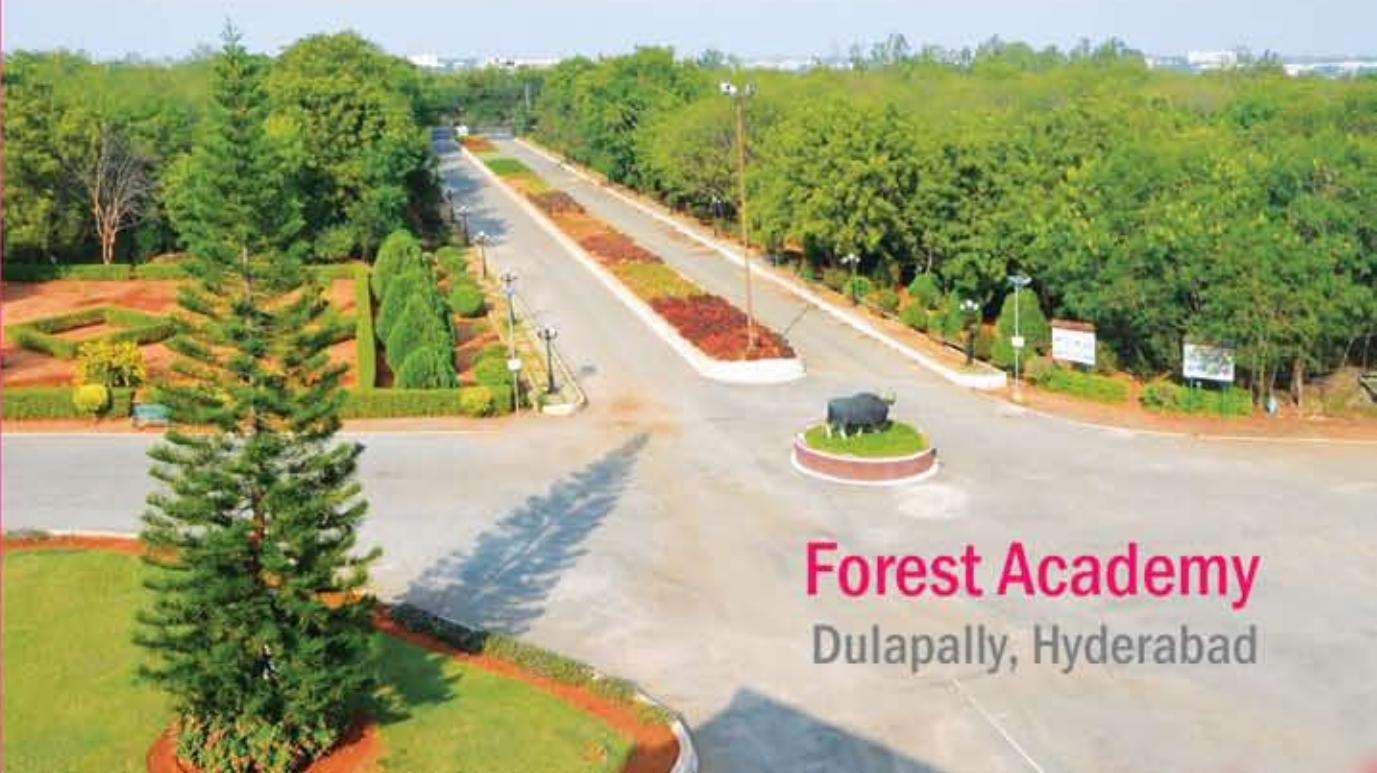
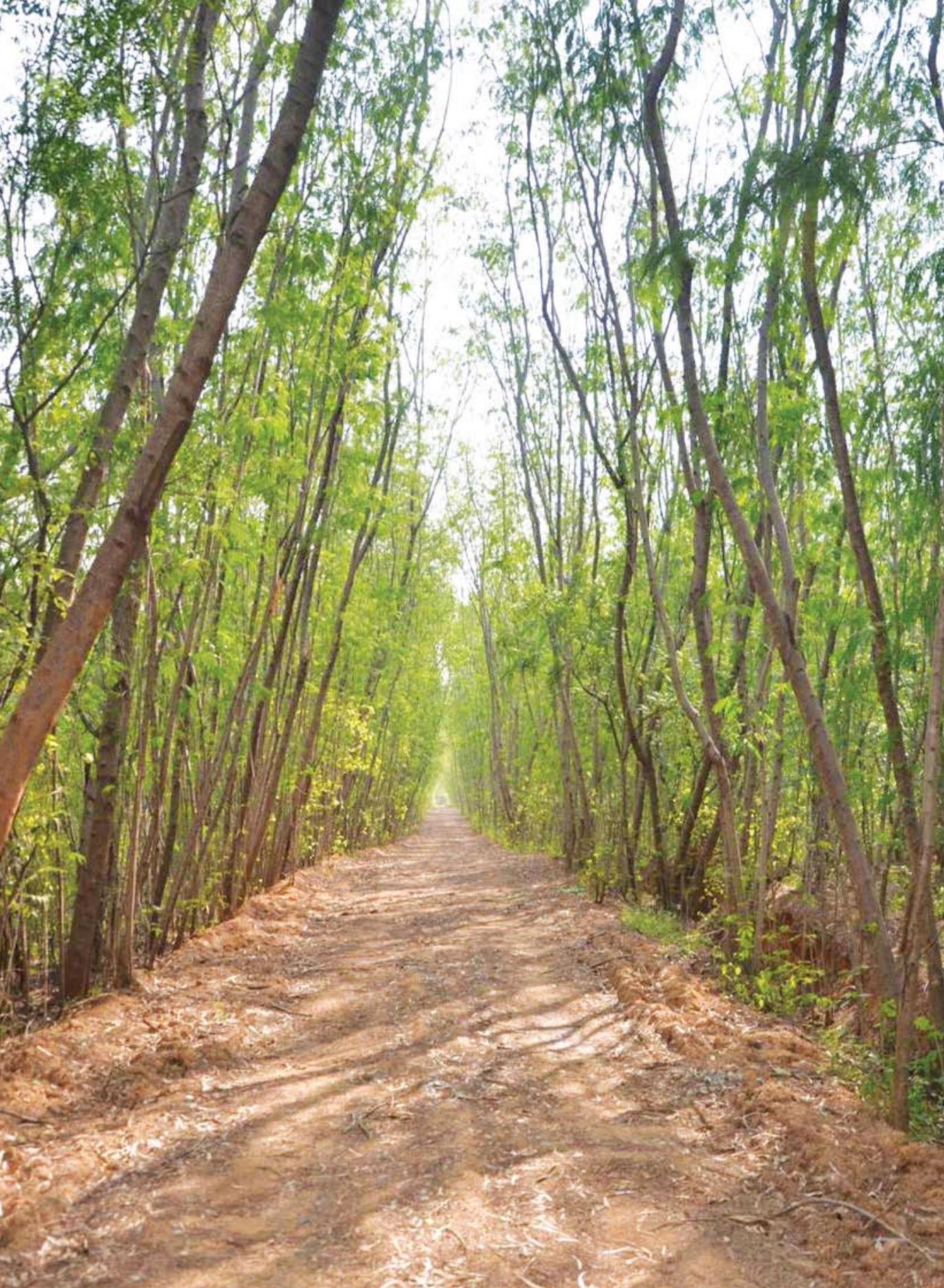


Feathered Friends of Forest Academy Campus

Bipin S. Phal Desai • Sidhesh S. Naik • Shefali K. Naik



Forest Academy
Dulapally, Hyderabad



ACKNOWLEDGEMENT

As a part of our Seminar project, an attempt was made to systematically study the diversity of Avian Fauna of the Forest Academy Campus, Dulpally. The study, conducted over a period of one year has enabled us to bring out our achievements in form of this book titled "**Feathered Friends of Forest Academy Campus, Dulpally**" with the guidance and efforts of our beloved Director, Sri P. Raghuveer, IFS. Here is a small effort to thank the people who have been part of this wonderful journey.

First of all, we take this opportunity to thank Almighty God, who gives us strength, patience and blessings to work efficiently and our parents and family who are the source of unconditional love, inspiration and support.

We owe a debt of gratitude to Sri. P. Raghuveer, IFS, Director, Forest Academy, Dulpally, for his commendable initiatives, constructive ideas, inevitable help and valuable guidance.

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13th February 2015

FOREWORD

Preservation of Biodiversity is an integral to any strategy aiming at improving quality of life. It is one of the **Fundamental Duties of every Indian citizen** to protect and improve the natural environment including forests, lakes, rivers, and wildlife, and to have **compassion** for living creatures. However, we are losing many species permanently due to loss of habitat. It is in this context the Telangana Government has embarked upon a massive programme to plant 230 crore seedlings in the next 3 years under the Telangana Ku Haritha Haram program. One of the key interventions is conserving urban green spaces as well. Dulapally Forest Academy forms an ideal habitat for a wide variety of birds. I am happy to know that as part of their seminar project, the Forest Range Officer Trainees from Goa have tracked different birds of this campus over a period of one year and came up with this very useful bird book. My complements to Mr. Bipin Desai, Mr. Sidhesh Naik and Ms. Shefali Naik for their tremendous effort in bringing out this book and I am sure it would act as a baseline data for the bird diversity in forest academy campus.

A handwritten signature in blue ink, appearing to read "S.B.L. MISRA, IFS".

(S.B.L. MISRA, IFS)

PCCF (HoFF), Govt. of Telangana

SALUTING THE UNPAID SOLDIERS OF MOTHER NATURE !

Birds, Butterflies and Honeybees play an important role in maintaining our vibrant ecosystems for posterity. Their contribution as pollinators, pest regulators, seed dispersers, apart from being part of a vital food chain is invaluable. In fact a study conducted in the Stockholm National Park, Sweden, which is spread over 655 hectares, estimates that the value of services rendered by Eurasian Jay (*Garrulus glandarius*) to the Oak Forest in the National Park is estimated at US \$ 6.2 million or about Rs. 37 crores ! That is the amount required to regenerate the oak forest manually or with machines in case the Eurasian Jays are not there. Just imagine the relentless work being done by the millions of birds all over planet earth every day and estimate the value of the services being rendered by them and would happen to us without them !



Our Forest Academy campus in Dulpally is quite rich in its biodiversity with over 116 varieties of plant species, apart from nearly 50 species of medicinal plants in our Herbal garden. One of our Forest Range Officer Trainees from Kerala Mr. Job did a commendable job in the 2nd batch when he painstakingly captured the photographs of 56 different species of butterflies in our Academy campus which is spread over 75 ha. The presence of butterflies is a good indicator of health of our ecosystem, as they are quite sensitive to climate change.

Continuing with the tradition of doing innovative and useful seminar projects, the FRO Trainees from 3rd batch which would be passing out from our Academy on 19th February 2015 have chosen a wide variety of topics for their project work.

I am happy with the dedication and determination shown by the 3 FRO Trainees from the state of Goa viz., Bipin, Sidhesh and Shefali who have studied the avifaunal diversity in our forest academy campus at Dulpally for over a year and captured the photographs of 78 varieties of birds, including 19 in the Rare category. This seminar project report summarizes the habit and habitat of these birds and I am sure that this book would be quite handy for all bird lovers. It would be a good extension tool for our Trainees as well as thousands of school and college students who visit our Campus every year as part of our CAFÉ (Children and Forest Education) Programme. Let us do our bit to support the birds with our little green actions like providing water in earthen bowls and grains, especially during summer, wherever possible including the roof tops ! May their population increase further !!

A handwritten signature in blue ink, consisting of stylized initials and the date 13/02/15.

(P. Raghuveer IFS)

Addl. PCCF / Director, APFA

Dulpally, Hyderabad

13th February 2015

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INTRODUCTION

Birds have evolved since 150 million years and have diversified into various forms. They are unique among the vertebrates with the exception of bats, for their ability to fly, an ability which allowed birds to move over long distances, and as a result they colonized the whole globe, from the Arctic to Antarctica, from the deserts to icy mountain tops. Today, more than 9,600 species of birds occur all over the world. Of these, 2,100 species and subspecies occur in the Indian subcontinent; India alone has 1300 species constituting about 13% of the World's birds. The number rises to over 2000 when sub species are taken in account.

Over the years there has been a noticeable decline in bird populations all over the world due to various reasons. Loss and degradation of habitat is the most obvious one. In recent years, information on birds has been used to document and highlight conservation problems. Birds are the indicators of the health of the environment and are being used as tool for conservation and Environmental Impact Assessment of sites.

The present study was conducted as a part of the Seminar Project Preparation in the Forest Academy Campus (Fig1) with spread of 75 hectare located at a distance of about 24 km, on the outskirts of Hyderabad city, capital city of the State. The elevation of the area is 585m above mean sea level. Geographical location of the campus is located between $17^{\circ}32'8.64''$ N and $78^{\circ}27'4.86''$ E.

Map of Forest Academy, Dulapally Campus:



Forest Academy campus inhabits different species of large flowering and fruiting trees, providing rich habitat for diverse species of birds. Birds depend on plants for their requirement of food which includes various plant parts like fruits, seeds, leaves and nectar. Plants also provide shelter for insects and these are preyed upon by birds. Birds are known to be voracious feeders and require constant supply of energy to meet high metabolic demand. The easiest source is wild fruits. Fleshy-fruits are an important component of the diet of many terrestrial bird species. Frugivory is thought to be more common in the tropics, where a higher fraction of plant species produce fleshy-fruits.

