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Diversity and abundance of avifauna in Western Ghats region of Kodagu and Hassan districts of Karnataka, India.

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ABSTRACT

The present paper is a document of the diversity and abundance of birds in the Western Ghats regions of Kodagu and Hassan districts. Field explorations were made for a period of three years. Point count and line transects methods were employed to record the birds. A total of 383 birds belonging to 80 families and 19 orders were documented. A bird inventory was made regarding the abundance, status, habitat preference, feeding preference, trend of population and nesting period. Carnivorous birds' diversity is more prevalent in the area.

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INTRODUCTION

Indian subcontinent supports diverse avifauna in its diverse ecosystems like Western Ghats, deserts and wetlands. Highly varied climatic conditions, unique habitats, long stretch of inland, forest and coastal areas attracts and supports a unique group of avian species round the year.[1]Assessing the bird diversity of a habitat over time and space is one of the key issues for avian community ecologists. Richness, abundance and community composition are often used by ecologists to understand the diversity of species in their natural occurrence[2]. Aves are an important integral part of biotic community of a forest ecosystem. Birds respond quickly to the changes of habitat. Birds are good indicators of health of an ecosystem. Monitoring the abundance, diversity, and habitat selection of the birds provide a baseline data for further assessment of the factors resulting in the fluctuation of the avifaunal population. Long term avian monitoring identifies the bird species that decline due to habitat loss or degradation.[3]The bird community structure is affected by changes in vegetation structure either due to natural or any human induced disturbances.[4]The change in vegetation composition could impact the quality and quantity of habitat for birds in terms of food, water and cover which can further affect the diversity, abundance and distribution of birds.[5] The assessment of vegetation composition and structure is a useful tool to examine and understand the habitat characteristics and impacts of disturbance or alteration of habitats on the avian species.[6] Monitoring the habitat selection, diversity and abundance of birds provide a baseline data to assess the fluctuation of avifaunal population. The avian habitat is roughly divided into forest, scrub and wetlands, although many species require a mixed type of habitat. It is reported that birds migrated from sub-tropical temperate regions to reservoirs of Western Ghats according to the food availability in each habitat.[7] This study aims to investigate the bird diversity, distribution pattern, feeding habits, population trends and abundance in the Western Ghats regions of Kodagu and Hassan districts.

METHODOLOGY

Study Area:-

(a) Kodagu district (Fig-2) is a hilly region, which is bordered by six districts including Dakshina Kannada to North-west, Hassan to North-east and Mysore to South districts of Karnataka and three other districts of Tamilnadu and Kerala state. The district is located on the eastern slopes of Western Ghats. The district lies to the South-western border of Karnataka between the northern latitudes ll°56'& 12°52' and eastern longitudes 72° 22'& 76° 12'. The forest range of the district is more or less crescent shaped which stretch for about 97kms. The largest river of the district is Kaveri. Though geographically limited in area it inhabits a greaterbiodiversity.

(b) The district of Hassan (Fig-3) is located in the southern part of Karnataka state on the border of the Central Western Ghats. The District was formerly a Malnad Area which has now become a Semi-Malanadu/Are-Malenadu due to excessive deforestation, encroachment and extension of agriculture and plantation farming. Lying between 12° 13´ and 13° 33´ North latitudes and 75° 33´ and 76°38´ East longitude, Hassan district is surrounded by mountainous region to the west and south-west called Bisle Ghat and the maidan or plains regions in the north, south and east. The district is surrounded by Mysore to the south, Chitradurga District to the north, Tumkur District to the east, Dakshina Kannada district to the west, Mandya District to the south-east, Kodagu District to the south-west and Chikmagalur District to the north-west. Though one of the smaller districts of Karnataka, the districts is rich in wildlife.

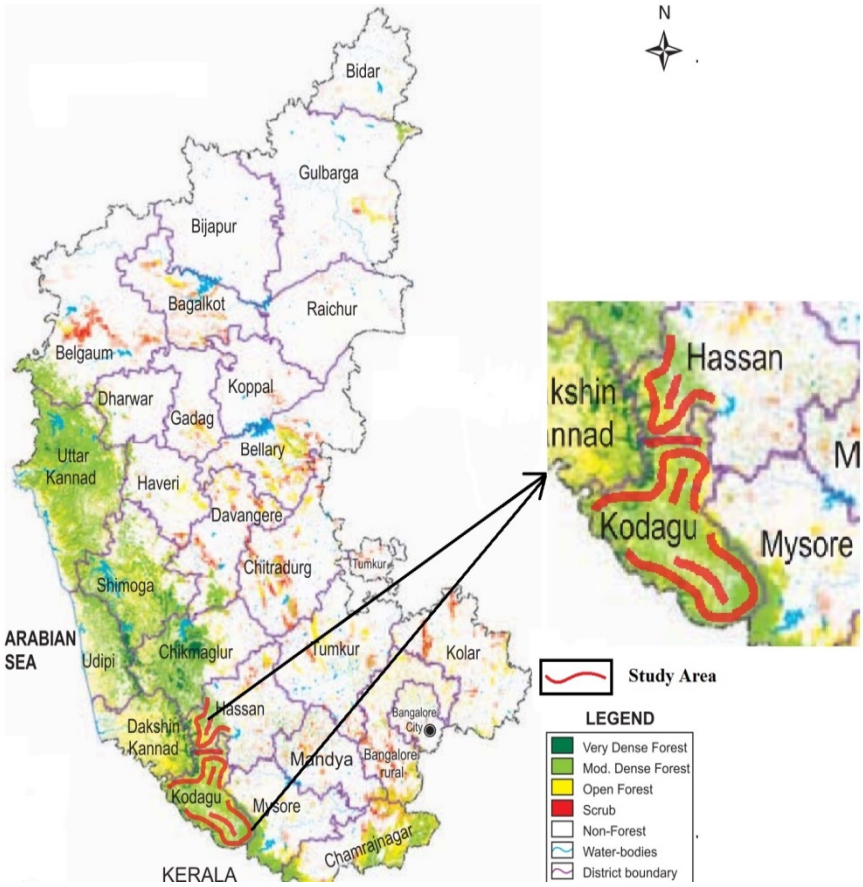


Fig 1: Map showing the study area

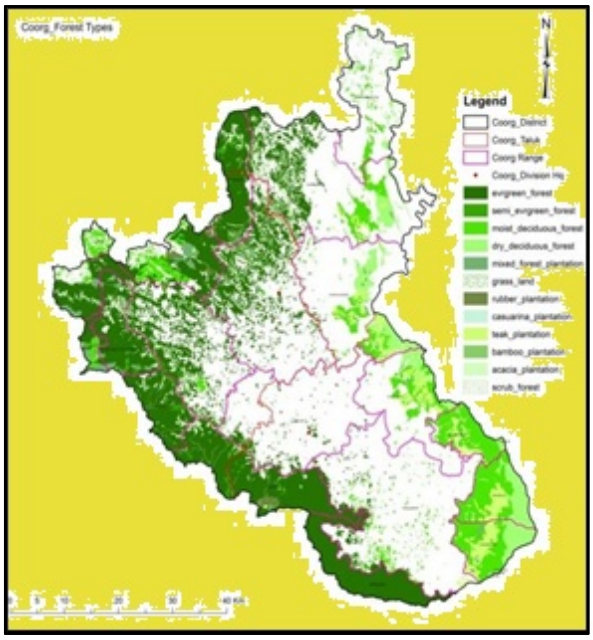


Fig 2: Forest of Kodagu district

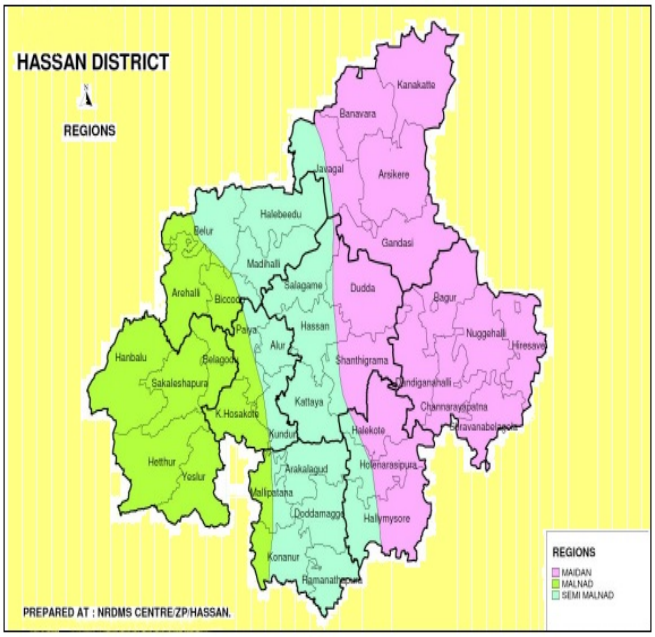


Fig 3: forest of Hassan district

The present study of avifaunal diversity in different habitats was conducted for a period of three years during 2014-2017 in the Western Ghats regions of Kodagu and Hassan districts. The study sites (Fig-1) were marked for investigation after random sampling of forest area. Areashaving considerable bird activitywere selected for birding. These sites were chosen for their variety of habitat types, which include agro forests, plantation farms, shrub forests, evergreen forest, grasslands, wetlands, woodland etc. The selected sites were thoroughly and periodically monitored throughout the study period for the occurrence of birds.

A checklist was prepared and regularly updated after the survey each area. The photographs and the field visit reports were used as evidences for updating the checklist regularly. As the habitats varied considerably, the avifauna was assessed using both point count and line transect methods (variable width line transect method[8]). The point count method which was adapted for wetland birds had a fixed radius of 25m. Roughly40-60 minutes were spent in each point count site. 3-4 transect lines were plotted in every site which were roughlyof 250m length. Every transect line was walked at a slow pace for about 30-40 minutes and documentation was done. The study was madefrom 6.30 to 9.00AM and 16.00 to 19.00PM in a day. A questionnaire was prepared to collect information pertinent to the local/vernacular names, population size, food habits and threats for them from the villagers/tribes of the region. All the observed birds in the sites were roughly enumerated and entered into standard field data sheets which included physical parameters like temperature, cloud cover, wind, humidity etc,. More than 60 transects lines were laid in the present study. Point count method was adopted on the banks of lakes, rivers, and steep areas and other places where transect walk

couldn't be carried out. In this method all the birds sitting on the trees and bushes within a radius of 25m from us were enumerated and listed down.

10X50 wide angle Celestron binocular was used for identification and spotting of the bird speciesand all the possible birds were photographed using Canon 60d and 600d cameras using three different lens (i) 18-135mm (ii) 55-250mm & (iii) Tamron 150-600mm telescopic lens. Birds were identified with the help of local bird watchers, farmers in the fields and wild life professionals. The identification was furtherconfirmed by authentic scientific literature on birds and field books. Names of non-sighted, known birds whose callswere clearly audible were also noted down while unrecognized bird calls were recorded with the help of Sony recorder and mobile. They werelater identifiedwith the help of bird experts,ornithological websites and android application*'Bird Sounds'*. Birds which were spotted in the study area but not identified were photographed. However, some of these could not be photographed. All these birds were identified either by photographs or by their key identification features which were taken down at the site as well as by referring to the following bird literature.

(i) The book of Indian sub-continent by Dr. Salim Ali

(ii) Common birds of Indian sub-continent by Ananda Banerjee

(iii) Hakki Pukka by Poorna Chandra Tejaswi &

(iv) Illustrated Encyclopedia of Birds by Word Lifeand

(v) A field guide to birds Bhadra, compiled by S Venkatesan, IFS.

The birds were categorized according to their respective status as Residents (Re), Migratory (M), Resident migratory or Local Migratory (ReM), Winter Migratory (WM), Very Common (VC), Common(C), Rare(R), Very Rare(VR) and the trends of population was determined by analyzing the regularly updated checklist. The bird species were assigned to their respectiveOrders and Families (Table 1).

In this study, the following check list of the birdspecies showing Common, Scientific and Vernacular names, food habit, status and trends of population of all the species recorded in the study areahas been prepared (Table 1).

Table 1: Checklist of birds showing common, scientific and vernacular names, food habit, status, sex, migratory status and trends of population.

