

RESEARCH ARTICLE

Aves of Ajanti reservoir region of Wena River, Hinganghat (Wardha) Central India

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ABSTRACT

The investigations on diversity of birds; their habitats, feeding habits and migratory status were carried out in and around the Ajanti Dam area of Hinganghat (Wardha), Central India from April 2015 to March 2017. Total 134 species of birds were recorded belonging to 16 orders viz., Pelecaniformes (03-Species), Ciconiiformes (12-Species), Anseriformes (07-Species), Falconiformes (06-Species), Galliformes (04-Species), Gruiformes (03-Species), Charadriiformes (08-Species), Strigiformes (04-Species), Columbiformes (06-Species), Psittaciformes (03-Species), Cuculiformes (05-Species), Pteroclidiformes (01-Species), Caprimulgiformes (02-Species), Coraciiformes (07-Species), Piciformes (04-Species) and Passeriformes (59-Species). Amongst the recorded species, 7 (5.22%) species are migratory (M), 89 (66.41%) species are Resident (R) and 38 (28.35%) species are Resident migratory (RM). The ecosystems in and around the dam consists of diverse range of habitats; suitable for feeding, resting and roosting sites. The food availability and natural habitat of this region is the main attraction for the bird species. From the observed species most birds observed throughout the year while other is mostly winter migrants. Very rare record of 04 species in particular viz., European white Stork, Brown hawk Owl, Indian eagle Owl and Stork-billed Kingfisher was done.

Keywords: Ajanti Dam, Avifauna, Biodiversity, Birds.

INTRODUCTION

Birds are adapted to inhabit in a huge range of diverse habitats; from deserts to the open oceans. Amongst about 9,000 species of birds in the world, the Indian subcontinent contains about 1,300 species i.e. occupied with 13% of bird diversity of the world [1]. Climate change affects the biodiversity of a habitat, but it makes an important contribution in migration and adaptation of birds. Birds fulfill many ecological functions in their habitats; for instance, they are bio-indicators of healthy ecosystems and are important markers of environmental quality [2-3]. In addition, insectivorous species and raptors regulate disease vectors, including mosquitoes and rodents. Scavenger birds contribute to biomass recycling and to some degree reduce levels of disposable wastes. Frugivorous birds play an important role in seed dispersal of fleshy fruit-producing plants [4]. Birds are also important in plant pollination as demonstrated by sunbirds, which participate in crossbreeding of flowering plants, especially those with bird-pollination syndrome [5].

Present status of bird diversity has been decreasing due to the destruction to natural habitats and anthropogenic activities [6] [7] [8][9]; thus majority avian species are unknowingly enters to inhabit in the urban areas [10]. Study of birds reveals that there are similar minor but well-marked and readily recognizable differences in size, coloration and other details in those species which range over a wide area and live under diversified natural conditions; these differences should be recognized for study of birds [11].

The investigation was carried in and around Ajanti reservoir of Hinganghat, District Wardha. The dam was constructed on river Wena; one of the major tributary of river Wardha, which occupies a large area of Wainganga basins in central India. The dam is surrounded by the woods, farmlands, aquatic weeds, grassy meadows, bushes which attract the birds for natural habitat. The report finds the current status of avian diversity of Ajanti reservoir region and to prepare an updated checklist of birds for the purpose of conservation of indigenous as well as migratory species inhabit in this area.

METHODOLOGY

The present report is the part of survey conducted to record bird biodiversity of Ajanti dam region, 3 Km distance North-East from Hinganghat, Dist. Wardha. The study of biodiversity of birds was done during the month of April 2015 to March 2017 in the morning and evening hours. Bird watching and recording were done during Sunday and holidays in such a way that there should be least two visits in a month. The record of birds was done according to the Line transect method [12]; [13]) of 0.5 km to 1.5 km length with 50 m to 150 m on either side. The present study is based on 5 line transects to study the birds biodiversity. The birds were observed with the help of binocular and the photographs were captured with SLR cameras (Canon 1100 D; Canon 1200 D). Flash was mostly kept off to capture the natural colour of birds. Spot identification was done by using field guides of Ali [11], Grimmett *et al.* [14]. Birds observed were recorded and identified by the habitat type; ecological status and checklist were prepared.

STUDY AREA

Ajanti dam located geographically 20°35'31"N, 78°52'40"E., elevated 228M (705Ft) and lies 3 Km North-East to Hinganghat, Dist. Wardha; In British India Hinganghat was said to be the Center of Country. At vena river pump house on an historical old stone it was written that "Hinganghat the center of India".

The dam was constructed as a part of irrigation project by government of Maharashtra, India as well as a primary source for drinking water supply to Ajanti village. This dam primarily used for water supply to Hinganghat, irrigation purpose and industries. This region provide rich food sources viz., variety of nectar and seed flora, fruits, insects, beetles, grubs, molluscs, shrimps, crustaceans, tadpoles, fishes, amphibians and reptiles etc. Such fascinating conditions of an ecosystem attract most of the resident and migratory species of bird for feeding as well as nesting (Figs. 3(I-VI). The maximum Summer Temperature reaches to 48° C while it falls to 9° C in the Months of Winter. The annual rain fall measures around 1200 mm.



Fig. 1

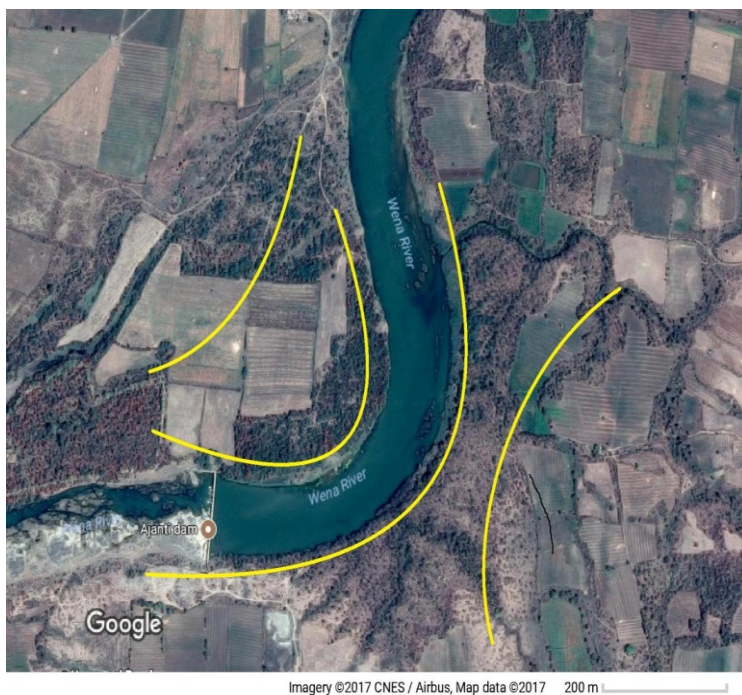


Fig. 2

Fig. 1: Map showing study area of Ajanti dam, Tah. Hinganghat, Dist. Wardha, MS, India. (P.C. Google map).

Fig. 2: Map showing Line transect at study area of Ajanti dam. (P.C. Google map).



Fig. 3 (I-VI): Study area showing different habitats of the Ajanti dam Hinganghat, Dist. Wardha, Maharashtra, India

OBSERVATIONS

A total of 134 species of birds belonging to 16 Orders, 48 Families and 104 Genera were recorded during the study. The 3 species belongs to 02 Genera and 01 Family were recorded from the Order Pelecaniformes; 12 species of 11 Genera belongs to 03 Families of Order Ciconiiformes; 07 species recorded from 05 Genera of 01 Family of Order Anseriformes; 06 species of 06 Genera from 02 Families belongs to Order Falconiformes; 04 species of 03 Genera and 01 Family noticed from Order Galliformes; 03 species and 03 Genera of 01 Family were recorded from Order Gruiformes; 08 species from 06 Genera of 04 Families belongs to Order Charadriiformes; 04 species of 04 Genera and 02 Families recorded from Order Strigiformes; 06 species noted from 03 Genera 01 Family of Order Columbiformes; 03 species of 01 genus belongs to Order Psittaciformes; 05 species from 04 genera of 01 family belongs to Order Cuculiformes; 01 species noticed from Order Pteroclidiformes; 02 species

from 01 Genus recorded form Order Caprimulgiformes; 07 species from 06 Genera belongs to 04 families of Order Coraciiformes, , 04 species of 03 Genera belongs to 02 Families of Order Piciformes; while from Order Passeriformes a maximum number of 59 species were recorded from 45 Genera belongs to 22 Families (Table 1, Table 2, Figs. 4(I&II)).

