

# A Comprehensive Study of Avifaunal Diversity in Jhargram District

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**Abstract--** Jhargram district, formerly known as Jungle mahal is a newly formed district, separated from Paschim Medinipur in April, 2017. The biodiversity of Jhargram is very rich, especially on avifaunal and lepidopteran diversity due to its well vegetation and environmental health. The following paper represents the survey report on birds for one and half years, checklist of bird species, study area and study protocol, devices used and some interesting photographs. The exhaustive field study showed 128 species in 108 genera from Jhargram outskirts. Some species are local migrant, while some are long distant migrant, occasional dweller, and maximum are resident.

**Key words -** Avifauna, jungle mahal, biodiversity, migrant, environmental health.

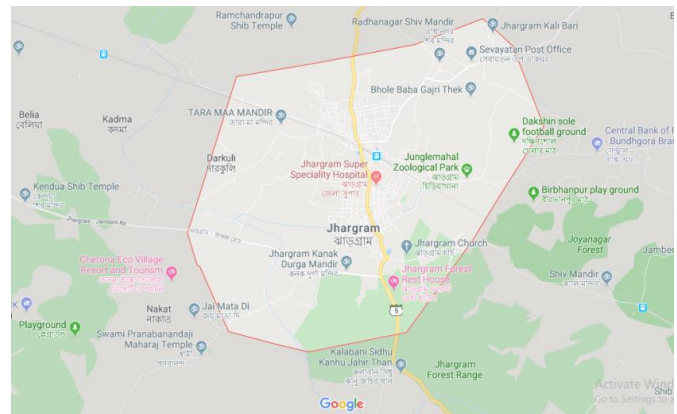
## I. INTRODUCTION

Birds has been described as a Feathered Biped. It is most studied animals due to its behavioural and morphological beauty and interest. Avifaunal diversity study is more expensive and exhaustive but quite interesting. It takes long duration; minimally one year or more, to understand the various aspects and daintiness of this recreative creature. We study the forest area & consequently less popular region like Jhargram outskirts, because where many tribal people live and their livelihood depends on this mother nature. We at first make a team, choose 6 visiting site and divides our labour for field work and data collection, then spot identification was done if possible, neither precise photograph was matched later by the help various guide book and birds specialists. After one and half year of survey we confirmed 128 species of birds belonging to 108 genera of 57 Families & 20 Orders. But day by day avian diversity was decrease due to various anthropogenic activities, such as urbanisation, deforestation and habitat destruction. They have greater roles to maintain ecological health. Some birds like Falcon, Shikra and Kite have a scavenging nature, some are insectivores in nature like Green Bee-eater, Black Drongo etc, and few like Indian Paradise Flycatcher, Indian Roller, Munia etc have amused beauty. Further study needed for well understood the migratory behaviour and nesting patterns of some birds, and also their roles to regulate environmental health. Unfortunately, ever bursting human population and human-animal conflicts is a serious threat over avian creatures.

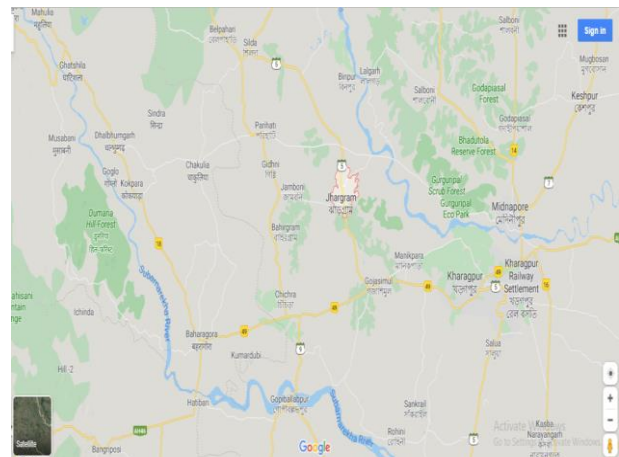
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## II. MATERIALS & METHODOLOGY

**Study site:** At first we selected the 6 study sites and their outskirts for measures Avian diversity, which are **Site-1:** Jhargram town outskirts (22.36° N, 86.73° E), **Site-2:** Belpahari-II (22.63° N, 86.77° E), **Site-3:** Chilkiagarh, Jamboni (22.27° N, 86.52° E), **Site-4:** Gopiballavpur (22.22° N, 86.9° E), **Site-5:** Lalgargh (22.35° N, 87.03° E), **Site-6:** Tapobon, Nayagram (22.01° N, 87.1° E).