NO	ORDER	FAMILY	COMMON NAME	SCIENTIFIC NAME	VERNACULAR NAME	OCCURRENCE	MIGRATORY STATUS	HABITAT	FOOD	SEX	NESTING PERIOD	STATUS	TREND OF POPULATION
1	Anseriformes	Anatidae	Fulvous whistling Duck	*Dendrocygna biclour*	Kandhu shille baathu koli	R	ReM	WL	O	Alike	Jan-Mar	LC	Decreasing
			Lesser whistling Duck	*Dendrocygna javanica*	Shille baathu koli	C	Re	WL	O	Alike	Jan-Mar	LC	Decreasing
			Spot-billed Duck	*Anaspoecilorhyncha*	Charle baathu koli	VC	Re	WL	H	Dimorphic	Jul-Sep	LC	Decreasing
			Knob-billed/Comb Duck	*Sarkidiornis melanotos*	-	R	M	WL	RS	Dimorphic	Jul-Sep	LC	Decreasing
			Bar-headed Goose	*Anser Indicus*	Patte thale hebbathu	R	M	WL	H	Alike	Apr-Jun	LC	Decreasing
			Ferruginous Duck	*Aythya nyroca*	Kebbe charle	R	M	WL	O/P	Dimorphic	-	NT	Decreasing
			Ruddy Shelduck/Brahminy Duck	*Tadorna ferruginea*	-	R	M	WL	O/P	Dimorphic	Apr-Jun	LC	Unknown
			Tufted Duck	*Aythya fuligula*	Naama gore	R	WM	WL	O	Dimorphic	-	LC	Unknown
			Garganey	*Spatula querquedula*	Neela paksha	UC	M	WL	H	Dimorphic	May-Jun	LC	Decreasing
			Northern Shoveler	*Spatula clypeata*	Narden shelver	UC	M	WL	O	Dimorphic	Apr-Jun	LC	Decreasing
			Gadwall	*Mareca strepera*	Charle/Sarale	UC	M	WL	H	Dimorphic	May-Jun	LC	Decreasing
			Common/Eurasian Teal	*Anas crecca*	Patte gore	UC	M	WL	H	Dimorphic	Apr-Jun	LC	Unknown
			Northern Pintail	*Anus acuta*	Sooji baalada baathu/Baala gore	UC	M	WL	H	Dimorphic	May-Jul	LC	Decreasing
			Eurasian/European Wigeon	*Mareca penelope*	Bannada gore	UC	WM	WL	H	Dimorphic	-	LC	Decreasing
2	Phoenicopteriformes	Podicipedidae	Little Grebe/Dabchick	*Tachybaptus ruficollis*	Chikka gulumuluka	C	Re	WL	I	Alike	Apr-Oct	LC	Decreasing
3	Columbiformes	Columbidae	Nilgiri Wood Pigeon	*Columba elphinstonii*	-	UC	Re*	EF	F	Alike	Apr-Jun	Vu	Decreasing
			Laughing/Little	*Spilopelia*	Kandu beleva	C	Re	F/SL	H	Alike	All Year	LC	Stable

			Brown/Senegal Dove	*senegalensis*								
			Spotted/Chinese/Mountain/Lace-necked Dove	*Spilopelia chinensis*	Chore hakki/Horasalu hakki	C	Re	F/SL	H	Alike	All Year	LC	Increasing
			Eurasian Collared/ Ring Dove	*Streptopelia decaocto*	Belavana hakki	C	Re	SL	H	Alike	All Year	LC	Increasing
			Emerald/Green/Green Winged Dove	*Chalcophaps indica*	Haralu Chore hakki	C	Re	F	H/F	Dimorphic	-	LC	Decreasing
			Orange-breasted Green Pigeon	*Treron bicinthus*	Maniyadalu hakki	VC	Re	F	H/F	Alike	-	LC	Decreasing
			Pompadour Green Pigeon	*Treron pampadora*	Maniyadalu hakki	VC	Re	F	H/F	Alike	-	LC	Decreasing
			Yellow Footed/legged Green Pigeon	*Treron phoenicopterus*	-	C	Re	F	F	Alike	Mar-June	LC	Increasing
			Green Imperial Pigeon	*Ducula aenea*	Gummadalu hakki	UC	Re	F	F	Alike	Mar-Jun	LC	Decreasing
			Mountain Imperial Pigeon	*Ducula badia*	Gummadalu hakki	UC	Re	F	F	Alike	Mar-Jun	LC	Decreasing
			Rock Pigeon/ Rock Dove	*Columba livia*	Paarivaala	VC	Re	F/HS	H	Alike	All Year	LC	Decreasing
			Red Collared/Turtle Dove	*Streptopelia tranquebarica*	Kem beleva/Mani Horasalu hakki	UC	Re	F	H	Dimorphic	All Year	LC	Stable
			Oriental/Rufous Turtle Dove	*Streptopelia orientalis*	Horasalu hakki	UC	M	HS	H	Alike	May-Jul	LC	Stable
			Eurasian Collared Dove/Ring Dove	*Streptopelia decaocto*	-	UC	Re	SL	H	Alike	All Year	LC	Increasing
4	Gallariformes	Phasianidae	Indian Peafowl	*Pavocristatus*	Navilu	UC	Re	F	O	Dimorphic	Jan-Sep	LC	Stable
			Common Quail	*Coturnixcoturnix*	Batera	UC	Re	SL	O	Dimorphic	Aug-Apr	LC	Stable
			Red Spurfowl	*Galloperdixspadicea*	Chittu koli	UC	Re*	F	O	Alike	All year	LC	Stable
			Grey Patridge/Francolin	*Francolinus pondicerianus*	Gowjigana hakki/Teetar/ Boodu koujuga	UC	Re	CL	O	Alike	All year	LC	Stable
			Black breasted/Rain	*Couturmix coromandelica*	Kappu batera	C	Re	SL	O	Dimorphic	Mar-Oct	LC	Stable

			Quail									
			Jungle bush Quail	*Perdicula asiatica*	Kaadu burli/koli	C	Re*	SL	O	Dimorphic	Aug-Mar	LC	Stable
			Blue-breasted Quail	*Synoicus chinensis*	-	C	Re	SL	O	Dimorphic	-	LC	Decreasing
			Rock bush Quail	*Perdicula argoondah*	Podhe burli	UC	Re*	SL	H	Dimmorphic	-	LC	Decreasing
			Painted bush Quail	*Perdicula erythrorhyncha*	Bannada podhe burli	UC	Re*	SL	H	Dimorphic	-	LC	Decreasing
			Painted Francolin	*Francolonuspictus*	Kemmande goujugahakki	UC	Re	SL	O	Dimorphic	All year	LC	Decreasing
			Grey Francolin	*Francolinus pondicerianus*	Goujalakki	UC	Re	SL	O	Dimorphic	-	LC	Decreasing
			Grey jungle Fowl	*Gallus sonneratti*	Boodhi kaadu koli	UC	Re*	CL	O	Dimorphic	-	LC	Decreasing
			Red jungle Fowl	*Gallus gallus*	Kaadu koli	C	Re	HS	O	Dimorphic	-	LC	Decreasing
			Red Spurfowl	*Galloperdix spadicea*	Kem chittu koli	UC	Re*	F	O	Alike	Jan-Jun	LC	Stable
			Painted Spurfowl	*Galloperdix lunulata*	Chittu koli	UC	Re*	F	O	Alike	Jan-Jun	LC	Stable
5	Pteroclif ormes	Pteroclid ae	Chestnut-bellied/Common Sandgrouse	*Pterocles exustus*	-	UC	Re	F	H	Dimorphic	Jan-May	LC	Stable
6	Cuculif ormes	Cuculida e	Crow Pheasant/Greater Coucal	*Centropus sinensis*	Kembootha	VC	Re	F	Cr	Alike	Feb-Sep	LC	Stable
			Lesser Coucal	*Centropus bengalensis*	Kembootha	C	Re	F	Cr	Alike	-	LC	Stable
			Indian Cuckoo	*Cuculus micropterus*	Kogile	R	M	F/CL	Cr	Alike	Mar-Jun	LC	Stable
			Lesser Cuckoo	*Cuculus poliocephalus*	Kogile	R	M	F/CL	Cr	Alike	Mar-Jun	LC	Stable
			Common/Eurasian Cuckoo	*Cuculus canorus*	Kembootha	R	M	F/CL	Cr	Alike	Mar-Jun	LC	Stable
			Sirkeer Malkoha/Cuckoo	*Taccocua leschenaultii*	-	UC	Re	SL	O	Alike	Mar-Aug	LC	Stable
			Banded Bay Cuckoo	*Cocomantis sonneratii*	-	R	Re	F	Cr	Alike	Mar-Jun	LC	Decreasing

			Jacobin/Pied Cuckoo	*Clamator jacobinus*	Jaathaka pakshi	C	M	F	O	Alike	Jun-Aug	LC	Stable
			Chestnut-winged cuckoo	*Clamator coramandus*	-	R	Re	F	Cr	Alike	-	LC	Unknown
			Large Hawk-cuckoo	*Hierococcyx sparverioides*	-	R	Re	F	Cr	Alike	-	LC	Stable
			Grey-bellied/Indian plaintive Cuckoo	*Cocomantis passerines*	-	R	M	F	Cr	Alike	-	LC	Stable
			Common hawk Cuckoo	*Hierococcyxvarius*	Kogile chaana	C	Re	F	Cr	Alike	Mar-Jun	LC	Stable
			Asian/Common Koel	*Eudynamys scolopaceus*	Kogile	C	Re	HS	O	Dimorphic	Apr-Aug	LC	Stable
			Fork tailed drongo Cuckoo	*Surniculus lugubris*	Inchara	C	Re	F	O	Alike	_	LC	Stable
			Blue faced/Green Billed Malkoha	*Phaenicophaeus viridirostris*	-	UC	Re	SL	O	Alike	Mar-Aug	LC	Stable
7	Gruiiformes	Rallidae	Slaty-legged Crake	*Rallinaeurizonoids*	-	UC	Re	WL	O	Alike	-	LC	Decreasing
			Slaty-breasted Rail	*Lewinia striata*	-	UC	Re	WL	O	Dimorphic	-	LC	Decreasing
			Ruddy-breasted Crake	*Zapornia fusca*	Kemneergoli	UC	Re	WL	O	Alike	-	LC	Unknown
			Spotted Crake	*Porzana porzana*	Chukki koli	UC	M	WL	O	Alike	-	LC	Decreasing
			Baillon's/Marsh Crake	*Zapornia pusilla*	-	UC	M	RB	O	Alike	May-Aug	LC	Unknown
			Brown Crake	*Zapornia akool*	-	UC	Re	WL	O	Alike	May-Aug	LC	Unknown
			Watercock	*Gallicrex cinerea*	Neer koli	UC	Re	WL		Dimorphic	Jun-Sep	LC	Decreasing
			White-breasted Waterhen	*Amaurornisphoenicurus*	Hundu koli	UC	Re	WL	O	Alike	Jun-Nov	LC	Stable
			Purple Moor/Swamp hen	*Porphyrio porphyria*	Neeli naama goli	UC	Re	WL	O	Alike	Jun-Sep	LC	Stable
			Indian/Common Moorhen	*Gallinula chloropus*	Kappu naamagoli	C	Re	WL	O	Alike	Jun-Sep	LC	Stable
			Common coot	*Fulica atra*	Naamada koli	C	M	WL	H	Alike	Jul-Aug	LC	Decreasing
8		Ciconiidae	Lesser adjutant	*Leptotilos javancius*	-	R	ReM	WL	Cr	Alike	-	VU	Decreasing
			Painted Stork	*Mycteria*	Daasa kokkare	UC	M	WL	P	Alike	Aug-Jan	NT	Decreasing

	Pelecaniformes			*leucocephala*								
			Asian Openbill Stork	*Anastomus oscitans*	Baaykalaka kokkare	C	Re	WL	P	Alike	Nov-Sep	LC	Unknown
			Black Stork	*Ciconia nigra*	Kari kokkare	UC	M	WL	Cr	Alike	In Europe	LC	Unknown
			Woolly/White-necked Stork	*Ciconia episcopus*	Bilikattina kokkare	R	Re	WL	Cr	Alike	All Year	VU	Decreasing
			White-necked Stork	*Ciconia episcopus*	Bilikutthige kokkare	C	Re	WL	P	Alike	All year	LC	Decreasing
			European White Stork	*Ciconia ciconia*	Bili kokkare	UC	M	WL	Cr	Alike	-	LC	Increasing
		Pelicanidae	Spot-billed Pelican	*Pelecanus philippensis*	Jolige Kokka/Heccharle	C	Re	WL	P	Alike	Mar-Apr	NT	Decreasing
		Ardeidae	Eurasian Bittern	*Botaurusstellaris*	Guppi	UC	Re	WL	Cr	Dimorphic	Apr-Sep	LC	Decreasing
			Yellow Bittern	*Ixobrychussinensis*	Haladi baka	UC	Re	WL	Cr	Alike	June - Sep	LC	Decreasing
			Cinnamon Bittern	*Ixobrychus cinnamomeus*	Kesari guppi	UC	Re	WL	Cr	Alike	-	LC	Decreasing
			Black Bittern	*Ixobrychus flavicollis*	Kari guppi	UC	Re	WL	Cr	Dimorphic	June - Sep	LC	Decreasing
			Malaysian Night Heron	*Gorsachius melanolophus*	-	UC	M	WL	Cr	Dimorphic	-	LC	Decreasing
			Black-crowned Night Heron	*Nycticorax nycticorax*	Katthala guppi/irulu baka	C	Re	WL	Cr	Alike	Dec-Feb	LC	Decreasing
			Indian Pond Heron	*Ardeola grayii*	Kolada baka	C	Re	WL	Cr	Alike	May-Sep	LC	Stable
			Striated Heron	*Butorides striata*	Patti kolada baka	C	Re	WL	Cr	Alike	May-Sep	LC	Decreasing
			Black crowned Night Heron	*Nycticorax nycticorax*	Nashe Baka/Ratri baka	UC	Re	WL	Cr	Alike	Dec-Feb	LC	Decreasing
			Cattle Egret	*Bubulcus ibis*	Jaanuwaru bellakki/Govalli	C	Re	WL	Cr	Alike	Jun-Aug	LC	Increasing
			Great Egret	*Ardea alba*	Dodda bellakki	C	Re	WL	Cr	Alike	Jul-Sep	LC	Stable
			Intermediate Egret	*Ardea intermedia*	Bellakki	C	Re	WL	Cr	Alike	Jul-Sep	LC	Stable
			Little egret	*Egretta garzetta*	Kokkare/Sanna bellakki	C	Re	WL	Cr	Alike	Nov-Sep	LC	Increasing
			Grey Heron	*Ardea cinerea*	Boodhu kokkare	C	Re	WL	Cr	Alike	Jun-Mar	LC	Decreasing
			Purple Heron	*Ardea purpurea*	Kanneeli baka	C	Re	WL	Cr	Alike	Jun-Mar	LC	Decreasing
			Little Darterant/Carmora	*Microcarboniger*	Putta neer kaage	C	Re	WL	P	Alike	Jul-Sep	LC	Stable

