



MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA
(MACFAST)

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FORESTRY CLUB



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**MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA
(MACFAST)
KERALA - 689101**



ABOUT FORESTRY CLUB

Forests are the cradle of myriad life forms on the earth and are the life sustaining system in many ways. They offer materialistic and spiritual solutions to many problems that exists in this world. For sensitizing the student community about our forest wealth and the importance of its conservation and for passing on thus acquired knowledge and experience to the society at large for helping the cause of conservation further, a Forestry Club was registered (Reg. No. SFPTA-42/17-18) under the auspices of Kerala State Forest and Wildlife Department, and started functioning in the college with the participation of students and faculty members. Fifty members are currently registered under the Forestry Club. "Look deep into nature and then you will understand everything better" – the quote by Albert Einstein is the motto of the Club and is upheld in all its activities. The co-ordinators of the Forestry Club activities are Dr. Nishad P.M., Associate Professor, Department of Computer Applications and Mr. Blessan Santhosh George, Assistant Professor, School of Biosciences. Prominent activities of the Forestry Club for the year 2019 are listed in the following sections.

Documentation of Campus Biodiversity

MACFAST, even though located amidst the busy township of Tiruvalla, has a campus that is rich in floral vegetation. The vegetation is dominated by *Anacardium occidentale*, *Racosperma auriculiforme*, *Racosperma mangium*, *Artocarpus heterophyllus*, *Artocarpus hirsutus*, *Mangifera indica*, Bamboo sp., *Cocos nucifera*, *Coryphaum brachyloba*, *Lagerstroemia microcarpa*, *Nephelium lappaceum*, *Ficus auriculata*, *Flacourtia jangomas*, *Azadirachta indica*, *Carica papaya*, *Cassia fistula*, *Syzygium jambos*, *Phyllanthus emblica*, *Sapindus emarginatus*, *Tectona grandis*, *Macaranga indica*, *Bauhinia racemosa*, *Averrhoa carambola*, *Albizia chinensis*, *Delonix regia*, *Muntingia calabura*, *Elaeocarpus serratus*, *Manilkara zapota* and *Artocarpus incisus*. Apart from the vivid trees and other plant species that grow in the campus, open marshy/ paddy fields are located adjacent to the campus as well where aquatic weeds like *Eichhornia crassipes* and *Salvinia molesta* are found. Such a setting is ripe for the faunal biodiversity to flourish in all its grandeur.

The arduous yet rewarding mission of in-campus faunal biodiversity documentation is being led by Dr. Nishad P.M., Associate Professor, Department of Computer Applications. The results of the project shed light to the fact that rich biodiversity could be found in our backyards as much as it is present in the forests and other pristine ecosystems.

Avifaunal diversity of MACFAST

Avifaunal diversity of MACFAST campus and adjoining areas were carried out from the year 2016 till date. Ponds, grasslands, rooftops of buildings, playground and paddy fields were the major microhabitats included in the study. Birds were observed using Bushnell binocular (10 x 50), spotting scope (10x-45x) and identified by the birds' physical features with the help of field guides and reference books. A total of 135 species (published data is given in Table 1) from 14 orders and 45 families were recorded in course of the study till date in the campus spanning about 7.5 acres. As per the IUCN 2018, most of the birds recorded from the campus are included under the Least Concern category. However, three species reported in the survey - Painted Stork (*Mycteria leucocephala*), Oriental Darter (*Anhinga melanogaster*) and Blackheaded Ibis (*Threskiornis melanocephalus*) are categorized under Near Threatened category while two other species – Woolly-necked Stork (*Ciconia episcopus*) and Greater Spotted Eagle (*Clanga clanga*) are categorized under the Vulnerable category. Other interesting findings include Slaty-breasted Rail (*Lewinia striata*), Ruddy-breasted Crake (*Zapornia fusca*) and Gray-bellied Cuckoo (*Cacomantis passerines*). The main objective of the survey programme is to explore the in-campus biodiversity and thereby enhance the awareness among students and public to promote citizen science movement. The research data was made available to public through journal publication (Nishad and Greeshma, 2017).





Pacific Golden Plover (*Pluvialis fulva*)



Pileolated Honey-buzzard (*Ceryle alcyon*)



Bronze-winged Jacana (*Metopides indicus*)



Wood Sandpiper (*Tringa glareola*)



Western Reef Heron (*Egretta alba*)



Clay-colored Ibis (*Plegadis falcinellus*)



Common Hawk-Cuckoo (*Hierococcyx varius*)

Table 1: Checklist of Birds from MACFAST College Campus, Thiruvalla, Kerala (Publication details Nishad, P. M., and P. Greeshma. "Birds in and around MACFAST campus, Thiruvalla, Kerala." *International Journal of Zoology and Research* 7.4 (2017): 1924.)

Order	Family	Sl. No	Common Name	Scientific Name	IUCN
Anseriformes	Anatidae	1	Lesser Whistling-Duck	<i>Dendrocygna javanica</i>	LC
		2	Cotton PygmyGoose	<i>Nettapus coromandelianus</i>	LC
		3	Indian Spot-billed Duck	<i>Anas poecilorhyncha</i>	LC
Phoenicopteriformes	Podicipedidae	4	Little Grebe	<i>Tachybaptus ruficollis</i>	LC
Columbiformes	Columbidae	5	Rock Pigeon	<i>Columba livia</i>	LC
		6	Spotted Dove	<i>Streptopelia chinensis</i>	LC
		7	Yellow-footed Pigeon	<i>Treron phoenicopterus</i>	LC
		8	Pompadour Green Pigeon	<i>Treron pompadora</i>	LC
Cuculiformes	Cuculidae	9	Greater Coucal	<i>Centropus sinensis</i>	LC
		10	Lesser coucal	<i>Centropus bengalensis</i>	LC
		11	Pied Cuckoo	<i>Clamator jacobinus</i>	LC
		12	Asian Koel	<i>Eudynamys scolopaceus</i>	LC
		13	Indian Cuckoo	<i>Cuculus micropterus</i>	LC
Gruiformes	Rallidae	14	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	LC
		15	Baillon's Crake	<i>Zapornia pusilla</i>	LC
		16	Watercock	<i>Gallicrex cinerea</i>	LC
		17	Gray-headed Swamphen	<i>Porphyrio porphyrio</i>	LC
		18	Common Moorhen	<i>Gallinula chloropus</i>	LC
		19	Common Coot	<i>Fulica atra</i>	LC
elicaniformes	Ciconiidae	20	Asian Openbill	<i>Anastomus oscitans</i>	LC
		21	Woolly-necked Stork	<i>Ciconia episcopus</i>	VU
		22	Painted Stork	<i>Mycteria leucocephala</i>	NT
	Ardeidae	23	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	LC
		24	Grey Heron	<i>Ardea cinerea</i>	LC

		25	Purple Heron	<i>Ardea purpurea</i>	LC	
		26	Great Egret	<i>Ardea alba</i>	LC	
		27	Intermediate	<i>Ardea intermedia</i>	LC	
			Egret			
		28	Little Egret	<i>Egretta garzetta</i>	LC	
		29	Western ReefHeron	<i>Egretta gularis</i>	LC	
		30	Cattle Egret	<i>Bubulcus ibis</i>	LC	
		31	Indian PondHeron	<i>Ardeola grayii</i>	LC	
	Threskiornit hid ae	32	Glossy Ibis	<i>Plegadis falcinellus</i>	LC	
		33	Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT	
	Phalacrocor acid ae	34	Little Cormorant	<i>Microcarbo niger</i>	LC	
		35	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	LC	
	Anhingidae	36	Oriental Darter	<i>Anhinga melanogaster</i>	NT	
	Recurvirostr ida e	37	Black-winged Stilt	<i>Himantopus himantopus</i>	LC	
	Charadriidae	38	Red-wattled Lapwing	<i>Vanellus indicus</i>	LC	
	Jacanidae	39	Bronze-winged Jacana	<i>Metopidius indicus</i>	LC	
	Scolopacida e	40	Common Snipe	<i>Gallinago gallinago</i>	LC	
		41	Marsh Sandpiper	<i>Tringa stagnatilis</i>	LC	
		42	Wood Sandpiper	<i>Tringa glareola</i>	LC	
	Accipitriiformes	Accipitridae	43	Crested Serpent Eagle	<i>Spilornis cheela</i>	LC
			44	Eurasian Marsh- Harrier	<i>Circus aeruginosus</i>	LC
			45	Shikra	<i>Accipiter badius</i>	LC
			46	Brahminy Kite	<i>Haliastur indus</i>	LC
			47	Black Kite	<i>Milvus migrans</i>	LC
<i>Piciformes</i>	<i>Picidae</i>	48	Common Goldenbacked Woodpecker	<i>Dinopium javanense</i>	LC	

		49	Lesser Goldenbacked Woodpecker	<i>Dinopium benghalense</i>	LC
	Ramphastidae	50	White-cheeked Barbet	<i>Psilopogon viridis</i>	LC

Coraciiformes	Meropidae	51	Blue-tailed Beeeater	<i>Merops philippinus</i>	LC
	Alcedinidae	52	Common Kingfisher	<i>Alcedo atthis</i>	LC
		53	Stork-billed Kingfisher	<i>Pelargopsis capensis</i>	LC
		54	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	LC
		55	Pied Kingfisher	<i>Ceryle rudis</i>	LC
Psittaciformes	Psittaculidae	56	Rose-ringed Parakeet	<i>Psittacula krameri</i>	LC
		57	Plum-headed Parakeet	<i>Psittacula cyanocephala</i>	LC
Passeriformes	Artamidae	58	Ashy Woodswallow	<i>Artamus fuscus</i>	LC
	Oriolidae	59	Indian Golden Oriole	<i>Oriolus kundoo</i>	LC
		60	Black-hooded Oriole	<i>Oriolus xanthornus</i>	LC
	Dicruridae	61	Black Drongo	<i>Dicrurus macrocercus</i>	LC
		62	Greater Rackettailed Drongo	<i>Dicrurus paradiseus</i>	LC
	Aegithinidae	63	Common Iora	<i>Aegithina tiphia</i>	LC
	Corvidae	64	Rufous Treepie	<i>Dendrocitta vagabunda</i>	LC
		65	House Crow	<i>Corvus splendens</i>	LC
	Monarchidae	66	Indian Paradiseflycatcher	<i>Terpsiphone paradisi</i>	LC
	Dicaeidae	67	Pale-billed Flowerpecker	<i>Dicaeum erythrorhynchos</i>	LC
Nectariniidae	68	Purple-rumped Sunbird	<i>Leptocoma zeylonica</i>	LC	

	69	Little Spiderhunter	<i>Arachnothera longirostra</i>	LC
	70	Loten's Sunbird	<i>Cinnyris lotenius</i>	LC
Estrildidae	71	Scaly-breasted Munia	<i>Lonchura punctulata</i>	LC
	72	Black-headed Munia	<i>Lonchura malacca</i>	LC
	73	White-rumped Munia	<i>Lonchura striata</i>	LC
Passeridae	74	House Sparrow	<i>Passer domesticus</i>	LC
Motacillidae	75	White-browed Wagtail	<i>Motacilla maderaspatensis</i>	LC
	76	Grey Wagtail	<i>Motacilla cinerea</i>	LC
Cisticolidae	77	Common Tailorbird	<i>Orthotomus sutorius</i>	LC
	78	Ashy Prinia	<i>Prinia socialis</i>	LC
Acrocephalidae	79	Blyth's Reed Warbler	<i>Acrocephalus dumetorum</i>	LC
Pycnonotidae	80	Red-vented Bulbul	<i>Pycnonotus cafer</i>	LC
	81	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	LC
Leiothrichidae	82	Jungle Babbler	<i>Turdoides striata</i>	LC
Hirundinidae	83	Barn Swallow	<i>Hirundo rustica</i>	LC
	84	Wire-tailed Swallow	<i>Hirundo smithii</i>	LC
Sturnidae	85	Rosy Starling	<i>Pastor roseus</i>	LC
	86	Chestnut-tailed Starling	<i>Sturnia malabarica</i>	LC
	87	Common Myna	<i>Acridotheres tristis</i>	LC
Muscicapidae	88	Oriental Magpie Robin	<i>Copsychus saularis</i>	LC

Butterflies of MACFAST Campus

Butterflies are very sensitive to the changes in the environment and are considered good ecological indicators; hence they are included in various conservation and biodiversity studies. The butterfly fauna of the MACFAST college campus was monitored from June 2017 to August 2018. The butterfly species were photo documented and species identification was

done with the help of field guides. A total of 75 species from 52 genera of butterflies belonging to five families and 13 subfamilies were identified, including one species which is endemic to the Western Ghats and 10 species protected under various schedules of the Indian Wildlife (Protection). A checklist of butterflies observed in and around MACFAST campus is given in Table 2.

Table 2: Checklist of butterflies of MACFAST Campus, Thiruvalla, Kerala. (Publication details Nishad, P. M., and P. Greeshma. "Butterflies of MACFAST Campus, Thiruvalla, Pathanamthitta District, Kerala, India." *ZOO'S PRINT* 34.11 (2019): 34-41.)

S.No	Common name	Scientific name
Papilionidae: Papilioninae		
1	Sahyadri Birdwing	<i>Troides minos</i>
2	Common Rose	<i>Pachliopta aristolochiae</i>
3	Crimson Rose	<i>Pachliopta hector</i>
4	Common Bluebottle	<i>Graphium sarpedon</i>
5	Tailed Jay	<i>Graphium agamemnon</i>
6	Lime Swallowtail	<i>Papilio demoleus</i>
7	Red Helen	<i>Papilio helenus</i>
8	Common Mormon	<i>Papilio polytes</i>
9	Common Mime	<i>Papilio clytia</i>
10	Blue Mormon	<i>Papilio polymnestor</i>
11	Lemon Emigrant	<i>Catopsilia pomona</i>
12	Mottled Emigrant	<i>Catopsilia pyranthe</i>
13	Small Grass Yellow	<i>Eurema brigitta</i>
14	Spotless Grass Yellow	<i>Eurema laeta</i>
15	Common Grass Yellow	<i>Eurema hecabe</i>
16	Three-spot Grass Yellow	<i>Eurema blanda</i>
Pieridae: Pierinae		
17	Indian Jezebel	<i>Delias eucharis</i>
18	Pioneer	<i>Belenois aurota</i>
19	Psyche	<i>Leptosia nina</i>

20	Common Gull	<i>Cepora nerissa</i>
21	Chocolate Albatross	<i>Appiaslyncida</i>
Nymphalidae: Satyrinae		
22	Common Evening Brown	<i>Melanitisleda</i>
23	Tailed Palmfly	<i>Elymnias caudata</i>

24	Bamboo Treebrown	<i>Lethe europa</i>
25	Common Bushbrown	<i>Mycalesis perseus</i>
26	Dark-branded Bushbrown	<i>Mycalesis mineus</i>
27	Long-branded Bushbrown	<i>Mycalesis visala</i>
28	Common Four-ring	<i>Ypthima huebneri</i>
29	Common Five-ring	<i>Ypthima baldus</i>

Nymphalidae: Heliconiinae

30	Tawny Coster	<i>Acraea terpsicore</i>
31	Cruiser	<i>Vindula erota</i>
32	Rustic	<i>Cupha erymanthis</i>
33	Common Leopard	<i>Phalanta phalantha</i>
34	Tamil Yeoman	<i>Cirrochroa thais</i>

Nymphalidae: Limenitidinae

35	Common Sailer	<i>Neptis hylas</i>
36	Commander	<i>Moduza procris</i>
37	Grey Count	<i>Tanaecia lepidea</i>
38	Baron	<i>Euthalia aconthea</i>

Nymphalidae: Biblidinae

39	Angled Castor	<i>Ariadne ariadne</i>
40	Common Castor	<i>Ariadne merione</i>

Nymphalidae: Nymphalinae

41	Yellow Pansy	<i>Junonia hierta</i>
42	Lemon Pansy	<i>Junonia lemonias</i>
43	Peacock Pansy	<i>Junonia almanac</i>

44	Grey Pansy	<i>Junonia atlites</i>
45	Chocolate Pansy	<i>Junonia iphita</i>
46	Danaid Eggfly	<i>Hypolimnas misippus</i>
47	Great Eggfly	<i>Hypolimnas bolina</i>
Nymphalidae: Danainae		
48	Glassy Tiger	<i>Parantica aglea</i>
49	Blue Tiger	<i>Tirumala limniace</i>
50	Dark Blue Tiger	<i>Tirumala septentrionis</i>
51	Plain Tiger	<i>Danaus chrysippus</i>
52	Striped Tiger	<i>Danaus genutia</i>
53	Common Crow	<i>Euploea core</i>
Lycaenidae: Polyommatainae		
54	Common Pierrot	<i>Castalius rosimon</i>
55	Banded Blue Pierrot	<i>Discolampa ethion</i>
56	Plains Cupid	<i>Chilades pandava</i>
57	Tiny Grass Blue	<i>Zizula hylax</i>
58	Lime Blue	<i>Chilades lajus</i>
59	Gram Blue	<i>Euchrysops cnejus</i>
60	Common Cerulean	<i>Jamides celeno</i>
61	Red Pierrot	<i>Talicauda nyseus</i>
Lycaenidae: Theclinae		
62	Slate Flash	<i>Rapala manea</i>
63	Monkey Puzzle	<i>Rathinda amor</i>
Hesperiidae: Pyrginae		
64	Common Snow Flat	<i>Tagiades japetus</i>
65	Water Snow Flat	<i>Tagiades litigiosa</i>
66	Tricolour Pied Flat	<i>Coladenia indrani</i>
67	Suffused Snow Flat	<i>Tagiades gana</i>
Hesperiidae: Hesperinae		
68	Bush Hopper	<i>Ampittia dioscorides</i>

69	Chestnut Bob	<i>Iambrix salsala</i>
70	Common Branded Redeye	<i>Matapa aria</i>
71	Grey-veined Grass Dart	<i>Taractrocera maevius</i>
72	Smaller Dartlet	<i>Oriens goloides</i>
73	Oriental Palm Bob	<i>Suastus gremius</i>
74	Pelopidas swift species	<i>Pelopidas</i> sp.
75	Parnara Swift species	<i>Parnara</i> sp.



