

Avifaunal Diversity and Conservation Status Along the Godavari River at Kopergaon Tahsil, Maharashtra, India”

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Abstract: Avifauna is an important component of ecosystems because of its crucial role. The diversity and abundance of avian fauna are mostly influenced by the local waterbodies' sources, as they provide habitat. The Godavari River is one of the longest rivers in Maharashtra and is a good habitat for local and migratory birds. The present work aims to prepare a checklist of avifauna from Kopergaon Tehsil, as there are no records to date. The current study was conducted between June 2022 - May 2023 to survey the avian fauna along the Godavari River from Kopergaon, India. This study aimed to examine the diversity, composition, and status of bird species in the area. Documentation was performed by taking photographs at the site, and they were identified using standard keys. A total of 103 species belonging to 49 families and 18 orders were identified. Passeriformes (38%) was the most abundant order, followed by Pelecaniformes (17%). According to the IUCN status, three species, namely *Ciconia episcopus*, *Coracias benghalensis*, and *Ammomanes phoenicura*, are near threatened (NT). Kopergaon town is located on the banks of the River Godavari; thus, anthropogenic activities and industrial discharge have resulted in significant degradation of water quality and habitat distortion, affecting bird abundance. A long-term assessment is required to study the abundance and distribution of avifauna in this area. This study can serve as a baseline for the conservation and management of the existing avifauna.

Keywords: Avian diversity, Godavari River, Kopergaon Tehsil, Checklist, Conservation Status

1. Introduction

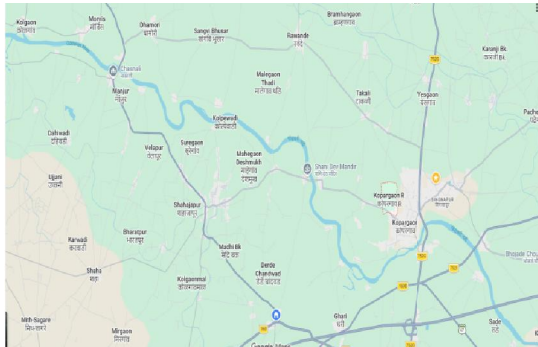
The study of avifauna in India has a strong history from Thomas C. Jerdon's book "The Birds of India" (1862 - 1864). Later, the curious workers like Ali and Ripley (1968-1974) acted as the catalyst to the field of avian diversity in India. And from nineteenth century onwards, numerous efforts have been taken by researchers to document the avifauna from various parts of India (Ali & Ripley, 1987; Grimmett et al., 2011; Kumar et al., 2016; Chawan & Salvankar, 2020; Nandhini & Jagatheeswari, J. 2024; Lonkar R.A et al., 2025). Avifauna is of great economical and ecological importance. (Chitampally, 1993; Balkhande et al., 2013; Padmavati et al., 2010). There are ~11,188 living bird species belonging to 36 orders and 247 families. (Stotz et al., 2025). India is home to approximately 1,358 bird species (Grimmett et al, 1999; Imran, S et al., 2025). About Maharashtra ~500 species have been recorded by different researchers. (Abdulali (1973) Parwate, B. P. 2020), (Narwade, S. & M.M. Fartade, 2011), (Mujmule, P. R., & Salve, B. S., 2025.)

As the River Godavari is a source of freshwater bodies, it harbours a large amount of flora and faunal diversity. It provides different habitats for birds and other organisms to thrive. Like aquatic habitats, marsh habitat agricultural lands, etc. The current study focused on the rapid assessment of the avifauna. There is no record of avian fauna from this region; hence, this is the first study.



Material and Methods:

Study Area: Located in the Ahilyanagar district at 19.88°N, 74.48°E along the Godavari Basin, Kopargaon is a town and municipality with a population of 80,27,3 according to the Kopargaon Municipal Council (Kopargaon Municipal Council, 2019). The Godavari River rises in Trimbakeshwar, Nashik, Maharashtra, and travels through the states of Chhattisgarh, Andhra Pradesh, Madhya Pradesh, Karnataka, and Odisha before emptying into the Bay of Bengal (Central Water Commission [CWC], 2020). Also known as the “Dakshin Ganga,” the Godavari River is the second-longest river (1,465-kilometre) in India after the Ganges River (CWC, 2020). Every 12 years, the Kumbh Mela, which holds immense spiritual and cultural significance, is celebrated along its banks.