In the present report out of 134 bird species, 89 (66.41%) are resident, 38 (28.35%) species are resident migratory and 7 (5.22%) species are migratory; while 102 (76.11%) species are common, 28 (20.89%) are occasional and 4 (2.98%) are rare (Table 1, Table 3).

Some rare species particularly; European White Stork (*Ciconia ciconia*), Indian eagle Owl (*Bubo bengalensis*), Brown Hawk Owl (*Ninox scutulata*), Stork-billed Kingfisher (*Halcyon capensis*) were recorded during the study period.

Table 1:- Checklist of biodiversity of birds in Ajanti dam.

Sr. No.	Order	Family	Common Name	Scientific Name	Status
1	Pelecaniformes (1 Family)	Phalacrocoracidae (2 Genera)	Darter	<i>Anhinga melanogaster</i>	RM, O
			Great Cormorant	<i>Phalacrocorax carbo</i>	RM, O
			Little Cormorant	<i>Phalacrocorax niger</i>	RM, C
2	Ciconiiformes (3 Families)	Ardeidae (9 Genera)	Asian Open bill	<i>Anastomus oscitans</i>	R, C
			Purple Heron	<i>Ardea purpurea</i>	RM, C
			Indian Pond Heron	<i>Ardeola grayii</i>	R, C
			Cattle Egret	<i>Bubulcus ibis</i>	RM, C
			Little Egret	<i>Egretta garzetta</i>	R, C
			Yellow Bittern	<i>Ixobrychus sinensis</i>	RM, C
			Median Egret	<i>Mesophoyx intermedia</i>	RM, C
			Painted Stork	<i>Mycteria leucocephala</i>	RM, O
			Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	R, C
		Ciconiidae (1 Genus)	Woolly-necked Stork	<i>Ciconia episcopus</i>	R, C
			European White Stork	<i>Ciconia ciconia</i>	M, RARE
3	Anseriformes (1 Family)	Anatidae (5 Genus)	Northern Pintail	<i>Anas acuta</i>	M, O
			Common Teal	<i>Anas crecca</i>	M, C
			Spot-billed Duck	<i>Anas poecilorhyncha</i>	RM, C
			Lesser Whistling-duck	<i>Dendrocygna javanica</i>	R, C
			Cotton Teal	<i>Nettapus coromandelianus</i>	R, O
			Red-crested Pochard	<i>Rhodoness arufina</i>	M, O
			Ruddy Shelduck	<i>Tadorna ferruginea</i>	RM, O

4	Falconiformes (2 Families)	Accipitridae (5 Genara)	Shikra	<i>Accipiter badius</i>	R, C
			Black-shouldered Kite	<i>Elanus caeruleus</i>	R, C
			Black kite	<i>Milvus migrans</i>	RM, C
			Oriental Honey-buzzard	<i>Pernis ptilorhyncus</i>	RM, C
		Crested Serpent Eagle	<i>Spilornis cheela</i>	R, C	
		Falconidae (1 Genus)	Common Kestrel	<i>Falco tinnuculus</i>	RM, C
5	Galliformes (1 Family)	Phasianidae (3 Genara)	Common Quail	<i>Coturnix coturnix</i>	RM, C
			Painted Francolin	<i>Francolinus pictus</i>	R, C
			Grey Francolin	<i>Francolinus pondicerianus</i>	R, C
			Indian Peafowl	<i>Pavo cristatus</i>	R, C
6	Gruiformes (1 Family)	Rallidae (3 Genara)	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	R, C
			Common Moorhen	<i>Gallinula chloropus</i>	RM, C
			Purple Moorhen	<i>Porphyrio porphyrio</i>	R, C
7	Charadriiformes (4 families)	Charadriidae (2 Genara)	Little Ringed Plover	<i>Charadrius dubius</i>	RM, C
			Red-wattled Lapwing	<i>Vanellus indicus</i>	R, C
			Yellow-wattled Lapwing	<i>Vanellus malarbaricus</i>	R, C
		Scopacidae (2 Genara)	Common Sandpiper	<i>Actitis hypoleucos</i>	RM, C
			Wood Sandpiper	<i>Tringa glareola</i>	M, O
			Green Sandpiper	<i>Tringa ocropus</i>	R, O
		Recurvirostridae (1 Genus)	Black-winged Stilt	<i>Himantopus himantopus</i>	R, C
Laridae (1 Genus)	River Tern	<i>Sterna aurantia</i>	R, O		
8	Strigiformes (2 Families)	Strigidae (3 Genara)	Spotted Owlet	<i>Athene brama</i>	R, C
			Indian eagle Owl	<i>Bubo bengalensis</i>	R, RARE
			Brown Hawk Owl	<i>Ninox scutulata</i>	R, RARE
		Tytonidae (1 Genus)	Barn Owl	<i>Tyto alba</i>	R, C
9	Columbiformes (1 Family)	Columbidae (3 Genara)	Blue rock Pigeon	<i>Columba livia</i>	R, C
			Spotted Dove	<i>Streptopelia chinensis</i>	R, C
			Eurasian Collared Dove	<i>Streptopelia decaocto</i>	R, C
			Little Brown Dove	<i>Streptopelia senegalensis</i>	R, C
			Red Collared Dove	<i>Streptopelia tranquebarica</i>	R, O
			Yellow-footed Green Pigeon	<i>Treron phoenicoptera</i>	RM, C
10	Psittaciformes (1 Family)	Psittacidae (1 Genus)	Plum-headed Parakeet	<i>Psittacula cyanocephala</i>	R, C
			Alexandrine Parakeet	<i>Psittacula eupatria</i>	R, C
			Rose ringed Parakeet	<i>Psittacula krameri</i>	R, C
11	Cuculiformes (1 Family)	Cuculidae (4 Genara)	Greater Coucal	<i>Centropus sinensis</i>	R, C
			Pied Crested Cuckoo	<i>Clamator jacobinus</i>	RM, O
			Common Cuckoo	<i>Cuculus canorus</i>	RM, C
			Indian Cuckoo	<i>Cuculus micropterus</i>	RM, C