A. GPS satellite map of Jhargram central region.



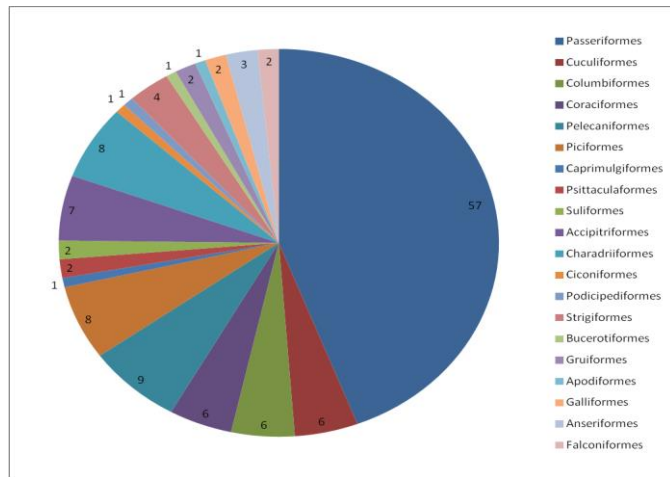
B. Various study site of Jhargram outskirts.

**Sampling methods:** We follow Systematic Bird Surveys method with regular basis on the above mentioned 6 fields. Randomly choose some sampling areas (Area search method) within them, which consist of some grasslands, water bodies, shrubs land and woody forest. Observed birds were listed and identified by audio-visual methods. Immediately unidentified bird's sound was recorded and photographs were collected for

analysis from bird's specialist. The subspecies level is not demonstrated here due to lack of more precise instruments and time.

**Instrument used:** Nikon ACULON A211-10-22 × 50 8252 Binocular is used for clear observation from long range, and Canon EOS 3000D 24.1 Digital SLR Camera with EF S18-55 is II Lens and Canon EOS 80D is used for proper photography. Garmin GPS machine was used to track the forest region and Tascam DR-05 stereo recorder was used to identify birds by auditory means.

**Field guide used:** The Book of INDIAN BIRDS, Thirteenth Edition by Salim Ali & Birds of the Indian Subcontinent, second edition by R. Grimmett, C. Inskipp and T. Inskipp were used for field guide.



**Graph:** Showing the proportion of number of species found in different orders

### III. RESULT AND DISCUSSION

Jhargram is a newly formed district having mass biodiversity and well environmental health. There are huge areas for ecological studies, especially in a good living laboratory like Jhargram outskirts. Now a day the taxonomical work is less prior and negligible areas of research. The biodiversity study, especially avian diversity is a quit interesting but expensive and time consumable. Several use this environment as a beautiful recreational site and good for wild life photography. But this paper represents the avian diversity of Jhargram for first time with interesting photograph, which is helpful for further ecological worker and environmentalist. A well bird's diversity also indicates the good health of nature, vegetation type and density of forest. Some beautiful migratory birds are arrived during pre-winter season to avoid extreme climate, build their nest and breed. Due to less funding and short of time the statistical analysis of birds survey and sub-species level studies was not provided here, further survey and proper equipments will be needed. Hope there is chance for more new reports of bird species from that region.