Vegetation of the Forest Academy campus, Dulapally is typically Deccan type. The Forest type is Southern Tropical Dry Deciduous Forest (5A/C1) as per Champion & Seth classification. Being in the tropical zone the climate of the Campus is warm for most parts of the year. The area receives moderate rainfall ranging between 800-900 mm from June to September from South-West Monsoon. Weather is also characterized by short cool season which lasts from mid-December to February. These months are marked by cool nights with temperatures of about 19.5°C and warm days of about 33°C. Though summer is the hottest season of the year in Hyderabad, the temperature in Campus is relatively lower as compared to the Capital, owing to the microclimatic conditions created by presence of vegetation.

About the campus:

The total area of the Forest Academy campus, Dulapally is 75 ha, which comprises of various institutional buildings like the Administrative building, Training Centre, FRO hostel, Ladies Hostel, Executive Hostel, Old Hostel, Dormitory, Dy. Director quarters, Asst. Director Quarters, Staff Quarters, Parade ground Outdoor stadium, Auditorium, etc apart from herbal garden, rose garden and rest of the area being endowed with natural forest.

Herbal garden:

Herbal garden of Forest Academy campus, Dulapally is a demonstration area of medicinal plants with a collection of various species of medicinal plants. It is spread in an area of 0.5 ha. There are nearly 50 species of medicinal plants which were collected from different parts of Andhra Pradesh. Plant forms consist of grasses, herbs, climbers, shrubs and trees. Some of the medicinal plant species found in the herbal garden include. Acorus calamus, Ocimum sanctum, Bacopa monneri, Ravoulfia serpentina, Aloe vera, Andrographis paniculata, Commiphora mukul, Artemisia vulgaris, Withania somnifera, Centella asiatica, Ruta graveolens and the likes.

Rose garden:

There is a lawn and garden section in the Academy which maintains ornamental gardens and lawns around the buildings. Various varieties of roses are planted in these gardens. Other than roses different species of ornamental plants are also planted here.

Natural forest:

Nearly 60 hectares of the area of the campus is covered by natural forest. Most of the trees are of natural origin with few species which are artificially planted. According to the records available there are 116 tree and shrub species, identified in the campus.

Beside the naturally existing trees many species of trees have been planted along the roads like *Ficus religiosa*, *Thuja occidentalis*, *Leucinia leucocephala*, *Mimusops elangi*, *Pongamia pinnata*, *Bauhinia purpurea*, *Calistomom viminalis*, *Dalbergia sissoo*, *Dalbergia latifolia*, *Ficus benghalensis*, etc. There is good representation of species at tree level, sapling level and seedling level.

The natural forest of Forest Academy campus, Dulpally forms good habitat for a number of wild animal species including birds and reptiles.

The present study was undertaken with the aims and objectives mentioned below.

Aims & Objectives

1. To understand the population profile & prepare checklist of avifauna of the Forest Academy campus, Dulpally, Hyderabad.
2. To understand the seasonal variation in species composition of the birds.
3. To understand their feeding behavior i.e. insectivorous, carnivorous, omnivorous and phytophagous.
4. To understand to what extent our campus supports their breeding activity.

Materials and methods:

For studying the Avifaunal Diversity we followed two methods of bird identification, ie Line transect method and Point sampling method.

1. Line transect Method

A line transect involves traveling on a predetermined route and recording birds on either side of the observer. The distance a bird is seen from the transect line is normally recorded as an absolute measure, and estimated as perpendicular to the transect line (rather than the distance from the bird to the observer). Distance estimation of this kind is key to the estimation of bird densities.

For applying line transect method, we walked around the whole Academy Campus.

2. Point Sampling Method.

Point count is an efficient and inexpensive survey method for estimating the presence and richness of bird species at the scale of individual points (Bibby et al. 2000, Reynolds et al. 1980 and Gutzwiller 1991). Generally, point counts are used to compare bird differences between sites. They can be used to monitor changes in bird populations when an area is changed. They also can be used to study seasonal and annual fluctuations in bird populations. Point counts often are utilized in areas where transects are impractical.

During the study period (September 2013 to September 2014), the entire campus was surveyed and observed for avian richness (species number per point) using fixed-radius

point counts (Reynolds 1980, Verner 1988). Point counts were conducted between 07:00 am and 10:00 am (local time) on days without rain and little or no wind by surveying 7 points randomly distributed within the campus. The distance between points was always > 350 m, and each point was sampled once. Bird species were counted in 20 m fixed radius plots because the detection rate for cryptic species drops significantly beyond 20 m from the observer and the dense vegetation structure does not allow dull-colored or small birds to be observed. Using a relatively short radius also minimizes the probability that the same bird is counted twice on successive points. Therefore, we truncated the distance at 20 m in order to simplify analytical procedures and to assure a high probability of detecting all species. The sampling points identified were

1. Rose Garden in front of the administrative building.
2. *Leucaena leucocephala* plantation in front of the executive hostel.
3. Woody patch in front of the FRO hostel.
4. Grassland behind the FRO hostel.
5. Herbal Garden and Quarry reclamation site.
6. Play Ground.
7. Scrub forest along the CAFÉ nature trail.

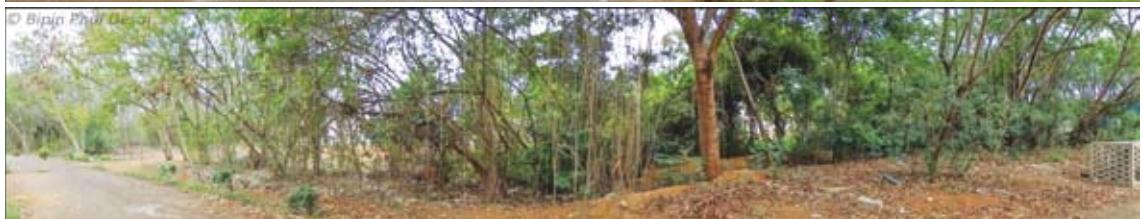
The birds were also identified based on their call notes, but were included in the checklist only if they were visually sighted in the area at least once. The morning hours from 7:00 am to 10:00 am i.e., around 3 hours were utilized every available weekend for the study purpose.

The records of the surveys at each site were separately maintained. The pooled data of both the surveys at each site was considered for working out the monthly picture at every site. A preliminary checklist was thus prepared and used for further census work. The common (English) names and scientific nomenclature of birds and their characteristics have been adopted from Manakadan & Pittie (2001), The Book of Indian Birds by Dr Salim Ali, a photographic guide to Birds of India by Bikram Grewal, Bill Harvey and Otto Pfister and Birds of Indian Subcontinent by Richard Grimmett, Carol Inskip and Tim Inskip.

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OBSERVATIONS

Table No. 1. List of Plants seen in Forest Academy campus, Dulapally

Sr. No.	Botanical Name/ Authority	Family	Vernacular Name	Habit	Flowering and Fruiting
1	<i>Acacia sundra</i>	Mimosaceae	Rhair	Tree	Fl. and Fr. July-August
2	<i>Aegle marmelos</i> (L) (Correa)	Rutaceae	Bel	Tree	Fl. & Fr. May-June
2	<i>Alstonia scholaris</i> (Brown)	Apocynaceae	SaptParni	Tree	Fl. & Fr. Nov-Dec
4	<i>Anona squamosa</i> (L)	Annonaceae	Sharipha	Small tree	Fl. March-May and Fr. July-Sept.
5	<i>Apluda mutica</i> (L)	Poaceae	-	Grass	Fl. & Fr. April
6	<i>Azadirachta indica</i> (A. Juss.)	Meliaceae	Neem	Tree	Fl. March-May & Fr. June-July
7	<i>Bauhinia purpurea</i> (L)	Caesalpiniaceae (Leg.)	Kachnar	Tree	Fl. & Fr. Nov-March
8	<i>Butea monosperma</i> (Lam) Taub	Fabaceae (Leg.)	Palas	Tree	Fl. & Fr. Feb-March
9	<i>Caesalpinia pulcherrima</i> L. Swartz	Caesalpiniaceae	Gulmohar	Shrub	Fl. & Fr. Sept-Jan.
10	<i>Calistom viminalis</i>	Myrtaceae	Bottle brush	Tree	Fl. & Fr. Jun.-Oct.
11	<i>Calotropis gigantea</i> (L) R.Br.	Asclepiadaceae	Madar	Herb	Fl. & Fr. Dec-April
12	<i>Careya arborea</i> (Roxb)	Myrtaceae	Kumbhi	Tree	Fl. & Fruit March-July
13	<i>Cassia fistula</i> (L)	Ceaselpinaceae (Leg.)	Amaltas	Tree	Fl. & Fr. March-May
14	<i>Cassia tora</i> (L)	Ceaselpinaceae (Leg.)	Chakoda	Herb	Fl. & Fr. Aug-June
15	<i>Chloroxylon swietenia</i> (D.C.)	Meliaceae	Bhirra	Tree	Fl. March-Apr. & Fr. May-June
16	<i>Dalbergia latifolia</i> (Roxb)	Fabaceae (Leg.)	Shisam	Tree	Fl. Sept. & Fr. Jan.-Feb.
17	<i>Dalbergia sissoo</i> (Roxb)	Fabaceae (Leg.)	Sishoo	Tree	Fl. & Fr. Apr-Aug.
18	<i>Dandrocalamus strictus</i> (Roxb)	Bambuseae	Bans	Grass	Fl. & Fr. Jan-June
19	<i>Delonixregia</i> (Bojer ex Hook)	Fabaceae (Leg.)	Gulmohar	Tree	Not recorded

20	<i>Diospyros melanoxylon</i> (Roxb)	Ebenaceae	Tendu	Tree	Fl. & Fr. Sept.-Nov.
21	<i>Emblica officinalis</i> (Gaertn)	Euphorbiaceae	Aonia	Tree	Fl. & Fr. April-May
22	<i>Eucalyptus</i> spp (Smith)	Myrtaceae	Nilgiri	Tree	Throughout the year
23	<i>Ficus benghalensis</i> (L)	Moraceae	Bar	Tree	Fl. & Fr. May
24	<i>Ficus religiosa</i> (L)	Moraceae	Pipal	Tree	Fl. & Fr. May-Sept.
25	<i>Ficus benjamina</i>	Moraceae	Benjamin Fig	Tree	Fl. & Fr. May-Sept.
26	<i>Gmelina arborea</i> (Roxb)	Verbenaceae	Khamar	Tree	Fl. & Fr. April
27	<i>Grewia tiliacefoli</i> (Vahl)	Tiliaceae	Dhaman	Shrub	Fl. & Fr. Sept.- Dec.
28	<i>Hardwickia binata</i> (Roxb)	Ceasalpinacea (Leg.)	Anjan	Tree	Fl. July-Aug. & Fr. Feb.-March
29	<i>Helicteres isora</i> (L)	Sterculiaceae	Marorphali	Large shrub	Fl. & Fr. Sept.-Dec.
30	<i>Lannea coromandelica</i>	Anacardiaceae	Mohin	Tree	Fl. & Fr. Jan-May
31	<i>Leucaena leucocephala</i> (L) Devit	Mimosaceae	SooBabool	Tree	Fl. & Fr. Oct.- March
32	<i>Michelia champaca</i> (L.)	Magnoliaceae	Champa	Small tree	Fl. & Fr. April-July
33	<i>Milingtonia hortensis</i>	Bignoniaceae	Indian cork tree	Tree	Fl. & Fr. April-June and Oct-Dec
34	<i>Mimosopes elengii</i>	Mimosaceae	Molsari	Tree	--
35	<i>Nerium indicum</i> (Mill)	Apocynaceae	Red kaner	Small tree	Fls and Fr. Throughout the year
36	<i>Peltophorum pterocarpum</i>	Fabaceae	Yellow flame tree	Tree	Fl. & Fr. March - May and Sept.-Dec.
37	<i>Pongamia pinnata</i> (L) Pierre	Mimosaceae (Leg.)	Karanj	Tree	Fl. May-June & Fr. Dec-Jan.
38	<i>Prosopis juliflora</i> (SW) DC.	Mimosaceae (Leg.)	Vilaytibabool	Tree	Fl. & Fr. Nov-Feb.
39	<i>Pterocarpus marsupium</i> (Roxb)	Fabaceae (Leg.)	Bija	Tree	Fl. & Fr. Nov-April
40	<i>Samanea saman</i> (Jacq) Merr	Mimosaceae (Leg.)	Rentree	Tree	Fl. Nov Feb.
41	<i>Santalum album</i> L. (Wild)	Santalaceae	Chandan	Small Tree	Fl. Aug. -Oct. & Fr. Oct-Dec.