		Phalacrocoracidae	nt									
			Indian Cormorant/Shag	*Phalacro corax fuscicollis*	Neer kaage	C	Re	WL	P	Alike	Jul-Feb	LC	Unknown
			Great Cormorant	*Phalacrocorax fuscicillis*	Bili kutthige neer kaage	UC	M	WL	P	Alike	Sep-Feb	LC	Stable
		Anhingidae	Oriental Darter	*Anhinga melanogaster*	Haavakki	UC	Re	WL	P	Dimorphic	Nov-Feb	NT	Decreasing
		Threskiornithidae	Oriental white Ibis/Black headed Ibis	*Threskiornisme lanocephalus*	Bili kembaralu	UC	Re	WL	Cr	Alike	Nov-Sep	NT	Decreasing
			Indian Black Ibis	*Psuedibis pappillosa*	Kari kembaralu	UC	Re	WL	Cr	Alike	Nov-Dec	NT	Decreasing
			Eurasian/Common Spoonbill	*Platalea leucorodia*	Chamachada kokku	UC	M	WL	Cr	Alike	Jul-Nov	LC	Unknown
			Glossy ibis	*Plegadis falcinellus*	Minchu kembaralu	UC	Re	WL	Cr	Alike	May-Jul	NT	Decreasing
9	Charadriiformes	Burhinidae	Eurasian Thick-knee	*Burhinuso edicnemus*	Gorava	UC	Re	WL	Cr	Alike	-	LC	Decreasing
			Great Thick-knee/Stone Plover/Stone Curlew	*Esacus recurvirostris*	Kallu gorava	UC	Re	WL	Cr	Alike	-	NT	Decreasing
		Charadriidae	Grey/Black-bellied Plover	*Pluvialis squatarola*	Gorava	UC	M	WL	I	Alike	-	LC	Decreasing
			Pacific Golden Plover	*Pluvialis fulva*	Arashina gorava	UC	M	WL	Cr	Alike	-	LC	Decreasing
			Little Ringed Plover	*Charadrius dubius*	Chittu gorava	UC	M	WL	Cr	Alike	Mar-May	LC	Stable
			Kentish Plover	*Charadrius alexandrinus*	-	UC	M	WL	I	Alike	Mar-Aug	LC	Decreasing
			Lesser Sand Plover	*Charadrius mongolus*	-	C	M	WL	Cr	Alike	-	LC	Decreasing
			Greater Sand Plover	*Charadrius leschenaultii*	-	LC	M	WL	Cr	Alike	-	LC	Decreasing
			Yellow-wattled Lapwing	*Vanellusmalabaricus*	Halladhi tittibha	C	Re	GL	Cr	Alike	Apr-Jul	LC	Stable
			Red-wattled Lapwing	*Vanellus indicus*	Thaene hakki/Kempu tittibha	C	Re	GL	Cr	Alike	Mar-Aug	LC	Unknown
		Rostratuli	Greater Painted-	*Rostratula*	-	UC	M	WL	Cr	Dimorp	All Year	LC	Decreasing

		dae	snipe	*benghalensis*						hic			
		Jacanidae	Bronze-winged Jacana	*Metopidius indicus*	Jyakaana	C	Re	WL	Cr	Alike	Jun-Sep	LC	Unknown
		Scolopacidae	Whimbrel	*Numenius phaeopus*	-	UC	WM	WL	Cr	Alike	-	LC	Decreasing
			Temminck's Stint	*Calidris temminckii*	-	UC	M	WL	Cr	Alike	In Europe	LC	Decreasing
			Sanderling	*Calidris alba*	Mettugaluhakki	UC	M	WL	Cr	Alike	-	LC	Decreasing
			Wood Snipe	*Gallinago nemoricola*	Gorava	UC	M	WL	Cr	Alike	-	VU	Decreasing
			Jack Snipe	*Lymnocryptes minimus*	-	C	Re	RS	Cr	Alike	-	LC	Decreasing
			Common/Fantail Snipe	*Gallinago gallinago*	Gorava	C	Re	RS	Cr	Alike	May-Jun	LC	Decreasing
			Eurasian Curlew	*Numenius arquata*	Heggorava	UC	M	WL	Cr	Alike	-	NT	Decreasing
			Pintail Snipe	*Gallinago stenura*	Patte gorava	UC	M	WL	Cr	Alike	-	NT	Decreasing
			Common Sandpiper	*Actitis hypoleucos*	Gadde gorava	C	M	WL	Cr	Alike	May-Jun	LC	Decreasing
			Broad-billed Sandpiper	*Calidris falcinellus*	-	UC	WM	WL	Cr	Alike	-	LC	Decreasing
			Temminck's Stint	*Calidris temminckii*	-	UC	M	WL	Cr	Alike	-	LC	Decreasing
			Green Sandpiper	*Tringa ochropus*	Hasiru gorava	C	M	WL	Cr	Alike	May-Jun	LC	Increasing
			Spotted Redshank	*Tringa erythropus*	Kappu gorava	UC	WM	WL	Cr	Alike	-	LC	Stable
			Common Redshank	*Tringa totanus*	Gorava	UC	WM	WL	Cr	Alike	May-Jul	LC	Unknown
			Common Greenshank	*Tringa nebularia*	Gorava	UC	M	WL	Cr	Alike	-	LC	Unknown
			Little Stint	*Calidris minuta*	-	UC	M	WL	Cr	Alike	In Europe	LC	Decreasing
			Wood Sandpiper	*Tringa glareola*	-	C	Re	RS	Cr	Alike	In Europe	LC	Stable
			Marsh Sandpiper	*Tringa stagnatilis*	-	UC	WM	WL	Cr	Alike	-	LC	Decreasing
		Turnicidae	Common Button/Bustard quail	*Turnix sylvaticus*	Bhateera	UC	Re	F	H	Dimorphic	All year	LC	Increasing
			Barred	*Turnix*	Bhateera	UC	Re	F	H	Dimorp	All year	LC	Increasing

			Button/Bustardquail	*suscitator*					hic			
			Yellow-legged Buttonquail	*Turnix tanki*	Haladi kaalina bhaterra	UC	Re	F	H	Dimorphic	All year	LC	Increasing
		Laridae	Indian River Tern	*Sterna aurantia*	Meenu gutara	C	M	WL	Cr	Alike	Mar-May	NT	Decreasing
			Black-headed Gull	*Chroicocephalus ridibundus*	-	R	M	WL	P	Alike	-	LC	Decreasing
			Common Gull-billed Tern	*Gelochelidon nilotica*	-	UC	M	WL	Cr	Alike	-	LC	Decreasing
			Lesser Black-backed Gull	*Larus fuscus*	-	UC	M	RS	Cr	Alike	-	LC	Increasing
			Common Gull-billed Tern	*Gelochelidon nilotica*	-	R	M	WL	Cr	Alike	-	LC	Decreasing
			Indian Whiskered Tern	*Chlidonias hybrida*	-	UC	M	WL	Cr	Alike	Jun-Sep	LC	Stable
			Caspian Tern	*Hydroprogne caspia*		R	M	WL	Cr	Alike	-	LC	Decreasing
			Common Tern	*Sterna hirundo*	Gutura	UC	M	WL	Cr	Alike	Jun-Sep	LC	Stable
			Black-bellied Tern	*Sterna acuticauda*	-	UC	M	WL	Cr	Alike	-	EN	Decreasing
		Glareolidae	Indian Courser	*Cursorius coromandelicus*	Kempu chitava	UC	Re	DL	Cr	Alike	Mar-Aug	LC	Stable
			Little Pratincole	*Glareola lactea*	-	UC	Re	DL	Cr	Alike	-	LC	Decreasing
		Recurvirostridae	Black-winged/Common Stilt	*Himantopus himantopus*	Neeru/Kesaru gorava	UC	M	WL	Cr	Alike	Apr-Aug	LC	Increasing
			Pied Avocet	*Recurvirostra avosetta*	Vaare kokka	R	M	WL	Cr	Alike	April	LC	Unknown
10	Accipitiformes	Accipitridae	Indian Spotted Eagle	*Clanga hastata*	Dodda garuda	VC	M	F	Cr	Alike	-	VU	Decreasing
			Black Eagle	*Ictinaetus malaiensis*	Kappu garuda	UC	Re	F	Cr	Alike	Apr-May	LC	Decreasing
			Crested Serpent Eagle	*Spilornis cheela*	Haavu giduga/Turaayi Pannagari	UC	Re	F/SL	Cr	Alike	Dec-Mar	LC	Stable
			Bonelli's Eagle	*Aquila fasciata*	-	UC	Re	F	Cr	Alike	Apr-May	LC	Decreasing
			Steppe Eagle	*Aquila nipalensis*	-	UC	Re	F	Cr	Alike	-	EN	Decreasing
			Booted Hawk Eagle	*Hieraaetus pennatus*	Garuda	C	WM	GL	Cr	Alike	-	LC	Decreasing

			Tawny Eagle/Eastern Steppe Eagle	*Aquila rapax*	Kandu Garuda	R	Re	DL	Cr	Alike	Nov-Apr	LC	Decreasing
			Changeable Hawk Eagle	*Nisaetus cirrhatus*	-	UC	Re	F	Cr	Alike	-	LC	Decreasing
			Short-toed Snake Eagle	*Circaetus gallicus*	Pannagaari	C	Re	WL/SL	Cr	Alike	-	LC	Decreasing
			Pariah/Black Kite	*Milvus migrans*	Haddu	VC	Re	F	Cr	Alike	-	LC	Decreasing
			Black-shoulderd Kite	*Elanus axillaris*	-	C	Re	SL/GL	Cr	Alike	All Year	LC	Increasing
			Black-winged Kite	*Elanus caeruleus*	Kari rekke chaana	UC	Re	SL/GL	Cr	Alike	All Year	LC	Increasing
			Brahminy Kite	*Haliastur indus*	Bili Garuda/Rana haddu	C	Re	F/WL	Cr	Alike	Dec-Mar	LC	Decreasing
			Pallid Harrier	*Circus marcourus*	Hakki Seleva	UC	M	F	Cr	Alike	-	NT	Decreasing
			White-eyed Buzzard	*Batustur teesa*	Daege	UC	Re	SL	Cr	Alike	Feb-May	NT	Stable
			Oriental Honey Buzzard	*Pernis ptilorhynchus*	Jenu Giduga	UC	Re	RS	O	Dimorphic	Apr-July	LC	Stable
			Eurasian/Western Marsh Harrier	*Circus aeruginosus*	Chaana	C	M	WL/GL	Cr	Dimorphic	-	LC	Increasing
			Crested Goshawk	*Accipiter trivirgatus*	Chotti Haddu	UC	M	WL/GL	Cr	-	-	LC	Decreasing
			Shikra	*Accipiter badius*	-	C	Re	WL/GL	Cr	Dimorphic	Mar-Jun	LC	Stable
			Besra Sparrow hawk	*Accipiter virgatus*	Kari Gubbi giduga	UC	Re	SL	Cr	Dimorphic	Mar-Jun	LC	Decreasing
			Egyptian/Indian Scavenger/White Scavenger Vulture	*Neophron percnopterus*	-	VR	Re	GL/DL	O	Alike	-	EN	Decreasing
		Pandionidae	Osprey/Sea Hawk/ Fish Eagle/Fish Hawk	*Pandion haliaetus*	-	UC	WM	WL	Cr	Dimorphic	In Europe	LC	Inceasing
11	Falconiformes	Falconidae	Peregrine/Shaheen Falcon	*Falco peregrines*	-	UC	M	DL	Cr	Dimorphic	-	LC	Stable
			Lesser Kestrel	*Falco naumanni*	Chaana	UC	Re	DL	Cr	Dimorphic	-	LC	Stable
			Common Kestrel	*Falco tinnunculus*	Chore hakki	UC	Re	WL/SL	Cr	Dimorphic	Feb-Apr	LC	Decreasing

			Amur Falcon/Eastern Red-Footed Falcon	*Falco amurensis*	-	R	Re	GL	Cr	Dimorphic	Apr-May	LC	Stable
			Laggar Falcon/Falco Juggar	*Falco jugger*	-	R	Re	GL	Cr	Dimorphic	Apr-May	NT	Decreasing
12	Strigiformes	Strigindae	Brown Hawk Owl	*Ninoxscutulata*	Meenu gumma	UC	Re	F/WL	Cr	Alike	-	NT	Decreasing
			Collared Scops Owl	*Otus lettia*	-	UC	Re	F	I	Alike	Jan-Apr	LC	Stable
			Brown Fish Owl	*Ketupa zeylonensis*	Goobe	UC	Re	F	I/F	Alike	Dec-Mar	LC	Decreasing
			Brown Wood Owl	*Strix leptogrammica*	-	UC	Re	F	Cr	Alike	Jan-Mar	LC	Decreasing
			Jungle owlet	*Glaucidium radiatum*	Cheeru gumma	C	Re	F	Cr	Alike	Mar-May	LC	Stable
			Spotted owlet	*Athene brama*	Haalakki	C	Re	F	Cr	Alike	Nov-Mar	LC	Stable
13	Trogoniformes	Trogonidae	Malabar Trogan	*Harpactes fasciatus*	Benki hakki/Kaakarne hakki	UC	Re*	F	I	Dimorphic	Feb-May	LC	Stable
14	Bucerotiformes	Bucerotidae	Great Hornbill	*Buceros bicornis*	Dodda mangatte	UC	Re	F	O	Dimorphic	Jan-Apr	VU	Decreasing
			Malabar Pied Hornbill	*Anthracoceros coronatus*	Maledasa mangatte	UC	Re	F	Fr	Dimorphic	All year	NT	Decreasing
			Malabar Grey Hornbill	*Ocyceros griseus*	Boodhu male mangatte	UC	Re*	F	Fr	Dimorphic	All year	LC	Decreasing
			Indian Grey Hornbill	*Ocyceros birostris*	Boodhu mangatte	C	Re	F	O	Dimorphic	Apr-Jun	LC	Stable
		Upupidae	Common hoopoe	*Upupa epops*	Chandra mukuta/Nela kutuka	C	Re	SL	I	Alike	Feb-May	LC	Decreasing
15	Piciformes	Picidae	Common Flame-backed Woodpecker	*Dinopium javanense*	Suvarna bennina mara kutuka	C	Re	F	I	Dimorphic	Mar-Aug	LC	Stable
			Black-rumped flame back Woodpecker	*Dinopium bengalense*	Hemmara kutuka/Kappu mara kutuka	C	Re	F	I	Dimorphic	Mar-Aug	LC	Stable
			Little-green Woodpecker	*Campetheremu culosa*	Hasiru mara kutuka	UC	Re	F	I	Dimorphic	_	LC	Decreasing
			Brown-capped Pygmy	*Picoides nanus*	Chhota Mara kutuka	UC	Re	F/SL	I	Alike	Feb-Apr	LC	Increasing