### IV. ACKNOWLEDGEMENT

We convey our sincere thanks to Dr. Debnarayan Roy, O-I-C, Jhargram Raj College, Dr. Subha Manna, Associate Professor and Dr. Krishnendu Sinha, Assistant Professor, Jhargram Raj College, Jhargram, W.B, for instrumental support during field survey. We are thankful to Biswarup Mondal, Jawahar Patar and Somnath Hembram for valuable efforts in taken pictures of birds and guiding to local rural areas. Last but not least, we give sincere gratitude to Dr. Kailash Chandra, Director of ZSI, Kolkata for providing various help.

## RESULTS:

Order	Family	Sl. No.	Common Name	Scientific Name		
Passeriformes	Passeridae	1	House Sparrow	<i>Passer domesticus</i>		
	Corvidae	2	House Crow	<i>Corvus splendens</i>		
		3	Common Raven	<i>Corvus corax</i>		
		4	Rufous Treepie	<i>Dendrocitta vagabunda</i>		
		5	Red-vented Bulbul	<i>Pycnonotus cafer</i>		
	Pycnonotidae	6	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>		
		7	Ashy Bulbul	<i>Hemixos flavala</i>		
		8	White-browed Bulbul	<i>Pycnonotus luteolus</i>		
		9	Black-naped Oriole	<i>Oriolus chinensis</i>		
	Oriolidae	10	Eurasian Golden Oriole	<i>Oriolus oriolus</i>		
		11	Paddyfield pipit	<i>Anthus rufulus</i>		
	Motacillidae	12	Pied or White Wagtail	<i>Motacilla alba</i>		
		13	Bengal Bush Lark	<i>Mirafra assamica</i>		
	Alaudidae	14	Baya Weaver	<i>Ploceus philippinus</i>		
	Ploceidae	Muscicapidae	15	Oriental Magpie Robin	<i>Copsychus saularis</i>	
			16	Indian Robin	<i>Copsychus fulicatus</i>	
			17	Siberian Rubythroat	<i>Calliope calliope</i>	
			18	Blue Rock Thrush	<i>Monticola solitaries</i>	
			19	White-rumped Shyama	<i>Copsychus malabaricus</i>	
			20	Verditer Flycatcher	<i>Eumyias thalassinus</i>	
			21	Taiga Flycatcher	<i>Ficedula albicilla</i>	
			22	Blue throated Blue Flycatcher	<i>Cyornis rubeculoides</i>	
			Estrildidae	23	Scaly Breasted Munia	<i>Lonchura punctulata</i>
				24	Tricoloured Munia	<i>Lonchura Malacca</i>
				25	Indian Silverbill	<i>Euodice malabarica</i>
			Artamidae	26	Ashy Woodswallows	<i>Artamus fuscus</i>
			Sturnidae	27	Chestnut Tailed Starling	<i>Sturnia malabarica</i>
				28	Common Myna	<i>Acridotheres tristis</i>
	29	Pied Myna		<i>Gracupica contra</i>		
	30	Common Hill Myna		<i>Gracula religiosa</i>		
	31	Black Drongo		<i>Dicrurus macrocercus</i>		
	Dicruridae	32	Tickell's Flower-pecker	<i>Dicaeum erythrorhynchos</i>		
	Dicaeidae	Acrocephalidae	33	Booted Warbler	<i>Iduna caligata</i>	
			34	Clamorous reed Warbler	<i>Acrocephalus stentoreus</i>	