			Asian Koel	<i>Eudynamys scolopacea</i>	R, C
12	Pteroclidiformes (1 Family)	Pteroclididae (1 Genus)	Painted Sandgrouse	<i>Pterocles indicus</i>	R, C
13	Caprimulgiformes (1 Family)	Caprimulgidae (1 Genus)	Indian Nightjar	<i>Caprimulgus asiaticus</i>	R, C
			Jungle Nightjar	<i>Caprimulgus indicus</i>	RM, C
14	Coraciiformes (4 Families)	Alcedinidae (3 Genara)	Small Blue Kingfisher	<i>Alcedo atthis</i>	RM, C
			Pied Kingfisher	<i>Ceryle rudis</i>	R, C
			White-breasted Kingfisher	<i>Halcyon smyrnensis</i>	R, C
			Stork-billed Kingfisher	<i>Halcyon capensis</i>	R,RARE
		Meropidae (1 Genus)	Small Bee-eater	<i>Merops orientalis</i>	R,C
		Upupidae (1 Genus)	Common Hoopoe	<i>Upupa epops</i>	RM, C
		Coraciidae (1 Genus)	Indian Roller	<i>Coracias benghalensis</i>	R, C
15	Piciformes (2 Families)	Picidae (2 Genara)	Yellow-crowned Woodpecker	<i>Dendrocopos mahrattensis</i>	R, C
			Black-rumped Flameback Woodpecker	<i>Dinopium benghalense</i>	R, C
			Common Flameback	<i>Dinopium javanense</i>	R, C
		Capitonidae (1 Genus)	Coppersmith Barbet	<i>Megalaima haemacephala</i>	R, C
16	Passeriformes (22 Families)	Alaudidae (3 Genara)	Rufous-tailed Finch Lark	<i>Ammomanes phoenicura</i>	R, C
			Ashy-crowned Sparrow Lark	<i>Eremopterix grisea</i>	R, C
			Syke's Crested Lark	<i>Galerida deva</i>	R, C
		Hirundinidae (1 genus)	Red-rumped Swallow	<i>Hirundo daurica</i>	RM, C
			Common Swallow	<i>Hirundo rustica</i>	RM, C
			Wire-tailed Swallow	<i>Hirundo smithii</i>	R, C
		Dicruridae (1 Genus)	Black Drongo	<i>Dicrurus macrocercus</i>	R, C
		Laniidae (1 Genus)	Rufous Backed Shrike	<i>Lanius schach</i>	R, C
			Bay-backed Shrike	<i>Lanius vittatus</i>	RM, C
		Oriolidae (1 Genus)	Eurasian Golden Oriole	<i>Oriolus oriolus</i>	RM, C
		Sturnidae (2 Genara)	Common Myna	<i>Acridotheres tristis</i>	R, C
			Asian Pied Starling	<i>Sturnus contra</i>	R, O
			Brahminy Starling	<i>Sturnus pagodarum</i>	R, C
			Rosy Starling	<i>Sturnus roseus</i>	M, O
		Corvidae (2 Genara)	House Crow	<i>Corvus splendens</i>	R, C
			Rufous Treepie	<i>Dendrocitta vagabunda</i>	R, C
Campephagidae (1 Genus)	Small Minivet	<i>Pericrocotus cinnamomeus</i>	R, C		
Irenidae (2 Genara)	Common Iora	<i>Aegithina tiphia</i>	R, C		
	Red-vented Bulbul	<i>Pycnonotus cafer</i>	R, C		

		White-browed Bulbul	<i>Pycnonotus luteolus</i>	R, O
	Timaliidae (3 Genara)	Yellow-eyed Babbler	<i>Chrysomma sinense</i>	R, C
		Common Babbler	<i>Turdoides caudata</i>	R, C
		Large Grey Babbler	<i>Turdoides malcolmi</i>	R, C
		Jungle Babbler	<i>Turdoides striata</i>	R, C
		Rufous-bellied Babbler	<i>Dumetia hyperythra</i>	R, C
	Monarchidae (2 Genara)	White-throated Fantail	<i>Rhipidura albicollis</i>	R, O
		Asian Paradise-flycatcher	<i>Terpsiphone paradisi</i>	RM, O
	Sylviidae (4 Genara)	Blyth's Reed Warbler	<i>Acrocephalus dumetorum</i>	RM, O
		Common Tailorbird	<i>Orthotomus sutorius</i>	R, C
		Plain Prinia	<i>Prinia inornata</i>	R, C
		Ashy Prinia	<i>Prinia socialis</i>	R, C
		Common Lesser Whitethroat	<i>Sylvia curruca</i>	M, O
	Turdidae (7 Genus)	Brown Rock-Chat	<i>Cercomela fusca</i>	R, O
		Oriental Magpie Robin	<i>Copsychus saularis</i>	R, C
		Bluethroat	<i>Luscinia svecica</i>	RM, O
		Black Redstart	<i>Phoenicurus ochruros</i>	RM, C
		Pied Bushchat	<i>Saxicola caprata</i>	R, C
		Indian Robin	<i>Saxicoloides fulicata</i>	R, C
		Orange-headed Thrush	<i>Zoothera citrina</i>	RM, O
	Motacillidae (2 Genara)	White Wagtail	<i>Motacilla alba</i>	RM, C
		Citrine Wagtail	<i>Motacilla citreola</i>	RM, O
		Large Pied Wagtail	<i>Motacilla maderaspatensis</i>	R, C
		Yellow Wagtail	<i>Motacilla flava</i>	RM, C
		Paddy field Pipit	<i>Anthus rufulus</i>	R, C
	Zosteropidae (1 Genus)	Oriental White-Eye	<i>Zosterops palpebrosus</i>	R, C
	Nectarinidae (1 Genus)	Purple Sunbird	<i>Nectarinia asiatica</i>	R, C
		Purple-rumped Sunbird	<i>Nectarinia zeylonica</i>	R, C
	Ploceidae (2 Genara)	House Sparrow	<i>Passer domesticus</i>	R, C
		Baya Weaver	<i>Ploceus philippinus</i>	R, C
	Estrildidae (2 Genara)	Red Munia	<i>Amandava amandava</i>	R, C
		Indian Silverbill	<i>Lonchura malabarica</i>	R, C
		Scaly-breasted Munia	<i>Lonchurra punctulata</i>	R, C
	Tephrodornithidae (1 Genus)	Common Woodshrike	<i>Tephrodornis pondicerianus</i>	R, C
	Pittidae (1 Genus)	Indian Pitta	<i>Pitta brachyura</i>	R, O
	Muscicapidae (4 Genara)	Tickell's Blue Flycatcher	<i>Cyornis stickelliae</i>	R, O
		Blue Rock Thrush	<i>Monticola solitarius</i>	RM, O
		Verditer Flycatcher	<i>Eumyias thalassina</i>	R, O
		Common Stonechat	<i>Saxicola torquata</i>	RM, C
	Stenostriridae (1 Genus)	Grey headed Canary Flycatcher	<i>Culicicapa ceylonensis</i>	R, O
	Orders- 16	Families- 48	No. Of bird species-134	No. Of bird genera-104

R- Resident; RM- Resident migratory; M- Migratory; C-Common; O-Occasional; RARE.



Fig.5-12. 5) Darter (*Anhinga melanogaster*), 6) Great Cormorant (*Phalacrocorax carbo*), 7) Little Cormorant (*Phalacrocorax niger*), 8) Asian open bill stork (*Anastomus oscitans*), 9) Purple Heron (*Ardea purpurea*), 10) Indian pond heron (*Ardeola grayii*), 11) Cattle egret (*Bubulcus ibis*), 12) Little egret (*Egretta garzetta*),



Fig.13-20. 13) Yellow Bittern (*Ixobrychus sinensis*), 14) Median egret (*Mesophoyx intermedia*), 15) Black crowned night heron (*Nycticorax nycticorax*), 16) White Necked Stork (*Ciconia episcopus*), 17) European White Stork (*Ciconia ciconia*), 18) Shikra (*Accipiter badius*), 19) Black kite (*Milvus migrans*), 20) Oriental Honey-buzzard (*Pernis ptilorhyncus*),

