

## BIRDS OF KUVEMPU UNIVERSITY CAMPUS, SHIMOGA DISTRICT, KARNATAKA

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### Abstract

Ninety-four species of birds belonging to 38 families were recorded in the three year study at the Kuvempu University Campus, Shimoga District, Karnataka. Most of the families were represented by less than five species except for Corvidae (14 species). There were 84 resident and 10 migratory birds. Fifteen species of waterfowl were recorded from the wetlands (ponds and puddles) of the campus. Among the birds recorded in this study, about 45 per cent are insectivores and other dominating types include piscivores, carnivores and frugivores (12%, 11% and 11% respectively).

### Keywords

*Avifauna, checklist Western Ghats Kuvempu  
University, Karnataka*

### Introduction

Birds have always fascinated man for their ability to fly in air and for their exquisite colouration. They have their functional role in the ecosystem as potential pollinators and scavengers, indeed rightly called bioindicators. India being a megadiversity centre, harbours 1,200 species of birds which amounts to 13 per cent of the bird species of the world (9,600 species) (Ali & Ripley, 1987). Recently with the increased consciousness for biodiversity census and monitoring, many new species were discovered or redescribed. This aspect prompted us to make a survey of birds in Kuvempu University Campus with scientific methodology that will form a baseline information for future indepth studies. The University campus is located towards the north of Bhadra River Dam at a distance of 3-4 km from the backwaters. The area of the campus before the establishment of the University, was barren due to clearing of forest and was allocated for grazing. However, the establishment of the

University has supported the regeneration of vegetation to a considerable level. Hence, the present study was also conducted with an intention to know the progress of restoration of bird diversity in this region.

### Study area and methods

#### Study area

Kuvempu University Campus (13°41'N and 75°38'E; altitude: 680-720m) is located 24 km South-East of Shimoga City and 4 km North of Bhadra Reservoir amidst the dry deciduous forest and is located on the edge of the Bhadra Tiger Reserve and Bhadra Wildlife Sanctuary. The University campus encompasses 230 acres of land with varied habitats, from undulating hilly terrain to man-made wetlands. Before the inception and establishment of the University in this landscape, the area was a barren hill-slope without any prominent vegetation. But in the past 10 years after the establishment of the University, there is considerable secondary vegetation of many tree species establishing gradually. As of now, the predominating vegetation is typically dry deciduous with considerable similarities with the wildlife sanctuary. Common flowering tree species are *Terminalia paniculata*, *Terminalia tomentosa*, *Bombax ceiba*, *Delonix regia*, *Butea monosperma*, *Spathodia companulata*, *Dalbergia latifolia*, *Mythragyna passiflora*, *Sclercheria olosa*, *Acacia auriculiformes*, *Samania saman*, *Anogeissus latifolia*, *Pongamia pinnata*, *Helethrix iora*, *Polyalthia longifolia*, *Albizia lebbek*, *Cassia siame*, *Bauhinia racemosa*, *Bombax malabaricum*, *Zyzyphus glabrata*, *Ficus religiosa*, *F. bengalensis*, *Santalum album*, *Eucalyptus* sp etc. The dominate shrubs are *Eupatorium odoratum*, *Lantana camera*, *Holarrhena antidysenterica*, *Cassia auriculiformes*, *Cassia tora*, *Ipomea convolvulata*, *Calotropis procera* and *Zyzyphus jujuba*. However, most of the tree species in the campus are less than 15 year old.

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## Methods

This report is based on observations made from November 1997 to December 2000. As the habitat elements vary considerably within the campus, survey was conducted using both line transect and point count methods. The selected line transects were 200 m in length with a maximum of 25m view on either side. A minimum of 30 minutes (speed: 8 m/minute) was spent for each transect. The point counts were with fixed radii (25m) generally adapted for wetland birds. Birds were sighted using a Binocular (6x30, field 7.8) and on spot identified using the field guides (King *et al.*, 1991; Ali & Ripley, 1983; Ali, 1996) and only those species with confirmed identity are reported in this paper. On compilation, the relative percentage of number of species to the respective family was calculated.

