

# Avian Faunal Diversity in Sherepalli and Peddagattu, Nalgonda District, Telangana, India

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**Abstract-** The present study carried out under Biodiversity Impact Assessment survey for the proposed Uranium Mining at Nalgonda district, Telangana, India. The diversity and distribution pattern of butterflies were observed in the study region. A total of 188 species belonging to 130 genera and 18 Orders were recorded during April, 2010 to December, 2013. Passeriformes was the most dominant Order represented by 74 species (39.36%) followed by Ciconiiforms with 19 species (10.11%). Out of 188 species recorded, eighteen species comes under Schedule-I species as per Indian Wildlife (Protection) Act, 1972 amended in 2022 and eight Near Threatened (NT) species and two Vulnerable (Vu) species found in this region.

**Key words:** Avian fauna, Sherepalli, Uranium, Diversity, Habitat, Telangana.

## I. INTRODUCTION

Birds play significant role in the ecosystem and maintain a tropic level. Therefore, there is a need of detail study on avifauna and their ecology is important to protect them. Effective baseline monitoring programs for biodiversity are much needed for proper ecosystem management.<sup>[1]</sup> Birds are also known to be very sensitive to environmental changes and productivity of an ecosystem and hence they are treated as ideal bio-indicators and useful models for studying a variety of environmental problems<sup>[2,3,4]</sup>. The Indian subcontinent, a part of the vast Oriental biogeographic region, is very rich in biodiversity. Out of the 10,324 birds recorded at global level, 1,341 species of birds (26 orders, 113 families and 489 genera) recorded from India<sup>[5]</sup> and in Telangana 380 species of birds were recorded<sup>[6]</sup>. The present study was an attempt made to conduct a baseline study of the birds in the proposed Uranium mining area in Nalgonda district, Telangana.

### i. *Need for the biodiversity survey in study locations of Nalgonda district:*

Uranium Corporation of India Limited (UCIL) is undertaking mining and processing of Uranium ore on large scale and proposed to expand its operation in Nalgonda District of Telangana state. It is essential and prime requisite to generate baseline data on entire biodiversity of the region to mitigate the impacts due to biological environment. A team of experts involved to study the impacts of proposed mining operations in Sherepalli, Lambapur and Peddagattu area.