Map 1- Showing the study area



Map 2- Showing the flow of the Godavari River in five states

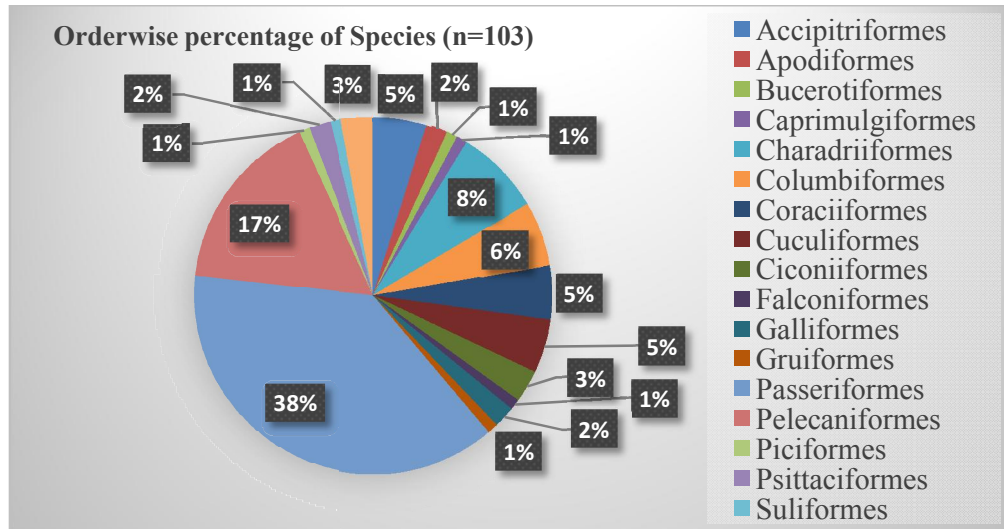
Methods:

The data of avifauna along Godavari River at Kopargaon town, was collected between June 2022 - May 2023. The study period covers all three seasons. The birds were observed in morning from 7:00 am to 11:30am and in evening at 4:00 pm to 6:00 pm. The birds were observed at the site and photograph was taken by DSLR Camera Canon with configuration of 600D, a lens of 250mm, 16 megapixels and a focal length of 2.0 to 7. Birds were identified with the help of standard methods given by the Book of Indian Birds (Dr. Salim Ali,2002), (Ali S. and Ripley, 1987; Grimmet et al., 2000). Rasmussen, P.C., and Anderton, P.C. (2012).

Result and Discussion:

In the present study, a total of 103 species belonging to 49 families and 18 orders were documented in this study. The majority of birds were observed in the winter session. It is observed that Passeriformes (38%) was the most abundant order, followed by Pelecaniformes (17%), followed by Charadriiformes (8%), Columbiformes (6%), Accipitriformes, Coraciiformes and Cuculiformes (5%) each, Ciconiiformes and Strigiformes (3%), Apodiformes, Galliformes and Psittaciformes (2%) each, Bucerotiformes, Caprimulgiformes, Falconiformes, Gruiformes, Piciformes and Suliformes (1%) each respectively(Chart - 1) According to the IUCN status, three species, namely *Ciconia episcopus*, *Coracias benghalensis*, and *Ammomanes phoenicurus*, are near threatened (NT) and other 100 species are Least Concern (LC). Most of the bird species are in the LC category in the study area, which indicates a moderate level of pollution in the habitat. But the abundance of the birds' changes in the summer session, as the water quality changes. The occurrence of NT species in the study region indicates moderate conservation concerns and highlights the ecological significance of the area. Therefore, continuous monitoring and habitat protection measures are recommended to ensure the long-term conservation of these species.