## Observations

The study reveals the occurrence of 94 species of birds belonging to 38 families (Table 2). Table 1 details the relative percentage of total bird species belonging to different families. Most of the families represented either by one or two species (relative percentage of species 0-2, 16 families; 2-4, 15 families; 4-6, 5 families), while the maximum relative percentage is from two families, Corvidae and Muscicapidae (14 and 6 species respectively). In the present study, 84 resident and 10 migratory birds were recorded within this small landscape that includes 15 species of waterfowl. Based on the food/foraging, from the present data it is apparent that the avifauna of the campus is dominated by insectivore (42 species), followed by piscivore, carnivore, frugivore and omnivore birds (11, 10, 10 and 8 species respectively). When the size of the birds are considered, the avifauna of the campus is dominated by small-sized birds (Sparrow +/-: 25 species and Bulbul +/-: 15 species) followed by medium-sized (Myna +/-: 22 and Pigeon +/-: 8 species) and large-sized (Crow +/-: 11, Hen +/-: 11 and Kite +/-: 2 birds respectively). Overall, the occurrence of maximum species of insectivore/piscivore/carnivore/frugivore/omnivore and waterfowl could depict the regeneration of the natural habitat in the campus.

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Table 1. Relative percentage of number of species in various families of birds of Kuvempu University Campus.

0-2	Relative percentage of species		
	2-4	4-6	6 and above
Podicipitidae	Phasianidae	Ardeidae	Corvidae
Phalacrocoracidae	Charadriidae	Accipitridae	Muscicapidae
Rallidae	Scolopacidae	Columbidae	
Laridae	Psittacidae	Sturnidae	
Centropodidae	Cuculidae	Passeridae	
Strigidae	Apodidae		
Cerylidae	Meropidae		
Alcedinidae	Bucerotidae		
Dacelonidae	Capitonidae		
Coraciidae	Hirundinidae		
Upupidae	Daniidae		
Picidae	Pycnonotidae		
Alaudidae	Cisticolidae		
Irenidae	Nectarinidae		
Sylviidae	Ploceidae		
Paridae			

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Table 2. List of birds in Kuvempu University Campus.