## II. MATERIALS AND METHODS

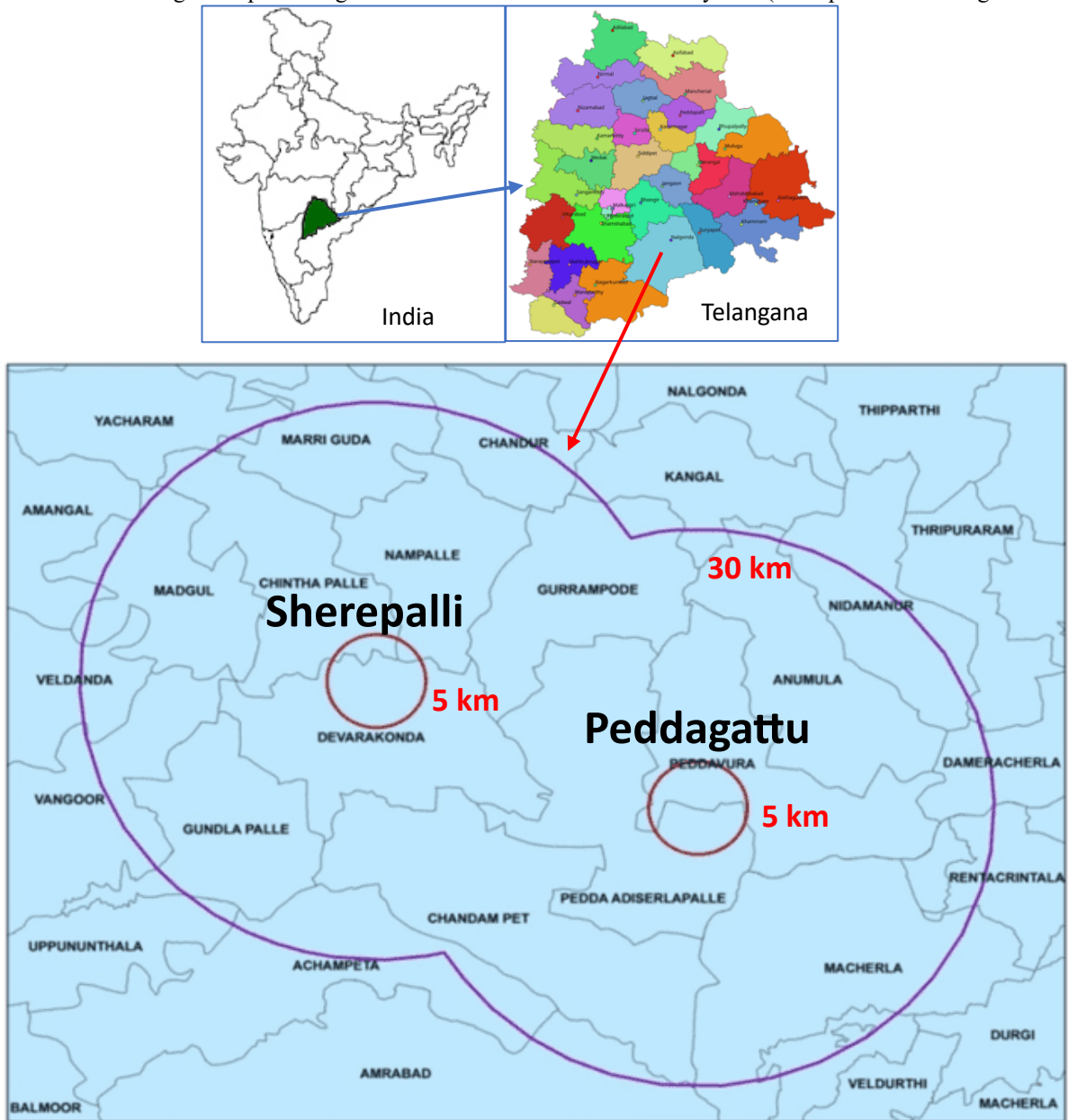
### i. *STUDY AREA*

**Sherepalli, Lambapur and Peddagattu:** These villages are the main core zone habitat for mining activities. The study area was divided into three zones based on the impact magnitude and dimensions of the proposed mine lease area namely 0-5 Km (core zone), 5-15 km (Buffer zone-I) and 15 –30 km (Buffer zone-II). The study area was lying between 16°53' to 17°50' N latitude and 78°45' to 78° 60' E longitude and having an area of 4,781.35 sq.km. The forest area forms 9% of the study area. The study area was spread in Nalgonda District and Mahaboobnagar District (Fig.1). The NSTR and Krishna River associated habitats are the part of the study area. Topography of the study area consists of flat-topped hills composed of Proterozoic sediments. A large portion of the region was under cultivation. The general drainage pattern is dendritic; indicating homogenous nature of formation. The study area as a whole has a gentle slope from West and North West to South East. The ground flora in the dry deciduous forests in conspicuous only during and after monsoon months and consists of various herbs and under shrubs. The common herbs are *Corchoru surticifolius*, *Melhanianc incana*, *Pavonia zeylanica*, *P.odorata*, *Acalypha alnifolia*, *Aervalanata*, *Plumbago zeylanica*, *Andrographis paniculata*, *Sida acuta*, *Evolvulus alsinoides*, *Phyllanthus virgatus*, *Pulicaria wightiana*, *Vernonia albicans*, *Rhynchosia capitata*, *Waltheria indica*, species of *Indigofera* and *Crotalaria*.

### III. METHODOLOGY

The study was carried out from April, 2010 to December, 2013 for all three seasons covering various habitats. The study area was divided into Core (0-5 km radius), Buffer zones- I (5-15 km) & Buffer zone-II (15-30 km) from the proposed project location. Data collection was made by following the line transect method. In each direction of the study area, six line transects of 1 km length was laid. Numbers of individuals were counted by using point count method. The sampling surveys were conducted from 0700–0900 hrs at least to cover 5 km of every sampling station, and randomised sampling from 0900-1100 hrs and 1600-1800 hrs during the study period. Identification was based on Ali and Ripley<sup>[7]</sup> and Ali<sup>[8]</sup>. Birds were observed and photo documented by using a DSLR camera. Based on the number of sightings and occurrence of a given species, their status was assigned. Birds were considered to be common (encountered daily in relatively large numbers), uncommon (encountered daily but in few numbers), occasional (encountered occasionally in less numbers, or singly) or rare (encountered less than 15 times in a year). Scientific names and taxonomic classification of birds is after Manakadan and Pittie<sup>[9]</sup>. Threatened status of recorded species was according to the IUCN Red List of 2022.

Fig: 1 Map showing the core and buffer zones of the study area (Sherepalli and Peddagattu sites)



### IV. RESULTS AND DISCUSSION

A total of 188 species belonging to 130 genera and 18 Orders were recorded during April, 2010 to December, 2013 covering various habitats in the Core and buffer zones of the study area (Table 1, Fig 2-9).

Table 1 List of Avian faunal species recorded in the study area

S.No	Order	Species name	Common name	IUCN Status	IWPA status
1	Anseriformes	<i>Anas acuta</i> (Linnaeus, 1758)	Northern Pintail	LC	Sch-II
2		<i>Anas clypeata</i> (Linnaeus, 1758)	Northern Shoveler	LC	
3		<i>Anas crecca</i> (Gmelin, 1789)	Green-Winged Teal	LC	Sch-II
4		<i>Anas penelope</i> (Linnaeus, 1758)	Eurasian wigeon	LC	
5		<i>Anas poecilorhyncha</i> (J.R. Forster, 1781)	Indian Spot billed duck	LC	Sch-II
6		<i>Anser indicus</i> (Latham, 1790)	Bar-headed goose	LC	Sch-II
7		<i>Dendrocygna javanica</i> (Horsfield, 1821)	Lesser whistling teal	LC	Sch-II
8		<i>Tadorna ferruginea</i> (Pallas, 1764)	Ruddy Shelduck	LC	Sch-II
9		<i>Tadorna</i> (Linnaeus, 1758)	Common Shelduck	LC	Sch-II
10	Apodiformes	<i>Apus affinis</i> (J. E. Gray, 1830)	Little swift	LC	Sch-II
11		<i>Cypsiurus balasiensis</i> (J.E. Gray, 1829)	Asian Palm Swift	LC	Sch-II
12	Caprimulgiformes	<i>Caprimulgus jotaka</i> (Temminck & Schlegel, 1845)	Grey Nightjar	LC	Sch-II
13	Charadriiformes	<i>Charadrius dubius</i> (Scopoli, 1786)	Little ringed plover	LC	Sch-II
14		<i>Vanellus indicus</i> (Boddaert, 1783)	Red wattle lawpwing	LC	Sch-II
15		<i>Vanellus malarbaricus</i> (Boddaert, 1783)	Yellow-wattled Lapwing	LC	Sch-II
16		<i>Cursorius coromandelicus</i> (Gmelin, 1789)	Indian courser	LC	Sch-I
17		<i>Glareola lactea</i> (Temminck, 1820)	Small Pratincole	LC	Sch-II
18		<i>Himantopus</i> (Linnaeus, 1758)	Black-winged Stilt	LC	Sch-II
19		<i>Actitis hypoleucos</i> (Linnaeus, 1758)	Common sandpiper	LC	Sch-II
20		<i>Erolia minuta</i> (Leisler, 1812)	Little stint	LC	
21		<i>Gallinago</i> (Linnaeus, 1758)	Common Snipe	LC	Sch-II
22		<i>Lymnocyptes minimus</i> (Brunnich, 1764)	Jack snipe	LC	Sch-II
23		<i>Tringa glareola</i> (Linnaeus, 1758)	Wood sandpiper	LC	Sch-II
24		<i>Tringa nebularia</i> (Gunnerus, 1767)	Common Greenshank	LC	Sch-I
25		<i>Tringa stagnatilis</i> (Bechstein, 1803)	Marsh Sandpiper	LC	Sch-II
26		<i>Tringa tetanus</i> (Linnaeus, 1758)	Common Redshank	LC	Sch-II
27		<i>Gelochelidon nilotica</i> (Gmelin, 1789)	Gull-billed Tern	LC	Sch-I
28		<i>Sterna aurantia</i> (Gray, 1831)	River tern	VU	Sch-I
29	Ciconiiformes	<i>Ardea cinerea</i> (Linnaeus, 1758)	Grey heron	LC	Sch-II
30		<i>Ardea purpurea</i> (Linnaeus, 1766)	Purple heron	LC	Sch-II
31		<i>Ardeola grayii</i> (Boie, 1822)	Indian Pond Heron	LC	Sch-II
32		<i>Bubulcus ibis</i> (Linnaeus, 1758)	Cattle Egret	LC	Sch-II
33		<i>Casmerodius albus</i> (Linnaeus, 1758)	Great Egret	LC	
34		<i>Egretta garzetta</i> (Linnaeus, 1766)	Little Egret	LC	Sch-II