			Woodpecker										
			White-Bellied/Great Indian Black Woodpecker	*Dryocopus hodgei*	Hemmara kutuka	UC	Re	F	I	Alike	-	LC	Decreasing
			Greater Flame Back/Greater Golden Back	*Chrysocolaptes Guttacristatus*	Haladi bennina mara kutuka	UC	Re	F	O	Dimorphic	-	LC	Decreasing
			Streak-Throated Woodpecker	*Picus xanthopygaeus*	-	UC	Re	F	I	-	-	LC	Decreasing
			Yellow-crowned/Mahratta Woodpeker	*Leiopicus maharattesis*	Arishina moothi	UC	Re	F	I	-	-	LC	Unknown
			Rufous Woodpecker	*Micropternus brachyurus*	Kandu mara kutuka	UC	Re	F	I	Dimorphic	Feb-Apr	LC	Decreasing
			Heart-spotted Woodpecker	*Hemicircus canente*	Chittu mara kutuka	C	Re	F	I	Dimorphic	Nov-Apr	LC	Decreasing
			Speckuled Piculet	*Picumnus innominatus*	-	R	Re	F	I	-	-	LC	Decreasing
		Ramphastidae	Malabar Barbet	*Megalaimamalabarica*	Goujal hakki	C	Re*	F	O	Alike	Jun-Jul	LC	Stable
			Coppersmith Barbet	*Megalaimahaemacephala*	Kal gojual hakki	C	Re	F	O	Alike	Jun-Jul	LC	Stable
			White-cheeked/ Small Green Barbet	*Psilopogonviridis*	Sanna kutra	C	Re	F	O	Alike	Jan-Jun	LC	Stable
			Brown Headed/Large Green Barbet	*Psilopogon zeylsncius*	Dodda Kutra	C	Re*	F	O	Alike	Feb-Jun	LC	Stable
16	Coraciiformes	Meropidae	Green Bee-eater	*Merops orientalis*	Sanna kalli peera	C	Re	SL	I	Alike	Feb-May	LC	Increasing
			Blue-tailed Bee-eater	*Merops philippinus*	Neeli baalada kallipeera	C	M	SL/WL	I	Alike	Mar-jun	LC	Stable
			Blue Bearded Bee-eater	*Nyctyornis Atherton*	Jenu gutura	UC	M	SL/WL	I	Alike	-	LC	Decreasing
			European Bee-eater	*Merops apiaster*	Kalli peera	UC	M	SL	I	Alike	-	LC	Decreasing
			Chest-nut headed Bee-eater	*Merops leschenaulti*	Gutura	R	M	SL/WL	I	Alike	-	LC	Decreasing
		Alcedinid	Oriental dwarf	*Ceyx erithaca*	Sanna kappu	UC	Re	F/WL	Cr	Alike	Feb-Jun	LC	Decreasing

		ae	Kingfisher		minchulli							
			White-breasted/Throated Kingfisher	*Halcyon smyrnensis*	Gaddhe minchulli	C	Re	F/WL /SL	Cr	Alike	Mar-Jul	LC	Increasing
			Blue Eared Kingfisher	*Alcedo meninting*		UC	Re	F/WL	Cr	Alike	-	LC	Decreasing
			Stork-billed Kingfisher	*Pelargopsiscapensis*	Hemminchulli	C	Re	WL	Cr	Alike	Mar-Jul	LC	Decreasing
			Small Blue/ Common Kingfisher	*Alcedo rudis*	Kiru/Neeliminchulli	C	Re	WL	Cr	Alike	Mar-Jun	LC	Stable
			Pied Kingfisher	*Ceryle rudis*	Kappu minchulli	C	Re	WL	Cr	Dimorphic	Oct-May	LC	Unknown
		Coraciidae	Indian Roller/Blue Jay	*Coracias benghalensis*	Neelakanta	C	Re	GL/SL	Cr	Alike	Mar-Jul	LC	Increasing
			Dollar bird	*Eurystomus orientalis*	-	C	Re	GL/SL	Cr	Alike	Mar-Jul	LC	Increasing
17	Psittaciformes	Psittaculidae	Plum-headed Parakeet	*Psittaculacyanocephala*	Kemmande/Kendalegili	C	Re*	F	Fr	Dimorphic	Dec-Mar	LC	Decreasing
			Rose-ringed Parakeet	*Psittaculakrameri*	Gulabikoralinagili	VC	Re	F/HS	Fr	Dimorphic	Feb-Apr	LC	Increasing
			Malabar Parakeet	*Psittaculacolumboides*	Neelirekkegili	UC	Re*	F	Fr	Dimorphic	Jan-Apr	LC	Decreasing
			Alexandrine Parakeet	*Psittaculaeupatria*	Raamagili	UC	Re	F	Fr	Dimorphic	Dec-Apr	LC	Decreasing
			Vernal hanging Parrot	*Loriculusvernalis*	Chittugili	UC	Re	F	Fr	Alike	-	LC	Decreasing
18	Caprimulgiformes	Apodidae	Asian Palm Swift	*Cypsiurus balasiensis*	Taale baanadi/Taale aakasha gubbi	C	Re	CL	I	Alike	-	LC	Stable
			House swift	*Apus nipalensis*	Sooru aakasha gubbi	C	Re	HS	I	Alike	Feb-Sep	LC	Increasing
			Indian Swiftlet	*Aerodramus unicolor*	-	UC	Re	HS	I	Alike	-	LC	Decreasing
			Fork-tailed Swift	*Apus pacificus*	Aaakasha gubbi	UC	Re	HS	I	Alike	-	LC	Decreasing
			Alpine Swift	*Tachymarptis melba*	Taale baanadi	UC	Re	HS	I	Alike	-	LC	Decreasing
			Little swift	*Apus affinis*	Chikka baanaadi	UC	Re	HS	I	Alike	-	LC	Decreasing
		Hemiprocnidae	Crested Treeswift	*Hemiprocne coronata*	Chotti aakashagubbi	UC	Re	F	I	Dimorphic	Dec-Jul	LC	Stable

		Podargidae	Srilankan/Ceylon Frogmouth	*Batrachostomus moniliger*	-	UC	Re	F	Cr	Alike	-	LC	Unknown
		Caprimulgidae	Grey/Jungle Nightjar	*Caprimulgus indicus*	Kandu gappata	C	Re	F	I	Alike	Feb-Sep	LC	Unknown
			Jerdon's Nightjar	*Caprimulgus atripennis*	Nettinga	C	Re	F	I	Alike	Feb-Sep	LC	Unknown
			Common Indian Nightjar	*Caprimulgus asiaticus*	Kurudu gappata/Nettinga	C	Re	F	I	Alike	Feb-Sep	LC	Stable
			Savanna Nightjar	*Caprimulgus affinis*	-	C	Re	F	I	Alike	-	LC	Unknown
19	Passeriformes	Campephagidae	Small Minivet	*Pericrocotus cinnamomeus*	Sanna chitrapakshi	C	Re	F	I	Dimorphic	Feb-Aug	LC	Stable
			Scarlet Minivet	*Pericrocotus speciosus*	Gulaganji/chitrapakshi	C	Re	F	I	Dimorphic	Apr-Jul	LC	Stable
			White-bellied Minivet	*Pericrocotus erythropygius*	Kappu gulaganji	UC	Re	F	I	Dimorphic	Jun-Oct	LC	Decreasing
			Large Cuckooshrike	*Coracina javensis*	Keechuga	UC	Re	F	O	Alike	Mar-Aug	LC	Decreasing
			Black-headed Cuckooshrike	*Lalagemelanoptera*	Karimande/Dodda keechuga	UC	Re	F	O	Alike	Mar-Aug	LC	Decreasing
		Oriolidae	Black-headed/hooded Oriole	*Oriolus xanthornus*	Kari mande/kari arasina burude	C	Re	F/CL	O	Dimorphic	Apr-Jul	LC	Decreasing
			Indian golden Oriole	*Oriolus kundoo*	Arasina burude	C	Re	F	O	Dimorphic	Apr-Jul	LC	Decreasing
			Black-naped Oriole	*Oriolus chinensis*	-	C	Re	F/CL	I/N/F	Dimorphic	May-Jun	LC	Unknown
		Vangidae	Common Woodshrike	*Tephrodornis pondicerianus*	Kaadu kalinga/Adavi keechuga	UC	Re	F	I	Alike	Mar-Apr	LC	Decreasing
			Large Woodshrike	*Tephrodornis gularis*	Kaadu keechuga	UC	Re	F	I	Alike	-	LC	Unknown
			Bar-winged/Pied Flycatcher-Shrike	*Hemipus picatus*	-	UC	Re	F	I	Dimorphic	Mar-May	LC	Stable
		Pittidae	Indian Pitta	*Pitta brachyuran*	Hanaalu Gubbi/Navarangi	UC	Re	F	I	Alike	-	LC	Decreasing
			Malabar Lark	*Galerida malabarica*	-	UC	Re*	SL	O	Alike	Mar-Jun	LC	Stable
			Oriental/Small Skylark	*Alauda gulgula*	-	UC	Re*	F/SL	O	Alike	-	LC	Decreasing

		Alaudidae	Rufous-tailed finch Lark	*Ammomanes phoenicura*	Kengandhu baalada nela gubbi	C	Re*	SL	H	Alike	Mar-May	LC	Stable
			Greater Short-toed Lark	*Calandrella brachydactyla*	-	UC	M	F	O	Alike	July	LC	Decreasing
			Jerdon's Lark	*Mirafra affinis*	-	C	Re	SL	H	Alike	Mar-May	LC	Stable
			Indian Bush Lark	*Galerida malabarica*	Kaadu gubbi	C	Re	SL	H	Alike	Mar-May	LC	Stable
			Singing Bush Lark	*Mirafra cantillans*	-	C	Re	F/SL	O	Alike	-	LC	Decreasing
		Motacillidae	White/Pied Wagtail	*Motacilla alba*	Bili Sipale	C	M	WL	I	Alike	May-Jul	LC	Stable
			White-browed/Large Pied Wagtail	*Motacilla maderaspatensis*	Dodda Sipale	C	Re	G/WL	I	Alike	Mar-Sep	LC	Stable
			Forest Wagtail	*Dendronanthus indicus*	Adave Sipale	UC	WM	F	I	Alike	May	LC	Stable
			Grey Wagtail	*Motacilla cinerea*	Boodhu sipale	C	M	WL	I	Alike	May-Jul	LC	Stable
			Paddyfield/Oriental Pipit	*Anthus rufulus*	-	C	Re	WL	I	Alike	Feb-Oct	LC	Stable
			Tree Pipit	*Anthus trivialis*	-	UC	M	SL	O	Alike	May-Jul	LC	Decreasing
			Blyth's Pipit	*Anthus godlewskii*	-	UC	M	SL	O	Alike	-	LC	Decreasing
			Long-billed Pipit	*Anthus similis*	-	UC	M	SL	O	Alike	-	LC	Decreasing
			Olive-backed/Indian/Hodgson's Pipit	*Anthus hodgsoni*	-	C	M	F	I	Alike	Apr-Aug	LC	Stable
		Pychnonotidae	Grey-Headed Bulbul	*Pycnonotus priocephalus*	Boodu mande peekalaara	C	Re*	F/SL	I/F	Alike	Feb-Aug	LC	Decreasing
			Red-whiskered Bulbul	*Pycnonotus jocosus*	Kemmese peekalaara	C	Re	F/SL	I/F	Alike	Feb-Aug	LC	Decreasing
			Red-vented Bulbul	*Pycnonotus cafer*	Kempubaalada peekalaara	C	Re	F/HS	I/F	Alike	Feb-May	LC	Increasing
			White-browed Yellow Bulbul	*Pycnonotus luteolus*	Bili hubbina haladi peekalaara	UC	Re	SL	I/F/N	Alike	Mar-Sep	LC	Stable
			Yellow-browed bulbul	*Acritillas indica*	Haladi peekalaara	UC	Re	F	F/I	Alike	Feb-May	LC	Stable
			Black-crested/Black-	*Pycnonotus melanicterus*	Peekalaara	UC	Re	F/SL	F/I	Alike	Jan-Jun	LC	Decreasing

			headed yellow Bulbul									
			Himalayan Black/Asian Black Bulbul	*Hypsipetes leuco cephalus*	Kari peekalaara	C	Re	F	F/I	Alike	May-Jul	LC	Stable
		Chloropseidae	Golden-fronted Leafbird/Chloropsis	*Chloropsis aurifrons*	Yele hakki/Hasuru peekalaara	C	Re	F/SL	F/I/N	Dimorphic	May-Aug	LC	Stable
			Blue-winged Leafbird/Chloropsis	*Chloropsis cochinchinensis*	Yele Hakki	VR	Re	F/SL	I	Dimorphic	-	NT	Decreasing
			Golden-fronted Leafbird/Chloropsis	*Chloropsis aurifrons*	Yele hakki	UC	Re	F/SL	I/F/N	Dimorphic	May-Aug	LC	Stable
		Irenidae	Asian Fairy-bluebird	*Irena puella*	Neeli Sillara	UC	Re	F	I/F/N	Dimorphic	Feb-Apr	LC	Decreasing
			Golden-fronted Leafbird/Chloropsis	*Chloropsis aurifrons*	Yele hakki	C	Re	F/SL	I/F/N	Dimorphic	May-Aug	LC	Stable
			Jerdon's Leafbird	*Chloropsis jerdoni*	-	C	Re	F/SL	I/F/N	Dimorphic	May-Aug	LC	Stable
		Laniidae	Brown Shrike	*Lanius cristatus*	Kandu kalinga	C	M	SL/DL	I	Alike	May-Jun	LC	Decreasing
			Great Grey Shri	*Lanius excubitor*	Kalinga	C	Re	SL	I/C	Alike	Apr-Sep	LC	Decreasing
			Bay-backed Shrike	*Lanius vittatus*	Kadugandu kalinga	C	Re	SL	I/C	Alike	Apr-Sep	LC	Stable
			Long-tailed/Rufous-backed Shrike	*Lanius schach*	Kengandbhu bennina kalinga/Kebbe keechuga	C	Re	SL	I/C	Alike	Feb-Apr	LC	Unknown
			Blue-capped/Blue-headed Rock Thrush	*Monticola cinclorhyncha*	Neeli thaleya bande sillara	UC	Re	F	I	Dimorphic	Apr-Jun	LC	Stable
			Malabar Whistling Thrush	*Myophonus horsfieldii*	Gopi hakki/Saralu sillara	C	Re	F	O	Alike	May-Aug	LC	Unknown
			Indian Blue Robin/Chat	*Larvivora brunea*	Chittu madivaala	UC	Re	F	I/N	Dimorphic	Apr-Jul	LC	Decreasing
			Indian Robin	*Saxicoloides*	Madivaala	C	Re	F	I	Dimorp	Apr-Jul	LC	Decreasing