Bamboo Treebrown



Banded Blue Pierrot



Chocolate Albatross



Common Bluebottle



Commander



Common Leopard



Common Cerulean



Common Mormon



Grey-veined Grass Dart



Indian Jezebel



Lemon Emigrant



Lemon Pansy

Dragonflies and Damselflies of MACFAST Campus

A study and documentation about dragonflies were also initiated in MACFAST campus. The research is mainly focusing on identifying different dragonfly species in MACFAST campus, helping in the conservation of such species, also the research and documentation helps us to understand more about each species. Around 30 species of dragonflies and damselflies were identified within the campus.



Common Clubtail



Rufous-backed Marsh Hawk

Moths of MACFAST Campus

Another ongoing study is about moths at MACFAST campus. The study again aims to identifying different moth species. The successful completion of the study may help the students and public in realizing the extent of moth diversity around us and thus appreciating the ways in which Nature operates. Also, the study helps to develop a new database on moths with emphasis on conservation aspects. More than 35 moth species are identified from our campus till date.



Creatonotos sp.



Orudiza protheclaria



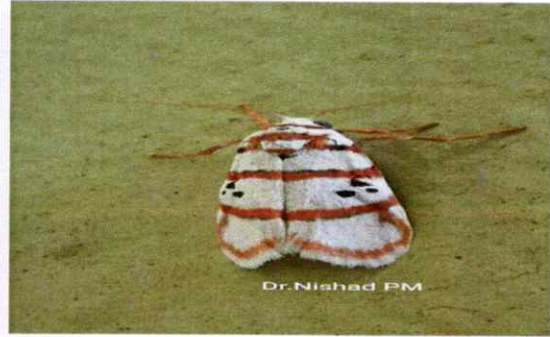
Spirama sp.



Erebus hieroglyphica



Miresa sp.



Cyana peregrina

Bugs and beetles of MACFAST Campus

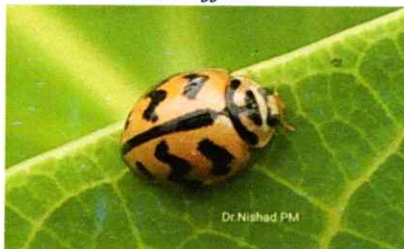
Another interesting study progressing in our campus is about bugs and beetles and have identified many interesting species in bugs and beetles from our campus. The documentation is envisaged to give insights into the lesser studied taxa of bugs and beetles. Each creature is very important. So, the research documentation definitely gives more knowledge to the students and community also the documentation will play important role in conservation of like species. As part of the project 32 different species of bugs and beetles were identified within the campus till date.



Oides affinis



June Beetles



Six-spotted Zigzag Ladybird



Coptops aedificator

Wild Mammals of MACFAST campus

Apart from the birds, butterflies and dragonflies, interestingly several rather uncommon mammals like Bengal monitor (*Varanus bengalensis*) and Jungle Cat (*Felis chaus*) has been spotted around the campus.



Bengal Monitor



Jungle Cat

These documentation projects are unique in its own account primarily because rich biodiversity is reported in the backyard of a college through patient and meticulous observation that could be otherwise seen in a well wooded countryside, forests or other known biodiversity rich ecosystems. The reports indicate persistent existence of birds, insects and other wildlife in and around the campus which showcases the fruitful efforts undertaken by the college in pursuing the idea of sustainable development. Through the project we have succeeded, to a greater extend, in educating our students that conservation has to begin from our backyard or gardens. The project motivates the students to understand the importance of conservation and also underlines that fact that one's hobbies can indeed play important role in conservation that can in turn possibly contribute to the greater knowledge domain.

FORESTRY CLUB ACTIVITIES

Great Backyard Bird Count (GBCC) 2019 - MACFAST secured 3rd position in Kerala and 10th position in India among best biodiversity campuses

MACFAST Forestry Club in association with Bird Count India & eBird India organized Campus Bird Count 2019 from February 14th to 18th at the MACFAST premises. The bird count was conducted during these days during early mornings and evenings. Event coordinators were Dr. Nishad P.M. and Mr. Blessan Santhosh George. Training sessions were organized in the campus on the previous day. The session aimed at promoting citizen science movement and to impart the basics of bird identification. About twenty five students of MACFAST Forestry Club actively participated in the bird count programme which was conducted in and around MACFAST Campus. The entire observation data at 15 min intervals in all these days were uploaded into the eBird portal and the summary was generated. A total of 3842 birds were spotted during the survey spanning 99 different bird species. Baya Weaver bird, Streaked Weaver bird, Common Snipe and Oriental Honey Buzzard were new sightings reported from the campus premises during the survey. MACFAST secured third position in Kerala and tenth position in India in GBCC 2019 in which more than 250 Universities and Colleges participated across India.



One day forest experience for students

MACFAST Forestry Club coordinated a one day trekking programme for the student members in the forest which is under the Njallore Forest Station, Pathanamthitta. The trekking was conducted on March 09, 2019 with the permission obtained from the Forest Range Office, Konni. The program, held with the support of Deputy Range Officer and staff members of Njallore Forest Station, was attended by twenty students and four faculty members. The students benefited from the trekking in that they were able to understand more about forests and to experience the joy in being closer to Nature. They were able to observe more than thirty bird species apart from butterflies, dragon and damsel flies and forest trees. Afterwards the participants of the one-day camp also visited Elephant Training Center situated at Konni, Pathanamthitta.



International Day of Forests celebrations and Bulbul Newsletter Release

The International Day of Forests was celebrated at MACAFST under the auspices of the Forestry Club on 28th March 2019. Ms. Sudha Gourilekshmi, Ecotourism Programme Officer, Shendurney Wildlife Sanctuary was the chief guest on the auspicious occasion and delivered a discourse on the topic “Perceiving Nature”. A proficient orator, Ms. Gourilekshmi inspired the audience in their pursuit of understanding Nature. She was found often quoting from sacred texts and contemporary literary works for underscoring the importance of understanding Nature and the environment around us. She also urged the listeners to become lovers of Nature and beggars for knowledge. The MACFAST Forestry Club Newsletter “Bulbul”, initiated and helmed by Dr. Nishad P. M., was launched during the event. Principal, Fr. Dr. Cherian J. Kottayil, Administrator, Prof. Varghese Abraham, Deputy Director, Prof. Saneesh Varghese and co-ordinator of the event, Mr. Blessan Santhosh George also delivered speeches in course of the programme. Ms. Remya R., Student member, proposed the vote of thanks.



MACFAST Forestry Club Newsletter "Bulbul"

A bimonthly newsletter of MACFAST Forestry Club titled "Bulbul" is being brought out and is published both as printed copies for in house circulation and soft copies which are sent to various colleges and other interested persons. The newsletter encompasses articles mostly written by students describing various club activities, environment related initiatives of the college and also account of their personal tryst with Nature. Dedicated columns include Backyard Pharmacy, Creative Zone, detailed description of a new bird species and a column on common Bulbul species. New sightings recorded in the campus are also announced through the newsletter. Dr. Nishad P. M., Mr. Blessan Santhosh George, Ms. Jeena Sara Viju, Assistant Professor, DCA and Dr. Greeshma Paleeri, KFRI Peechi are the current Editorial Board members.



Message
Dr. In. Greeshma Paleeri
 Through MACFAST
 Notice the beauty of our
 country. Being enthralled
 to have nature in nearby
 place is part of nature in life.
 MACFAST has its campus
 surrounded and close to the
 prospects of enjoying the
 environmental and green
 nature. Here, we are happy
 to announce the launch of the
 newsletter "BULBUL" News-
 letter" which will be pub-
 lished bimonthly in the
 campus. I appreciate all the
 faculty members and stu-
 dents who have been work-
 ing hard to make this contribu-
 tion to the education of the
 next generation.

Dr. In. Greeshma Paleeri
 Assistant Professor
 DCA, Kuvempu



BIRD COUNT OF INDIA ANNOUNCED BEST BIODIVERSITY CAMPUS IN INDIA: MACFAST SECURED 3RD POSITION IN KERALA AND 100 POSITION IN INDIA

On 18th Feb 2019 was conducted the campus on 18th February 2019 from 8:30am to 4:30pm and from 4:30pm to 6:30pm. A total of 102 birds were spotted during the survey. After the survey of birds were identified. A new bird species was reported at the survey. They are **White-throated Sparrow**, **Common Sparrow**, **Orange-billed Woodpecker**, **White-throated Sparrow**, **Common Sparrow**, **Orange-billed Woodpecker**.

As a part of Great Backyard Bird Count (GBBC) 2019, MACFAST Forestry club started their bird count preparation from 15th February, 2019 to 18th February, 2019. Training sessions were organized inside the campus on 15th February, 2019 at 10:30 am for the students and staff by Dr. Nishad P. M. Assistant Professor, Department of Computer Applications. The theme of the training was to encourage citizen science involvement and how to identify the birds of species of birds. About 25 students from MACFAST Forestry Club actively participated and the team was led by Dr. Nishad P. M. Assistant Professor and Dr. Blessan Santhosh George, Assistant Professor. The survey was conducted in and around MACFAST Campus. The whole data after each phase throughout three days were recorded and the effort and the survey was presented through video.

Birds Spotted:
 1. White-throated Sparrow
 2. Common Sparrow
 3. Orange-billed Woodpecker
 4. White-throated Sparrow
 5. Common Sparrow
 6. Orange-billed Woodpecker
 7. White-throated Sparrow
 8. Common Sparrow
 9. Orange-billed Woodpecker
 10. White-throated Sparrow
 11. Common Sparrow
 12. Orange-billed Woodpecker

Backyard Pharmacy

Kuranthoth (Ficus religiosa L.)
Dr. Jeena Sara Viju
M.Sc. Pharmaceutical Science & Technology

Kuranthoth is commonly known as figs, and its scientific name is *Ficus religiosa*. The tree has a central and the name of "Ficus" is given to the tree for its ability to grow in a variety of soils. It is a small tree which belongs to the family Moraceae and its native is India. It is also found in some other parts of the world. We can identify the plant by the following features like it is a perennial plant with dark yellow red and small flowers. Flowers emerge from the area between stem and leaf and flower consist of five petals. Leaves are comparatively smaller in size and round in shape. There are many other species of other trees. It has small seed cones and berries are covered with small hairs.

Important studies conducted on Ficus religiosa include investigations of antidiabetic activity, wound healing process, Bactericidal activity present in latex, was found to be used in combination of wound healing process in type 2 diabetes, anti-inflammatory and analgesic properties, cardioprotective effect and neuropharmacological effects.

Side effects:
 Side effects have recorded medicinal values, so it is used for many treat ailments. And some of them are asthma, rheumatism, herpes like infection, cold, flu, headache, and various other ailments. And it is also used in the treatment of heart diseases, stroke, nerve pain, nerve inflammation, and uncontrolled weight loss. In Ayurveda, usually the extract of *Ficus religiosa* is used in the treatment and medicine preparation for arthritis and rheumatism. Medicines prepared from the leaves are used to treat hair problems and from the growth of healthy hair and maintain color. Leafy containing of most helps in maintaining normal blood pressure levels.



Side effects 1.



Side effects 2.



Side effects 3.



Side effects 4.

In-campus Bird watching for general public

Coming to know about the bird diversity available in the college campus through press and other public platforms, queries are being received from general public including seasoned and amateur nature watchers alike for an opportunity for bird watching in the campus. Such a session was arranged on 14th March 2019 by the Forestry Club and was attended by Mr. Aneesh G.A.S (Bird watcher from Thiruvalla), Mr. Harikumar Mannar (eBird Editor and resident of Alappuzha District) and his daughter Ms. Devi. The event was also attended by members of the Forestry Club. The session proved to be a fruitful one where the guests had a satisfying experience and were able to observe 52 different bird species. They appreciated the efforts by the college in documenting bird diversity and the conservation efforts.



Baya Weaver Count

Members of MACFAST Forestry Club participated in the Baya Weaver Count on 19 June 2019 as part of Common Bird Monitoring Programme of BNHS. Indian Baya Weaver (*Ploceus philippinus*) is one of the four species of weaver birds or bayas in India and is a familiar and common bird in the country. This is the only species which has suspended pendulous nests built in colonies, usually above water bodies. However, these birds seem to be facing population decline due to the growing human population and development. The survey was conducted in two locations, Ponnvallikavu and Thymala, which are places nearby the college. At Ponnvallikavu, two male and three female Baya Weavers were spotted and eleven uncompleted nests and a single completed one were found in two coconut trees. At Thymala fourteen male and four female Baya Weavers with twenty three completed and twenty one uncompleted nests in four coconut trees were found by the team which was lead by Dr. Nishad P. M. The obtained data was submitted in BNHS portal.



Three day nature camp at Kattilapara, Shendurney Wildlife Sanctuary

Forestry Club of MACFAST organized a three day paid nature camp 18th – 20th July 2019 at Shendurney Wildlife Sanctuary with the support of Shendurney Ecotourism Project with the permission of Kerala Forest Department. On 18th July, the camp participants, including 13 students and 3 staff members, visited Thenmala Dam and its surroundings for an evening bird watching session after reporting at Shendurney Forest Information Center and attending a lecture by Ms. Sudha Gourilekshmi, Ecotourism Programme Officer. Accommodation for the participants was arranged at Kattilappara dormitory in Shendurney, 14 km away from Forest Information Centre. The next day a forest walk was arranged to the unique myristica swamps of Shendurney Wildlife Sanctuary accompanied by the staff of Kerala Forest Department. Evenings were spent on discussions and debate on environment related issues led by Dr. Nishad P. M. The camp concluded on 20th July 2020 after an early morning bird watching along the trail leading to the dormitory. The students were fascinated by the unique habitat of the myristica ecosystem and the experience of overnight stay inside a natural forest. In spite of rains they were able to spot many forest birds including the Malabar trogon and nesting of the endemic Malabar Whistling Thrush. The event was coordinated by Mr. Blessan S George.