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Order	Family	Sr. No	Scientific Name	Common Name	IUCN Status
Accipitriformes	Accipitridae		<i>Accipiter badius</i>	Shikra	LC
			<i>Elanus caeruleus</i>	Black-winged Kite	LC
			<i>Milvus migrans</i>	Black Kite	LC
			<i>Spilornis cheela</i>	Crested Serpent Eagle	LC
			<i>Pernis ptilorhynchus</i>	Crested honey buzzard	LC
Apodiformes	Apodidae		<i>Apus affinis</i>	Little Swift	LC
			<i>Cypsiurus balasiensis</i>	Asian Palm Swif	LC
Bucerotiformes	Upupidae		<i>Upupa epops</i>	Eurasian Hoopoe	LC
Caprimulgiformes	Caprimulgidae		<i>Caprimulgus asiaticus</i>	Indian Nightjar	LC
Charadriiformes	Recurvirostridae		<i>Himantopus himantopus</i>	Black-winged Stilt	LC
	Charadriidae		<i>Vanellus indicus</i>	Red-wattled Lapwing	LC
			<i>Vanellus malabaricus</i>	Yellow-wattled Lapwing	LC
			<i>Charadrius dubius</i>	Little Ringed Plover	LC
	Scolopacidae		<i>Actitis hypoleucos</i>	Common Sandpiper	LC
			<i>Tringa glareola</i>	Wood Sandpiper	LC
			<i>Tringa stagnatilis</i>	Marsh Sandpiper	LC
	Turnicidae		<i>Turnix sylvaticus</i>	Small Buttonquail	LC
	Columbiformes	Columbidae		<i>Streptopelia decaocto</i>	Eurasian Collared-Dove
			<i>Columba livia</i>	Blue Rock Pigeon	LC
			<i>Spilopelia senegalensis</i>	Laughing Dove	LC
			<i>Spilopelia chinensis</i>	Spotted Dove	LC
			<i>Metriopelia melanopectera</i>	Black-winged Ground Dove	LC
			<i>Zenaida aurita</i>	Zenaida Dove	LC
Coraciiformes	Alcedinidae		<i>Alcedo atthis</i>	Common Kingfisher	LC
			<i>Halcyon smyrnensis</i>	White-throated	LC



				Kingfisher	
	Meropidae		<i>Merops orientalis</i>	Asian Green Bee-eater	LC
			<i>Merops philippinus</i>	Blue-tailed Bee-eater	LC
	Coraciidae		<i>Coracias benghalensis</i>	Indian Roller	NT
Cuculiformes	Cuculidae		<i>Centropus sinensis</i>	Greater Coucal	LC
			<i>Hierococcyx varius</i>	Common Hawk Cuckoo	LC
			<i>Centropus menbeki</i>	Greater Black Coucal	LC
			<i>Eudynamys scolopaceus</i>	Asian Koel	LC
			<i>Centropus leucogaster</i>	Black-throated Coucal	LC
Ciconiiforme	Ciconiidae		<i>Anastomus oscitans</i>	Asian Openbill	LC
			<i>Mycteria leucocephala</i>	Painted Stork	LC
			<i>Ciconia episcopus</i>	White Necked/Woolly Stork	NT
Falconiformes	Falconidae		<i>Falco tinnunculus</i>	Eurasian Kestrel (Common Kestrel)	LC
Galliformes	Phasianidae		<i>Ortygornis pondicerianus</i>	Gray Francolin	LC
			<i>Pavo cristatus</i>	Indian Peafowl	LC
Gruiformes	Rallidae		<i>Amauornis phoenicurus</i>	White-breasted Waterhen	LC
Passeriformes	Aegithinidae		<i>Aegithina tiphia</i>	Common Iora	LC
	Cisticolidae		<i>Orthotomus sutorius</i>	Common Tailorbird	LC
			<i>Prinia socialis</i>	Ashy Prinia	LC
			<i>Prinia inornata</i>	Plain Prinia	LC
			<i>Corvus splendens</i>	House Crow	LC
			<i>Corvus macrorhynchos</i>	Large-billed Crow	LC
	Hirundinidae		<i>Hirundo smithii</i>	Wired tailed Swallow	LC
	Passeridae		<i>Passer domestic</i>	House Sparrow	LC
	Sturnidae		<i>Acridotheres tristis</i>	Common Myna	LC
			<i>Sturnia pagodarum</i>	Brahminy Starling	LC
			<i>Argya caudata</i>	Common Babbler	LC
	Laniidae		<i>Lanius schach</i>	Long-tailed Shrike	LC
	Leiothrichidae		<i>Argya striata</i>	Jungle Babbler	LC
			<i>Argya malcolmi</i>	Large Gray	LC