		Muscicapidae		*fulicatus*						hic			
			Asian Brown Flycather	*Muscicapa dauurica*	Korala	UC	M	F	I	Alike	Apr-Jun	LC	Stable
			Oriental Magpie Robin	*Copsychus saularis*	Madivaala	C	Re	F/SL	I/N	Dimorphic	Apr-Jul	LC	Stable
			White-bellied Blue Flycatcher	*Cyornis pallidipes*	Bilihotte hula guluka	UC	Re*	F	I	Dimorphic	Feb-Sep	LC	Decreasing
			Taiga/Red-throated Flycatcher	*Ficedula albicilla*	-	R	M	F	I	Dimorphic	-	LC	Decreasing
			Blue Rock Thrush	*Monticola solitaries*	Neeli Kallu Gutura/Kasthuri	C	M	F	O	Dimorphic	Apr-Jul	LC	Stable
			Malabar Whistling Thrush	*Myophonus horsfieldii*	Gopi hakki	C	Re*	F	O	Alike	May-Aug	LC	Unknown
			Tickell's Blue Flycatcher	*Cyornis tickelliae*	Hula guluka	UC	Re	F	I	Alike	Feb-Aug	LC	Stable
			Asian Verditer Flycatcher	*Eumyias thalassinus*	Hula guluka	UC	Re	F	I	Dimorphic	Apr-Jul	LC	Stable
			Nilgiri Verditer Flycatcher	*Eumyias albicaudatus*	-	UC	Re*	F	I	Dimorphic	Apr-Jul	LC	Stable
		Muscicapidae	White-rumped Shama/Shama Thrush	*Kittacincla malabarica*	Shaama	UC	Re	F	I	Dimorphic	Apr-Jun	LC	Decreasing
			Pied Bushchat	*Saxicola caprata*	Neelimande peepi	C	Re	WL	I	Dimorphic	Feb-May	LC	Stable
		Monarchidae	Asian Paradise Flycatcher	*Terpsiphone paradise*	Baaladande hakki/Raja hakki	UC	Re	F	I	Dimorphic	Feb-Jul	LC	Stable
			Black-naped Monarch/Flycatcher/Warbler	*Hypothymis azurea*	-	UC	M	F	I	Dimorphic	Apr-Aug	LC	Stable
		Stenostiridae	Grey-headed Canary-flycatcher	*Culicicapa ceylonensis*	Boodutale Nona hiduka	UC	Re	F	I	Alike	Apr-Jun	LC	Stable
		Phylloscopidae	Greenish Leaf Warbler	*Phylloscopus trochiloides*	-	UC	M	SL	I	Alike	May-Aug	LC	Increasing
			Tytler's Leaf Warbler	*Phylloscopus tytleri*	-	UC	Re*	SL	I	Alike	-	LC	Increasing
			Green Leaf Warbler	*Seicercus nitidus*	-	UC	M	SL	I	Alike	-	LC	Decreasing
			Large-billed Leaf Warbler	*Seicercus magnirostris*	-	UC	M	SL	I	Alike	-	LC	Decreasing
			Tickell's Leaf	*Phylloscopus*	-	UC	M	SL	I	Alike	-	LC	Decreasing

			Warbler	*affinis*								
		Rhipiduridae	White-spotted/Spot breasted Fantail	*Rhipidura albogularis*	Beesanige baala	C	Re	F/SL	I	Alike	Mar-Aug	LC	Unknown
			White-browed fantail	*Rhipidura aureola*	-	UC	Re	F	I	Alike	-	LC	Decreasing
		Pellorneidae	Puff-throated/Spotted Babbler	*Pellornem ruficeps*	Chukke chikka	C	Re	F	I	Alike	Mar-May	LC	Stable
		Timaliidae	Indian Scimitar Babbler	*Pomatorhinus horsfieldii*	Patti chikka	UC	Re	F	I/F	Alike	Dec-May	LC	Increasing
			Tawny Bellied Babbler	*Dumetia hyperythra*	Geeja gaarlu	UC	Re	F	I	Alike	-	LC	Decreasing
		Sylviidae	Yellow-eyed Babbler	*Chrysomma sinense*	Arashina Kannu	C	Re	F/SL	I/F	Alike	Jun-Sep	LC	Stable
			Lesser Whitethroat	*Curruca curruca*	-	C	Re	F/SL	I/F	Alike	Jun-Sep	LC	Decreasing
		Leiotrichidae	Jungle Babbler	*Turdoides striata*	Kaadu geeja garlu	C	Re	F	O	Alike	All Year	LC	Stable
			Brown-cheeked Nun Babbler/Alcippe Fulvetta/Quaker Babbler	*Alcippe poioicephala*	-	UC	Re	F	I/N	-	-	LC	Decreasing
			Large Grey Babbler	*Argya malcolmi*	-	C	Re	HS	O	Alike	All Year	LC	Stable
			Rufous Babbler	*Argya subrufa*	-	UC	Re*	HS	O	Alike	-	LC	Decreasing
			Yellow-billed Babbler	*Turdoides affinis*	-	UC	Re	HS	O	Alike	-	LC	Decreasing
			Wynaad/Palani Laughing-thrush	*Garrulax delesserti*	-	UC	Re*	HS	O	Alike	-	LC	Decreasing
			Common/Scrub Babbler	*Argya caudata*	Geeja garlu	C	Re	SL	O	Alike	Mar-Jul	LC	Stable
		Sittidae	Velvet-fronted Nuthatch	*Sitta frontalis*	Makmal Netthi/Maragubbi	C	Re	F	I	Dimorphic	Feb-Apr	LC	Decreasing
			Chestnut-bellied Nuthatch	*Sitta castanea*	-	C	Re	F	I	Dimorphic	Feb-Apr	LC	Decreasing
		Turdidae	Indian Blackbird	*Turdus simillimus*	Kari goravanka	C	Re	F	I/F	Dimorphic	May-Aug	LC	Stable

			Tickell's Thrush	*Turdus unicolor*	-	C	Re	F	O	Dimorphic	-	LC	Unknown
			Pied Thrush	*Geokichla wardii*	-	C	Re	F	O	Alike	-	LC	Decreasing
			Orange-headed Thrush	*Geokichla citrina*	-	C	Re	F	O	Alike	May-Jun	LC	Decreasing
		Hirundidinidae	Common/Barn Swallow	*Hirundo rustica*	Kavalu thoke/Ambara gubbi	C	Re	WL	I	Alike	Apr-Jul	LC	Decreasing
			Dusky Crag Martin	*Ptyonoprogne concolor*	Kandugpa kamari thoke	C	Re	HS	I	Alike	Jun-Oct	LC	Increasing
			Northern House Martin	*Delichon urbicum*	-	UC	Re	HS	I	Alike	Jun-Oct	LC	Increasing
			Wire-tailed Swallow	*Hirundo smithii*	Tanthi baalada kavaluthoke/ambara gubbi	C	Re	WL	I	Alike	All Year	LC	Increasing
		Cisticolidae	Grey-breasted Prinia	*Prinia hodgsonii*	-	C	Re	SL	I/N	Alike	Jun-Oct	LC	Stable
			Jungle Prinia	*Prinia sylvatica*	Suvvi hakki	C	Re	GL/SL	I	Alike	Mar-Oct	LC	Decreasing
			Zitting Cisticola/Streaked Fantail Warbler	*Cisticola juncidis*	-	C	Re	SL	I	Alike	Jun-Sep	LC	Increasing
			Plain Prinia/Plain Wren Warbler	*Prinia inornata*	-	C	Re	GL/F	I	Alike	Mar-Sep	LC	Stable
			Ashy Prinia/Ashy Wren Warbler	*Prinia socialis*	Tuvvi hakki	C	Re	F/SL	I	Alike	Mar-Sep	LC	Stable
			Common Tailorbird	*Orthotomus sutorius*	Simpiga/Hasuru tuvvi	C	Re	F/SL	I/N	Dimorphic	Apr-Sep	LC	Stable
		Locustellidae	Grasshopper Warbler	*Locustella naevia*	-	C	Re	GL/F	I	Alike	-	LC	Decreasing
			Bristled Grass Warbler	*Chaetornis striata*	-	C	Re*	GL/F	I	Alike	-	VU	Decreasing
		Aegithinidae	Marshall's Iora	*Aegithina nigrolutea*	-	C	Re	F/SL	I/N	Dimorphic	Apr-Sep	LC	Stable
			Common Iora	*Aegithina tiphia*	Madhura kanta	C	Re	F	I	Dimorphic	May-Sep	LC	Unknown
		Dicruridae	Greater Racket-tailed Drongo	*Dicrurus paradiseus*	Brunga raja/Bheemaraja/ Kaajana	UC	Re	F	O	Alike	Apr-Aug	LC	Decreasing

			White-bellied Drongo	*Dicruruscaerulescens*	Bili hotteya kaajana	UC	Re	F/SL	O	Alike	Mar-Jun	LC	Decreasing
			Ashy Drongo	*Dicrurusleucophaeus*	Bhoodhi bhujanga	C	Re	F/SL	O	Alike	-	LC	Unknown
			Black Drongo	*Dicrurusmacrocercus*	Kari bhujanga/Kaajana	VC	Re	F/SL	O	Alike	Apr-Aug	LC	Stable
			Bronzed Drongo	*Dicrurus aeneus*	-	C	Re	F/SL	O	Alike	-	LC	Unknown
			Spangled Drongo	*Dicrurus bracteatus*	-	C	Re	F/SL	O	Alike	-	LC	Unknown
		Corvidae	Rufous Treepie	*Dendrocittavagabunda*	Mata pakshi/Nookare baala	C	Re	F/SL	O	Alike	Mar-May	LC	Stable
			White-bellied Treepie	*Dendrocittaleucogastra*	Bili nookare baala	C	Re*	F/SL	O	Alike	Mar-May	LC	Stable
			House crow	*Corvos splendens*	Ooru kaage	VC	Re	HS	O	Alike	Apr-Jun	LC	Stable
			Jungle Crow	*Corvus macrorhynchos*	Kaadu kaage	VC	Re	HS	O	Alike	Dec-Apr	LC	Stable
		Ploceidae	Baya Weaver	*Ploceus philippinus*	Neygaara pakshi/Geejuga	C	Re	SL	H/I	Dimorphic	Jun-Sep	LC	Stable
			Streaked Weaver	*Ploceus manya*	Geejuga	C	Re	SL	H/I	Dimorphic	Jun-Sep	LC	Stable
		Dicaeidae	Niligiri/Plain Flowerpecker	*Dicaeum concolor*	Pelava badanike	C	Re	DF	F/N	Alike	-	LC	Stable
			Thick-billed Flowerpecker	*Dicaeum agile*	Dappa kokkina Badanike	C	Re	F	O	Alike	Jan-Jun	LC	Stable
			Tickell's/Pale-billed Flowerpecker	*Dicaeum erythrorhynchos*	Badanike	C	Re	GL	F/N	Alike	Feb-Jun	LC	Stable
		Nectariniidae	Purple-rumped Sunbird	*Leptocoma zeylonica*	Haladi hoogubbi/Soorakki	C	Re	F	I/N	Dimorphic	All Year	LC	Stable
			Purple Sunbird	*Cinnyris asiaticus*	Kari hoogubbi/Nerale soorakki	C	Re	F	I/N	Dimorphic	All Year	LC	Stable
			Crimson-backed Sunbird	*Leptocoma minima*	Sanna Soorakki	C	Re*	F	I/N	Dimorphic	Dec-Apr	LC	Unknown
			Loten's Sunbird	*Cinnyris*	Soorakki	C	Re	F	I/N	Dimorp	-	LC	Unknown