National Wildlife Week Celebrations

The Forestry Club organized a debate competition open for all students of the college on 01 October 2019 as part of National Wildlife Week Celebrations. The debate topic was “Human and its Deeds are Anti-Nature”. Six teams of two members each spoke for and against the motion and winners were declared. Students among the audience were also given their turn to voice their views about the subject.

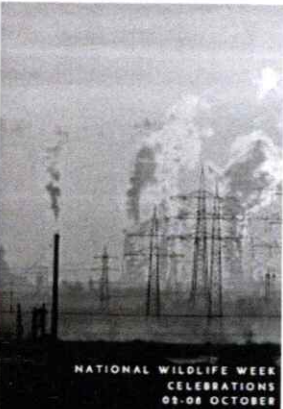

DEBATE
ORGANIZED BY
MACFAST
FORESTRY CLUB

**HUMAN & ITS
DEEDS - OF
NATURE OR
ANTI-NATURE**

OCTOBER 01, TUESDAY
5.15 PM - 6.45 PM
CONFERENCE HALL

OPEN TO ALL

Confirm your Participation:
9048297281 (Nishad P.M.)
7025403827 (Blessan S. George)



NATIONAL WILDLIFE WEEK
CELEBRATIONS
01-08 OCTOBER

Poster for the event

Appendix 1- Relevant Newspaper
Clippings

ഔഷധസസ്യ സംരക്ഷണ സെമിനാർ നടത്തി

തിരുവല്ല • സഹായക ഔഷധ സസ്യങ്ങളുടെ നന്നായ സംരക്ഷണത്തിന് ഓംകോട്ടയ്ക്ക് കോളേജ് ഔഷധ സസ്യ സംരക്ഷണ പരിപാടി നടന്നു. ഈ വിഷയത്തിൽ നടന്ന സെമിനാർ കോളേജ് ഇന്ത്യൻ ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് സയൻസ് അദ്ധ്യക്ഷകളിൽ നടന്നു. പൊതുവെ സിദ്ധന്മാർ നൽകാൻ ഉദ്ദേശിക്കുന്ന പേര് നൽകി കോളേജ് അധികാരികൾക്ക് പ്രകൃതി സംരക്ഷണത്തിന് അത്യാവശ്യമായ പ്രവർത്തനങ്ങൾ നടത്താൻ സഹായം നൽകാൻ പ്രാർത്ഥിച്ചു.

Malayala Manorama
18-05-2018

ഔഷധ-സസ്യ ശില്പശാല

തിരുവല്ല • ഔഷധസസ്യ സംരക്ഷണവും പരിപാടിയുമായി ബന്ധപ്പെട്ട് ഓംകോട്ടയ്ക്ക് കോളേജ് ഇന്ത്യൻ ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് സയൻസ് അദ്ധ്യക്ഷകളിൽ നടന്നു. പൊതുവെ സിദ്ധന്മാർ നൽകാൻ ഉദ്ദേശിക്കുന്ന പേര് നൽകി കോളേജ് അധികാരികൾക്ക് പ്രകൃതി സംരക്ഷണത്തിന് അത്യാവശ്യമായ പ്രവർത്തനങ്ങൾ നടത്താൻ സഹായം നൽകാൻ പ്രാർത്ഥിച്ചു.

Mathrubhumi
18-05-2018



തിരുവല്ല ഓംകോട്ടയ്ക്ക് കോളേജ് ഇന്ത്യൻ ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് സയൻസ് അദ്ധ്യക്ഷകളിൽ നടന്നു. പൊതുവെ സിദ്ധന്മാർ നൽകാൻ ഉദ്ദേശിക്കുന്ന പേര് നൽകി കോളേജ് അധികാരികൾക്ക് പ്രകൃതി സംരക്ഷണത്തിന് അത്യാവശ്യമായ പ്രവർത്തനങ്ങൾ നടത്താൻ സഹായം നൽകാൻ പ്രാർത്ഥിച്ചു.

Bhujika
06-06-2018

This verdant campus is a birds' paradise

Study on avifaunal diversity identifies 89 species from MACFAST campus at Thiruvalla



Painted storks, Blue-tailed bee-eater, Indian Paradise flycatcher, Oriental Magpie robin, Red-whiskered bulbul, and Common kingfisher spotted in a bird survey held on the lush green MACFAST campus at Thiruvalla.

RADHAKRISHNAN KUTTOOR
PATMANABHUTTA
 Setting a model to its peers, the Mar Athanasius College For Advanced Studies (MACFAST), Thiruvalla, has been developed into a lush green campus for the avifauna to flourish, making it a birdwatcher's paradise too.

F.M. Nishad, Associate Professor of Computer Science at MACFAST, and his wife, Geeshama Faleel, researcher in Wildlife Biology at the Kerala Forest Research Institute at Peechi, have conducted a study on

the avifaunal diversity on the college campus during March 2006 to June 2007.

Many trees
 Talking to *The Hindu*, Dr. Nishad and Ms. Geeshama said many indigenous fruiting trees and other nesting trees, which attracted a large number of birds, were found on the MACFAST campus.

Dr. Nishad said they could spot a total of 89 species, belonging to 12 orders and 38 families, during the study.

The couple used to spend

eight to 30 hours a day for birdwatching with the help of Bushnell binoculars and spotting scope and identified each bird with its physical features and with the help of field guides and reference books.

Among the birds surveyed, Passeriformes and Pelecaniformes, dominated the list with 31 and 14 species, respectively.

Near-threatened ones too
 Three species of near-threatened category, Painted stork (*Mycteria leucocephala*), Oriental

dartar (*Anhinga melanogaster*) and Black-headed ibis (*Threskornis melanoleuca*), and White-necked stork (*Ciconia episcopus*) from the vulnerable category were also recorded.

Pompadour Green Pigeon (*Treron pompadour*), Lesser curlew (*Centropus bengalensis*), Pied cuckoo (*Cacomor jacobinus*), ballon's Crane (*Zapornia pusilla*), White-browed Wagtail (*Motacilla madagascariensis*), Chestnut-tailed starling (*Sturnia malabarica*), and Indian

Paradise flycatcher (*Terpisphenus paradise*) were the important sightings during the survey, they said.

Migratory bird
 Indian Paradise flycatcher is a bird found to have been migrated to the college campus from the Himalayan during December-January. Painted storks were the other migratory birds spotted in the dusky fields bordering the campus, they said.

College Principal Fr. Pradeep Vazhatharamalayil told *The Hindu* that it took 10

years for the management to develop the campus into a model green campus, declaring it a biodiversity-rich zone.

Fr. Vazhatharamalayil said ponds, grasslands, rooftops, playground, and paddy fields were the major microhabitats of the study area.

Located about 3 km south of Thiruvalla town, the MACFAST campus presently houses varied microhabitats like ponds, grasslands, rooftop of buildings, playground, and paddy fields for the avifauna.

THE HINDU
 30/10/17

Appendix 2- Publications

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/320373866>

Birds in and Around Macfast Campus, Thiruvalla, Kerala

Article · October 2017

DOI: 10.24247/jproct20173

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1

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Project

Butterflies of MACFAST [View project](#)

BIRDS IN AND AROUND MACFAST CAMPUS, THIRUVALLA, KERALA

P. M. NISHAD¹ & P. GREESHMA

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² Department of Wildlife Biology, Kerala Forest Research Institute, Peechi, Thrissur, Kerala

ABSTRACT

Avifaunal diversity of MACFAST campus and adjoining areas were carried out during March 2016 to June 2017. Ponds, grasslands, rooftops of buildings, playground and paddy fields were the major microhabitats of the study area. Birds were observed using Bushnell binocular (10 x 50), spotting scope (10x- 45x) and identified using physical features with the help of field guides and reference books. A total of 88 species from 12 orders and 38 families were recorded during the study and among these, Passeriformes and Pelicaniformes, dominated the list with 31 and 14 species, respectively. Three species of Near Threatened category (*Mycteria leucocephala*, *Anhinga melanogaster*, *Threskiornis melanocephalus*) and *Ciconia episcopus* from Vulnerable category were also recorded. Pompadour Green Pigeon *Treron pompadora*, Lesser coucal *Centropus bengalensis*, Pied Cuckoo *Clamator jacobinus*, Baillon's Crake *Zapornia pusilla*, White-browed Wagtail *Motacilla maderaspatensis*, Chestnut-tailed Starling *Sturnia malabarica* and Indian Paradise-flycatcher *Terpsiphone paradise* were the important sightings, during the survey. The presence of indigenous fruiting trees along with large trees as roosting sites, attract more birds to the campus. **KEYWORDS:** Birds-Diversity- Macfast Campus-Thiruvalla-Kerala

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INTRODUCTION

Birds are always a fascinating creature, which adds up the beauty of nature. Avifauna of MACFAST campus and adjoining areas were studied from March 2016 to June 2017. Mar Athanasios College for Advanced Studies (MACFAST) (9° 22' 23" N & 76° 35' 4"E) in Pathanamthitta District is located about 3 km to the South of Thiruvalla town. The campus has varied micro habitats like ponds, grasslands, roof top of buildings, playground and paddy fields. The vegetation is dominated by *Racosperma auriculiforme*, *Anacardium occidentale*, *Artocarpus heterophyllus*, *Racosperma mangium*, *Nephelium lappaceum*, *Artocarpus hirsutus*, *Ficus auriculata*, *Flacourtia jangomas*, *Mangifera indica*, *Bamboo Sps.*, *Cocos nucifera*, *Azadirachta indica*, *Syzygium jambos*, *Phyllanthus emblica*, *Carica papaya*, *Cassia fistula*, *Sapindus emarginatus*, *Corypha umbraculifera*, *Lagerstroemia microcarpa*, *Tectona grandis*, *Macaranga indica*, *Bauhinia racemosa*, *Albizia chinensis*, *Delonix regia*, *Muntingia calabura*, *Averrhoa carambola*, *Elaeocarpus serratus*, *Manilkara zapota* and *Artocarpus incises*. Aquatic weeds like *Eichhornia crassipes*, *Salvinia molesta* were also present in water bodies near paddy fields.

METHODOLOGY

Birds were observed alone as well as in a team using Bushnell binocular (10 x 50), spotting scope (10 x-45 xs) and identified using physical features, with the help of field guides and reference books (Ali & Ripley 1978; Grimmett *et al.* 2011). Observations were made from 06.00 hrs to 10.00 hrs and 16.00 hrs to 19.00 hrs, once in

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Greeshma

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every week.

RESULTS

A total of 88 species from 12 orders and 38 families were recorded during the study (Table 1). Out of 500 species of Kerala (Praveen 2015), 17.6 % of bird species were reported from this region. Of these 12 orders, Passeriformes, Pelicaniformes dominated the list with 31 and 14 species, respectively (Figure.1).

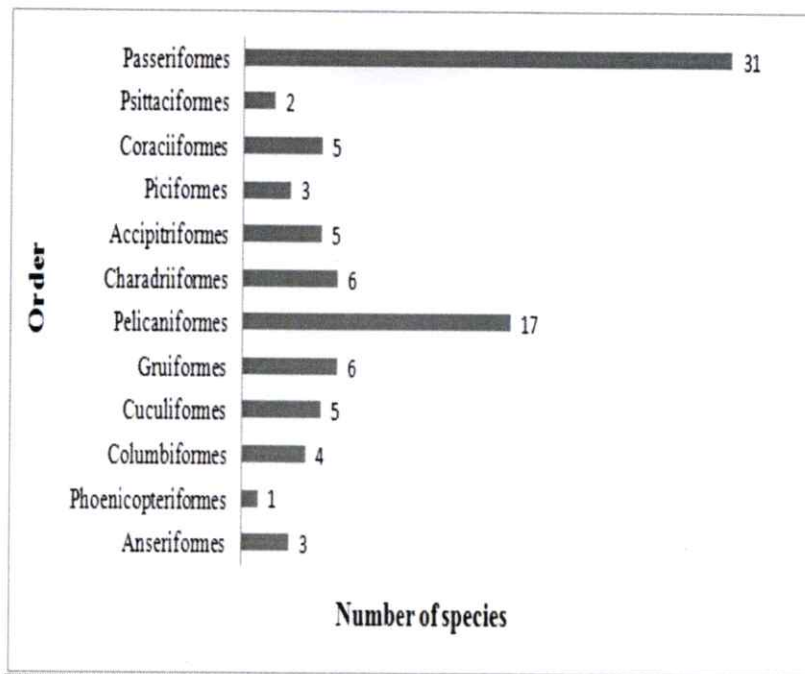


Figure 1: Number of Species Representing the Respective Orders from MACFAST Campus

Among the species recorded, 51% comprised of resident birds followed by 33% of local migrants and 16 % of migratory birds. Of these, 47 species were wetland dependent birds and 41 species terrestrial birds. Little cormorant *Microcarbo niger*, Indian pond heron *Ardeola grayii*, Grey-headed swamphen *Porphyrio poliocephalus*, White-throated Kingfisher *Halcyon smyrnensis*, Black Drongo *Dicrurus macrocercus* were the most abundantly seen resident birds. Three species of Near Threatened category (*Mycteria leucocephala*, *Anhinga melanogaster*, *Threskiornis melanocephalus*) and Woolly-necked Stork *Ciconia episcopus*, from Vulnerable category were also recorded. Pompadour Green Pigeon *Treron pompadora*, Lesser coucal *Centropus bengalensis*, Pied Cuckoo *Clamator jacobinus*, Baillon's Crake *Zapornia pusilla*, White-browed Wagtail *Motacilla maderaspatensis*, Chestnut-tailed Starling *Sturnia malabarica*, Indian Paradise-flycatcher *Terpsiphone paradise* were the important sightings. The paddy fields serve as an important foraging ground for several groups of birds like herons, ducks, cormorants, storks etc. Apart from foraging, hundreds of birds choose their resting place in this campus.

DISCUSSION AND CONCLUSIONS

During the study it was observed that the campus and adjoining areas had a rich variety of vegetation. The presence of indigenous fruiting trees, along with large trees as roosting sites, attract more birds to the campus. Least

Impact Factor (JCC): 3.8975

NAAS Rating: 3.10

Birds in and Around Macfast Campus, Thiruvalla, Kerala
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disturbances to the habitat and conservation awareness among the college people had led to the safe movement of birds all the time in the campus. Bird diversity at MACFAST campus and adjoining areas is unexplored yet and hence this work to record the avian diversity will form the base line information for future studies.