42	<i>Saraca indica</i> (L.)	Ceacalpiniaceae	Ashokka	Tree	Not recorded
43	<i>Syzygiumcumini</i> (L.) Skeels	Myrtaceae	Jamun	Tree	Fl. & Fr. March-July
44	<i>Tamarindus indica</i> (L.)	Ceaselpinaceae (leg.)	Imli	Tree	Fl. & Fr. June- Jan.
45	<i>Tectona grandis</i> (L.F)	Verbenaceae	Teak	Tree	Fl. & Fr. Feb-April
46	<i>Terminalia arjuna</i> (Roxb ex DC)	Combretaceae	Arjun	Tree	Fl. April-June & Fr. Feb.- April
47	<i>Thuja orientalis</i>	Cupressaceae	Mayurpankhi	Shrub and Tree	Fl. & Fr. Sept.- Oct
48	<i>Wrightia tinctoria</i> (R.Br)	Apocynaceae	Dudhi	Small Tree	Fl. & Fr. Sept.-March
49	<i>Zizyphus mauritiana</i> (Lamk)	Rhamnaceae	Desi Ber	Tree	Fl. & Fr. Oct. Jan.
50	<i>Zizyphus oenoplia</i> (L.)	Rhamnaceae	Barari	Climbing shrub	Fl. & Fr. April-Sept.
51	<i>Zizyphus xylopyra</i> (Wild)	Rhamnaceae	Ghont	Tree	Fl. & Fr. Aug-Dec.

Birds of Forest Academy campus, Dulapally:

Forest Academy campus is located in compartment no.204 of Dulapally reserve forest having an area of 543.65 ha. It inhabits variety of resident as well as migratory birds.

This table depicts the list of birds observed in the campus over the period of training in the academy.

Table No. 2: Checklist of birds observed in Forest Academy campus, Dulapally

Sr No.	Common name	Scientific Name	Order/Family	Size	Status	Abundance Scale	Feeding Habit
1	Shikra	<i>Accipiter badius</i>	Accipitridae/Accipitridae	Crow	RS	C	C
2	Common myna	<i>Acridotheres tristis</i>	Passeriformes/ Sturnidae	Myna	RM	C	0
4	Common iora	<i>Aegithina tiphia</i>	Passeriformes/Aegithinidae	Sparrow	LM	NC	F
5	Olive pipit	<i>Anthus hodgsoni</i>	Passeriformes/ Motacillidae	Sparrow	M	R	I
6	Little swift	<i>Apus affinis</i>	Apodiformes /Apodidae	Sparrow	LM	R	I
7	Indian pond heron	<i>Ardeola grayii</i>	Pelecaniformes/Ardeidae	Little egret	RM	NC	C
8	Spotted owllet	<i>Athene brama (Tem)</i>	Strigiformes/ Strigidae	Crow	RS	R	C
9	Tawny eagle	<i>Aquila rapax</i>	Accipitridae/Accipitridae	Eagle	LM	R	C
10	Cattle egret	<i>Bubulus ibis(L)</i>	Ciconiiformes/Ardeidae	Little egret	RM	C	I,C
11	Intermediate egret	<i>Mesophoyx intermedia</i>	Ciconiiformes/Ardeidae	Egret	LM	R	I,C
12	Indian thick knee	<i>Burhinus (foedicenemus) indicus</i>	Charadriformes/Burhinidae	Little egret	RS	R	I,C
13	Indian nightjar	<i>Caprimulgus asiaticus</i>	Caprimulgiformes/ Caprimulgidae	Myna	RS	C	I
14	Southern coucal	<i>Centropus parroti</i>	Cuculiformes/Cuculidae	Crow	RS	C	I,C
15	Purple sunbird	<i>Cinnyris asiatica</i>	Passeriformes/Nectariniidae	Sunbird	RM	NC	N
16	Loten's sunbird	<i>Cinnyris lotenius</i>	Passeriformes/Nectariniidae	Sunbird	RM	C	N

17	Blue rock pigeon	<i>Columba livia</i>	Columbiformes/Columbidae	Pigeon	RS	C	G
18	Black-headed cukoos shrike	<i>Coracina melanoptera</i>	Passeriformes/Campyphagidae	Myna	RM	R	I
19	Indian roller	<i>Coracias garrulus</i>	Coraciiformes /Coraciidae	Myna	LM	NC	C
20	Indian jungle crow	<i>Corvus culminatus</i>	Passeriformes/Corvidae	Crow	RM	NC	O
21	House crow	<i>Corvus splendens</i>	Passeriformes/Corvidae	Crow	RS	NC	O
22	Asian palm swift	<i>Cypsiurus balasiensis</i>	Apodiformes/Apodidae	Bulbul	M	NC	I
23	Tickell's blue flycatcher	<i>Cyornis tickelliae</i>	Passeriformes/Muscicapidae	Sparrow	RM	R	I
24	Pale-billed flower pecker	<i>Dicaeum erythrorhynchos</i>	Passeriformes/Dicaeidae	Sunbird	RS	C	N,F
25	Black drongo	<i>Dicrurus macrocercus</i>	Passeriformes/Dicruridae	Bulbul	RS	C	I,C
26	Lesser golden back woodpecker	<i>Dinopium benghalense</i>	Piciformes/Picidae	Myna	LM	NC	I,C
27	Rufous tree pie	<i>Dendrocitta vagabunda</i>	Passeriformes/ Corvidae	Crow	LM	NC	I,C
28	Tawny-bellied babbler	<i>Dumeria hyperythra (Franklin)</i>	Passeriformes/Acrocephalus	Sparrow	LM	NC	I
29	Black winged kite	<i>Elanus caeruleus</i>	Accipitriiformes / Accipitridae	Kite	RM	NC	C
30	Asian koel	<i>Eudynamys scolopaceae</i>	Cuculiformes/Cuculidae	Crow	RS	C	F
31	Verditer flycatcher	<i>Eumyias thalassinus</i>	Passeriformes/Muscicapidae	Sparrow	LM	R	I
32	Common kestrel	<i>Falco tinnunculus</i>	Falconiformes/Falconidae	Crow	RM	R	C
33	Grey francolin	<i>Francolinus pondicerianus</i>	Galliformes/Phasianidae	Pigeon	RS	NC	I
34	White breasted kingfisher	<i>Haleyon smyrnensis</i>	Coraciiformes/Halcyonidae	Myna	RS	NC	C
35	Brahminy kite	<i>Haliastur indus</i>	Accipitriiformes/ Accipitridae	Kite	LM	R	C
36	Common hawk cuckoo	<i>Hierococcyx varius</i>	Cuculiformes/ Cuculidae	Crow	RM	R	C,I
37	Booted tree warbler	<i>Hippolais caligata</i>	Passeriformes/Acrocephalidae	Sparrow	M	R	I
38	Bay backed shrike	<i>Lanius vittatus</i>	Passeriformes/Laniidae	Sparrow	M	R	C
39	Purple-rumped sunbird	<i>Leptocoma zeylonica</i>	Passeriformes/Nectariniidae	Sunbird	RS	C	N
40	Indian silverbill	<i>Lanichura malabarica</i>	Passeriformes/Estrildidae	Sparrow	LM	C	G,I

41	Black headed munia	<i>Lonchura Malaccensis</i>	Passeriformes/Estrildidae	sparrow	LM	NC	G,I
42	Scaly-breasted munia	<i>Lonchura punctulata</i>	Passeriformes/Estrildidae	Sparrow	LM	C	G,I
43	Vernal hanging parrot	<i>Loriculus Vernalis</i>	Psittaciformes/Psittaculidae	Myna	M	R	F
44	Large pied wagtail	<i>Motacilla maderaspatensis</i>	Passeriformes/Motacillidae	Sparrow	RS	C	I
45	Coppersmith barbet	<i>Megalaima hemacephala</i>	Piciformes/Megalaimidae	Bulbul	RS	C	F
46	Chestnut headed bee eater	<i>Merops leschenaultii</i>	Coraciiformes/Meropidae	Sparrow	LM	NC	I
47	Green bee eater	<i>Merops orientalis</i>	Coraciiformes/Meropidae	Sparrow	RS	C	I
48	Blue tailed bee eater	<i>Merops Philippines</i>	Coraciiformes/Meropidae	Sparrow	LM	NC	I
49	Black kite	<i>Milvus migrans</i>	Accipitridae	Kite	RM	NC	C
50	Indian grey hornbill	<i>Oyceros birostris</i>	Coraciiformes/Bucerotidae	Crow	LM	NC	EG
51	Common tailor bird	<i>Orthotomus sutorius</i>	Passeriformes/Cistocoridae	Sparrow	RM	NC	I,G
52	Indian peafowl	<i>Pavo cristatus(L)</i>	Galliformes/Phasianidae	Peacock	RS	C	I,G
53	Small minivet	<i>Pericrocotus cinnamomeus</i>	Passeriformes/Campetherigidae	Sparrow	LM	NC	I
54	Jungle bush quail	<i>Perdicula asiatica</i>	Galliformes/Phasianidae	Myna	RS	NC	0
55	Black red start	<i>Phoenicurus ochruros</i>	Passeriformes/Muscicapidae	Sparrow	LM	NC	I,N
56	Greenish warbler	<i>Phylloscopus trochiloides</i>	Passeriformes/Phylloscopidae	Sparrow	M	R	EN
57	Tickell's leaf warbler	<i>Phylloscopus affinis</i>	Passeriformes/Phylloscopidae	Sparrow	LM	NC	G,N
58	Ashy prinia	<i>Prinia socialis</i>	Passeriformes/Cisticolidae	Sparrow	RS	C	I
59	Plain prinia	<i>Prinia inornata</i>	Passeriformes/Cistocoridae	Sparrow	RS	C	I
60	Grey-breasted prinia	<i>Prinia hodgsoni</i>	Passeriformes/Cistocoridae	Sparrow	RS	C	I
61	Plum headed parakeet	<i>Psittacula cyanocephala</i>	Psittaciformes Psittaculidae	Myna	RM	C	F
62	Rose ringed parakeet	<i>Psittacula krameli</i>	Psittaciformes Psittaculidae	Myna	RS	C	F
63	Red vented bulbul	<i>Pycnonotus cafer</i>	Passeriformes/pycnonotidae	Bulbul	RS	C	I,F
64	White browed bulbul	<i>Pycnonotus luteolus</i>	Passeriformes/pycnonotidae	Bulbul	LM	R	I,F

65	White throated fantail	<i>Rhipidura albicollis</i>	Passeriformes/ Rhipiduridae	Sparrow	RS	C	I
66	Indian robin	<i>Saxicoloides fulicata</i>	Passeriformes/ Muscicapidae	Sparrow	LM	C	I
67	Spotted dove	<i>Streptopelia chinensis</i>	Columbiformes/ Columbidae	Pigeon	RS	C	G
68	Eurasian collared dove	<i>Streptopelia decacta</i>	Columbiformes/ Columbidae	Pigeon	RS	NC	G
69	Little brown dove	<i>Streptopelia senegalensis</i>	Columbiformes/ Columbidae	Myna	RS	NC	G
70	Common woodshrike	<i>Tephrodornis pondicerianus (Gmelin)</i>	Passeriformes/ Tephrodornithidae	Sparrow	LM	R	I
71	Asian paradise flycatcher	<i>Terpsiphone paradise</i>	Passeriformes/ Monarchidae	Bulbul	RM	NC	I
72	Eurasian blackbird	<i>Turdus merula (L)</i>	Passeriformes/ Turdidae	Myna	M	R	I
73	Yellow-billed babbler	<i>Turdoides caudata</i>	Passeriformes/ Leiothrichidae	Myna	RS	C	I
74	Jungle babbler	<i>Turdoides striata</i>	Passeriformes/ Leiothrichidae	Myna	RS	C	I
75	Common hoopoe	<i>Upupa epops</i>	Coraciiformes/ Upupidae	Myna	RS	NC	I,C
76	Red wattled lapwing	<i>Vanellus indicus</i>	Charadriiformes/ Charadriidae	Myna	RS	C	I
77	Oriental white eye	<i>Zosterops palpebrosus</i>	Passeriformes/Zosteropidae	Sunbird	RM	C	F

Feeding Guide	
C	Carnivores
NC	Frugivores
R	Granivores
I	Insectivores
N	Nectivores
O	Omnivores

Abundance scale	
C	Common*
NC	Not Common**
R	Rare***

* Observed during most part of sampling period

** Observed only few times during sampling period
*** (Observed only once or twice)

Status	
RS	Resident*
M	Migratory**
LM	Local Migratory***
RM	Resident Migratory****

* Observed through the sampling period.

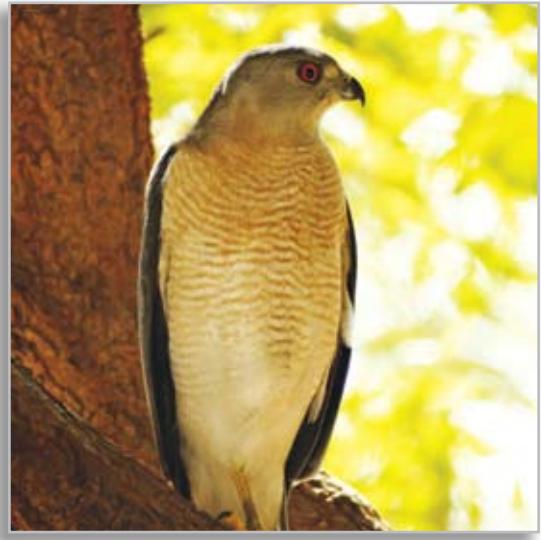
** Migratory comes to this part of the country for some part of the year.