				lotenius					hic			
			Little Spiderhunter	*Arahnothera longirostrs*	Baale gubbi	C	Re	F	I/N	Alike	Mar-Sep	LC	Stable
		Estrildidae	Scaly-breasted Munia	*Lonchurapunctulata*	Chukke muniya	C	Re	F/GL	O	Alike	Jul-Oct	LC	Stable
			Black-throated Munia	*Lonchurakelaarti*	Kari muniya	C	Re	F/GL	O	Alike	-	LC	Stable
			Black-headed Muniya	*Lonchura Malacca*	Kappu thaleya muniya	C	Re	F/GL	O	Alike	Jul-Oct	LC	Stable
			White-rumped Munia/Mannikin	*Lonchura striata*	Bili prushtada raatavala	C	Re	F/GL	H	Alike	All Year	LC	Stable
			Red Avadavat/Munia/Strawberry Finch	*Amandava amandava*	Kempu raatavaala	UC	Re	SL	H	Dimorphic	Jun-Oct	LC	Stable
			White-throated Munia/Indian Silverbill	*Euodice malabarica*	-	UC	Re	WL/SL	H	Dimorphic	All Year	LC	Stable
		Zosteropidae	Oriental White Eye	*Zosterops palpebrosus*	Biligannina chita gubbi/Belganna	C	Re	SL	I/N/F	Alike	Apr-Jul	LC	Decreasing
		Fringillidae	Common Rosefinch	*Carpodacus erythrinus*	Kesari Gubbi	UC	M	SL	H/F	Dimorphic	Jun-Aug	LC	Decreasing
		Emberizidae	Red-headed Bunting	*Granativora bruniceps*	-	UC	M	SL	H	Dimorphic	Apr-Aug	LC	Stable
			Grey-necked Bunting	*Emberiza buchanani*	-	UC	M	SL	H	Dimorphic	Apr-Aug	LC	Stable
		Sturnidae	Rosy Starling/Rosy Pastor	*Pastor roseus*	Gulaabi kabbakki	C	M	CL	I	Alike	May-Jul	LC	Unknown
			Brahminy Starling	*Sturnia pagodarun*	Karithale Kabbakki	C	Re	F/SL	I/F	Alike	May-Jul	LC	Unknown
			Indian/Common Myna	*Acridotheres tristis*	Goravanka/Myna	C	Re	F/HS	I/F	Alike	Apr-Aug	LC	Increasing
			Jungle Myna	*Acridotheres fuscus*	Kaadu goravaka	C	Re	F/SL	I/F	Alike	Feb-Jul	LC	Decreasing
			Lesser Hill Myna	*Gracula religiosa*	Kaamalli	C	Re	F	I/F	Alike	-	LC	Decreasing
		Acrocephalidae	Clamorous/Great Indian Reed Warbler	*Acrocephalus stentoreus*	Tuvvi	C	WM	WL/RB	I	Alike	May-Aug	LC	Stable
			Booted Warbler	*Iduna caligata*	Kiru tuvvi	UC	M	F	I	Alike	May-Jul	LC	Increasing

			Sykes's Warbler	*Iduna rama*		R	M	SL	I	Alike	-	LC	Stable
			Blyth's Reed Warbler	*Acrocephalus dumetorum*	Tuvvi	UC	M	SL	I	Alike	-	LC	Increasing
			Paddyfield Warbler	*Acrocephalus agricola*	Gadde tuvvi	UC	WM	WL	I	Alike	-	LC	Decreasing
			Thick-billed Warbler	*Acrocephalus aedon*	-	R	M	SL	I	Alike	-	LC	Decreasing
		Paridae	Great Tit/Cinereous Tit	*Parus major*	Kaanu Gubbi	C	Re	SL	O	Alike	Feb-Nov	LC	Increasing
			White-naped Tit	*Machlolophus nuchalis*	-	C	Re*	F	O	Alike	Apr-Sep	LC	Stable
			Indian Yellow Tit/Indian Black-lored Tit	*Parus aplonotus*	Kari chotti kaanu gubbi	C	Re	F	I/F	Alike	Apr-Sep	LC	Stable
		Sittidae	Chest-bellied Nuthatch	*Sitta cinnamoventris*	Kempu mara gubbi	R	M	F	F	Alike	-	LC	Unknown
			Velvet-fronted Nuthatch	*Sitta frontalis*	Makmal netthi/Mara gubbi	C	Re	DF	I	Dimorphic	Feb-Apr	LC	Decreasing
		Passeridae	House sparrow	*Passer domesticus*	Gubbacchi	C	Re	HS	O	Dimorphic	All year	LC	Decreasing
			Chestnut-shouldered Petronia/Yellow-throated Sparrow	*Gymnoris xanthocollis*	Arashina kutthige gubbacchi	C	Re	F/SL	O	Dimorphic	Apr-Jun	LC	Stable
		Artamidae	Ashy Woodswallow/Ashy Swallow-shrike	*Artamus fuscus*	-	UC	Re	F	I	Alike	Apr-Jun	LC	Stable

ReM-Resident Migratory, Re-Resident, M-Migratory, WM=Winter Migratory WL-Wetland, RS-River Side, F-Forest, EF- Evergreen Forest, DF- Decidious Forest, G-Garden, SL-Scrubland, CL-Cultivated Land, HS-Human Settlements, G-Garden, DL-Desert/Dry Land, RB-Reed Beds, O-Omnivores, H-Herbivores, I-Insectivores, Cr-Carnivores, Fr-Frugivores, P-Piscivores, N-Nector, LC-Least Concerned, NT-Near Threatened, VU-Vulnerable, DD-Date Deficient*-Endemicto Region

Abundance: VC-Very Common(>10 Sightings), C-Common(5-10 Sightings), UC-Uncommon(3-5 Sightings), R-Rare(<3 Sightings)

RESULTS AND DISCUSSIONS

The study revealed the occurrence of a total of 383species of birds belonging to 19 Orders and 80 Families comprising of 283 resident birds, 2 resident migratory, 12 Winter Migratory birds and 86 migratory birds (Fig 4).

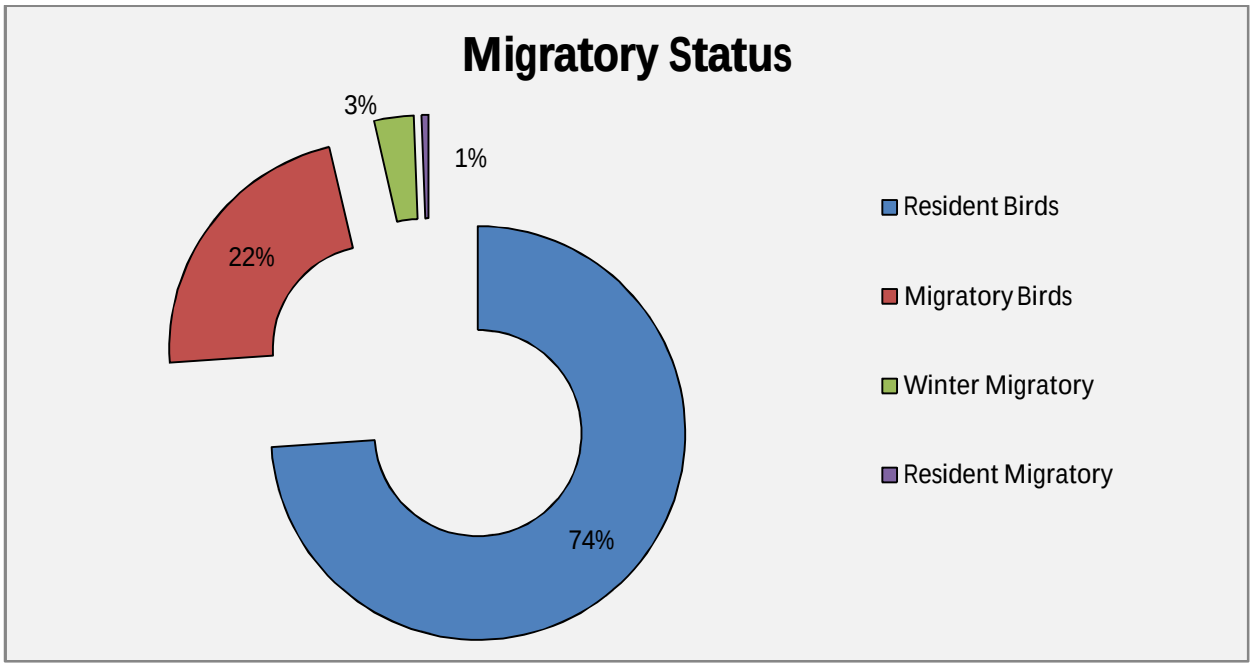


Figure-4: Migratory status of birds

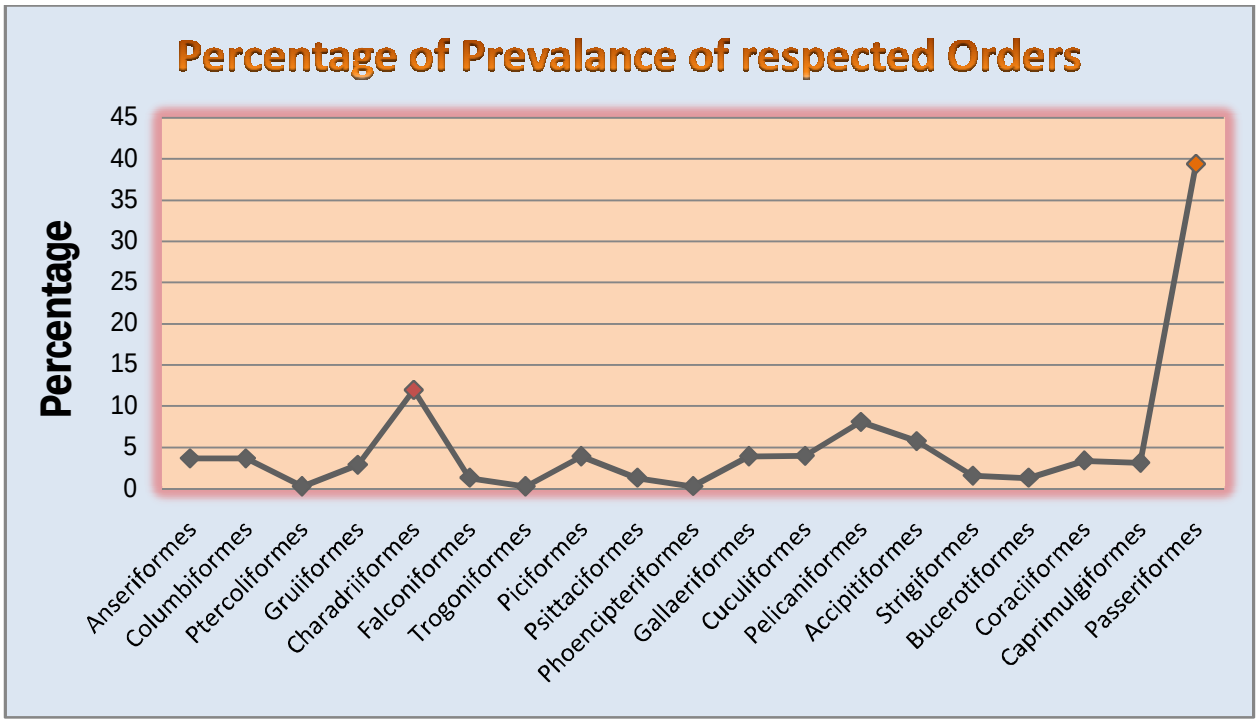


Figure-5: Percentage of birds with respect to their orders

From the results it is evident that, the avifauna belonging to the Order Charadriiformes and Passeriformes are dominating in the region.

The present studies have shown that in the study area, birds belonging to the Order Anseriformes are 3.65%, Phoenicopteriformes are 0.26%, Columbiformes are 3.65%, Galliformesare 3.91%, Ptercoliformesare 0.26%, Cuculiformes are 3.91%, Gruiformes-2.87%, Pelicaniformes are 8.09%, Charadriiformes are 12.01%, Acciptriformes are 5.74%, Falconifornes are 1.3%, Strigiformes are 1.56%, Trogoniformes are 0.27%, Bucerotiformes are 1.30%, Piciformes are 3.91%, Coraciiformes are 3.39%, Psittaciformes are 1.30%, Caprimulgiformes are 3.13% and Passeriformes are 39.42% in the study area (Fig-5).