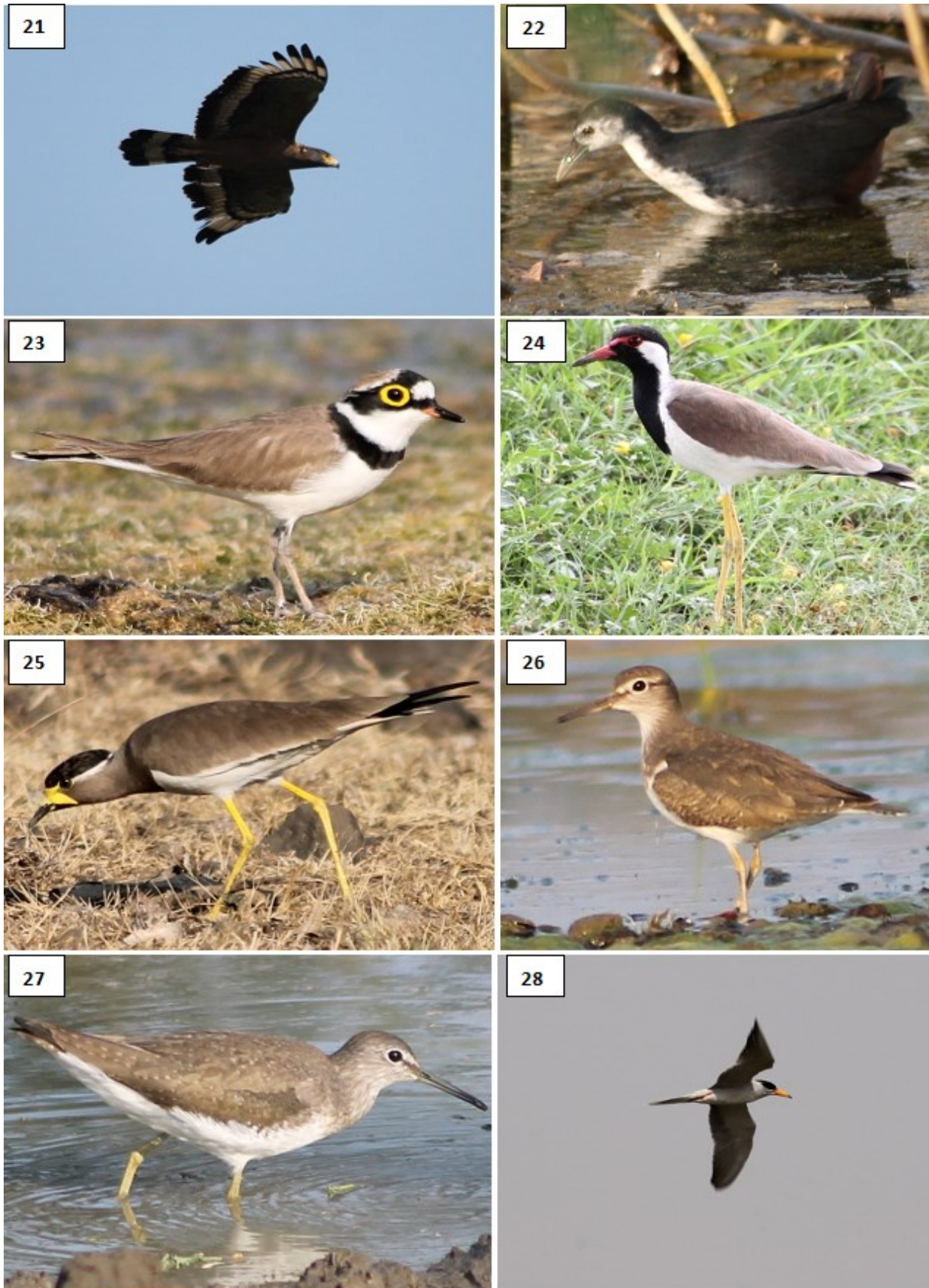


Fig.21-28. 21) Crested serpent eagle (*Spilornis cheela*), 22) White breasted waterhen (*Amaurornis phoenicurus*), 23) Little Ringed Plover (*Charadrius dubius*), 24) Red-wattled Lapwing (*Vanellus indicus*), 25) Yellow-wattled lapwing (*Vanellus malabaricus*), 26) Common Sandpiper (*Actitis hypoleucos*), 27) Wood Sandpiper (*Tringa glareola*), 28) River Tern (*Sterna aurantia*),

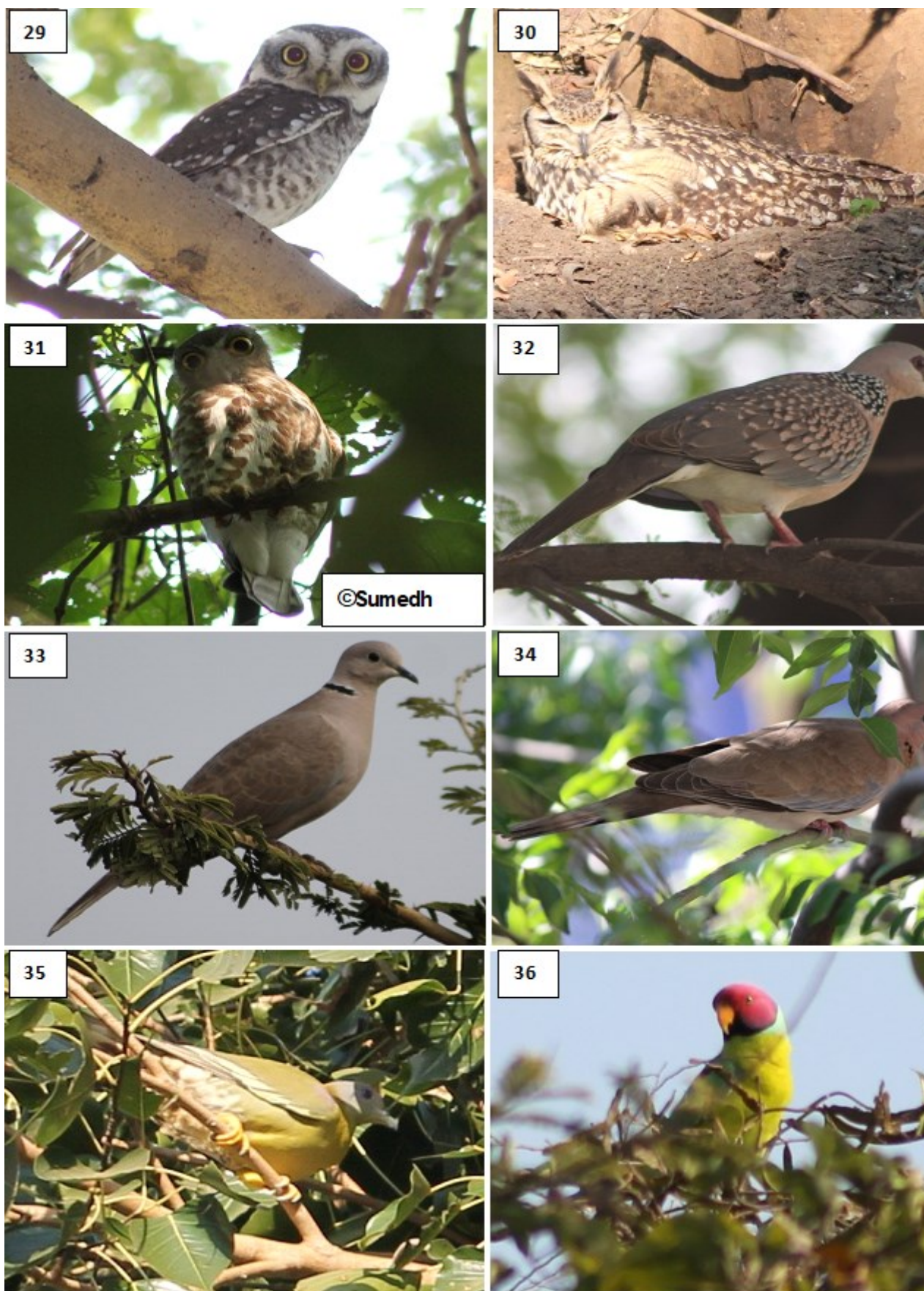


Fig.29-36. 29) Spotted owlet (*Athene brama*), 30) Indian eagle Owl (*Bubo bengalensis*), 31) Brown Hawk Owl (*Ninox scutulata*), 32) Spotted dove (*Streptopelia chinensis*), 33) Eurasian collared dove (*Streptopelia decaocto*), 34) Little brown dove (*Streptopelia senegalensis*), 35) Yellow footed Green Pigeon (*Treron phoenicoptera*), 36) Plum headed parakeet (*Psittacula cyanocephala*),