35		<i>Ixobrychus cinnamomeus</i> (Gmelin, 1789)	Cinnamon Bittern	LC	Sch-I
36		<i>Ixobrychus sinensis</i> (Gmelin, 1789)	Yellow bittern	LC	Sch-II
37		<i>Mesophoyx intermedia</i> (Wagler, 1827)	Intermediate Egret	LC	
38		<i>Nycticorax nycticorax</i> (Linnaeus, 1758)	Black Crowned Night Heron	LC	Sch-II
39		<i>Anastomus oscitans</i> (Boddaert, 1783)	Asian Openbill	LC	
40		<i>Ciconia episcopus</i> (Boddaert, 1783)	Woolly-necked Stork	NT	Sch-II
41		<i>Mycteria leucocephala</i> (Pennant, 1769)	Painted stork	NT	Sch-II
42		<i>Hydrophasianus chirurgus</i> (Scopoli, 1786)	Pheasant-tailed Jacana	LC	Sch-II
43		<i>Metopidius indicus</i> (Latham, 1790)	Bronze-winged Jacana	LC	Sch-II
44		<i>Platalea leucorodia</i> (Linnaeus, 1758)	Eurasian Spoonbill	LC	Sch-I
45		<i>Plegadis falcinellus</i> (Linnaeus, 1766)	Glossy Ibis	LC	Sch-II
46		<i>Pseudibis papillosa</i> (Temminck, 1824)	Black Ibis	LC	Sch-II
47		<i>Threskiornis melanocephalus</i> (Latham, 1790)	Black Headed Ibis	NT	Sch-II
48	Columbiformes	<i>Columba livia</i> (Gmelin, JF, 1789)	Rock dove	LC	
49		<i>Streptopelia chinensis</i> (Scopoli, 1786)	Spotted Dove	LC	Sch-II
50		<i>Streptopelia decaocto</i> (Fridvaldszky, 1838)	Eurasian collared Dove	LC	Sch-II
51		<i>Streptopelia orientalis</i> (Latham, 1790)	Oriental Turtle Dove	LC	Sch-II
52		<i>Streptopelia senegalensis</i> (Linnaeus, 1766)	Laughing dove	LC	
53		<i>Streptopelia tranquebarica</i> (Hermann, 1804)	Red collared dove	LC	Sch-II
54		<i>Pterocles exustus</i> (Temminck, 1825)	Chestnut-bellied Sandgrouse	LC	Sch-II
55		<i>Pterocles indicus</i> (Gmelin, JF, 1789)	Painted sandgrouse	LC	Sch-II
56		Coraciformes	<i>Alcedo atthis</i> (Linnaeus, 1758)	Common Kingfisher	LC
57	<i>Ceryle rudis</i> (Linnaeus, 1758)		Pied kingfisher	LC	Sch-II
58	<i>Ocyrceros birostris</i> (Scopoli, 1786)		Indian grey hornbill	LC	Sch-II
59	<i>Coracias benghalensis</i> (Linnaeus, 1758)		Indian Roller	LC	Sch-II
60	<i>Halcyon smyrnensis</i> (Linnaeus, 1758)		White-throated Kingfisher	LC	Sch-II
61	<i>Merops leschenaulti</i> (Vieillot, 1817)		Chestnut-headed Bee-eater	LC	Sch-II
62	<i>Merops orientalis</i> (Latham, 1801)		Asian Green Bee-Eater	LC	Sch-II
63	<i>Merops philippinus</i> (Linnaeus, 1766)		Blue tailed bee eater	LC	Sch-II
64	<i>Upupa epops</i> (Linnaeus, 1758)		Common hoopoe	LC	Sch-II
65	Cuculiformes	<i>Cacomantis merulinus</i> (Scopoli, 1786)	Plaintive Cuckoo	LC	Sch-II
66		<i>Centropus sinensis</i> (Stephens, 1815)	Greater Coucal	LC	Sch-II
67		<i>Clamator jacobinus</i> (Boddaert, 1783)	Pied cuckoo	LC	Sch-II