Sy.No <sup>1</sup>	Common Name <sup>2</sup>	Scientific Name <sup>3</sup>	S <sup>4</sup>	F <sup>5</sup>	Sy.No <sup>1</sup>	Common Name <sup>2</sup>	Scientific Name <sup>3</sup>	S <sup>4</sup>	F <sup>5</sup>
<u>Podicipedidae</u>					<u>Centropodidae</u>				
5	Little Grebe *	<i>Tachybaptus ruficollis</i>	R	P	602	Greater Coucal	<i>Centropus sinensis</i>	R	I
<u>Phalacrocoracidae</u>					<u>Strigidae</u>				
28	Little Cormorant *	<i>Phalacrocorax niger</i>	R	P	652	Spotted Owlet	<i>Athene brama</i>	R	C
<u>Ardeidae</u>					<u>Apodidae</u>				
42	Indian Pond-Heron *	<i>Ardeola grayii</i>	R	P	703	House Swift	<i>Apus affinis</i>	R	I
44	Cattle Egret *	<i>Bubulcus ibis</i>	R	P	707	Asian Palm Swift	<i>Cypsiurus balasienis</i>	R	I
46	Great Egret *	<i>Casmerodius albus</i>	R	P	<u>Cerylidae</u>				
48	Intermediate Egret *	<i>Mesophoyx intermedia</i>	R	P	719	Lesser Pied Kingfisher	<i>Ceryle rudis</i>	R	P
49	Little Egret *	<i>Egretta garzetta</i>	R	P	<u>Alcedinidae</u>				
<u>Accipitridae</u>					<u>Dacelonidae</u>				
133	Black Kite	<i>Milvus migrans</i>	R	C	722	Common Kingfisher	<i>Alcedo atthis</i>	R	P
135	Brahminy Kite	<i>Haliastur indus</i>	R	C	<u>Meropidae</u>				
138	Shikra	<i>Accipiter badius</i>	R	C	744	Chestnut-headed Bee-eater	<i>Merops leschenaulti</i>	R	I
187	Egyptian Vulture	<i>Neophron percnopterus</i>	R	C	748	Blue-tailed Bee-eater	<i>Merops philippinus</i>	R	I
<u>Phasianidae</u>					<u>Coraciidae</u>				
301	Grey Junglefowl	<i>Gallus sonneratii</i>	R	C	756	Indian Roller	<i>Coracias benghalensis</i>	R	I
311	Indian Peafowl	<i>Pavo cristatus</i>	R	O	<u>Upupidae</u>				
<u>Rallidae</u>					<u>Bucerotidae</u>				
343	White-breasted Waterhen *	<i>Amauromis phoenicurus</i>	R	I	767	Indian Grey Hornbill	<i>Ocyroceros birostris</i>	R	F
<u>Charadriidae</u>					<u>Capitonidae</u>				
366	Red-wattled Lapwing *	<i>Vanellus indicus</i>	R	I	775	Indian Pied Hornbill	<i>Anthrococeros coronatus</i>	R	F
370	Yellow-wattled Lapwing *	<i>Vanellus malabaricus</i>	R	I	<u>Picidae</u>				
380	Little Ringed Plover *	<i>Charadrius dubius</i>	R	I	819	Black-rumped Flame-backed Woodpecker	<i>Dinopium benghalense</i>	R	I
<u>Scolopacidae</u>					<u>Alaudidae</u>				
398	Wood Sandpiper *	<i>Tringa glareola</i>	M	I	878	Ashy-crowned Sparrow-Lark	<i>Eremopternix grisea</i>	R	I
401	Common Sandpiper *	<i>Actitis hypoleucos</i>	M	I	<u>Hirundinidae</u>				
409	Fantail Snipe *	<i>Gallinago gallinago</i>	M	I	916	Barn Swallow **	<i>Hirundo rustica</i>	M	I
<u>Laridae</u>					<u>Daniidae</u>				
464	Common Tern *	<i>Sterna hirundo</i>	M	P	921	Wire-tailed Swallow	<i>Hirundo smithii</i>	R	I
<u>Columbidae</u>					<u>Cuculidae</u>				
517	Rock Pigeon	<i>Columba livia</i>	R	G,F	590	Asian Koel	<i>Eudynamis scolopacea</i>	R	F, I
530	Oriental Turtle-Dove **	<i>Streptopelia orientalis</i>	R	G,F	595	Blue-faced Malkoha	<i>Phaenicophaeus viridirostris</i>	R	F, I
534	Eurasian Collared-Dove	<i>Streptopelia decaocto</i>	R	G,F	<u>Psittacidae</u>				
537	Spotted Dove	<i>Streptopelia chinensis</i>	R	G,F	550	Rose-ringed Parakeet	<i>Psittacula krameri</i>	R	F
<u>Psittacidae</u>					<u>Hirundinidae</u>				
557	Plum-headed Parakeet	<i>Psittacula cyanocephala</i>	R	F	916	Barn Swallow **	<i>Hirundo rustica</i>	M	I
566	Vernal Hanging-Parrot	<i>Loriculus vernalis</i>	R	F	921	Wire-tailed Swallow	<i>Hirundo smithii</i>	R	I
<u>Cuculidae</u>					<u>Daniidae</u>				
590	Asian Koel	<i>Eudynamis scolopacea</i>	R	F, I	946	Long-tailed Shrike	<i>Lanius schach</i>	R	I
595	Blue-faced Malkoha	<i>Phaenicophaeus viridirostris</i>	R	F, I	949	Brown Shrike	<i>Lanius cristatus</i>	M	I