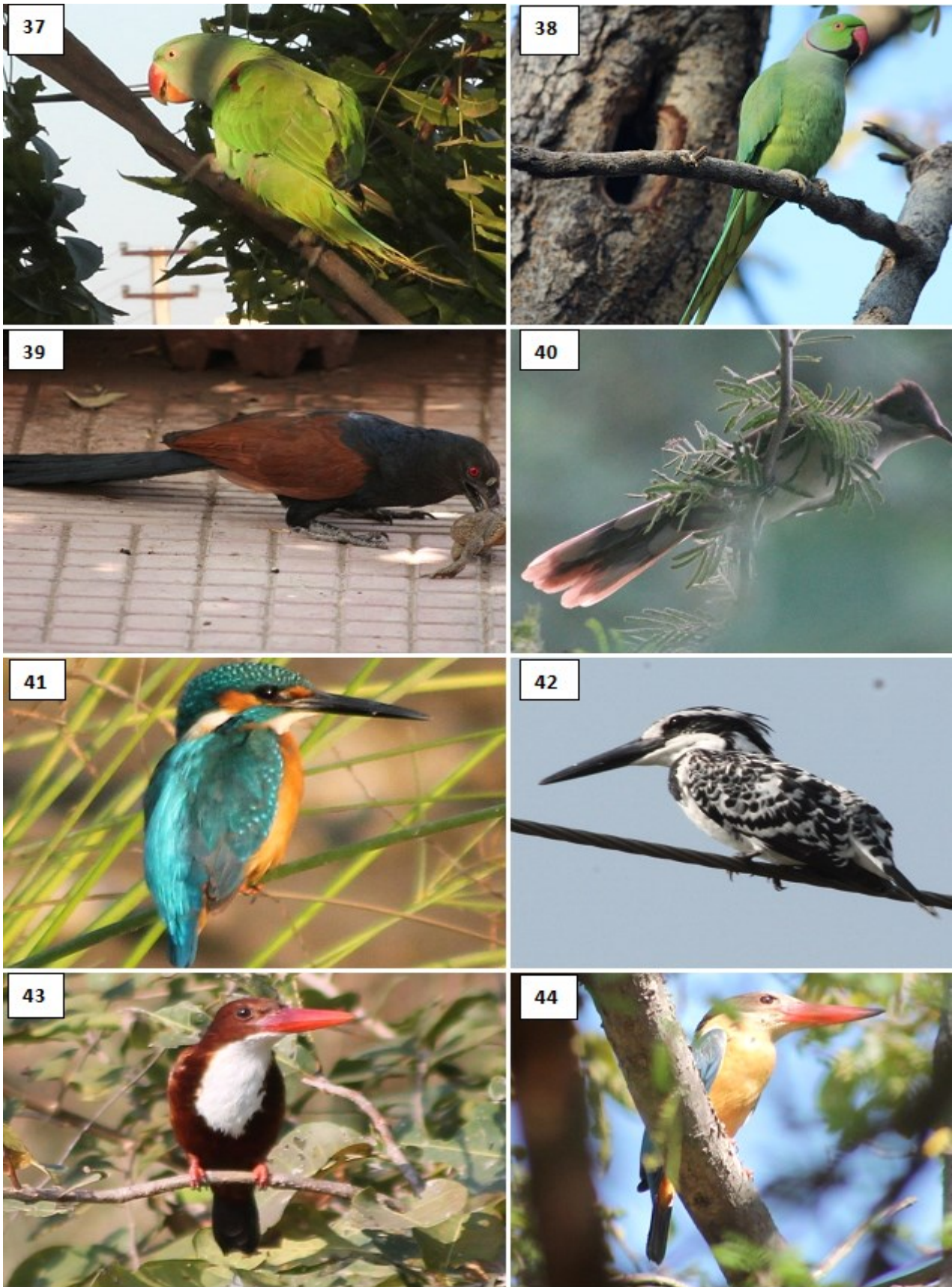


Fig.37-44. 37) Alexandrine parakeet (*Psittacula eupatria*), 38) Rose ringed Parakeet (*Psittacula krameri*), 39) Greater coucal (*Centropus Sinensis*), 40) Pied crested cuckoo (*Clamator jacobinus*), 41) Small blue kingfisher (*Alcedo atthis*), 42) Lesser pied kingfisher (*Ceryle rudis*), 43) White-breasted kingfisher (*Halcyon smyrnensis*), 44) Stork billed Kingfisher (*Halcyon capensis*),

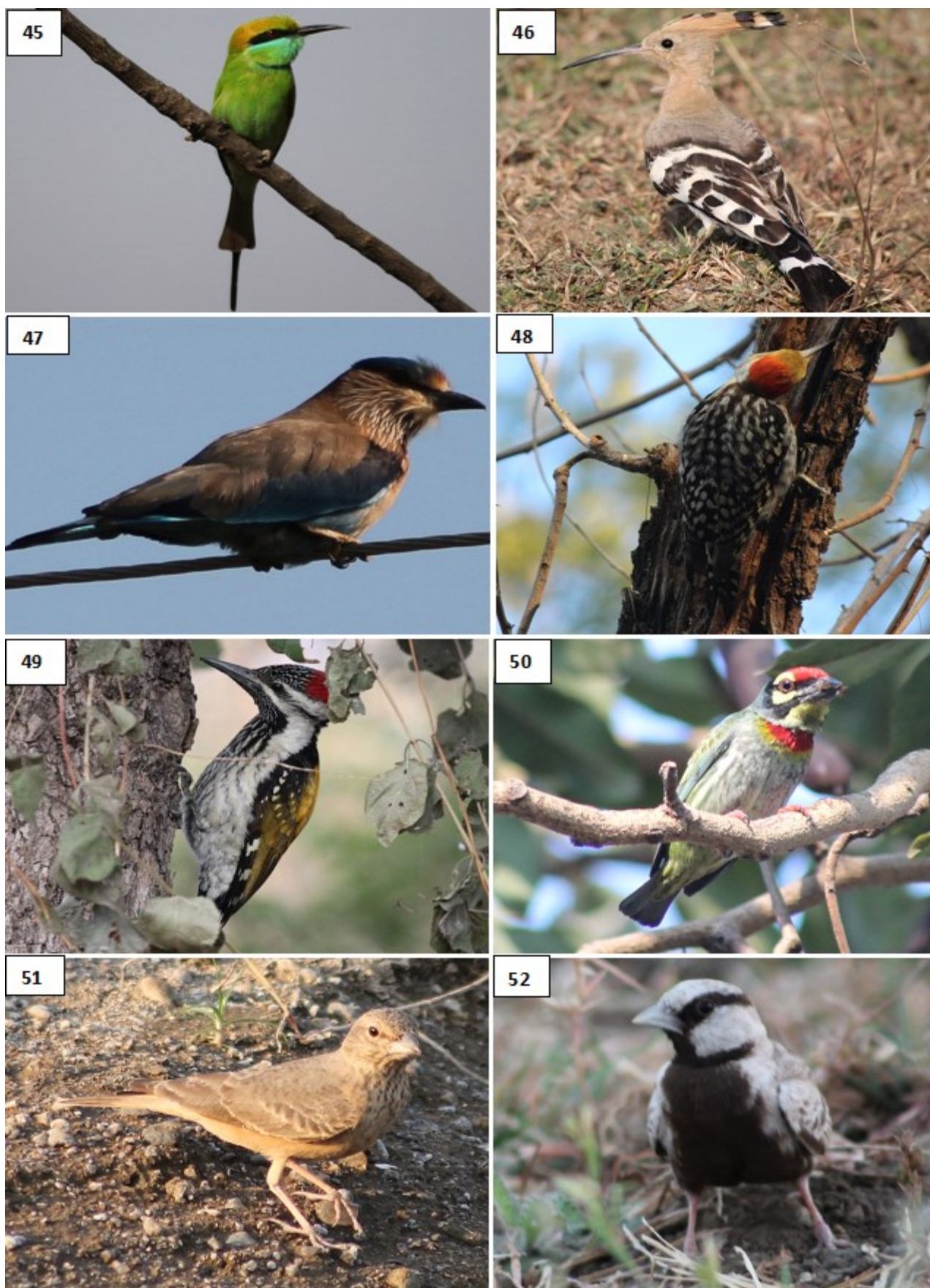


Fig.45-52. 45) Small bee-eater (*Meropus orientalis*), 46) Common hoopoe (*Upupa epops*), 47) Indian roller (*Coracias benghalensis*), 48) Yellow-crowned Woodpecker (*Dendrocopos mahrattensis*), 49) Lesser golden backed woodpecker (*Dinopium benghalense*), 50) Coppersmith barbet (*Megalaima haemacephala*), 51) Rufous-tailed Finch Lark (*Ammomanes phoenicura*), 52) Ashy-crowned Sparrow Lark (*Eremopterix griseus*),