68		<i>Cuculus canorus</i> (Linnaeus, 1758)	Common Cuckoo	LC	Sch-II
69		<i>Cuculus micropterus</i> (Gould, 1838)	Indian cuckoo	LC	Sch-II
70		<i>Eudynamis scolopacea</i> (Linnaeus, 1758)	Asian Koel	LC	Sch-II
71		<i>Hierococcyx varius</i> (Vahl, 1797)	Common Hawk Cuckoo	LC	Sch-II
72		<i>Phaenicophaeus leschenaultii</i> (Lesson, 1830)	Sirkeer Malkoha	LC	
73		<i>Phaenicophaeus viridirostris</i> (Jerdon, 1840)	Blue-faced Malkoha	LC	Sch-II
74	Falconiformes	<i>Accipiter badius</i> (Gmelin, 1788)	Shikra	LC	Sch-I
75		<i>Accipiter nisus</i> (Linnaeus, 1758)	Eurasian Sparrowhawk	LC	Sch-II
76		<i>Accipiter virgatus</i> (Temminck, 1822)	Besra	LC	Sch-I
77		<i>Butastur teesa</i> (Franklin, 1831)	White-eyed Buzzard	LC	Sch-I
78		<i>Circaetus gallicus</i> (Gmelin, 1788)	Short toed snake eagle	LC	Sch-I
79		<i>Circus cyaneus</i> (Linnaeus, 1766)	Hen Harrier	LC	Sch-I
80		<i>Circus macrourus</i> (S.G. Gmelin, 1770)	Pallid harrier	NT	Sch-I
81		<i>Elanus caeruleus</i> (Desfontaines, 1789)	Black-Shouldered Kite	LC	Sch-II
82		<i>Haliastur indus</i> (Boddaert, 1783)	Brahminy Kite	LC	Sch-I
83		<i>Milvus migrans</i> (Boddaert, 1783)	Black Kite	LC	Sch-II
84		<i>Pernis ptilorhynchus</i> (Temminck, 1821)	Oriental honey buzzard	LC	Sch-II
85		<i>Spizaetus cirrhatu</i> s (Gmelin, 1788)	Changeable Hawk Eagle	LC	
86		<i>Falco chicquera</i> (Daudin, 1800)	Red-necked Falcon	NT	Sch-I
87		<i>Falco tinnunculus</i> (Linnaeus, 1758)	Common Kestrel	LC	Sch-II
88		Galliformes	<i>Coturnix</i> (Linnaeus, 1758)	Common Quail	LC
89	<i>Francolinus pondicerianus</i> (Gmelin, 1789)		Grey Francolin	LC	Sch-II
90	<i>Galloperdix lunulata</i> (Valenciennes, 1825)		Painted Spurfowl	LC	Sch-II
91	<i>Pavo cristatus</i> (Linnaeus, 1758)		Indian Peafowl	LC	Sch-I
92	<i>Perdica asiatica</i> (Latham, 1790)		Jungle bush quail	LC	Sch-II
93	<i>Turnix suscitator</i> (Gmelin, JF, 1789)		Barred Button Quail	LC	Sch-II
94	Gruiformes	<i>Amaurornis phoenicurus</i> (Pennant, 1769)	White-breasted Waterhen	LC	Sch-II
95		<i>Fulica atra</i> (Linnaeus, 1758)	Common coot	LC	
96		<i>Gallix cinerea</i> (Gmelin, 1789)	Water cock	LC	Sch-II
97		<i>Gallinula chloropus</i> (Linnaeus, 1758)	Common Moorhen	LC	Sch-II
98		<i>Porphyrio porphyria</i> (Linnaeus, 1758)	Purple Swampphen	LC	
99	Passeriformes	<i>Acrocephalus aedon</i> (Pallas, 1776)	Thick billed Warbler	LC	
100		<i>Acrocephalus agricola</i> (Jerdon, 1845)	Paddyfield Warbler	LC	Sch-II
101		<i>Acrocephalus dumetorum</i> (Blyth, 1849)	Blyth's Reed Warbler	LC	
102		<i>Hippolais caligata</i> (Lichtenstein, 1823)	Booted warbler	LC	

103	<i>Schoenicola striatus</i> (Jerdon, 1841)	Bristled grassbird	VU	
104	<i>Aegithina tiphia</i> (Linnaeus, 1758)	Common Iora	LC	Sch-II
105	<i>Alauda arvensis</i> (Linnaeus, 1758)	Eurasian skylark	LC	Sch-II
106	<i>Ammomanes phoenicura</i> (Franklin, 1831)	Rufous-tailed Lark	LC	Sch-II
107	<i>Artamus fuscus</i> (Vieillot, 1817)	Ashy woodswallow	LC	Sch-II
108	<i>Eremopterix grisea</i> (Scopoli, 1786)	Ashy crowned Sparrow Lark	LC	Sch-II
109	<i>Galerida cristata</i> (Linnaeus, 1758)	Crested lark	LC	Sch-II
110	<i>Mirafra affinis</i> (Blyth, 1845)	Jerdon's bush lark	LC	Sch-II
111	<i>Mirafra assamica</i> (Horsfield, 1840)	Bengal bush lark	LC	Sch-II
112	<i>Mirafra cantillans</i> (Blyth, 1845)	Singing Bushlark	LC	Sch-II
113	<i>Orthotomus sutorius</i> (Pennant, 1769)	Common tailor bird	LC	Sch-II
114	<i>Prinia hodgsonii</i> (Blyth, 1844)	Grey Breasted prinia	LC	Sch-II
115	<i>Prinia inornata</i> (Sykes, 1832)	Plain prinia	LC	Sch-II
116	<i>Prinia socialis</i> (Sykes, 1832)	Ashy prinia	LC	Sch-II
117	<i>Prinia sylvatica</i> (Jerdon, 1840)	Jungle Prinia	LC	Sch-II
118	<i>Pericrocotus cinnamomeus</i> (Linnaeus, 1766)	Small Minivet	LC	Sch-I
119	<i>Pericrocotus erythropygus</i> (Jerdon, 1840)	White-bellied Minivet	LC	Sch-II
120	<i>Corvus macrorhynchos</i> (Wagler, 1827)	Large billed crow	LC	Sch-II
121	<i>Corvus splendens</i> (Vieillot, 1817)	House crow	LC	
122	<i>Dendrocitta vagabunda</i> (Latham, 1790)	Rufous Treepie	LC	Sch-II
123	<i>Dicaeum erythrorhynchos</i> (Latham, 1790)	Pale-billed flowerpecker	LC	Sch-II
124	<i>Dicrurus leucophaeus</i> (Linnaeus, 1758)	White bellied Drongo	LC	Sch-II
125	<i>Dicrurus macrocercus</i> (Vieillot, 1817)	Black Drongo	LC	Sch-II
126	<i>Amandava</i> (Linnaeus, 1758)	Red Munia	LC	Sch-II
127	<i>Lonchura malabarica</i> (Linnaeus, 1758)	Indian Silverbill	LC	
128	<i>Lonchura malavea</i> (Linnaeus, 1766)	Tricoloured munia	LC	Sch-II
129	<i>Lonchura punctulate</i> (Linnaeus, 1758)	Scaly-breasted Munia	LC	Sch-II
130	<i>Hirundo daurica</i> (Linnaeus, 1771)	Red rumped Swallow	LC	
131	<i>Hirundo concolor</i> (Sykes, 1832)	Dusky crag martin	LC	
132	<i>Hirundo rustica</i> (Linnaeus, 1758)	Barn swallow	LC	Sch-II
133	<i>Hirundo smithii</i> (Leach, 1818)	Wire-tailed swallow	LC	Sch-II
134	<i>Lanius cristatus</i> (Linnaeus, 1758)	Brown shrike	LC	Sch-II
135	<i>Lanius excubitor</i> (Linnaeus, 1758)	Great grey Shrike	LC	Sch-II
136	<i>Lanius schach</i> (Linnaeus, 1758)	Long-tailed Shrike	LC	Sch-II
137	<i>Lanius vittatus</i> (Valenciennes, 1826)	Bay-backed Shrike	LC	Sch-II
138	<i>Terpsiphone paradisi</i> (Linnaeus, 1758)	Asian Paradise-flycatcher	LC	Sch-II
139	<i>Anthus rufulus</i> (Vieillot, 1818)	Paddy field Pipit	LC	Sch-II
140	<i>Motacilla alba</i> (Linnaeus, 1758)	White Wagtail	LC	Sch-II