*** Comes to academy campus from adjoining areas.
**** Migrate to other parts of the country during some part of year.

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Shikra (*Accipiter badius*) Female



SHIKRA

Accipiter badius

Family: Accipitridae Size: 35cm

Distribution: The bird is breeding resident throughout India except in Himalayan foothills. It is seen in wooded places and avoids heavy forests. It is fond of grooves of large trees near villages and cultivations.

Description: It is a small, pale coloured raptor. Adult male is ashy blue-grey above, white below with rusty brown cross bars and smaller in size. Female is larger with dark brown colouration. It usually occurs singly or in pairs.

Feeding: It is a very aggressive hunter and preys upon mice, squirrels, reptiles and smaller birds. Spots prey while sitting on tree branches and moves swiftly towards it before the prey is aware of danger.

Nesting: The bird nests high in trees. Nest is made up of dry twigs in shape of platform.



TAWNY EAGLE

Aquila rapax

Family: Accipitridae Size: 71cm

Distribution: The bird is commonest of eagles found throughout drier parts of India up to an elevation of 4000m in Himalayas. Not found in Northeastern part. It inhabits semi-deserts and dry rocky scrub places, often found near villages and cultivations.

Description: It is a large, variably coloured raptor with yellow irises. It has typical flat

eagle's head, powerful hooked bill and fully feathered legs. Wings are long, reaching almost tip of tail when at rest, broad and ending with 'splayed fingers' pattern similar to vultures.

Feeding: It is largely a scavenger and a pirate, feeding at carcasses or by robbing other raptors. Rarely catches hares, small rodents, sick and disabled birds.

Nesting: It nests on solitary trees, bamboos etc., Nest is a large platform of sticks, thinly lined with grass and leaves.

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Brahminy kite (*Haliastur indus*)



(source: www.arkive.org)

BLACK WINGED KITE (Black-shouldered Kite)

Elanus melanopterus

Family: Accipitridae **Size:** 33cm

Distribution: A widespread resident bird in India but unrecorded in Northeast and Northwest. Found mostly in grasslands interspersed with cultivation, scattered trees and scrub forest.

Description: It is a small raptor distinguished by ruby red eyes. Upper body is pale grey with black shoulders and black wing tips. Head and under parts are white. Both sexes look similar.

Feeding: The bird is crepuscular in habit, but also active during day. It pounces on prey from high perch. The prey includes grasshoppers, crickets, lizards, rodents, frogs, small snakes, and injured birds.

Nesting: Nest is small and untidy built on isolated trees.



BRAHMINI KITE

Haliastur indus

Family: Accipitridae **Size:** 50cm

Distribution: This is a locally found bird of Coastal India and South India but unrecorded in Northwest and parts of Northeast. Found in vicinity of water, flooded paddy fields, tanks, reservoirs, lakes etc.,

Description: Bird is medium sized raptor with rich chestnut body colour, white head, neck and breast. Wings are black tipped. Tail is rounded. Both sexes look similar.

Feeding: The bird perches on tall trees overlooking water and scavenges on fish, fish wastes small animals and preys upon winged termites during rains in air.

Nesting: Nest is built in large Peepal, Banyan and similar such trees growing near water. Nest is a loose platform of twigs, lined with green leaves.

©Bipin Phal Desai



Black kite (*Milvus migrans*)



BLACK KITE

(*Pariah, Dark, Black-eared Kite*)

Milvus migrans

Family: Accipitridae **Size:** 61cm

Distribution: It is a local breeding resident found throughout India up to an elevation of 2500m in Himalayas. Most abundant of all raptors and is found in villages, cities, towns, along rivers and lakeshores.

Description: Bird is large in size, with brown body colour and pale head distinguished from other raptors by its forked tail. Both sexes look similar while juveniles are very pale in colour.

Feeding: They move in scattered groups in search of food. Gather on pylons and other structures near food sources and are found scavenging on dead animals and garbage particularly fish. Also feed on earthworms, winged termites, lizards, mice and young birds.

Nesting: They nest high on trees or roofs and corners of buildings.



(source: www.arkive.org)

6) COMMON SWIFT

(*House Swift, Little Swift*)

Apus affinis

Family: Apodidae **Size:** 15cm

Distribution: This is a commonest swift found throughout India except Rajasthan and Himalayan foothills. It prefers urban areas and ancient old buildings where it builds nests.

Description: The bird has broad wings and almost square tail, blackish in colour. The overall body is very dark with peculiar white throat patch and square white rump. The wings are pointed with broad base giving bat-like flight to bird.

Feeding: Swifts feed on aerial insects.

Nesting: Swifts are known to build their colonies under bridges, eaves of buildings and old walls. Nest is a round, untidy cup of feather and straw cemented with bird's saliva.

©Bipin Phal Desai



Cattle egret (*Bubulcus ibis*)



(source: www.arkive.org)

ASIAN PALM SWIFT (Palm Swift)

Cypsiurus balasiensis

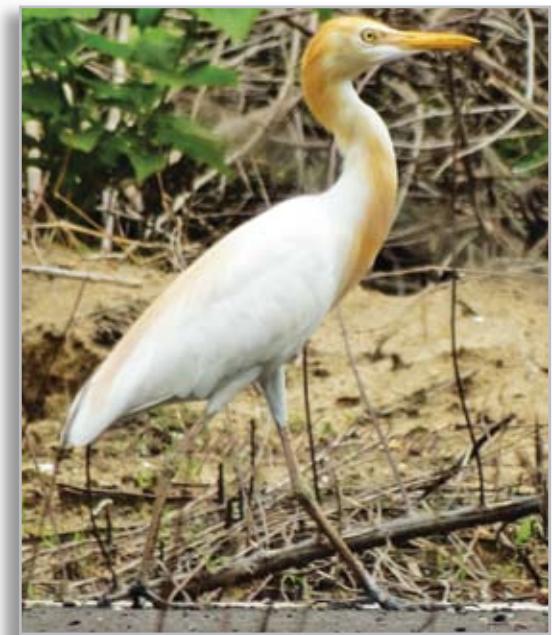
Family: Apodidae Size:13 cm

Distribution: It is common in southern and eastern parts of India. Strictly associated with palmyra and other palms. It hunts in small groups over cultivations and open forests.

Description: Bird is very small in size with slender body and long tail. The body colour is brown which fades to pale brown on throat and belly. It has narrow, long, back swept wings and forked tail held close which appears as a point.

Feeding: Feeds on aerial insects.

Nesting: It builds a unique nest with soft feathers and other materials collected in air. Nest is stuck to underside of palm leaves. The two eggs are stuck to nest and hatched young ones cling to it by their claws until fledging.



CATTLE EGRET

Bubulcus ibis

Family: Ardeidae Size:50cm

Distribution: It is abundantly found throughout India. Commonest of all herons and found near wetlands, grasslands, garbage dumps, open wooded places and parks. It is often seen in fields during ploughing operations.

Description: Bird is medium-size, with snow white body colour and short yellow bill. During breeding plumage, body colour changes to slight orange with bushy head and dark orange bill. Both sexes are alike.

Feeding: It is known to feed from the backs of ungulates and on insects disturbed by animals. It is active feeder, feeding mainly on large insects and also refuse and carrion.

Nesting: It breeds and nests in tree colonies. Nest is similar to that of Crow.

©Bipin Phal Desai



Pond heron (*Ardeola grayii*)



INTERMEDIATE EGRET (Smaller, Median, Yellow-billed)

Mesophoyx intermedia

Family: Ardeidae Size: 80 cm

Distribution: It is common resident bird throughout plains and coastal parts of India. Mostly found in wetlands and coastal areas.

Description: This heron is large in size with snow-white body colour, thick neck and dark bill. Its neck has gentle curve as compared to other egrets but while standing keeps its neck straight.

Feeding: It feeds on aquatic animals, fishes and other insects. Hunts by slow stalking.

Nesting: Nests in tree colonies. Nest is in shape of loose platform built with sticks.



INDIAN POND HERON (Pond Heron, Paddy Bird)

Ardeola grayii

Family: Ardeidae Size: 45 cm

Distribution: This is a common breeding resident found throughout India but unrecorded in parts of Northeast and Northwest. It occurs wherever there is water including temporary ponds. Lives solitary but several birds feed close together.

Description: It is a small, brown coloured heron with contrasting white wings and tail. It has short, thick legs and dark-tipped, yellow bill. During breeding plumage, bird acquires dark purplish-brown body colour with yellow head, neck and breast. Both sexes look similar.

Feeding: It sits hunched waiting for aquatic fishes and insects and feeds on them.

Nesting: It nests in tree colonies. Nest is similar to that of Crow's built in large mango, tamarind or other such trees.

© Sidhesh Naik



Indian grey hornbill (*Ocyceros birostris*)



INDIAN GREY HORNBILL (Common Grey Hornbill)

Ocyceros birostris

Family: Bucerotidae Size: 60cm

Distribution: It is an endemic breeding resident throughout India except Malabar, parts of Rajasthan and Assam. Especially found in Fig, Peepal and Banyan trees along roadsides near villages along with pigeons and other frugivores birds.

Description: It is a clumsy brownish grey bird with enormous black and white curved bill surmounted by peculiar protuberance or casque and long graduated tail. Male's black casque is longer and pointed. Females show a smaller casque.

Feeding: It is sociable and arboreal, feeds on fruits and also on large insects, lizards and rodents, caught on ground.

Nesting: Nests in tree hollow walled up with bird's droppings. Incubating female is sealed in nest by male leaving a narrow slit through which male feed her throughout incubation period.



(source: www.arkive.org)

INDIAN NIGHT JAR (Common Indian, Little)

Caprimulgus asiaticus

Family: Caprimulgidae Size: 24cm

Distribution: It is fairly distributed throughout India except in North India. It inhabits dry, open scrub jungles including fallow and sparse plantations.

Description: Night Jar is a nocturnal bird. It is small in size with complicated camouflaging body pattern. Has mottled grey-brown body with white breast patch and moustache.

Feeding: It spends the day squatting under bushes. Gets active after sunset, during night and catches flying insects.

Nesting: The bird roosts exclusively on ground. Rests on trees after dark and lays eggs on bare ground in bamboo or jungle bushes.

© Sidhech Naik



Indian thick knee (*Burhinus indicus*)



INDIAN THICK KNEE

Burhinus indicus

Family: *Burhinidae* **Size:** 39cm

Distribution: It is widespread resident throughout India. Prefers scanty, scrub forests, ploughed or fallow lands, light deciduous forests and mango grooves.

Description: It is very similar to Eurasian Thick-knee but has smaller, darker and more heavily streaked body, larger bill, shorter tail and longer tarsi. Bill is blacker and shows more pronounced bars on wing-coverts. It is mainly crepuscular or nocturnal and spends day standing or sitting in shade.

Feeding: Feeds on insects, worms, small reptiles etc., and adding small quantity of grit.

Nesting: It lays eggs on ground in scrape, dry river bed or mango grooves. Both sexes share parental duties.



GRAETER COUCAL (Crow- pheasant)

Centropus sinensis

Family: *Centropodidae* **Size:** 50cm

Distribution: It is fairly distributed in India up to elevation of 2000 m. Inhabits grasslands, cultivations, scrub, open woodland, forest edges and reed beds. It is one of the non-parasitic cuckoos.

Description: The bird is large in size with glossy black body and chestnut coloured mantle and wings. It has red irises and strong bill.

Feeding: It walks grandly on ground with horizontally held tail to locate for large insects and reptiles. Often climbs to heights in order to glide to destination.

Nesting: Nest is built in tangled shrubs of moderate height with the help of twigs and leaves.

©Geerish Bailudkar



Red-wattled lapwing (*Vanellus indicus*)



RED -WATTLED LAPWING (Die-ye-do-it? Bird)

Vanellus indicus

Family: Charadriidae Size: 35 cm

Distribution: Abundant breeding resident throughout country. It inhabits open places in vicinity of water and found in villages, parks and gardens.

Description: The bird is large in size, with warm brown colour above, black head, neck and breast and white underparts. It has black-tipped red bill, red wattles and eye rings and yellow legs. Sexes are alike.

Feeding: It feeds on insects, grubs, molluscs etc., Runs in short spurts and dips forward obliquely to pick up food in the depressions.

Nesting: Lays eggs on bare ground in open wasteland, occasionally with the depression ringed around with few pebbles. They match the soil perfectly and are difficult to find.



BLUE ROCK PIGEON (Rock dove, Feral, Blue Pigeon)

Columba livia

Family: Columbidae Size: 33cm

Distribution: It is abundantly found in India. Inhabits urban areas and cultivations. Frequently observed in remote rocky places with cliffs and ruins. Found in mixed groups with domestic pigeons and doves.

Description: It is a medium-sized bird with small head and stocky body. It interbreeds with domestic pigeons and show variations in body colour but basically it is blue-grey with green-purple sheen across neck. Always has two long neck bars across wing coverts. Both sexes look similar.