Fig.53-60. 53) Wire tailed Swallow (*Hirundo smithii*), 54) Black Drongo (*Dicrurus macrocercus*), 55) Rufous Backed Shrike (*Lanius schach*), 56) Eurasian Golden Oriole (*Oriolus oriolus*), 57) Common myna (*Acridotheres tristis*), 58) Brahminy starling (*Sturnus pagodarum*), 59) House Crow (*Corvus splendens*), 60) Rufous Treepie (*Dendrocitta vagabunda*),



Fig.61-68. 61) Small Minivet (*Pericrocotus cinnamomeus*), 62) Common Iora (*Aegithina tiphia*), 63) Red vented bulbul (*Pycnonotus cafer*), 64) White-browed Bulbul (*Pycnonotus sluteolus*), 65) Yellow-eyed Babbler (*Chrysomma sinense*), 66) Common Babbler (*Turdoides caudatus*), 67) Large Grey Babbler (*Turdoides malcolmi*), 68) Jungle Babbler (*Turdoides striatus*),

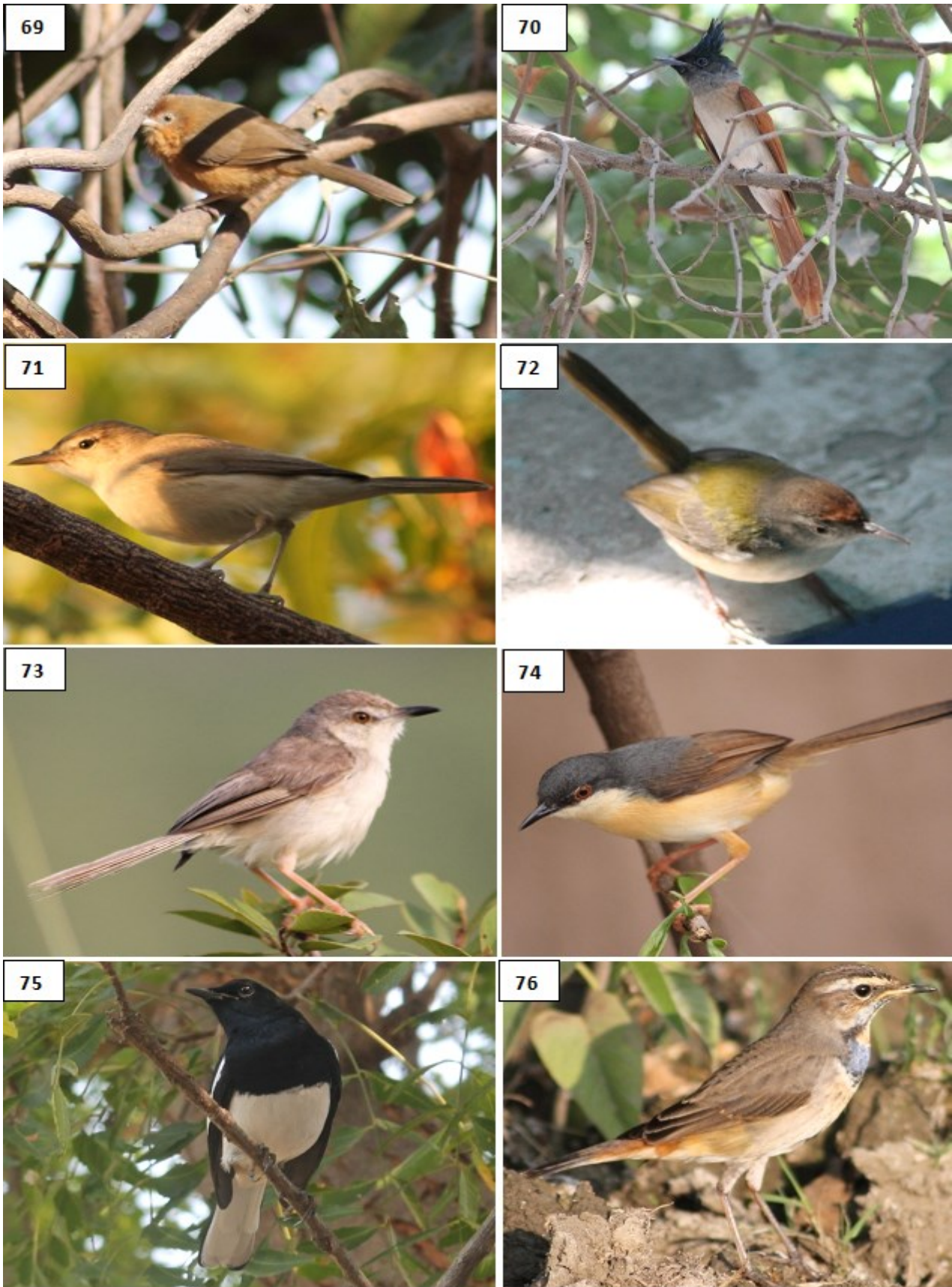


Fig.69-76. 69) Rufous bellied Babbler (*Dumetia hyperythra*), 70) Asian Paradise-flycatcher (*Terpsiphone paradisi*), 71) Blyth's Reed Warbler (*Acrocephalus dumetorum*), 72) Common Tailorbird (*Orthotomus sutaris*), 73) Plain prinia (*Prinia inornata*), 74) Ashy prinia (*Prinia socialis*), 75) Oriental magpie robin (*Copsychus saularis*), 76) Bluethroat (*Luscinia svecica*),



Fig.77-84. 77) Black redstart (*Phoenicurus ochruros*), 78) Pied Bushchat (*Saxicola carpata*), 79) Indian robin (*Saxicoloides fulicata*), 80) Orange headed thrush (*Zoothera citrine*), 81) White wagtail (*Motacilla alba*), 82) Citrine wagtail (*Motacilla citreola*), 83) Large pied wagtail (*Motacilla maderaspatensis*), 84) Oriental White-Eye (*Zosterops palpebrosus*),

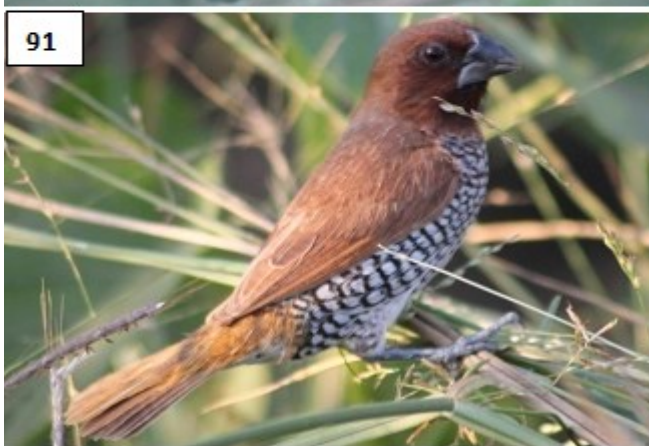


Fig.85-92. 85) Purple Sunbird (*Nectarinia asiatica*), 86) Purple-rumped Sunbird (*Nectarinia zeylonica*), 87) House Sparrow (*Passer domesticus*), 88) Baya Weaver (*Ploceus philippinus*), 89) Red Munia (*Amandava amandava*), 90) Indian Silverbill (*Lonchura malabarica*), 91) Scaly-breasted Munia (*Lonchura punctulata*), 92) Common woodshrike (*Tephrodornis pondicerianus*),