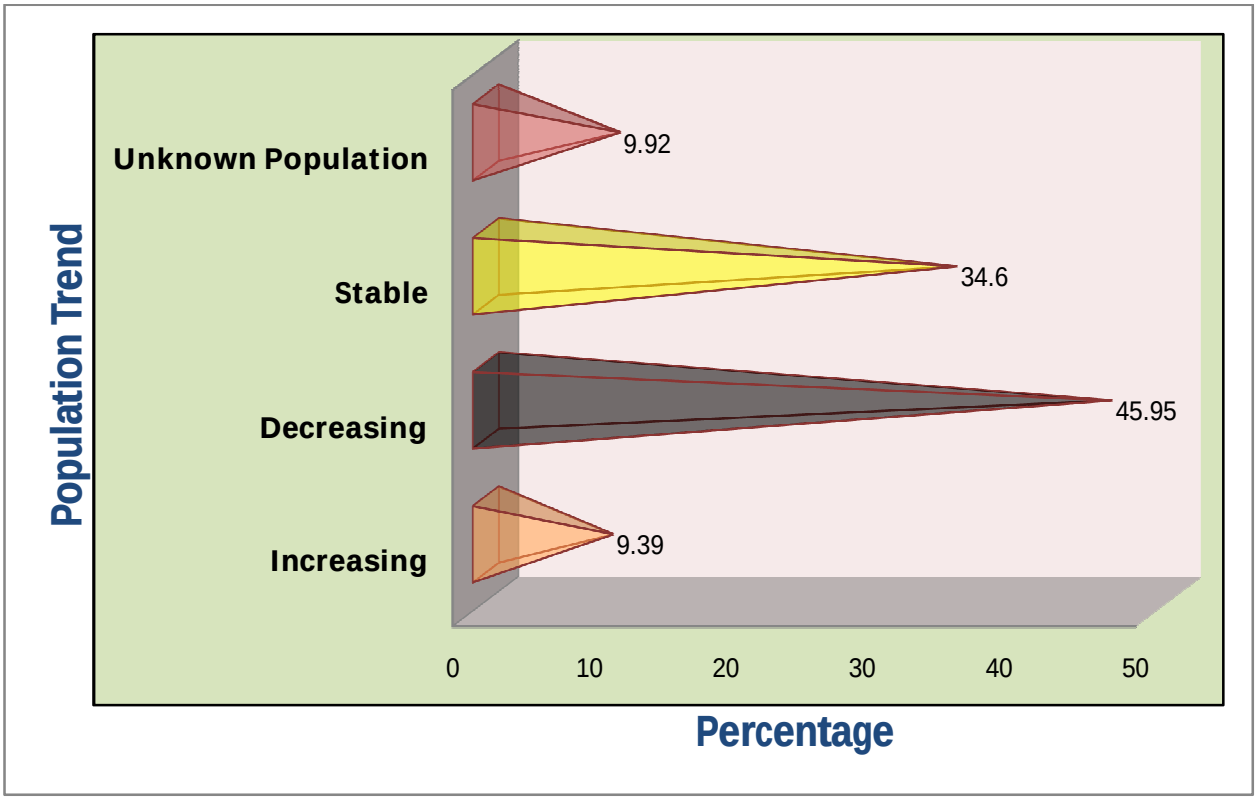


Figure-6: Population trends of recorded birds

It is observed that, of the 383 species of birds documented, only 34.6% (132 species) are maintaining stable population while45.95% (176 species) are showing decreasing trend and only 9.39% (36 species)are showing an increasing trend (Fig-6). It was also observed that that the population of 39 species could not be analyzed due to data deficiency inthe region.

The increased and stable population trend of population observed in the region could be due to the following reasons;

- ✓ Presence of a good numbers of trees supports the inhabitation of bark and canopy insectivorous birds.

- ✓ A good percentage of peat in the forests that supports ground insectivorous birds.
- ✓ Adjacent plantation farms providing food resources to frugivorous and granivorous birds.
- ✓ Large number of sacred grooves and protected forests of the region provide a safe and undisturbed habitat for breeding and nesting.

The decreased population of most of the bird species in the study area is because of the following reasons;

- ✓ Developmental activities like road extension, construction of bridges, and construction of huts/houses by the villagers.
- ✓ Expansion of agriculture into forest land local inhabitants.This affects the successive breeding and nesting of ground nesting birds.
- ✓ Poaching of song birds for illegal trade and to keep them as pets.
- ✓ Deforestation and indiscriminating felling of trees reducing the canopy prevents the nesting and foraging of the birds and also result in decreased population of bark insectivorous birds.
- ✓ Decreased number of trees causes declined population of bark insectivores birds,
- ✓ Hunting of heavy/flightless and ground nesting birdsby humans and predators.
- ✓ The eggs of certain birds such as Red Wattled Lapwing and Yellow Wattled Lapwing are believed to possess medicinal properties and their exploitation stealthily by local medicinal practitioners.
- ✓ Exploitation of birds such as Grey partridge,Grey francolin, Jungle fowl, Jungle quail, Bush quail, Red spurfowl, Spotted pigeon, Rock pigeon for their flesh and are popularly consumed by the locals owing to their belief that these birds are good for health and give strength.
- ✓ Food specification by piscivorous, granivorous etc and the gradual depletion in their food sources have led to the migration of these bird species.
- ✓ Pollution, especially noise of machines used for construction and road making, over hunting, spreading invasive species.
- ✓ An increase in the temperature of the region over years resulting in climate change.

The birds documented in the present study comprises of29.76% are Omnivores (feeding on insects, nectar, grains, seeds, fruits, reptiles, fishes etc), 12.27% are Herbivores(feeding on grains, seeds, sea plants, weeds Nectar and etc), 55.81% are Carnivores (feeding on Fishes, Reptiles, Insects, Cocoons, Amphibians, Small Birds etc) respectively (Fig-7).Carnivorous species have dominated the region over granivorous, piscivorous, nectarivorous and frugivorous and thus a balance of prey predator popultions is observed. Omnivorous rank second to carnivorous in their population size (Fig-7).

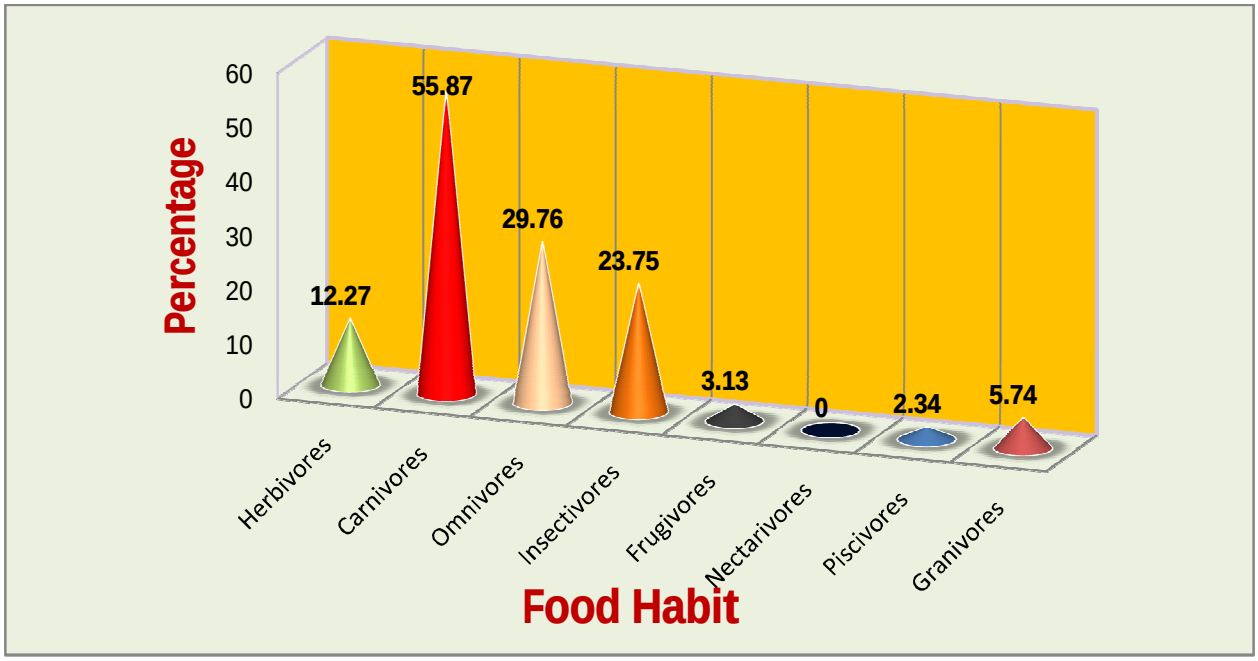


Figure-7: Food habits of the recorded birds

Among the documented species 25.47% of the species inhabit on Wetlands (Lakes, channels, reservoirs, swamps, marshes, rivers, riverside etc), 33.42% of the species live in Forests (Woodland, Decidious Forests, Evergreen Forests etc,.), 18.35% of the species are present in Mixed type of habitats, and the remaining 22.34% are dependent on other habitats (Human settlements, Grasslands, Cultivated lands, Scrublands etc.,) (Fig 8). The results, thus, have shown that birds' species inhabiting wetlands and forests show proportionately more number of species.

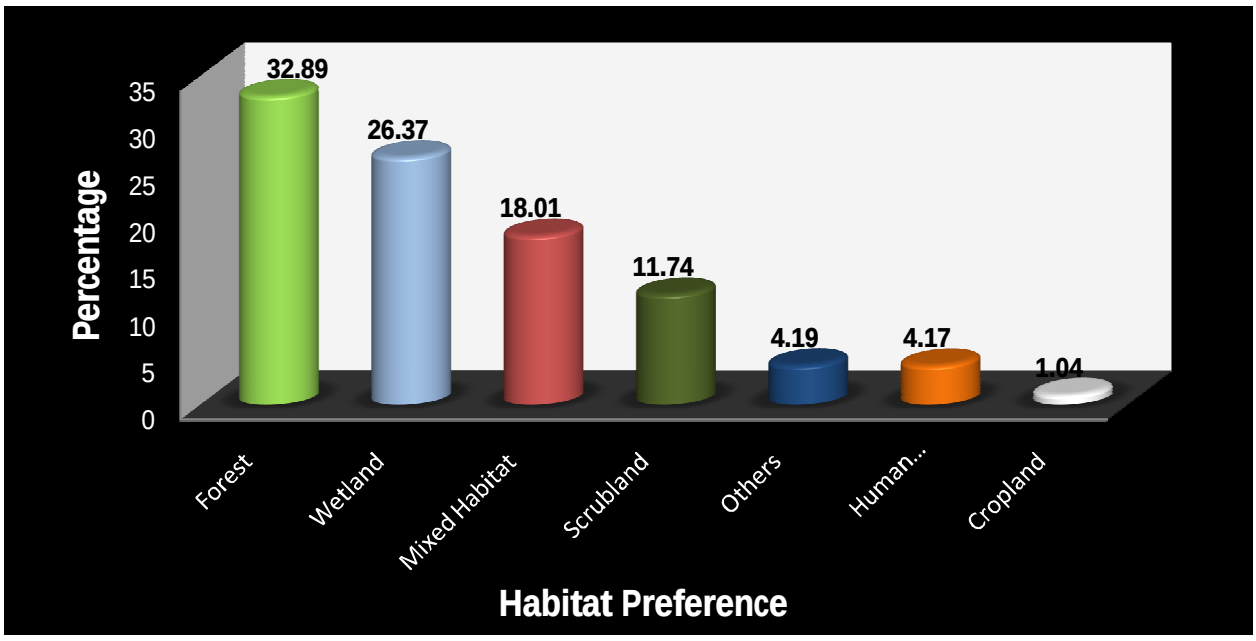


Figure-8: Percentage of habitat dependence of recorded birds

The population of majority of the recorded species was found to be declining (Fig-6) due to various anthropogenic activities. Habitat degradation in the study area has led to decline of migratory birds, resulting in dominance of resident birds (Fig-4).

Regarding the abundance of birds, 163 species (42.55%) are commonly seen, 177 species (46.21%) are uncommon, 28 species (7.31%) are rare, 11 species (2.87%) are very common and 2 species (0.52%) are very rare.

The very rare species documented in the study sites are *Neophron percnopterus* (Egyptian Vulture) and *Chloropsis cochinchinensis* (Blue-winged Leafbird) and the rare species of the study area are *Dendrocygna biclour* (Fulvous Whsitling Duck), *Sarkidiornis melanotos* (Knob-billed/Comb Duck), *Anser Indicus* (Bar-headed Goose), *Aythya nyroca* (Ferruginous Duck), *Tadorna ferruginea* (Ruddy Shelduck), *Aythya fuligula* (Tufted Duck), *Cuculus micropterus* (Indian Cuckoo), *Cuculus poliocephalus* (Lesser Cuckoo), *Cuculus canorus* (Eurasian Cuckoo), *Cocomantis sonneratii* (Banded Bay Cuckoo), *Clamator coramandus* (Chestnut-winged cuckoo), *Hierococcyx sparverioides* (Large Hawk-cuckoo), *Cocomantis passerines* (Indian Plainitive Cuckooo), *Leptotilos javancius* (Lesser Adjutant), *Ciconia episcopus* (Wolly-neckwed Stork), *Chroicocephalus ridibundus* (Black-headed Gull), *Gelochelidon nilotica* (Common Gull-billed Tern), *Hydroprogne caspia* (Caspian Tern), *Recurvirostra avosetta* (Pied Avocet), *Aquila rapax* (Tawny Eagle), *Falco amurensis* (Amur Falcon), *Falco jugger* (Laggar Falcon), *Picumnus innominatus* (Speckuled Piculet), *Merops leschenaultia* (Chest-nut headed Bee-eater), *Ficedula albicilla* (Taiga Flycatcher), *Iduna rama* (Sykes's Warbler), *Acrocephalus aedon* (Thick-billed Warbler), *Sitta cinnamoventris* (Chest-bellied Nuthatch).

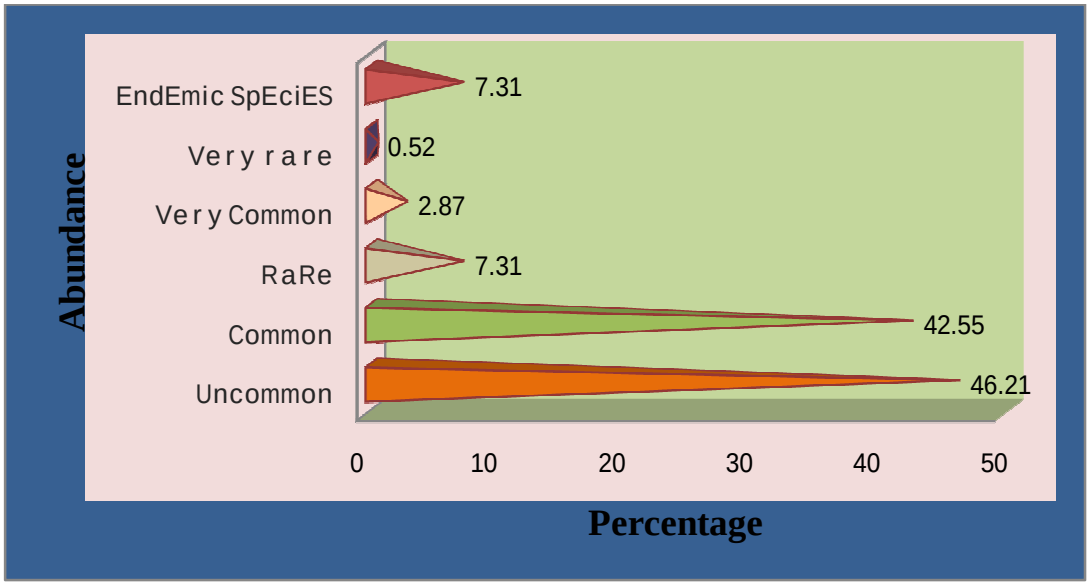


Figure-10: Abundance of birds in the study area

The study area abode 28 endemic species (7.31%), 17 near threatened species (4.43%),7 Vulnerable species (1.82%) and 3 endangered species (0.78%).