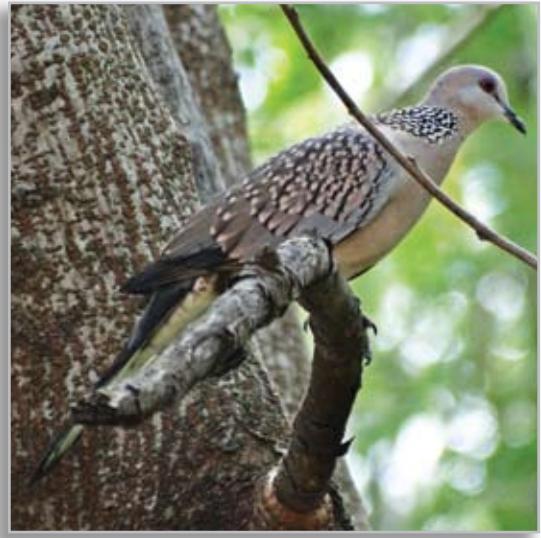
Feeding: Feeds in flocks on split grain and sprouting cereals.

Nesting: Nests colonially in cavities and on ledges in buildings and cliffs, ceilings of dwelling houses.

©Bipin Patel Desai



Spotted Dove (*Streptopelia chinensis*)



SPOTTED DOVE

Streptopelia chinensis

Family: Columbidae **Size:** 30 cm

Distribution: It is commonly found throughout Country except arid Northwestern parts. Seen in open deciduous forests, cultivations, fields, villages, parks and gardens.

Description: It is a medium-sized, pink and spotted brown dove with large white-spotted black, hind neck patch. Tail is dark with broad white borders. It is quite confiding and flies noisily over short distances when disturbed.

Feeding: It feeds in pairs and small groups on seeds on ground and grit on roads. Drinks water frequently.

Nesting: It nests low in tree or bush, and corners and beams in verandas of bungalows.



EURASIAN COLORED DOVE (Indian Ringed, Collared)

Streptopelia decaocto

Family: Columbidae **Size:** 32cm

Distribution: It is found abundantly throughout lowlands including deserts. Inhabits urban areas and cultivations. Found in mixed groups with Pigeons and other Doves.

Description: Medium-sized, fawn brown dove with black hind collar. Tail is dusky with broad white tips. It has black beady eyes. Both sexes look similar.

Feeding: Feeds in flocks on split grain and sprouting cereals.

Nesting: Nests low down in tree, bush or building. It is territorial and defensive of its nest, driving off even Shikra.

©Siddesh Gaude



Indian roller (*Coracias benghalensis*)



LITTLE BROWN DOVE (Laughing Dove)

Streptopelia senegalensis

Family: Columbidae Size: 27cm

Distribution: It is found in drier parts of entire Gangetic plains and Peninsular India upto Tripura. Prefers dry stony, scrub places with cactus brakes, in villages and cultivations.

Description: It is a small, slim dove, with earthy brown and grey upper body and pinkish brown and white underparts. It displays a miniature 'chessboard' pattern in rufous and black colour on either side of neck.

Feeding: Feeds on seeds and grains fallen on the ground.

Nesting: It builds nest in shape of platform with twigs in Euphorbia clumps and also on rafters and inhabited dwellings.



INDIAN ROLLER (Blue Jay)

Coracias benghalensis

Family: Coraciidae Size: 31cm

Distribution: It is distributed throughout India from Himalayan foothills to South. Resident and partial local migrant. It is found in open and light deciduous forests.

Description: This is a beautiful bird with wings in two shades of blue. Crown, inner wing, outer tail and belly are turquoise whereas tail centre, tip and most of the flight feathers are darker blue. Neck and breast is dark pink with white streaking on throat. Bill is large, dark and conspicuous. Sexes are alike.

Feeding: It perches on wires and pounces upon large insects, rodents and frogs. Also chases insects in flight. Highly beneficial to agriculture since it destroys vast quantities of injurious insects.

Nesting: Nests in tree hole or building holes by collecting straw, rags and rubbish.



Plain prinia (*Prinia inornata*)



PLAIN PRINIA (Plain warbler)

Prinia inornata

Family: Cisticolidae **Size:** 13 cm

Distribution: It is common breeding, near endemic resident throughout plains and lower hills of India. Inhabits all type of damp grasslands, crops and scrubs.

Description: A small, long-tailed warbler with prominent white supercilia. The body is pale brown with rufous wing edging above and whitish below. Tail is graduated with whitish tail feathers. Rotates its tail making it appear as barely fixed. Takes low, jerky flights. Both sexes are alike.

Feeding: Feeds secretly on ground insects. Active and inquisitive while feeding.

Nesting: Nests are hung on stems of weeds usually up to 1m height. Nest is long, pear-shaped pouch of woven grass stripes, open or with lateral entrance hole near top.



GREY BREASTED PRINIA (Franklin's Wren Warbler)

Prinia hodgsonii

Family: Cisticolidae **Size:** 11cm

Distribution: This bird is common breeding resident throughout the Country except few parts of Rajasthan. It inhabits scrub undergrowth of open forests, forest edges and thick scrubs.

Description: This is the smallest prinia with proportionally shortest tail. The bird has bright pink legs, fine dark bill and red irises. Tail is graduated with black and white feather tips. During breeding season, bird develops greyish breast band.

Feeding: It feeds on insects, usually in small active groups and also on nectar of Butea, Erythrina and other flowers.

Nesting: Nests low down in bush and grass cover.

A close-up photograph of an Asian paradise flycatcher male perched on a tree branch. The bird has a distinctive long, deeply forked orange-red tail. Its head is dark blue with a prominent white supercilium and a black crest. The body is white with dark brown wing patches. It is perched on a thick, textured brown branch, surrounded by green leaves.

©Bipin Phal Desai

Asian paradise flycatcher male (*Tersiphone paradiso*)



ASIAN PARADISE-FLYCATCHER (Paradise Flycatcher)

Terpsiphone paradise
Family: Corvidae Size:20cm

Distribution: Fairly common throughout India. Mainly breeding summer visitor to northern and peninsular hills, and comes down to plains in winters. Inhabits shady areas in forests, gardens and plantations, often near water.

Description: It is a small sized bird, known for beautiful, extremely long tail feathers in males up to 20cm length. Body of males is full rufous with white underparts during normal period and full white during breeding season. Male has black-crested head, broad bluish bill and blur-rimmed eyes. Female and juvenile are as in rufous phase with short tail and crest.

Feeding: Feeds by catching flies in air. The agile-fairy like movements of male as he twist and turns in the air after flies, with his tail ribbons looping or trailing behind is spectacular watch.

Nesting: Nests high in tree fork or elbow. Nest is compactly woven cup of fine grasses and fibre, plastered outside with cobwebs.



BLACK-HEADED CUCKOOSHRIKE

Coracina melanoptera
Family: Corvidae Size: 20 cm

Distribution: It is a endemic breeding resident from Himalayan foothills to Southern peninsula. Rare in Northeast and scarce winter

visitor in Northwest. It is found in good wooded forests and is a shy bird.

Description: Bird is medium sized, black and grey in colour. Male has black hood and white edged black wings and tail. Underparts are white. Female is browner grey with whitish supercilia.

Feeding: The bird feeds on insects, fruits and nectar and berries of Lantana.

Nesting: It nests high on tree branch.



Common jungle crow (*Corvus macrohynchos*)



BLACK DRONGO (King Crow)

Dicrurus macrocerus

Family: Corvidae **Size:** 31cm

Distribution: Abundant breeding resident throughout lowlands. Commonly seen in open, light wooded places, urban parks and cultivations.

Description: Bird is commonest among Drongos, glossy black in colour with blue gloss on head and breast. Eyes are dark red and it is characterized by long, deeply forked tail. Sexes are alike. Aggressive to larger birds.

Feeding: It is usually found solitary, sometimes in small groups. Feeds on aerial and ground insects, wild figs, berries and nectar.

Nesting: Nests in tree fork or branch of large trees preferably standing alone in the open.



COMMON JUNGLE CROW

Corvus macrorhynchos

Family: Corvidae **Size:** 48 cm

Distribution: It is fairly distributed throughout India except in Rajasthan. Found in moderate dense forests including forest edges and urban parks.

Description: It is bold and inquisitive bird. It is large in size, glossy black colour with steep forehead and large curved bill. Bill and forehead are best shaped features.

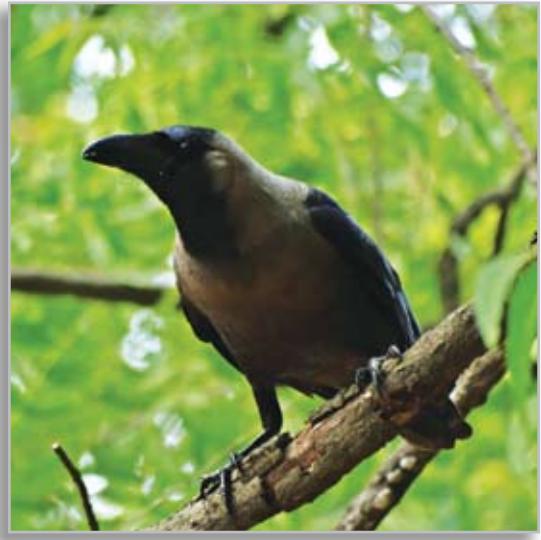
Feeding: It can eat anything, including carrion.

Nesting: It roosts communally often with other bird species and nests high in trees. Nests are parasitized by Koel.

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Common iora female (*Aegithina tiphia*)



HOUSE CROW (Indian House Crow)

Corvus splendens

Family: Corvidae **Size:** 43cm

Distribution: House Crow is one of the most familiar but least-loved birds and found abundantly throughout India. It is mainly seen around human habitations.

Description: House crow is a medium-sized, slim, grey and black bird with a long, black bill. Both sexes are alike.

Feeding: It feeds on almost anything including garbage and carrion. It robs other birds' nests and people's shops.

Nesting: They form huge roosting flocks and nests in trees. Nest is a cup-like depression lined with coir, fibres, twigs etc., Koel commonly lays its eggs in Crow's nest.



COMMON IORA (Iora)

Aegithina tiphia

Family: Corvidae **Size:** 14 cm

Distribution: Found throughout India except Northwest region. It inhabits forest edges, groves and wooded places. Occurs singly or in pairs.

Description: It is a small, yellow and green arboreal bird with white-marked black wings. Non-breeding males and females have similar plumage but males have black tails. Both males and females have yellow underparts.

Feeding: It feeds on insects, their eggs and larvae and also flower nectar.

Nesting: It nests in trees. Nest is cup-shaped made up of grasses and plastered with cobwebs.

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Rufous treepie immature (*Dendrocitta vagabunda*)



COMMON WOODSHRIKE (Lesser Woodshrike)

Tephrodornis pondicerianus
Family: Corvidae Size: 16cm

Distribution: Commonly found throughout Country. Inhabits open woodlands, groves, parks and gardens.

Description: Bird is small sized, with brown and white body colour and white outer tail feathers. It has broad white supercilia and dark brown face mask. Upper parts are unmarked pale brown while underparts are whitish and both sexes look similar.

Feeding: Feeds on insects and nectar on trees. Moves rapidly in small groups through trees.

Nesting: Nests in tree forks. Nest is cup shaped neatly built, with soft bark and fibres cemented together with cobwebs.



RUFOUS TREEPIE (Indian Treepie)

Dendrocitta vagabunda
Family: Corvidae Size: 50cm

Distribution: Common breeding resident throughout lowlands and foothills of the Country. Inhabits any place with trees, including open forest, urban parks and gardens. Not shy to enter residential compounds and gardens.

Description: The commonest of treepie with long-tail, grey and rufous body. Upper body

parts are cinnamon-rufous, paler below with dark grey head and black and white wings. Tail is pale grey (black below) graduated, edged and broadly tipped with black colour. Bold and inquisitive bird often remains hidden in foliage.

Feeding: Mainly arboreal but will feed on ground. Eats insects, reptiles, small birds and their eggs, fruit, nectar and garbage.

Nesting: Nests are concealed in foliage of moderate trees. Nest is same as crow's nest but deeper built out of thorny twigs, well lined with rootlets.

© Sidhesh Naik



Small minivet male (*Pericrocotus cinnamomeus*)



SMALL MINIVET (Little minivet)

Pericrocotus cinnamomeus

Family: Corvidae **Size:** 15cm

Distribution: Fairly common breeding resident throughout most of the lowlands of India. It is exclusively arboreal and seen in gardens, groves and light deciduous jungles in flocks mainly during winters.

Description: Small, black, grey and orange arboreal bird with long tail. Male has dark grey head and mantle, black face, wings and tail, orange rump and wing patch. Female is orange yellow below and grey above with yellow wings.

Feeding: It flits rapidly through canopies in small groups. Feeds on insects in foliage.

Nesting: Nests in trees. Nest is a shallow cup of fibers coated externally with cobwebs and lichens attached to upper surface of branch.



WHITE THROATED FANTAIL (Fantail Flycatcher)

Rhipidura albicollis

Family: Corvidae **Size:** 17cm

Distribution: Found commonly in Southern India. Makes altitudinal and local movements. It inhabits shady places and well wooded ravines.