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APPENDICES

ACKNOWLEDGEMENTS

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Table 1: Checklist of Birds from MACFAST Collge Campus, Thiruvalla, Kerala

Order	Family	Sl. No	Common Name	Scientific Name	IUCN
Anseriformes	Anatidae	1	Lesser Whistling-Duck	<i>Dendrocygna javanica</i>	LC
		2	Cotton Pygmy-Goose	<i>Nettapus coromandelianus</i>	LC
		3	Indian Spot-billed Duck	<i>Anas poecilorhyncha</i>	LC
Phoenicopteriformes	Podicipedidae	4	Little Grebe	<i>Tachybaptus ruficollis</i>	LC
Columbiformes	Columbidae	5	Rock Pigeon	<i>Columba livia</i>	LC
		6	Spotted Dove	<i>Streptopelia chinensis</i>	LC
		7	Yellow-footed Pigeon	<i>Treron phoenicopterus</i>	LC
		8	Pompadour Green Pigeon	<i>Treron pompadora</i>	LC
Cuculiformes	Cuculidae	9	Greater Coucal	<i>Centropus sinensis</i>	LC
		10	Lesser coucal	<i>Centropus bengalensis</i>	LC
		11	Pied Cuckoo	<i>Clamator jacobinus</i>	LC
		12	Asian Koel	<i>Eudynamys scolopaceus</i>	LC
		13	Indian Cuckoo	<i>Cuculus micropterus</i>	LC
Gruiformes	Rallidae	14	White-breasted Waterhen	<i>Amauornis phoenicurus</i>	LC
		15	Baillon's Crake	<i>Zapornia pusilla</i>	LC

		16	Watercock	<i>Gallix cinerea</i>	LC
		17	Gray-headed Swamphen	<i>Porphyrio porphyrio</i>	LC
		18	Common Moorhen	<i>Gallinula chloropus</i>	LC
		19	Common Coot	<i>Fulica atra</i>	LC
elicaniformes	Ciconiidae	20	Asian Openbill	<i>Anastomus oscitans</i>	LC
		21	Woolly-necked Stork	<i>Ciconia episcopus</i>	VU
		22	Painted Stork	<i>Mycteria leucocephala</i>	NT
	Ardeidae	23	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	LC
		24	Grey Heron	<i>Ardea cinerea</i>	LC
		25	Purple Heron	<i>Ardea purpurea</i>	LC
		26	Great Egret	<i>Ardea alba</i>	LC

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Greeshma

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		27	Intermediate Egret	<i>Ardea intermedia</i>	LC
		28	Little Egret	<i>Egretta garzetta</i>	LC
		29	Western Reef-Heron	<i>Egretta gularis</i>	LC
		30	Cattle Egret	<i>Bubulcus ibis</i>	LC
		31	Indian Pond-Heron	<i>Ardeola grayii</i>	LC
	Threskiornithidae	32	Glossy Ibis	<i>Plegadis falcinellus</i>	LC
		33	Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT
	Phalacrocoracidae	34	Little Cormorant	<i>Microcarbo niger</i>	LC
		35	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	LC
	Anhingidae	36	Oriental Darter	<i>Anhinga melanogaster</i>	NT
Charadriiformes	Recurvirostridae	37	Black-winged Stilt	<i>Himantopus himantopus</i>	LC
	Charadriidae	38	Red-wattled Lapwing	<i>Vanellus indicus</i>	LC
	Jacaniidae	39	Bronze-winged Jacana	<i>Metopidius indicus</i>	LC
	Scolopacidae	40	Common Snipe	<i>Gallinago gallinago</i>	LC
		41	Marsh Sandpiper	<i>Tringa stagnatilis</i>	LC
		42	Wood Sandpiper	<i>Tringa glareola</i>	LC
Accipitriformes	Accipitridae	43	Crested Serpent Eagle	<i>Spilornis cheela</i>	LC
		44	Eurasian Marsh-Harrier	<i>Circus aeruginosus</i>	LC
		45	Shikra	<i>Accipiter badius</i>	LC
		46	Brahminy Kite	<i>Haliastur indus</i>	LC
		47	Black Kite	<i>Milvus migrans</i>	LC
Piciformes	Picidae	48	Common Goldenbacked Woodpecker	<i>Dinopium javanense</i>	LC
		49	Lesser Golden-backed Woodpecker	<i>Dinopium benghalense</i>	LC
	Ramphastidae	50	White-cheeked Barbet	<i>Psilopogon viridis</i>	LC
Coraciiformes	Meropidae	51	Blue-tailed Bee-eater	<i>Merops philippinus</i>	LC

	Alcedinidae	52	Common Kingfisher	<i>Alcedo atthis</i>	LC
		53	Stork-billed Kingfisher	<i>Pelargopsis capensis</i>	LC
		54	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	LC
		55	Pied Kingfisher	<i>Ceryle rudis</i>	LC
Psittaciformes	Psittaculidae	56	Rose-ringed Parakeet	<i>Psittacula krameri</i>	LC
		57	Plum-headed Parakeet	<i>Psittacula cyanocephala</i>	LC
Passeriformes	Artamidae	58	Ashy Woodswallow	<i>Artamus fuscus</i>	LC
	Oriolidae	59	Indian Golden Oriole	<i>Oriolus kundoo</i>	LC
		60	Black-hooded Oriole	<i>Oriolus xanthornus</i>	LC
	Dicruridae	61	Black Drongo	<i>Dicrurus macrocercus</i>	LC
		62	Greater Racket-tailed Drongo	<i>Dicrurus paradiseus</i>	LC
	Aegithinidae	63	Common Iora	<i>Aegithina tiphia</i>	LC
	Corvidae	64	Rufous Treepie	<i>Dendrocitta vagabunda</i>	LC
		65	House Crow	<i>Corvus splendens</i>	LC
	Monarchidae	66	Indian Paradiseflycatcher	<i>Terpsiphone paradisi</i>	LC
	Dicaeidae	67	Pale-billed Flowerpecker	<i>Dicaeum erythrorhynchos</i>	LC
	Nectariniidae	68	Purple-rumped Sunbird	<i>Leptocoma zeylonica</i>	LC
		69	Little Spiderhunter	<i>Arachnothera longirostra</i>	LC
70		Loten's Sunbird	<i>Cinnyris lotenius</i>	LC	

Impact Factor (JCC): 3.8975

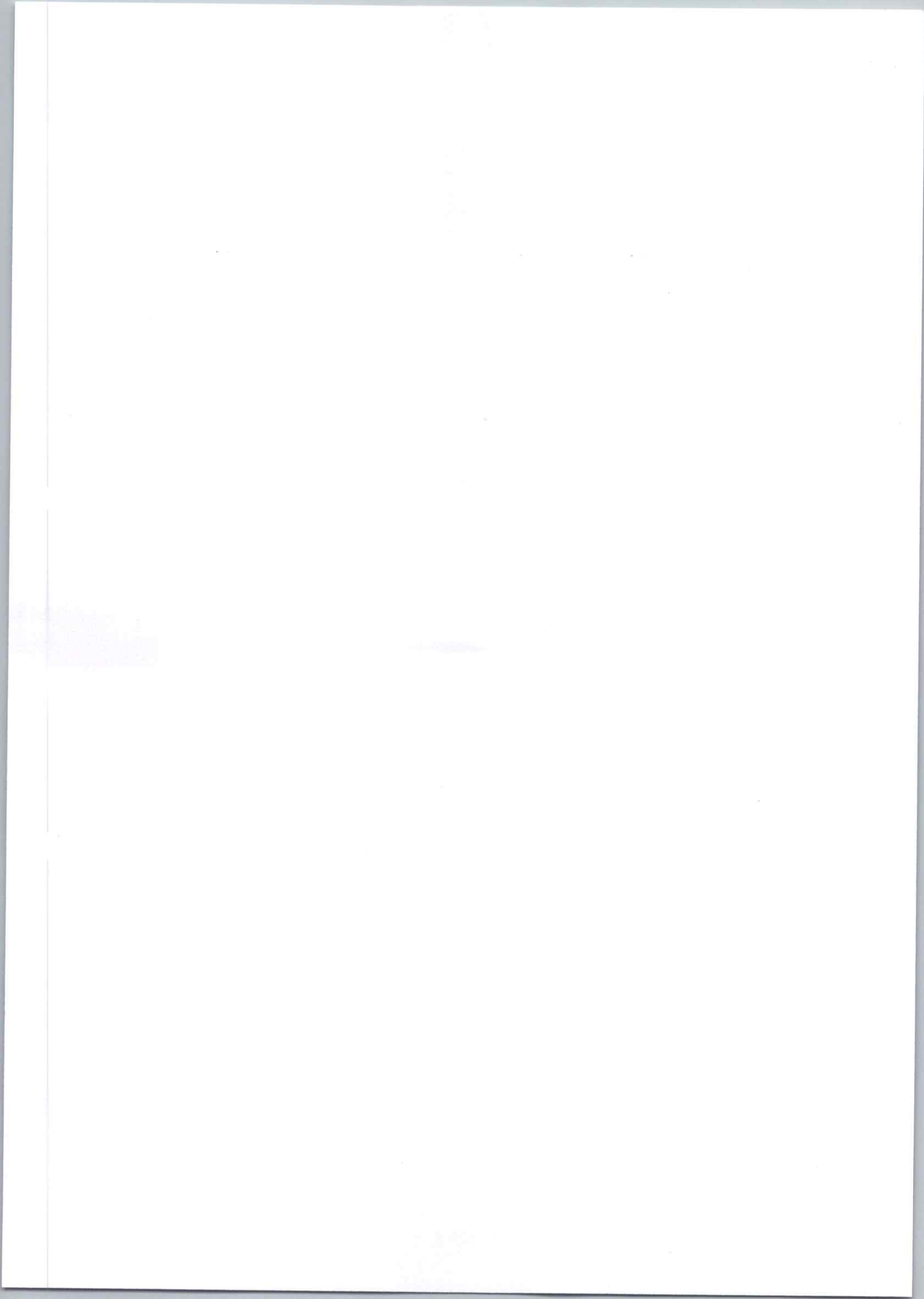
NAAS Rating: 3.10

Birds in and Around Macfast Campus, Thiruvalla, Kerala

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	Estrildidae	71	Scaly-breasted Munia	<i>Lonchura punctulata</i>	LC
		72	Black-headed Munia	<i>Lonchura malacca</i>	LC
		73	White-rumped Munia	<i>Lonchura striata</i>	LC
Passeridae	74	House Sparrow	<i>Passer domesticus</i>	LC	
Motacillidae	75	White-browed Wagtail	<i>Motacilla maderaspatensis</i>	LC	
	76	Grey Wagtail	<i>Motacilla cinerea</i>	LC	
Cisticolidae	77	Common Tailorbird	<i>Orthotomus sutorius</i>	LC	
	78	Ashy Prinia	<i>Prinia socialis</i>	LC	
Acrocephalidae	79	Blyth's Reed-Warbler	<i>Acrocephalus dumetorum</i>	LC	
Pycnonotidae	80	Red-vented Bulbul	<i>Pycnonotus cafer</i>	LC	
	81	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	LC	
Leiothrichidae	82	Jungle Babbler	<i>Turdoides striata</i>	LC	
Hirundinidae	83	Barn Swallow	<i>Hirundo rustica</i>	LC	
	84	Wire-tailed Swallow	<i>Hirundo smithii</i>	LC	
Sturnidae	85	Rosy Starling	<i>Pastor roseus</i>	LC	
	86	Chestnut-tailed Starling	<i>Sturnia malabarica</i>	LC	
	87	Common Myna	<i>Acridotheres tristis</i>	LC	

	Muscicapidae	88	Oriental MagpieRobin	<i>Copsychus saularis</i>	LC
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Butterflies of MACFAST Campus, Thiruvalla, Pathanamthitta District, Kerala, India

Butterflies are very sensitive to the changes in the environment and are considered good ecological indicators; hence they are included in various conservation and biodiversity studies (Gadgil 1996).

Butterflies are valuable pollinators and form an important part of the food chain components of reptiles, birds, and other predatory insects. Butterflies are diurnal creatures but some are active at night also. Approximately, 18,000 species of butterflies have been recorded from around the world. Of them, 1,501 species are from India, 334 species from the Western Ghats (Evans 1932; Gaonkar 1996; Kunte 2000) and 316 from Kerala (Palot et al., 2012). Some of the earlier works, which enriched the butterfly studies in Kerala include Ferguson (1891) who recorded 220 butterfly species from Travancore area, Mathew & Rahmathulla (1993) recorded 100 species from Silent Valley National Park, 119 species from Periyar Tiger Reserve (Palot et al., 1997), 124 species from Pambikulam Wildlife Sanctuary (Sudheendrakumar et al., 2000), and 71 species from Aralam Wildlife Sanctuary (Sreekumar & Balakrishnan, 2001). Fire, illegal trading of butterflies,

Table. Checklist of butterflies of MACFAST Campus, Thiruvalla, Kerala.

impact butterfly species. Diversity studies from representative habitats will give an outline of the ecological system of that area.

The butterfly fauna of the MACFAST college campus, Thiruvalla, Pathanamthitta district was monitored once a week from June 2017 to August 2018. The butterfly species were photo documented and species identification was done with the help of field guides by Mathew (2014), Kunte (2000), and the website of Butterflies of India (Kunte 2018).

The present study on butterfly diversity was carried out in the campus of Mar Athanasios College for Advanced Studies (MACFAST) (9.3730°N & 76.584°E from June 2017 to August 2018. The MACFAST campus is located about three kilometers south of Thiruvalla Town. The total area of the campus is about 7.5 acres, and the vegetation is dominated by *Anacardium occidentale*, *Racosperma auriculiforme*, *Racosperma mangium*, *Artocarpus heterophyllus*, *Artocarpus hirsutus*, *Mangifera indica*, *Bamboo sp.*, *Cocos nucifera*, *Corypha umbraculifera*, *Lagerstroemia microcarpa*, *Nephelium*

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	Common name	Scientific name
Papilionidae: Papilioninae		
1	Sahyadri Birdwing	<i>Troides minos</i>
2	Common Rose	<i>Pachliopta aristolochiae</i>
3	Crimson Rose	<i>Pachliopta hector</i>
4	Common Bluebottle	<i>Graphium sarpedon</i>
5	Tailed Jay	<i>Graphium agamemnon</i>
6	Lime Swallowtail	<i>Papilio demoleus</i>
7	Red Helen	<i>Papilio helenus</i>
8	Common Mormon	<i>Papilio polytes</i>
9	Common Mime	<i>Papilio clytia</i>
10	Blue Mormon	<i>Papilio polymnestor</i>
Pieridae: Coliadinae		
11	Lemon Emigrant	<i>Catopsilia pomona</i>
12	Mottled Emigrant	<i>Catopsilia pyranthe</i>

	Common name	Scientific name
Nymphalidae: Heliconiinae		
30	Tawny Coster	<i>Acraea terpsicore</i>
31	Cruiser	<i>Vindula erota</i>
32	Rustic	<i>Cupha erymanthis</i>
33	Common Leopard	<i>Phalanta phalantha</i>
34	Tamil Yeoman	<i>Cirrochroa thais</i>
Nymphalidae: Limenitidinae		
35	Common Sailer	<i>Neptis hylas</i>
36	Commander	<i>Moduza procris</i>
37	Grey Count	<i>Tanaecia lepidea</i>
38	Baron	<i>Euthalia aconthea</i>
Nymphalidae: Biblidinae		
39	Angled Castor	<i>Ariadne ariadne</i>
40	Common Castor	<i>Ariadne merione</i>
Nymphalidae: Nymphalinae		

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13	Small Grass Yellow	<i>Eurema brigitta</i>
14	Spotless Grass Yellow	<i>Eurema laeta</i>
15	Common Grass Yellow	<i>Eurema hecabe</i>
16	Three-spot Grass Yellow	<i>Eurema blanda</i>
Pieridae: Pierinae		
17	Indian Jezebel	<i>Delias eucharis</i>
18	Pioneer	<i>Belenois aurota</i>
19	Psyche	<i>Leptosia nina</i>
20	Common Gull	<i>Cepora nerissa</i>
21	Chocolate Albatross	<i>Appiaslyncida</i>
Nymphalidae: Satyrinae		
22	Common Evening Brown	<i>Melanitisleda</i>
23	Tailed Palmfly	<i>Elymnias caudata</i>

41	Yellow Pansy	<i>Junonia hierta</i>
42	Lemon Pansy	<i>Junonia lemonias</i>
43	Peacock Pansy	<i>Junonia almanac</i>
44	Grey Pansy	<i>Junonia atlites</i>
45	Chocolate Pansy	<i>Junonia iphita</i>
46	Danaid Eggfly	<i>Hypolimnas misippus</i>
47	Great Eggfly	<i>Hypolimnas bolina</i>
Nymphalidae: Danainae		
48	Glassy Tiger	<i>Parantica aglea</i>
49	Blue Tiger	<i>Tirumala limniace</i>
50	Dark Blue Tiger	<i>Tirumala septentrionis</i>
51	Plain Tiger	<i>Danaus chrysippus</i>
52	Striped Tiger	<i>Danaus genutia</i>

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24	Bamboo Treebrown	<i>Lethe europa</i>
25	Common Bushbrown	<i>Mycalesis perseus</i>
26	Dark-branded Bushbrown	<i>Mycalesis mineus</i>
27	Long-branded Bushbrown	<i>Mycalesis visala</i>
28	Common Four-ring	<i>Ypthima huebneri</i>
29	Common Five-ring	<i>Ypthima baldus</i>

