 2016). Previously work was done on Avian Diversity in agricultural landscape from Burdwan, but through this present study efforts have been made to enlist the avian fauna of Katwa only. This will be helpful to prepare a baseline data on bird diversity of Katwa.

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Materials & Methods:-

Study area:

The study was conducted in and around Katwa (23°39'N 88°08'E/ 23°65'N 88°13'E). Katwa is situated between Ajay river and the Bhagirathi river and so is bounded by water to the east, west and north. The average annual rainfall is 158.99 mm and as due to tropical means hot and humid climate, the annual average temperature is 30.52 °C.

Methodology:-

The data of birds was collected and recorded during July 2022 to February 2023. Continuous observation was done twice a day at morning (between 6 am to 8 am) and at evening (between 4 pm to 6 pm). Birds were observed by using Olympus 8X40 DPS binocular and spot identification was done with field guides (Ali 1980, 2002). The data of the birds was collected once in a week and 4 hours in a day. Spotting and identification of birds is a challenging work. During observation following criteria were kept in mind like movement, songs, feeding habit, size, shape, distinctive stripes and patches of color, specific calls and songs etc. During bird watching eye spotting should be very quick to get maximum observation within a short span of time.

Result and Discussion:-

During the study 67 species of birds are recorded. Among the recorded species 40 are common resident (CR) of Katwa and Ajay Baandh(Shown in Table 1), 24 are not common resident (NCR) of the region and three are migratory namely common pochard, northern Pintain and Red-crested Pochard. However, the winter migrant population in the wetlands in the last few years is decreasing. One of the major threats attributed to the sustainability of these wetlands is human disturbances. According to Balachandra, 2012, knowledge of the status of bird populations on this stopover provides significant information on the wider environment such as climate change impact, habitat loss, development impact, unsustainable agricultural practices, and human disturbance. Change in avian species diversity can affect food chain, so study of avifaunal diversity is an important measuring tool of ecosystem health (Roy Bhowmick, 2021). This study indicates that the above threats are in the primary stage and this would be the right time to implement the protective measures. Therefore, assessment of the avifaunal diversity is essential to describe precisely the importance of local landscapes for conservation of local resident, non-resident and migratory birds.

Table 1:- Checklist of Birds of Katwa, Purba Burdwan, West Bengal.

Sl. No.	Common Nme	Scientific Name	Resident Status
1.	House sparrow	(<i>Passer domesticus</i>)	CR
2.	Common Myna	(<i>Acridotheres tristis</i>)	CR
3.	Jungle Mayna	(<i>Acridotheres fuscus</i>)	NCR
4.	House crow	(<i>Corvus splendens</i>)	CR
5.	Jungle crow	(<i>Corvus macrorhynchos</i>)	CR
6.	Red vented Bulbul	(<i>Pycnonotus cafer</i>)	CR
7.	Indian Robin	(<i>Copsychus fulicatus</i>)	CR
8.	Spotted Dove	(<i>Streptopelia chinensis</i>)	CR
9.	Black kite	(<i>Milvus migrans</i>)	CR
10.	Asian koel	(<i>Eudynamys scolopacea</i>)	CR
11.	Brahminy Kite	(<i>Haliastur indus</i>)	NCR
12.	Indian Cuckoo	(<i>Cuculus micropterus</i>)	NCR
13.	Common Hoopoe	(<i>Upupa epops</i>)	NCR
14.	Pied Cuckoo	(<i>Clamator jacobinus</i>)	NCR
15.	Water cock	(<i>Gallix cinerea</i>)	CR
16.	Black Drongo	(<i>Dicrurus macrocercus</i>)	CR
17.	Common Babbler	(<i>Turdoides caudata</i>)	CR
18.	Jungle Babbler	(<i>Turdoides striata</i>)	CR
19.	Common Tailor Bird	(<i>Orthotomus sutorius</i>)	CR
20.	Scaly- Breasted Munia	(<i>Lonchura punctulata</i>)	NCR
21.	Black-shouldered Kite	(<i>Elanus axillaris</i>)	CR
22.	Indian Nightjar	(<i>Caprimulgus asiaticus</i>)	CR