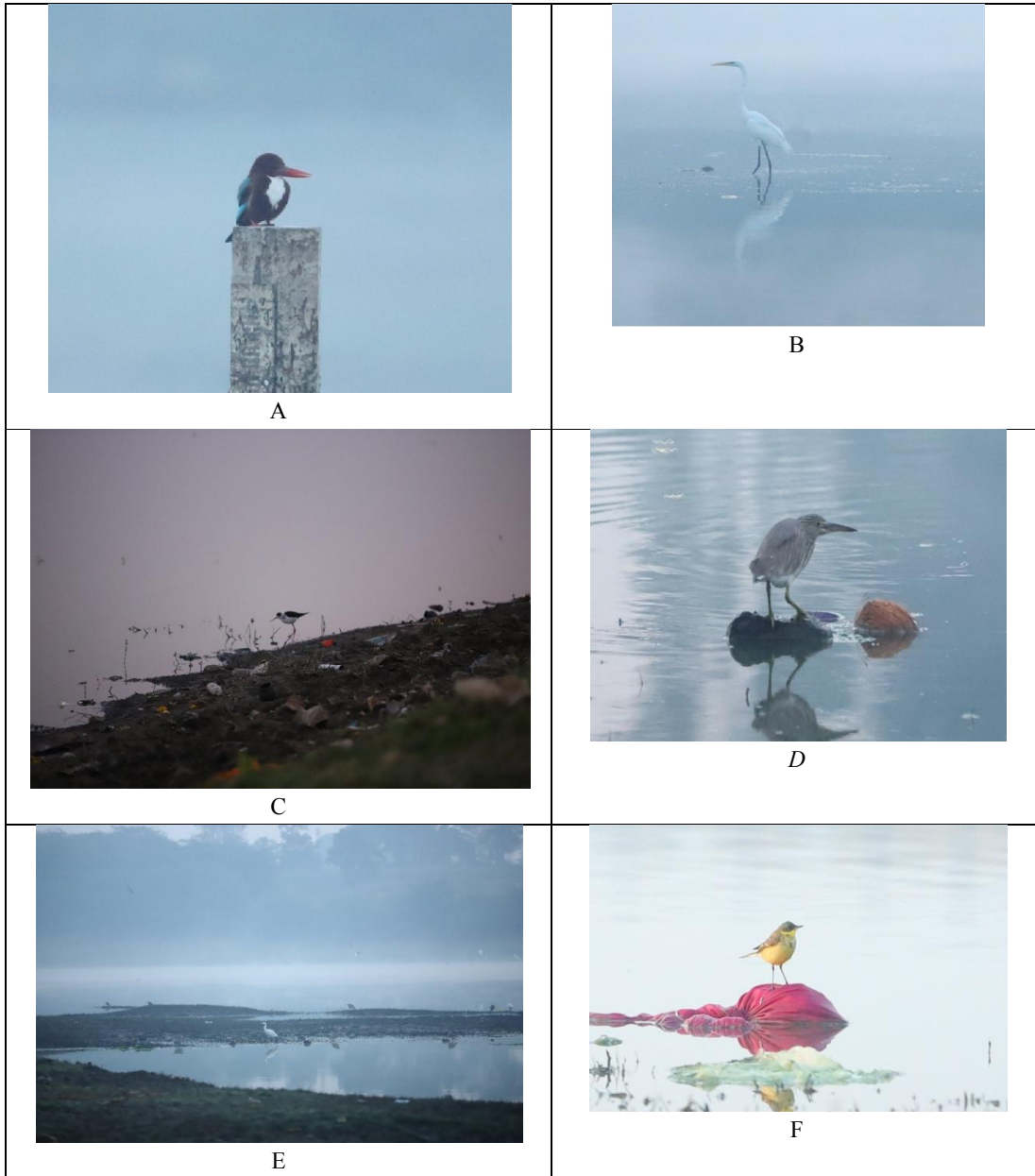


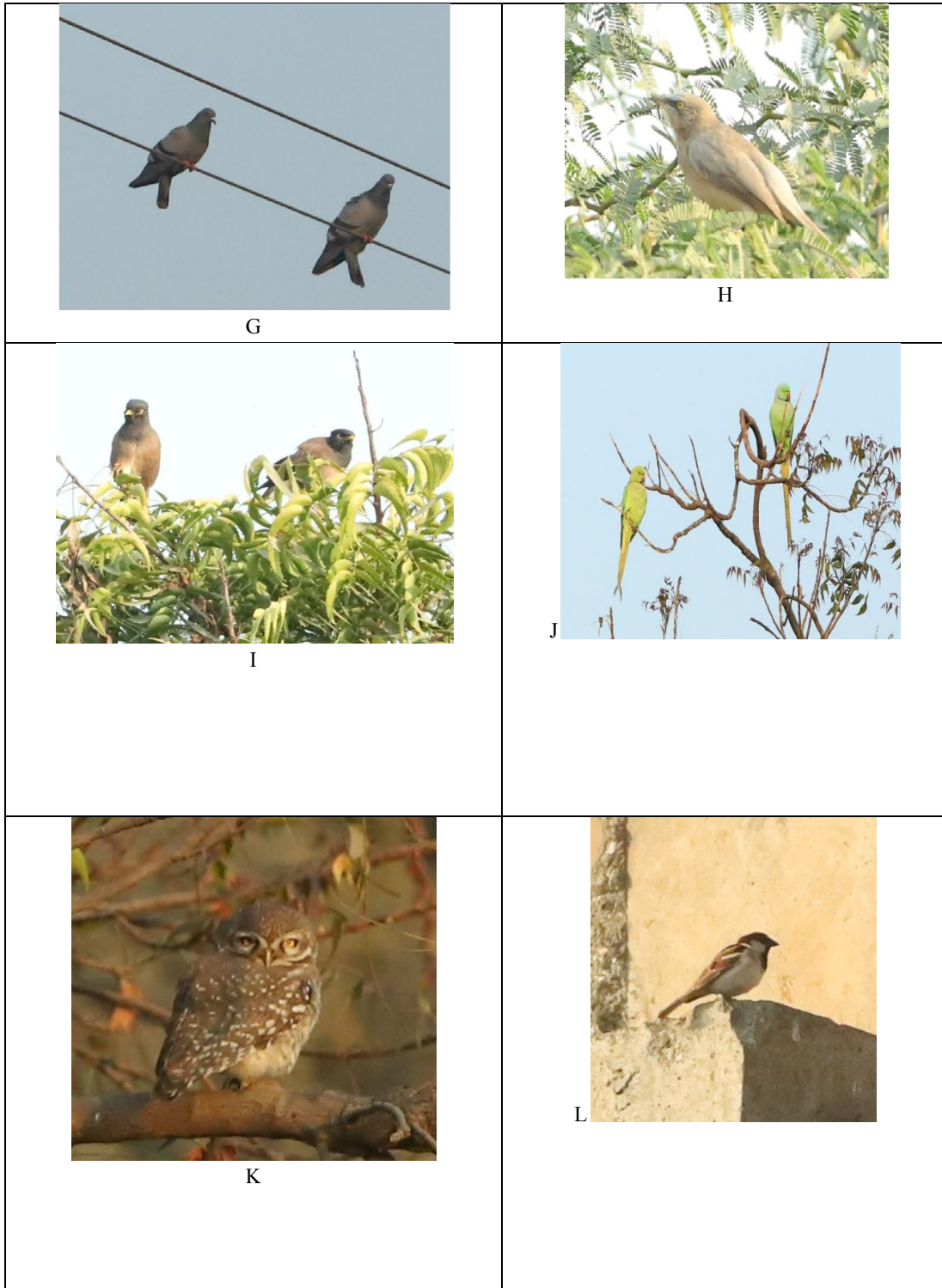
				Babbler	
	Dicruridae		<i>Dicrurus macrocercus</i>	Black Dragon	LC
			<i>Dicrurus leucophaeus</i>	Ashy Dragon	LC
	Pycnonotidae		<i>Pycnonotus jocosus</i>	Red Whiskered Bulbul	LC
			<i>Pycnonotus cafer</i>	Red Vented Bulbul	LC
	Muscicapidae		<i>Copsychus saularis</i>	Oriental Magpie Robin	LC
			<i>Oenanthe fusca</i>	Brown Rock Chat	LC
			<i>Copsychus fulicatus</i>	Indian Robin	LC
			<i>Cyornis tickelliae</i>	Tickell's Blue Flycatcher	LC
			<i>Saxicola caprata</i>	Pied Bushchat	LC
			<i>Monticola solitarius</i>	Blue Rock-Thrush	LC
	Motacillidae		<i>Anthus similis</i>	Long-billed Pipit	LC
			<i>Motacilla alba</i>	White Wagtail	LC
			<i>Motacilla flava</i>	Western Yellow Wagtail	LC
	Nectariniidae		<i>Cinnyris asiaticus</i>	Purple Sunbird	LC
			<i>Leptocoma zeylonica</i>	Purple-rumped Sunbird	LC
	Estrildidae		<i>Lonchura punctulata</i>	Scaly-breasted Munia	LC
	Zosteropidae		<i>Zosterops palpebrosus</i>	Indian White-eye	LC
	Rhipiduridae		<i>Rhipidura albogularis</i>	Spot-breasted Fantail	LC
	Paradoxornithidae		<i>Chrysomma sinense</i>	Yellow-eyed Babbler	LC
	Paridae		<i>Parus cinereus</i>	Cinereous Tit	LC
	Laniidae		<i>Lanius schach</i>	Long-tailed Shrike	LC
	Hirundinidae		<i>Cecropis daurica</i>	Red-rumped Swallow	LC
	Vangidae		<i>Tephrodornis pondicerianus</i>	Common Woodshrike	LC
				<i>Rhipidura albicollis</i>	White-throated Fantail
Pelecaniformes	Ardeidae		<i>Ardea alba</i>	Great Egret	LC
			<i>Ardea brachyrhyncha</i>	Yellow-billed Egret	LC