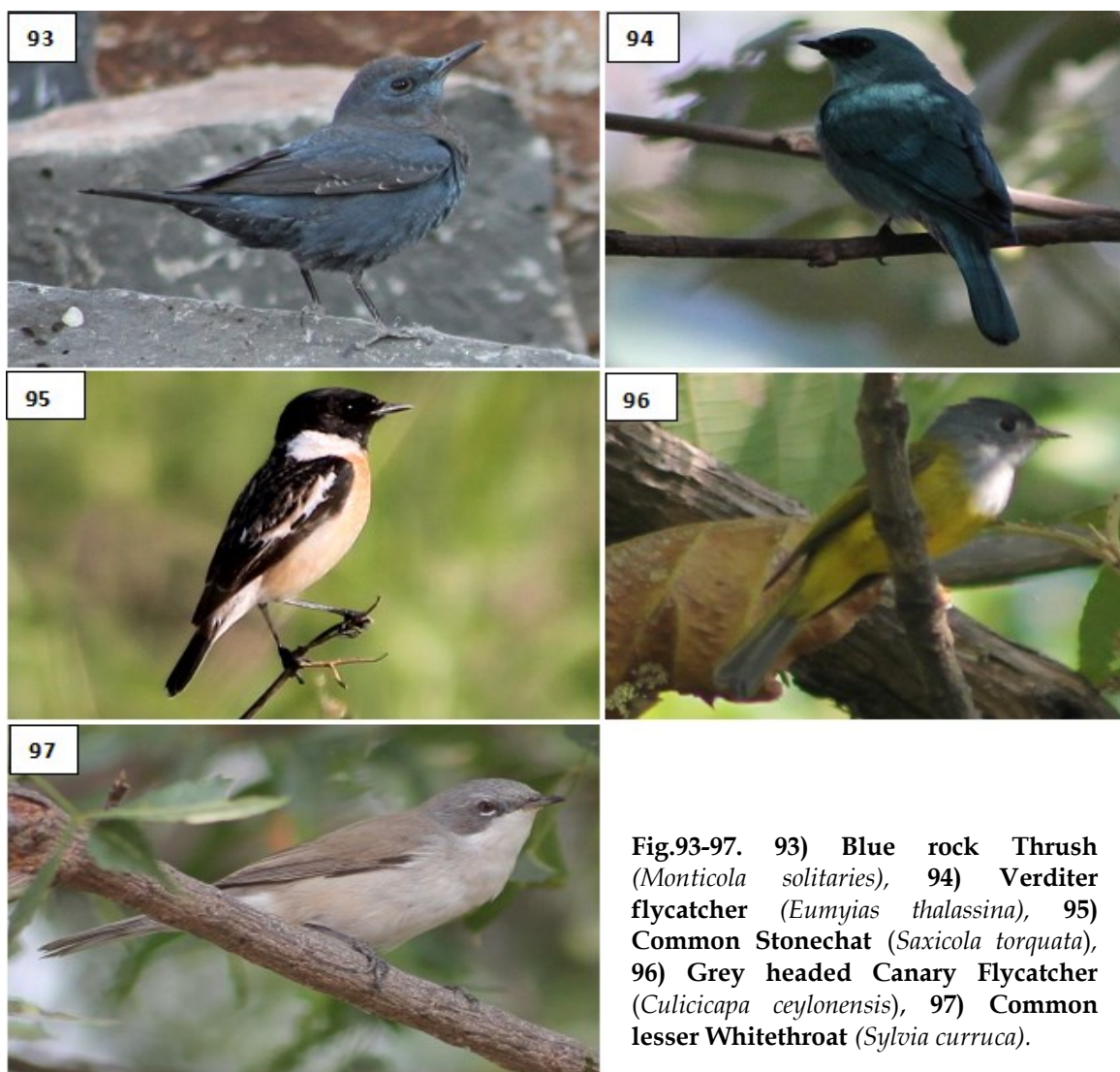


Fig.93-97. 93) Blue rock Thrush (*Monticola solitaries*), 94) Verditer flycatcher (*Eumyias thalassina*), 95) Common Stonechat (*Saxicola torquata*), 96) Grey headed Canary Flycatcher (*Culicicapa ceylonensis*), 97) Common lesser Whitethroat (*Sylvia curruca*).

Table 2:- Biodiversity of birds in respective orders.

Sr.No.	Order	No. of families	No. of Genera	No. of species
1	Pelecaniformes	01	02	03
2	Ciconiiformes	03	11	12
3	Anseriformes	01	05	07
4	Falconiformes	02	06	06
5	Galliformes	01	03	04
6	Gruiformes	01	03	03
7	Charadriiformes	04	06	08
8	Strigiformes	02	04	04
9	Columbiformes	01	03	06
10	Psittaciformes	01	01	03
11	Cuculiformes	01	04	05
12	Pteroclidiformes	01	01	01
13	Caprimulgiformes	01	01	02
14	Coraciiformes	04	06	07
15	Piciformes	02	03	04
16	Passeriformes	22	45	59
Total	16	48	104	134

Table 3:- Status of birds.

Sr.No.	Status of birds	No. Of bird species	% of bird species
1	Resident	89	66.41 %
2	Resident migratory	38	28.35 %
3	Migratory	07	5.22 %
		134	100.00 %

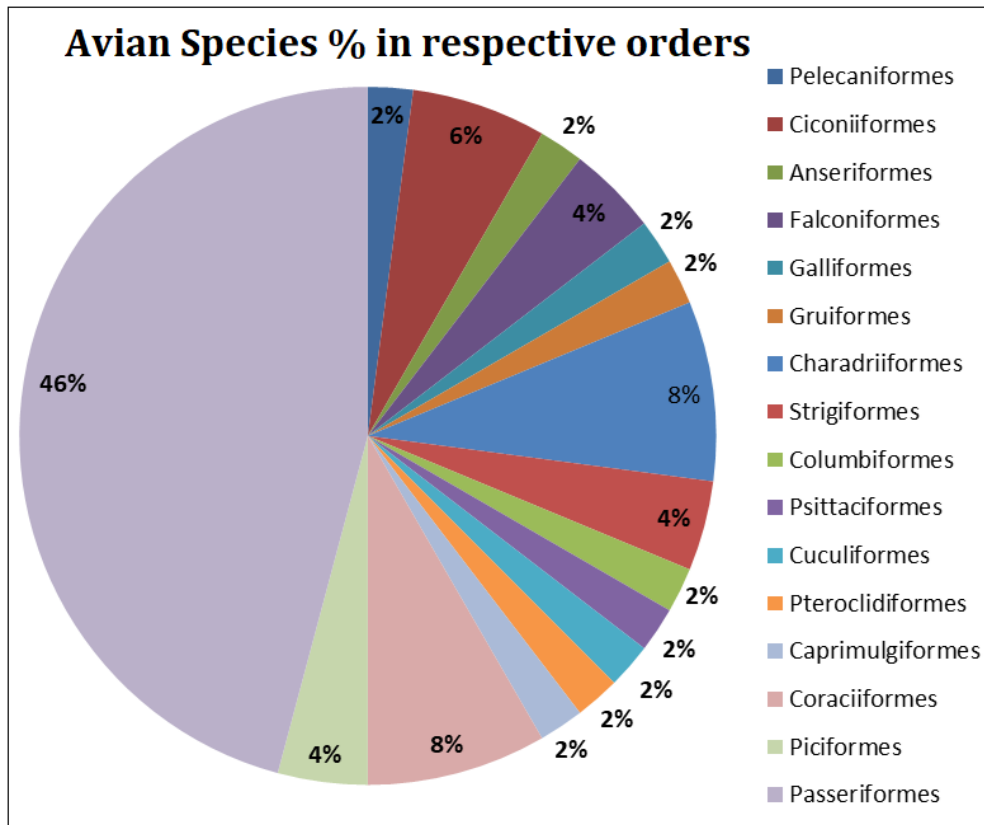


Fig. 4(I): To show avian species percentage in respective orders.