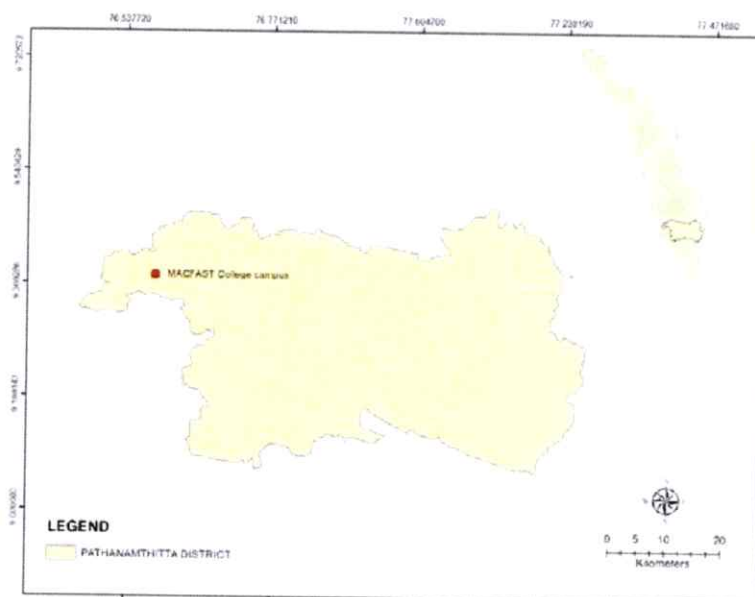
53	Common Crow	<i>Euploea core</i>
Lycaenidae: Polyommatae		
54	Common Pierrot	<i>Castalius rosimon</i>
55	Banded Blue Pierrot	<i>Discolampa ethion</i>
56	Plains Cupid	<i>Chilades pandava</i>
57	Tiny Grass Blue	<i>Zizula hylax</i>

	Common name	Scientific name
58	Lime Blue	<i>Chilades lajus</i>
59	Gram Blue	<i>Euchrysops cnejus</i>
60	Common Cerulean	<i>Jamides celeno</i>
61	Red Pierrot	<i>Talicauda nyseus</i>
Lycaenidae: Theclinae		
62	Slate Flash	<i>Rapala manea</i>
63	Monkey Puzzle	<i>Rathinda amor</i>
Hesperiidae: Pyrginae		
64	Common Snow Flat	<i>Tagiades japetus</i>
65	Water Snow Flat	<i>Tagiades litigiosa</i>
66	Tricolour Pied Flat	<i>Coladenia indrani</i>
67	Suffused Snow Flat	<i>Tagiades gana</i>

Hesperiidae: Hesperinae		
68	Bush Hopper	<i>Ampittia dioscorides</i>
69	Chestnut Bob	<i>Iambrix salsala</i>
70	Common Branded Redeye	<i>Matapa aria</i>
71	Grey-veined Grass Dart	<i>Taractrocera maevius</i>
72	Smaller Dartlet	<i>Oriens goloides</i>
73	Oriental Palm Bob	<i>Suastus gremius</i>
74	Pelopidas swift species	<i>Pelopidas</i> sp.
75	Parnara Swift species	<i>Parnara</i> sp.

Jappaceum, Ficus auriculata, Flacourtia jangomas, Azadirachta indica, Carica papaya, Cassia fistula, Syzygium jambos, Phyllanthus emblica, Sapindus emarginatus, Tectona grandis, Macaranga indica, Bauhinia racemosa, Averrhoa carambola, Albizia chinensis, Delonix regia, Muntingia calabura, Elaeocarpus serratus, Manilkara zapota and Artocarpus incises. Aquatic weeds like *Eichhornia crassipes, Salvinia molesta* were also present in water bodies near paddy fields.

A total of 75 species from 52 genera of butterflies belonging to five families and 13 subfamilies were identified from MACFAST Campus, including one species which is endemic to the Western Ghats and 10 species protected under various schedules of the Indian Wildlife (Protection)



MACFAST Campus, Thiruvalla.
Photographs of butterflies recorded in the MACFAST Campus.

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Bamboo Treebrown



Banded Blue Pierrot



Chocolate Albatross



Common Bluebottle



Bush Hopper



Chestnut Bob



Chocolate Pansy



Common Crow



Commander



Common Leopard



Common Cerulean



Common Mormon (female)



Common Five-ring



Common Four-ring



Common Grass Yellow



Crimson Rose



Common Mormon (male)



Common Pierrot



Common Sailer



Cruiser



Baron



Danaid Eggfly



Dark Blue Tiger



Dark-banded Bushbrown



Gram Blue



Great Eggfly



Grey Count



Grey Pansy



Grey-veined Grass Dart



Indian Jezebel



Lemon Emigrant



Lemon Pansy



Lime Blue



Long-branded Bushbrown



Monkey Puzzle



Pioneer



Mottled Emigrant



Oriental Palm Bob



Peacock Pansy



Plain Tiger



Red Pierrot

Plains Cupid

Sahyadri Birdwing

Psyche



Common Branded Redeye



Slate Flash



Tailed Jay



Tailed Palmfly



Yellow Pansy



Tawny Coster



Three-spot Grass Yellow



Rustic



Tamil Yeoman



Tiny Grass Blue



Striped Tiger



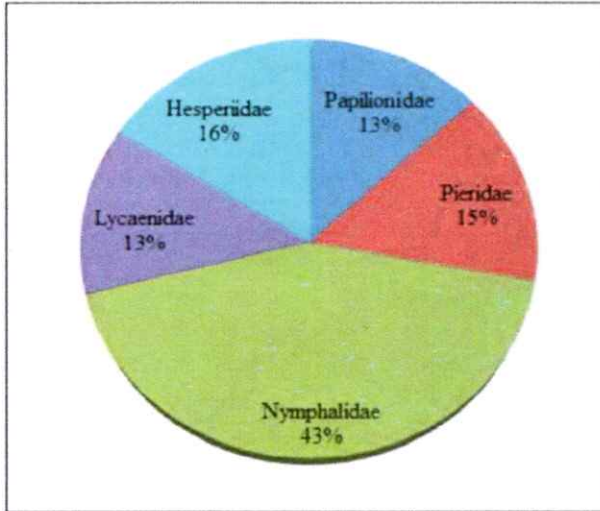
Glassy Tiger



Lime Swallowtail

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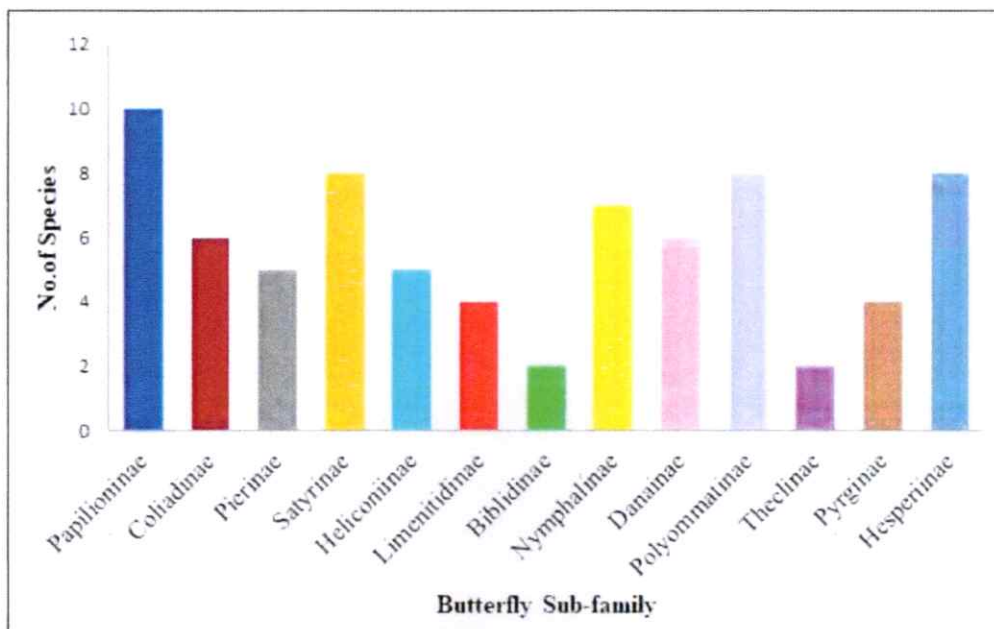
Family wise distribution of butterfly species in MACFAST campus.

Act, 1972. The sighted butterflies are listed in Table. Nymphalidae (brush-footed butterflies) were the most dominant family comprising of 32 species belonging to five subfamilies and it constituted 42.7% of the total butterfly species in the campus. The subfamily-wise distribution of butterflies of MACFAST campus is given.

Out of 316 species recorded from

Kerala, 75 species are recorded from the MACFAST campus, which implies that the small green campus is rich in butterfly diversity. Among the 75 species, *Pachliopta hector*, *Papilio clytia*, *Lethe europa*, *Castalius rosimon* are listed in the Schedule I of the Indian Wildlife (Protection) Act of 1972. Species such as *Euchrysops cnejus*, *Hypolimnas misippus*, *Tanaecia lepidea*, *Cepora nerissa*, *Appias lycida* are in Schedule II and *Euploea core* is under Schedule IV as per the Act. Sahyadri Birdwing *Troides minos*, an endemic species to the Western Ghats was also recorded from the campus. Six migratory butterfly species namely *Euploea core*, *Danaus chrysippus*, *Tirumalalimniace*, *Catopsilia pyranthe*, *Catopsilia*, *Pomona*, and *Papilio demoleus*, have also been recorded on this campus.

While comparing with the butterfly diversity of well-established butterfly gardens like Nilambur Butterfly Garden (with 50 species) (Revathy & Mathew 2013) and



Sub-family wise distribution of butterfly species in MACFAST campus.



Thumboormuzhi river garden (with 89 species) (Puthur et al. 2015), MACFAST campus, without a butterfly garden, exemplifies a potential habitat for the butterflies. This small urban landscape is an abode to 5% and 23.73% of the total butterfly species of India and Kerala respectively. As there is an urgent need for conservation programmes, setting up of a butterfly garden by planting more nectar plants and larval food plants is the main recommendation for the conservation of butterflies on the campus.

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BIRDS IN AND AROUND MACFAST CAMPUS, THIRUVALLA, KERALA

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ABSTRACT

Avifaunal diversity of MACFAST campus and adjoining areas were carried out during March 2016 to June 2017. Ponds, grasslands, rooftops of buildings, playground and paddy fields were the major microhabitats of the study area. Birds were observed using Bushnell binocular (10 x 50), spotting scope (10x- 45x) and identified using physical features with the help of field guides and reference books. A total of 88 species from 12 orders and 38 families were recorded during the study and among these, Passeriformes and Pelicaniformes, dominated the list with 31 and 14 species, respectively. Three species of Near Threatened category (*Mycteria leucocephala*, *Anhinga melanogaster*, *Threskiornis melanocephalus*) and *Ciconia episcopus* from Vulnerable category were also recorded. Pompadour Green Pigeon *Treron pompadora*, Lesser coucal *Centropus bengalensis*, Pied Cuckoo *Clamator jacobinus*, Baillon's Crake *Zapornia pusilla*, White-browed Wagtail *Motacilla maderaspatensis*, Chestnut-tailed Starling *Sturnia malabarica* and Indian Paradise-flycatcher *Terpsiphone paradise* were the important sightings, during the survey. The presence of indigenous fruiting trees along with large trees as roosting sites, attract more birds to the campus. **KEYWORDS:** Birds-Diversity- Macfast Campus-Thiruvalla-Kerala

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INTRODUCTION

Birds are always a fascinating creature, which adds up the beauty of nature. Avifauna of MACFAST campus and adjoining areas were studied from March 2016 to June 2017. Mar Athanasios College for Advanced Studies (MACFAST) (9° 22' 23" N & 76° 35' 4"E) in Pathanamthitta District is located about 3 km to the South of Thiruvalla town. The campus has varied micro habitats like ponds, grasslands, roof top of buildings, playground and paddy fields. The vegetation is dominated by *Racosperma auriculiforme*, *Anacardium occidentale*, *Artocarpus heterophyllus*, *Racosperma mangium*, *Nephelium lappaceum*, *Artocarpus hirsutus*, *Ficus auriculata*, *Flacourtia jangomas*, *Mangifera indica*, *Bamboo Sps.*, *Cocos nucifera*, *Azadirachta indica*, *Syzygium jambos*, *Phyllanthus emblica*, *Carica papaya*, *Cassia fistula*, *Sapindus emarginatus*, *Corypha umbraculifera*, *Lagerstroemia microcarpa*, *Tectona grandis*, *Macaranga indica*, *Bauhinia racemosa*, *Albizia chinensis*, *Delonix regia*, *Muntingia calabura*, *Averrhoa carambola*, *Elaeocarpus serratus*, *Manilkara zapota* and *Artocarpus incises*. Aquatic weeds like *Eichhornia crassipes*, *Salvinia molesta* were also present in water bodies near paddy fields.

METHODOLOGY

Birds were observed alone as well as in a team using Bushnell binocular (10 x 50), spotting scope (10 x-45 xs) and identified using physical features, with the help of field guides and reference books (Ali & Ripley 1978; Grimmett *et al.* 2011). Observations were made from 06.00 hrs to 10.00 hrs and 16.00 hrs to 19.00 hrs, once in

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Greeshma

P. M. Nishad & P.

every week.

RESULTS

A total of 88 species from 12 orders and 38 families were recorded during the study (Table 1). Out of 500 species of Kerala (Praveen 2015), 17.6 % of bird species were reported from this region. Of these 12 orders, Passeriformes, Pelicaniformes dominated the list with 31 and 14 species, respectively (Figure.1).

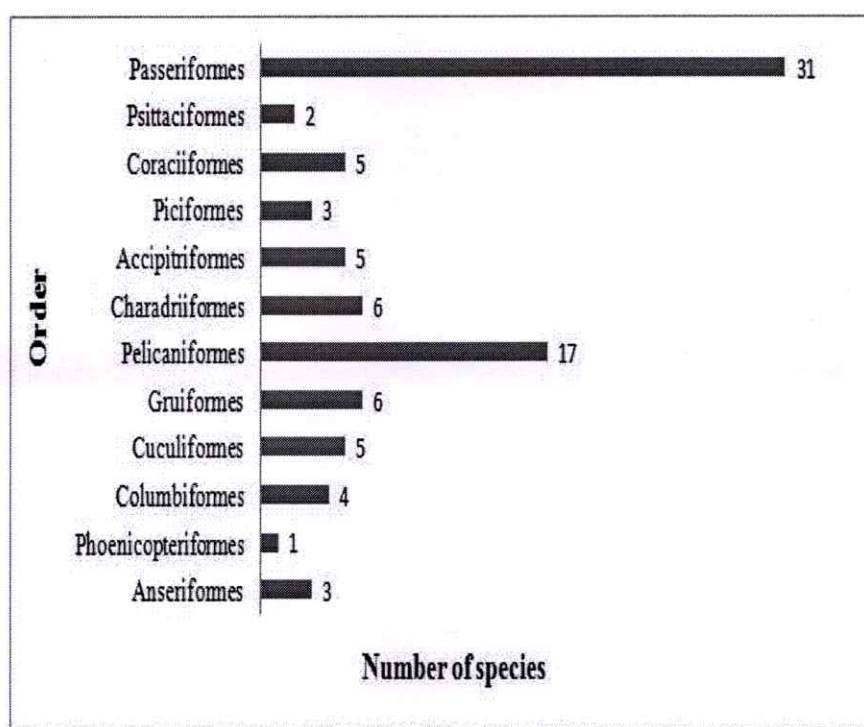


Figure 1: Number of Species Representing the Respective Orders from MACFAST Campus

Among the species recorded, 51% comprised of resident birds followed by 33% of local migrants and 16 % of migratory birds. Of these, 47 species were wetland dependent birds and 41 species terrestrial birds. Little cormorant *Microcarbo niger*, Indian pond heron *Ardeola grayii*, Grey-headed swamphen *Porphyrio poliocephalus*, White-throated Kingfisher *Halcyon smyrnensis*, Black Drongo *Dicrurus macrocercus* were the most abundantly seen resident birds. Three species of Near Threatened category (*Mycteria leucocephala*, *Anhinga melanogaster*, *Threskiornis melanocephalus*) and Woolly-necked Stork *Ciconia episcopus*, from Vulnerable category were also recorded. Pompadour Green Pigeon *Treron pompadora*, Lesser coucal *Centropus bengalensis*, Pied Cuckoo *Clamator jacobinus*, Baillon's Crane *Zapornia pusilla*, White-browed Wagtail *Motacilla maderaspatensis*, Chestnut-tailed Starling *Sturnia malabarica*, Indian Paradise-flycatcher *Terpsiphone paradise* were the important sightings. The paddy fields serve as an important foraging ground for several groups of birds like herons, ducks, cormorants, storks etc. Apart from foraging, hundreds of birds choose their resting place in this campus.