141		<i>Motacilla flava</i> (Linnaeus, 1758)	Yellow wagtail	LC	Sch-II
142		<i>Motacilla maderaspatensis</i> (Gmelin, 1789)	Large Pied wagtail	LC	Sch-II
143		<i>Chrysomma sinense</i> (Gmelin, 1789)	Yellow eyed babbler	LC	Sch-II
144		<i>Copsychus saularis</i> (Linnaeus, 1758)	Oriental Magpie Robin	LC	Sch-II
145		<i>Monticola solitaries</i> (Linnaeus, 1758)	Blue rock thrush	LC	Sch-II
146		<i>Muscicapa dauurica</i> (Pallas, 1811)	Asian brown flycatcher	LC	Sch-II
147		<i>Rhipidura aureola</i> (Lesson, 1831)	White-browed Fantail	LC	Sch-II
148		<i>Saxicola caprata</i> (Linnaeus, 1766)	Pied Bush Chat	LC	Sch-II
149		<i>Saxicoloides fulicatus</i> (Linnaeus, 1776)	Indian Robin	LC	
150		<i>Nectarinia asiatica</i> (Latham, 1790)	Purple Sunbird	LC	
151		<i>Nectarinia zeylonica</i> (Linnaeus, 1766)	Purple rumped Sun bird	LC	
152		<i>Oriolus kundoo</i> (Sykes, 1832)	Indian Golden Oriole	LC	Sch-II
153		<i>Passer domesticus</i> (Linnaeus, 1758)	House Sparrow	LC	Sch-II
154		<i>Ploceus manyar</i> (Horsfield, 1821)	Streaked weaver	LC	Sch-II
155		<i>Ploceus philippinus</i> (Linnaeus, 1766)	Baya weaver	LC	Sch-II
156		<i>Tephrodornis pondicerianus</i> (Gmelin, 1789)	Common Woodshrike	LC	Sch-II
157		<i>Pycnonotus cafer</i> (Linnaeus, 1766)	Red vented bulbul	LC	Sch-II
158		<i>Pycnonotus luteolus</i> (Lesson, 1841)	White-browed Bulbul	LC	Sch-II
159		<i>Acridotheres tristis</i> (Linnaeus, 1766)	Common Myna	LC	Sch-II
160		<i>Gracupica contra</i> (Linnaeus, 1758)	Indian pied myna	LC	Sch-II
161		<i>Sturnus pagodarum</i> (Gmelin, 1789)	Brahminy starling	LC	Sch-II
162		<i>Sturnus roseus</i> (Linnaeus, 1758)	Rosy Starling	LC	
163		<i>Acrocephalus stentoreus</i> (Hemprich and Ehrenberg, 1833)	Clamorous Reed Warbler	LC	Sch-II
164		<i>Eremopterix griseus</i> (Scopoli, 1786)	Ashy crowned Sparrow Lark	LC	Sch-II
165		<i>Cisticola juncidis</i> (Rafinesque, 1810)	Zitting Cisticola	LC	
166		<i>Irena puella</i> (Latham, 1790)	Asian fairy-bluebird	LC	Sch-II
167		<i>Luscinia svecica</i> (Linnaeus, 1758)	Blue throat	LC	Sch-II
168		<i>Turdoides affinis</i> (Jerdon, 1845)	Yellow-billed Babbler	LC	Sch-II
169		<i>Turdoides caudata</i> (Dumont, 1823)	Common Babbler	LC	
170		<i>Turdoides malcolmi</i> (Sykes, 1832)	Large Grey babbler	LC	
171		<i>Turdoides striatus</i> (Dumont, 1823)	Jungle Babbler	LC	
172		<i>Zosterops palpebrosus</i> (Temminck, 1824)	Oriental white eye	LC	Sch-II
173		<i>Anhinga melanogaster</i> (Pennant, 1769)	Oriental Darter	NT	Sch-II
174	Pelecaniforms	<i>Pelecanus philippensis</i> (Gmelin, 1789)	Gray Pelican	NT	Sch-II
175	Piciformes	<i>Psilopogon haemacephalus</i> (Statius Müller, 1776)	Coppersmith Barbet	LC	Sch-II

176		<i>Dinopium javanense</i> (Liungh, 1797)	Common Flameback	LC	Sch-II
177	Podicipediformes	<i>Tachybaptus ruficollis</i> (Pallas, 1764)	Little Grebe	LC	Sch-II
178	Psittaciformes	<i>Psittacula cyanocephala</i> (Linnaeus, 1766)	Plum headed Parakeet	LC	Sch-II
179		<i>Psittacula eupatria</i> (Linnaeus, 1766)	Alexandrine Parakeet	NT	Sch-II
180		<i>Psittacula krameri</i> (Scopoli, 1769)	Rose ringed Parakeet	LC	Sch-II
181	Strigiformes	<i>Tyto alba</i> (Scopoli, 1769)	Barn Owl	LC	
182		<i>Athene brama</i> (Temminck, 1821)	Spotted Owlet	LC	Sch-II
183		<i>Bubo</i> (Linnaeus, 1758)	Eurasian eagle owl	LC	Sch-I
184		<i>Glaucidium radiatum</i> (Tickell, 1833)	Jungle owlet	LC	Sch-II
185		<i>Strix ocellata</i> (Lesson, 1839)	Mottled Wood Owl	LC	Sch-I
186	Suliformes	<i>Microcarbo niger</i> (Vieillot, 1817)	Little Cormorant	LC	Sch-II
187		<i>Phalacrocorax carbo</i> (Linnaeus, 1758)	Great Cormorant	LC	Sch-II
188		<i>Phalacrocorax fuscicollis</i> (Stephens, 1826)	Indian Cormorant	LC	Sch-II

Order wise species composition reveals that Order Passeriformes was recorded as the most dominant in terms of number of species, represented by 74 species (39.36%) followed by Order Ciconiiforms with 19 species (10.11%) (Table 2). Out of 188 species recorded, eighteen species comes under Schedule-I species as per Indian Wildlife (Protection) Act, 1972 (IWPA) amended in 2022. The IUCN Red List categorisation also been done for the recorded species and found that eight Near Threatened species and two Vulnerable species found in this region. (Table 3).