	Phylloscopidae	35	Green-Crowned Warbler	<i>Phylloscopus burkii</i>
		36	Siberian Chifchaff or Leaf Warbler	<i>Phylloscopus collybita tristis</i>
		37	Dusky Warbler	<i>Phylloscopus fuscatus</i>
	Nectariniidae	38	Purple Sunbird	<i>Cinnyris asiaticus</i>
		39	Crimson Sunbird	<i>Aethopyga siparaja</i>
	Cisticolidae	40	Common Tailorbird	<i>Orthotomus sutorius</i>
		41	Plain Prinia	<i>Prinia inornata</i>
	Zosteropidae	42	Oriental White-eye	<i>Zosterops palpebrosus</i>
	Leothrichidae	43	Common Babbler	<i>Argya caudate</i>
		44	Jungle Babbler	<i>Argya striata</i>
	Sylviidae	45	Yellow-eyed Babbler	<i>Chrysomma sinense</i>
	Timaliidae	46	Tawny-bellied Babbler or Rufous-bellied babbler	<i>Dumetia hyperythra</i>
	Monarchidae	47	Asian Paradise Flycatcher	<i>Terpsiphone paradisi</i>
		48	Black-napped Monarch	<i>Hypothymis azurea</i>
	Laniidae	49	Brown Shrike	<i>Lanius cristatus</i>
	Aegithinidae	50	Common Iora	<i>Aegithina tiphia</i>
	Campephagidae	51	Black-headed Cuckooshrike	<i>Lalage melanoptera</i>
		52	Small Minivet	<i>Pericrocotus cinnamomeus</i>
	Chloropseidae	53	Jerdon's Leafbird	<i>Chloropsis jerdoni</i>
	Emberizidae	54	White-capped Bunting	<i>Emberiza stewarti</i>
	Hirundinidae	55	Barn Swallow	<i>Hirundo rustica</i>
	Pittidae	56	Indian Pitta	<i>Pitta brachyuran</i>
Cuculiformes	Cuculidae	57	Hawk Cuckoo	<i>Hierococcyx varius</i>
		58	Asian Koel	<i>Eudynamys scolopaceus</i>
		59	Jacobin Cuckoo	<i>Clamator jacobinus</i>
		60	Plaintive Cuckoo	<i>Cacomantis merulinus</i>
		61	Grey-bellied Cuckoo	<i>Cacomantis passerinus</i>
		62	Sirkeer Malkoha	<i>Taccocua leschenaultia</i>
Columbiformes	Columbidae	63	Yellow-footed Green Pigeon	<i>Treron phoenicoptera</i>
		64	Rock Dove	<i>Columba livia</i>
		65	Eurasian Collared Dove	<i>Streptopelia decaocto</i>
		66	Eurasian Turtle Dove	<i>Streptopelia turtur</i>
		67	Laughing Dove	<i>Spilopelia senegalensis</i>
		68	Spotted dove	<i>Spilopelia chinensis</i>

Coraciformes	Alcedinidae	69	Common Kingfisher	<i>Alcedo atthis</i>	
		70	White Throated/Breasted Kingfisher	<i>Halcyon smyrnensis</i>	
		71	Stork Billed Kingfisher	<i>Pelargopsis capensis</i>	
		72	Pied Kingfisher	<i>Ceryle rudis</i>	
		73	Green Tailed Bee-eater	<i>Merops orientalis</i>	
Pelecaniformes	Coracidae	74	Indian Roller	<i>Coracias benghalensis</i>	
	Ardeidae	75	Cattle Egret	<i>Bubulcus ibis</i>	
		76	Little Egret	<i>Egretta garzetta</i>	
		77	Intermediate Egret	<i>Ardea intermedia</i>	
		78	Common Egret	<i>Ardea alba</i>	
		79	Pond Heron	<i>Ardeola</i> sp.	
		80	Night Heron	<i>Nycticorax</i> sp.	
		81	Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>	
		82	Black Bittern	<i>Ixobrychus flavicollis</i>	
		83	Red-napped Ibis	<i>Pseudibis papillosa</i>	
Piciformes	Picidae	84	Greater Flameback Woodpecker	<i>Chrysocolaptes guttacristatus</i>	
		85	Lesser Golden-backed	<i>Dinopium benghalense</i>	
		86	Indian Pygmy Woodpecker	<i>Yungipicus nanus</i>	
		87	Eurasian Wryneck	<i>Jynx torquilla</i>	
		88	Fulvous-breasted Woodpecker	<i>Dendrocopos macei</i>	
		Megalaimidae	89	White-cheeked Barbet	<i>Psilopogon viridis</i>
			90	Blue-throated Barbet	<i>Megalaima asiatica</i>
			91	Coppersmith Barbet	<i>Megalaima haemacephala</i>
Caprimulgiformes	Caprimulgidae	92	Indian Nightjar	<i>Caprimulgus asiaticus</i>	
Psittaculaformes	Psittaculadae	93	Rose-ringed Parakeet	<i>Psittacula krameri</i>	
		94	Alexandrine Parakeet	<i>Psittacula eupatria</i>	
Suliformes	Phalacrocoracidae	95	Little Cormorant	<i>Microcarbo niger</i>	
		96	Greater Cormorant	<i>Phalacrocorax carbo</i>	
Accipitriformes	Accipitridae	97	European Honey Buzzard	<i>Pernis apivorus</i>	
		98	Black-shouldered Kite	<i>Elanus axillaris</i>	
		99	White-rumped Vulture	<i>Gyps bengalensis</i>	
		100	Black Kite	<i>Milvus migrans</i>	
		101	Shikra	<i>Accipiter badius</i>	
		102	Pied Harrier	<i>Circus melanoleucos</i>	