DISCUSSION AND CONCLUSIONS

During the study it was observed that the campus and adjoining areas had a rich variety of vegetation. The presence of indigenous fruiting trees, along with large trees as roosting sites, attract more birds to the campus. Least

Impact Factor (JCC): 3.8975

NAAS Rating: 3.10

Birds in and Around Macfast Campus, Thiruvalla, Kerala

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disturbances to the habitat and conservation awareness among the college people had led to the safe movement of birds all the time in the campus. Bird diversity at MACFAST campus and adjoining areas is unexplored yet and hence this work to record the avian diversity will form the base line information for future studies.

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APPENDICES

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Table 1: Checklist of Birds from MACFAST Collge Campus, Thiruvalla, Kerala

Order	Family	Sl. No	Common Name	Scientific Name	IUCN
Anseriformes	Anatidae	1	Lesser Whistling-Duck	<i>Dendrocygna javanica</i>	LC
		2	Cotton Pygmy-Goose	<i>Nettapus coromandelianus</i>	LC
		3	Indian Spot-billed Duck	<i>Anas poecilorhyncha</i>	LC
Phoenicopteriformes	Podicipedidae	4	Little Grebe	<i>Tachybaptus ruficollis</i>	LC
Columbiformes	Columbidae	5	Rock Pigeon	<i>Columba livia</i>	LC
		6	Spotted Dove	<i>Streptopelia chinensis</i>	LC
		7	Yellow-footed Pigeon	<i>Treron phoenicopterus</i>	LC
		8	Pompadour Green Pigeon	<i>Treron pompadora</i>	LC
Cuculiformes	Cuculidae	9	Greater Coucal	<i>Centropus sinensis</i>	LC
		10	Lesser coucal	<i>Centropus bengalensis</i>	LC
		11	Pied Cuckoo	<i>Clamator jacobinus</i>	LC
		12	Asian Koel	<i>Eudynamys scolopaceus</i>	LC
		13	Indian Cuckoo	<i>Cuculus micropterus</i>	LC
Gruiformes	Rallidae	14	White-breasted Waterhen	<i>Amaurornis phoenicurus</i>	LC
		15	Baillon's Crane	<i>Zapornia pusilla</i>	LC

		16	Watercock	<i>Gallicrex cinerea</i>	LC
		17	Gray-headed Swampphen	<i>Porphyrio porphyrio</i>	LC
		18	Common Moorhen	<i>Gallinula chloropus</i>	LC
		19	Common Coot	<i>Fulica atra</i>	LC
elicaniformes	Ciconiidae	20	Asian Openbill	<i>Anastomus oscitans</i>	LC
		21	Woolly-necked Stork	<i>Ciconia episcopus</i>	VU
		22	Painted Stork	<i>Mycteria leucocephala</i>	NT
	Ardeidae	23	Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	LC
		24	Grey Heron	<i>Ardea cinerea</i>	LC
		25	Purple Heron	<i>Ardea purpurea</i>	LC
		26	Great Egret	<i>Ardea alba</i>	LC

22

Greeshma

P. M. Nishad & P.

		27	Intermediate Egret	<i>Ardea intermedia</i>	LC
		28	Little Egret	<i>Egretta garzetta</i>	LC
		29	Western Reef-Heron	<i>Egretta gularis</i>	LC
		30	Cattle Egret	<i>Bubulcus ibis</i>	LC
		31	Indian Pond-Heron	<i>Ardeola grayii</i>	LC
	Threskiornithidae	32	Glossy Ibis	<i>Plegadis falcinellus</i>	LC
		33	Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT
	Phalacrocoracidae	34	Little Cormorant	<i>Microcarbo niger</i>	LC
		35	Indian Cormorant	<i>Phalacrocorax fuscicollis</i>	LC
	Anhingidae	36	Oriental Darter	<i>Anhinga melanogaster</i>	NT
Charadriiformes	Recurvirostridae	37	Black-winged Stilt	<i>Himantopus himantopus</i>	LC
	Charadriidae	38	Red-wattled Lapwing	<i>Vanellus indicus</i>	LC
	Jacaniidae	39	Bronze-winged Jacana	<i>Metopidius indicus</i>	LC
	Scolopacidae	40	Common Snipe	<i>Gallinago gallinago</i>	LC
		41	Marsh Sandpiper	<i>Tringa stagnatilis</i>	LC
		42	Wood Sandpiper	<i>Tringa glareola</i>	LC
Accipitriformes	Accipitridae	43	Crested Serpent Eagle	<i>Spilornis cheela</i>	LC
		44	Eurasian Marsh-Harrier	<i>Circus aeruginosus</i>	LC
		45	Shikra	<i>Accipiter badius</i>	LC
		46	Brahminy Kite	<i>Haliastur indus</i>	LC
		47	Black Kite	<i>Milvus migrans</i>	LC
Piciformes	Picidae	48	Common Goldenbacked Woodpecker	<i>Dinopium javanense</i>	LC
		49	Lesser Golden-backed Woodpecker	<i>Dinopium benghalense</i>	LC
	Ramphastidae	50	White-cheeked Barbet	<i>Psilopogon viridis</i>	LC
Coraciiformes	Meropidae	51	Blue-tailed Bee-eater	<i>Merops philippinus</i>	LC

	Alcedinidae	52	Common Kingfisher	<i>Alcedo atthis</i>	LC
		53	Stork-billed Kingfisher	<i>Pelargopsis capensis</i>	LC
		54	White-throated Kingfisher	<i>Halcyon smyrnensis</i>	LC
		55	Pied Kingfisher	<i>Ceryle rudis</i>	LC
Psittaciformes	Psittaculidae	56	Rose-ringed Parakeet	<i>Psittacula krameri</i>	LC
		57	Plum-headed Parakeet	<i>Psittacula cyanocephala</i>	LC
Passeriformes	Artamidae	58	Ashy Woodswallow	<i>Artamus fuscus</i>	LC
	Oriolidae	59	Indian Golden Oriole	<i>Oriolus kundoo</i>	LC
		60	Black-hooded Oriole	<i>Oriolus xanthornus</i>	LC
	Dicruridae	61	Black Drongo	<i>Dicrurus macrocercus</i>	LC
		62	Greater Racket-tailed Drongo	<i>Dicrurus paradiseus</i>	LC
	Aegithinidae	63	Common Iora	<i>Aegithina tiphia</i>	LC
	Corvidae	64	Rufous Treepie	<i>Dendrocitta vagabunda</i>	LC
		65	House Crow	<i>Corvus splendens</i>	LC
	Monarchidae	66	Indian Paradiseflycatcher	<i>Terpsiphone paradisi</i>	LC
	Dicaeidae	67	Pale-billed Flowerpecker	<i>Dicaeum erythrorhynchos</i>	LC
	Nectariniidae	68	Purple-rumped Sunbird	<i>Leptocoma zeylonica</i>	LC
		69	Little Spiderhunter	<i>Arachnothera longirostra</i>	LC
		70	Loten's Sunbird	<i>Cinnyris lotenius</i>	LC

Impact Factor (JCC): 3.8975

NAAS Rating: 3.10

Birds in and Around Macfast Campus, Thiruvalla, Kerala

23

Estrildidae	71	Scaly-breasted Munia	<i>Lonchura punctulata</i>	LC
	72	Black-headed Munia	<i>Lonchura malacca</i>	LC
	73	White-rumped Munia	<i>Lonchura striata</i>	LC
Passeridae	74	House Sparrow	<i>Passer domesticus</i>	LC
Motacillidae	75	White-browed Wagtail	<i>Motacilla maderaspatensis</i>	LC
	76	Grey Wagtail	<i>Motacilla cinerea</i>	LC
Cisticolidae	77	Common Tailorbird	<i>Orthotomus sutorius</i>	LC
	78	Ashy Prinia	<i>Prinia socialis</i>	LC
Acrocephalidae	79	Blyth's Reed-Warbler	<i>Acrocephalus dumetorum</i>	LC
Pycnonotidae	80	Red-vented Bulbul	<i>Pycnonotus cafer</i>	LC
	81	Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	LC
Leiothrichidae	82	Jungle Babbler	<i>Turdoides striata</i>	LC
Hirundinidae	83	Barn Swallow	<i>Hirundo rustica</i>	LC
	84	Wire-tailed Swallow	<i>Hirundo smithii</i>	LC
Sturnidae	85	Rosy Starling	<i>Pastor roseus</i>	LC
	86	Chestnut-tailed Starling	<i>Sturnia malabarica</i>	LC
	87	Common Myna	<i>Acridotheres tristis</i>	LC

	Muscicapidae	88	Oriental MagpieRobin	<i>Copsychus saularis</i>	LC
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BULBUL

LIVE WITH NATURE

NEWSLETTER

ISSUE -2, MARCH-APRIL 2019

FORESTRY DAY CELEBRATION AND BULBUL NEWSLETTER RELEASE

Message

Nature is our home. Understanding that, nature is home for not only humans but also for other floral and faunal creatures is essential. This basic understanding makes us a 'perfect' human.

Ms. Jeena Sara Viju

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"Look deep into nature, and you will understand everything better."-**Albert Einstein.**

This sentence exactly express what Ms. Sudhagourilekshmi, Ecotourism Programme Officer, Shendurney Wildlife Sanctuary who graciously came to our MACFAST college on the auspicious occasion of International Day of Forests, giving awareness to the students about our mother nature. On 28th March 2019 at 3 pm, in the presence of our beloved Principal Fr.Dr.Cherian J Kottayil and other dignitaries-MACFAST administrator Prof. Varghese Abraham, Deputy Director Prof.Saneesh Varghese and all the faculties, the session started with ode to the almighty God. Dr. Blessan invited the guests to the programme and Fr.Dr. Cheriyan J Kottayil, Principal gave the presidential address. Rekindling the cherished memories of wild and the lush forests in his previous years he gave us a memorable presidential address. The launching of Forestry Club Newsletter "Bulbul" was done by Ms. Sudhagourilekshmi by handing over it to Principal Fr.Dr.Cherian J Kottayil. The initiative undertaken by Dr.Nishad PM and the hard work of people who worked behind the release of Bulbul was appreciable.

The talk of Ms. Sudhagourilekshmi was an enlightening experience as lots of misunderstandings about our mother nature were cleared. She was an outstanding orator and she kept on inspiring us all. The valuable information which was to be passed on to us was carefully divided into various lessons just to make us understand things more easily.



The poetic nature and rhythmic style sounded more interesting. The speech started by addressing all the esteemed personalities present. "To me, forest is the temptation of Romance, the light of Knowledge and the taste of Research" the reply to a news reporter, which she told us was enough to understand her deep connection with the heart of forest. The real understanding of forest comes when we become a lover of nature and a beggar for knowledge.



CNTD...

She said that true spirit of a researcher doesn't lie with PhD, but in everyone with curiosity and compassion to all living creatures. She informed us with every aspects which we need to know for understanding nature and forests varying from law to scientific explanations. Using the citations of ancestral scriptures such as Rigveda, she enlightened us about the importance of understanding our nature and environment. Regardless of any religion and beliefs all godly figures were nature lovers. They all proposed the importance of sustainable development. She recited Bible, Bhagavatgeeta and Quran to establish the point.

The Bhagavatgeeta has portrayed the existence of life and its relationships through symbolism of an inverted tree. Also she gave us the insight to the connection (psychokinesis) of all living beings by giving us the example of experiment done in distant Japanese islands by Larry Watson and her own experience. The more you are closer to nature the stronger connection you feel.

The knowledge about Social Consciousness was rather new to all of us as Ms. Sudhagourilekshmi explained how the consciousness is a singular mass body and each organism takes up a portion of it in its life.

The problems, remedies and the precautions which should have been taken during the recent Flood in Kerala was also discussed with more clarity in the class. The necessity of scientific knowledge about the nature conservation was highlighted in her talk. She also shared her experience of finding out the Stone Age men residence in the Shendurney wildlife sanctuary, which was explained with lots of enthusiasm. Her enthusiasm was very contagious as we wanted to experience the same.

She said that the meddling of human have affected the nature very gravely. The most obvious result which is the climate change have adversely effected the human population too. The connection of man with nature should be regained to correct all the mistakes happened until now.

The emotions of each and every being on earth was well portrayed in her speech, such as the scared trees, pain of being cut down, wailing of still alive trees after it has been cut... each and every emotions were absorbed by her and transacted to us eloquently. With the advice to move out and interact with, to experience it with all the senses granted to us by the almighty, Ms.Sudhagourilekshmi wrapped up her speech. The clamour of claps were enough to tell the effectiveness of her speech.



As a student, I could tell that all the students enjoyed the class very much. After the lecture Ms. Sudhagourilekshmi gladly accepted the interaction session with students who were eager to ask various questions about the conservation and nature. She answered all the questions with a generous smile and also thanked students for being very enthusiastic and the teachers for inviting her to address the students



She generously invited the students and faculty to come over and visit the Shendurney Wildlife Sanctuary. Ms. Remya a student of MCA department and an active member of MACFAST Forestry Club gave the hearty Vote of Thanks on behalf of all the teachers and students present there. The session ended by 4.45 PM.

Anisha Anto
M.Sc. (Bioinformatics)

Mr. Shuppu



Ms. Jeena Sara Viju

NEW SIGHTINGS FROM MACFAST



1

1. Bengal Monitor (*Varanus bengalensis*)
 IUCN Red list : LC
 Life span: 11 years
 Sighted on: 19 March 2019
 © Dr. Nishad PM



6

6. Gray -bellied cuckoo (*Cacomantis passerinus*)
 IUCN Red list : LC
 Life span: 4.2 years
 Sex : Male/ Female
 Sighted on: 16 March 2019
 © Dr. Nishad PM

2. Thick Billed Warbler (*Arundinax aedon*)
 IUCN Red list : LC
 Life span: 4.4 years
 Sex : Male/ Female
 Sighted on: 11 April 2019
 © Dr. Nishad PM



4

4. Gray -bellied cuckoo (*Cacomantis passerinus*)
 IUCN Red list : LC
 Life span: 4.2 years
 Sex : Juv/ Female
 Sighted on: 16 March 2019
 © Dr. Nishad PM



7

7. Jungle cat (*Felis chaus*)
 IUCN Red list : LC
 Life span: 15-20 years in Captivity
 Sighted on: 18 May 2019
 © Dr. Nishad PM



2

3. Ruddy breasted crake (*Zapornia fusca*)
 IUCN Red list : LC
 Life span: 2.7 years
 Sighted on: 01 April 2019
 © Dr. Nishad PM



5

5. Slaty- breasted rail (*Lewinia striata*)
 IUCN Red list : LC
 Life span: 3.4 years
 Sighted on: 18 May 2019
 © Dr. Nishad PM



8

8. Tetragnatha viridorufa
 Sighted on: 14 Feb 2019
 © Dr. Nishad PM



3

A WALK TO THE “KASHMIR OF SOUTH INDIA”



Around 17 students visited the Chinnar Wildlife Sanctuary situated in Munnar known as “Kashmir of South India”. The Experience of what we saw and what we felt is beyond words. We found beauty everywhere. The saying “Look deep into nature and then you will understand everything better ” found meaningful when we reached there and started experiencing everything.