Table 2 Order wise number of Species recorded from the study area

S.No	Order	Genera	%	Species	%
1	Anseriformes	4	3.08	9	4.79
2	Apodiformes	2	1.54	2	1.06
3	Caprimulgiformes	1	0.77	1	0.53
4	Charadriiformes	12	9.23	16	8.51
5	Ciconiiforms	17	13.08	19	10.11
6	Columbiformes	3	2.31	8	4.26
7	Coraciiformes	7	5.38	9	4.79
8	Cuculiformes	7	5.38	9	4.79
9	Falconiformes	10	7.69	14	7.45
10	Galliformes	6	4.62	6	3.19
11	Gruiformes	4	3.08	5	2.66
12	Passeriformes	44	33.85	74	39.36
13	Pelecaniforms	2	1.54	2	1.06
14	Piciformes	2	1.54	2	1.06
15	Podicipediformes	1	0.77	1	0.53
16	Psittaciformes	1	0.77	3	1.60
17	Strigiformes	5	3.85	5	2.66
18	Suliformes	2	1.54	3	1.60
	<b>Total</b>	<b>130</b>		<b>188</b>	

Table 3 List of conservation priority species recorded during the study period

S.No.	Order	Species name	Common name	IUCN Status	IWPA Status
1	Charadriiforms	<i>Cursorius coromandelicus</i> (Gmelin, 1789)	Indian courser	LC	Sch-I
2	Charadriiforms	<i>Tringa nebularia</i> (Gunnerus, 1767)	Common Greenshank	LC	Sch-I



3	Charadriiforms	<i>Gelochelidon nilotica</i> (Gmelin, 1789)	Gull-billed Tern	LC	Sch-I
4	Charadriiforms	<i>Sterna aurantia</i> (Gray, 1831)	River tern	VU	Sch-I
5	Ciconiiforms	<i>Ixobrychus cinnamomeus</i> (Gmelin, 1789)	Cinnamon Bittern	LC	Sch-I
6	Ciconiiforms	<i>Ciconia episcopus</i> (Boddaert, 1783)	Woolly-necked Stork	NT	
7	Ciconiiforms	<i>Mycteria leucocephala</i> (Pennant, 1769)	Painted stork	NT	
8	Ciconiiforms	<i>Platalea leucorodia</i> (Linnaeus, 1758)	Eurasian Spoonbill	LC	Sch-I
9	Ciconiiforms	<i>Threskiornis melanocephalus</i> (Latham, 1790)	Black Headed Ibis	NT	
10	Falconiformes	<i>Accipiter badius</i> (Gmelin, 1788)	Shikra	LC	Sch-I
11	Falconiformes	<i>Accipiter virgatus</i> (Temminck, 1822)	Besra	LC	Sch-I
12	Falconiformes	<i>Butastur teesa</i> (Franklin, 1831)	White-eyed Buzzard	LC	Sch-I
13	Falconiformes	<i>Circaetus gallicus</i> (Gmelin, 1788)	Short toed snake eagle	LC	Sch-I
14	Falconiformes	<i>Circus cyaneus</i> (Linnaeus, 1766)	Hen Harrier	LC	Sch-I
15	Falconiformes	<i>Circus macrourus</i> (S.G. Gmelin, 1770)	Pallid harrier	NT	Sch-I
16	Falconiformes	<i>Haliastur indus</i> (Boddaert, 1783)	Brahminy Kite	LC	Sch-I
17	Falconiformes	<i>Falco chicquera</i> (Daudin, 1800)	Red-necked Falcon	NT	Sch-I
18	Galliformes	<i>Pavo cristatus</i> (Linnaeus, 1758)	Indian Peafowl	LC	Sch-I
19	Passeriformes	<i>Schoenicola striatus</i> (Jerdon, 1841)	Bristled grassbird	VU	
20	Passeriformes	<i>Pericrocotus cinnamomeus</i> (Linnaeus, 1766)	Small Minivet	LC	Sch-I
21	Pelecaniforms	<i>Anhinga melanogaster</i> (Pennant, 1769)	Oriental Darter	NT	
22	Pelecaniforms	<i>Pelecanus philippensis</i> (Gmelin, 1789)	Gray Pelican	NT	
23	Psittaciformes	<i>Psittacula eupatria</i> (Linnaeus, 1766)	Alexandrine Parakeet	NT	
24	Strigiformes	<i>Bubo</i> (Linnaeus, 1758)	Eurasian eagle owl	LC	Sch-I
25	Strigiformes	<i>Strix ocellata</i> (Lesson, 1839)	Mottled Wood Owl	LC	Sch-I

## V. CONCLUSION

It was observed that a total of 188 species belonging to 130 genera and 18 Orders were recorded during the study period. Out of these, 25 conservation priority species found. The proposed mining activity involves completed vegetation removal of core zone and also impacts on aquatic ecosystems of the buffer zones. As the birds are very sensitive to climatic and other anthropogenic factors, the loss of habitat in Sherepalli, Peddagattu and Lambapur areas shall be conserved at high priority. Habitat improvement works along with species specific conservation plan shall be prepared.