Sy.No <sup>1</sup>	Common Name <sup>2</sup>	Scientific Name <sup>3</sup>	S <sup>4</sup>	F <sup>5</sup>	Sy.No <sup>1</sup>	Common Name <sup>2</sup>	Scientific Name <sup>3</sup>	S <sup>4</sup>	F <sup>5</sup>
<u>Corvidae</u>					1917	Purple Sunbird	<i>Nectarinia asiatica</i>	R	F, N, I
953	Eurasian Golden Oriole **	<i>Oriolus oriolus</i>	M	O	<u>Ploceidae</u>				
958	Black-hooded Oriole	<i>Oriolus xanthomus</i>	R	O	1966	Plain Munia	<i>Lonchura malabarica</i>	R	G
962	Black Drongo	<i>Dicrurus macrocercus</i>	R	C	1967	White-rumped Munia	<i>Lonchura striata</i>	R	G
965	Ashy Drongo **	<i>Dicrurus leucophaeus</i>	M	I	1974	Scaly-breasted Munia	<i>Lonchura punctulata</i>	R	G
967	White-bellied Drongo	<i>Dicrurus caeruleus</i>	R	I	<sup>1</sup> Ripley's (1961) <i>Synopsis</i> numbers as followed by Pittie & Robertson (1993); Ali (1983); Ali & Ripley (1983)				
982	Ashy Wood-Swallow	<i>Artamus fuscus</i>	R	C	<sup>2</sup> Common names after Manakadan <i>et al.</i> , 1998				
1031	Rufous Treepie	<i>Dendrocitta vagabunda</i>	R	O	<sup>3</sup> Scientific names after Inskipp <i>et al.</i> , 1996				
1048	House Crow	<i>Corvus splendens</i>	R	O	<sup>4</sup> Status of the birds observed as Resident (R) or Migratory (M)				
1054	Jungle Crow	<i>Corvus macrorhynchos</i>	R	O	<sup>5</sup> Observed food habit				
1072	Large Cuckoo-Shrike	<i>Coracina macei</i>	R	I	I - Insectivore; P - Piscivore; C - Carnivore; F - Frugivore; O - Omnivore; G - Grainivore				
1080	Scarlet Minivet	<i>Pericrocotus flammeus</i>	R	I	* Water Fowl				
1093	Small Minivet	<i>Pericrocotus cinnamomeus</i>	R	I	** Resident birds with migratory population				
1100	Common Iora	<i>Aegithina tiphia</i>	R	I					
1461	Asian Paradise-Flycatcher**	<i>Terpsiphona paradisi</i>	M	I					
<u>Stumidae</u>									
987	Chestnut-tailed Starling	<i>Stumus malabaricus</i>	R	C					
994	Brahminy Starling	<i>Stumus pagodarum</i>	R	C					
1006	Common Myna	<i>Acridotheres tristis</i>	R	O					
1010	Jungle Myna	<i>Acridotheres fuscus</i>	R	O					
<u>Irenidae</u>									
1103	Golden-fronted Leafbird	<i>Chloropsis aurifrons</i>	R	I					
<u>Pycnonotidae</u>									
1118	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	R	F					
1128	Red-vented Bulbul	<i>Pycnonotus cafer</i>	R	F					
<u>Muscicapidae</u>									
1258	Large Grey Babbler	<i>Turdoides malcolmi</i>	R	I					
1259	Rufous Babbler	<i>Turdoides subrufus</i>	R	I					
1262	Jungle Babbler	<i>Turdoides striatus</i>	R	I					
1661	Oriental Magpie Robin	<i>Copsychus saularis</i>	R	I					
1700	Pied Bushchat	<i>Saxicola caprata</i>	R	I					
1717	Indian Robin	<i>Saxicoloides fulicata</i>	R	I					
<u>Cisticolidae</u>									
1511	Plain Prinia	<i>Prinia inornata</i>	R	I					
1517	Ashy Prinia	<i>Prinia socialis</i>	R	I					
<u>Sylviidae</u>									
1535	Common Tailorbird	<i>Orthotomus sutorius</i>	R	I					
<u>Paridae</u>									
1794	Great Tit	<i>Parus major</i>	R	I					
<u>Passeridae</u>									
1857	Paddyfield Pipit	<i>Anthus rufulus</i>	R	I					
1884	Grey Wagtail	<i>Motacilla cinerea</i>	M	I					
1891	Large Pied Wagtail	<i>Motacilla maderaspatensis</i>	R	I					
1938	House Sparrow	<i>Passer domesticus</i>	R	G I					
<u>Nectariniidae</u>									
1899	Tickell's Flowerpecker	<i>Dicaeum erythrorhynchos</i>	R	F, N, I					
1907	Purple-rumped Sunbird	<i>Nectarinia zeylonica</i>	R	F, N, I					