Description: It is a small, brown and white bird with broad white tipped tail. Bird has white brown breast with rest white under parts. Constantly flirts its broad tail.

Feeding: Forages for insects at middle and lower level canopies and around tree trunks.

Nesting: Nests low down in tree forks. Nest is beautifully made cup of fine grass and fibres, plastered with cobwebs.

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Asian Koel female (*Eudynamys scolopaceus*)



ASIAN KOEL (Koel, Indian Koel, Cuckoo)

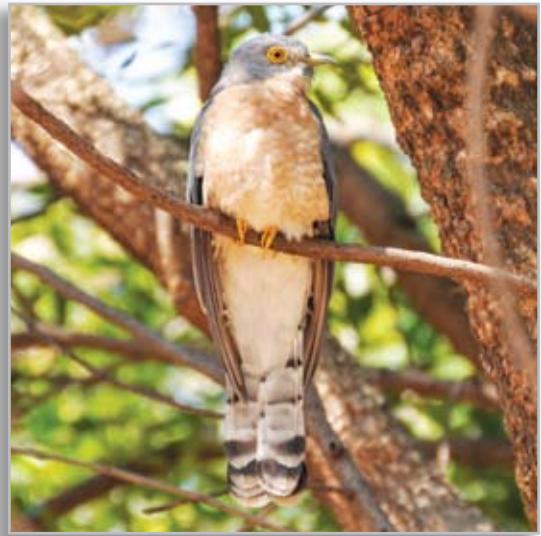
Eudynamys scolopacea
Family: Cuculidae Size:43cm

Distribution: Common breeding resident throughout Country but monsoon breeding visitor to the Northwest. Inhabits all types of wooded places, city parks and gardens. It is silent in winter and becomes increasingly noisy with advance of hot weather.

Description: It is a commonly seen bird before advent of monsoons. Males have full glossy black body, with white bill and ruby red eyes. Females and juvenile are brown above with white barred and white spotted body. They are brood parasites.

Feeding: Adults eat mainly fruit and rob other bird's nests. Also known to feed on caterpillars and insects.

Nesting: Brood -parasites of House and Large-billed Crows. Young accompany foster parents for several weeks, noisily demanding food.



COMMON HAWK CUCKOO (Brain- fever bird)

Hierococcyx varius
Family: Cuculidae Size:34cm

Distribution: It is found commonly throughout India from an elevation of 800 m in Himalayas to South. It is Nest-parasitic and found in wooded forests, plantations, parks and gardens.

Description: It is a medium sized Cuckoo and resembles Shikra. Upper parts are clear grey, pale underneath with long barred tail. The bill has dark yellow base.

Feeding: It feeds mainly on caterpillars and brood-parasitize babblers.

Nesting: It is parasitic on Nests of Babblers. Hatchlings are reared to maturity by foster parents.

©Geerish Bailudkar



Common Kestrel (*Falco tinnunculus*)



COMMON KESTREL (Kestrel, Eurasian Kestrel, Windhover)

Falco tinnunculus

Family: Falconidae Size:35 cm

Distribution: It is a winter visitor from Northern Mountains and Western Ghats. Inhabits mountains, semi deserts and cultivations. Often found near ruins and cliffs, where it nests on edges.

Description: It is a small, slender, long winged and long tailed raptor. Male is grey-headed with black moustache, grey tail and broad black band. Body is chestnut coloured, lightly-spotted. Female and immature are streaked brown with barred tail.

Feeding: It is chiefly distinguished for its spectacular method of Hunting. It checks itself now and again in flight and remains poised and stationary in mid air on rapidly hovering wing tips for many seconds, intentionally, scanning for crawling prey on ground.

Nesting: It builds nest of twigs, roots, rags and rubbish in hole or crevice, or on edge, of cliff. Occasionally in trees and on ruined buildings.



WHITE BREASTED KINGFISHER (White -throated)

Halcyon smyrnensis

Family: Halcyonidae Size: 28cm

Distribution: Abundant breeding resident throughout plains and lower hills of India. Commonest and least dependant on water.

Found in cultivations, parks, gardens, open forest and fresh and coastal wetlands.

Description: Bird is beautiful, turquoise colour with broad brown and black wing shoulders. It is characterized by white throat and white central breast. Both sexes look alike.

Feeding: Frequently perches on wires, posts and trees. Feeds by pouncing on insects, reptiles, amphibians and rodents on ground. Occasionally dives for fish.

Nesting: Nests in horizontal tunnel dug into side of dry nullah or earth cutting. Both sexes excavate, incubate and feed the young one.



Chestnut headed bee-eater (*Merops leschenaultia*)



BAY BACKED SHRIKE

Lanius vittatus

Family: Laniidae Size: 18cm

Distribution: The bird is common in Central and Southern parts of India and rare in Northeast. It is found in dry, open scrub forests, and edges of cultivations.

Description: This is the smallest Indian Shrike. Bird has chestnut back, black forehead and black eye mask. It has strikingly coloured, delicately built and fine-billed body. Both sexes look similar.

Feeding: It perches on low bushes and wires looking for feed, mainly insects like locusts. Also feeds on lizards and large insects.

Nesting: Nests in thorny trees. Nest is cup shaped built neatly with grass rags, wool and feathers.



CHESTNUT HEADED BEE EATER

Merops leschenaultia

Family: Meropidae Size: 21cm

Distribution: It is found in Western Ghats of Country to south of Belgavi, Himalayan foothills, the North-east and southern peninsular hills. Prefers foothills up to 1000 m elevation. Inhabits stream and pool margins in forests intermediate between the moist evergreen and dry deciduous type forests.

Description: Bird is small in size, yellow and green coloured, with a square-ended tail with slight notch. Throat is bright yellow and bird has contrasting chestnut coloured crown and mantle with black eyestripes. Male and female are alike.

Feeding: Feed on flying insects by acrobatic dives from exposed perches.

Nesting: Nests are formed in as tunnels in earth cuttings and sandy soil commonly in banks of streams in forests.

©Bipin Phal Desai



Green bee eater (*Merops orientalis*)



GREEN BEE- EATER (Little Green Bee-eater)

Merops orientalis

Family: Meropidae Size: 21cm

Distribution: Common breeding resident throughout lowlands. Inhabits open places, cultivations and light woodlands.

Description: It is a small, active, green bee-eater with black gorget and eyestripes. Total body is green with slight buff wash on crown, bluish cheeks and throat. Conspicuous black 'necklace' long central tail pins on adult, not present in duller juveniles. Bill is slender shape, dark, and decurved.

Feeding: Feeds acrobatically on flying insects including bees. Robs beehives. Sociable, perching on wires, bare branches and on sandy ground. Frequently dust- bathes.

Nesting: Nests in self-excavated tunnels in banks or obliquely into flat ground ending into widened egg chamber, dug in the side of an earth -cutting, burrow pit or in uneven sandy grounds. Both sexes share in excavating nest-tunnel and feeding of young-ones.



BLUE TAILED BEE EATER

Merops philippinus

Family: Meropidae Size: 30cm

Distribution: Summer visitor to Northern lowlands, wintering down south. Inhabits open often wooded, places near water bodies.

Description: This is a large size, dull green bee-eater, with blue rump and tail. Wings can also show blue wash. Black eyestripes have slight blue edgings. Adults have long tail pins. Sexes are alike.

Feeding: Feeds on dragon flies aerially. Perches on wires, bare branches and ground.

Nesting: Nests in self-excavated burrows in banks or sandy mounds, usually in colonies occasionally in association with Bank mynas.

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Black red start (Phoenicrurus ochruros)



COPPERSMITH BARBET (Crimson- Breasted Barbet)

Megalaima haemacephala

Family: Megalaimidae Size: 17cm

Distribution: Found throughout Country. It is the commonest barbet wherever there are trees. Avoids thick forests.

Description: It is a small, green barbet with brightly coloured head. It has black bordered yellow face with black eye stripes, red forecrown and throat patch. Bill is stout and dark. Body upper parts are grass green while under parts paler greenish. Perches on bare branches. Sexes are alike.

Feeding: Feeds on fruits and nectar. Fond of Banyan and Peepal tree figs.

Nesting: Nests in tree hole at moderate heights.



BLACK REDSTART

Phoenicurus ochruros

Family: Muscicapidae Size: 15 cm

Distribution: It is a common breeding summer visitor to northern mountains from Pakistan, towards east to Sikkim. In winters it moves to foothills and Central and Peninsular India. Inhabits open cultivation and woodlands. Perches on low branches rocks and wires.

Description: It is a grey, black and rusty-red colored bird with dark centre body, rufous tail and rufous rump. Males are either grey in

colour above with black face and throat or black above with greyish forecrown. They have deep rusty colour below. Females have same tail pattern but are dull rufous brown. They sit erect with shivering tail. Usually solitary and shy.

Feeding: Bird perches on branches, wires and flies to ground to pick up insects. Feeds on spiders and winged insects.

Nesting: Nests among rocks. Nest is a loose cup made up of feathers, grass, hairs and wool.

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Tckell's blue flycatcher female (*Cyornis tickelliae*)



VERDITER FLYCATCHER

Eumyias thalassina

Family: Muscicapidae Size: 15cm

Distribution: It is a breeding summer visitor to Northern hills from extreme north Pakistan. It is less common throughout Peninsula and Northwest India. Found in open woods, gardens and mangroves.

Description: It is a medium sized, slim, turquoise flycatcher with black mask and bill. The wings are darker blue and white vent. Female is greyer in colour.

Feeding: Feeds on insects sitting on exposed branches and wires.

Nesting: Nests low in holes of embankments or holes in walls.



TICKELL'S BLUE FLYCATCHER (Orange-Breasted Blue)

Cyornis tickelliae

Family: Muscicapidae Size: 14cm

Distribution: The bird is common breeding resident of lower hilly regions of South India. It is rare in Northeast and Northwest. Found in open dry forests, grooves and gardens, often near water.

Description: It is a small, blue and orange flycatcher with orange throat. Male has blue-throat and clearly demarcated white belly. Female is dull bluish above with faint orange throat to breast.

Feeding: Feeds on aerial insects from lower branches.

Nesting: Nests low down in tree hollows and stumps. Nest is cup shaped, made up of twigs, rootlets, moss and leaves.

©Bipin Patel Desai



Indian robin male (*Saxicoloides fulicata*)



INDIAN ROBIN (Black Robin)

Saxicoloides fulicata

Family: *Muscicapidae* **Size:** 16 cm

Distribution: It is common breeding endemic resident bird found throughout India except North-east region. It is observed in dry, rocky, wooded areas, scrub, cultivation and gardens.

Description: Males are dark in colour with rufous belly and undertail coverts. They have white wing patch. Females are brownish-grey with same rufous under tail. Hops with head and tail held high. Stays solitary but sometimes found in pairs.

Feeding: Feeds on invertebrates, their eggs and spiders on ground.

Nesting: Nests low down under stone or hole in earth bank. Nest is in shape of pad made up of grass, rootlets and rubbish lined with feathers.



LOTEN'S SUNBIRD (Long-billed Sunbird)

Nectarinia lotenia

Family: *Nectariniidae* **Size:** 13cm

Distribution: It is endemic breeding resident of southern peninsular India. Found in open forests and also gardens.

Description: It is a dark sunbird with characteristic long, steeply curved bill. Male is metallic blackish-purple colour on head and black upperparts, wings and tail. Female is dark olive green above and pale yellow below with white tail tips.

Feeding: They feed singly or in pairs on nectar particularly of loranthus flowers and insects.

Nesting: They build nests suspended from trees. Nest is oval pouch made up of fine fibres.

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Purple sunbird female (*Nectarinia asiatica*)



PALE BILLED FLOWERPECKER (Tickell's Flower Pecker)

Dicaeum erythrorynchos

Family: Nectariniidae Size: 8 cm

Distribution: Common breeding resident in plains and low hills of the Country. It is found all along Himalayan foothills to Himachal Pradesh and rare visitor in Northeast India. It is found in open forests, groves and gardens especially in loranthus bushes.

Description: It is a tiny, olive grey flowerpecker with pink bill. Body is olive grey above and grey-buff below. Bill is short and decurved. It is found usually in pairs or small parties moving rapidly between tree tops. Both sexes are alike.

Feeding: It feeds actively on berries and insects high in canopy. Its staple food is berries of noxious plant parasite Mistletoe's.

Nesting: Nests in trees, in a hanging oval pouch with lateral entrance hole.



PURPLE SUNBIRD

Nectarinia asiatica

Family: Nectariniidae Size: 10 cm

Distribution: This is a most widespread sunbird found throughout the Country except extreme Northeast and Northwest regions. It is found in all types of open and lightly wooded forests, urban parks and gardens.

Description: It is a small dark sunbird. Male has metallic purple-blue colour on head and upper body. Wings and belly is blackish with maroon breast band. Female body is brownish-grey above and yellowish below with dark tail.