The endangered species recorded include *Sterna acuticauda* (Black-bellied Tern), *Aquila nipalensis* (Steppe Eagle), *Neophron percnopterus* (Egyptian vulture) whereas the vulnerable species of the study area are *Columba elphinstonii*(Nilgiri Wood Pigeon), *Leptotilos javancius* (Lesser adjutant), *Ciconia episcopus* (Wolly-necked Stork), *Gallinago nemoricola* (Wood Snipe), *Clanga hastate* (Indian Spotted Eagle), *Buceros bicornis* (Great Hornbill), *Chaetornis striata* (Bristled Grass Warbler) and the near-threatened species of the study site are *Aythya nyroca* (Ferruginous Duck), *Mycteria leucocephala* (Painted Stork), *Pelecanus philippensis* (Spot-billed Pelican), *Anhinga melanogaster* (Oriental Darter), *Threskiornismelanocephalus* (Black-headed ibis), *Psuedibis pappillosa* (Indian Black Ibis), *Plegadis falcinellus* (Glossy ibis), *Esacus recurvirostris* (Stone Curlew), *Numenius arquata* (Eurasian Curlew), *Gallinago stenura* (Pintail Snipe), *Sterna aurantia* (Indian River Tern), *Circus marcourus* (Pallid Harrier), *Batustur teesa* (White-eyed Buzzard), *Falco jugger* (Laggar Falcon), *Ninox scutulata* (Brown Hawk Owl), *Anthracoceros coronatus* (Malabar Pied Hornbill), *Chloropsis cochinchinensis* (Blue-winged leaf bird). These sightings showed that food resources, water quality, habitat and shelter played major roles in the abundance of birds in the study area.

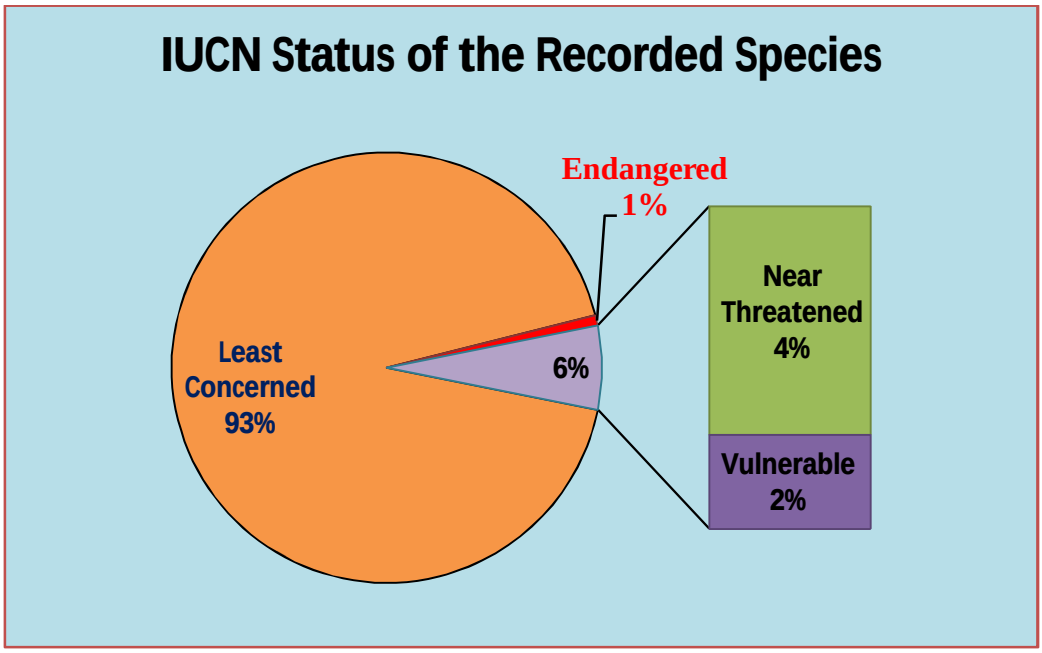


Figure-9: Status of documented bird (IUCN Redlist 2019)

CONCLUSION

The present investigation in the Western Ghats regions of Kodagu and Hassan districts abode about 383 birds inhabited in varied habitants such as wetlands, plantation farms, scrub forest, deciduous forests etc. Thus, a manifestation of a greater diversity of the avifauna was recorded. Kodagu district having 81.04% forests cover followed by Hassan district with 19.52% of forest cover[9],show a significant species richness with many rare and endemic species. It is an established fact that species richness and evenness which are directly co-related to stability of ecosystem.[10]Our studies have shown that the study areas have more potential to provide habitat even for declining population of threatened, vulnerable and endangered birds. Also, the vegetation composition and vegetation structure are the key factors that influence the species diversity, distribution and abundance. Climate changes in these region and their effects should not be ignored.

The area has the potential to provide habitat for declining population of the threatened, vulnerable and endangered birds. Therefore, the need of the hour is to encourage the habitat and natural resources for long term monitoring of birds to get a complete idea of bird population dynamics.

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REFERENCES

1. Grimmette K, Inskipp C, Inskipp T. Birds of Indian sub-continent, Oxford University press, New Delhi, 1999.
2. Magurran AE, Measuring Biological Diversity. Blackwell Publishing, Oxford, 2004; 256 p.
3. Maurer BA, McArthur LB,and Whitmore RC. Effect of logging on guild structure of a forest bird community in West Virginia. Ecology1981; 35:11-13.
4. Muhammad NR, and Zakaria M. Bird species abundance and their correlation ship with microclimatic and habitat variables at natural wetland reserve, Peninsular Malaysia. Hindawi.2011.
5. Western D, Grimsdell JJR. Measuring the distribution of animals in relation to environment. African Wildlife Foundation, Nairobi, Kenya.1979;Handbook No. 2 (2nd edn.).

6. Muhammad NR, and Zakaria M. Bird species abundance and their correlation ship with microclimatic and habitat variables at natural wetland reserve, Peninsular Malaysia. Hindawi. 2011.
7. Ramachandra AM. Diversity and richness of bird species in newly formed habitats of Chandoli National Park in Western Ghats, Maharashtra State, India. Biodiversity Journal. 2013; 4 (1): 235-242
8. Burnham P, Anderson KR, Laake and Jeffrey. Line transect estimation of bird population density using a Fourier series. Studies in Avian Biology. 1981; 6: 466-482.
9. State of forest report 2011, Forest survey of India, A review" [online]. 2019 [cited 2019Mar 19] Available from: URL: http://http://fsi.nic.in/forest-report-2011.
10. Jayson EA, and Mathew DN. Diversity and species-abundance distribution of birds in the tropical forests of Silent Valley, Kerala. Journal of the Bombay Natural History Society. 2000; 97(3): 390–399.

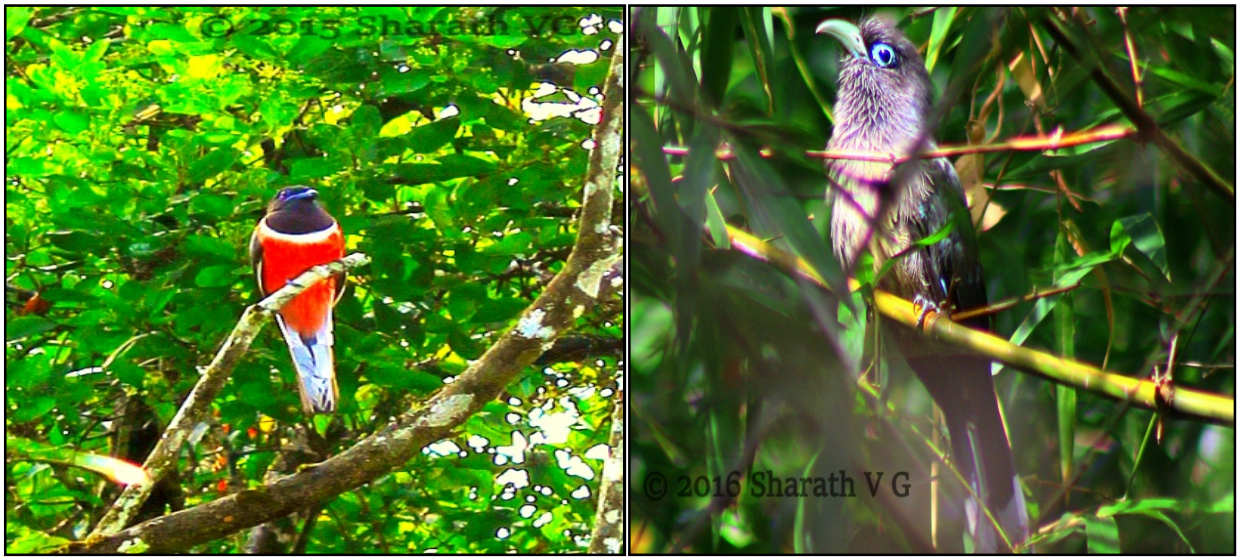
Fig-10-Avifauna of Western Ghats of Kodagu and Hassan Districts



Leptocoma zeylonica **(Purple-rumped Sunbird)*Platalea leucorodia*(Eurasian Spoonbil)**



Psittacula cyanocephala*(Plum-headed Parakeet)*Eudynamys scolopaceus **(Asian Koel)**



***Harpactes fasciatus*(Malabar Trogan)*Phaenicophaeus viridirostris*(Blue-faced Malkoha)**

Fig-10-Avifauna of Western Ghats of Kodagu and Hassan Districts





Nisaetus cirrhatus **(Changeable Hawk Eagle)** **Hierococcyx varius (Common Hawk-Cuckoo)**





Tringa totanus**(Common Redshank)** ***Fulica atra*****(Common Coot)**





Neophron percnopterus**(Egyptian Vulture)*****Vanellus indicus*****(Red-wattled Lapwing)**

Fig-10-Avifauna of Western Ghats of Kodagu and Hassan Districts





Pycnonotus luteolus **(White-browed Bulbul)*Galloperdixspadicea*(Red Spurfowl)**





Anhinga melanogaster **(Oreintal Darter)*Accipiter virgatus*(Besra Sparrow Hawk)**





Threskiornis melanocephalus**(Black-headed Ibis)*Pavo cristatus*(Indian Peafowl)**

Fig-10-Avifauna of Western Ghats of Kodagu and Hassan Districts





Eumyias albicaudatus **(Nilgiri Flycatcher)*Aquila fasciata*(Bonneli's Eagle)**





Hieraaetus pennatus**(Booted Hawk Eagle)*Megalaima haemacephala*(Coppersmith Barbet)**





Leptotilos javancius **(Lesser Adjutant)*Accipiter badius*(Shikra)**

Fig-10-Avifauna of Western Ghats of Kodagu and Hassan Districts





Tachybaptus ruficollis **(Little Grebe)*Dicrurus macrocercus*(Black Drongo)**





Lonchura striata **(White-rumped Munia)*Oriolus kundoo*** **(Golden Oriole)**





Acridotheres tristis **(Common Myna)*Pycnonotus priocephalus*(Grey-headed Bulbul)**

Fig-10-Avifauna of Western Ghats of Kodagu and Hassan Districts



Terpsiphone paradise (Asian-Paradise Flycathcher)*Alcedo rudis*(Common Kingfisher)



***Merops leschenaulti*(Chestnut headed Bee eater)*Porphyrio porphyria*(Purple Moorhen)**



***Gallus gallus*(Red Jungle Fowl)** ***Bubulcus ibis*(Cattle Egret)**

Fig-10-Avifauna of Western Ghats of Kodagu and Hassan Districts





***Mycteria leucocephala*(Painted Stork)** ***Acridotheres fuscus*(Jungle Myna)**





Halcyon smyrnensis **(White Breasted Kingfisher)** ***Haliastur indus*(Brahminy Kite)**





Anastomus oscitans **(Open Billed Stork)** ***Merops orientalis*** **(Green Bee-eater)**

Fig-10-Avifauna of Western Ghats of Kodagu and Hassan Districts





Saxicoloides fulicatus **(Indian Robin)*Psittacula columboides*(Malabar Grey Hornbill)**





Anthracocer oscoronatus**(Malabar Pied Hornbill)** ***Tringa glareola*** **(Oriental Honey-Buzzard)**





Pluvialis fulva **(Pacific Golden Plover)*Anthus rufulus*(Paddy field Pipit)**

Fig-10-Avifauna of Western Ghats of Kodagu and Hassan Districts





***Leptocoma zeylonica*(Purple-Rumped Sunbird)*Amandava amandava*(Red Avadavat)**





Ardea cinerea(Grey Heron) ***Ninox scutulata*(Brown-Hawk Owl)**





***Dendrocitta vagabunda*(Rufous Treepie)*Hirundo rustica*(House Swallow)**

Fig-10-Avifauna of Western Ghats of Kodagu and Hassan Districts



***Tringa glareola*(Wood Sandpiper)** *Artamus fuscus*(Ashy Wood Swallow)



Saxicola caprata **(Pied Bushchat)** ***Pelecanus philippensis*** **(Spot-billed Pelican)**



Esacus recurvirostris (Great Thick Knee) Sterna aurantia (Indian River Tern)