23.	Long-legged Buzzard	(<i>Buteo rufinus</i>)	NCR
24.	Cotton Teal	(<i>Nettapus coromandelianus</i>)	NCR
25.	Common Pochard	(<i>Aythya ferina</i>)	M
26.	Lesser Whistling –duck	(<i>Dendrocygna javanica</i>)	NCR
27.	Northern Pintail	(<i>Anas acuta</i>)	M
28.	Red-crested Pochard	(<i>Netta rufina</i>)	M
29.	Grey Wagtail	(<i>Motacilla cinerea</i>)	NCR
30.	Yellow Wagtail	(<i>Motacilla flava</i>)	NCR
31.	White Wagtail	(<i>Motacilla alba alba</i>)	NCR
32.	Grey Tit	(<i>Parus afer</i>)	CR
33.	Baya Weaver	(<i>Ploceus philippinus</i>)	NCR
34.	Black-hooded oriole	(<i>Oriolus xanthornus</i>)	CR
35.	Eurasian Golden Oriole	(<i>Oriolus oriolus</i>)	CR
36.	Red-throated Flycatcher	(<i>Ficedula parva</i>)	NCR
37.	Indian Robin	(<i>Saxicoloides fulicatus</i>)	CR
38.	Purple Sunbird	(<i>Cinnyris asiaticus</i>)	CR
39.	Blue rock pigeon	(<i>Columba livia</i>)	CR
40.	Yellow-footed Green Pigeon	(<i>Treron phoenicopterus</i>)	NCR
41.	Little ringed Plover	(<i>Charadrius dubius</i>)	CR
42.	Wood Sandpiper	(<i>Tringa glareola</i>)	NCR
43.	Common Sandpiper	(<i>Tringa hypoleucos</i>)	CR
44.	Small blue kingfisher	(<i>Alcedo atthis</i>)	CR
45.	Common Snipe	(<i>Gallinago gallinago</i>)	NCR
46.	Little Stint	(<i>Calidris minuta</i>)	NCR
47.	Common Kestrel	(<i>Falco tinnunculus</i>)	NCR
48.	Red-whiskered Bulbul	(<i>Pycnonotus jocosus</i>)	NCR
49.	Great Egret	(<i>Egretta alba</i>)	NCR
50.	Cattle Egret	(<i>Bubulcus ibis</i>)	CR
51.	Little Egret	(<i>Egretta garzetta</i>)	CR
52.	Brahminy Myna	(<i>Sturnus pagodarum</i>)	CR
53.	Coppersmith Barbet	(<i>Megalaima haemacephala</i>)	CR
54.	Blue-throated Barbet	(<i>Megalaima asiatica</i>)	CR
55.	Green bee eater	(<i>Merops orientalis</i>)	NCR
56.	Fulvousbreasted Woodpecker	(<i>Dendrocopos macei</i>)	CR
57.	Indian Ring Dove	(<i>Streptopelia decaocto</i>)	CR
58.	Magpie Robin	(<i>Copsychus saularis</i>)	CR
59.	House swallow	(<i>Hirundo tahitica</i>)	CR
60.	Pariah kite	(<i>Milvus migrans</i>)	CR
61.	White Breasted Waterhen	(<i>Amaurornis phoenicurus</i>)	NCR
62.	Red Whiskered bulbul	(<i>Pycnonotus jocosus</i>)	CR
63.	Common Kingfisher	(<i>Alcedo atthis</i>)	CR
64.	Little Cormorant	(<i>Phalacrocorax niger</i>)	CR
65.	Shikra	(<i>Accipiter badius</i>)	CR
66.	Oriental Magpie Robin	(<i>Copsychus suularis</i>)	CR
67.	Asian Palm Swift	<i>Cypsiurus balasinensis</i>	NCR

Conclusion:-

The present study is a preliminary effort towards documentation of bird species within a specific region namely Katwa which is surrounded by water bodies i.e., rivers from east, south and west, the three sides. Due to the geographical location of Katwa a very large number of avifauna are found residing in the agricultural land and wetland. The study area also has wide range of trees such as Banyan, Peepal, Sagun, Ashok, Bamboo, Neem, Mango, Jackfruit, Coconut, Phoenix etc. These trees provide habitat for different species of birds. The preliminary listing is provided for the enterprise of future analysis and conservation, moreover as management on the bird's diversity. This

investigation will be helpful for the conservation of birds by creating awareness to conserve microhabitat of avian diversity by proper future urban planning.

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