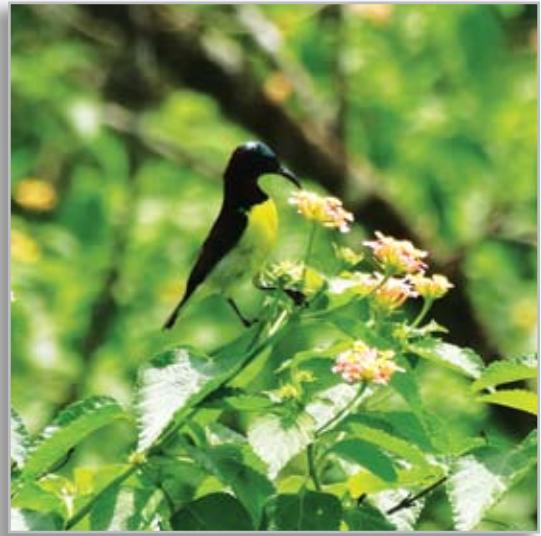
Feeding: The bird feeds on nectar by probing its slender curved bill into flower tubes. Thus it helps in cross pollination.

Nesting: Sunbirds build nests suspended from shrubs or small trees. Nest is oblong pendular pouch of soft grasses. Female builds nests and incubates, male assists in feeding young ones.

©Bipin Phal Desai



Purple rumped sunbird (Nectarinia zeylonica)



PURPLE RUMPED SUNBIRD

Nectarinia zeylonica

Fam: Nectariniidae Size: 10 cm

Distribution: Bird is common breeding resident in South India. Mostly found in forests, secondary growth's, parks and gardens.

Description: It is short tailed, purple and yellow sunbird. Male has metallic green crown, maroon head, mantle, and purple throat, wings and rump. Female is olive-brown with greyish head and throat and pale yellow underparts.

Feeding: Feeds actively on nectar and insects, singly or in pairs mostly on low lying flowers.

Nesting: Nests suspended from tree or bush is in shape of pouch made up of soft grasses, rubbish draped with piece of bark and caterpillar droppings.



BLACK HEADED MUNIA (Chestnut Munia)

Lonchura Malacca

Fam: Passeridae Size: 10cm

Distribution: It is fairly common in Northern, Eastern and Southern Peninsula. Found in paddy, tall grass, grassy scrubs and reedbeds.

Description: It is a tiny, black and chestnut munia with striking blue bill. Upper body is chestnut with bright rump and tail, black and head white underparts. Both sexes are alike. It is a very popular cage bird.

Feeding: Feeds actively in flocks mixed with other seed-eaters on seeds and invertebrates on ground and on plants.

Nesting: It nests in reeds. Nest is a large ball of coarse grasses, lined with fine grasses and with a lateral entrance hole.

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Large pied wagtail (*Motacilla maderpatensis*)



INDIAN SILVERBILL (Common White-throated Munia)

Lonchura malabarica

Family: Passeridae Size: 10 cm

Distribution: It is a common bird found throughout India except Northeast and Southeast. Inhabits dry scrub and grass, open woodland and edges of dry cultivation.

Description: It is tiny slim bird with white rump, sandy brown body, dark brown wings and black, pointed tail. The upper mandible of beak is darker grey whereas lower mandible is silver blue-grey.

Feeding: It feeds on seeds and insects on ground and on plants usually forming small groups.

Nesting: Silverbills are found near Baya Weaver colonies and may sometimes roosts in their Nests. Otherwise they normally nests in low tree or bush. Old disused Baya nests serve as family dormitories.



LARGE PIED WAGTAIL (White-browed wagtail)

Motacilla maderaspatensis

Family: Passeridae Size: 21cm

Distribution: It is endemic breeding resident throughout lowlands of India and rare in Northeast and Northwest. Inhabits lowlands and open watersides of all types, particularly favours irrigation barrages, village tanks and pools.

Description: It is a large, black and white wagtail with distinct supercilia. Upper body is black with white wing patches and edgings, and black tail. Under parts are white. Female is browner above.

Feeding: Feeds usually in pairs on insects on ground or in flight.

Nesting: Nests is cup shaped built under projecting rock, rafters of dwelling houses always close to water source.

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Scaly breasted munia (*Lonchura punctulata*)



OLIVE-BACKED PIPIT

Anthus hodgsoni

Family: Passeridae **Size: 15cm**

Distribution: The bird is common breeding resident in Central and Southern India and summer visitor in Northern mountains. It is seen in open woodlands and plantations beneath trees. It flies rapidly with slight disturbance.

Description: It is a small, pipit with plain back and heavily streaked breast and flanks. Legs are pink in colour. It pumps its tail constantly when perched and while walking.

Feeding: It feeds on invertebrates on ground, grass and weed seeds by forming small loose groups.

Nesting: The bird breeds in open woodlands and nests in ground.



SCALY-BREASTED MUNIA (Spotted, Nutmeg, Mannikin)

Lonchura punctuata

Family: Passeridae **Size: 10cm**

Distribution: It is a common breeding resident throughout India except Western India. Found in secondary forest growth with grass and scrub, cultivation and gardens.

Description: Brown coloured tiny munia with black-scaled white under-parts. Head throat and upperparts are warm red-brown. Both sexes are similar.

Feeding: Feeds on seeds and invertebrates on ground and plants in active flocks sometimes with other seed eaters. Occasionally feeds on winged termites emerging from ground.

Nesting: Nests low in tree or creeper or thorny bushes. Nest is globular structure of grass blades about 20 cm and has lateral entrance.

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Indian peafowl (*Pavo cristatus*)



GREY FRANCOLIN (Grey Partridge)

Francolinus pondicerianus

Family: Phasianidae Size: 34cm

Distribution: It is found in most parts of country except Northeast region. It inhabits dry, open places including woodlands, scrubs, semi-deserts and cultivations.

Description: It is a medium sized, grey and brown coloured bird with black bordered throat. They have finely barred grey and white under parts and buff vent. Run fast when disturbed and flies for short distances. Sexes alike.

Feeding: Feed on ground in pairs or small groups on seeds shoots and invertebrates.

Nesting: They nest on ground. Nest is grass-lined scrape in scrub jungle or grassland.



INDIAN PEAFOWL (Common, Blue Peafowl, Peacock)

Pavo cristatus

Family: Phasianidae Size: Male- 110cm

Female- 86 cm

Distribution: India's National Bird. Locally common endemic breeding resident throughout lowlands of India. Large feral populations in northern, western and central areas. Inhabits forest undergrowth, villages, cultivation and some towns.

Description: It is a huge, very familiar game bird with tufted crest. Adult male has train of elongated green upper tails coverts up to 1.5 m in length. Train covered by blue centered 'eyes'. Small head, deep blue long neck, grey coverts and chestnut wings. Female is brown, whitish below with black barred fore neck and breast and green hind neck. Male is polygamous and found in groups with 4-5 peahen.

Feeding: Feeds methodically on ground on vegetable matter, invertebrates and reptiles in small parties.

Nesting: Roosts high in trees. Nests on ground. Its nest is a shallow scrape in the Ground in dense thicket, lined with sticks and leaves.

©Bipin Phal Desai



Lesser golden backed woodpecker (*Dinopium benghalense*)



(Source: ©Vijay Cavale)

JUNGLE BUSH QUAIL

Perdicula asiatica

Family: Phasianidae Size: 17cm

Distribution: It is commonly found in most of Peninsula but absent in Gangetic plains and Northeast India. They are found in dry, open and stony places with scrub and grass.

Description: It is a tiny, barred bird. Male is heavily barred but black and white below. Head is chestnut colour with white supercilia and moustache. Female is pinky-buff below with barred wing coverts and buff supercilia. They are very secretive and squat if disturbed.

Feeding: Feed on ground on seeds and insects in pairs or small groups.

Nesting: They nest on ground.



LESSER GOLDEN BACKED WOODPECKER (Black-Rumped Flameback)

Dinopium benghalense

Family: Picidae Size: 30cm

Distribution: Breeding endemic resident throughout lowlands of India. It is most widespread of five similar species. Found where there are trees including road and canal avenues, gardens and plantation. Avoids thick forest.

Description: A bright golden and black woodpecker with bold red crest. Black and yellow speckling on shoulders. Black nape, rump and tail. Female has blackish forecrown, white-streaked black throat and eyestripes contrast with white cheeks.

Feeding: Feeds on ants on ground and at all heights on trees, often with mixed hunting groups.

Nesting: Nests in self made tree hole.

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Rose ringed parakeet female (*Psittacula krameri*)



PLUM HEADED PARAKEET (Blossom Headed)

Psittacula cyanocephala

Family: Psittacidae Size: 36cm

Distribution: Fairly common, endemic breeding resident in lowlands. Inhabits wooded areas and plantations. Occurs in city parks and gardens although tends to be more rural.

Description: A slender, Green parakeet with purple-red head in male, dark lavender in female. Males and most females have red shoulder patches, both have white tipped blue tail, and yellow upper and black lower mandibles. Male has black and blue collar. Females yellow.

Feeding: Raid fruit and cereal crops but rarely in large numbers. Pairs are very affectionate.

Nesting: Nests in tree holes excavated mostly by themselves.



ROSE RINGED PARAKEET (Green Parrot)

Psittacula krameri

Family: Psittacidae Size: 42cm

Distribution: Abundant breeding and resident throughout lowlands. Occurs wherever there are trees. Particularly favors city parks and gardens and cultivations where huge flocks can seriously damage fruit, vegetable and grain crops.

Description: The most well-known parakeet. Grass green with long bluish tail and red bill. The Male has black and pink malar stripes and collar after third year. No shoulder patches. Although the most popular cage-bird in region, it remains abundant. Pairs are very affectionate.

Feeding: Thousands of these gather at grain silos and at favored city roosts.
Nesting: Nests in holes in trees and walls, often enlarging an existing hole.

© Sidhesh Naik



White browed bulbul (*Pycnonotus luteolus*)



VERNAL HANGING PARROT (Indian Lorikeet)

Loriculus vernalis

Family: Psittacidae Size: 15cm

Distribution: Scarce breeding resident of lower hills of southwestern and eastern India. Subjected to local movements. It is arboreal and inhabits forests.

Description: It is a tiny, grass green colour gymnastic parrot with a short, square tail. Males have bright crimson rump patch and blue throat. Females look similar but lack blue colour.

Feeding: Feeds usually in pairs on nectar, flowers and small fruits. Occasionally seen in groups. It feeds very actively climbing swiftly around high branches and often hangs upside down to reach fruits. Unique among birds, lorikeets sleep in bat-like position.

Nesting: They nest in small tree holes.



WHITE BROWED BULBUL

Pycnonotus luteolus

Family: Pycnonotidae Size: 20cm

Distribution: Endemic breeding resident of peninsular India. It is found in thick scrub, gardens and forest edge.

Description: A plain bulbul with white colour eyebrows and eye rings. It has dark eye strips and moustache but overall dull in colour. Both sexes are alike. It is a shy bird found mostly in pairs or small groups.

Habits: Feeds on invertebrates, nectar and fruits.

Nesting: Nests in bushes. Nest is cup shaped built out of twigs bound together with cobwebs.



Common myna (*Acridotheres tristis*)



RED-VENTED BULBUL

Pycnonotus cafer

Family: Pycnonotidae **Size:** 20cm

Distribution: Commonly breeding resident throughout plains. It is the most familiar bulbul. Inhabits open wooded places including urban gardens and parks.

Description: Body is black, sooty- brown with characteristic red vent. All dark with paler feather edgings, which gives scaly appearance to its back and breast. Under parts are paler but head is black with peaked crown. Rump is whitish. Plain brown tail has black sub-terminal band and white tips. Sexes alike.

Feeding: Feeds on insects, nectar, fruits and berries.

Nesting: Nests in low cover. Nest is cup shaped built out of rootlets and cobwebs.



COMMON MYNAH

Acridotheres tristis

Family: Sturnidae **Size:** 23cm

Distribution: It is commonly found throughout plains and lower hills in India. It is seen in towns and villages and associated cultivation, parks and gardens.

Description: It is a small stocky starling with purplish- brown body colour and large white wing patches. It has yellow bill and yellow patches behind eyes. The tail is white tipped. It is usually seen in pairs or groups. Both sexes are alike.

Feeding: Mynahs feed on invertebrates, fruits, nectar, grains and human garbage.

Nesting: The bird is very much territorial and nests in holes. It roosts communally in reedbeds or groves.

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Jungle babbler (*Turdoides striatus*)



JUNGLE BABBLER (Seven Sisters)

Turdoides striatus

Family: Sylviidae Size: 25 cm

Distribution: It is endemic breeding resident found commonly throughout Country except foothills of Himalaya and parts of North-east. Found in open forests, scrubs, cultivations, gardens and villages.

Description: It is a stocky, grey-brown babbler with whitish irises and bright yellow bill. Its short and medium eyebrows give fierce impression.

Feeding: These birds feed in noisy, excited groups on insects on ground.

Nesting: They nest in Bushes. Nest is compact cup built neatly with grass and rootlets.



TAWNY BELLIED BABBLER (Rufous -bellied)

Dumetia hyperythra

Family: Sylviidae Size: 13cm

Distribution: It is endemic breeding resident in Northern foothills from Himachal Pradesh to West Bengal. Found throughout Southern India but not recorded in Northeast and Northwest. Inhabits scrubs and grass patches.

Description: It is a small, brown babbler with yellow irises. It has chestnut crown, orange -buff under parts and white throat and belly. Both sexes are alike. It has camouflaging plumage that merges with background.