Fig 2 Dominant Passerines recorded in the study area









		
<p>Red-vented bulbul (<i>Pycnonotus cafer</i>)</p>	<p>Indian robin (<i>Copsychus fulicatus</i>)</p>	<p>Laughing dove (<i>Spilopelia senegalensis</i>)</p>
		
<p>Plain Prinia (<i>Prinia inornata</i>)</p>	<p>Pied bush chat (<i>Saxicola caprata</i>)</p>	
		

Fig 3 Dominant Passerines recorded in the study area

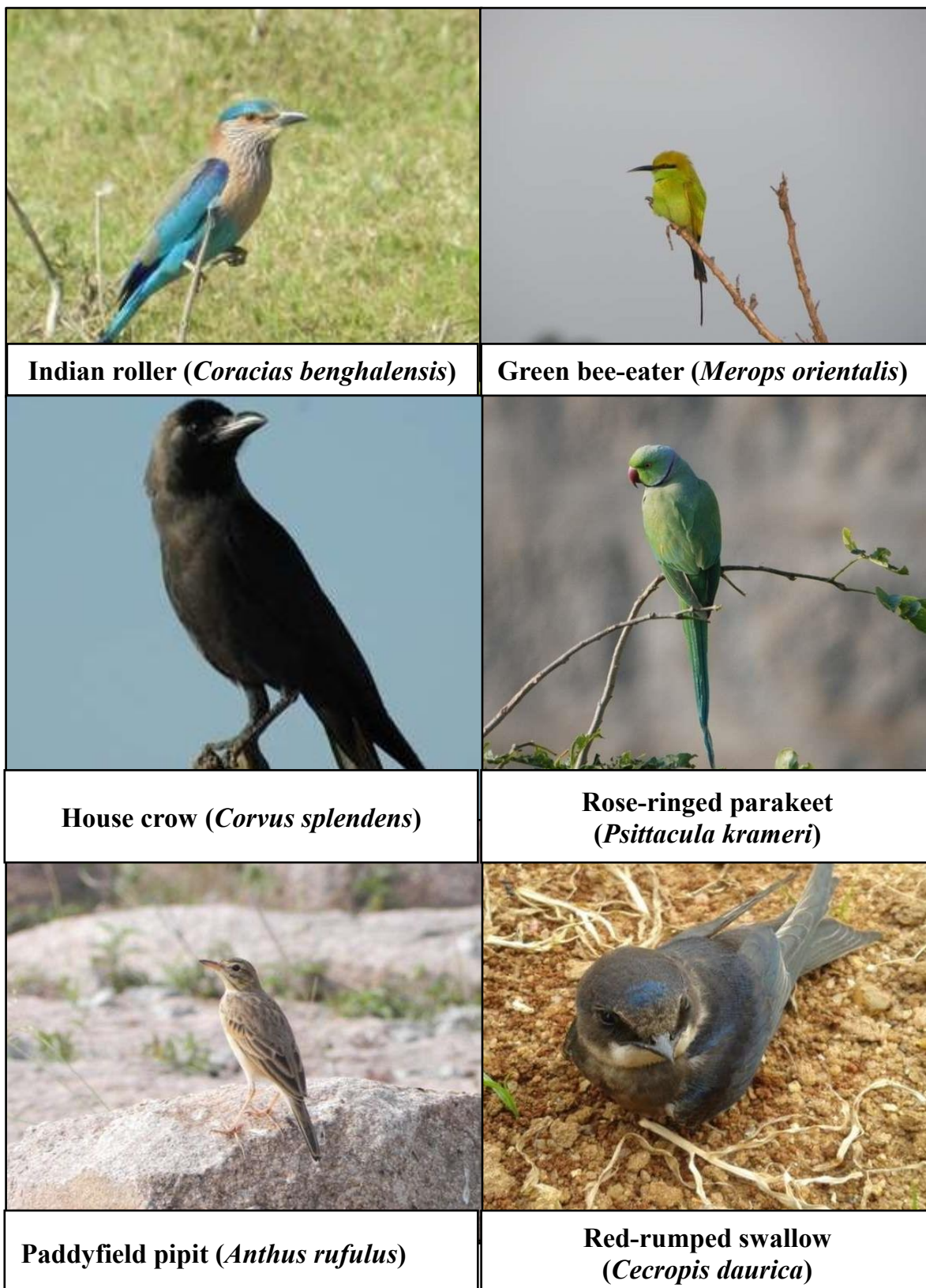


Fig 4 Dominant water birds of the study area



**White-throated kingfisher**  
*(Halcyon smyrnensis)*



**Common kingfisher** (*Alcedo atthis*)



**Common coot** (*Fulica atra*)



**Oriental darter**  
*(Anhinga melanogaster)*

Fig 5 Dominant water birds of the study area