			<i>Ardea intermedia</i>	Medium Egret	LC
			<i>Ardea plumifera</i>	Plumed Egret	LC
			<i>Ardea cinerea</i>	Grey Heron	LC
			<i>Ardeola grayii</i>	Indian pond heron	LC
			<i>Bubulcus ibis</i>	Cattle Egret	
			<i>Bubulcus coromandus</i>	Eastern Cattle Egret	LC
			<i>Egretta garzetta</i>	Little Egret	LC
			<i>Nycticorax nycticorax</i>	Black-crowned Night Heron	LC
	Alaudidae		<i>Ammomanes phoenicura</i>	Rufous-tailed Lark	NT
			<i>Eremopterix griseus</i>	Ashy-crowned Sparrow-Lark	LC
	Cisticolidae		<i>Cisticola juncidis</i>	Zitting Cisticola	LC
	Threskiornithidae		<i>Plegadis falcinellus</i>	Glossy Ibis	LC
			<i>Pseudibis papillosa</i>	Red-naped Ibis (Indian Black Ibis)	LC
	Paridae		<i>Parusci Babbler</i>	Cinereous Tit	LC
	Ploceidae		<i>Ploceus philippinus</i>	Baya Weaver	LC
Piciformes	Megalaimidae		<i>Psilopogon haemacephalus</i>	Coppersmith Barbet	LC
Psittaciformes	Psittaculidae		<i>Psittacula krameri</i>	Rose-ringed Parakeet	LC
			<i>Psittacula eupatria</i>	Alexandrine Parakeet	LC
Suliformes	Phalacrocoracidae		<i>Microcarbo niger</i>	Little Cormorant	LC
Strigiformes	Strigidae		<i>Glaucidium radiatum</i>	Jungle Owlet	LC
			<i>Athene brama</i>	Spotted Owlet Athene brama	LC
	Tytonidae		<i>Tyto javanica</i>	Asian Barn Owl	LC