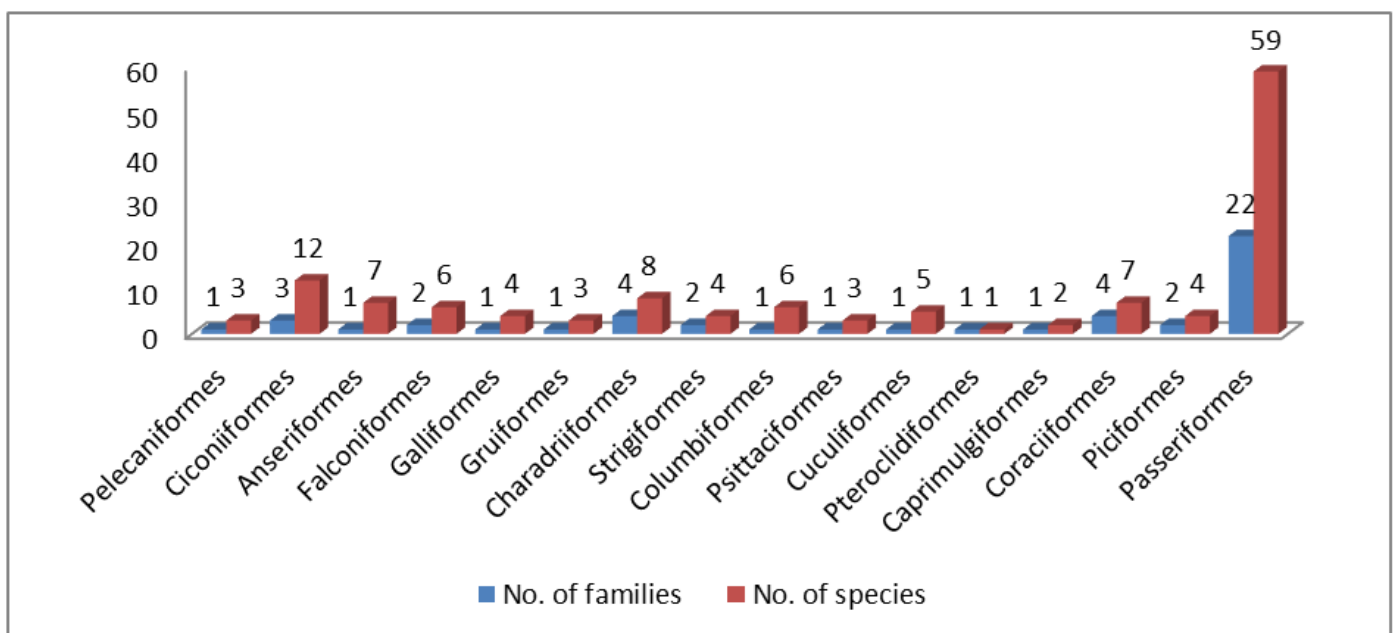


Fig. 4(II): To show avian species and family diversity in respective orders.

DISCUSSION

The survey was conducted to record biodiversity and the ecological status of birds from Ajanti dam region, 3 Km distance North-East from Hinganghat, Dist. Wardha, Maharashtra of central India. In present report a total of 134 species birds were recorded from 16 orders and 48 Families. Out of 134 bird species 89 (66.41%) are resident, 38 (28.35%) species are resident migratory, 7 (5.22%) species are migratory and the order Passeriformes is the largest order which covered 20 families out of 48. Out of 134 bird species, 102 (76.11%) species are common, 28 (20.89%) are occasional and 4 (2.98%) are rare. The report co-includes Shende and Patil [16]; they were recorded 190 species from 17 orders and 51 families in Gorewada International Biopark, Nagpur of central India. Out of which 89 species are resident, 77 species are resident migratory and 24 were migratory species and the order Passeriformes is the largest order which covered 20 families out of 51. Wanjari et al. [9] were recorded 158 species from 46 Families in Tipleshwar wildlife sanctuary, Maharashtra. Out of which 129 species are resident, 12 are resident migrant and 17 are migrant. Chavan et al. [3] were recorded 168 species from 53 Family and 15 order from Godawari River Basin in Nanded district. They also noticed maximum number of species from Order Passeriformes which counts 73. Joshi et al. [15] examined 146 species from 46 families of 16 Orders within different habitats of Kernala bird sanctuary, Maharashtra. They noticed that the species richness was highest in deciduous forest habitats (40) where it was lowest in rocky habitats (17). In the region of Singhori wildlife sanctuary, Raisen district of Madhya Pradesh, Talmale et al. [17] recorded 173 species of birds from 16 orders and 49 families. Patil [18] recorded A total of 159 species of birds belonging to 17 orders and 60 families form Urban Wetlands of Kolhapur.

The observations of above studies are typically similar to the investigation in present report; which shows the resident birds are predominant than the resident migratory and migratory birds. The birds are seen in all the three seasons but mostly in winter season and less in summer season because of scarcity of food. All above studies indicates the rich avifaunal diversity in the central part of India. The region gifted with diverse range of healthy habitats and ecosystems to provide place for nesting, breeding, feeding and shelter etc. [19].

It is noticed that the birds like kingfisher, swifts and kites are always seen flying in separate companies while swallows, babblers and quails are seen in mixed companies. White-browed Fantail, Flycatchers and Sunbirds are particularly observed during the migration months.

The species of Wagtails, Cuckoos, Bee eaters, Flycatchers, Warblers, Robins, Lapwings, Drongos were observed of which food was basically insects, grubs, beetles, midges, flies grasshoppers etc. Piscivorous birds like Kingfishers, Egrets and Pond herons, bird species are also observed near wetland habitats as their chief food like insects, crustaceans, tadpoles and small amphibians was flourished in this area. Carnivorous species as Kites, Shikra and Shrike were observed to feed upon grasshoppers, snails, crabs, frogs, snakes, hatchlings of birds.

Omnivorous birds eg. Larks, Mynas, Babblers, Asian koel, Red vented bulbul, Rufous tree pie noticed as resident species. Their chief food was consists of grains, fruits and small invertebrates. Sparrows and Bush chats were common and observed frequently.

In winter season when there was flowering and fruiting, frugivorous species i.e. Parakeets, Coppersmith barbets were observed to be feeding on various fruits like guava, custard apple, berries, wild fig and their fruit buds. Small nectar feeder species like Oriental white eye, Purple sunbird and Purple rumped sunbirds were observed while feeding on nectar and pollen grains from different varieties of flowers. A few rare species as European White Stork (*Ciconia ciconia*), Indian eagle Owl (*Bubo bengalensis*), Brown Hawk Owl (*Ninox scutulata*), Stork-billed Kingfisher (*Halcyon capensis*) were recorded during the study. The nesting of rare species such as Indian eagle owl was found containing 3 eggs.

CONCLUSION

Ajanti dam is a healthy natural habitat adds hilly terrain and Forest which is rich in food resource like nectar and seed flora, fruits, insects, beetles, grubs. Aquatic fauna includes micro and macro-organisms, shrimps, molluscs, crustaceans, tadpoles, fishes and amphibians, protein rich invertebrates and other food also attract bird species for feeding, breeding and nesting. This study contributes to the knowledge of bird diversity in Ajanti dam and provides the most recent status of bird diversity. This

study of biodiversity of birds will be helpful in the protection and conservation of threatened and vulnerable birds.

Out of 134 bird species 89 (66.41%) are resident, 38 (28.35%) species are resident migratory, 7 (5.22%) species are migratory and the order Passeriformes is the largest order which covered 20 families out of 48. Out of 134 bird species, 102 (76.11%) species are common, 28 (20.89%) are occasional and 4 (2.98%) are rare. During the study we found 4 rare species such as Brown hawk Owl, Indian eagle Owl (Nesting has 3 eggs), Stork-billed Kingfisher and European white Stork, which shows ecological health of Ajanti dam.

This study will be helpful to obtain information of staging, feeding, and breeding area of resident and migratory birds, areas of migratory birds. The report will help for protection and conservation of birds in the region of Ajanti wetlands.

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