**Spot-billed duck**  
(*Anas poecilorhyncha*)



**Black-winged stilt**  
(*Himantopus himantopus*)



**Northern pintail** (*Anas acuta*)



**Common sandpiper** (*Actitis hypoleucos*)



**Ruddy shelduck** (*Tadorna ferruginea*)

Fig 6 Dominant water birds of the study area

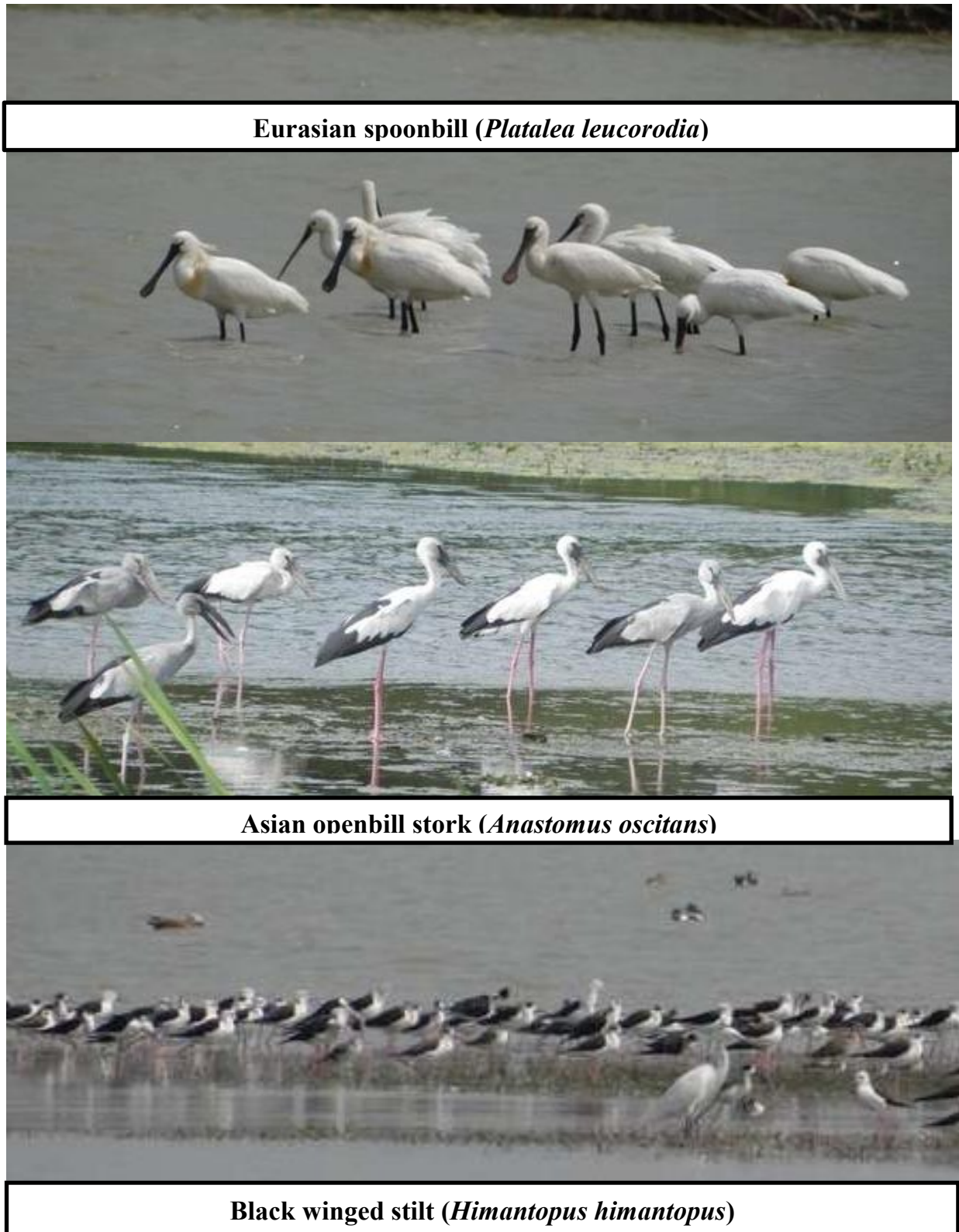


Fig 7 Herons and Egret recorded in the study area



**Grey heron (*Ardea cinerea*)**



**Indian pond heron (*Ardeola grayii*)**



**Little egret (*Egretta garzetta*)**

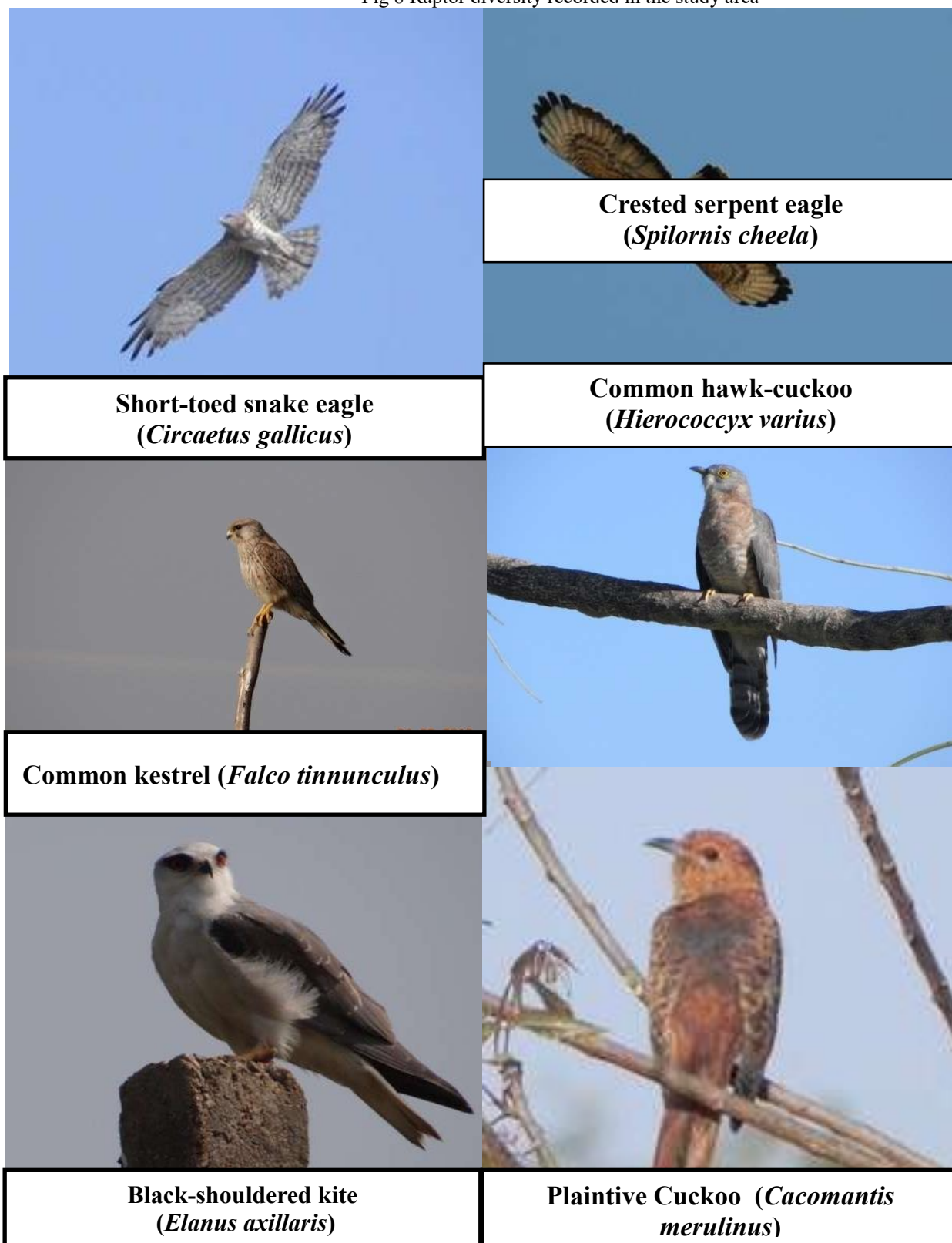


**Great egret (*Ardea alba*)**



**Black-crowned night heron (*Nvcticorax nvcticorax*)**

Fig 8 Raptor diversity recorded in the study area





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