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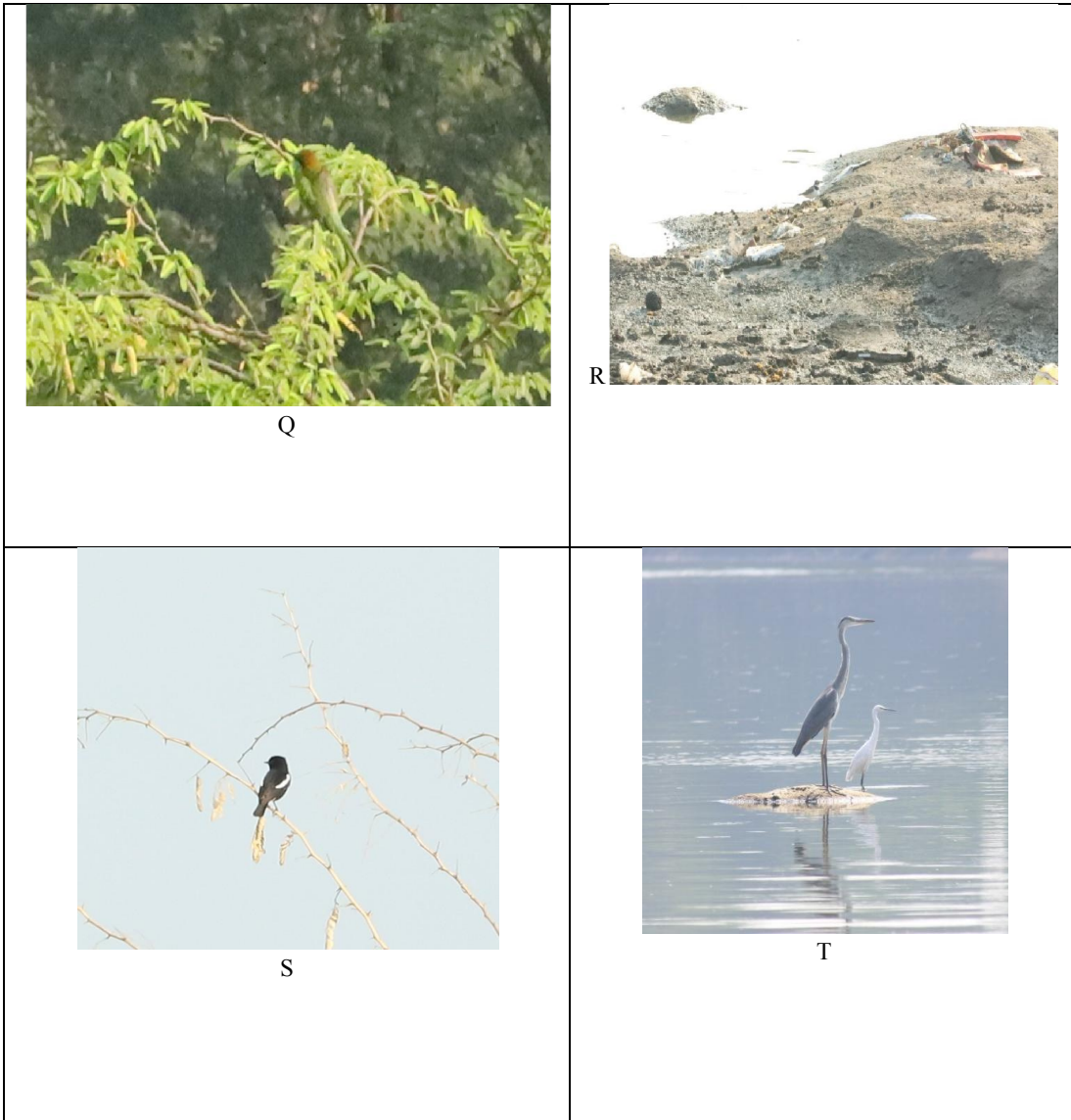


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P





A- Kingfisher, B- Great Egret, C- Black-winged Stilts, D- Indian Pond Heron, E- Medium Egret, F-Western Yellow Wagtail, G- Rock doves or city pigeons, H- Large Grey Babbler, I-Common Mynas, J- Parrot, K- Spotted Owl, L- House Sparrow, M- N- Purple Sunbird, O-Red-vented Bulbul, P- Brahminy Starling, Q-Asian Green Bee-eater, R- Little Ringed Plover, S-Pied Bushchat, T- Grey Heron, S-oriental magpie Robin