Feeding: It feeds on insects, larvae and flower nectar.

Nesting: Nests in low cover on ground. Nest is a neat ball of coarse grass and Bamboo leaves lined with soft grass.

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Yellow billed babbler (*Turdoides affinis*)



YELLOW BILLED BABBLER (White Headed, Southern)

Turdoides affinis

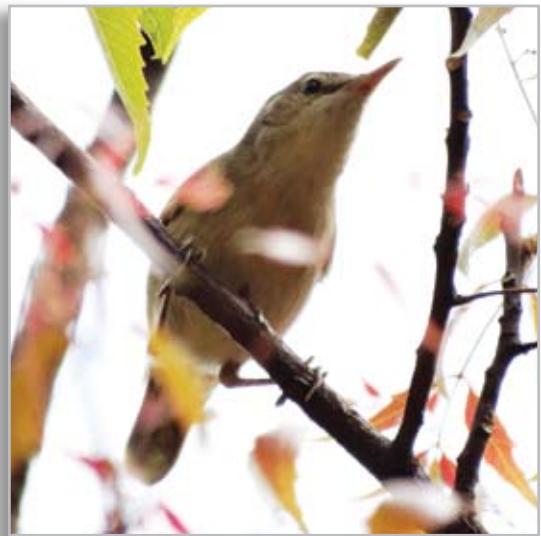
Family: Sylviidae Size: 23cm

Distribution: It is local endemic breeding resident in plains from Goa and Andhra Pradesh to South. It is found in open scrub, woodlands, cultivations, and gardens.

Description: It is a fairly large, stocky grey-brown babbler with pale greyish brown cape and nape. Bill and lores are paler yellow in colour.

Feeding: It feeds on insects on ground forming noisy excited groups.

Nesting: Nests in Bushes.



BOOTED TREE WARBLER (Booted Warbler)

Hippolais caligata

Family: Sylviidae Size: 12cm

Distribution: It is winter visitor to Peninsular India. Found in low scrub, thorny trees and crops.

Description: It is small, plain warbler with dark edged supercilia. Bill is dark above, pale below with tiny dark tip.

Feeding: Feeds on invertebrates in small groups. Forages among leaves and flowers of Acacia and Prosopis.

Nesting: Nests in small bushes or grass clumps, well hidden.

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Greenish warbler (*Phylloscopus trochoides*)



GREENISH WARBLER

Phylloscopus trochiloides

Family: Sylviidae Size: 11cm

Distribution: It is a passage migrant in parts of India and winters in Western Ghats. It winters in dense forests, acacia grooves, mango orchards.

Description: It is a small bird, with bright, pure green upperparts, slightly broader and yellower wing-bars, white supercilium and noticeably yellow cheeks. Under parts are yellowish in colour. Sexes alike.

Feeding: It feeds on invertebrates at ground level.

Nesting: Nests in low bushes.



PADDYFIELD WARBLER

Acrocephalus agricola

Family: Sylviidae Size: 13cm

Distribution: This bird is found in Northern, Western, North-eastern and Southern India. It normally occurs in reedbeds, mangroves and paddy and sugarcane fields.

Description: It is a long-tailed, brown, wetland warbler with marked supercilia. It has whitish supercilia that extend beyond eyes. The body is rufous brown above mainly on rump, with short wings and long rounded tail. The bill is dark above and pale below with dark tip. Both sexes are similar. Bird is camouflaging and not easy to observe.

Feeding: It feeds on invertebrates at ground level.

Nesting: Nests in low vegetation close to ground.

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Tickell's leaf warbler (*Phylloscopus affinis*)



TICKELL'S LEAF WARBLER (Tickell's Warbler)

Phylloscopus affinus

Family: Sylviidae Size: 11cm

Distribution: It is a summer visitor to northern mountains from Pakistan and Bhutan but winters in Southwest and Peninsular India. Found in scrub forests in summers and forest edges and gardens in winters.

Description: It is a small green warbler with very prominent yellow supercilia. It has deep yellow colour on throat and breast and prominent eye stripes. Sexes are similar.

Feeding: Feeds on invertebrates close to the ground.

Nesting: Nests close to the ground in bushes.



COMMON TAILOR BIRD (Tailorbird)

Orthotomus sutorius

Family: Sylviidae Size: 13 cm

Distribution: It is common breeding resident throughout plains and hills in India. It is found in all types of scrub including forest edges, gardens and mangroves.

Description: A small, long-tailed bird with rusty fore-crown. Bright green colour above and whitish below. A long thin pale bill and pink legs. The tail is longest in breeding males, usually cocked and waved. It has dark feather bases on throat sides. It flies weakly with tail raised.

Feeding: Feeds mainly on invertebrates on the ground and flower nectar of Erythrina and Salmalia.

Nesting: It is famous as tailor bird as it stitches two leaves in to a pouched nest, low in shrub or potted plants.

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Spotted owlet (*Athene brama*)



SPOTTED OWLET

Athene brama

Family: Strigidae Size: 21cm

Distribution: The bird is commonest of all owls found throughout the Country. It inhabits open woodlands and cultivations near habitations.

Description: It is a small greyish brown owl with yellow irises. It has white spots on brown crown and white markings on greyish brown upperparts. Eyebrows are white and rounded crown gives startled expression. Both sexes are similar.

Feeding: It feeds on reptiles, insects, small birds and mammals.

Nesting: It nests in holes in tree, walls or cliffs.



COMMON HOOPOE (Hoopoe)

Upupa epops

Family: Upupidae Size: 31cm

Distribution: Common breeding resident throughout lowlands, subject to local movements. Inhabits cultivation, open woodlands, villages, parks and gardens.

Description: Striking bird with pinkish-orange fan-crest, black and white body and long decurved bill. Orange or rufous pink with white barred black tail and wings. Distinctive, halting flight with wings closed between beats.

Habits: Feeds mainly in short grass, including lawn, probing ground with long beak. Often in pairs or loose groups. Feeds on large insects, worms, small reptiles and rodents.

Nesting: Nests in natural tree hollow or hole in wall or ceiling of a building. Nest is untidy lined with straw, rags and rubbish.

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Oriental white eye (*Zosterops palpebrosus*)



ORIENTAL WHITE EYE (Small White-eye)

Zosterops palpebrosus

Family: Zosteropidae Size: 10 cm

Distribution: It is commonly found in plains and hills throughout India. It is found in wooded areas including forests, parks and gardens.

Description: It is a small, plump, greenish-yellow bird with broad, white ringed, round black eyes. Body is greenish-yellow above, more yellow on throat and upper breast and rump. Underparts are greyish white. Lores, bill and legs are black. Both sexes are alike. It moves in large groups, sometimes in mixed hunting groups.

Feeding: It is a lively bird, moves restlessly through foliage and feeds on insects, nectar and fruits.

Nesting: Nests in trees.



ASHY PRINIA (Ashy Wren-warbler)

Prinia socialis

Family: Cisticolidae Size: 13cm

Distribution: Found in most parts of India up to an elevation of 1500 m in Himalayas and 2000 m in South India. Inhabits shrubbery in Gardens, reeds bordering streams, and moist grasslands and scrubs.

Description: It is a small, dark, long-tailed warbler with deep orange belly. Its long, loose, graduated, black and white tipped tail is carried partially erect and constantly shaken up and down. Irides are deep red. Both sexes look similar.

Feeding: Feeds by catching flies. It feeds on caterpillars, ants, small beetles and also on flower nectar.

Nesting: Nest is oblong purse of woven fibers tacked and bound to the supporting leaves of low bushes.

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Indian Blackbird (*Turdus simillimus*)



INDIAN BLACKBIRD (Common Blackbird, Blackbird)

Turdus simillimus

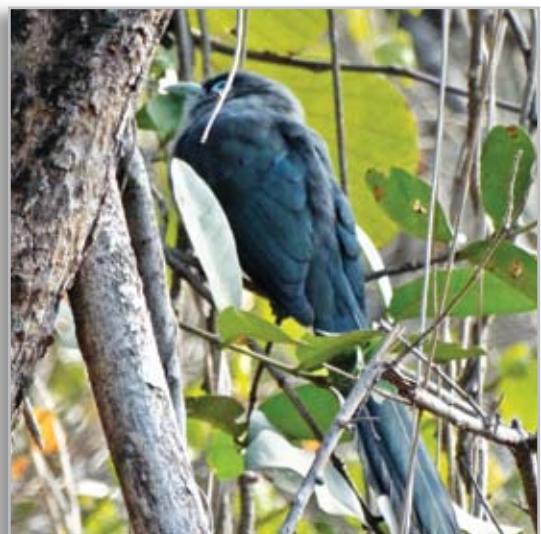
Family: Muscicapidae Size: 26cm

Distribution: It is resident Indian bird found in hills of peninsular India. Found mostly in shola forests and moist wooded forests.

Description: The male has brownish slaty underparts and dark brown to blackish crown. The underparts are pale brownish grey with white lower belly. Both sexes have distinct eye ring, pale orange post orbital skin and orange legs and feet.

Feeding: Feeds on insects on ground, also eats berries and fruits on trees. Also hunts amphibians and lizards occasionally.

Nesting: The nest is cup shaped and made up of grasses, leaves and other vegetation bound together. Nest built only by female. Pairs remain for life.



BLUE-FACED MALKOA

Phaenicophaeus viridirosis

Family: Cuculidae Size: 39cm

Distribution: It is restricted to Southern India and Sri Lanka. It is a bird found in open forest and scrub jungle.

Description: Body is black with dark green head. Tail is a green edged with white bands. Throat and belly are light green in colour. There is a large blue ring around the eyes. Bill is green, sexes are similar.

Feeding: Feeds on variety of insects and small vertebrates. Occasionally seen eating berries.

Nesting: It nests in a thorn bush, the typical clutch being two sometimes three.

DISCUSSION:

Out of 78 species, 37 species were recorded as insectivores, 12 as carnivores, 10 omnivores 9 as frugivores, 6 as grainivores and 4 as nectarivores. Majority of the species found in the Forest Academy campus are insectivores which mostly feed on bees and flies. This indicates that there is a good population and diversity of insects available for these birds.

Campus has only 9 species of birds feeding on fruits and 8 species of birds feeding on grains which show that campus has less diversity of edible fruit trees and grass species. Ficus species attracted most of these fruit eating birds.

Out of 78 species sighted in the campus, 31 species are resident, 23 species are local migrant, 17 species are resident migrant and 7 species are migrants. Most of the species sighted in the campus are resident and local migrant as campus vegetation creates a microclimate which provides an ideal habitat for these birds. Dulapally reserve forest is like an oasis in the desert as this area is surrounded by concrete jungle with very little green cover.

Analysis of population indices like species richness, species diversity and species evenness suggest that all the sampling sites have good species richness and are supporting good bird species diversity. But these sampling sites differ from each other in species evenness suggesting that species are not evenly distributed in the entire campus. Birds tend to prefer some areas and avoid other areas due to food availability, predation risk and morphological constraints.

Season wise comparison of population indices indicate that there is not much of a difference in species evenness with changing seasons but species richness and species diversity significantly increased from winter season to summer season. This may be due to missed sampling during winter season due to our absence in campus due to two national tours. But still number of birds in summer is very high, which shows that more species of birds prefer Forest Academy, Dulapally campus as a habitat during summer season due to its microclimate. Evenness of species is not affected by changing seasons which may be due to different habitat preferences by different types of birds.

The Forest Academy campus supported breeding of at least 8 species of birds, among these Scaly breasted munia and Indian silverbill were the most successful breeding species. Ashy prinia, Red vented bulbul, purple sunbird, Tickell's blue flycatcher, Blue rock pigeon and Red wattled Lapwing were also found to be breeding in the campus. Different birds preferred different sites for nesting.

Overall the Academy campus is having rich diversity of bird species throughout the year. All the species are evenly distributed in the campus due to varying habitat preferences by different birds. Most of the birds found in the campus are insectivorous followed by carnivorous. There are very less species of birds feeding on fruits which may be due to less number of edible fruit bearing trees in the campus. Campus also doesn't support any wetland birds due to absence of any major water body.

This campus can add to its species richness and diversity if more fruit bearing trees which are edible by birds are planted throughout the campus and by developing some water bodies at strategic locations in the campus.

Conclusion:

Forest Academy campus due to its ideal location in the Dulpally reserve forest supports a good population and rich diversity of birds. Campus provides different habitats for different species of birds. Campus also supports breeding of many species. This area has a great potential for developing as a major bird site.

Suggestions:

- Some water bodies can be developed to improve the existing habitat for the birds as such water bodies are scarce.
- Planting of more fruit bearing species wherever possible to attract greater diversity of fruit and seed eating birds.
- Erection of bird information boards at various locations along the CAFÉ nature trail and Herbal garden in the campus.
- Regular bird watching camps can be organized for school and college students.
- Creation of bird baths at various places in the campus.
- More research work can be carried out to study plant bird interactions, habitat preferences and breeding behaviors of birds in the campus.

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BUTTERFLIES OF FOREST ACADEMY CAMPUS, DULAPALLY, HYDERABAD



Note: This checklist of Butterflies is the result of the monitoring done in Dulapally Reserve Forest from Aug 2012 to March 2013.

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