		103	Crested Serpent Eagle	<i>Spilornis cheela</i>
Charadriiformes	Charadriidae	104	River Lapwing	<i>Vanellus duvaucelii</i>
		105	Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>
		106	Red-wattled Lapwing	<i>Vanellus indicus</i>
	Jacanidae	107	Bronze-winged Jacana	<i>Metopidius indicus</i>
		108	Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>
	Rostratulidae	109	Greater Painted-Snipe	<i>Rostratula benghalensis</i>
	Scolopacidae	110	Common Snipe	<i>Gallinago gallinago</i>
	Burhinidae	111	Indian Stone-curlew	<i>Burhinus indicus</i>
Ciconiformes	Ciconidae	112	Asian Open-bill Stork	<i>Anastomus oscitans</i>
Podicipediformes	Podicepedidae	113	Little Grebe	<i>Tachybaptus ruficollis</i>
Strigiformes	Strigidae	114	Spotted Owlet	<i>Anthene brama indica</i>
		115	Brown Fish Owl	<i>Ketupa zeylonensis</i>
		116	Indian Scoops Owl	<i>Otus bakkamoena</i>
		117	Barn Owl	<i>Tyto alba</i>
Bucerotiformes	Upapidae	118	Eurasian Hoppoe	<i>Upupa epops</i>
Gruiformes	Rallidae	119	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>
		120	Grey-headed Swampphen	<i>Prophyrio poliocephalus</i>
Apodiformes	Apodidae	121	Asian Palm Swift	<i>Cypsiurus balasiensis</i>
Galliformes	Phasianidae	122	Grey Francolin or Grey Partridge	<i>Francolinus pondicerianus</i>
		123	Black Francolin	<i>Francolinus francolinus</i>
Anseriformes	Anatidae	124	Cotton Pygmy Goose or Cotton Teal	<i>Nettapus coromandelianus</i>
		125	Red-crested Pochard	<i>Netta rufina</i>
		126	Gadwall	<i>Mareca strepera</i>
Falconiformes	Falconidae	127	Peregrine Falcon	<i>Falco peregrines</i>
		128	Eurasian Hobby	<i>Falco subbuteo</i>

CHECKLIST OF BIRDS FOUND AT JHARGRAM DISTRICT



Fig1. Common Kingfisher.



Fig2. Green-tail Bee eater.



Fig3. Indian Pitta.



Fig4. Oriental White eye.



Fig5. Golden Oriole.



Fig6. Asian Paradise Flycatcher.



Fig7. Baya Weaver.



Fig8. Verditer Flycatcher



Fig9. Chestnut tailed Starling.



Fig 10. Indian Bush lark



Fig11. Paddy field Pipit



Fig. 12. Shikra



Fig13. Asian Open bill Stork.



Fig14. Greater Flameback.



Fig15. Magpie Robin.



Fig16. Red-napped Ibis.



Fig17. Common Babbler.



Fig18. Indian scops Owl.

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