As soon as we reached the place, we spotted a Barn Owl and noted it’s movements. After that we moved ahead passing through the heap where we saw a beautiful tree above a large rock which was covered with beautiful bloomed *Magnolia champaca*. The scenario was so beautiful and it captured everyone’s attention. We started our journey to Chinnar Wildlife Sanctuary so as to watch the beautiful waterfall. We reached at the Chinnar office around 8 am. A guide was assigned to accompany us through the journey. He directed us the route and explained about the place for us. We were given clear instructions not to distract the habitat of nature, not to put any waste and various precautions to be kept in mind. I came to know that there are around 225 species of birds in the Sanctuary. As we moved, the Asian Koel started giving calls, probably it’s the warning call to other birds indicating the presence of human inside the forest.

On the way, the guide showed us a Barn Owl which was hiding behind a tree.

Later I saw my favourite bird, with a long white tail and black head with a small cap, it was the Indian Paradise Flycatcher resting on a tree. I got attracted by seeing Red Whiskered Bulbul and as I was about to show it to my friends, it vanished.

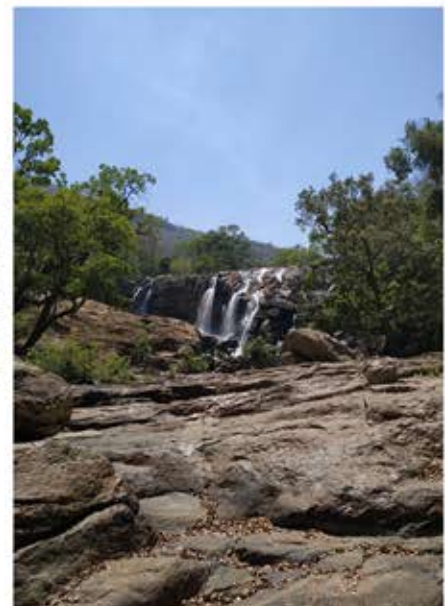
It was a long trip and I was tired. I closed my eyes for a minute I could hear the wheezing of wind, the movement of dried leaves as the wind hit them, the flow of water in the streams. By hearing this my mind was refreshed and I moved forward. On the way we saw monkeys moving around and there were 3 Hanuman monkeys and they were jumping from one tree to another. It was so entertaining watching them. fighting and jumping around the trees.



The guide asked us to keep quiet as he heard some noise behind the bushes, it was a Gaur. We were asked not to make sound and it wouldn't harm us. 5-6 feet heightened Buffalo and we had no sticks or anything to defend ourselves.

After watching this I was reminded of Bahubali movie and the fight scene was running in my mind.

We moved ahead, the temperature was rising .We reached the waterfalls and it was so beautiful to experience the flow of water, the noise, the cold wheezing wind. The guide instructed us not to go into the waterfall as it is dangerous. So I went near the bank of the waterfall. The water was ice-cold, pure and crystal clear. After spending some time there and having food we returned back. By this time the sun was very shiny and we felt very warm. I couldn't find any birds may be because of the hot and shiny climate. Altogether it was a beautiful experience.



Ashbin Shaji 5th Sem MCA(Reg)

കാടിന്റെ ഉള്ളറിഞ്ഞു ഒരു ദിനം



സമയം രാവിലെ ഏഴു മണി കഴിഞ്ഞതേയുള്ളൂ. മാക്ഫാസ്റ്റ് കോളേജിൽ നിന്ന് അതിരാവിലെ യാത്ര പുറപ്പെട്ട 20 വിദ്യാർത്ഥികളും നാല് അധ്യാപകരും അടങ്ങുന്ന ഞങ്ങളുടെ സംഘം കോന്നി ഫോറസ്റ്റ് ഡിവിഷൻ ഭാഗമായ ഞങ്ങളിൽ എത്തിച്ചേർന്നിരിക്കുകയാണ്. അവിടെ ഞങ്ങളെയും കാത്ത് ബീറ്റ് ഫോറസ്റ്റ് ഓഫീസർ ആയ ജി.ശ്രീജിത്തും വാച്ചർ മാരായ രഘുവും മണിയനും കാത്തുനിൽക്കുന്നുണ്ടായിരുന്നു. ഇനി ഞങ്ങളുടെ മുന്നോട്ടുള്ള പ്രയാണം ഇവരുടെ നേതൃത്വത്തിലാണ്.

ഞങ്ങൾ കാട്ടുവഴികളിലൂടെ കാടിനെ അനുഭവിച്ചും ശ്വസിച്ചും കിളികളുടെ കളക്യജനം കാതോർത്തും നടന്നു. വേഴാമ്പൽ ഉൾപ്പെടെയുള്ള അപൂർവ്വ ഇനം കിളികളെ കണ്ടതിലുള്ള ആവേശത്തിൽ ഞങ്ങളുടെ സ്വരം കാടിന്റെ നിശബ്ദതയെ ഇടയ്ക്കിടെ ഭ്രമിക്കുമ്പോൾ രഘു ഞങ്ങളെ വിളിക്കുന്നുണ്ടായിരുന്നു. 'കാടിനുള്ളിലേക്ക് നമ്മൾ യാത്ര ചെയ്യുന്നത് ഒരു തീർത്ഥാടനം പോലെ ആകണം. നമ്മുടെ പ്രവർത്തികളൊ സ്വരമോ ഇവിടുത്തെ സ്ഥിരതാമസക്കാർക്ക് ഒരു രീതിയിലും അലോസരം ഉണ്ടാകാൻ പാടില്ല 'ശ്രീജിത്ത് പറഞ്ഞു.

യാത്രയുടെ ഇടയ്ക്ക് ഞങ്ങളുടെ പാത കടന്നുപോകുന്നത് ചെങ്ങര സമര ഭൂമിയുടെ സമീപത്തുകൂടി ആയിരുന്നു. ചെങ്ങര സമരഭൂമിയിലെ ചെറിയ ചെറിയ കുരകളിൽ നിന്ന് ഞങ്ങളെ വീക്ഷിക്കുന്ന സമരക്കാർ. അവിടെ കാടിന്റെ അതിർവരമ്പുകൾ നിർണയിക്കുന്ന ജിൻഡ വാച്ചർ മണിയൻ ഞങ്ങളെ പരിചയപ്പെടുത്തി.

വാച്ചർ രഘുവിന്റെ കാട്ടറിവുകൾ അത്ഭുതപ്പെടുത്തുന്നവയായിരുന്നു. ദന്തപാല എന്ന താക്ക് രോഗങ്ങൾക്ക് പ്രതിവിധി ആയി ഉപയോഗിക്കുന്ന ഔഷധഗുണമുള്ള ചെടിയെക്കുറിച്ച്, എങ്ങനെ അത് ഉപയോഗിച്ച് മരുന്നുകൾ ഉണ്ടാക്കാം എന്നത് ഉൾപ്പെടെ ഒരു നീണ്ട വിവരണം തന്നെ അദ്ദേഹം നൽകി. ചെറിയ പ്രാണികളുടെ ഒരു കൂട്ടത്തെ കണ്ടപ്പോൾ അദ്ദേഹം പറഞ്ഞു. 'ഇതാണ് പുത അടുത്ത് എവിടെയോ കാട്ടുപന്നി ഉണ്ട്'.

വർഷങ്ങൾകൊണ്ട് ആർജ്ജിച്ച കാടിന്റെ തിരിച്ചറിവുകൾ. കുട്ടികളുടെ സ്വരം ഇടയ്ക്കൊക്കെ ഉയരുമ്പോൾ അദ്ദേഹം അസ്വസ്ഥനാകുന്നത് എനിക്ക് കാണാമായിരുന്നു. ഇടയ്ക്കൊക്കെ ചെവികുർപ്പിച്ചു കാതോർത്ത് നിൽക്കുമ്പോൾ അദ്ദേഹം പറഞ്ഞു 'നമ്മുടെ സ്വരം കേട്ടാൽ ചെവിയടി നിൽക്കും 'ആനകൾ സൈര്യമായി വിഹരിക്കുമ്പോൾ ചെവി വിശദീകരണവീശുമ്പോൾ ഉണ്ടാകുന്ന ശബ്ദത്തെ ആണ് രഘു ചെവിയടി എന്ന് പറഞ്ഞത്. ആനയുടെ സാമീപ്യം അറിയാൻ രഘുവിന്റെ കാട്ടറിവാണ് ചെവിഅടിക്കു വേണ്ടി കാതോർക്കുക എന്നത്. മനുഷ്യന്റെ സാമീപ്യം ശബ്ദത്തിലൂടെയോ പ്രലാപനത്തിലൂടെയോ ജന്മസിദ്ധമായ ചോദനകളോടെ മനസ്സിലാക്കുന്ന കാട്ടാനകൾ ചെവി അടി നിർത്തി നിശബ്ദമാകുമ്പോൾ അവരുടെ സാമീപ്യം നമുക്ക് തിരിച്ചറിയാൻ കഴിയില്ല എന്നതാണ് രഘുവിനെ തിരി. കിലോമീറ്ററുകളോളം ഉൾവനത്തിൽ ആണ് ഞങ്ങൾ. വഴിയിലൂടെനീളം ആനപ്പിണ്ടത്തിൽ സാന്നിധ്യം. ഉടനെ തന്നെ ഞങ്ങളുടെ പാതയിൽ ഒരു കരിവീരൻ വരുമോ എന്ന ഉൾഭയം എല്ലാവരിലും ഉണ്ടായിരുന്നു.

പ്രത്യേകിച്ച് ഞങ്ങളുടെ സുരക്ഷയെ കുറിച്ചുള്ള രഘുവിന്റെ ഉത്കണ്ഠ അയാളുടെ മുഖത്തുനിന്നും വായിച്ചെടുക്കാൻ എനിക്ക് പറ്റുമായിരുന്നു. പടുകുറ്റൻ മരങ്ങൾ, നൂറ്റാണ്ടുകൾ പഴക്കമുള്ളത്. കാലഘട്ടം ഏതായിരിക്കും? ഒരുപക്ഷെ മാർത്താണ്ഡ വർമയേക്കാൾ പ്രായം ഉള്ള വൃക്ഷങ്ങൾ (1758 AD). ശ്രീജിത്ത് പറഞ്ഞപ്പോൾ നൂറ്റാണ്ടുകൾക്കപ്പുറത്തേക്ക് ഒരു യാത്ര പോലെ, പടുകുറ്റൻ മരങ്ങളെ സ്പർശിക്കുമ്പോൾ ഏതോ ഒരു ജന്മാന്തര ബന്ധത്തിന്റെ കണ്ണികൾ ആകും പോലെ. കൂട്ടത്തിൽ ഒരു കുന്തിരിക്ക വൃക്ഷത്തിനുമുറ്റം ഞങ്ങൾ ഒട്ടേറെനേരം ചിലവഴിച്ചു. എങ്ങനെ ആണ് കുന്തിരിക്കം, ഇഞ്ച തുടങ്ങിയവന വിഭവങ്ങൾ ശേഖരിക്കുന്നത് എന്നും മണിയൻ ഞങ്ങൾക്ക് പറഞ്ഞുതന്നു.



Keezha nelli (*Phyllanthus niruri* Linn.) കീഴാർ നെല്ലി



Keezha nelli is a widespread tropical plant which belongs to family Euphorbiaceae. It can be easily identified and widely seen around our surrounding, it is also known as stone breaker or seed under leaf. Bhumyamalaki is Sanskrit name for *Phyllanthus niruri*. It grows 50-70 cm tall and bears ascending herbaceous branches, the bark is smooth and light green and it bears seeds under its leaves which is a unique feature of this herb.

The plant has been used as herbal medicine in Ayurveda. It has many medicinal properties, it is used to treat diseases like bladder infections, cold, hepatitis, kidney disorders and urinary tract infections. It is best known and widely studied for its ability to treat kidney stone, it is used to break up stones in the urinary tract.

The plant is used in such a way that either the whole plant or its leaves are taken separately



Leaves and seeds

cleansed properly and made to boil in fresh water and can be drunk like tea.

The medicinal plant *Phyllanthus niruri*. has wide variety of phytochemicals and pharmacological properties. The active phytochemicals flavonoids, alkaloids, terpenoids, lignan, polyphenols, tannins, coumarins and saponins, have been identified from various studies conducted by researchers. It also exhibits a wide range of pharmacological activities like antimicrobial, antioxidant, antiinflammatory, anticancerous, antiviral and diuretic activities.

Ms.Caroline Xavier,
M.Sc. Phytomedical Science and
Technology

അഞ്ചാം പേജിൽ നിന്നുള്ള തുടർച്ച...



അഞ്ചു കിലോമീറ്ററോളം കഴിഞ്ഞപ്പോൾ ഞങ്ങളുടെ യാത്ര കല്ലാറിലെ കരയിലൂടെ ആയി. പിന്നെ ആറ്റിലിറങ്ങി ശരീരവും മനസ്സും തണുപ്പിച്ച് ഒരു ചെറു വിശ്രമം . വംശനാശഭീഷണി നേരിടുന്ന അപൂർവയ 1നം മത്സ്യങ്ങളുടെ കലവറയാണ് കല്ലാർ എന്ന് ശ്രീജിത്ത് പറഞ്ഞു.കെഎസ്ഇബി യിലും വാട്ടർ അതോറിറ്റിയിലും ജോലി ഉപേക്ഷിച്ച കാടിനോടുള്ള സ്നേഹം മൂലം ഫോറസ്റ്റ് ഡിപ്പാർട്ട്മെന്റ്

ജോലിക്കു ചേർന്ന ശ്രീജിത്തിനോട് അതിയായ ബഹുമാനം തോന്നി. കഴിഞ്ഞ പ്രളയത്തിന്റെ അവശേഷിപ്പായി രണ്ടാൾ പൊക്കത്തിൽ ആറ്റുതീരത്തെ മരക്കൊമ്പുകളിൽ പ്ലാസ്റ്റിക് മാലിന്യം നൊമ്പര കാഴ്ചയായി. ഒരു കിലോമീറ്ററോളം ഞങ്ങളുടെ യാത്ര ആറ്റിലൂടെ ആയ 1റുന്നു. പേരിനെ അമ്പർത്ഥമാക്കുന്ന രീതിയിൽ കല്ലാറിൽ

നിറയെ കല്ലുകൾ ആണ്. ആറ്റിലൂടെ ഉള്ള നടത്തം വേഗത കുറച്ചപ്പോൾ പിന്നെ എല്ലാവരും നടത്തം കാട്ടുപാതയിലൂടെ ആക്കി. പിന്നീടുള്ള സമയം ശരീരത്തിൽ നിന്ന് രക്തം കുടിക്കുന്ന അട്ടയായിരുന്നു താരം. മിക്കവരുടെയും കാലുകളിൽ രക്തം കുടിച്ചു വീർത്ത അട്ടകൾ. കയ്യിൽ കരുതിയിരുന്ന ഉപ്പ് പ്രയോജനപ്പെട്ടു.

ഉച്ചയോടടുത്ത സമയം അടവിയിൽ എത്തിച്ചേരുമ്പോൾ ഞങ്ങളരിൽ തുടങ്ങി ഉടുമ്പന്നൂർ കല്ലാർ മുണ്ടുകമുഴി വഴി ഏകദേശം 8 കിലോമീറ്റർ ഞങ്ങൾ പിന്നിട്ടിരുന്നു. യാത്ര അവസാനിക്കുമ്പോൾ എല്ലാവരുടെയും മുഖത്ത് ക്ഷീണത്തെക്കാൾ ഉപരി കാടിന്റെ നിശബ്ദതയിലും സൗന്ദര്യത്തിലും ആവാഹിച്ച ഊർജ്ജവും സന്തോഷവും നിറഞ്ഞുനിന്നിരുന്നു.

Mr. Tiji Thomas

BIRDING WITH EXPERTS ON 14th MARCH 2019 AT MACFAST



On 14th March 2019 Mr. Aneesh G.A.S (Bird watcher, Thiruvalla), Mr. Harikumar Mannar (eBird Editor, Alappuzha District) and his daughter Ms.Devi gave a visit to our college. As the bird watching was conducted during lecture hours only a few students could attend the session.

They were so excited to know that we had observed the presence of around 129 species of birds in our campus. They started walking around, observing various bird calls. It was a sunny day and we started our mission around 4:00 PM. They were having a DSLR camera with a telephoto lens.

They had such a good observation skill, we noticed around 15 species in a specific area meanwhile they noticed more than 20 species in the same spot. Total 52 species were spotted during the survey, among them majority were wetland birds.



They were very fascinated watching all the pleasant greenery around the campus and listening to the bird calls. As we walked they addressed themselves to us and how they got into this interesting field.

They had a keen observation and idea about every species and they were quite eager to observe the environment. We went through the fields and paddy fields. Devi got mingled with our team very fast and it was quite joyful. It was so shiny and not many birds were found around. We walked through the grass and crossed the other side of the field. The land was muddy as we reached to a certain spot. It soaked our shoes and sandals so we kept our footwears aside and walked barefooted. We could feel the wet mud and it was very slippery. Our legs were covered with mud and as we walked through the long grasses the mud had already vanished.

CREATIVE ZONE



As one raft flies about 3-4 cycles, the next raft got ready to beautify the sky. It was so amazing, we waited for them to settle down but as it was getting late we returned back to our campus. Through this lovely experience, we came to know how important it is to keep our environment clean and green.

Remya R., S5 MCA(LE)

THICK-BILLED WARBLER (*Arundinax aedon*) പെരുങ്കൊക്കൻ കുരുവി



Thick billed warbler © Dr. Nishad PM

ആദ്യമായി 11-04-2019 നാണ് പെരുങ്കൊക്കൻ കുരുവിയെ മാക്ഫാസ്സ് ക്യാമ്പസ്സിൽ കണ്ടെത്തുന്നത്. IUCN പട്ടിക പ്രകാരം ലീസ്റ്റ് കൺസേൺ വിഭാഗത്തിൽ പെടുന്ന വയാണെങ്കിലും വർഷം തോറും ഇവയുടെ എണ്ണത്തിൽ വൻ കുറവുകൾ സംഭവിക്കുന്നുണ്ട്. പെരുങ്കൊക്കൻ കുരുവിയുടെ ആയുർദൈർഗ്യം പരമാവധി 4.4 വർഷമാണ്. പെരുങ്കൊക്കൻ കുരുവി ദേശാടന പക്ഷികളുടെ ഗണത്തിൽ വരുന്നു. മറ്റു വാബ്ളർ കുരുവികളെ പോലെത്തന്നെ പെരുങ്കൊക്കൻ കുരുവിയെയും തിരിച്ചറിയുക പ്രയാസകരമാണ്. ആവാസസ്ഥലത്തിന്റെയും വ്യക്തമായ ചിത്രത്തിന്റെയും, ശബ്ദത്തിന്റെയും അടിസ്ഥാനത്തിൽ ആണ് പക്ഷിനിരീക്ഷകർ ഇവയെ തിരിച്ചറിയാറുള്ളത്.

മറ്റു വാബ്ളർ കുരുവികളെ അപേക്ഷിച്ചു ഇവക്കു അല്പം വലിപ്പം കൂടുതൽ ആണ്. ഏകദേശം ഇരട്ടത്തലച്ചിയുടെ അത്രയും വലുപ്പമുള്ള (16-17.5 cm) പക്ഷിയാണ് പെരുങ്കൊക്കൻ കുരുവി. തടിച്ചുരുണ്ട് കുറുകിയ മുർച്ചയേറിയ കൊക്കുകളുള്ളതു കൊണ്ടാവും ഇവയെ പെരുങ്കൊക്കൻ എന്നു വിളിക്കുന്നത്. അല്പം മങ്ങിയ ചുവപ്പുനിറത്തോടുകൂടിയുള്ള കീഴ്കൊക്കുകൾ ഇവയെ ഒരുപരിധിവരെ തിരിച്ചറിയുവാൻ സഹായിക്കുന്നുണ്ട്.

മറ്റു വാബ്ളർ കുരുവികളിൽ കാണുന്ന രീതിയിൽ ഉള്ളതുപോലുള്ള കൺപുരിക മോ കണ്ണിനു കുറുകെയുള്ള വരകളോ പെരുങ്കൊക്കൻ കുരുവികളിൽ കാണാറില്ല. അതുപോലെതന്നെ അൽപം നീളം കൂടുതലുള്ള വാലുകളാണ് പെരുങ്കൊക്കൻ കുരുവികളിൽ കാണാറുള്ളത്. അൽപം മങ്ങിയ നിറത്തിലുള്ള അടിഭാഗവും ഏകദേശം ഏഗതേശം തലയുടെ മുകൾഭാഗം ഉരുണ്ടും, കണ്ണുകൾക്കു വൃത്താകൃതിയും ആണ്. മാർഷ് വാബ്ളറിന്റെതുപോലെ തോന്നിപ്പിക്കുന്ന ശബ്ദത്തിനുമേയ്ക്കും കൂടിയാണ് പെരുങ്കൊക്കൻ കുരുവി. ചതുപ്പുനിലങ്ങൾക്കിടയിലുള്ള പുൽത്തകിടികളിലും, പുൽപ്രദേശങ്ങളിലും, വയലുകളിലെ ബണ്ടുകളിലെ പുല്ലുകളിലും ആണ് ഇവയുടെ ആവാസ വ്യവസ്ഥ. മറ്റു പക്ഷികളിലെന്ന പോലെ ആൺ പെൺ വ്യത്യാസങ്ങൾ അത്ര പ്രകടമല്ല. ചെറുപ്രാണികളും മറ്റുമാണ് ഇവയുടെ ആഹാരം. വലിയ ഉയരത്തിലല്ലാതെ മരങ്ങളിലും, പുല്ലുകളിലും, കുറ്റിച്ചെടികളിലും ഇവ കൂടുകൂട്ടുന്നതായി പല ലേഖനങ്ങൾ സൂചിപ്പിക്കുന്നു. അഞ്ചു മുതൽ ആറു മുട്ട വരെ സാധാരണയായി കാണാറുണ്ട്. റഷ്യ, മംഗോളിയ, ചൈനയുടെ മംഗോളിയയോട് ചേർന്നുള്ള ഭാഗങ്ങൾ എന്നിവിടങ്ങളിലാണ് ഇവ പ്രജനനകാലം ചെലവഴിക്കാറ്. ആദ്യമേ സൂചിപ്പിച്ചുവല്ലോ ഇതൊരു ദേശാടന പക്ഷിയാണെന്നു.

പ്രജനനകാലം കഴിയുമ്പോൾ ആണ് ഇവ ദേശാടനം തുടങ്ങുന്നത്. ദേശാടന കാലത്തു ഇന്ത്യ, നേപ്പാൾ, മ്യാൻമാർ, തായ്‌ലാൻഡ്, ബംഗ്ലാദേശ്, കംബോഡിയ, കൊറിയ, വിയറ്റ്നാം എന്നിവിടങ്ങളിലെല്ലാം ഇവയെ കാണാറുണ്ട്. എന്നിരുന്നാലും പ്രജനനശേഷം തുടങ്ങുന്ന ദേശാടനം കേരളംവരെ എത്താറുള്ളു എന്നാണ് അനുമാനം. ഒക്ടോബർ മാസത്തോടെ വിരുന്നെത്തുന്ന പെരുങ്കൊക്കൻ കുരുവി ഏപ്രിൽ വരെ ഇവിടെ ഉള്ളതായി പഠനങ്ങൾ സൂചിപ്പിക്കുന്നു. നഷ്ടപ്പെടുകൊണ്ടിരിക്കുന്ന ചതുപ്പുനിലങ്ങളും, പുൽമേടുകളും, ബണ്ടുകളിലെ പുല്ലിനു തീ വയ്ക്കുന്നതും ഇവയുടെ നിലനിൽപ്പിന് ഭീഷണിയാണ്.

പെരുങ്കൊക്കൻ കുരുവി 1,000,000-10,000,000 ചതുരശ്ര കിലോമീറ്ററിൽ വരെ വ്യാപിച്ചുകിടക്കുന്നുണ്ടാവാം എന്ന് IUCN നിൽ നിന്നുള്ള വിവരങ്ങളെ ആസ്പദമാക്കി മനസ്സിലാക്കാവുന്നതാണ്. ലോകത്താകമാനമുള്ള പെരുങ്കൊക്കൻ കുരുവികളുടെ എണ്ണം ഇതുവരെ എണ്ണിയിട്ടില്ലെങ്കിലും പക്ഷെ ലഭ്യമായ കണക്കുകൾ അനുസരിച്ചു ഇവയുടെ എണ്ണം കുറഞ്ഞു വരുന്നതായി IUCN റേഖപ്പെടുത്തിയിരിക്കുന്നു. കഴിഞ്ഞ പത്തു വർഷത്തിനുള്ളിൽ മുപ്പതുശതമാനത്തോളം ഇവയുടെ എണ്ണത്തിൽ കുറവ് വന്നതായി അനുമാനിക്കപ്പെടുന്നു.

Dr. Nishad PM

FIELD TRIP TO KONNI FOREST RANGE



ഒരിക്കലും മറക്കാനാവാത്ത ഒരു പിടി അനുഭവങ്ങൾ സമ്മാനിച്ച നല്ല ദിവസം, ചുറ്റുപാടും കണ്ണോടിച്ച ഓരോ നിമിഷവും അതിശയങ്ങളാൽ വീർപ്പുമുട്ടിച്ച പ്രകൃതി. വാസ്തവത്തിൽ ഇരുട്ടിലായിരുന്നത് ഞാൻതന്നെ ആയിരുന്നില്ലേ...! കാരണം ചുറ്റുമുള്ളതിനെ കാണാനാവാത്തവിധം കണ്ണുകൾ പൂട്ടിയിരുന്നത് ഞാൻ തന്നെ ആയിരുന്നു. ഓരോ നിമിഷവും പണ്ടെങ്ങോ ജീവിതപ്പാച്ചിലിനിടയിൽ നഷ്ടമായ നന്മകൾ ഓർമ്മപ്പെടുത്തുന്നതായിരുന്നു MACFAST forestry club നടത്തിയ birdwatching camp. ഒരുപക്ഷേ പക്ഷികൾ സ്വതന്ത്രമായി പറക്കുന്നതുകൊണ്ടും നമ്മൾ അതിവേഗം പരിണമിക്കുന്ന കാലത്തിനൊപ്പം ബന്ധിക്കപ്പെട്ടിരിക്കുന്നതും കൊണ്ടാവാം

അവയുടെ മഹത്തായ വൈവിധ്യം അധികമാരും തിരിച്ചറിയാതെ പോകുന്നത്. 9 മാർച്ച് 2019 പുലർച്ചെ കൊന്നിയിലേക്ക് യാത്ര പുറപ്പെട്ട ഞങ്ങൾ ഏകദേശം 7 മണിയോടെ അവിടുത്തെ ഫോറസ്റ്റ് സ്റ്റേഷനിൽ എത്തിച്ചേർന്നു. ഫോസ്റ്റ് ഓഫീസറുടെ പക്കൽനിന്നും ലഭിച്ച നിർദ്ദേശങ്ങൾ അനുസരിച്ച് ഞങ്ങൾ 8 മണിയോടെ അവിടുത്തെ കുപ്പിനുള്ളിലൂടെ ട്രക്കിങ് ആരംഭിച്ചു. ആവശ്യത്തിനു ഭക്ഷണവും വെള്ളവും കരുതിയിരുന്നു. കാടിനുള്ളിലെ സസ്യ പക്ഷി വൈവിധ്യം അതിശയിപ്പിക്കുന്നതായിരുന്നു. വേഴാമ്പലുകളും തത്തകളും മറ്റു കിളികളും കടന്നൽ കുടുകളും കാലിൽ നിന്നും രക്തമുറ്റുന്ന തോട്ടപ്പൂക്കളും (അട്ടകളും)

നടന്നു തളരുമ്പോൾ കുളിരേകുന്ന കാറ്റും, തണലേക്കുന്ന വന്മരങ്ങളും കാട്ടാനകൾ വെട്ടിയൊരുക്കിയ പാതകളും അവ തിന്നവശേഷിപ്പിച്ച ഇറുക്കാടുകളും പടർന്നുനിൽക്കുന്ന കുന്തിരിക്കമരവും കാടിനെ തഴുകിയൊഴുകുന്ന കല്ലാറും അതിലെ പരൽ മീനുകളും ഇക്കോ ടൂറിസത്തിന്റെ ഭാഗമായ നിർമ്മിതികളും കാടിനുള്ളിലെ കൊട്ടേജുകളും വള്ളിപടർപ്പുകളും... എല്ലാം മനോഹരമായിരുന്നു. ഉച്ചയോടെ ട്രക്കിങ് പൂർത്തിയാക്കി അടവി ഇക്കോ ടൂറിസം സന്ദർശിച്ച ഞങ്ങൾ അവിടെ നിന്നും ഉച്ചഭക്ഷണം കഴിച്ചു. ശേഷം കോന്നി ആനക്കൂട് സന്ദർശിച്ചശേഷം ഞങ്ങൾ കോളേജിലേക്ക് മടങ്ങി.

Mr. Amal Joseph Varghese
M.Sc Bioinformatics

BIODIVERSITY PROJECTS OF MACFAST

Avifaunal diversity of MACFAST

Avifaunal diversity project aim to study the bird species and their population in the MACFAST campus. This is an ongoing project lead by Dr. Nishad PM from 2016 onwards. So far 133 species of birds were identified from the campus that include both resident and migratory birds. Also it includes as well as wetland and terrestrial birds. daily checklists are updated through eBird.

Butterfly diversity of MACFAST

Butterfly diversity project aim to study and identify the butterfly species in the MACFAST campus,. This is an ongoing project lead by Dr. Nishad PM from 2017 onwards. So far 77 species of butterflies were identified from the campus. Also this project aims to build a butterfly garden in the campus itself, the number of species shows the biodiversity richness of MACFAST.

Green Thiruvalla

Green Thiruvalla is a collaborative wok between MACFAST and Thiruvalla Municipality. It aims for the clean, green and pollution free Thiruvalla and Also to reduce the plastic waste. The project proposes various methods to reduce and recycle different kind of waste. One of the main focus of the project is to create mass awareness among the students and public. The project is led by Dr. Nishad PM.

Red-Vented Bulbul(*Pycnotus Cafer*) താട്ടു ബുൾബുൾ

Red-vented bulbul (*Pycnotus cafer*; താട്ടു ബുൾബുൾ) is a medium-sized bird that is dark brown in colour with a partially crested black head. The bird has a conspicuous red patch below the root of tail



Red-Vented Bulbul © Dr. Nishad PM

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(that is why it got the name) while the rump is white, which is obvious during flight. Pale edges in feathers at breast, back and wings of the bird gives a scaly appearance to these parts. The sexes are alike in appearance. Red-vented bulbuls are found in pairs or small gatherings in gardens and light wooded country sides, as much like the red-whiskered bulbul. They are native from Pakistan to southwest China, being distributed throughout India, Sri Lanka and Myanmar and were introduced to many regions of the world, including Australia and the United States. These birds do not have a song of their own but the notes that they let out are pure joy to listen and

it's a boon that we have them here in MACFAST as our welcome hosts right on the trees near the entrance gate. They feed on fruits, berries, and insects and on flower nectar too. The increasing population density of red-whiskered bulbuls over red-vented bulbuls over the years have been recorded by stalwarts like Prof. K.K. Neelakantan and this topic can be taken up by young bird enthusiasts as well. Nesting season is mainly between February and May and the nests are a cup of mainly small roots positioned in bushes, shrubs or trees. In MACFAST we have breeding populations of this species manifested by nests reported within the campus year after year.

Dr. Blessan George

Courses Offered:

- Ph.d. in Biosciences
- M.Sc. Food Technology & Quality Assurance
- Biochemistry
- Bioinformatics
- Plant Biotechnology
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MCA Master of Computer Applications
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MBA Master of Business Administration



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